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Data Center Impacts on Residential Communities



Loudoun Meadows HOA




Data Center Impacts on Residential Communities

Loudoun Meadows HOA provides the information in this presentation for consideration as Loudoun County Staff and Planning and Zoning Commissioners review Data Center development, land use and performance standards.

Our community has been greatly impacted by data center development since 2018 and we provide experienced based perspective from residents. Our intent in providing this information is not to argue the merits of the Data Center business but to illustrate the impacts of this type of land use on a residential community where there is overlap. We are running out of space in Loudoun to locate these massive facilities, and this type of overlap with residential communities is a growing concern.

The information that follows provides contextual background and photos. We conclude with some recommendations on Data Center development and performance standards.



Loudoun Meadows HOA Background

- Loudoun Meadows
 - Location:
Intersection of Rt. 50
and Fleetwood Rd.
Ashburn
 - Development
occurred between
2010 and 2015
 - 174 Single Family
homes



Data Center Construction Amazon - Racefield Ln.



Data Center Construction Amazon – Easement Problems

Data Center construction on bordering farmland located at Rt. 50 and Racefield Lane began in late 2018. Shortly after, the community faced an easement dispute with the developer for water and sewer access. The nearest access point was located in the community and required a roughly ¼ mile long dig through HOA common area and the community's most prominent amenities. The easement allowed for access but was too narrow to accommodate the heavy equipment required to install piping. Despite the HOAs best efforts to negotiate terms allowing broader access for the heavy equipment needed, the developer, Northstar Commercial Partners, proceeded without authorization and fenced off access to the area and began tearing up the walking path, trees and recreation areas owned by the HOA. Supervisor Buffington's office was very supportive and stopped construction activity until an agreement between the HOA and the Developer was eventually reached.

Data Center Construction Amazon – Easement Problems- Cont'd

Impacts to HOA Residents

- Unapproved destruction of HOA owned property
- Unplanned - loss of access to amenities for 10 months
- Heavy equipment and construction noise within feet of homesites

