

GIS FOR AIRPORT ZONING

John Houlihan

KY Airport Zoning Commission
Administrator

The beginning of KAZC

- ▣ The KAZC became state law in March 25, 1960
KRS 183.861
- ▣ The commission will promote the public interest and protect and encourage the proper use of the airports and their facilities.
- ▣ Shall be empowered to issue orders, rules, and regulations pertaining to use of land within and around the facilities.

Who makes up the KAZC

- ▣ Such commission shall consist of six (6) members and the secretary of the Transportation Cabinet or in his absence his designated representative who shall be the ex officio chairman of such commission.
- ▣ The 6 members of such commission shall be appointed by the Governor for a term of four (4) years.
- ▣ Upon recommendation of an individual by the secretary, the commission shall appoint an administrator of the commission.

Who is required to file a permit application with the KAZC

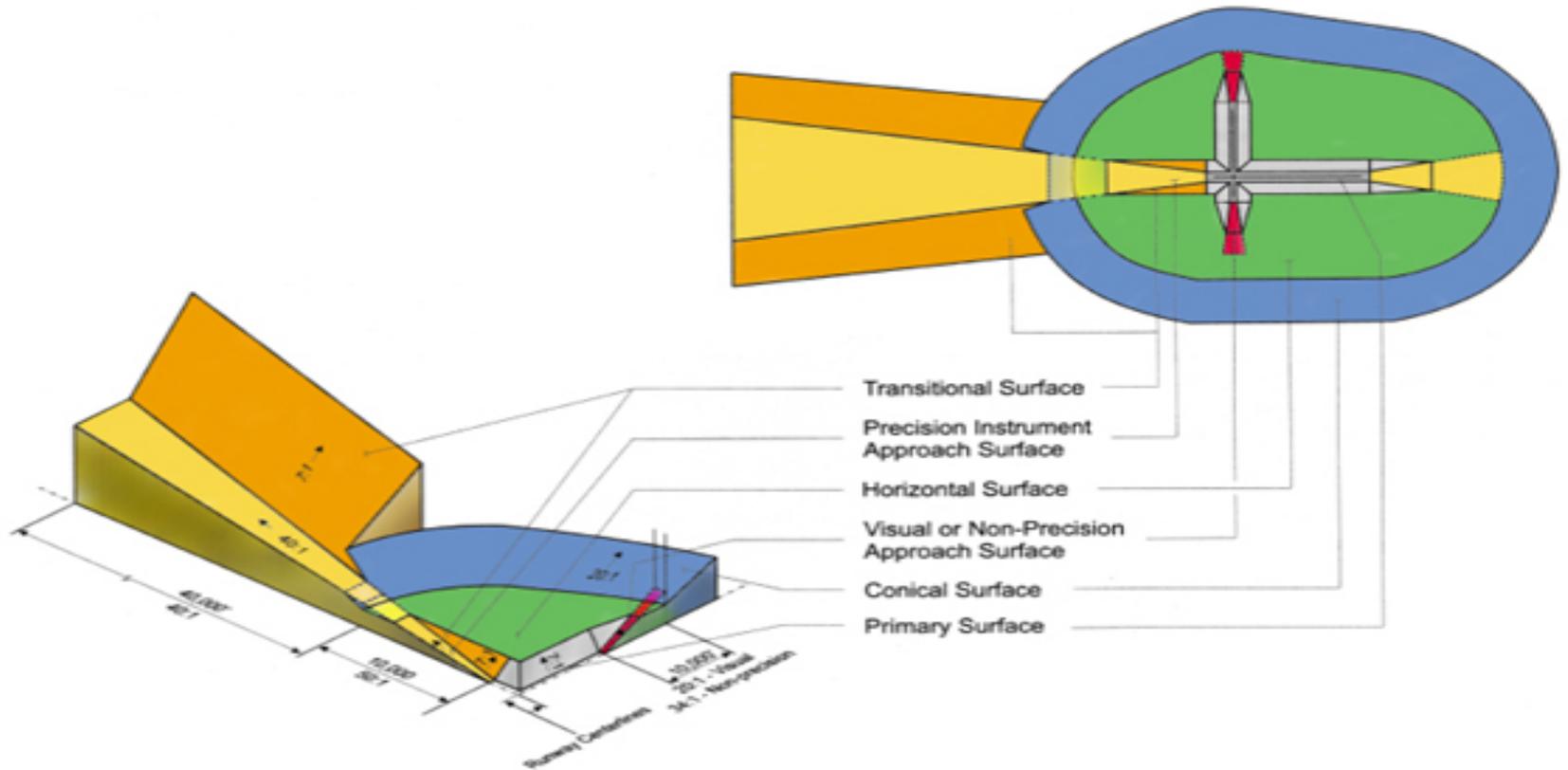
- ▣ Any one building or altering a structure that will exceed the following criteria:
- ▣ If an airport has at least one (1) runway that is 3,200 feet or more in length, the slope shall be 100 to one (1) for a horizontal distance of 20,000 feet from the closest point of the nearest runway
- ▣ If an airport's longest runway is less than 3,200 feet in actual length, the slope shall be fifty (50) to one (1) for a horizontal distance of 10,000 feet from the nearest point of the nearest runway

