# 10 System Evaluation – Facilities and Services

This chapter presents an evaluation of airport facilities and services, the second of a three-step evaluation of the Kentucky system of 59 public-use airports. Types of airport facilities and services are evaluated using one of two major criteria: the airport's runway design code (RDC) or the Kentucky Statewide Aviation System Plan (SASP) airport role. All evaluations in this chapter are based on goals, objectives, and performances measures detailed in Chapter 2: Goals, Objectives, and Performance Measures.

In the Federal Aviation Administration (FAA) Advisory Circular 150/5300-13A, Airport Design, the FAA outlines standards for many elements of airport design based on the RDC of each runway. Elements of airport design included in this chapter, evaluated based on RDC, include the following:

- Runway Width
- Runway Safety Area (RSA)
- Runway Protection Zone (RPZ)
- Runway Object Free Area (OFA)
- Runway Centerline to Aircraft Holding Position Separation
- Runway Centerline to Taxiway Centerline Separation
- Runway Centerline to Aircraft Parking Area Separation

Other airport facilities and all airport services are evaluated based upon the airport's role. Chapter 8: Airport Role Analysis and Benchmarks sets facility and service benchmarks for each of the five SASP airport roles. Airport facilities and services based on these benchmarks that are evaluated in this chapter include the following:

- Runway Length
- Runway Lighting
- Approach Lighting Systems
- Instrument Approach Procedures (IAP)
- Aircraft Fuel
- Airport Automobile Parking
- Snow Removal
- Terminal/Administration Building
- Taxiway Type
- Visual Approach Aids
- Runway End Identifier Lights
- Automated Weather Reporting
- Airport Beacon
- Windsock
- Airfield Fencing
- Security Access Control System

The following sections explain the evaluation of airport design elements and facility and service benchmarks. Note that Kentucky's three largest commercial service airports – Cincinnati/Northern Kentucky International Airport, Blue Grass Airport in Lexington, and Louisville International Airport – are only included in this analysis as a matter of procedure to illustrate full system performance. This analysis will not lead to any recommendations for these three airports.

# System Performance – Airport Design Compliance

This section analyzes the extent to which Kentucky's public airports maintain compliance with standards established by the Federal Aviation Administration (FAA). Many of the FAA's compliance regulations are tied to an airport's grant assurances. The authority to require compliance standards comes from Order 5190.6B, the *FAA Airport Compliance Manual*, which outlines the FAA Airport Compliance Program, while grant assurances are detailed in *Grant Assurances Airport Sponsors*. When an airport accepts federal funds or federal property for the development or operation of a public airport, it enters into a contractual obligation with the FAA. The primary goal of the program is to educate and inform sponsors on their compliance obligations and how those obligations apply to their particular airport. In the event of a violation, the FAA will work with the sponsor to achieve compliance. Only when all efforts have failed to achieve compliance will the FAA resort to other actions, such as the limiting or withholding of federal funding.[1]

To analyze the performance of Kentucky's airports in terms of airport design compliance, several data sources were consulted. The primary data sources were Kentucky's airports via the Airport Inventory and Data Survey. Additional data sources included individual airport master plans and airport layout plays (ALPs), the knowledge of KDA staff members, satellite imagery from sources such as Google Maps, and various internet resources.

Airport design data was gathered for all 59 of Kentucky's public-use airports. However, this analysis applies primarily to the Commonwealth's 53 general aviation airports. Additionally, while the FAA's grant assurances only apply to airports included in the National Plan of Integrated Airport Systems (NPIAS), Kentucky's four public non-NPIAS airports are also included in this analysis. The airport design factors analyzed as part of the SASP are viewed as basic standards to which any public airport should adhere.

In many cases, it may not be practical or even possible to achieve compliance with all elements of airport design. However, standards remain in effect even in cases of noncompliance, and no actions should be taken that would further noncompliance. For example, facilities such as NAVAIDs should not be installed in an RSA even if that RSA does not currently meet all requirements. In addition, the requirements and dimensions of these airport design elements may increase as a result of changes to an airport's critical aircraft or instrument approach minimums. This may result in noncompliant airport design due to conditions such as improperly graded RSAs, uncontrolled RPZ area, or inadequate separation of the runway and taxiway. Airport sponsors and the FAA are required to perform continuous evaluation of all elements of airport design that are not currently in compliance. Working towards compliance is often an ongoing effort, with incremental improvements made as they become feasible.

## *Runway Width Compliance*

**Objective 1.02: Assess the adequacy of runway width at each system airport based on its runway design code.**

The required width of a runway is based on the runway's RDC and instrument approach visibility minimums, and is not directly tied to runway length. That said, longer runways typically serve larger, more demanding aircraft which in turn lead to more advanced RDCs and higher standards for runway widths. Depending on an airport's RDC and visibility minimums, the required runway width may range from 60 feet to 200 feet. The runway width associated with an airport's RDC is also an important component of federal airport funding, as the FAA will typically only fund for

[1] Federal Aviation Administration Order 5190.6B, *FAA Airport Compliance Manual*.

maintenance and rehabilitation of runway pavements for the width associated with the RDC. **Table 10-1** details runway widths associated with all RDCs and approach visibility minimums.

**Table 10-1**
**Runway Widths by RDC**

| Runway Design Code | Runway Width (feet) | |
|---|---|---|
| | Visibility Not Lower Than 3/4 Mile | Visibility Lower Than 3/4 Mile |
| A/B-I Small | 60 | 75 |
| A/B-I | 60 | 100 |
| A/B-II | 75 | 100 |
| A/B-III | 100 | 100 |
| A/B-IV | 150 | 150 |
| C/D/E-I & II | 100 | 100 |
| C/D/E-III to V | 150 | 150 |
| C/D/E-VI | 200 | 200 |

Source: FAA Advisory Circular 150/5300-13A, Airport Design

All 59 airports in Kentucky's public system meet the required runway width associated with their RDC and visibility minimum. Therefore, there will be no recommendations associated with widening runways in Kentucky.

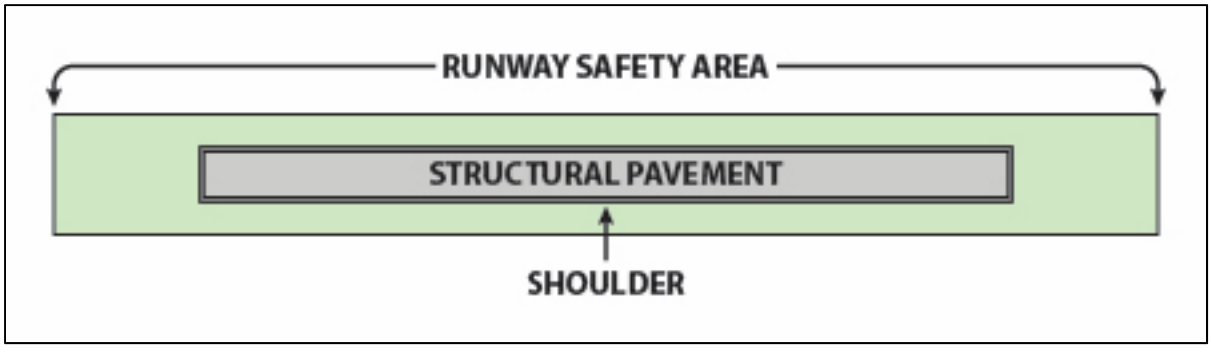
## *Runway Safety Area Compliance*

**Objective 2.01: Assess whether each system airport adheres to FAA runway safety area standards on primary runways.**

**Objective 2.02: Assess whether each system airport adheres to FAA runway safety area standards on other runways.**

The runway safety area (RSA) is a rectangular area that surrounds each runway, and is one of many areas in and around an airport that is regulated by the FAA for the purposes of enhancing airport safety and efficiency. The RSA is specifically defined by the FAA as "a defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway." The RSA is centered on a runway centerline, and has dimensions based on the RDC. A hypothetical example of an RSA is shown in **Figure 10-1**.

**Figure 10-1**
**Runway Safety Area**




Source: CDM Smith, FAA.

FAA standards for RSA design are detailed in Advisory Circular 150/5300-13A, Airport Design. Under FAA airport design standards, the RSA must be:

1. Cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations;
2. Drained by grading or storm sewers to prevent water accumulation;
3. Capable, under dry conditions, of supporting snow removal equipment, Aircraft Rescue and Fire Fighting (ARFF) equipment, and the occasional passage of aircraft without causing damage to the aircraft; and
4. Free of objects, except for objects that need to be located in the RSA because of their function. Objects higher than 3 inches (76 mm) above grade must be constructed, to the extent practical, on frangible structures of the lowest practical height with the frangible point no higher than 3 inches (76 mm) above grade. Other objects, such as manholes, should be constructed at grade and capable of supporting the loads noted above. In no case should their height exceed 3 inches (76 mm) above grade.

Failing to meet any of these standards results in a noncompliant RSA. Other items that may also lead to a noncompliant RSA include insufficient airport property ownership and a lack of roadway/vehicle access. It is recommended that no part of an RSA be more than 300 feet (100 m) from an all-weather road or paved operational surface. This ensures that the entire RSA is accessible to rescue and ARFF equipment.

A non-standard or nonconforming RSA can potentially reduce usable runway length through displaced or relocated thresholds and declared distances, which affect other runway and taxiway geometry, and/or otherwise limit the development capabilities and diminish the function of the airport. Declared distances are a tool used by airport management and the FAA to meet certain safety and operational standards, including RSA requirements. It accomplishes this by publishing what the acceptable runway lengths are for takeoff and landing operations that allow for sufficient safety margins in the RSA. Using part of the runway to meet RSA requirements is preferable to permanently removing runway pavement to meet the safety criteria, but not as desirable as establishing full-dimension RSAs at each runway end. Furthermore, declared distances are based on turbine powered aircraft performance parameters, so users of piston powered aircraft may not appreciate the reduced safety margins found at runway ends where declared distances are in use.

Four system airports make use of declared distances to achieve RSA standards: Bowman Field, Fulton, Lake Barkley State Resort Park, and Gene Snyder Airport. The analysis of their RSAs, like all airports, assumes that declared distances are not in use in an effort to maximize the runway length available for operations.

As stated, the dimensions of an RSA are determined by the RDC of the specific runway and instrument approach visibility minimums – the larger the wingspan and faster the approach of a runway's critical aircraft, the larger the RSA dimensions. The length of an RSA extending beyond the runway end begins at the runway end when a stopway is not provided, and when a stopway is provided, the length begins at the stopway end. RSA dimensions required for each RDC are detailed in **Table 10-2**.

