# Charlotte Airport Community Roundtable (ACR)

## Unapproved Summary Minutes: September 18, 2019

**Attendees**

Sara Nomellini, Chair, County 2
Kurt Wiesenberger, Vice Chair, Charlotte
Phillip Gussman, City 1
Darren Crosby, City 2
Loren Schofield, City 3
Priscilla Johnson, City 4
Bobbi Almond, City 5
Sam Blair, City 6
Alan Sauber, City 7
Sherry Washington, County 4
Mark Loflin, County 6
Sayle Brown, Cornelius
Bob Lemon, Huntersville
Walter Ballard, Lincoln
Kim Hardee, Matthews
Ben Miley, Mint Hill
Theresa Brunner, Pineville
Thelma Wright, Mecklenburg
Kevin Vesely, York
Sean Muckenfuss, York (Central)
Bob Mentzer, HMMH (Technical Consultant)
Stuart Hair, CLT (ex-officio)
Dan Gardon, CLT
Kevin Hennessey, CLT
Tracy Montross, American Airlines
Ed Gagnon, CSS, Inc. (Facilitator)
Kassinda Ross, CSS, Inc.
**Call-in Participants:** None

## Summary Minutes

- Meeting started at 6:00 PM
- **Open the Meeting**: Nomellini called the meeting to order.
  - Approve Minutes: Lemon moved to approve. Vesely seconded. All voted to approve.
  - Nomellini: Since we have a long Agenda, we will skip over reviewing the Ground Rules. Everyone was encouraged to be respectful throughout the meeting.
  - Review Meeting Packet Information by Gagnon
    - Gagnon reviewed the meeting packet information. Noted Agenda and Minutes that were just approved. After the Minutes, there is a 4-page document. At the top of that document is says "Recommendation Objective." **This is a draft document that Dan Gardon put together for write-ups that will be submitted to the FAA. Please read and give feedback**. Next is a 1-pager with information from the last meeting so you can see the results of the discussion of the Altitude-based Turns. Then there are slides that we'll go through, and a landscape version of the HMMH slides.
- **Receive Public Input (**There were no speakers for the meeting)
- **Analyze/Uncover**
  - **Overview of Today's Process – Ed Gagnon, CSS**
    - Gagnon: (Discussed 8 different recommendations (provided handout) that HMMH is in the process of analyzing.) The ones that are bolded have already been presented over the last 3 months (#1, #3, #8). Today HMMH will present on 3 different recommendations (pg. 1). They will go over #4- Utilizing Alternating Arrival Rails, #5- Delay Turns on South Departures, #7- Removing the 2-mile Restriction. There are two different pieces to this document. We give you Guiding Principles as a reminder. The desired effect of what you're looking for in the recommendations are the increases in times between flights, or reduction in flights during the day, or reduction in night flights. We're trying to figure out where are those highly affected areas overall from Metroplex – Mountain Island Lake, SouthPark, Steele Creek. The 3 slides we're going to pause on are slides 15, 18, and 41. At the last three meetings we did an informal poll on where you're leaning about the different recommendations. There have been lots of data and lots of analysis done for today. We will pause after each recommendation to have dialogue; however, we want to give you time to digest information shared today and do an additional review before being polled. Therefore, next week I will work with Kurt and

Sara and send out a survey. The team will decide whether or not to continue to have the recommendations on the Slate or to modify the focus for the recommendation. I will follow-up with a web survey next week.

- (Gagnon introduced Bob Mentzer, from HMMH who presented in Gene's place.)