- ▣ The commission shall have jurisdiction over the airspace of the Commonwealth that exceeds 200 feet in height above ground level.
- ▣ The commission shall have jurisdiction from the ground upward within the limits of the primary and approach surfaces

An aeronautical study looks at:

- ▣ 602 KAR Chapter 50
- ▣ Federal Aviation Administration Part 77

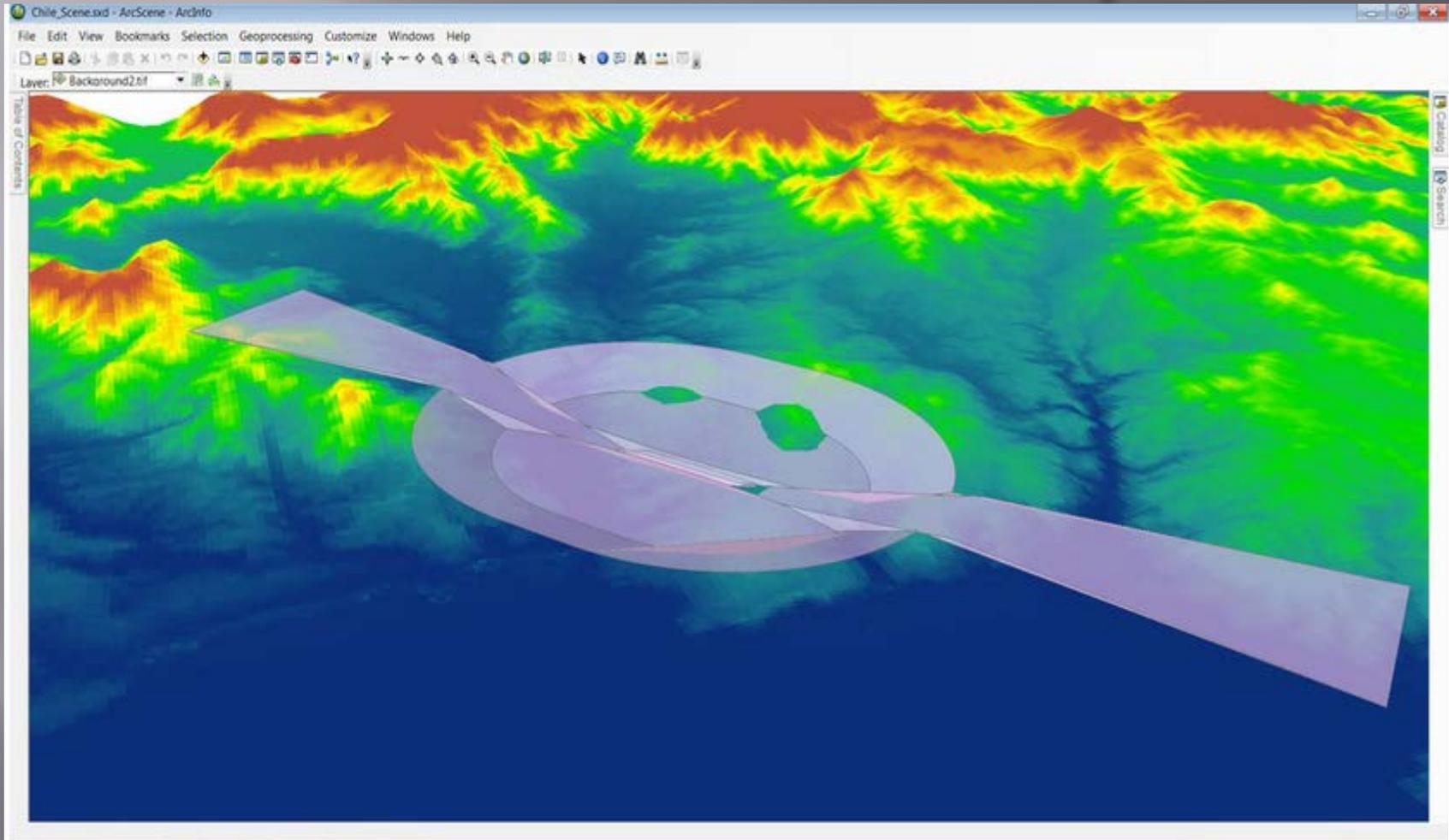
FAR Part 77 Surfaces



The old process of a aeronautical study



The new process of a aeronautical study



IOB:

The screenshot displays the 'Aeronautical Study' software interface. On the left is a data entry form, in the center is a map with concentric circles around a site, and on the right is a 'Report' window.

Aeronautical Study Form:

- Kentucky Aeronautical Study Number: as - 025 - IOB - 2013 - 136
- Latitude: 37 Deg. 56 Min. 7.96 Sec. N
- Longitude: 83 Deg. 59 Min. 37.2 Sec. W
- Customer-Submitted Site Elevation (SE): 734 feet
- Structure Height (SH): 265 feet
- Traverseway: No Traverseway
- Does the nearest airport have multiple runways? No Yes

Map: The map shows a site location with concentric circles representing different levels of obstruction clearance. A red circle highlights the site area, and a yellow callout box points to it with the text: "IOB: MOUNT STERLING-MONTGOMERY COUNTY".

Report Window:

Attribute	Value
Nearest Runway Centerline	MOUNT STERLING-MONTGOMERY COUNTY
Nearest Airport Code	IOB
Airport Designator	03-21
Distance To The Airport (ft)	42512.62
ARPElevation	1019
