

Background on Airspace

There are six classifications of airspace in the United States; A, B, C, D, E, and G. Class A is the most restrictive and Class G the least restrictive. They can be categorized as:

Class A – 18,000 feet and higher above mean sea level (MSL).

Class B – Airspace around the 40 most congested airports in the country. Because Kennedy, LaGuardia, and Newark are so close, the Class B airspace for the three airports overlaps. Class B airspace is often described as an upside-down wedding cake (see accompanying picture). The top of the airspace is 7,000 feet above sea level for New York’s Class B. The bottom ranges from 0 feet near the airports, to generally 1,500 feet in the middle ring, to generally 3,000 feet in the outer ring. Republic has a “cut-out” in the outer ring to 4,000 feet. The sizes and elevations of the rings vary at each airport. There are many restrictions on flying in the Class B airspace and many rules that must be followed.

Class C – Airspace around commercial airports that are less congested than the Class B airports.

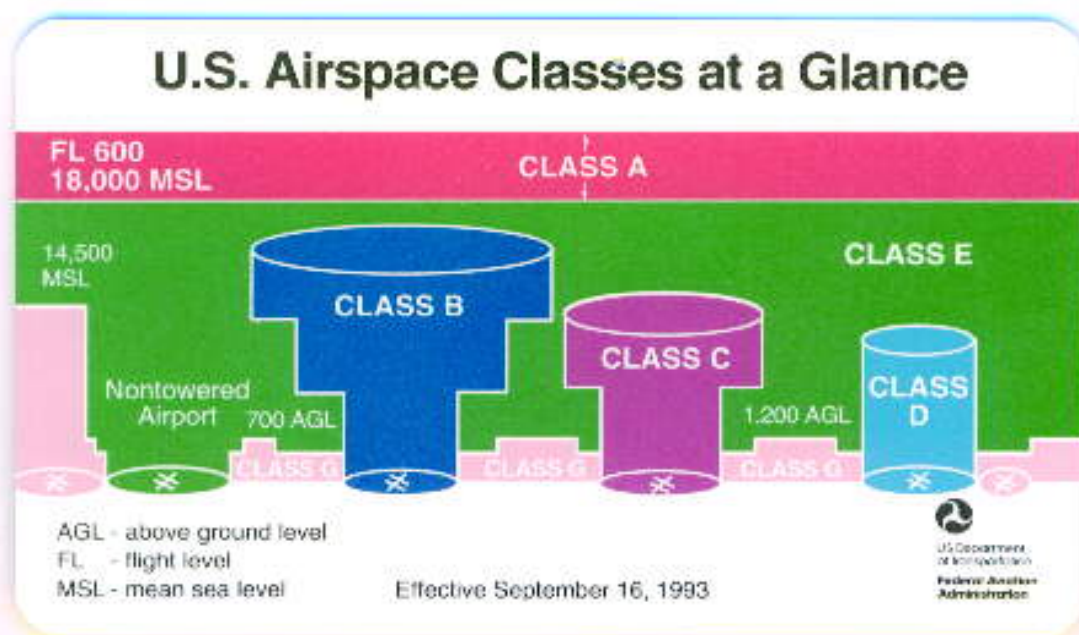
MacArthur Airport has Class C airspace. Class C typically has two rings, one from the ground to 4,000 feet above ground level (AGL) and above the airport and the outer ring from 1,500 feet to 4,000 feet above the airport. Class C has less stringent rules than Class B.

Class D – Airspace around other towered airports. One ring, usually 10 miles in diameter from the ground to 2,500 feet above the airport. This is the airspace around Republic Airport when the tower is open. Class D requires communication with the tower but generally has no other rules for flight.

Class E – Most of the airspace when you are not near towered airports or when the tower is closed.

Republic’s airspace is Class E overnight when the tower is closed. MacArthur is the same way.

Class G – Airspace in select areas below either 700 feet or 1,200 feet above the ground in the New York area.



The Class A, B, and C airspace are designed to protect commercial aircraft and allow the smooth flow of commercial air traffic into those airports. Because of the high volume of traffic at the three New York

area airports, aircraft are not able to remain in the Class B airspace the whole time. This creates a workload issue since the air traffic controllers must inform each aircraft when they depart the airspace.

If aircraft are routed outside the airspace by air traffic controllers, it could possibly create traffic conflicts with other aircraft that are not under the same control. This is because aircraft outside the Class B airspace can legally fly into the path of the commercial aircraft and possibly cause them to be rerouted. Safety issues could also emerge if an uncontrolled aircraft inadvertently flew into the path of commercial traffic, and evasive action was required to avoid a mid-air collision. This scenario is not likely, but commercial traffic does generate wake turbulence that could affect other aircraft operating outside the Class B airspace. This type of turbulence is highly destructive and could cause a smaller aircraft to crash if it strayed into the turbulent air.