➢ **Slate Recommendation Analyses - Robert Mentzer, Principal Consultant, HMMH**

- **Population Data**
  - Mentzer: We're going to go through three of the ACR Slate recommendations and talk about the analysis that was done, and discuss at the end.
  - Mentzer: Population data sources used: 2010 US Census data. The Census data was assigned to each of the grid points used for the evaluations. Darker colors are the levels of higher population levels and density such as dark purples and reds.
  - Gardon: We have begun supplementing population data with the American Community Survey data collected in 2013 and projected to 2016. This is the only other official population data count in the US. HMMH is not utilizing this data yet. We just got access to it. We'll update population and bring figures back before the formal vote.
- **1st Recommendation - Remove the 2-mile Restriction on Departures**
  - Mentzer: The first discussion will be on Elimination of 2-Mile Departure Restriction which was recommended during the March 2019 meeting. We only modified departures in south flow. Flying same headings, making turns to West and East. Compared results to 2018 baseline data. Noise events above 70 DB were evaluated. 2-mile restriction initial turn to West is now sooner, so more on the northern end of Steele Creek. On East departures, where it was going through SouthPark toward the southern end, it is more towards the northern and middle part. For reference this is the set of 2-mile and 4-mile line; turns need to be initiated by the 4-mile mark. In the baseline, they were happening past 2-miles, now happening at the ends of the runways to the West and East. Red shaded colors represent an increase, green-decrease.
  - Gagnon: Bob, for everybody's reminder, can you point out the three major areas affected by Metroplex?
  - Mentzer: Mountain Island Lake to north, Steele Creek to the southwest, and SouthPark to the southeast.
  - Gardon: Maps are also printed on the boards behind you. Feel free to look during or after meeting.
  - Mentzer: Amount of overflights here would decrease, amount of overflights closer to the airport would increase. Overall 107,000 people would experience reduction in overflights, and 161,000 (22%) would experience an increase in overflights with elimination of 2-mile turn. As we go further out, number of events over 70 decibels lessens. Number of overflights N70 analysis has similar results. Overall 161,000 experience fewer events above 70DB, and 235,000 would experience more events above 70 DB.
  - Sauber: Intuitively you would think less people live closer to the airport? Is that a wrong assumption? If they're turning closer to the airport, 70,000 more people we're affecting adversely than before?
  - Mentzer: It depends on population density in those areas.
  - Sauber: So not only is it going to be more people, but it will be a lot louder for those people because they are turning lower?
  - Mentzer: Correct, they'd be turning sooner. In some cases, you have areas of lower density residential.
  - Muckenfuss: For clarification this was done sort of in a vacuum, not as what we discussed last month with Altitude-based Turns? Not eliminate 2-mile AND get to a certain altitude to turn, correct?
  - Mentzer: Correct, it's essentially just eliminating 2-mile turn – turning 2 miles earlier than they did before. If there were aircraft flying out 4-miles, then turning, they were moved 2-miles closer to the airport before initiating the turn.
  - Muckenfuss: This is different than data we might see if there were no 2-mile restriction, and there was an altitude based where they turn at 2,000' because some will turn earlier?
  - Mentzer: Right.
  - Mentzer: We have a greater number of grid points and more people experiencing increase than a decrease. Elimination of 2-mile departure restriction provides greatest benefits for areas further away from the airport, and the least benefit for areas closer to the airport, which is what we were expecting.
  - Vesely: Did you look into what the zoning is for each of the areas affected by this; in other words, are they industrial or residential because it makes a big difference?

- Mentzer: At this point in time, no. It was simply based on population data assigned to each of those grid points from the census data.
- Vesely: So, in a sense you could be shifting noise from a residential area to an industrial area, but we haven't taken that into consideration?
- Sauber: No, he's not doing that because there's still people there. He's still using census. You're shifting the noise from one group of people to another group of people.
- Vesely: The census location is not directly reflected by those points.
- Sauber: Yes, it is.
- Mentzer: It's very close. A census block is almost equivalent to a city block or neighborhood block. The resolution is fairly good. That data was added to the grid point that represents that area.
- Wright: I live within three miles, so the census data is incorrect. There's been a whole host of homes that have been built, residential, not multi-family homes. It's quite a bit more dense around the airport than the data would reflect.
- Vesely: Perhaps you might want to use Google Maps as well. If you look at Google Maps of a 2018 map vs. a 2010 map, there's no comparison. If you use just use Google Maps, census wise it's nice, but where the homes are as she pointed out, that's important.
- Mentzer: Analysis is based on 2010 census, and that's what we started with. As Dan said, we'll be looking at the community survey data for 2016, and then look at what other sources will be available and whether other adjustments need to be made.
- Member: We're moving noise with this one, right? Are we all in agreement with that?
- Sauber: I'm not supporting this theory, but what it basically says is if you live near the airport, you should expect to have noise, and you're going to get more. If you don't live near the airport, it might help you. That's the only assumption you can make. This is just a push so far to me.
- Blair: Can we combine this, if we remove the 2-mile restriction **and** incorporate Altitude-based Turns or something like that, wouldn't that increase dispersion and give it a wider swath?
- Mentzer: That would depend on what altitude you're potentially selecting and what other Slate options might affect this. We're looking at each one of these independently. We'll look at the ones you're considering to move forward either possibly combined or, in the end, all of them combined.
- Muckenfuss: We discussed this a little bit last month. We did say that there were some planes that would reach (if it were 2000 ft.) that altitude within the 2 miles. If that 2-mile were not there, they could turn earlier. We saw last month that even with that 2-mile in place, there were greater dispersions with Altitude-based Turns. Logically you can make the extension that if there were some planes that would get there before those 2-miles, that would further disperse the large # of planes taking off. It seems rational.
- Brown: The only reason we're talking about doing away with the 2-mile departure restriction is to give us the flexibility to do altitude and distance-based turns. That's all. We're not saying everybody will turn at 500 ft. It was just to eliminate that restriction to give us the flexibility to do the other things we wanted to do. I think that's what we were talking about wasn't it, Ed?
- Gagnon: Yes, that would definitely bring some of those others into play. To the point that Bob just made, even though these are being looked at individually, what Sean and Sam asked about. I believe it's November when HMMH comes back, based on which ones you still want to include on the Slate, they'll roll all these together to give you the collective assessment of the full impact if you do multiples of these at one time.
- Nomellini: Just to add a little on that, when Gene looks at this all together in one package, if something comes out of that he'll bring that forward.
- Mentzer: This may be seen by the group as a shifting of noise from one area of community to another. Communities protected for years by the restriction might notice a change and react negatively to this change in operations. Reviewed considerations (Slide 14). Things for you to consider are: Does the reported change from the 2018 baseline to eliminate the 2-mile departure restriction meet the goals of the ACR? Do you want to reserve final decision? Do you want to recommend?

