Charlotte Airport Community Roundtable

June 10, 2020 Meeting

Handouts

- Meeting Agenda
- FAA Submittal Checklist
- Slate (Recommendation) Evaluation Table
  - Includes Survey Results (Yes, No, Abstain)
- Additional Survey Comments
- Example Motions to Consider
- Listing of Requests for Analysis and Motions from May
- Written Updates Document
  - Request Database (p. 23)

Charlotte Douglas International Airport

Airport Community Roundtable

CLT ACR 2019-20 FAA Submittal Checklist - as of 6-9-20

	Sequence							
	1	2	3	4	5	6	7	8
✓ Finish Analysis of Recommendations and Finalize Slate								
✓ Review/Approve Expanded Baseline Grid	■							
✓ Review Full Analysis on 6000' Minimum Arrival Altitude Recommendation on Expanded Grid; Determine Whether to Consider for the Slate	■							
✓ Vote to Finalize Slate – *no further items added after this*		■	■					
✓ Select Groupings for Collective Analysis		■	■					
✓ Receive FAA Feedback on Potential "Non-starters"			■					
☐ Perform Collective Review – June ACR Meeting								
☐ Receive Full Analysis on Expanded Grid of Other 8 Recommendations – June ACR Meeting			■					
✓ Review Collective Analyses			■					
☐ Plan/Conduct Community Meetings – Deferred								
✓ Begin Planning for Community Meetings - ***Partial √*** – Deferred			■					
✓ Meet with FAA headquarters representatives **before/after** community meeting, engaging in informal dialogue about Recommendations, priorities, submittal process, etc. - ***Partial √*** – Initial Meeting Completed				■		■		
☐ Invite all communities affected by the ACR proposed "change" to presentation of Slate and discussion (about 2 months before they are held) – Deferred				■				
☐ Conduct 2 Public Meetings – Deferred					■			
☐ Perform Final Review								
☐ Review Results of Public Input – Deferred						■		
☐ Review/Refine Submittal Documentation – July ACR Meeting					■	■	■	
☐ Decide on Final Submittal Recommendations – During June/July ACR Meetings							■	
☐ Submit Recommendations to FAA – July ACR Meeting								■

Charlotte Douglas International Airport – ACR

2020 Potential Slate Recommendations – Evaluation Table (Sorted based on Level of Consensus from Member Survey Results)

Recommendation & Survey Results	Overall (Relating to Guiding Principles)					FAA Non-starter	Targeted Areas Affected by Metroplex			Newly Affected Areas
	Pros	Cons	For Higher Affected Areas	Net Population w/Benefit	Net Grid Points w/Benefit		Mountain Island Lake	Steele Creek	South Park	
Strong Consensus to Include in Slate										
2-Utilize Divergent Departure Headings **15 Y, 1 N, 1 A**	• Greatest benefit to areas along current departure headings	• New departure headings will expose new areas to aircraft noise	Relief to populations 2-6 NM southwest of airport and 3-6 NM northeast and northwest of airport	112,752	290	N	Disbenefit (central, east edge, west edge) Benefit (elsewhere)	Benefit (northwest, northeast) Disbenefit (elsewhere)	Benefit (throughout)	High Shoals, Stanley, Dallas, Huntersville, Tega Cay, India Hook, Rock Hill
10-Return CAATT Waypoint to Pre-Metroplex location (aka, Raising the Altitude by 1000' at CAATT/EPAYE) **14 Y, 1 N, 2 A**	• Greatest benefit under south flow's east downwind	• None	N/A	80,244	709	N	Minimal change	Minimal change	Benefit (south central)	N/A
3-Modify Use of Departure Profiles **14 Y, 2 N, 1 A**	• Greatest benefit for small areas north and south of airport	• Negatively impacts areas directly adjacent to airport property	Relief for areas 3-4 NM northwest, northeast, southwest, and southeast of airport	28,825	275	N	Benefit (south)	Benefit (south)	Benefit (north, west)	Small increases in areas immediately adjacent to airport property

