

Establishment
of
Instrument Landing Systems
and
Approach Lighting Systems

Airport Needs

- Airport is interested in the best achievable minima.
- An ILS is one means available to achieve those needs
- Ensuring Feasibility:
 - Obstruction Evaluation
 - Air Space Action
 - Air Space Actions
 - Runway length/width, spacing etc

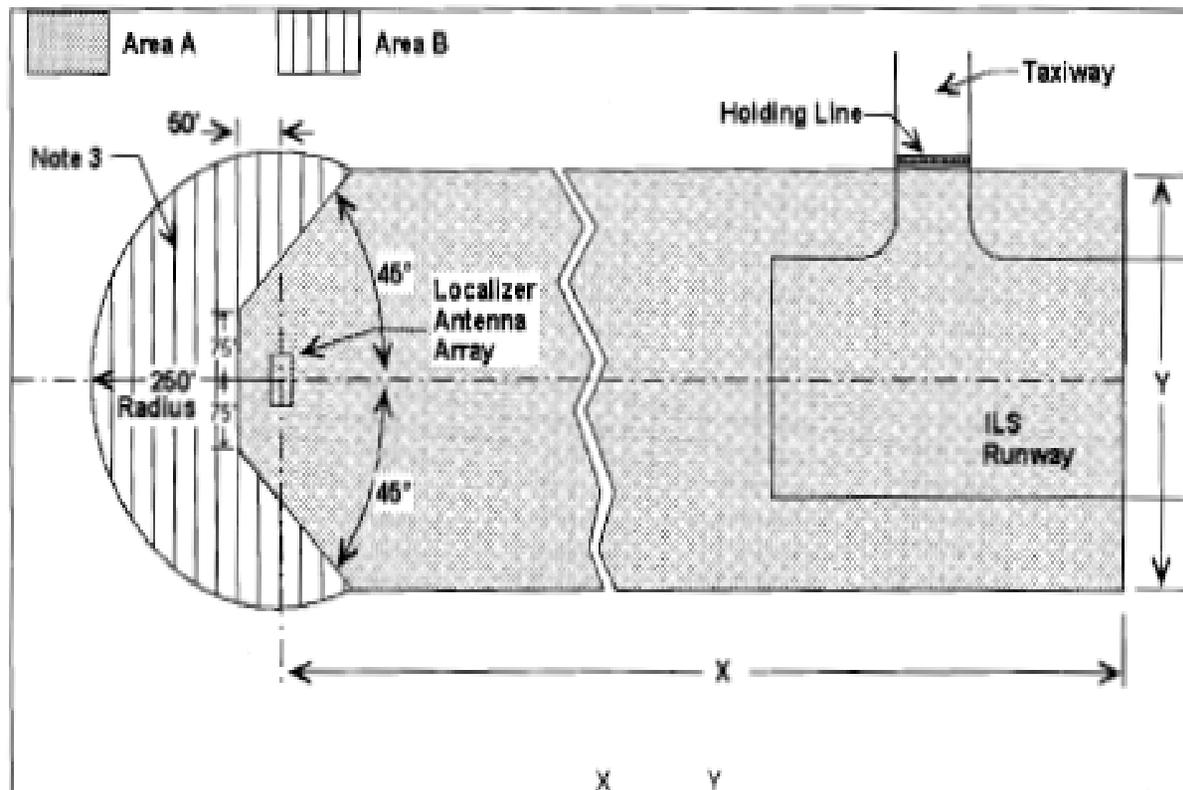
Key Considerations

REAL ESTATE

- a. Airport may acquire property
- b. 405 Surveys and Responsibilities
- c. Environmental Assessments and responsibilities
- d. Terrain may limit options and Performance of ILS components
- e. Terrain effects can dramatically increase ALS installation costs