- Mentzer: Do you want to reserve final decision until you recommend the removal potentially along with another measure instead of by itself, and do you want to consider 2-mile restriction on the final Slate? I'll leave it open for discussion at this point.
- Gagnon: We're not looking for a poll like we've been doing. Are there any questions of clarity or additional conclusions that you all have at this point?
- Nomellini: Let's just make sure that in the survey that one of the options is a "C", not a yes or no; that it's in conjunction with the other solutions.
- Gagnon: As one point of clarification, this may be for CLT folks and Bob, can the 2-mile restriction be removed from just the east or west side? Could one departure runway have departures right off the runway, and the others still abide by the 2-mile for whatever reason?
- Gardon: We'd really have to ask the FAA, but I can't think of anything that would not allow that. It's simply a Part 150 measure over a long standing tower policy. To my understanding this is something that could be changed at nearly any time.
- Nomellini: Actually, Bob (FAA) addressed that specifically in a meeting I had with him where he said basically it helps them out. One goes straight, the other turns because what is sort of driving the problem now is this requirement for separation. It may make sense that one goes straight, and the other turns. One side benefits more by turning quicker as opposed to the other.
- Montross: When we talked about divergent headings, if we kept - on the western runway - the 2-mile heading in place, could you do divergent headings on the other, and he said that was okay, too.
- Gagnon: That's something to keep in mind when you look at it in more detail after the meeting; don't look at it just in the totality. Try to look at it in terms of effects of 2-mile restriction being removed west bound flights vs. more eastern flights.
- Brown: The key is 15 degrees (10 on 1 runway and 5 on the other, for example) - it gives the tower the flexibility. They can set what they want to any particular day. You have to be starting the 15 degree divergence prior to the 4-mile fix. The only thing we were discussing here was keeping you on runway heading for 2DME before starting at any turn.