Charlotte Douglas International Airport – ACR

2020 Potential Slate Recommendations – Evaluation Table (Sorted based on Level of Consensus from Member Survey Results)

Recommendation & Survey Results	Overall (Relating to Guiding Principles)					FAA Non-starter	Targeted Areas Affected by Metroplex			Newly Affected Areas
	Pros	Cons	For Higher Affected Areas	Net Population w/Benefit	Net Grid Points w/Benefit		Mountain Island Lake	Steele Creek	South Park	
Strong Consensus to Include in Slate (cont'd)										
8-Utilize CDA (Continuous Descent Approach) **14 Y, 3 N, 0 A**	• Benefits for areas north and south of the airport where aircraft level off for conventional approaches • Improvement in air traffic control tools and increased number of aircraft conducting CDAs may result in increased noise reduction	• Disbenefit for areas along extended centerline where aircraft turn and descend on final approach • More concentrated flight paths along this turn due to precision of Required Navigation Performance (RNP)	N/A	276,250	3,361	N	Disbenefit (central) Slight benefit (elsewhere)	Disbenefit (central) Benefit (south edge)	Benefit (southern central)	Lowesville, Fort Mill
7-Remove the 2-mile Restriction on Departures **13 Y, 3 N, 1 A**	• Greatest benefit to areas to the south at and beyond the 2-NM mark where aircraft currently turn • Decreases controller workload • Positive impact on throughput due to reduced time for headings to diverge	• Increases noise in areas closer to the airport where turns would now start	Relief for population approximately 6 NM south of airport along current departure paths	-166,683	-1,012	N	Minimal to no benefit or disbenefit	Disbenefit (northwest edge, southeast edge) Benefit (central)	Benefit (south) Disbenefit (elsewhere)	Dallas, High Shoals, South Gastonia, Crowders, Hickory Grove, Tega Cay, India Hook, West Clover
6-On South Departures, change heading at first turns off 18L (East) and 18C (West) **13 Y, 4 N, 0 A**	• Greatest benefits to areas directly east and west of airport	• Initial heading changes expose new areas to aircraft noise • Increased controller workload • Negative impact on throughput due to increased times required for headings to diverge	Relief for communities within 2.5 NM directly south of airport	524,625	6,458	N	Minimal to no benefit or disbenefit	Benefit (north) Disbenefit (south)	Benefit (north, central) Disbenefit (south)	Lake Wylie

Charlotte Douglas International Airport – ACR

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Recommendation & Survey Results	Overall (Relating to Guiding Principles)					FAA Non-starter	Targeted Areas Affected by Metroplex			Newly Affected Areas
	Pros	Cons	For Higher Affected Areas	Net Population w/Benefit	Net Grid Points w/Benefit		Mountain Island Lake	Steele Creek	South Park	
No Strong Consensus – Lean toward including in Slate										
9-Maintain 6,000' Arrival Altitude until Final Approach Course **9 Y, 6 N, 2 A**	• Greatest benefit for areas east and west of airport between downwinds and runway centerlines	• Impacts areas along runway centerlines farther north and south of the airport • Negative impact on throughput due to reduced flexibility for vectoring • May increase miles flown	N/A	376,222	5,213	N	Disbenefit (north)	Benefit (east, west) Disbenefit (central)	Benefit (central)	N/A
1-Utilize Altitude-based Turns **9 Y, 8 N, 0 A**	• Greatest benefit to areas south and immediately north of airport where aircraft currently turn	• Increases noise along where aircraft turns would be moved • Increases uncertainty of turn location and therefore increases controller workload • Decreases airport throughput	Relief for populations west of US Whitewater Center and east of Paw Creek	281,352	876	Y	Disbenefit (central, north) Benefit (east, west corners)	Disbenefit (northwest, southeast) Benefit (central)	Benefit (south) Disbenefit (elsewhere)	Lincolnton, Iron Station, Stanley, Dallas, Bessemer City, Huntersville, Poplar Tent, Concord, Roberta Mill

Charlotte Douglas International Airport – ACR

2020 Potential Slate Recommendations – Evaluation Table (Sorted based on Level of Consensus from Member Survey Results)

Recommendation & Survey Results	Overall (Relating to Guiding Principles)					FAA Non-starter	Targeted Areas Affected by Metroplex			Newly Affected Areas
	Pros	Cons	For Higher Affected Areas	Net Population w/Benefit	Net Grid Points w/Benefit		Mountain Island Lake	Steele Creek	South Park	
No Strong Consensus – Lean toward NOT including in Slate										
4-Utilize Alternating Arrival Rails **7 Y, 10 N, 0 A**	• Greatest benefit to areas under current 5-NM downwind	• Rotating the location of the downwind legs will expose new areas to aircraft noise • Carries significant implementation challenges, including airspace changes, training, and environmental reviews	Relief for parts of central South Park, western Steele Creek	-156,362	1,128	Y	Benefit/ disbenefit with downwind change (central)	Benefit (western edge) Disbenefit (elsewhere)	Benefit/ disbenefit with downwind change (central, western)	Cramerton, Tega Cay, India Hook, Rock Hill, Charlotte
5-On South Departures, delay Turns off 18L (East) and 18C (West) **6 Y, 9 N, 2 A**	• Similar to altitude-based turns	• Similar to altitude-based turns • Difficult to convince FAA to consider and implement delayed turns due to separation requirements and current waiver	N/A	N/A	N/A	N	N/A	N/A	N/A	N/A

