

Appendix H

Runway Shift Analysis

Background

The Waterbury-Oxford Airport (OXC) FAR Part 150 Noise Study includes a recommendation for voluntary acquisition of approximately 71 homes in the Town of Middlebury, within the Triangle Hills neighborhood. Most of the homes are exposed to average noise levels greater than a “DNL” (Day-Night Average Noise Level) of 65 dB, which is the noise level considered incompatible with residential land uses (per FAA guidelines). Many of these homes are also located within the Runway Protection Zone (RPZ) beyond the northern end of the Airport’s runway.

At the November 29, 2006 Public Information Meeting (PIM), several Triangle Hills residents expressed concern regarding the proximity of the Airport to their homes. Their concerns included safety as well as noise disturbance. In order to mitigate the noise and safety concerns, without acquiring homes, it was suggested that Runway 18-36 be shifted to the south, away from Triangle Hills in Middlebury, and further into the Town of Oxford. This alternative is not included in the Part 150 Noise Study. As such, this appendix provides a preliminary review of the feasibility of shifting or relocating the runway to the south.

Shifting Runway 18-36 to the South

The Airport Master Plan Update (AMPU) did not consider any major runway modifications due to lack of available property, steep terrain, and environmental considerations. The AMPU recommended that the runway be maintained in its current configuration throughout the planning period, without alternation or extension.

A runway shift to the south would involve several site considerations and issues. The terrain beyond the south end of the runway (Oxford side) slopes down sharply from an elevation of approximately 680 feet to 600 feet, contains large areas of wetland, a floodplain associated with a tributary of Little River, State park property (i.e., Larkin State Trail), Connecticut Light & Power (CL&P) electrical transmission lines, a proposed electrical substation, as well as proposed commercial developments. A summary of these site considerations and a feasibility review of shifting the runway to the south is provided below. The review assumes that the runway would be shifted approximately ¼-mile to the south.

Specific Site Considerations

1. **Steep Terrain (substantial fill requirements)** – Due to the drop in elevation immediately beyond the runway end, a shift in the runway would require a very large volume of fill (soil and crushed stone) in an order of magnitude of 1 to 2 million cubic yards. This volume of fill would require approximately 100,000 truck loads and could take years to supply on-site. Traffic and road impacts would be significant. Therefore, an area of adjacent property

would likely be acquired and used to extract the fill for construction (i.e., borrow area) and to reduce traffic, noise, and air quality impacts in the vicinity. Nevertheless, localized traffic impacts would still be likely during the multi-year construction effort. Coordination with local town(s) for road and traffic issues would be required and designated haul routes and/or new right-of-ways may be needed. After construction, reclamation of the “borrow” area would be necessary.

2. **Property Availability** – The property located to the south of the Airport is privately-owned and planned for commercial and industrial development. To shift the runway, approximately 25 acres of property acquisition would be needed. As this property is not for sale, acquisition through eminent domain may be required, including the property needed for fill excavation. It is anticipated that the use of eminent domain would not be supported by State officials.
3. **Wetland and Floodplains** – Much of the area to the south of the runway contains wetland and floodplains. To shift the runway, approximately 5 to 10 acres of wetland would be filled. Mitigation requirements would likely include 2:1 or 3:1 replacement and other environmental improvements as a condition of the Connecticut Department of Environmental Protection (CTDEP) and US Army Corp of Engineers (ACOE) permits. Initial analysis has not identified any adequate available locations for wetland mitigation. As such, ConnDOT would also be required to identify and acquire appropriate nearby property for wetland mitigation. However, it must be noted that wetland impacts are generally not permitted by the CTDEP or ACOE if any other feasible alternative is available. The regulatory agencies would likely consider the existing recommendation of voluntary acquisition of homes to be a reasonable alternative, and therefore would not permit the wetland/floodplain impacts.
4. **State Park Property (Larkin State Trail)** – The adjacent state trail would need to be relocated in order to shift the runway. This would require CTDEP coordination and approval, and assumes that property can be acquired to connect the relocated portion of trail to the existing trail sections to the east and west of the Airport. Again, eminent domain acquisition may be required to obtain the necessary property. Furthermore, it is anticipated that additional wetland impacts would occur as part of the trail relocation.
5. **Connecticut Light & Power (CL&P) Electrical Transmission Lines** – The shift in the runway would also require burial of the major transmission lines located to the south of the Airport. CL&P owns the utility right-of-way, as well as the site of the proposed substation in this area. ConnDOT would have to acquire the rights to this property in order to shift the runway. The legal authority to obtain these property rights has not been determined at this time. Furthermore, CL&P would need to acquire a new location for their proposed substation in this general vicinity, and obtain Connecticut Siting Council approval.

Summary

Based on these considerations, it is believed that shifting the runway at Waterbury-Oxford Airport to the south is not a feasible project for consideration by ConnDOT. The lack of available property, substantial fill requirements, and significant wetland impacts would each likely preclude successful implementation. Under the National Environmental Policy Act (NEPA), it is believed that such a project would be declared to be “impractical” (and “considered and dismissed”). Based on this initial feasibility review, it is noted that such a project would likely exceed \$50 million in cost.

Conclusion

It is not recommended that detailed alternative layouts or associated cost estimates be developed for shifting the runway at Waterbury-Oxford Airport. Shifting the runway to the south should not be included as a recommendation of the AMPU or FAR Part 150 Study.

Note that the runway shift analysis will be further discussed in a subsequent Environmental Assessment (EA) study for the implementation of the Noise Study recommendations. Based on past comments from the public, the EA will also address other alternatives regarding runway realignment.