Therefore, the FAA is proposing to enlarge the New York Class B airspace to encompass the areas where commercial aircraft are already flying. According to the FAA, this will not change the flight paths of the commercial traffic since they are already flying in these areas during certain times of the day.

The FAA called a meeting of all airports located under the Class B airspace whereby they notified the airport representatives of their decision to study enlarging the Class B airspace. The FAA assisted the airports by recommending the formation of a joint committee to solicit input regarding the problems resulting from enlarging the airspace and the associated impacts on smaller airports. Republic Airport has participated in these meetings and has provided the FAA feedback on many issues ranging from safety and economics to environmental impacts. That feedback is provided on the following pages.

The FAA has stressed that this is a long term effort. Recent discussions with their representatives indicate that no action would be taken for at least two years and more likely around five years. Also, there is no "official" proposal for a change to the airspace. The FAA presented the committee with a plan that would solve the current air traffic management problems for aircraft utilizing Kennedy, LaGuardia, and Newark airports. However, the FAA realizes this may inconvenience other airports in the region and asked for input so that they may adjust the design of the airspace to account for these problems before making an official proposal and soliciting public comments.

The community has expressed concerns with aircraft flying lower making more noise, which is listed as one of the issues brought to the attention of the FAA. This may be an issue for residents north, east, and south of the airport and minimally to the northwest but not west of the airport. Aircraft heading west will be entering the Class B, so they will not be flying lower since that does not help them avoid the Class B. Also, aircraft that are flying by instrument flight rules would not be affected since they are under the control of air traffic controllers and, therefore, avoiding the Class B airspace is not an issue. Most jets are flying under instrument rules. As pointed out at the Commission meeting, residents close to the airport will experience at most minimal changes in the height of aircraft since many are already descending into or climbing out of Republic Airport.

Please note, the possible solutions listed in the following write-up are just to have something there. It is not an official proposal from Republic Airport as can be seen by the lack of elevations in the write-up.

Class Bravo Redesign Issues – Republic Airport

Safety Issues

1. Reduction in VFR airspace will lead to more congestion and potential for midair collisions.
2. Lower Class B ceiling approaching and over Long Island Sound will result in aircraft flying lower over the Sound and could cause problems in the event of an engine failure. (ISP issue also).
3. Southern practice area will be below Class B airspace and will force maneuvers to be practiced at lower altitudes, which is not advisable for stalls and other maneuvers.
4. Wake turbulence at lower altitudes.
5. Aircraft flying over Westchester and New Jersey will be lower over hilly terrain resulting in less time to act in event of an emergency. (ISP issue also).
6. Increased workload for Republic Airport ATC as more traffic flies through the Class D to avoid the Class B.

Economic Issues

1. Flight training may need to be relocated further from the airport resulting in more time and money being spent on flight training. May “encourage” students to use another airport.
2. Aircraft flying VFR around the Class B will have to fly further, costing time and money. (ISP comment also).

Practical Issues

1. Aircraft leave FRG and climb above the Class C at ISP. Will not be able to do this without a clearance.
2. Aircraft will not be able to descend into FRG from the east without a clearance.
3. Lower Class B ceiling requires longer communication with TRACON. Aircraft will be closer to FRG when they contact the tower.
4. VFR traffic will be flying lower; this includes jets, increasing the noise in residential communities and noise complaints.
5. Will be impossible to climb above the Class B from FRG. (ISP comment also).

Possible Solutions

1. Cutout for FRG east of the airport (73 degrees 26'W longitude) at least XXXX feet MSL running from the Atlantic Ocean to intersection with Class B ring over Connecticut.
2. Increase the floor of the outer five miles of Class B ring (from 20 miles to 25 miles from LGA) at XXXX feet MSL over Connecticut, Westchester, and northern New Jersey.

Detailed Discussion of Issues

S1. Aircraft currently can fly up to 4,000 feet MSL in the vicinity of FRG and much higher as little as three miles east of the airport. The enlarging of the Class B will result in all VFR traffic flying below 2,500 feet as far as seven miles east of the airport. Since all fixed-wing aircraft must be at least 1,000 AGL, the area available for VFR traffic is reduced by over 50%. FRG is the third busiest airport in New York State and at times can be fairly congested (with a mid-air collision one year ago). Reducing the available VFR airspace by over 50% will increase congestion in the areas around the airport and could increase the potential for more mid-air collisions. Also, FRG has over 10 flight schools. Flight training is a large part of the operation of the airport. Putting new pilots into a more congested environment could be detrimental to everyone's safety.