- **2nd Recommendation - On South Departures, delay Turns off 18L (East) and 18C (West)**
  - Mentzer: (Reviewed information on Slides 17-18); the results shared on Altitude-based Turns showed essentially what this change would show. We recommend no further analysis at this time.
  - Wright: Maybe I'm missing something. With the 2-mile restriction and then there's a 4-mile requirement. Are those two different ideas?
  - Mentzer: With the 2-mile restriction, they don't initiate the turn until after 2-miles, but they have to make a turn by 4-miles in order to keep separation. They have a 2-mile window to make a turn. Doing a delayed turn to 3 miles would only give them 1 mile to make a turn, which would not be feasible in the way it's structured now. For example, if we were looking at a 3-mile turn, the discussion of the FAA waiver at 4-miles would have to come into play.
  - Johnson: Are there events where the aircraft could violate the 4-mile restriction? Is there an incident or event where an aircraft could not *intentionally* violate the 4-mile restriction but could as they're making that turn?
  - Gardon: I can't speak for the FAA but yes. It's called a violate deviation. There's an investigation.
  - Nomellini: Can I ask you a question, Sayle? I think this was one of your suggestions. May I defer to you as to whether or not that you agree we have seen something already that sort of addresses something that would happen with this solution?
  - Brown: Right now, we have a mandatory runway heading to 2-miles. If we get rid of that, we can go to an altitude-based turn system. My understanding was that you had to initiate that turn prior to 4-miles. As long as you're within the 4-miles of the runway and they're both at 2,000 feet, you're legal. There's no problem. In my opinion, that is all feasible; the altitude-based turn is feasible as long as we have a 15 degree diversion.
  - Nomellini: Agree. What I'm questioning is whether or not you believe the delay in the initial turn has been covered by the Altitude-based Turns that we saw last month.
  - Brown: Yes, I agree. We've already discussed that.

- Mentzer: Yes, we looked at that, and if you're not using altitude-based but turned at 2 1/2-miles, then 4-miles, you'll get similar results and analysis as with the Altitude-based Turns.
- Brown: As far as getting it past the FAA, the best thing we could do, and the easiest thing they could do with the least amount of training in the towers, is to give those guys the flexibility to use the 10 and 5 or 8 and 7 degrees, I think the FAA would buy that. I talked with Bob about it, and he thinks that might be easier to get through.
- Gagnon: Just to clarify, Sayle - we couldn't do this **and** Altitude-based Turns because they somewhat serve the same purpose, but there may be a way to do some variation of this or some variation of Altitude-based Turns. That's one of the decisions the group would have to make, right?
- Brown: Yes, and the FAA wants to have certainty as far as the separations - safety and certainty of the aircraft.

▪ **3rd Recommendation - Utilize Alternating Arrival Rails**

- Mentzer: Currently the downwind distance is approximately 5 nautical miles from the airport on either the east or west side of the airport. Alternating downwind arrival. We had some consultation with the FAA about how this might work. FAA would have to go through training program with the controllers, make airlines aware, publication requirements, etc. With change in flight patterns, the annual rotation seemed like the best approach; it would take 3 years to rotate through each of the downwind distances. Used 2018 baseline data models. (Reviewed information on Slides 20-21) Changes are mainly in downwind area.
- Muckenfuss: This is important especially in York County. This grid ends north of where the first turn is. You can't really do a complete analysis with these stopping points.
- Mentzer: For most of the tracks where they were modified was in the downwinds. The turns are in similar locations, but they were slightly adjusted to account for the aircraft arrival speed and how they would make that turn.
- Vesely: Coming down that rail on the downwind, there's a big difference in coming down in 3,600 ft. and going up in 8000 ft. I'm seeing on the right side it sit at 3,600 feet down that rail, turnaround and come back. No matter what, raising the altitude would make some difference. You don't have the same conditions on right as you do left, because of air separation. What about the alternating of those as well or some other method you could use? It's really not fair to have the right-hand side always get the lowest altitude on the two downwind tracks unless you raise both. In York County, Lancaster County which isn't represented here, it's really a severe impact. If you move those rails around, you move the sound around. You're not arriving at the airport. Unless that altitude is addressed, it doesn't matter if you go 4-miles out, 6 miles, 2-miles out, you're just moving the sound somewhere else.
- Sauber: Are they really 3,600 feet for 20 miles?
- Blair: They come down to 4000 right below our house, and then they stay at 4,000 until they pass.
- Sauber: I know exactly where they make that turn. It's about 3,600/3,500. I can't imagine they're at 3,600 20 miles north of me.
- Blair: There's a motion we made September of last year. Have they finally set a meeting to remove the waypoint?
- Vesely: If they're not doing anything, moving is going to create more problems.
- Blair: Let's move it around and share it. If you give me one year on and two years off. If we share the love here a little bit, that's better.
- Muckenfuss: One of the criteria is dispersal, which changes every year. It does spread the love among more people and gives you a break.
- Ballard: If we're going to consider this as a viable approach we want to promote, we need to extend the grid up to 30 miles. I'm up north, others are down south. The downwind is important that we extend the grid.
- Vesely: If you want to share the love, the turning point shouldn't be the same spot all the time. That's bringing all the planes down, regardless of how far they're spaced. I'm getting the love from both runways and the turn back. Where the turn is made is very important, especially when they're doing it simultaneously.