**Table 10-2**
**Runway Safety Area Dimensions**

| Runway Design Code | Runway Safety Area Dimensions | |
|---|---|---|
| | Visibility Not Lower Than 3/4 Mile | Visibility Lower Than 3/4 Mile |
| A/B-I | 240' beyond runway end<br>240' prior to threshold<br>120' width | 600' beyond runway end<br>600' prior to threshold<br>300' width |
| A/B-II | 300' beyond runway end<br>300' prior to threshold<br>150' width | 600' beyond runway end<br>600' prior to threshold<br>300' width |
| A/B-III | 600' beyond runway end<br>600' prior to threshold<br>300' width | 800' beyond runway end<br>600' prior to threshold<br>400' width |
| A/B-IV | 1,000' beyond runway end<br>600' prior to threshold<br>500' width | 1,000' beyond runway end<br>600' prior to threshold<br>500' width |
| C/D/E | 1,000' beyond runway end<br>600' prior to threshold<br>500' width | 1,000' beyond runway end<br>600' prior to threshold<br>500' width |

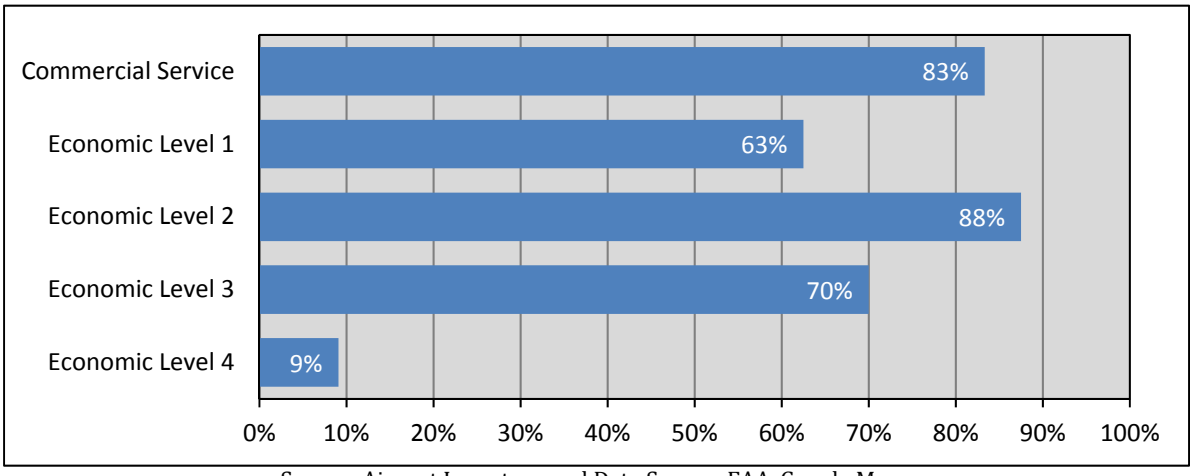
*For C-I and C-II RDCs, an RSA width of 400 feet is permissible.
Source: FAA Advisory Circular 150/5300-13A, Airport Design

RSA standards also specify acceptable longitudinal and transverse ground contour grade and compaction beyond the runway ends to help protect aircraft during takeoff or landing mishaps, and to provide access for emergency equipment. Longitudinal grades, longitudinal grade changes, vertical curves, and distance between changes in grades for the section of an RSA between the runway ends (parallel to the runway) are the same as the comparable standards for the end and stopway. Exceptions are allowed when necessary because of taxiways or other runways within the area. For the first 200 feet (61 m) of the RSA beyond the runway ends, the longitudinal grade is between 0 and 3 percent, with any slope being downward from the ends. For the remainder of the safety area, the maximum allowable positive longitudinal grade is such that no part of the RSA penetrates any applicable approach surface or clearway plane. The maximum allowable negative grade is 5 percent. Limitations on longitudinal grade changes are plus or minus 2 percent per 100 feet (30 m). Because the ability for an overrunning aircraft to stop within the RSA decreases as the downhill grade increases, it is recommended to avoid using the maximum grades if possible. Maximum grades may also result in approach lighting or other NAVAIDs being mounted on non-frangible supports.

For the SASP, RSA compliance was estimated using two primary sources. First, during the inventory phase, airport representatives reported known issues in their RSAs. In addition, satellite imagery was inspected for each airport, and obvious RSA issues were noted. Using these satellite images, it was also possible to estimate the area of each RSA that exists outside of airport property. This analysis is not an engineering-level assessment of each RSA, and follow-up analysis should be conducted on any issues identified as part of the SASP.

**Figure 10-2** summarizes the percentage of airports by role that were found to have no issues with the RSA of their primary runway. In total, 59 percent of the system has primary runway RSAs with no issues. With only 9 percent of airports found to have a compliant primary RSA, the Economic Level 4 group performs the lowest in this performance measure.

**Figure 10-2**
**Primary Runway RSA Compliance at Kentucky Airports**




Source: Airport Inventory and Data Survey, FAA, Google Maps.

RSA issues on primary runways took a variety of forms, but the most common were issues with grading and filling (13 airports), uncontrolled property (13 airports), and vegetation such as trees and shrubs (12 airports). In addition, 10 airports were found to have roads in their primary runway RSA, and two airports had other issues such as structures and walking paths. Details of RSA issues can be found in **Table 10-3**.

**Table 10-3**
**Details of Primary Runway RSA Issues at Kentucky Airports**

| FAA ID | Associated City | Airport Name | |
|---|---|---|---|
| **Commercial Service** | | | |
| BWG | Bowling Green | Bowling Green-Warren County Regional | Uncontrolled: 0.52 acres |
| CVG | Covington | Cincinnati/Northern Kentucky International | No Issues |
| LEX | Lexington | Blue Grass | No Issues |
| SDF | Louisville | Louisville International-Standiford Field | No Issues |
| OWB | Owensboro | Owensboro-Daviess County Regional | No Issues |
| PAH | Paducah | Barkley Regional | No Issues |
| **Economic Level 1** | | | |
| AAS | Campbellsville | Taylor County | No Issues |
| DVK | Danville | Stuart Powell Field | RW 30: Shrubs<br>RW 30: Grading, fill |
| EKX | Elizabethtown | Addington Field | No Issues |
| FGX | Flemingsburg | Fleming-Mason | RW 07: Grading, fill<br>RW 25: Grading, fill |
| FFT | Frankfort | Capital City | No Issues |
| 27K | Georgetown | Georgetown Scott County - Marshall Field | RW 21: 2-track road may require grading |
| JQD | Hartford | Ohio County | No Issues |
| CPF | Hazard | Wendell H. Ford Regional | No Issues |
| EHR | Henderson | Henderson City-County | RW 09: Public road<br>RW 27: Public roads<br>Uncontrolled: 1.67 acres |
| HVC | Hopkinsville | Hopkinsville-Christian County | RW 26: Dirt road, grading<br>Uncontrolled: 0.19 |

**Table 10-3**
**Details of Primary Runway RSA Issues at Kentucky Airports**

| FAA ID | Associated City | Airport Name | |
|---|---|---|---|
| K24 | Jamestown | Russell County | No Issues |
| LOZ | London | London-Corbin-Magee Field | RW 06: Trees/shrubs<br>RW 06: Fence relocation<br>RW 24: Trees<br>RW 24: Structures<br>Uncontrolled: 3.98 acres |
| LOU | Louisville | Bowman Field | RW 06: Walking path<br>RW 06: Trees/shrubs<br>Uncontrolled: 0.4 acres |
| 2I0 | Madisonville | Madisonville Regional | No Issues |
| M25 | Mayfield | Mayfield Graves County | No Issues |
| SYM | Morehead | Morehead-Rowan County Clyde A. Thomas Regional | No Issues |
| IOB | Mount Sterling | Mount Sterling-Montgomery County | No Issues |
| CEY | Murray | Kyle-Oakley Field | No Issues |
| PBX | Pikeville | Pikeville – Pike County Regional | RW 09: Trees<br>RW 09: Non-secure service road<br>RW 27: Fill at end of RSA<br>RW 27: Trees<br>RW 27: Public road<br>Uncontrolled: 5.07 acres |
| SJS | Prestonsburg | Big Sandy Regional | RW 03: Trees<br>RW 03: Public road<br>RW 21: Trees/shrubs<br>Uncontrolled: 0.33 acres |
| RGA | Richmond | Central Kentucky Regional | No Issues |
| SME | Somerset | Lake Cumberland Regional | No Issues |
| 6I2 | Springfield | Lebanon-Springfield | RW 11: Grading, deep fill<br>RW 29: Grading, deep fill |
| BYL | Williamsburg | Williamsburg-Whitley County | No Issues |
| **Economic Level 2** | | | |
| DWU | Ashland | Ashland Regional | No Issues |
| BRY | Bardstown | Samuels Field | No Issues |
| GLW | Glasgow | Glasgow Municipal | No Issues |
| M21 | Greenville | Muhlenberg County | No Issues |
| 5M9 | Marion | Marion-Crittenden County | No Issues |
| EKQ | Monticello | Wayne County | No Issues |
| 4M7 | Russellville | Russellville-Logan County | RW 06: Fill at end of RSA |
| TWT | Sturgis | Sturgis Municipal | No Issues |
| **Economic Level 3** | | | |
| 0I8 | Cynthiana | Cynthiana-Harrison County | No Issues |
| K62 | Falmouth | Gene Snyder | RW 03: Evidence of slope collapse<br>RW 21: Grading, fill at north end |
| 1M7 | Fulton | Fulton | RW 09: Grading<br>RW 27: Public road<br>Uncontrolled: 0.54 acres |
| I93 | Hardinsburg | Breckinridge County | No Issues |

**Table 10-3**
**Details of Primary Runway RSA Issues at Kentucky Airports**

| FAA ID | Associated City | Airport Name | |
|---|---|---|---|
| I35 | Harlan | Tucker-Guthrie Memorial | No Issues |
| M20 | Leitchfield | Grayson County | RW 02: Trees<br>Uncontrolled: 0.45 acres |
| KY8 | Lewisport | Hancock Co-Ron Lewis Field | No Issues |
| 1A6 | Middlesboro | Middlesboro-Bell County | RW 10: Trees<br>RW 10: Public road<br>RW 28: Public road<br>Uncontrolled: 0.75 acres |
| 2M0 | Princeton | Princeton-Caldwell County | No Issues |
| TZV | Tompkinsville | Tompkinsville-Monroe County | No Issues |
| **Economic Level 4** | | | |
| 1M9 | Cadiz | Lake Barkley State Resort Park | RW 02: Trees<br>RW 20: Trees |
| I96 | Columbia | Columbia-Adair County | RW 08: Grading, fill |
| 8M7 | Dawson Springs | Tradewater | RW 18: Trees |
| 2I3 | Falls of Rough | Rough River State Resort Park | RW 02: Grading, fill at end of RSA<br>RW 20: Grading, fill at end of RSA |
| M34 | Gilbertsville | Kentucky Dam Village State Resort Park | RW 09: Trees<br>RW 27: Shrubs<br>Uncontrolled: 0.35 acres |
| JKL | Jackson | Julian Carroll | RW 01: Trees<br>RW 19: Grading, fill at north end |
| I53 | Liberty | Liberty-Casey County | RW 01: Minor grading in RSA center, 2-track road |
| 18I | Pine Knot | McCreary County | RW 04: Grading, fill at south corner |
| 8M9 | Providence | Providence-Webster County | RW 16: Regrade unpaved road<br>RW 34: Shrubs<br>Uncontrolled: 0.2 acres |
| I50 | Stanton | Stanton-Powell County | RW 06: Public road<br>RW 24: Public road<br>Uncontrolled: 0.14 acres |
| 9I3 | West Liberty | West Liberty | No Issues |

Source: Airport Inventory and Data Survey, Google Earth.

RSAs on secondary runways were also assessed as part of the SASP. Only nine Kentucky system airports have more than one runway, and five were found to have issues in their RSAs. However, two of these airports are Commercial Service airports, and the SASP prioritizes design standard improvements at GA airports. The full list of RSA issues on secondary runways is as follows:

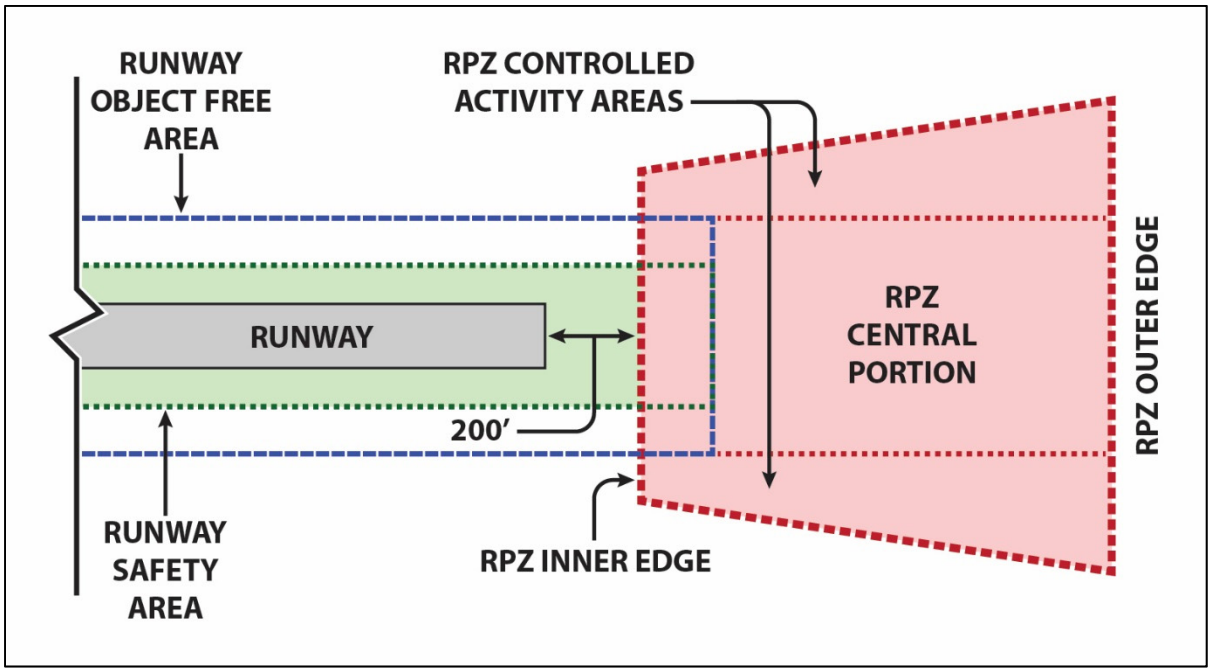
- **Barkley Regional Airport** – Public road in Runway 14 end RSA
- **Bowling Green-Warren County Regional Airport** – 0.17 acre of uncontrolled land
- **Bowman Field** – 0.1 acre of uncontrolled land
- **Stuart Powell Field** – 0.12 acre of uncontrolled land
- **Wendell H. Ford Regional Airport** – Slope failure

## *Runway Protection Zone Control*

**Objective 2.03: Assess whether each system airport controls its runway protection zones on the primary runway.**

Like the RSA, the runway protection zone (RPZ) is an area regulated by the FAA for purposes of safety and operational efficiency. The RPZ is a trapezoidal area located at ground level prior to the threshold or beyond the runway end, designed to enhance the protection of people and property on the ground. **Figure 10-3** displays a hypothetical RPZ, including its location in relation to the runway and RSA.