Ground Elevation (ft)	725.8
Ground Elevation Source	KY DEM USGS 10M Metadata
User-Submitted Ground Elevation (ft)	734
Structure Height (ft) (plus traverseway if applicable)	265
PART77 Surface Name	N/A
PART77 Surface Elevation (ft)	Structure is outside PART77
PART77 Surface - (SE+SH) (ft)	Structure is outside PART77
Nautical Mile Distance	7
Nautical Mile Surface Elevation (ft)	Structure is outside the 6NM ring.
Nautical Mile Surface - (SE+SH) (ft)	Structure is outside the 6NM ring.
KY Jurisdictional Slope Elevation (ft)	Structure is outside the KY jurisdictional slope.
KY Jurisdictional Slope Elevation - (SE+SH) (ft)	Structure is outside the KY jurisdictional slope.

Report

Attribute	Value
Nearest Runway Centerline	MOUNT STERLING-MONTGOMERY COUNTY
Nearest Airport Code	IOB
Airport Designator	03-21
Distance To The Airport (ft)	42512.62
ARPElevation	1019
Ground Elevation (ft)	725.8
Ground Elevation Source	KY DEM USGS 10M Metadata
User-Submitted Ground Elevation (ft)	734
Structure Height (ft) (plus traverseway if applicable)	265
PART77 Surface Name	N/A
PART77 Surface Elevation (ft)	Structure is outside PART77
PART77 Surface - (SE+SH) (ft)	Structure is outside PART77
Nautical Mile Distance	7
Nautical Mile Surface Elevation (ft)	Structure is outside the 6NM ring.
Nautical Mile Surface - (SE+SH) (ft)	Structure is outside the 6NM ring.
KY Jurisdictional Slope Elevation (ft)	Structure is outside the KY jurisdictional slope
KY Jurisdictional Slope Elevation - (SE+SH) (ft)	Structure is outside the KY jurisdictional slope