- Mentzer: We looked at simply moving from 5 miles to 4 to 6. No adjustments on the altitudes.
- Blair: Every 3 years they'd move it?
- Mentzer: It's a 3-year cycle. One year on and two years off.
- Sauber: There's not many options you can do with arrivals, but more with departures. They have to come down at some point to land the plane. If we can combine that, I'm all for it. I'm leery if the FAA will do that and how much will it cost planes to do that, but this is an equitable way to share it.
- Wiesenberger: The other recommendation we've discussed was the continuous descent approach. Aircraft coming down to 4000 ft. level and staying there for 10 miles downwind as opposed to a continuous descent approach. This in combination with that might be very effective for arrivals.
- Vesely: How are you going to have continuous descent help anybody like me if you're already at 4,000?
- Brown: You start at a higher altitude.
- Vesely: It should be 18 nautical miles where you're starting at 8,000'. I'm at 20, and they're at 3900'.
- Brown: Those are all visual approaches.
- Gagnon: Reminder to use green button for accuracy in minutes to be detailed. One thing to keep in mind is - with the 8 different recommendations, with what the FAA is going to do on the design of raising the altitudes on the CAATT and EPAYE Waypoints - there's no one of these recommendations that's a panacea, and they're all addressing different things or areas. If any of these provide some value to the community, then you would want to include them in the collective analysis and final submittal. Don't feel like you have to rank these, like this isn't important because it doesn't help a specific area, because it might help a different area or a different aspect of it. We're just looking to those that might provide a benefit and address the Guiding Principles.
- Nomellini: The solution moves a departure rail over my neighborhood, which we currently don't have. When we look at data at the end, we need to look at overall map to see who's affected.
- Blair: Let's move arrivals around, give us our year, two years off, and we'd be pretty happy.
- Mentzer: Modeling and looking at all of measures together to see how they interact.
- Gardon: Bob, from my understanding, this has not been done at any other airport, correct? (Yes) Could we just do this on the east side? We don't have many complaints from the downwind of the west side. Would it be feasible to split this up?
- Mentzer: The FAA would need to weigh in, but I don't see why you couldn't do it on just one side.
- Mentzer: Passing through the center of SouthPark, there is no change to the Mountain Lake area. With the 4-mile downwind, it's passing through the Steele Creek area closer to the airport and on western edge of SouthPark. Overall a 66,000 reduction in numbers of overflights, 110,000 would experience increase in overflights due to 4-mile downwind. Noise events above 70 decibels, most of aircraft on 4-mile downwind, descend and do turn in. Number of events above 70 analysis, approximately 47,000 would experience a decrease and 156,000 would experience an increase in events above 70 due to this alternative.
- Sauber: Maybe you don't do on west, you do on the east based on population. You will capture more people, but on right downwind you move out east, how do you capture more people? There's less people who live out there. We don't need to be absolute.
- Muckenfuss: This is very hard to evaluate as far as number of people impacted until it goes farther south and farther north. As you come down that altitude and make that turn, all that is off the map. The decrease further south may counteract that.
- Sauber: Agree we need to go further south. Turn on the East leg does happen on that map because I live in it.
- Muckenfuss: It will change pretty significantly with the population numbers that are shown there.
- Mentzer: (Reviewed slides 28 – 4-mile summary - & 35 – 6-mile summary)
- Mentzer: 4-mile brings closer to the airport, further away with the 6 miles. It would occur over a 3-year rotation. It would expose the dispersion.