**Figure 10-3**
**Runway Protection Zone**




Source: CDM Smith, FAA.

RPZ compliance is typically described in terms of the percentage of the RPZ that is "controlled" by the airport. Control is determined through either ownership of the land (fee simple) or an easement granting control of the area to the airport. Note that the percentage controlled of an RPZ detailed in the SASP is often an estimate made by airport representatives or by the consultant team, and does not claim to provide the accuracy of an on-the-ground engineering study.

Other factors that may lead to noncompliant RPZs include the following:

- Unapproved land uses within the RPZ.
- Man-made and/or natural object penetration and height above approach surface.
- Unapproved encroachments.

Similarly to the RSA, the dimensions of an RPZ are determined by a runway's RDC combined with its approach visibility minimums. As such, a runway with a critical aircraft having a larger wingspan and faster approach requires a larger RPZ area. Runway ends can have two RPZs, an approach RPZ and departure RPZ. Both begin 200 feet beyond the runway end or takeoff run available. While the approach and departure RPZs may be the same dimension, a departure RPZ cannot be larger than an approach RPZ. Because of this, at runway ends where there is no displaced threshold, property interests and clearing requirements are governed by the approach RPZ. In cases where there is a displaced threshold, the approach RPZs is located farther up the runway pavement than the departure RPZ, and therefore both areas should be controlled and cleared. The dimensions of approach and departure RPZs, per RDC and visibility minimums, are detailed in **Table 10-4**.

**Table 10-4**
**Runway Protection Zone Dimensions**

| Runway Design Code | Runway Protection Zone Dimensions | | |
|---|---|---|---|
| | VFR/Visibility Not Lower Than 1 Mile | Visibility Not Lower Than 3/4 Mile | Visibility Lower Than 3/4 Mile |
| *Approach RPZ* | | | |
| A/B-I (Small) | 250' inner width<br>1000' length<br>450' outer width | 1,000' inner width<br>1,700' length<br>1,510' outer width | 1,000' inner width<br>2,500' length<br>1,750' outer width |
| A/B-I to IV | 500' inner width<br>1000' length<br>700' outer width | 1,000' inner width<br>1,700' length<br>1,510' outer width | 1,000' inner width<br>2,500' length<br>1,750' outer width |
| C/D/E | 500' inner width<br>1700' length<br>1010' outer width | 1,000' inner width<br>1,700' length<br>1,510' outer width | 1,000' inner width<br>2,500' length<br>1,750' outer width |
| *Departure RPZ* | | | |
| A/B-I (Small) | 250' inner width<br>1000' length<br>450' outer width | 250' inner width<br>1,000' length<br>450' outer width | 250' inner width<br>1,000' length<br>450' outer width |
| A/B-I to IV | 500' inner width<br>1000' length<br>700' outer width | 500' inner width<br>1,000' length<br>700' outer width | 500' inner width<br>1,000' length<br>700' outer width |
| C/D/E | 500' inner width<br>1700' length<br>1010' outer width | 500' inner width<br>1,700' length<br>1,010' outer width | 500' inner width<br>1,700' length<br>1,010' outer width |

Source: FAA Advisory Circular 150/5300-13A, Airport Design.

Certain land uses are permitted within the RPZ. As specified in FAA Advisory Circular 150/5300-13A, these land uses include the following:

- Farming that meets the minimum buffers, as specified by the FAA in Advisory Circular 150/5300-13A;
- Irrigation channels as long as they do not attract birds;

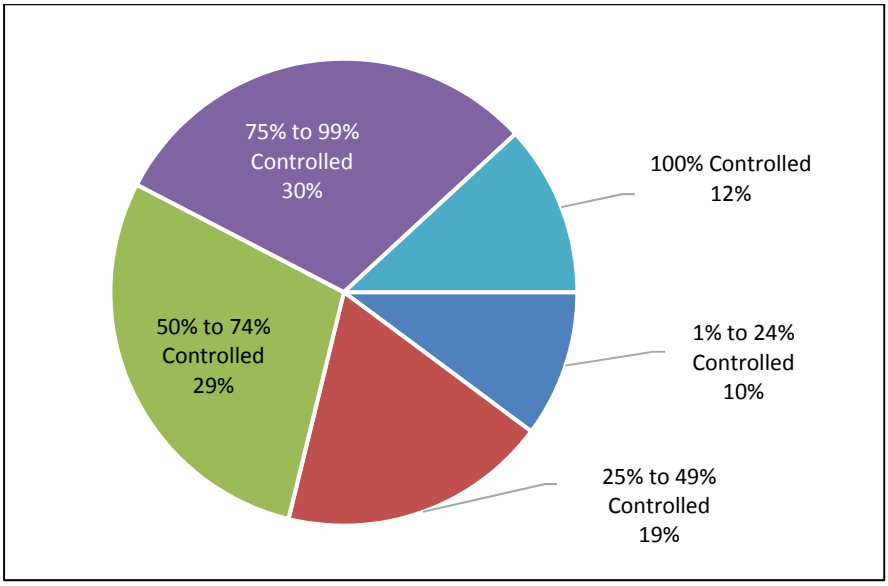
- Airport service roads, as long as they are not public roads and are directly controlled by the airport operator;
- Underground facilities, as long as they meet other design criteria, such as RSA requirements, as applicable;
- Unstaffed NAVAIDs and facilities, such as equipment for airport facilities that are considered fixed-by-function in regard to the RPZ.

The dimensions of an RPZ may increase as a result of a change to the critical aircraft or instrument approach of a runway. This in turn my result in incompatible land uses due to existing airport facilities or structures such as buildings, fuel farms, or utilities. In addition to airport facilities resulting in incompatible land uses, the FAA lists recreational uses, transportation facilities, hazardous material storage, and wastewater treatment facilities as incompatible land uses of primary concern.

In the case of incompatible land uses, airport sponsors must work alongside the appropriate FAA Regional Office (RO) and Airport District Office (ADO) to develop alternatives pertaining to these land uses. Goals of these alternatives should be to avoid introducing the land use into the RPZ altogether, minimizing the impact of the land use, or mitigating risk to people and property on the ground. Upon development of these alternatives, the FAA National Airport Planning and Environmental Division and FAA Airport Engineering Division will make a joint determination regarding the approval of such land uses on the airport's ALP.

**Figure 10-4** summarizes primary RPZ control at Kentucky system airports. This includes all RPZ areas on primary runways, including approach and departure RPZs on both runway ends. In total, only seven Kentucky system airports (12 percent of system) control 100 percent of the RPZ areas on their primary runway. However, an additional 18 airports (30 percent of system) control at least 75 percent of their primary runway's RPZ.

**Figure 10-4**
**Runway Protection Zone Compliance at Kentucky Airports**




Source: Airport Inventory and Data Survey, FAA, Google Maps.

**Table 10-5** provides full details of RPZ control on primary runways at Kentucky airports, including percentage control by runway end and total control.

## Table 10-5
## Details of Primary RPZ Control at Kentucky Airports

| FAA ID | Associated City | Airport Name | Primary Runway | End 1 RPZ Area (acres) | End 1 RPZ Percentage Controlled | End 2 RPZ Area (acres) | End 2 RPZ Percentage Controlled | Combined RPZ Area (acres) | Total RPZ Percentage Controlled |
|---|---|---|---|---|---|---|---|---|---|
| **Commercial Service** | | | | | | | | | |
| BWG | Bowling Green | Bowling Green-Warren County Regional | 03/21 | 48.98 | 90% | 48.98 | 85% | 98.0 | 87% |
| CVG | Covington | Cincinnati/Northern Kentucky International | 09/27 | NA | 100% | NA | 100% | NA | 100% |
| LEX | Lexington | Blue Grass | 04/22 | NA | 100% | NA | 100% | NA | 100% |
| SDF | Louisville | Louisville International-Standiford Field | 17L/35R | NA | 100% | NA | 100% | NA | 100% |
| OWB | Owensboro | Owensboro-Daviess County Regional | 18/36 | 48.98 | 100% | 78.91 | 90% | 127.9 | 94% |
| PAH | Paducah | Barkley Regional | 04/22 | 78.91 | 100% | 29.47 | 100% | 108.4 | 100% |
| **Economic Level 1** | | | | | | | | | |
| AAS | Campbellsville | Taylor County | 05/23 | 13.77 | 80% | 48.98 | 90% | 62.7 | 87% |
| DVK | Danville | Stuart Powell Field | 12/30 | 13.77 | 95% | 13.77 | 24% | 27.5 | 59% |
| EKX | Elizabethtown | Addington Field | 05/23 | 29.47 | 92% | 29.47 | 60% | 58.9 | 76% |
| FGX | Flemingsburg | Fleming-Mason | 07/25 | 19.18 | 98% | 13.77 | 93% | 33.0 | 96% |
| FFT | Frankfort | Capital City | 07/25 | 48.98 | 53% | 29.47 | 57% | 78.4 | 55% |
| 27K | Georgetown | Georgetown Scott County - Marshall Field | 03/21 | 48.98 | 100% | 48.98 | 100% | 98.0 | 100% |
| JQD | Hartford | Ohio County | 03/21 | 48.98 | 51% | 48.98 | 84% | 98.0 | 67% |
| CPF | Hazard | Wendell H. Ford Regional | 14/32 | 48.98 | 74% | 13.77 | 100% | 62.7 | 79% |
| EHR | Henderson | Henderson City-County | 09/27 | 29.47 | 100% | 29.47 | 100% | 58.9 | 100% |
| HVC | Hopkinsville | Hopkinsville-Christian County | 08/26 | 30.49 | 49% | 48.98 | 35% | 79.5 | 40% |
| K24 | Jamestown | Russell County | 17/35 | 13.77 | 100% | 48.98 | 42% | 62.7 | 55% |
| LOZ | London | London-Corbin-Magee Field | 06/24 | 32.95 | 56% | 42.81 | 55% | 75.8 | 55% |
| LOU | Louisville | Bowman Field | 06/24 | 27.04 | 50% | 50.40 | 71% | 77.4 | 64% |
| 2I0 | Madisonville | Madisonville Regional | 05/23 | 29.47 | 54% | 48.98 | 100% | 78.4 | 83% |
| M25 | Mayfield | Mayfield Graves County | 01/19 | 13.77 | 95% | 13.77 | 25% | 27.5 | 60% |
| SYM | Morehead | Morehead-Rowan County Clyde A. Thomas Regional | 02/20 | 48.98 | 85% | 29.47 | 83% | 78.4 | 84% |
| IOB | Mount Sterling | Mount Sterling-Montgomery County | 03/21 | 13.77 | 100% | 48.98 | 19% | 62.7 | 37% |
| CEY | Murray | Kyle-Oakley Field | 05/23 | 48.98 | 73% | 48.98 | 89% | 98.0 | 81% |