Charlotte Douglas International Airport – ACR

2020 Potential Slate Recommendations – Evaluation Table

Detailed Descriptions of Recommendations

1) Utilize Altitude-Based Turns: Altitude-based turns dictate that aircraft turn once they reach a specified altitude after departure, as opposed to turning at a specified distance from the airport. This results in better track dispersion and potentially higher altitudes before the aircraft turn over communities, thus reducing the effects of aircraft noise on the communities. The analysis for this recommendation specified that departures turn from the extended centerlines at 2,000 feet above Mean Sea Level (MSL).The 2,000 foot MSL altitude was chosen based on weighing the benefits of increasing aircraft turn altitudes with the decreased throughput that is associated with the uncertainty of where aircraft will turn associated with altitude-based turns.
2) Utilize Divergent Departure Headings: The divergent departure heading alternative assigns departure headings based on the aircraft's destination. These variable headings not only allow aircraft to fly a more direct path to destination, resulting in time and fuel savings for operators, but also disperse traffic over a wider area, dividing the noise effects over multiple communities. This analysis used 7 headings for both north and south flow departures, for a total of 14 headings. These headings diverged at the runway end for north flow and at 2 nautical miles from the runway end for south flow.
3) Modify Use of Departure Profiles: This recommendation requests that aircraft operators use available Noise Abatement Departure Profiles (NADPs) to reduce noise as flights depart CLT. The NADP modeled in this analysis changes the vertical profile of the departing aircraft, requiring use of flaps up to 800 feet AGL. Above this altitude, the aircraft retracts the flaps and accelerates to the Flaps Up speed to climb to 3,000 feet AGL. Above 3,000 feet, the aircraft accelerates to normal climb speed and proceeds as usual. This procedure creates more noise closer to the airport but reduces the noise farther from the airport and potentially reduces fuel consumption.
4) Utilize Alternating Arrival Rails: The alternating arrival rail proposal rotates through multiple downwind legs on a set annual schedule to distribute noise from arrivals over multiple communities over time. This alternative looks at the use of downwinds located 4 and 6 nautical miles from the airport, in addition to the current downwind located 5 nautical miles from the airport.
5) On South Departures, Delay Turns off 18L (East) and 18C (West): Delayed departure turns allow aircraft to reach higher altitudes prior to turning over communities, resulting in reduced noise over these communities. This alternative was not modeled since the altitude-based turn analysis shows similar results to what would be expected from this alternative.
6) On South Departures, Change Heading at First Turns off 18L (East) and 18C (West): After departure, aircraft turn to a given heading. This alternative proposes a change to this specified heading so that they overfly communities that they overflew prior to the implementation of the Metroplex, which tend to be less populated areas. This reduces the impact on more densely populated areas and enables the desire to return to pre-Metroplex flight paths. This analysis changes the headings for east and west departures by 30 degrees, from 270 to 240 degrees for west departures and 090 to 120 degrees for east departures.
7) Remove the 2-mile Restriction on Departures: Currently, southern departures from CLT cannot turn until they are 2 nautical miles from the runway end. Eliminating this restriction allows aircraft to turn on course sooner, reducing noise impact over communities along the extended southern centerlines but shifting the noise closer to the airport and along east and west areas where turns would then occur. This alternative modified flight tracks so that aircraft turned on course upon reaching the runway's departure end.
8) Utilize CDA (Continuous Descent Approach): Continuous Descent Approaches (CDAs) provide a continuous descent from cruise altitude to the airport at constant low power settings to reduce noise compared to traditional stepdown approaches. In a traditional approach, aircraft level off at intermediary altitudes, requiring power changes to maneuver and change altitudes and resulting in noise. CDAs reduce these level-offs and thereby reduce noise from this baseline. However, use of CDAs will likely increase flight track density over the approach paths due to increased precision of the navigational systems used. This evaluation identified aircraft eligible and equipped for CDAs and aircraft operating during lower traffic volumes and modeled those operations to utilize CDAs as that is when they would be utilized.
9) Maintain 6,000' Arrival Altitude until Final Approach Course: This alternative requires aircraft to maintain 6,000 ft MSL along the downwind arrival, only beginning descent once they turn from the base leg to intercept the final approach course. This will potentially extend the downwind over new communities to allow aircraft to descend safely but will also reduce noise along the current downwind legs due to the higher altitudes. This alternative modified flight tracks to maintain altitudes of 6,000, 7,000, or 8,000 feet along the downwind leg based on the arrival runway used.
10) Return CAATT Waypoint to Pre-Metroplex location (aka, Raising the Altitude by 1000' at CAATT/EPAYE): Higher altitude restrictions at CAATT and EPAYE bring flight paths in line with pre-Metroplex altitudes and flight paths, reducing noise along the south flow east downwind over these navigational points. This alternative raised the altitude at the two points by 1,000 feet above the current altitude requirement.