Localizer

Critical Area Requirements



Structures Can Impact Localizer performance

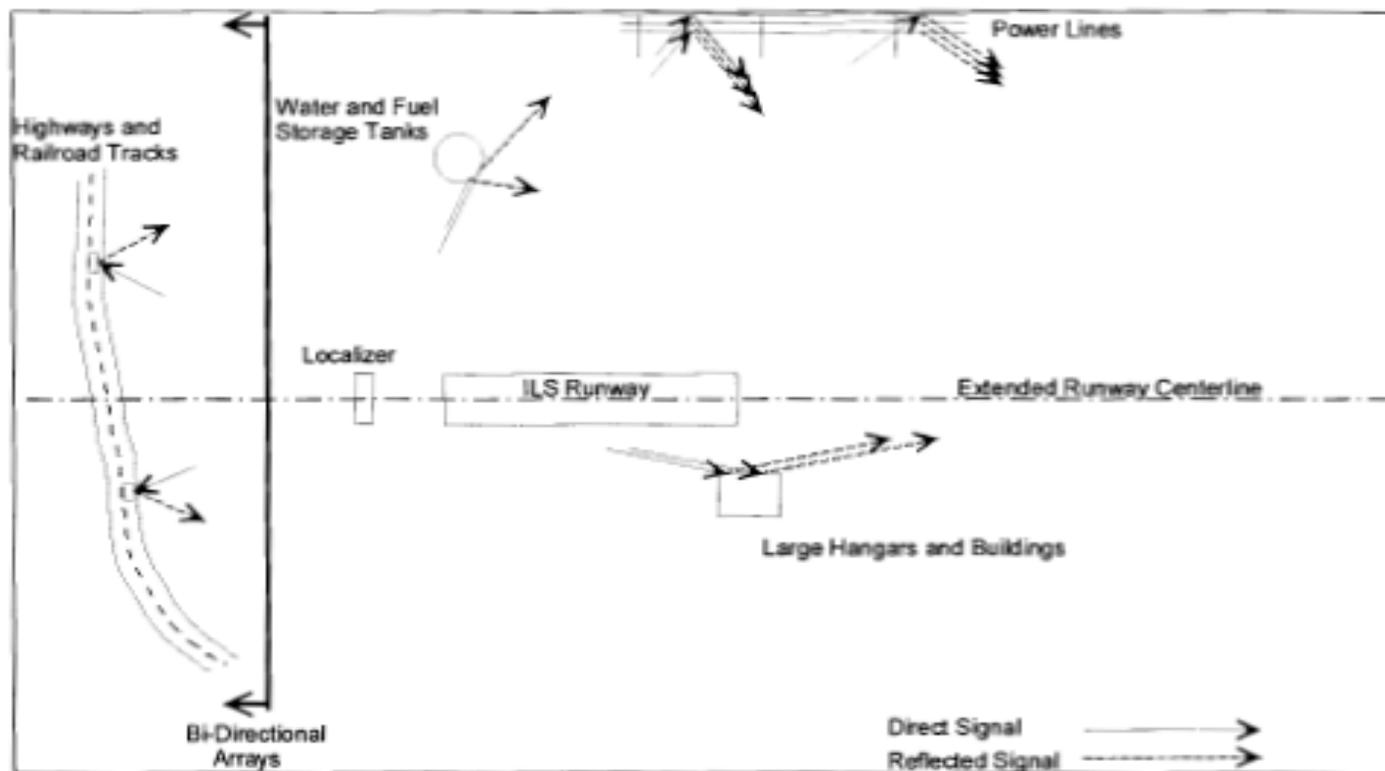
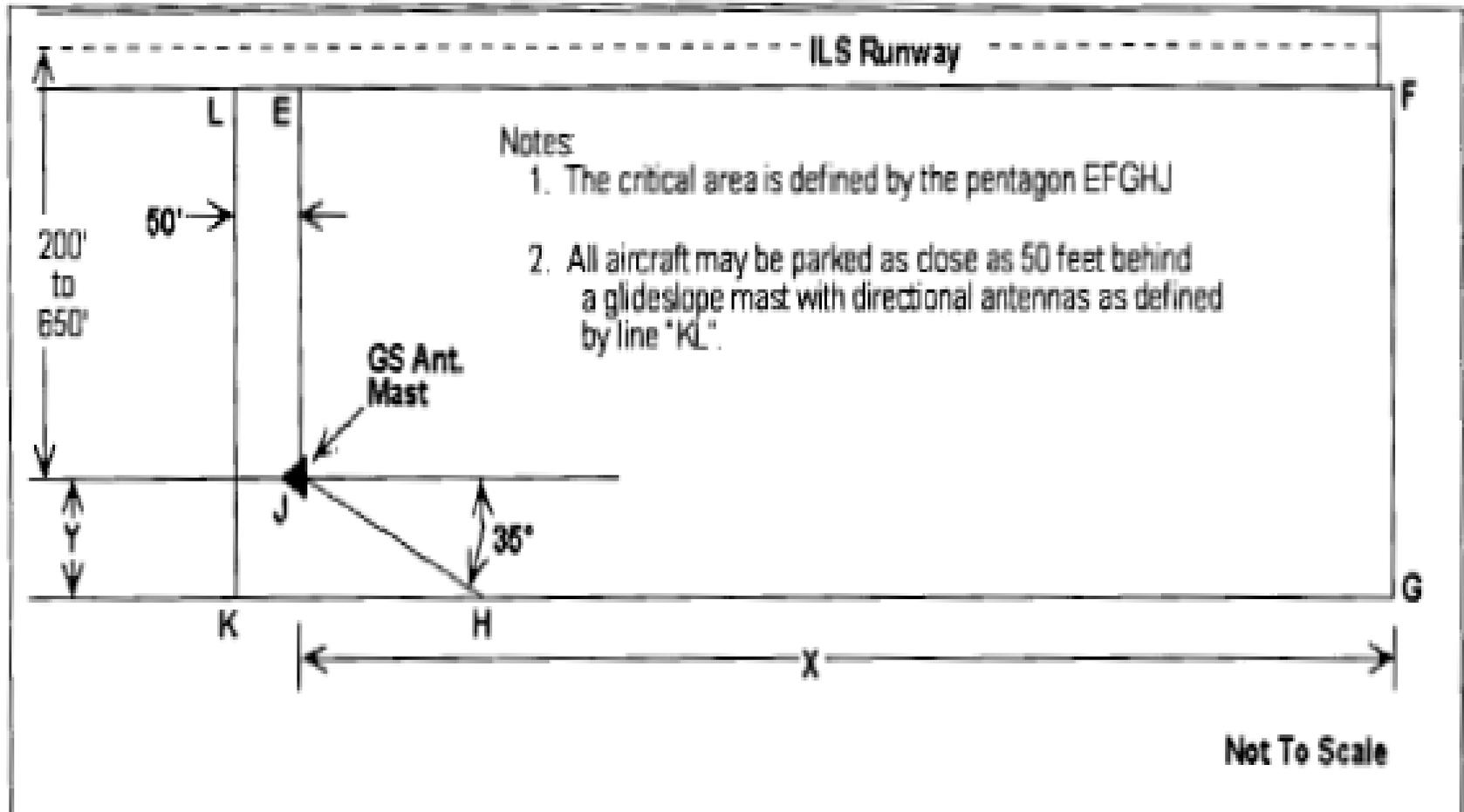