## Table 10-5
## Details of Primary RPZ Control at Kentucky Airports

| FAA ID | Associated City | Airport Name | Primary Runway | End 1 RPZ Area (acres) | End 1 RPZ Percentage Controlled | End 2 RPZ Area (acres) | End 2 RPZ Percentage Controlled | Combined RPZ Area (acres) | Total RPZ Percentage Controlled |
|---|---|---|---|---|---|---|---|---|---|
| PBX | Pikeville | Pikeville – Pike County Regional | 09/27 | 38.57 | 65% | 38.33 | 36% | 76.9 | 50% |
| SJS | Prestonsburg | Big Sandy Regional | 03/21 | 13.77 | 38% | 48.98 | 0% | 62.7 | 8% |
| RGA | Richmond | Central Kentucky Regional | 18/36 | 48.98 | 20% | 48.98 | 68% | 98.0 | 44% |
| SME | Somerset | Lake Cumberland Regional | 05/23 | 38.33 | 99% | 22.36 | 60% | 60.7 | 84% |
| 6I2 | Springfield | Lebanon-Springfield | 11/29 | 16.53 | 32% | 17.61 | 70% | 34.1 | 52% |
| BYL | Williamsburg | Williamsburg-Whitley County | 02/20 | 48.98 | 88% | 29.47 | 100% | 78.4 | 93% |
| **Economic Level 2** | | | | | | | | | |
| DWU | Ashland | Ashland Regional | 10/28 | 13.77 | 65% | 13.77 | 48% | 27.5 | 57% |
| BRY | Bardstown | Samuels Field | 02/20 | 13.77 | 30% | 13.77 | 72% | 27.5 | 51% |
| GLW | Glasgow | Glasgow Municipal | 08/26 | 13.77 | 100% | 19.36 | 88% | 33.1 | 93% |
| M21 | Greenville | Muhlenberg County | 06/24 | 13.77 | 75% | 8.41 | 97% | 22.2 | 83% |
| 5M9 | Marion | Marion-Crittenden County | 07/25 | 13.77 | 98% | 48.98 | 8% | 62.7 | 28% |
| EKQ | Monticello | Wayne County | 03/21 | 13.77 | 80% | 13.77 | 93% | 27.5 | 86% |
| 4M7 | Russellville | Russellville-Logan County | 07/25 | 13.77 | 14% | 13.77 | 39% | 27.5 | 26% |
| TWT | Sturgis | Sturgis Municipal | 01/19 | 48.98 | 91% | 13.77 | 100% | 62.7 | 93% |
| **Economic Level 3** | | | | | | | | | |
| 0I8 | Cynthiana | Cynthiana-Harrison County | 11/29 | 13.77 | 67% | 27.54 | 49% | 41.3 | 55% |
| K62 | Falmouth | Gene Snyder | 03/21 | 15.99 | 86% | 13.77 | 18% | 29.8 | 55% |
| 1M7 | Fulton | Fulton | 09/27 | 13.77 | 13% | 17.00 | 16% | 30.8 | 14% |
| I93 | Hardinsburg | Breckinridge County | 10/28 | 13.77 | 16% | 13.77 | 38% | 27.5 | 27% |
| I35 | Harlan | Tucker-Guthrie Memorial | 08/26 | 8.04 | 9% | 8.04 | 82% | 16.1 | 46% |
| M20 | Leitchfield | Grayson County | 02/20 | 13.77 | 0% | 13.77 | 78% | 27.5 | 39% |
| KY8 | Lewisport | Hancock Co-Ron Lewis Field | 05/23 | 13.77 | 25% | 13.77 | 100% | 27.5 | 62% |
| 1A6 | Middlesboro | Middlesboro-Bell County | 10/28 | 18.35 | 100% | 15.53 | 9% | 33.9 | 58% |
| 2M0 | Princeton | Princeton-Caldwell County | 05/23 | 13.77 | 76% | 13.77 | 90% | 27.5 | 83% |
| TZV | Tompkinsville | Tompkinsville-Monroe County | 04/22 | 13.77 | 87% | 13.77 | 100% | 27.5 | 94% |
| **Economic Level 4** | | | | | | | | | |
| 1M9 | Cadiz | Lake Barkley State Resort Park | 02/20 | 16.85 | 19% | 16.67 | 100% | 33.5 | 59% |
| I96 | Columbia | Columbia-Adair County | 08/26 | 13.77 | 6% | 13.77 | 6% | 27.5 | 6% |

**Table 10-5**
**Details of Primary RPZ Control at Kentucky Airports**

| FAA ID | Associated City | Airport Name | Primary Runway | End 1 RPZ Area (acres) | End 1 RPZ Percentage Controlled | End 2 RPZ Area (acres) | End 2 RPZ Percentage Controlled | Combined RPZ Area (acres) | Total RPZ Percentage Controlled |
|---|---|---|---|---|---|---|---|---|---|
| 8M7 | Dawson Springs | Tradewater | 18/36 | 8.04 | 5% | 8.04 | 100% | 16.1 | 52% |
| 2I3 | Falls of Rough | Rough River State Resort Park | 02/20 | 8.04 | 100% | 8.04 | 100% | 16.1 | 100% |
| M34 | Gilbertsville | Kentucky Dam Village State Resort Park | 09/27 | 13.77 | 5% | 13.77 | 78% | 27.5 | 41% |
| JKL | Jackson | Julian Carroll | 01/19 | 13.77 | 16% | 13.77 | 42% | 27.5 | 29% |
| I53 | Liberty | Liberty-Casey County | 01/19 | 13.77 | 11% | 13.77 | 4% | 27.5 | 7% |
| 18I | Pine Knot | McCreary County | 04/22 | 13.77 | 100% | 13.77 | 94% | 27.5 | 97% |
| 8M9 | Providence | Providence-Webster County | 16/34 | 8.04 | 25% | 8.04 | 25% | 16.1 | 25% |
| I50 | Stanton | Stanton-Powell County | 06/24 | 12.65 | 18% | 10.92 | 14% | 23.6 | 16% |
| 9I3 | West Liberty | West Liberty | 07/25 | 8.04 | 27% | 8.04 | 23% | 16.1 | 25% |

Source: Airport Inventory and Data Survey, FAA, Google Maps.
Note: End 1 refers to the first RW end listed under Primary Runway, while End 2 refers to the second end.
Note: It is assumed that CVG, LEX, and LOU control 100 percent of their RPZ areas.

## *Runway Object Free Area Control*

**Objective 2.04: Assess whether each system airport controls its object free area on their primary runway.**

Like the RSA, the runway object free area (OFA) is a rectangular area centered on the runway centerline. An OFA for a particular RDC and visibility minimum has the same lengths beyond the runway end and prior to the threshold as does the RSA, but is wider in all cases. A runway's OFA works as an extension of the RSA in terms of airport operational safety and efficiency.

The OFA is to remain clear of objects that are not essential for air navigation or aircraft taxiing, including both parked aircraft and agricultural operations, and is to be located within airport property boundaries. Objects necessary for air navigation, including NAVAIDs, are permitted within the OFA as long as they do not violate other airport clearing standards, as are taxiing aircraft. Ideally, an OFA is designed as it would be for a new runway, with terrain not protruding above the nearest point of the RSA within a distance from the edge of the RSA equal to one-half the most demanding wingspan of the RDC. Where practical, an OFA should maintain frangibility requirements of the runway's RSA. However, it is not always practical to apply this standard to existing runway OFAs. In this case, the FAA has specific standards for grading based on a runway's approach category and critical aircraft.[2]

As with other elements of airport design, a runway's OFA is based on its RDC and approach minimums. Dimensions of runway OFAs are detailed in **Table 10-6**.

**Table 10-6**
**OFA Dimensions by Runway Design Code**

| Runway Design Code | Object Free Area Dimensions | |
|---|---|---|
| | Visibility Not Lower Than 3/4 Mile | Visibility Lower Than 3/4 Mile |
| A/B-I | 240' beyond runway end<br>240' prior to threshold<br>250' width | 600' beyond runway end<br>600' prior to threshold<br>800' width |
| A/B-II | 300' beyond runway end<br>300' prior to threshold<br>500' width | 600' beyond runway end<br>600' prior to threshold<br>800' width |
| A/B-III | 600' beyond runway end<br>600' prior to threshold<br>800' width | 800' beyond runway end<br>600' prior to threshold<br>800' width |
| A/B-IV | 1,000' beyond runway end<br>600' prior to threshold<br>800' width | 1,000' beyond runway end<br>600' prior to threshold<br>800' width |
| C/D/E | 1,000' beyond runway end<br>600' prior to threshold<br>800' width | 1,000' beyond runway end<br>600' prior to threshold<br>800' width |

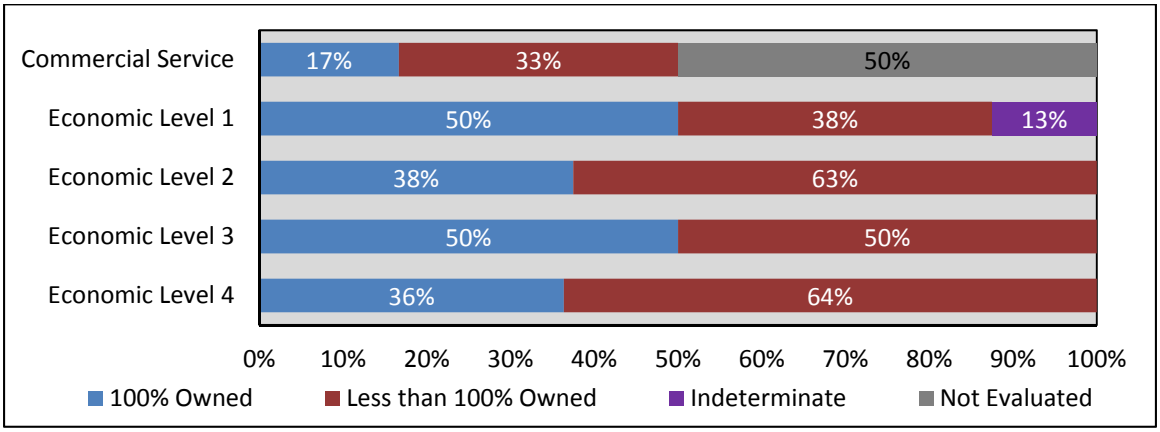
Source: FAA Advisory Circular 150/5300-13A, Airport Design.

For the purposes of the SASP, OFA compliance is related to property control over the OFA. If any percentage of the OFA is located on property that is not owned by the airport, that airport is determined to be out of compliance for their primary runway OFA.

[2] FAA Advisory Circular 150/5300-13A, Airport Design.

**Figure 10-5** summarizes primary runway OFA compliance at Kentucky airports. In total, only 42 percent of system airports were found to completely control their primary runway OFA. With 50 percent each, Economic Level 1 and Economic Level 3 had the most airports in compliance by percentage of total. However, the Commonwealth's three largest Commercial Service airports – Cincinnati/Northern Kentucky International Airport, Louisville International Airport-Standiford Field, and Blue Grass Airport – are not included in this analysis.

**Figure 10-5**
**Object Free Area Compliance at Kentucky Airports**




Source: Airport Inventory and Data Survey, FAA, Google Maps.

**Table 10-7** details OFA compliance by airport, including notes on the areas of each primary runway OFA that are not currently owned by the airport.