ACR Member 2020 Pre-submittal Survey Results - Comments

For any Recommendations where you marked "Abstain," please note why you selected that option.

- Re: 6000' recommendation: I am unclear whether this is realistic.
- Re: #5, #7, #9: Need more info/discussion
- Re: #10: This does not affect where I live.
- Re: #2, #3, #5, #10: I don't feel I'm as focused on those proposals, which seem to have significant cons. I also think the fewer items make the slate, the better received and the more quickly we can get resolution of the ones I voted for (#6,7,8,9 - those increase the FAA's flexibility [which might make them friendlier to working with us on others], are easy to implement, and have the most payback).

Please feel free to share any other comments that will help us to prepare to review the Recommendations during the June 10 meeting.

- All that were FAA non-starter's should not be included. After reviewing affected, most would affect my community negatively.
- I don't understand the "NO" responses from the FAA Non-starter so if this impacts the delay for us sending our recommendations please send what we can, then we can possibly modify it later. Thanks!
- I would like to see a recommendation that increases altitude and or distribution of Southbound arrival traffic to decrease the noise impact from rails over Mountain Island Lake.
- If maintaining 6000 feet until final approach course from the north is not feasible, try something that keeps the arrival flow turning on to final approach course over the main channel of Lake Norman at a higher altitude than cutting the corner and sending the aircraft direct to final approach fix at 3,000 ft.
- I would like clarification on the CDA - was this something that the FAA gave guidance on and said was not feasible, I cannot recall but I seem to remember something about this that was not possible to implement even though this would reduce noise and save fuel. Please remind me of what was said. Thank you.
- Would like to know the current effects of AM traffic that has been diverted since closure of cross runway. Which runways has that traffic been diverted to?
- If I could only see one item implemented, I would pick #9, the 6,000' down/crosswind minimum. I am, during Covid, seeing planes at 3,600 overfly my home regularly (screen shots available) - it used to be 3,850. If we could get #6-9 done, we'd have a ACR major victory (in my opinion), and we can continue to work on the others in the future.

Charlotte Airport Community Roundtable

June 10, 2020 Meeting

Sample Motions

For the Top 6 Recommendations based on ACR Member Survey Results

- **Motion #1:** To include the following Recommendations in the documentation being prepared for submittal to the FAA:
  - 2-Utilize Divergent Departure Headings
  - 10-Return CAATT Waypoint to Pre-Metroplex location (aka, Raising the Altitude by 1000' at CAATT/EPAYE)
  - 3-Modify Use of Departure Profiles
  - 8-Utilize CDA (Continuous Descent Approach)
  - 7-Remove the 2-mile Restriction on Departures
  - 6-On South Departures, change heading at first turns off 18L (East) and 18C (West)

For the Other 4 Recommendations

- **Motion #2:** To include the following Recommendation in the documentation being prepared for submittal to the FAA: **9-Maintain 6,000' Arrival Altitude until Final Approach Course**.
- **Motion #3:** To include the following Recommendation in the documentation being prepared for submittal to the FAA: **1-Utilize Altitude-based Turns**.
- **Motion #4:** To include the following Recommendation in the documentation being prepared for submittal to the FAA: **4-Utilize Alternating Arrival Rails**.
- **Motion #5:** To include the following Recommendation in the documentation being prepared for submittal to the FAA**: 5-On South Departures, delay Turns off 18L (East) and 18C (West)**.