Figure 2-2. Typical Localizer Degrading Sources

Glide Slope Critical Area



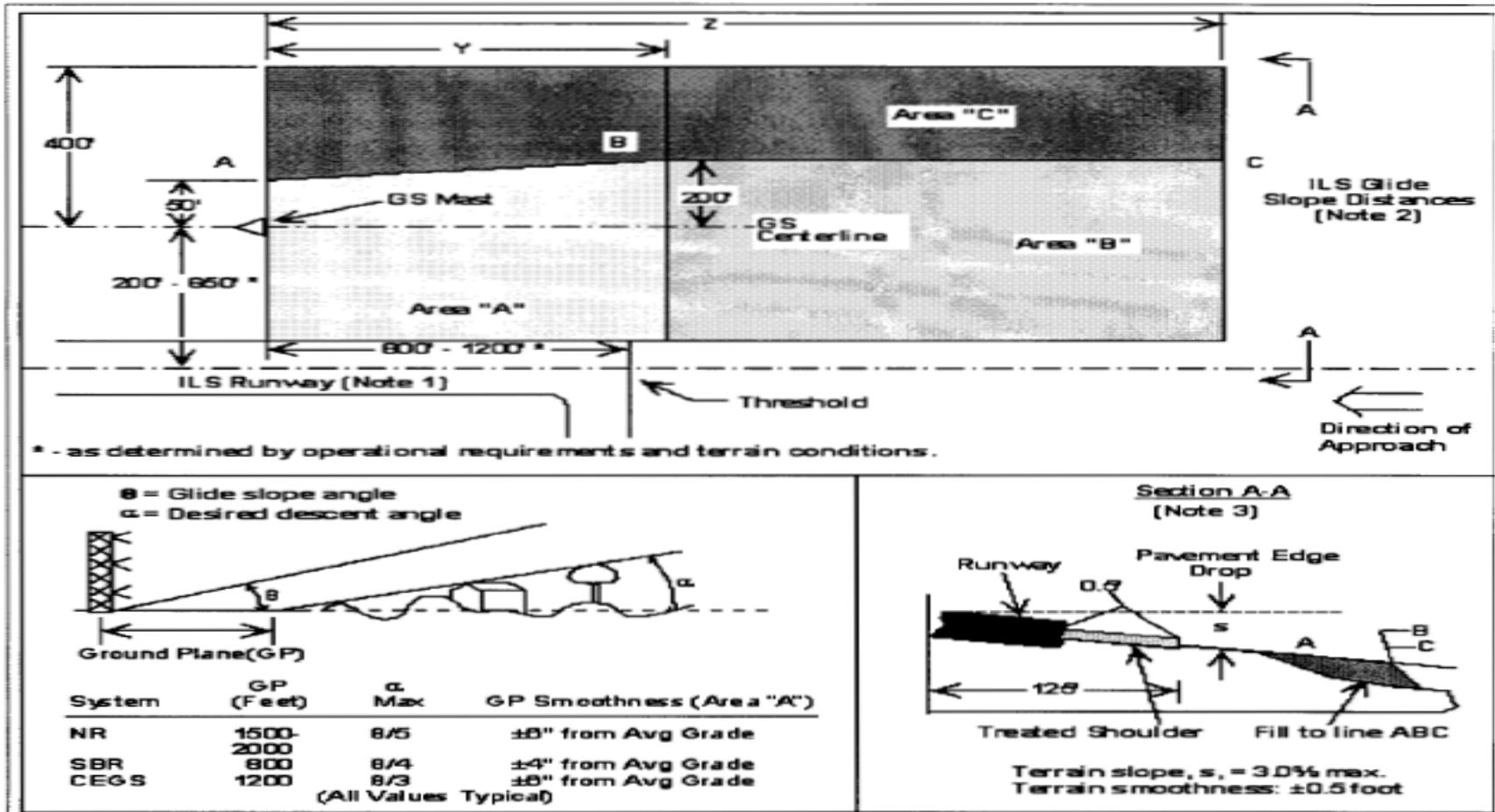
Glide Slope Grading

- Locate Glide Slope on runway side away from taxiways, roads, etc.
- Grading and Obstruction removal
 - A. Area should be uniformly graded and should have the same longitudinal slope as the runway
 - B. Area should be smoothly graded to comply with terrain roughness criterion. Extensive landfill operations determined by feasibility.

Glide Slope Grading (cont.)

- C. Area grading may be limited to removal of hills which would reflect the glide slope signal into the usable area.
- D. All possible interference sources (metallic structures, fences, etc.) should be removed from areas and that portion that is within 250 feet of the antenna centerline extended.

