

## **General Aviation Airport Design for Aircraft Typically Used by the University of Michigan Medical Center**

### **Medical Center Aircraft**

Currently the Medical Center operates two aircraft a Cessna Citation II and a Westwind 1123. The Citation II is the primary aircraft with the Westwind 1123 being used as the primary backup transport. Typical passengers and fuel loads bring both aircraft to near their maximum allowed flying weight when flying organ harvest missions. These missions have reach out a distance as far as some locations in Mexico, the return time is the critical parameter from any location. All harvested organs have a limited time during which they are suitable for use. One example organ time limit is four hours for a heart, from the time it is remove from a donor to the time it is transplanted into a recipient. Given this kind of time constraint every second counts and is why small business jets are best suited for this transportation job.

These aircraft are operated under the same Federal Aviation Rules(FAR's) as the airlines use for commercial flights. Further, these rules are exceeded in practice as the individual aircraft operators require for the safest operation. The Cessna Citation II is considered by the FAA a B approach category because it is allowed to approach an airport runway at speeds above 91 knots and below 121 knots. The aircraft pilots for reasons of safety operate the aircraft as a C approach category aircraft, i.e. approach speeds between 121 knots and 166 knots. This added safety margin is reflected in the for a longer runway for landing the aircraft. The Westwind is listed in FAA documents as a C approach category is also for safety reasons is operated as a D category.

The commercial flight rules add to all other considerations for calculation of takeoff runway length for a given set of weather conditions. The most restrictive of the following is the limiting factor:

- Maximum allowed takeoff weight for given conditions
- Takeoff field requirements dictated by weight, current air temperature, humidity
- Brake energy requirements derived from manufacturers charts
- Second takeoff segment, i.e. during climb
- Takeoff Correction Factors, Federal Aviation Rules, determined by FAA
- Maximum tire ground speed limit before failure

Landing has another set of rules that restrict the aircraft to safe operation:

- Maximum certified landing at weight
- Aborted landing, approach climb requirements
- Available length of runway for a given set of conditions
- Corrections for wet, slush, snow, or ice covered runway
- Runway gradient or slope

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Mr. John T. Avendt  
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Dear Sir:

As a physician, pilot, and taxpayer of the City of Ann Arbor, I am writing to express my opposition to the "status quo" Part 150 study for the Ann Arbor Airport. This "status quo" plan will serve neither the airport users or the non-users.

The proposed plan continues air traffic over residential areas, a "status quo" which both residents and pilots find objectionable. The viable solution of a re-aligned runway addresses this concern and can be funded with Federal and State grants.

The "status quo" plan will also limit future use of the airport by medical aircraft. Subsequent to this proposal, both the University of Michigan and Catherine McAuley hospitals have been designated as Level I Trauma Centers. Thus, the "status quo" of the community, assumed in the analysis, has already changed. Prompt medical attention has been well documented as a prime determinant of patient survival in cases of severe trauma. Limiting prompt access of medical care to trauma patients, due to inadequate airport facilities mandated by the "status quo" plan, is surely an irresponsible action by governing officials.

Additionally, business aircraft usage at the airport would be limited by the proposed plan. A 1993 Michigan Department of Transportation economic impact study documented a thirty three million dollar annual financial benefit to Ann Arbor and the surrounding communities from the economic activity created by airport users. This is a conservative estimate as it does not include, for example, the economic benefit of patient care generated by individuals arriving by air transportation. Adoption of the "status quo" plan will severely limit the ability of business users to utilize the time saving advantages of aircraft with subsequent penalties to Ann Arbor's economic base as users look elsewhere for adequate air related services.

The residents of Ann Arbor take pride in their community and its wide range of educational, medical, technical, athletic, artistic and cultural institutions. Ann Arbor is one of the premier cities of the midwest and the "Big Ten" conference. Unfortunately, the Ann Arbor Airport ranks last in terms of airport facilities in the "Big Ten" and, overall, can only be termed mediocre at best. Adoption of the "status quo" Part 150 study will perpetuate this mediocrity, to the detriment of the residents, medical community, businesses and airport users of Ann Arbor.

Sincerely,