- Ballard: You can't make a proper evaluation until you extend the grid. The folks in Huntersville, Cornelius will be impacted by this, and it could sway your results considerably.
- Vesely: Same with Lancaster, which isn't represented, and York.
- Mentzer: When we look at final recommended options, we would use the expanded grid.
- Ballard: This option needs that before you can make an intelligent decision. It affects more so than your grid.
- Nomellini: This is a standalone solution, right? We get another opportunity to say yea or nay. Then they expand the grid for that if there's enough interest?
- Ballard: I'm just saying you can't say yea or nay until you do that.
- Mentzer: We're not talking about polling or making decisions today. It would allow for a rotation. 1 year on, 2 years off. It would result in exposing new areas and community reaction.
- Ballard: It's important to look at east and west separately.
- Sauber: Dan asked has anyone ever done this. Has it ever been proposed before?
- Mentzer: Not to my knowledge, no.
- Nomellini: Thinking about the affected population, what might be important to understand, we're comparing this to what's happening now vs. how it would change. Maybe we should look at a 3rd set of data – pre-Metroplex. If you had it before, and we give it back, that's less obnoxious than if you never had it before.
- Blair: But think of what's changed in last 5 years. People have moved/sold; apartment complexes have popped up.
- Gardon: It's important to realize that with arrivals and location of downwind, that didn't change with location in Metroplex. They tightened it by about 200 ft. I can show you the data.
- Blair: Yes, it did. Bob said it did.
- Wright: The new runway that will come in - you have that to consider in terms of this.
- Mentzer: This is simply evaluating using baseline data from 2018 with existing runways.
- Wiesenberger: Bob, you described a certain # of people negatively or positively impacted by the 4/5/6 mile downwinds; which has the largest population? That may be a consideration.
- Nomellini: Maybe throw one out, keep 6 and go to 7.
- Mentzer: Adam had conversations with the FAA and what would be feasible. Don't know if going out further would be feasible. The 5 nautical mile is the lower population, compared to 4 or 6.
- Muckenfuss: It's going to take people a little amount of time to really notice it and get annoyed. To Sam's point, if it's a year and it moves, then you have a break. You don't get that year over year frustration of it's always here, it's every day and every night. That can be considered as well.
- Gagnon: Sam, that's a lot of your thinking behind this recommendation. Correct?
- Blair: Yes. We get the departures and arrivals; give me my fair share, but can we move it around? The population numbers, I'm really curious. Charlotte has exploded since 2010. What's the threshold? What makes it more or less important?
- Vesely: One thing you might be missing is when people were building homes, they knew they were in the rail and built to that spec. Homes were soundproofed, now move rail where they didn't build to that spec. Lots of changes, the way homes are soundproofed, to shift problems to where those homes were built in that way is going to be a big problem. It's going to take me a day to figure out. Moving rails and spreading the problem is not a good solution.
- Gagnon: Other comments or thoughts before Bob goes to his last slide?
- Gussman: 6-mile turn will impact more people than a 4-mile turn. Am I missing something? It's off the map to some degree. A larger area at least will be impacted.
- Muckenfuss: It's my understanding if you take 6 miles from the airport, they'll be able to turn closer to the airport because they'll have more room to make the turn.
- Ballard: If the downwind is out to 6 miles, does it allow them to come in at a higher altitude?
- Mentzer: I don't know; we'd have to talk to FAA.

- Ballard: We're at 4000', we have to slide into approach; if they're out another mile, can they be at 5000 ft. because they have more room to come in?
- Vesely: You're adding a mile coming across the loop. Respectfully, planes are not high enough; they're not doing what they should at 8 nautical miles. Regardless of the turn, the further out you go, you're adding more distance.
- Ballard: If you're further away, can you be at a higher altitude? Is this an approach that might help?
- Mentzer: The last slide (#41) is to have you discuss the results of the downwind distance of alternating rails. These are items we want you to consider now and after the meeting.
- Gagnon: As it relates to the survey, we'll ask for your input on alternating rails, as well as west or east or both and to some extent, a lot of this discussion is about the concept of it. The data is what it is, so a lot of how questions will be phrased to get your feedback will be on the concept of utilizing alternating rails to spread the noise over the 3-year period.
- Sauber: What is the current down rail distance?
- Mentzer: 5 nautical miles.
- Wiesenberger: What is the distance where the final turn is made for the approach leg? Is it known or consistent?
- Mentzer: It varies based on traffic levels and how they sequence everyone in.
- Wiesenberger: That's a good case to enlarge the scale of what we're considering.
- Gagnon: To Sean's point, the base leg of how that looks in relation to the airport might be different for 4-mile, 5-mile, 6-mile?
- Muckenfuss: Absolutely; for 4-miles the turn would have to be further away.
- Gardon: We talk about the Trombone Effect; that's what he's talking about. With the 4-mile, the trombone is extended; with the 6-mile, the trombone is brought in a little bit.
- Brown: For Kevin - with the trombone effect, there's lots of traffic; it gets extended. If the controller is anticipating that, he can get plane in early, he will get the plane down low enough to turn early.
- Vesely: I don't believe that's it at all. I've never seen it done.
- Brown: That's not the altitude the airplane has to be at.
- Vesely: Not just once every 3 years, raise altitude so that it's on the last 8 or 10 nautical miles, so that most people can hear less noise. Since 2014 those planes have flown lower.
- Brown: There were lots of flights. I've been flying for 36 years.
- Gagnon: I know there's been change in volume over the years, but as it relates to this recommendation – alternating arrival rails, any other questions about clarity for Bob?
- Blair: Can we have below grid part analyzed?
- Gardon: Yes, HMMH is looking at 50 miles north and south of airport, correct?
- Mentzer: I believe so. We just haven't been able to expand the grid for this current analysis.
- Ballard: East Lincoln has grown; it has developments all over the place there. Take into account growth in those areas as well.
- Hennessey: Understand that whatever data we get is not going to be perfect.
- Gagnon: Good point, Kevin; just getting it much more up-to-date is important.