## Table 10-7
## Primary Runway OFA Compliance at Kentucky Airports

| FAA ID | Associated City | Airport Name | 100 Percent Owned by Airport | OFA Compliance Notes |
|---|---|---|---|---|
| **Commercial Service** | | | | |
| BWG | Bowling Green | Bowling Green-Warren County Regional | No | South end of OFA outside of AP property |
| CVG | Covington | Cincinnati/Northern Kentucky International | Not applicable | No exhibit to review |
| LEX | Lexington | Blue Grass | Not applicable | No exhibit to review |
| SDF | Louisville | Louisville International-Standiford Field | Not applicable | No exhibit to review |
| OWB | Owensboro | Owensboro-Daviess County Regional | Yes | |
| PAH | Paducah | Barkley Regional | No | North end of OFA outside AP property |
| **Economic Level 1** | | | | |
| AAS | Campbellsville | Taylor County | Yes | |
| DVK | Danville | Stuart Powell Field | Yes | |
| EKX | Elizabethtown | Addington Field | Yes | |
| FGX | Flemingsburg | Fleming-Mason | No | Northeast end of OFA outside AP property |
| FFT | Frankfort | Capital City | Yes | |
| 27K | Georgetown | Georgetown Scott County - Marshall Field | No | North end of OFA outside AP property |
| JQD | Hartford | Ohio County | Yes | |
| CPF | Hazard | Wendell H. Ford Regional | Yes | |
| EHR | Henderson | Henderson City-County | No | East and west ends of OFA outside AP property |
| HVC | Hopkinsville | Hopkinsville-Christian County | No | West end and south side of OFA outside AP property |
| K24 | Jamestown | Russell County | Yes | |
| LOZ | London | London-Corbin-Magee Field | No | North end of OFA outside AP property |
| LOU | Louisville | Bowman Field | No | South end of OFA outside of AP property |
| 2I0 | Madisonville | Madisonville Regional | Indeterminate | South end of OFA may extend beyond AP property |
| M25 | Mayfield | Mayfield Graves County | Yes | |
| SYM | Morehead | Morehead-Rowan County Clyde A. Thomas Regional | Yes | |
| IOB | Mount Sterling | Mount Sterling-Montgomery County | Yes | |
| CEY | Murray | Kyle-Oakley Field | Yes | |
| PBX | Pikeville | Pikeville – Pike County Regional | No | East end of OFA outside AP property |

## Table 10-7
## Primary Runway OFA Compliance at Kentucky Airports

| FAA ID | Associated City | Airport Name | 100 Percent Owned by Airport | OFA Compliance Notes |
|---|---|---|---|---|
| SJS | Prestonsburg | Big Sandy Regional | No | North end of OFA outside AP property |
| RGA | Richmond | Central Kentucky Regional | Indeterminate | West side of OFA may extend beyond AP property near each RW end |
| SME | Somerset | Lake Cumberland Regional | Yes | |
| 6I2 | Springfield | Lebanon-Springfield | No | South side of OFA outside AP property |
| BYL | Williamsburg | Williamsburg-Whitley County | Indeterminate | South end of OFA may extend beyond AP property |
| **Economic Level 2** | | | | |
| DWU | Ashland | Ashland Regional | No | East and west ends of OFA outside of AP property |
| BRY | Bardstown | Samuels Field | Yes | |
| GLW | Glasgow | Glasgow Municipal | No | East end of OFA outside AP property |
| M21 | Greenville | Muhlenberg County | No | South side of OFA outside AP property |
| 5M9 | Marion | Marion-Crittenden County | No | Northeast end of OFA outside AP property |
| EKQ | Monticello | Wayne County | Yes | |
| 4M7 | Russellville | Russellville-Logan County | No | South end of OFA outside of AP property |
| TWT | Sturgis | Sturgis Municipal | Yes | |
| **Economic Level 3** | | | | |
| 0I8 | Cynthiana | Cynthiana-Harrison County | Yes | |
| K62 | Falmouth | Gene Snyder | No | South side of south end OFA outside AP property |
| 1M7 | Fulton | Fulton | No | East end of OFA outside AP property |
| I93 | Hardinsburg | Breckinridge County | Yes | |
| I35 | Harlan | Tucker-Guthrie Memorial | Yes | |
| M20 | Leitchfield | Grayson County | No | East side of OFA outside of AP property |
| KY8 | Lewisport | Hancock Co-Ron Lewis Field | Yes | |
| 1A6 | Middlesboro | Middlesboro-Bell County | No | East and west ends of OFA outside of AP property |
| 2M0 | Princeton | Princeton-Caldwell County | Yes | |
| TZV | Tompkinsville | Tompkinsville-Monroe County | No | South end of OFA outside of AP property |

**Table 10-7**
**Primary Runway OFA Compliance at Kentucky Airports**

| FAA ID | Associated City | Airport Name | 100 Percent Owned by Airport | OFA Compliance Notes |
|---|---|---|---|---|
| **Economic Level 4** | | | | |
| 1M9 | Cadiz | Lake Barkley State Resort Park | Yes | |
| I96 | Columbia | Columbia-Adair County | No | East and west ends of OFA outside of AP property |
| 8M7 | Dawson Springs | Tradewater | No | North end of OFA outside AP property |
| 2I3 | Falls of Rough | Rough River State Resort Park | Yes | |
| M34 | Gilbertsville | Kentucky Dam Village State Resort Park | No | West end of OFA outside of AP property |
| JKL | Jackson | Julian Carroll | Yes | |
| I53 | Liberty | Liberty-Casey County | No | West side of OFA outside AP property |
| 18I | Pine Knot | McCreary County | Yes | |
| 8M9 | Providence | Providence-Webster County | No | North and south ends of OFA outside AP property |
| I50 | Stanton | Stanton-Powell County | No | East and west ends of OFA outside of AP property |
| 9I3 | West Liberty | West Liberty | No | South side of OFA outside AP property |

AP = airport
Source: CDM Smith, Google Maps.

## *FAA Airport Separation Standards*

**Objective 2.05: Assess whether each system airport meets FAA standards for separation of the primary runway to the holding position, parallel taxiway, and aircraft parking area.**

Additional elements of airport design analyzed as part of the SASP are FAA separation standards between the runway centerline and other airport facilities. As with the above elements of airport design, separation standards are based on a runway's RDC and approach minimums. The analysis of separation standards examined three FAA design standards: runway centerline to holding position separation, runway centerline to taxiway centerline separation, and runway centerline to aircraft parking area separation.

Markings on the taxiway leading up to the runway indicate how close to the runway an aircraft can safely position while awaiting its turn to use the runway. These hold position markings are designed to be a minimum distance from the runway centerline, based on the RDC. **Table 10-8** details runway centerline to hold position separation standards by RDC.

**Table 10-8**
**Runway Centerline to Holding Position Separation Standards**

| Runway Design Code | Runway Centerline to Holding Position Distance (feet) | |
|---|---|---|
| | Visibility Not Lower Than 3/4 Mile | Visibility Lower Than 3/4 Mile |
| A/B-I Small | 125 | 175 |
| A/B-I to III | 200 | 250 |
| A/B-IV | 250 | 250 |
| C/D/E-I to IV | 250 | 250 |
| C/D/E-V | 250 | 280 |
| C/D/E-VI | 280 | 280 |

Source: FAA Advisory Circular 150/5300-13A, Airport Design.

The RDC specifies how close a parallel taxiway can be located to each runway, as measured from the centerline of the taxiway to the centerline of the runway. **Table 10-9** details these standards.

**Table 10-9**
**Runway Centerline to Taxiway Centerline Separation Standards**

| Runway Design Code | Runway Centerline to Taxiway Centerline Distance (feet) | |
|---|---|---|
| | Visibility Not Lower Than 3/4 Mile | Visibility Lower Than 3/4 Mile |
| A/B-I Small | 150 | 200 |
| A/B-I | 225 | 250 |
| A/B-II | 240 | 300 |
| A/B-III | 300 | 350 |
| A/B-IV | 400 | 400 |
| C/D/E-I & II | 300 | 400 |
| C/D/E-III & IV | 400 | 400 |
| C/D/E-V by Airport Elevation:<br>≤ 1,345'<br>> 1,345' and < 6,560'<br>> 6,560' | <br>400<br>450<br>500 | <br>400<br>450<br>500 |
| C/D/E-VI | 500' | 500' |

Source: FAA Advisory Circular 150/5300-13A, Airport Design.

The RDC also determines how close aircraft parking ramps can be located to the runway, as measured from the parking ramp to the runway centerline. Since aircraft parking is not always clearly marked, there is a chance for ambiguity in this evaluation. **Table 10-10** details standards for runway centerline to aircraft parking area separation.

**Table 10-10**
**Runway Centerline to Aircraft Parking Area Separation Standards**

| Runway Design Code | Runway Centerline to Aircraft Parking Area Distance (feet) | |
|---|---|---|
| | Visibility Not Lower Than 3/4 Mile | Visibility Lower Than 3/4 Mile |
| A/B-I Small | 125 | 400 |
| A/B-I | 200 | 400 |
| A/B-II | 250 | 400 |
| A/B-III | 400 | 400 |
| A/B-IV | 500 | 500 |
| C/D/E-I & II | 400 | 500 |
| C/D/E-III to VI | 500 | 500 |

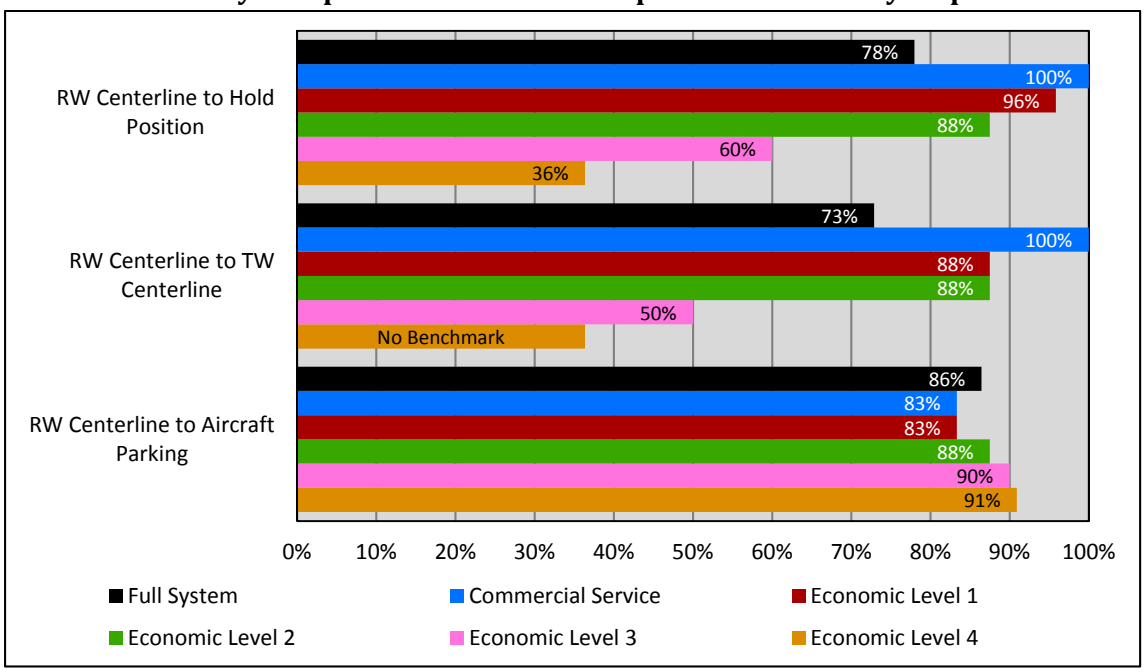
Source: FAA Advisory Circular 150/5300-13A, Airport Design.

***Separation Standards Compliance***

Separation standards for hold position and aircraft parking apply to all Kentucky system airports. All airports have an aircraft parking area, while all airports should have an aircraft hold position; the lack of a hold position also results in noncompliance with this standard. However, not all airports have a parallel taxiway. Runway centerline to parallel taxiway centerline compliance only applies to those airports with a full or partial parallel taxiway.

**Figure 10-6** summarizes separation standards compliance at Kentucky airports. In total, 78 percent of the system meets standards for runway centerline to hold position separation, including 100 percent of Commercial Service airports and 96 percent of Economic Level 1 airports. Of airports with some type of parallel taxiway, 73 percent meet separation standards, including 100 percent each of Commercial Service airports and 88 percent each of Economic Level 1 and Economic Level 2 airports. Finally, 86 percent of the system meets standards for runway centerline to aircraft parking area separation. In this category, Economic Level 3 and Economic Level 4 airports performed best, with 90 percent and 91 percent in compliance, respectively.

**Figure 10-6**
**Summary of Separation Standard Compliance at Kentucky Airports**




Source: CDM Smith, Google Maps.