S2. Long Island Sound generally increases in width from west to east. At the eastern boundary of the proposed 25 mile ring, the width increases to over 10 miles. With a glide ratio of 1.5 miles per 1,000 feet elevation, to ensure a dry landing in the event of an engine failure would require a minimum altitude of 3,500 feet. With the Class B at 2,500 feet, pilots of piston aircraft may not be able to glide to land in the event of an engine failure over the middle of Long Island Sound.

S3. Flight training from FRG is often done in the area southeast of the airport over Great South Bay or the Atlantic Ocean towards Fire Island. When practicing stalls and some other complex maneuvers, the maneuvers start at over 3,000 feet. Therefore, the practice would either have to occur with less factor of safety or further from the airport.

S4. VFR aircraft will be flying relatively close to the bottom of the Class B outer ring. With commercial traffic flying just above, there is a potential for wake turbulence without warning for the VFR traffic.

S5. Maximum elevations across Westchester and New Jersey under the expanded ring are about 1,250 feet. Traffic flying through this area will be at a maximum of 1,200 feet AGL. This does not allow for much reaction time or many areas to land in event of an emergency. If the ring were 3,500 feet MSL, aircraft could be 2,200 feet agl allowing over 3 times as much area to potentially land and doubling the reaction time.

S6. Traffic can fly either east of FRG's Class D or above the Class D and below 4,000 feet MSL. With the outer ring extended to 25 miles, pilots can not fly VFR over the Class D and the area to east of FRG outside of ISP's Class C is effectively gone. Pilots will therefore have to fly through the Class B, Class C, or Class D airspace. Most VFR pilots will chose the Class D since it is least restrictive. This will increase the workload of FRG tower.

E1. Aviation training is expensive and has increased with the dramatic increase in fuel costs. Requiring potential pilots to spend more time flying to training areas with increased fuel costs and instructor costs may have a negative impact on students. FRG has over 10 flight schools which could be negatively impacted. Also, potential pilots may choose to train at other airports due to the cost and safety issues being forced on FRG.

E2. When flying west or returning from the west this concept if implemented will require pilots to fly a longer distance. This increases fuel costs.

P1. When flying to eastern Long Island or the islands located in the Atlantic Ocean, pilots will often leave FRG's airspace and climb over the Class C at ISP. They can do this without ATC control. If the Class B is extended into the Class C, pilots will no longer be able to do this.

P2. When returning from the east, pilots will have to pass through the Class B or Class C instead of overflying the Class C and descending. This could increase workload for ISP controllers.

P3. When TRACON is busy, the handoff between them and FRG tower is not always smooth and pilots sometimes complain about the transition because they are quickly into the Class D at FRG without the tower receiving much warning. Lowering the Class B will make this more of an issue.

P4. Planes leaving or arriving at FRG can fly up to 4,000 feet MSL when VFR. They will have to fly below 2,500 feet MSL under the current proposal. This will result in more noise complaints from the communities around the airport.

P5. There are four choices for heading west from FRG and ISP. Fly through the Class B IFR or VFR. However, if VFR, you may not be allowed and could be vectored all over the airspace. Fly around the Class B to the south below 500 feet, which many pilots will not do. Fly around the Class B to the north, which under the proposal will require a larger detour and/or flying lower. Fly over the Class B. With the changes proposed a pilot would have to stay below 2,500 feet while heading northeast about 10 miles, then circle climb above 7,000 feet. This will not happen.



Existing Class B Airspace in the vicinity of Republic Airport. The red color is Republic's airspace which covers about 5 miles around the airport from the ground up to 2,600 feet above sea level. The orange color is the Class B Airspace. The top elevation for that airspace is 7,000 feet above sea level. The bottom elevation varies from the ground (SFC), to 500 feet, to 1,500 feet, to 3,000 feet, to 4,000 feet directly above Republic Airport.



This graphic shows the airspace that would allow FAA Air Traffic Control to have maximum ability to direct the traffic heading for Kennedy Airport. Only the orange lines and text mean anything for the Class B Airspace in this graphic. The Class B Airspace would still be 7,000 high, and the areas where it descends to the surface, 500 feet, and 1,500 feet would not change appreciably, if at all. However, the outer ring would extend another five miles and its floor would be at 2,500 feet.