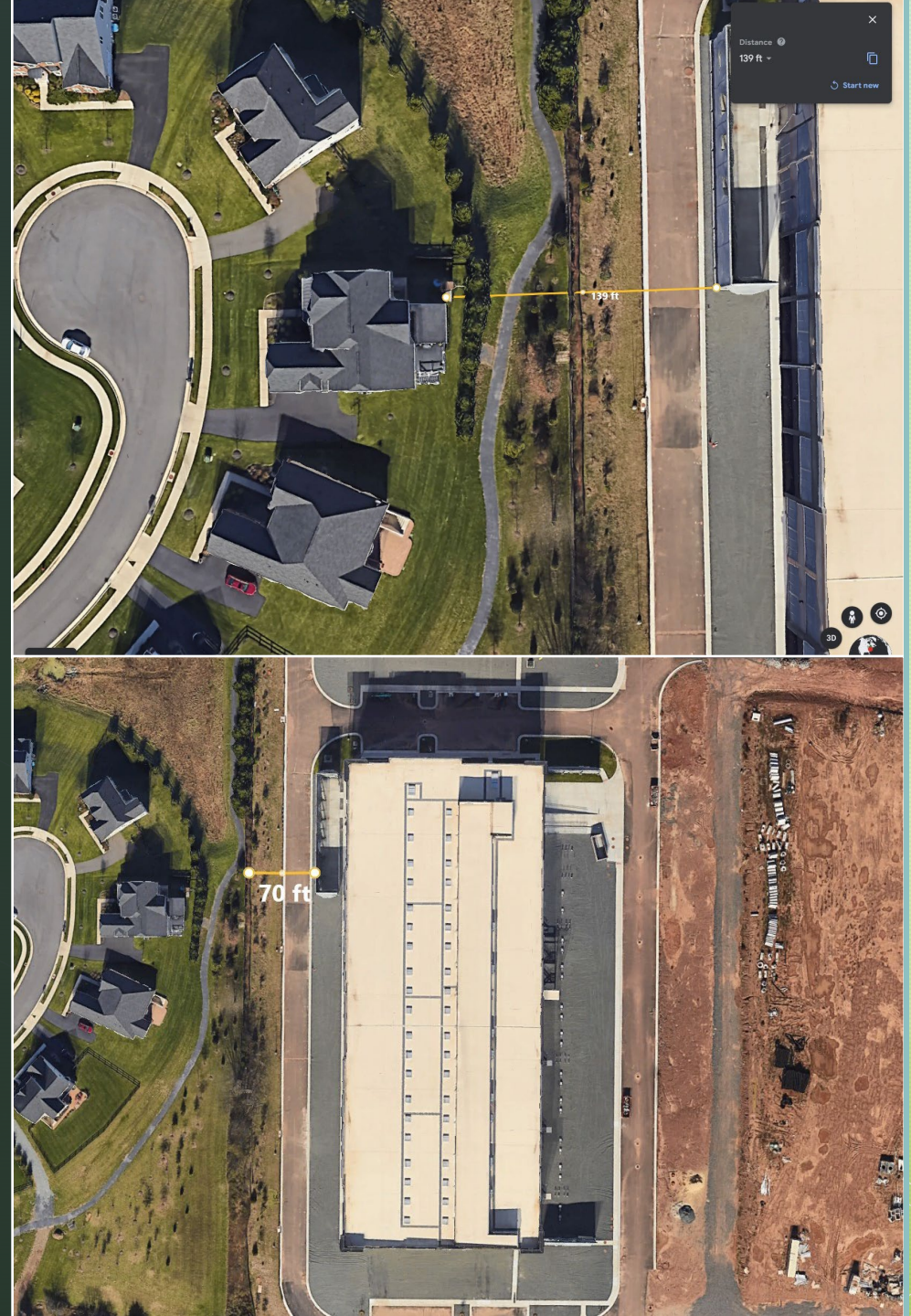
Considerations/Questions

- Should an easement allow this type of impact to an established community?
- Is there enough oversight of approved easement access?



Data Center Setbacks and Proximity to Homes

- Upper photo
 - 139 ft is all that separates a residence from the Data Center facility.
- Lower photo
 - Facility was constructed a mere 70 ft from property line
 - No room for screening of the facility on data center property