**Table 10-11** details separation standards compliance at all 59 Kentucky system airports. Appendix B: Airports Not Meeting Separation Standards provides further details on airports not meeting these standards, detailing each standard that is not met and providing an aerial view and measurement depicting where on the airport the deficiency can be found. Measurements were determined using Google Earth. Measurements shown in blue meet the FAA standard. Measurements shown in red do not meet the FA standard. The FAA separation standards were based on the RDC assigned to the airport, which was what the airport reported, or, if that information was not available, determined from an assessment and discussion conducted by CDM Smith and KDA.

A later section of this report explains what recommended projects were developed for the airports that did not meet their FAA airport separation standards.

## Table 10-11
## Separation Standard Compliance at Kentucky Airports

| FAA ID | Associated City | Airport Name | Runway Centerline to Hold Position | Runway Centerline to Parallel Taxiway Centerline | Runway Centerline to Aircraft Parking Area |
|---|---|---|---|---|---|
| **Commercial Service** | | | | | |
| BWG | Bowling Green | Bowling Green-Warren County Regional | Yes | Yes | No |
| CVG | Covington | Cincinnati/Northern Kentucky International | Yes | Yes | Yes |
| LEX | Lexington | Blue Grass | Yes | Yes | Yes |
| SDF | Louisville | Louisville International-Standiford Field | Yes | Yes | Yes |
| OWB | Owensboro | Owensboro-Daviess County Regional | Yes | Yes | Yes |
| PAH | Paducah | Barkley Regional | Yes | Yes | Yes |
| **Economic Level 1** | | | | | |
| AAS | Campbellsville | Taylor County | Yes | No | Yes |
| DVK | Danville | Stuart Powell Field | Yes | Yes | Yes |
| EKX | Elizabethtown | Addington Field | Yes | Yes | Yes |
| FGX | Flemingsburg | Fleming-Mason | Yes | Yes | Yes |
| FFT | Frankfort | Capital City | Yes | Yes | Yes |
| 27K | Georgetown | Georgetown Scott County - Marshall Field | Yes | Yes | Yes |
| JQD | Hartford | Ohio County | Yes | No Parallel Taxiway | Yes |
| CPF | Hazard | Wendell H. Ford Regional | Yes | Yes | Yes |
| EHR | Henderson | Henderson City-County | Yes | Yes | No |
| HVC | Hopkinsville | Hopkinsville-Christian County | Yes | Yes | No |
| K24 | Jamestown | Russell County | Yes | Yes | Yes |
| LOZ | London | London-Corbin-Magee Field | Yes | Yes | Yes |
| LOU | Louisville | Bowman Field | Yes | Yes | Yes |
| 2I0 | Madisonville | Madisonville Regional | Yes | Yes | Yes |
| M25 | Mayfield | Mayfield Graves County | No | Yes | No |
| SYM | Morehead | Morehead-Rowan County Clyde A. Thomas Regional | Yes | Yes | Yes |
| IOB | Mount Sterling | Mount Sterling-Montgomery County | Yes | Yes | Yes |
| CEY | Murray | Kyle-Oakley Field | Yes | Yes | No |
| PBX | Pikeville | Pikeville – Pike County Regional | Yes | No | Yes |
| SJS | Prestonsburg | Big Sandy Regional | Yes | Yes | Yes |
| RGA | Richmond | Central Kentucky Regional | Yes | Yes | Yes |

## Table 10-11
## Separation Standard Compliance at Kentucky Airports

| FAA ID | Associated City | Airport Name | Runway Centerline to Hold Position | Runway Centerline to Parallel Taxiway Centerline | Runway Centerline to Aircraft Parking Area |
|---|---|---|---|---|---|
| SME | Somerset | Lake Cumberland Regional | Yes | Yes | Yes |
| 6I2 | Springfield | Lebanon-Springfield | Yes | Yes | Yes |
| BYL | Williamsburg | Williamsburg-Whitley County | Yes | Yes | Yes |
| **Economic Level 2** | | | | | |
| DWU | Ashland | Ashland Regional | No | No | No |
| BRY | Bardstown | Samuels Field | Yes | Yes | Yes |
| GLW | Glasgow | Glasgow Municipal | Yes | Yes | Yes |
| M21 | Greenville | Muhlenberg County | Yes | Yes | Yes |
| 5M9 | Marion | Marion-Crittenden County | Yes | Yes | Yes |
| EKQ | Monticello | Wayne County | Yes | Yes | Yes |
| 4M7 | Russellville | Russellville-Logan County | Yes | Yes | Yes |
| TWT | Sturgis | Sturgis Municipal | Yes | Yes | Yes |
| **Economic Level 3** | | | | | |
| 0I8 | Cynthiana | Cynthiana-Harrison County | No | Yes | No |
| K62 | Falmouth | Gene Snyder | Yes | No Parallel Taxiway | Yes |
| 1M7 | Fulton | Fulton | Yes | Yes | Yes |
| I93 | Hardinsburg | Breckinridge County | Yes | Yes | Yes |
| I35 | Harlan | Tucker-Guthrie Memorial | Yes | No Parallel Taxiway | Yes |
| M20 | Leitchfield | Grayson County | No | No Parallel Taxiway | Yes |
| KY8 | Lewisport | Hancock Co-Ron Lewis Field | Yes | Yes | Yes |
| 1A6 | Middlesboro | Middlesboro-Bell County | No | No | Yes |
| 2M0 | Princeton | Princeton-Caldwell County | No | No Parallel Taxiway | Yes |
| TZV | Tompkinsville | Tompkinsville-Monroe County | Yes | Yes | Yes |
| **Economic Level 4** | | | | | |
| 1M9 | Cadiz | Lake Barkley State Resort Park | Yes | No Parallel Taxiway | Yes |
| I96 | Columbia | Columbia-Adair County | No | No | No |
| 8M7 | Dawson Springs | Tradewater | No | No Parallel Taxiway | Yes |
| 2I3 | Falls of Rough | Rough River State Resort Park | Yes | No Parallel Taxiway | Yes |
| M34 | Gilbertsville | Kentucky Dam Village State Resort Park | No | Yes | Yes |

**Table 10-11**
**Separation Standard Compliance at Kentucky Airports**

| FAA ID | Associated City | Airport Name | Runway Centerline to Hold Position | Runway Centerline to Parallel Taxiway Centerline | Runway Centerline to Aircraft Parking Area |
|---|---|---|---|---|---|
| JKL | Jackson | Julian Carroll | No | No Parallel Taxiway | Yes |
| I53 | Liberty | Liberty-Casey County | No | No Parallel Taxiway | Yes |
| 18I | Pine Knot | McCreary County | No | No Parallel Taxiway | Yes |
| 8M9 | Providence | Providence-Webster County | No | Yes | Yes |
| I50 | Stanton | Stanton-Powell County | Yes | Yes | Yes |
| 9I3 | West Liberty | West Liberty | Yes | Yes | Yes |

Source: CDM Smith, Google Maps.

# Facility and Service Benchmarking

Because not all aspects of an airport's facilities and services can be evaluated based on FAA standards, it was necessary to develop system planning benchmarks for Kentucky airports. These benchmarks are based on the airport roles developed in Chapter 8 of this study, and are detailed in **Table 10-12**. The facilities and services outlined in these benchmarks are not requirements, but guidelines tailored so that each airport can best meet the market demands of its system role. Airports in higher economic level roles are assigned more demanding benchmarks styled to meet more demanding aircraft operations and economic activities.

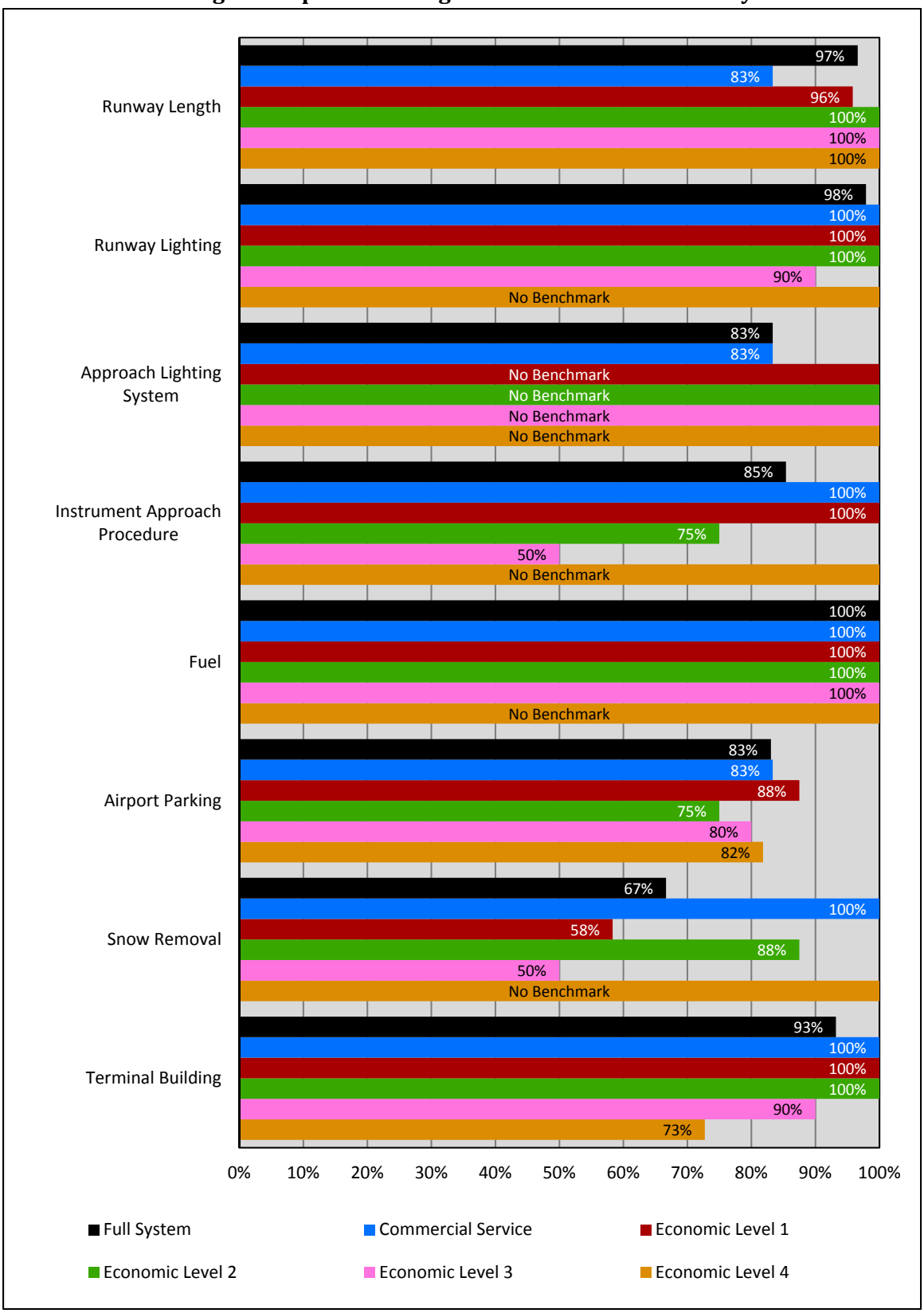
**Table 10-12**
**Performance Measures and Benchmarks Tied to Airport Roles**

| Obj. | Performance Measure | Commercial Service Airports | Economic Level 1 Airports | Economic Level 2 Airports | Economic Level 3 Airports | Economic Level 4 Airports |
|---|---|---|---|---|---|---|
| 1.01 | Runway Length | 6,500 ft. | 5,000 ft. | 4,000 ft. | 3,200 ft. | 2,400 ft. |
| 1.03 | Runway Lighting | High | Medium | Medium | Medium | N/A |
| 1.04 | Approach Lighting System | ALS | N/A | N/A | N/A | N/A |
| 1.05 | Instrument Approach Procedure | APV | APV | APV | Non-precision | Visual |
| 1.06 | Fuel | Jet-A, 100LL | Jet-A, 100LL | Jet-A, 100LL | 100LL, Self-Service | N/A |
| 1.07 | Airport Parking | Informational only | Informational only | Informational only | Informational only | Informational only |
| 1.08 | Snow Removal | On-airport | On-airport | Off-airport | Off-airport | N/A |
| 1.09 | Terminal Building | Yes | Yes | Yes | Yes | Yes |
| 2.05 | Taxiway Type | Full Parallel | Full Parallel | Partial Parallel | Partial Parallel | Turnarounds |
| 2.06 | Visual Approach Aids | PAPI | PAPI | PAPI | PAPI | N/A |
| 2.07 | Runway End Identifier Lights | REILs if no ALS | REILs if no ALS | REILs if no ALS | REILs | N/A |
| 2.08 | Automated Weather Reporting | AWOS | AWOS | AWOS | AWOS | N/A |
| 2.09 | Airport Beacon | Beacon | Beacon | Beacon | Beacon | N/A |
| 2.10 | Windsock | Windsock | Windsock | Windsock | Windsock | Windsock |
| 3.01 | Airfield Fencing | Complete | Complete | Complete | Partial | Partial |
| 3.02 | Security Access Control System | Yes | Yes | Yes | Yes | N/A |

Source: CDM Smith.