Charlotte Douglas International Airport

Airport Community Roundtable

Analysis/Support Requests and Motions from the May 2020 Meeting

ACR Approach to Community Engagement

Vote to Moving Forward without Public Meetings

The ACR voted unanimously to select Option #3 presented by CLT for addressing community engagement. Option #3 stated: *The ACR can consider moving forward without public meetings – since these are only recommendations and changes to the airspace are not being made at this point, public meetings may not be necessary. In the event that the FAA implements changes recommended by the ACR, public outreach must occur under the NEPA process.*

Therefore, the ACR decided not to hold public meetings prior to submittal of Slate Recommendations. The formal Motion voted on follows: *The ACR will adopt Option #3, moving forward without public meetings, and the ACR's Community Engagement Project Team will move forward to address interim community engagement needs regarding the Slate, working in conjunction with CLT.*

ACR Member Meeting Schedule/Logistics

Continuing Current Schedule

The ACR decided to keep its current schedule of meetings, continuing them on the second Wednesday of every month at 6:00 PM. There were no objections to keeping that schedule at least through the final submittal. After that point, the ACR will determine whether the schedule needs to be modified in any way. Meetings will be online until further notice.

HMMH Expanded Grid Files and Links

Request to Resend Information

The ACR requested that they be sent the PowerPoint files and KML links provided in March to help prepare for the June meeting.

CLT Airport Community Roundtable

Updates on Requests/Motions – 6/10/20 ACR Meeting

CLT Operational Update

Update on Current State of CLT Operations, Traffic Volume, Revenue

Dan J. Gardon, Noise Abatement Specialist, CLT on June 8

Current enplanements are at about 20% of the numbers when compared to this time in 2019. At this time, enplanements are projected to return to about 90% in November. Enplanements affect both parking and concession revenue, and at this time we are budgeting for a 20% decrease in revenue for the fiscal year. Total number of flights are still significantly down, with about 6-700 total arrivals and departures per day. Compared to this same time last year number of operations are down by about 62%.

Community Engagement/Communications Updates

ACR Government Engagement Project Team Update

Bob Cameron, Project Team Chair on June 3

The Government Engagement Project Team has deferred its next step of contacting relevant government officials, pending the relaxation of various Covid restrictions on personal contact. The Team expects that a slate will be developed before the restrictions are lifted, and so will benefit by having the slate in hand when we do initiate contacts. Currently, government officials are meeting by email and conference call, and we believe that in order to communicate our position effectively, we will need to have an opportunity for personal contact. Once we have a slate or, if restrictions are relaxed before that, we will reconvene to develop our unified briefing, which we will also provide to the ACR.

ACR Community Engagement Project Team Update – ACR Members

Mark Loflin, ACR and Community Engagement Project Team Member on June 1

- Nothing new to report since October 14 update.

Requests for Support – Communication Plan Development – CLT Staff

Dan J. Gardon, Noise Abatement Specialist, CLT on June 8

No solid updates on the Communication Plan. The consultant is currently slowed its work and is expected to launch brand targeting in early 2021.

FAA-Related Items

Understanding of Internal FAA Review Process relating to CAATT/EPAYE Raising Altitude Motion

John Carraher, Office of the ASO Regional Administrator - Senior Advisor, FAA on March 9

We can arrange to have someone at the April or May ACR meetings to discuss the process for the CAATT/EPAYE Raising the Altitude motion with the understanding that the ACR would like to better understand the process while they finalize the rest of the slate.

Request of FAA for Tower Orders (FOIA)

Dan J. Gardon, Noise Abatement Specialist, CLT on June 8

No update on FAA FOIA Request.

North v. South Flow Decision-making

Dan J. Gardon, Noise Abatement Specialist, CLT on June 8

No update on north v. south flow decision making at this time.

Airlines-related Updates

Update on NADP-2 Recommendation

Dan J. Gardon, Noise Abatement Specialist, CLT on June 8

No further updates on NADP-2 request at this time.

American Airlines Retrofit of Airbus Aircraft with Vortex Generators

Tracy Montross, American Airlines Regional Director of Government Affairs as of May 15

We have now modified 162 of 283 aircraft with vortex generators. No changes to the completion date. [previously noted as 3/1/22].

Voluntary Restraint Program (Scheduling of Flights at Night)

Dan J. Gardon, Noise Abatement Specialist, CLT on June 8

No further updates on the Voluntary Restraint Program at this time.

Additional Updates

EA Process

Dan J. Gardon, Noise Abatement Specialist, CLT on June 8

CLT is checking with the Planning Department for updates.

Update Requests/Motions Databases – CLT/CSS

Page 23 of Request Database includes and update to Request #115 – HMMH Expanded Grid Files and Links

CLT Airport Community Roundtable – **Request Database**

ID	REQUESTED TO	REQUESTED BY	METHOD	DATE OF REQUEST	TITLE	STATUS	NOTES AND NEXT STEPS	COMPLETION DATE
115	CLT	ACR	In-Person	5/13/20	HMMH Expanded Grid Files and Links	Completed	The ACR requested that they be sent the PowerPoint files and KML links provided in March to help prepare for the June meeting.	5/14/20