Copy
Close

Aeronautical Study

Kentucky Aeronautical Study Number as - 025 - IOB - 2013 - 136

Latitude: 37 Deg. 56 Min. 7.95 Sec. N

Longitude: 83 Deg. 59 Min. 37.2 Sec. W

Customer-Submitted Site Elevation (SE) 734 feet

Structure Height(SH): 265 feet

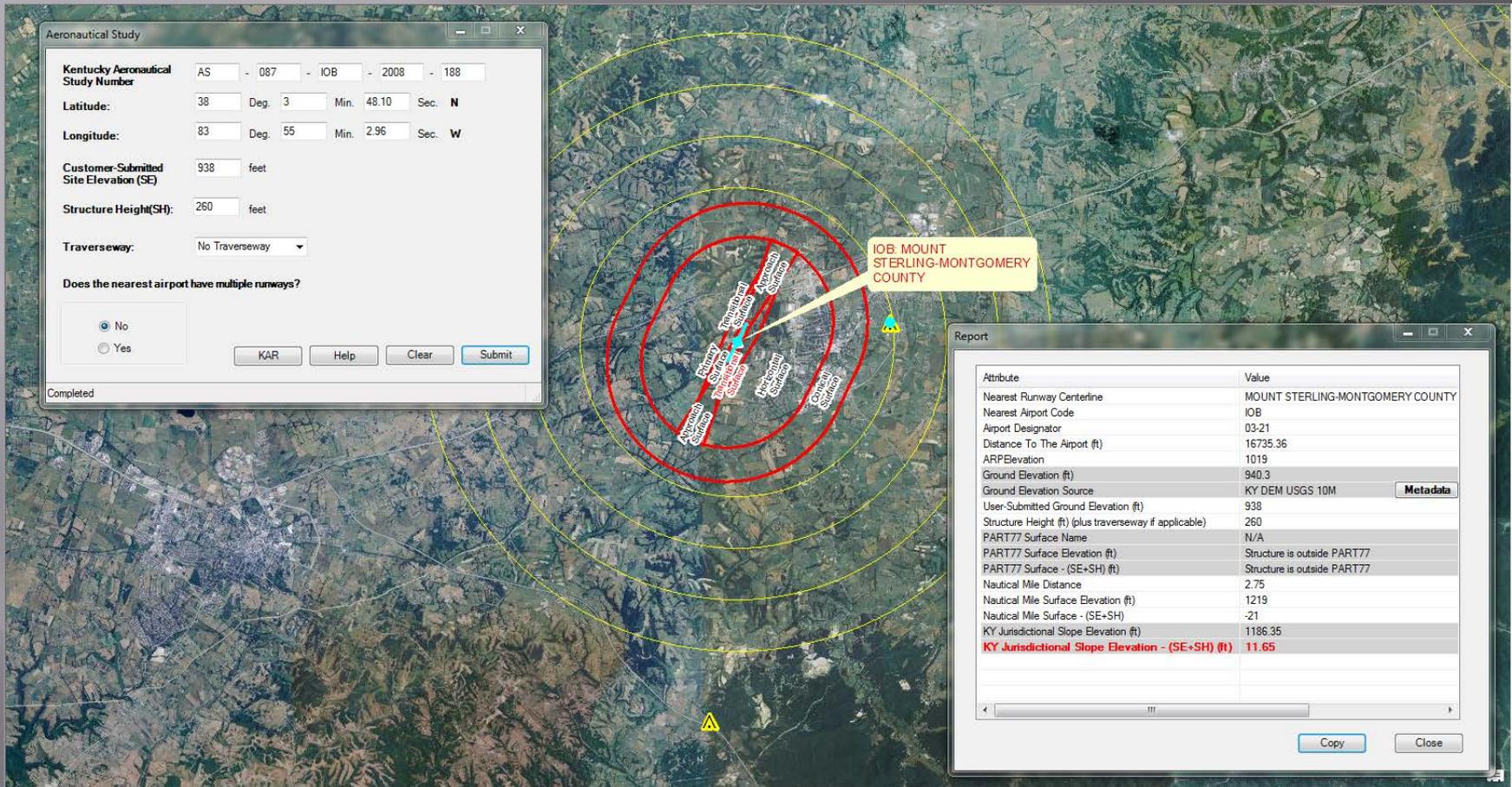
Traverseway: No Traverseway

Does the nearest airport have multiple runways?

