

Data Centers and Sound: What's Real, What's Not



THE BIG PICTURE

The data center industry has shifted in recent years from reacting to noise complaints to proactively designing sound out of the picture for residential neighborhoods.

Local Jurisdictions Set Noise Levels

- Local jurisdictions in Maryland set noise ordinances for all commercial facilities. Like a manufacturing plant, warehouse, or office park, a data center must comply with the local noise ordinance.
- Jurisdictions that proactively institute reasonable decibel limits at a data center's property line help to preserve quality of life for their community.

Reasonable Setbacks Mean Quieter Property Lines

- Distance helps to determine if a data center is heard beyond its property line. Reasonable setbacks from a property line help to keep sound levels low.
- Jurisdictions that enact reasonable setbacks help to preserve neighborhood quality of life while generating new tax revenue that benefits that community.

Data Centers and Decibel Levels

- Data centers typically generate 55 decibels of sound at the property line, depending on the setback. According to the Yale School of Environmental Health & Safety, 55 decibels is quieter than a normal conversation and equivalent to the sound of a household refrigerator.

Proactive Designs Preserve Quality of Life

- In addition to noise ordinances and setbacks, data center designers reduce noise by:
 - Locating sensitive equipment away from boundaries
 - Enclosing equipment in specialized sound-reducing covers
 - Preventing mechanical vibration via neoprene mounts
 - Incorporating tree plantings, earth berms, and other natural acoustic filters

The Bottom Line

With proper planning, data centers are quiet neighbors that bring big benefits for communities with far less traffic than office parks and warehouses.

ACTIVITY	SOUND LEVEL	ACTIVITY	SOUND LEVEL
Jet Taking Off	140 Decibels	Typical Data Center (From Property Line)	55-60 Decibels
Loud Radio	80 Decibels	Rain	40 Decibels
Normal Conversation	60 Decibels	Whisper	20 Decibels