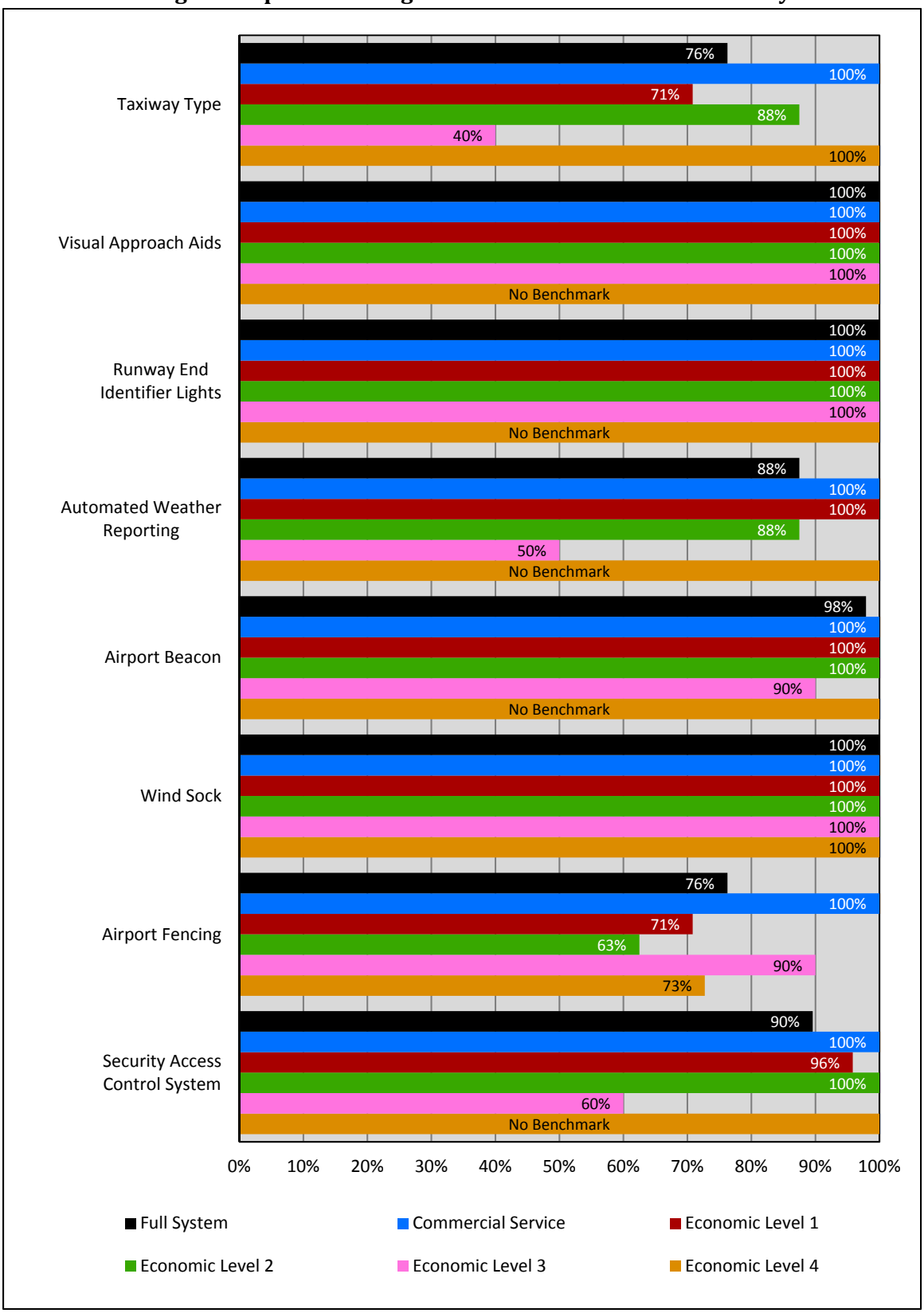
**Figures 10-7** and **10-8** summarize the results of the benchmarking analysis based on SASP roles, showing the percentage of airports by role that meet their benchmarks. The following sections provide further insight into the results of this analysis. The results of this analysis reveal an airport system that is very well equipped to handle the majority of the aviation activity that it serves. Like the evaluation based on RDCs and FAA standards, the majority of these benchmarks lead directly to recommendations made later in the SASP.

**Figure 10-7**
**Percentage of Airports Meeting SASP Goal 1 Benchmarks by Role**




Source: Airport Inventory and Data Survey, CDM Smith, FAA Form 5010.

**Figure 10-8**
**Percentage of Airports Meeting SASP Goals 2 and 3 Benchmarks by Role**




Source: Airport Inventory and Data Survey, CDM Smith, FAA Form 5010.

## *Runway Length*

**Objective 1.01: Assess the adequacy of primary runway length at each system airport based on assigned airport role.**

Runway length benchmarks apply to all five airport roles in the Kentucky system, ranging from 6,500 feet at Commercial Service airports to 2,400 feet at Economic Level 4 airports. In total, 97 percent of all system airports meet their role's benchmark, including 100 percent of Economic Level 2, Economic Level 3, and Economic Level 4 airports. The only airports not meeting benchmarks are Bowling Green-Warren County Regional Airport and Bowman Field in Louisville. The former is only short of the Commercial Service benchmark of 6,500 feet by one foot, while the latter is short of the Economic Level 1 benchmark of 5,000 feet by 675 feet.

## *Runway Lighting*

**Objective 1.03: Assess the adequacy of the primary runway lighting at each system airport based on assigned airport role.**

All SASP roles except Economic Level 4 have benchmarks for runway lighting. Of these roles, 98 percent meet benchmarks for runway lighting. Only Middlesboro-Bell County Airport is not meeting its runway lighting benchmark, which is the Economic Level 3 benchmark to have at least medium intensity lighting.

## *Approach Lighting System*

**Objective 1.04: Assess the adequacy of the approach lighting system on the primary runway at each system airport based on assigned airport role.**

The approach lighting system (ALS) benchmark applies only to Kentucky's six Commercial Service airports. Of these, only Bowling Green-Warren County Regional Airport does not currently have an ALS.

## *Instrument Approach Procedure*

**Objective 1.05: Assess the adequacy of the best instrument approach procedure at each system airport based on assigned airport role.**

Airports in all roles except the Economic Level 4 role have a benchmark for published instrument approach procedure (IAP). Commercial Service and Economic Levels 1 and 2 have a benchmark of an approach with vertical guidance (APV), while Economic Level 3 airports have a benchmark of a non-precision approach. Of these four roles, 85 percent meet role benchmarks for their IAP. This includes 100 percent of airports in the Commercial Service and Economic Level 1 roles.

## *Aircraft Fuel*

**Objective 1.06: Assess the adequacy of fuel provided at each system airport based on assigned airport role.**

The Commercial Service and Economic Levels 1 and 2 airports have a benchmark for both Jet A and 100LL avgas service, as these airports are all assumed to support moderate to high levels of both jet and piston aircraft activity. Economic Level 3 airports have a benchmark to offer 100LL avgas and self-service fueling. All airports in the Commercial Service and Economic Levels 1, 2, and 3 meet role objectives for aircraft fuel.

## *Airport Parking*

**Objective 1.07: Assess the adequacy of airport parking at each system airport based on airport manager's opinion.**

During the inventory phase of the SASP, airport managers were asked to report if the volume and condition of their automobile parking was sufficient to support their level of activity. In total, 83 percent of all system airports reported having adequate automobile parking, including at least 75 percent of each SASP role. However, this is strictly an informational benchmark, and will have no associated recommendations.

## *Snow Removal*

**Objective 1.08: Assess the adequacy of snow removal service provided at each system airport based on assigned airport role.**

System benchmarks for snow removal operations are either on-site snow removal operations, meaning the airport owns their snow-removal equipment, or reliable off-site snow removal, meaning the airport can rely on the county, municipality, or other entity to treat airport snow removal as a priority. Airports in the Commercial Service and Economic Level 1 roles have a benchmark of on-site snow removal, while Economic Levels 2 and 3 have a benchmark of reliable off-site snow removal. In total, 67 percent of these airports meet these benchmarks. However, only 58 percent of Economic Level 1 and 50 percent of Economic Level 3 airports meet snow removal benchmarks, indicating an area for improvement.

## *Terminal Building*

**Objective 1.09: Assess the adequacy of terminal facilities provided at each system airport based on assigned airport role.**

All airports in the Kentucky system are held to the benchmark of having a GA terminal building, operated by either the airport or an FBO. In total, 93 percent of the system currently has a terminal building or has a terminal under construction. One airport in the Economic Level 3 role and three airports in the Economic Level 4 airport do not currently have a GA terminal building.

## *Taxiway Type*

**Objective 2.06: Assess the adequacy of taxiways for the primary runway at each system airport based on airport role.**

All five airport roles have a benchmark for taxiway type. Commercial Service and Economic Level 1 airports have the benchmark of a full parallel taxiway, while Economic Levels 2 and 3 have the benchmark of a partial parallel taxiway and Economic Level 4 airports have the benchmark of aircraft turnarounds. In total, 76 percent of the Kentucky system meets benchmarks for taxiways, including all airports in the Commercial Service and Economic Level 4 roles. Only 40 percent of Economic Level 3 airports meet this benchmark.

## *Visual Approach Aids*

**Objective 2.07: Assess the adequacy of visual glide slope indicators for the primary runway at each system airport based on airport role.**

All airports in the Kentucky system except those in the Economic Level 4 role are held to the benchmark of having a VGSI, preferably a precision approach path indicator (PAPI). However, for the purposes of this study, a visual approach slope indicator (VASI) also qualifies for meeting the

benchmark. In total, 100 percent of the Commercial Service and Economic Levels 1, 2, and 3 airports have either a VASI or PAPI.

## *Runway End Identifier Lights*

**Objective 2.08: Assess the adequacy of runway end identifier lights at each system airport.**

Airports in all roles except Economic Level 4 are held to the benchmark of having runway end identifier lights (REILs) if they do not already have an ALS installed. All airports in these roles meet this benchmark, equating to a 100 percent performance.

## *Automated Weather Reporting*

**Objective 2.09: Assess the adequacy of automated weather reporting at each system airport based on airport role.**

On-site and automated weather-reporting equipment is a benchmark for all system airports except those in the Economic Level 4 role. The benchmark is the same for every other role, to have some form of automated weather reporting equipment, typically a AWOS or ASOS. In total, 88 percent of applicable airports meet the benchmark for having automated weather reporting equipment, including 100 percent of Commercial Service and Economic Level 1 airports. However, only 50 percent of Economic Level 3 airports currently have automated weather reporting equipment.

## *Airport Beacon*

**Objective 2.10: Assess the adequacy of the rotating beacon at each system airport.**

All airports in the Kentucky system except those in the Economic Level 4 role are held to the benchmark of having a rotating airport beacon. In total, 98 percent of applicable airports meet this objective, including 100 percent of Commercial Service and Economic Levels 1 and 2 airports.

## *Windsock*

**Objective 2.11: Assess the adequacy of wind socks at each system airport based on airport role.**

All Kentucky airports are held to the benchmark of having a wind sock. All airports meet this benchmark, resulting in a 100 percent system-wide performance.