Data Center Setbacks and Proximity to Homes – Cont'd

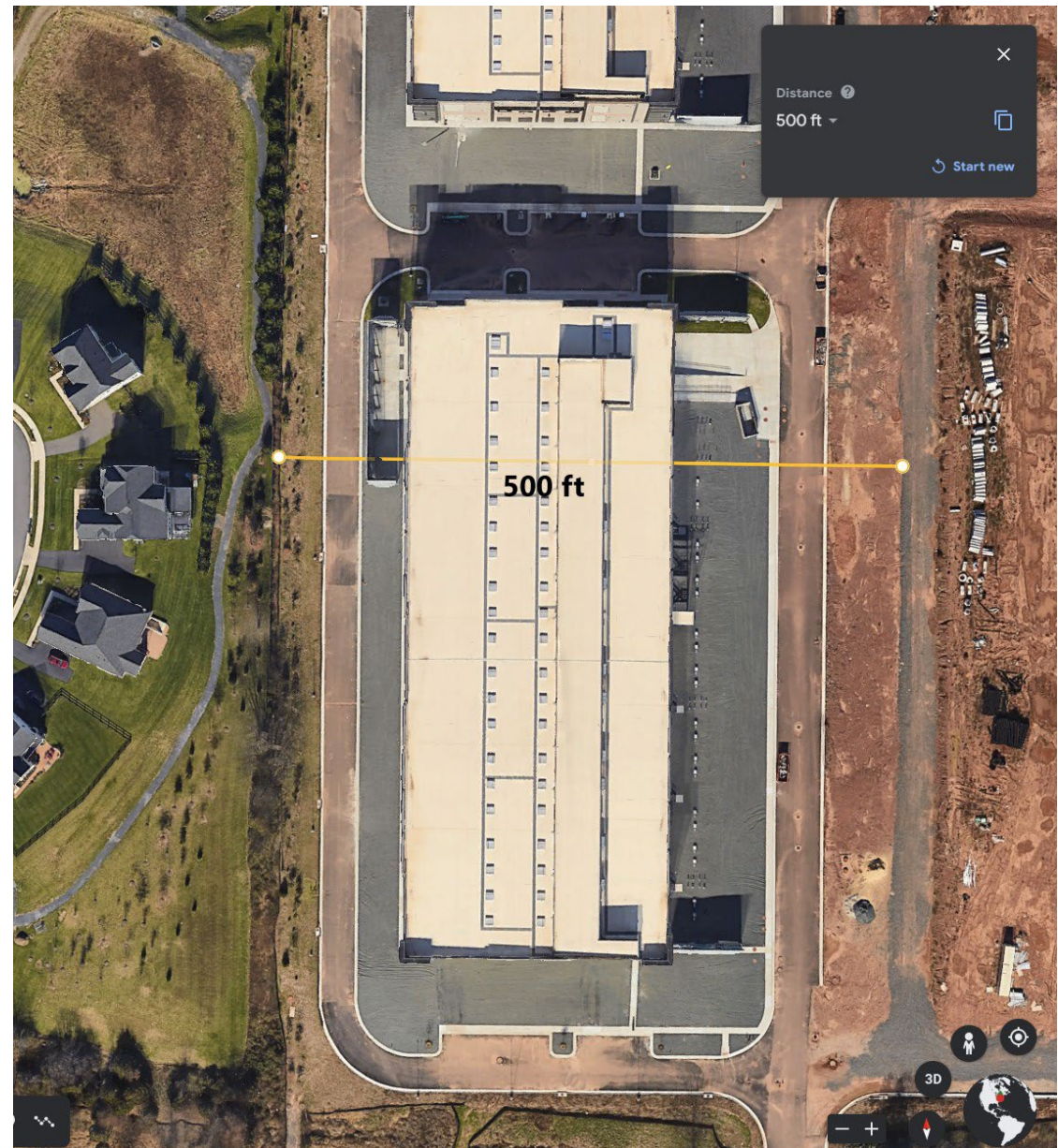
- Street view from homesites reveals impact of 70 ft tall facilities
- Facilities cast shadows over homes which previously had visibility to the morning sunrise



Data Center Setbacks and Proximity to Homes – Cont'd

Setback adjustment considerations

- We understand that a 500 ft setback is under consideration and provide a visual representation of the impact that would have had.
- Photo represents a 500 ft setback from the property line
- If such setback was in place, only 2 of 4 buildings could be built
- Would the development still have occurred with approximately half the square footage available (est. 560,000 vs 1m+ sqft)?
- Is 1m sqft the minimum standard by the industry to build?



Data Center Lighting

Noteworthy points

- Viewpoint is provided by a resident from their back deck
- Facility is not active due to legal disputes between Amazon and developer Northstar
- Lights are illuminated from dusk to dawn 7 days per week.
- Only a portion of the building attached downward facing lights are illuminated in the photo
- Additional street lighting and roof mounted security lighting surrounds the facility which will be turned on when facility is active.