❖ Additional Business – **Unfinished Business**

➢ Written Update: **Community Engagement Project Team**

- Gagnon: These are written updates as opposed to having formal presentations. Kurt, Mark, Phil any updates on the community engagement team?
- Wiesenberger: Not particularly. I summarized everything into the 5 bullet points as you asked.
- Loflin: Kurt, were you going to give them an assignment, or did we decide to pass on that?
- Wiesenberger: I don't know that that's clear at this time. I will make a notation that I had a 1-page article published in my community paper to 500 homes. "Airport Noise" was the title of that article.

➢ Written Update: **FAA Work Submittal Plan/Progress**

- Gagnon: The next item - I'm going to ask for Dan to address. With the FAA work submittal update there is a need for ACR to put together a solution to every problem sent to FAA. In your handout there was this document that says "Recommendation Overview" (4 page document with pie chart in it).
- Gardon: This is a draft submittal document that the ACR will sign off on. This is a draft of the actual document that will go to FAA. This is only concerned with Altitude-based Turns. Major revisions you would like to see? It does talk about removal of the 2-mile turn restriction as a possibility on the last page.
- Wiesenberger: Dan - Is your idea when we get to January that we'll have a summary document with recommendations in total, or to do each separately?
- Gardon: Summary document with maybe 6 sections or however many Slate items you decide.
- Gagnon: Give Dan feedback on content, format, etc.

➢ Written Update: **NADP-2, Voluntary Curfew, Communications Strategy, Raising the Altitudes Motion, Vortex Generators, MD-80**
- The other two on the bottom of the first page there were updates: Voluntary Curfew, and on the very back of document, there's an update on communications strategy and two meetings relating to EA.

➢ Written Update: **Raising the Altitudes Motion**
- Gagnon: The FAA apologized for not being here. They do plan to be here in October. Design team will come to Charlotte about raising altitude.
- Vesely: On raising altitude, does that affect downwind rail?
- Gagnon: My understanding is that it does raise - at 2 Waypoints East of the airport – altitudes by 1000 feet.
- Gardon: In this case, it's a simple raise of the altitude of two fixed points.
- Gagnon: If the altitude is higher at EPAYE, it will be higher after EPAYE, correct?
- Gardon: Probably.
- Vesely: Any recommendations from this committee to raise the altitude on the East downwind leg?
- Blair: This one. We put it in a year ago, and they haven't met on it yet.
- Vesely: It's just 1000 ft. they're talking about?
- Member: Yes.

➢ Written Update: **EA Community Meetings**
- Wright: Environmental Assessment. What is the expectation for ACR members attending those meetings?
- Nomellini: It's completely up to you.
- Wright: Are we expected to be there in an official capacity or a member of the community listening?
- Hennessey: We encourage you to go as an interested citizen.
- Sauber: That's what I would think. You don't know how these are going to turn out.
- Schofield: Could the community see the content or gist of what's going to be said prior to the meetings?
- Gardon: No, Bob (FAA) may be able to put you in contact with someone who could get you advance information. It's strictly an FAA-led meeting.

❖ Additional Business – **New Business**

➢ Muckenfuss: Orientation packets that stated goals had two arrival flows. North flow and south flow, and that goal is 50/50. Dan, about a year ago, I started looking at data to investigate that and found a pretty healthy swing that was preferential for north flow operations (Jul-Dec 2018). That corrected in January of this year and went back closer to 50/50. Beginning of August, I started to notice a change and asked for data. August 2019: 71% north flow, and 29% south flow. There were approximately 20,000 more planes approached north flow in August than did south flow. Aug. 21-Sep. 12, there were 22 straight days majority flow was north flow. I would like this committee to consider this in the Slate of recommendations that this be put in as an airport policy – that there is a more structured way to balance flows.

