

James City County Airport Feasibility Study

Table A-1

Listing and Explanation Of Evaluation Criteria To Be Used In The Alternatives Evaluation Effort And Presented In The Evaluation Matrix

6-30-08 DRAFT

Known Environmental Factors Category

1. Compatible Land Use

This criterion provides for the ability to conduct a general assessment of each alternative's ability to support compatible land use between the airport facility and the surrounding community. This will be accomplished by considering the ability to preserve and fully protect all safety areas and protection zones as associated with each alternative. Since the 65Ldn and higher noise levels are also normally contained within the safety areas and protection zones, potential noise impacts will also have been considered. Applicable information found in The Virginia Department of Aviation's compatible land use guide will also be considered.

2. Potential Recreation / Wildlife / Historic Area Impacts

This criterion will consider potential impacts to publicly owned recreation areas, wildlife areas, and historic areas as associated with each alternative. Number of acres of potential impact will be used to assess this factor.

3. Wetlands

This criterion will consider potential impacts to known wetland areas. Existing and available wetland mapping will be used to perform this analysis for each alternative. Number of acres of potential impact will be used to assess this factor.

4. Floodplains

This criterion will consider potential impacts to known floodplain areas. Existing and available floodplain mapping will be used to perform this analysis for each alternative. Number of acres of potential impact will be used to assess this factor.

5. Proximity To Land Fill / Wildlife Hazards

Active sanitary land fills and other geographical features can attract wildlife activity (such as bird activity) that can pose a hazard to aircraft operations. As such, this criterion will consider the potential for wildlife hazards as associated with each alternative.

6. Land Acquisition

This criterion will consider the amount of land acquisition that would be needed to support the implementation of each alternative. Acres of needed land acquisition will be used to assess this factor.

Engineering Factors Category

7. Special Engineering Factors

Engineering contingencies (such as unstable soil types) can influence the implementation ability of an alternative. As such, this criterion will consider and list significant engineering factors as related to each alternative.

8. Utility / Pipeline Relocation

This criterion will consider the amount of utility / pipeline relocation that would be needed to support the implementation of each alternative. Linear feet of needed relocation will be used to assess this factor.

9. Building / Structure Removal

This criterion will consider the amount of building / structure removal that would be needed to support the implementation of each alternative. Number of structures needing removal will be used to assess this factor.

10. Topography Factors

Topographical features (such as ground contour elevation changes) can influence the implementation ability of an alternative. As such, this criterion will consider and list significant topography factors as related to each alternative.

Surface Transportation Factors Category

11. Road / Rail Relocation

This criterion will consider the amount of road / rail line relocation that would be needed to support the implementation of each alternative. Linear feet of needed relocation will be used to assess this factor.

12. New Roadway Requirements

This criterion will consider the amount of new roadway development that would be needed to support the implementation of each alternative. Linear feet of needed new roadway development will be used to assess this factor.

13. Highway Congestion Factor

Potential alternative implementation could change airport user driving patterns and subject users to added highway congestion. As such, this criterion will consider the potential of users being subjected to known "highly congested" highway areas.

14. User Driving Time

Potential alternative implementation could influence user driving time from origination areas to the airport facility. As such, this criterion will consider changes to estimated average user driving minutes as associated with each alternative.

Operational Factors Category

15. Ability To Meet Design Standards

This criterion will assess each alternative's ability to meet appropriate airport design standards. Commonwealth of Virginia standards will be used for the "Status Quo" alternative, and FAA design standards will be used for all other alternatives. The following design standards will be considered:

- *Runway length*
- *Runway Width*
- *Runway Safety Area Width*
- *Runway Safety Area Length Prior to Landing Threshold*
- *Runway Safety Area Length Beyond Runway End*
- *Obstacle Free Zone Width and Length*
- *Runway Object Free Area Width*
- *Runway Object Free Area Length Beyond RW End*
- *Runway Protection Zone*
- *Runway Centerline to Taxiway/Taxilane Centerline*
- *Runway Centerline to Holdline*
- *Runway Centerline to Aircraft Parking Area*
- *Runway End Siting*
- *Part 77, Objects Affecting Navigable Airspace*
- *Taxiway Width*
- *Taxiway Safety Area Width*
- *Taxiway Object Free Area Width*

16. Airspace / Airfield Capacity

As associated with each alternative, this criterion will assess the ability of the area airspace to accommodate the anticipated aeronautical demand without conflict, and the ability of the runway/taxiway system to accommodate anticipated aircraft operations without appreciable delay.

17. Obstruction Removal

This criterion will consider the number of obstructions that would require removal to meet aircraft approach, departure, and circling airspace needs, as related to each alternative. Applicable information found in The Virginia Department of Aviation's compatible land use guide will also be considered.

18. Instrumentation / lighting Improvements

This criterion will consider each alternative's ability to utilize and incorporate current and upcoming technologies such as GPS - WAAS based navigation and approach capabilities, as well as lighting aids.

19. Ability to Meet User Needs

This criterion will assess each alternative's overall ability to meet user needs, including: ability to provide convenient access to destinations within the service area; ability to accommodate a high percentage of the anticipated aircraft mix; and ability to provide on airport support facilities for various types of general aviation related activities.

Economic Factors Category

20. Development Costs

This criterion will consider the estimated development costs associated with the implementation of each alternative. Constant 2008 dollars will be used in all calculations.

21. Economic Benefits

Using existing data contained in the 2004 Commonwealth of Virginia Economic Impact Study, this criterion will consider how airport related jobs might shift from one community to another community – as related to each alternative.

22. FAA Funding Potential

As associated with each alternative, this criterion will assess the potential of the airport facility to be included in FAA's National Plan of Integrated Airport Systems (NPIAS) document, and become eligible for FAA grant funding.

23. Financial Viability Potential

As associated with each alternative, and using other similar general aviation airports as examples, this criterion will consider the potential of the airport facility to operate as a viable economic entity.

Public Support Factors Category

24. Ability To Secure A Public Airport Sponsor

As associated with each alternative, this criterion will consider the ability to secure a public airport sponsor for the airport facility.

25. Airport User Support

This criterion will assess the ability to achieve a high level of airport user support as related to each alternative.

26. Community Support

This criterion will assess the ability to achieve a high level of community support as related to each alternative.

27. Public Agency Support

This criterion will assess the ability to achieve a high level of public agency support as related to each alternative.