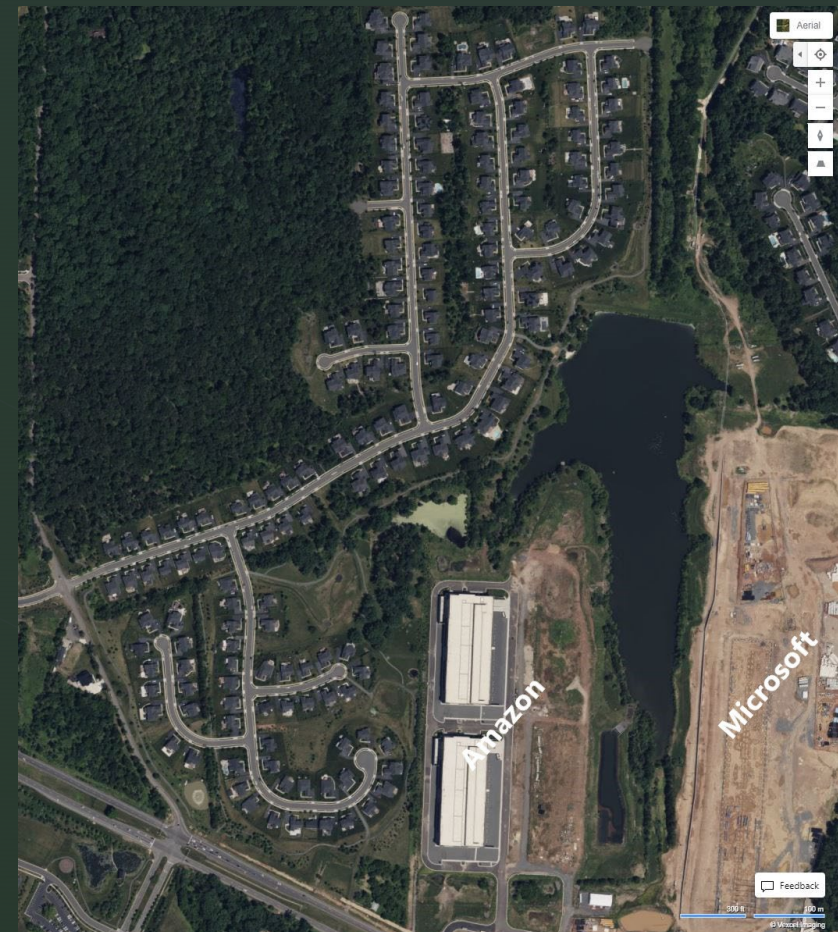


Overhead Views of Loudoun Meadows Before and After

Loudoun Meadows 2018



Today with Amazon and Microsoft



Land Based Views of Loudoun Meadows Before and After

Loudoun Meadows 2018



Today with Amazon and Microsoft



Microsoft is on the left/center, Amazon is far right

Considerations and Recommendations

1. **Setbacks** - Evaluate setbacks between approved uses. Consider a 500ft minimum as both a visual and sound buffer or transition area for data center use that abuts residential.
2. **Lighting Standards** - Evaluate lighting standards and adjust to have minimal impact on residential uses within close proximity. Consider implementing “lights out” periods as a reprieve for residents.
3. **Security Lighting** - Re-evaluate security lighting standards and increase scrutiny over the types, placement and overall necessity of security lighting.
4. **Sound (A)** – despite current inactivity at the Amazon facilities close to the community, noise is a concern once operational. This issue is well documented from other communities with active facilities nearby. Loudoun Meadows residents fully expect an increase in noise when the facilities go live. Between heavy HVAC usage, cooling fans, power management/substations and backup power generation, these facilities emanate sound. Sound standards should be consistent with residential uses when in proximity. HVAC noise exemptions should not be allowed for systems that are perpetually in use.
5. **Sound (B)** – Reflective sound is often overlooked side effect of large concrete structures. Standards should be implemented to minimize external sound reflection for facilities bordering residential uses.
6. **Building height** – Stark contrast between uses should be avoided. Allowing 70ft tall structures directly adjacent to homes half that size results in a “David and Goliath” unnatural difference. Suggest tapering down to the closest point of setback.
7. **Easements** - Review and amend easement access processes to provide additional oversight. Our experience demonstrates the abuse that can occur if unchecked access to easements are permitted. For new construction, access should be granted only upon submission of a project plan outlining all facets of the construction. A plan that extends beyond easement boundaries should never be allowed without demonstrated agreement with the impacted property owner(s).