➢ Nomellini: My understanding is that was driven purely by wind direction.

➢ Muckenfuss: There is very little correlation to wind direction when I monitored for 22 days straight.

➢ Sauber: We need to address this directly with the FAA. Bob, do you think we can put this question to them?

➢ Gardon: Primary driver is wind direction; there are a # of factors that can also influence that like weather patterns.

➢ Sauber: Sean, what do you think it is?

- Muckenfuss: I think north flow is easier to control. There is a preference for north flow operations. I realize it's unrealistic to have a hard line on 50/50. We've talked about alleviating late night/early morning - voluntary curfew that was not approved. I have not gotten an understandable answer on deviation.
- Hardee: I was told the opposite 10 years ago; I was told at the time that South flow was preferred.
- Muckenfuss: There's a lot of population all around the area. There are a lot of flights arriving at Charlotte Douglas Airport. There needs to be more structure along that breakdown.
- Brown: If the wind is 1-2 knots, they can pick any runway they want; but if the wind is 5-10 knots, the penalties for airlines - the airline will not allow you to land with a tailwind; the airport's not going to take the responsibility to land you with a tailwind. The primary driving force of a north v. south operation is the wind direction.
- Gagnon: Is that your point, Sean; when it is not so clear which flow it should be, should it be north or south?
- Muckenfuss: Right. When it has been light and variable, it seems like it's been north, north, north. Looking at over two years of data, it seems like it's going a little bit far. What's wrong with balancing it a little bit more?
- Brown: I agree. When it's light and variable, do half north and half south operation.
- Nomellini: It's a good question. Let's bring it forward to the FAA. I've never heard anyone state there is a preference for 50/50. In recent years it tends to - you take off more north than south.
- Montross: This is the primary issue for the DC (noise group) working group – at Reagan National. Looking at notes from last meeting, sometimes there's operational preference, and it's harder to turn operation around in the middle of the day even if wind changes mid-day. This is relevant to DC. The FAA is always going to say what's easiest and safest without operational distraction is the procedure they're going to choose. I just wanted to validate that it's an important question to ask.
- Crosby: The lack of a 2-mile departure turn to the north may be an inclination for traffic to run that way.
- Montross: I agree with that. When you have a significant amount of traffic headed to the northeast out of this airport, it's operationally easier.
- Muckenfuss: It is both north flow and south flow are FAA approved. Given our charge on this, we're to seek solutions that are implementable.
- Nomellini: Great question. Let's see if we can get to Bob before next month. I would ask, "What makes you decide? Within that, what's the variable to see if we can get it more balanced?"
- Gagnon: FAA wants requests like that coming from the ACR; okay to say coming from the ACR as a whole?
- Members: Yes.
- Vesely: I also noticed in arrivals they're using all 3 runways simultaneously? Under impression only using two.
- Hennessey: 3 for arrival, 2 for departure.
- Vesely: There was a presentation about what's annoying about frequency. Was that taken into consideration?
- Gagnon: That was from the perspective of a resident (analysis done by Bob Cameron and Kurt Wiesenberger), and at what point does the frequency of flights in a given hour become annoying, and at what noise level does it become annoying, and what's the combination? For example, 1 plane at 80 decibels in an hour is annoying, but maybe 1 at 50 isn't annoying, but maybe 20 in an hour at 50 would be annoying. The focus was not at a macro level of planes flying into the airport; it was more so for one person sitting in a room - what is an annoying frequency and noise level? So there's a little difference there. Kurt, did you want to add anything?
- Wiesenberger: It was trying to define noise annoyance. It was disputing metrics that FAA uses – like DNL. We disagreed with that.
- Vesely: Supporting what you're saying, we had several times 3 aircrafts at once over the same location.
- Nomellini: Can you help me understand - are you asking us to do something?
- Vesely: I would like this taken into consideration when looking at base turns.
- Nomellini: (To HMMH) Your data takes into account all flight plans as they come in. Regardless of straight or turning, they're in your data.
- Vesely: The sound you're recording.
- Mentzer: Yes.

❖ **Adjourn**

- Blair motioned to adjourn. Sauber seconded; all in favor.
- Meeting adjourned at 7:56 pm