## *Airfield Fencing*

**Objective 3.01: Assess the adequacy of fencing at system airports based on assigned airport role.**

All five SASP airport roles have a benchmark for airfield fencing for both security and safety purposes. Airports in the Commercial Service and Economic Levels 1 and 2 roles are held to the benchmark of having full airport perimeter fencing, while airports in Economic Levels 3 and 4 have the benchmark of partial perimeter fencing in key areas. In total, 76 percent of the system meets perimeter fencing benchmarks, including all airports in the Commercial Service role. In most cases where an Economic Level 1 airport did not meet the full perimeter fencing benchmark, these airports already have partial perimeter fencing.

## *Security Access Control System*

**Objective 3.02: Assess the security of system airports through an evaluation of airports with access control systems based on assigned airport role.**

Airports in all roles except the Economic Level 4 role are held to the benchmark of having installed a security access control system to sensitive and operational areas. Currently, 90 percent of these airports meet this benchmark, including 100 percent of Commercial Service and Economic Level 2 airports.

## *Role Benchmarking by Airport*

**Table 10-13** details the results of the role benchmarking process by airport. In total, 17 of Kentucky's 59 airports meet all of the benchmarks associated with their role. An additional 29 system airports fail to meet only one or two of their role benchmarks, again illustrating how well-developed the Kentucky system of airports is at this time.

## Table 10-13
## Kentucky Airports Meeting Role Benchmarks

| FAA ID | Associated City | Airport Name | RW Length | RW Lighting | ALS | IAP | Fuel | Auto Parking | Snow Removal | Terminal | Taxiway Type | VGSI | REILs | Weather Reporting | Beacon | Wind Sock | Airport Fencing | Security Access Control System |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Commercial Service** | | | | | | | | | | | | | | | | | | |
| BWG | Bowling Green | Bowling Green-Warren County Regional | | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| CVG | Covington | Cincinnati/Northern Kentucky International | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| LEX | Lexington | Blue Grass | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| SDF | Louisville | Louisville International-Standiford Field | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| OWB | Owensboro | Owensboro-Daviess County Regional | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| PAH | Paducah | Barkley Regional | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Economic Level 1** | | | | | | | | | | | | | | | | | | |
| AAS | Campbellsville | Taylor County | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| DVK | Danville | Stuart Powell Field | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| EKX | Elizabethtown | Addington Field | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| FGX | Flemingsburg | Fleming-Mason | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| FFT | Frankfort | Capital City | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 27K | Georgetown | Georgetown Scott County - Marshall Field | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| JQD | Hartford | Ohio County | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| CPF | Hazard | Wendell H. Ford Regional | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| EHR | Henderson | Henderson City-County | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| HVC | Hopkinsville | Hopkinsville-Christian County | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| K24 | Jamestown | Russell County | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| LOZ | London | London-Corbin-Magee Field | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| LOU | Louisville | Bowman Field | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 2I0 | Madisonville | Madisonville Regional | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| M25 | Mayfield | Mayfield Graves County | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| SYM | Morehead | Morehead-Rowan County Clyde A. Thomas Regional | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| IOB | Mount Sterling | Mount Sterling-Montgomery County | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |

## Table 10-13
## Kentucky Airports Meeting Role Benchmarks

| FAA ID | Associated City | Airport Name | RW Length | RW Lighting | ALS | IAP | Fuel | Auto Parking | Snow Removal | Terminal | Taxiway Type | VGSI | REILs | Weather Reporting | Beacon | Wind Sock | Airport Fencing | Security Access Control System |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CEY | Murray | Kyle-Oakley Field | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| PBX | Pikeville | Pikeville – Pike County Regional | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| SJS | Prestonsburg | Big Sandy Regional | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| RGA | Richmond | Central Kentucky Regional | ✓ | ✓ | | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| SME | Somerset | Lake Cumberland Regional | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 6I2 | Springfield | Lebanon-Springfield | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| BYL | Williamsburg | Williamsburg-Whitley County | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Economic Level 2** | | | | | | | | | | | | | | | | | | |
| DWU | Ashland | Ashland Regional | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| BRY | Bardstown | Samuels Field | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| GLW | Glasgow | Glasgow Municipal | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| M21 | Greenville | Muhlenberg County | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| 5M9 | Marion | Marion-Crittenden County | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| EKQ | Monticello | Wayne County | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 4M7 | Russellville | Russellville-Logan County | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| TWT | Sturgis | Sturgis Municipal | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ |
| **Economic Level 3** | | | | | | | | | | | | | | | | | | |
| 0I8 | Cynthiana | Cynthiana-Harrison County | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| K62 | Falmouth | Gene Snyder | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| 1M7 | Fulton | Fulton | ✓ | ✓ | | | ✓ | ✓ | | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | |
| I93 | Hardinsburg | Breckinridge County | ✓ | ✓ | | | ✓ | ✓ | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| I35 | Harlan | Tucker-Guthrie Memorial | ✓ | ✓ | | | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| M20 | Leitchfield | Grayson County | ✓ | ✓ | | | ✓ | | | ✓ | | ✓ | ✓ | | ✓ | ✓ | | |
| KY8 | Lewisport | Hancock Co-Ron Lewis Field | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 1A6 | Middlesboro | Middlesboro-Bell County | ✓ | | | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ |

## Table 10-13
## Kentucky Airports Meeting Role Benchmarks

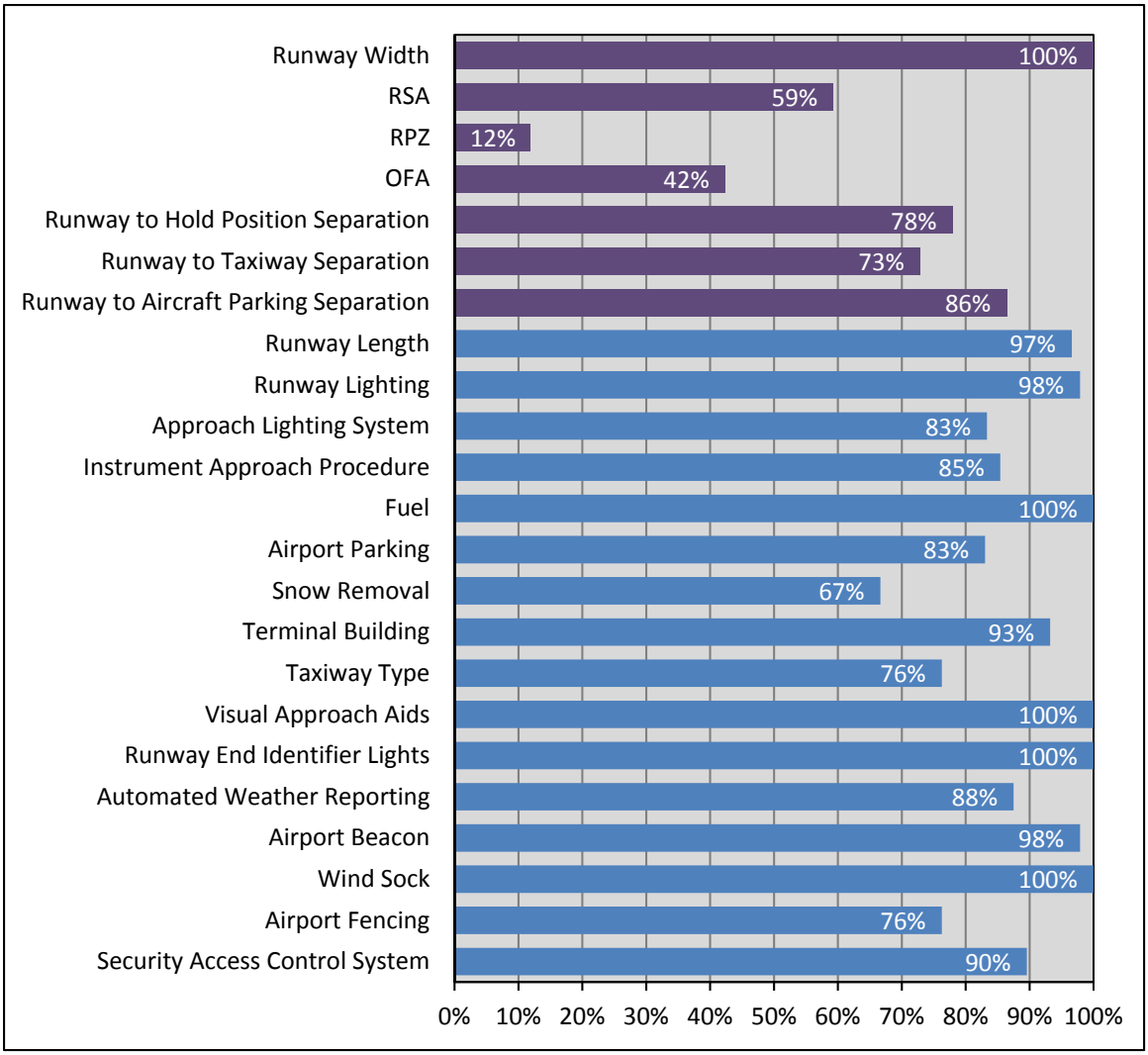
| FAA ID | Associated City | Airport Name | RW Length | RW Lighting | ALS | IAP | Fuel | Auto Parking | Snow Removal | Terminal | Taxiway Type | VGSI | REILs | Weather Reporting | Beacon | Wind Sock | Airport Fencing | Security Access Control System |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2M0 | Princeton | Princeton-Caldwell County | ✓ | ✓ | | ✓ | ✓ | ✓ | | ✓ | | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ |
| TZV | Tompkinsville | Tompkinsville-Monroe County | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| **Economic Level 4** | | | | | | | | | | | | | | | | | | |
| 1M9 | Cadiz | Lake Barkley State Resort Park | ✓ | | | | | ✓ | | ✓ | ✓ | | | | | ✓ | | |
| I96 | Columbia | Columbia-Adair County | ✓ | | | | | | | ✓ | ✓ | | | | | ✓ | ✓ | |
| 8M7 | Dawson Springs | Tradewater | ✓ | | | | | | | | ✓ | | | | | ✓ | ✓ | |
| 2I3 | Falls of Rough | Rough River State Resort Park | ✓ | | | | | ✓ | | ✓ | ✓ | | | | | ✓ | | |
| M34 | Gilbertsville | Kentucky Dam Village State Resort Park | ✓ | | | | | ✓ | | ✓ | ✓ | | | | | ✓ | ✓ | |
| JKL | Jackson | Julian Carroll | ✓ | | | | | ✓ | | ✓ | ✓ | | | | | ✓ | ✓ | |
| I53 | Liberty | Liberty-Casey County | ✓ | | | | | ✓ | | | ✓ | | | | | ✓ | ✓ | |
| 18I | Pine Knot | McCreary County | ✓ | | | | | ✓ | | ✓ | ✓ | | | | | ✓ | ✓ | |
| 8M9 | Providence | Providence-Webster County | ✓ | | | | | ✓ | | ✓ | ✓ | | | | | ✓ | | |
| I50 | Stanton | Stanton-Powell County | ✓ | | | | | ✓ | | ✓ | ✓ | | | | | ✓ | ✓ | |
| 9I3 | West Liberty | West Liberty | ✓ | | | | | ✓ | | | ✓ | | | | | ✓ | ✓ | |

Note: Greyed out areas do not have a benchmark associated with that performance measure.
Source: Airport Inventory and Data Survey, CDM Smith, FAA Form 5010.

# Summary

**Figure 10-9** summarizes all of the performance evaluation conducted in this chapter. Note that these percentages apply to airports for which there is a benchmark. The results of this analysis reveals an airport system that is very well equipped to handle a demanding aviation market. However, many of the deficiencies revealed through this analysis will result in system recommendations. These recommendations, and their estimated costs, will be detailed in Chapter 12: Recommended System and Cost Estimates.

**Figure 10-9**
**Summary of Facilities and Services System Evaluation**




Source: Airport Inventory and Data Survey, CDM Smith, FAA Form 5010, Google Maps.
Note: Purple bars represent performance measures evaluated using RDC, while blue bars represent performance measures evaluated using airport role benchmarks.

Before all recommendations are presented, however, the Kentucky airport system will be evaluated on a system-wide, geographic basis to analyze how accessible the Commonwealth's airports are to its population and economy. This analysis is presented in the next chapter, Chapter 11: System Evaluation – Geographic Coverage and Gaps.