Glide Slope Critical Area



MALSR

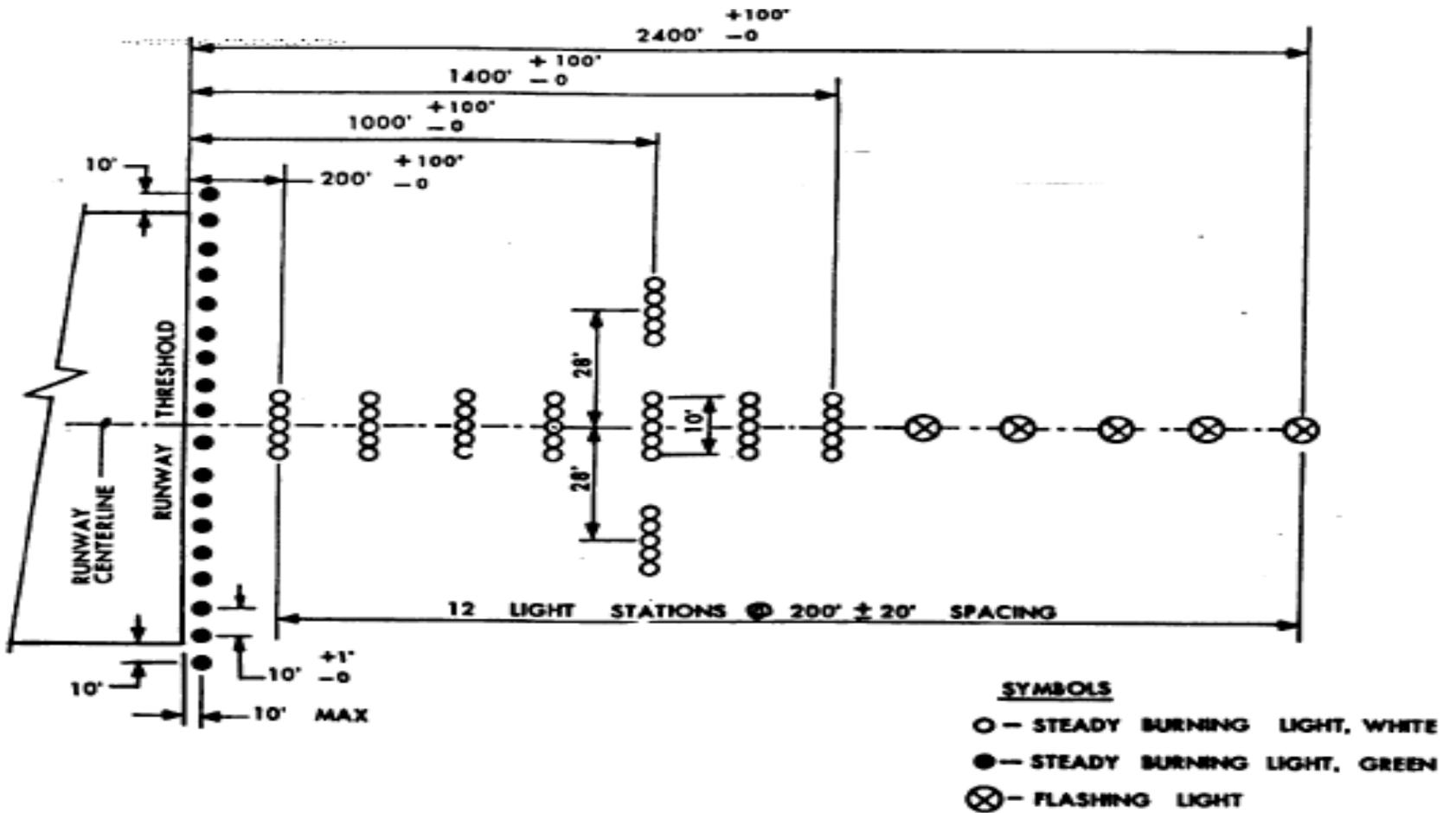


FIGURE 2 - 4 MALSR CONFIGURATION

MALSR

- Approach Light Plane-The light units in the approach light plane are in a single horizontal plane.
- At Threshold 400' wide centered on runway centerline.
- No object protrudes above the approach light plane. For clearance purposes, all roads, highways, vehicle parking, and railroads are considered vertical solid objects.

MALSR (cont.)

- Visibility- There is a clear line-of-sight to all lights of the system from any point on a surface, on-half degree below the ILS glide paths and extending 250 feet each side of R/W centerline, up to 1600 feet in advance of the outermost light in the system.

Web Site

“So you want an instrument flight procedure”

[HTTP://WWW.avn.faa.gov/index.asp?xml=ifp/index](http://www.avn.faa.gov/index.asp?xml=ifp/index)