No
 Yes

KAR Help Clear Submit

Completed



Aeronautical Study

Kentucky Aeronautical Study Number AS - 087 - IOB - 2008 - 188

Latitude: 38 Deg. 3 Min. 48.10 Sec. N

Longitude: 83 Deg. 55 Min. 2.96 Sec. W

Customer-Submitted Site Elevation (SE) 938 feet

Structure Height(SH): 260 feet

Traverseway: No Traverseway

Does the nearest airport have multiple runways?

No
 Yes

KAR Help Clear Submit

Completed

Attribute	Value
Nearest Runway Centerline	MOUNT STERLING-MONTGOMERY COUNTY
Nearest Airport Code	IOB
Airport Designator	03-21
Distance To The Airport (ft)	16735.36
ARPElevation	1019
Ground Elevation (ft)	940.3
Ground Elevation Source	KY DEM USGS 10M Metadata
User-Submitted Ground Elevation (ft)	938
Structure Height (ft) (plus traverseway if applicable)	260
PART77 Surface Name	N/A
PART77 Surface Elevation (ft)	Structure is outside PART77
PART77 Surface - (SE+SH) (ft)	Structure is outside PART77
Nautical Mile Distance	2.75
Nautical Mile Surface Elevation (ft)	1219
Nautical Mile Surface - (SE+SH)	-21
KY Jurisdictional Slope Elevation (ft)	1186.35
KY Jurisdictional Slope Elevation - (SE+SH) (ft)	11.65

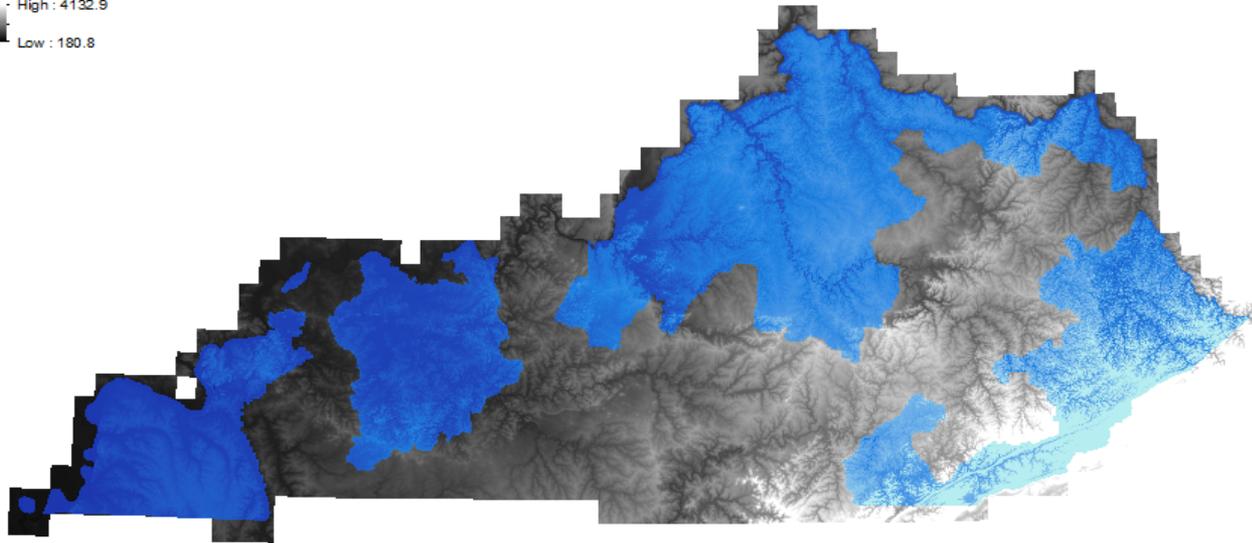
Digital Elevation Model (DEM)

KYAPED Digital Elevation Model 5FT - (ImageServer)

Value
High : 4012.21
Low : 267.258

Digital Elevation Model - 10M - (ImageServer)

Value
High : 4132.9
Low : 180.8



Kentucky Division of Geographic Information (DGI) & USGS, DGI, KYTC, AML, DOW, FEMA, NRCS, USGS, KYAPED