

Pleasant Valley Community Meeting
July 27, 2023
RZ 2022-SU-00019/SE 2022-SU-00038
Tax Map #33-2 ((1)) 006 part ("Chantilly Premier")



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PDCREF 2 Chantilly LLC, Developer

Kimley-Horn, Civil & Landscape
Architecture

DCM, Architect (Data Center)

MGMA, Architect (Warehouse)

Wells & Associates, Traffic

Ramboll, Noise Consultant



Introduction

- Presented to the Sully District Council on May 15 and June 19, 2023
- Currently approved for car dealership and service center
- Proposed rezoning of C-8 portion of the property to I-5
 - Option 1: data center
 - Option 2: warehouse
- Special exception request for increased height (Option 1 – data center)
- Special exception for increased density (Option 1 – data center)



Existing Conditions and Area Context



- Tax Map #33-2 ((1)) 6 is vacant land of approx. 79 acres
- Adjacent Cub Run Stream Valley, Route 50, and Auto Park Circle
- Application applies only to 12.1 acre portion
- Remaining 67 acres to be preserved as Resource Protection Area (RPA) and will not be developed
- Single-family residential (Pleasant Valley) approximately .45 mile from the southwest edge of the application property

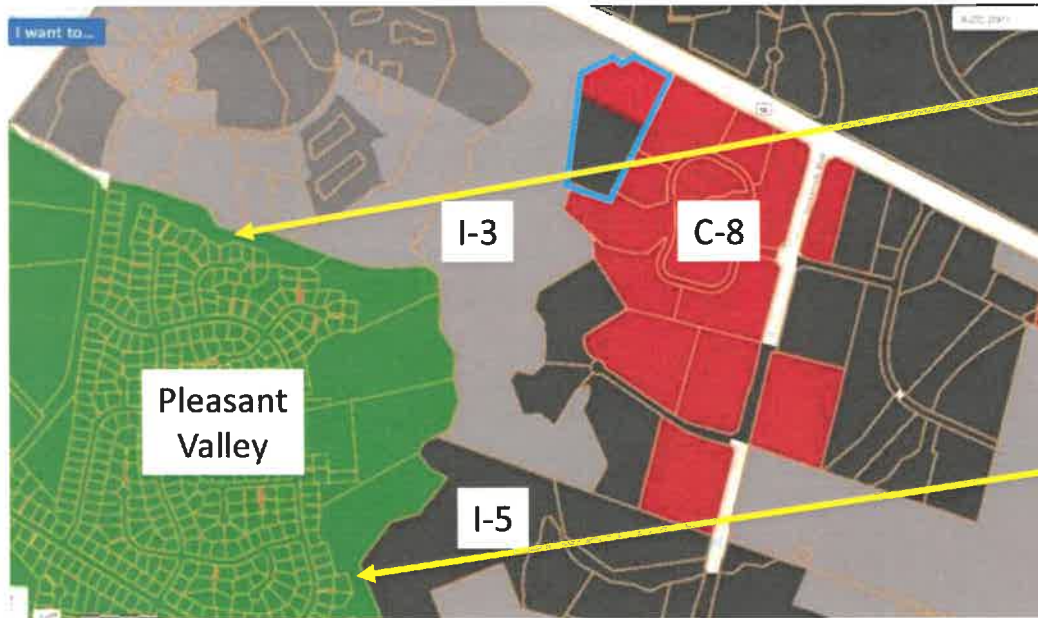




Property to closest
Pleasant Valley Lot = .45 mile

Property to center
Pleasant Valley Lot = .76 mile

Property to furthest
Pleasant Valley Lot = 1 mile



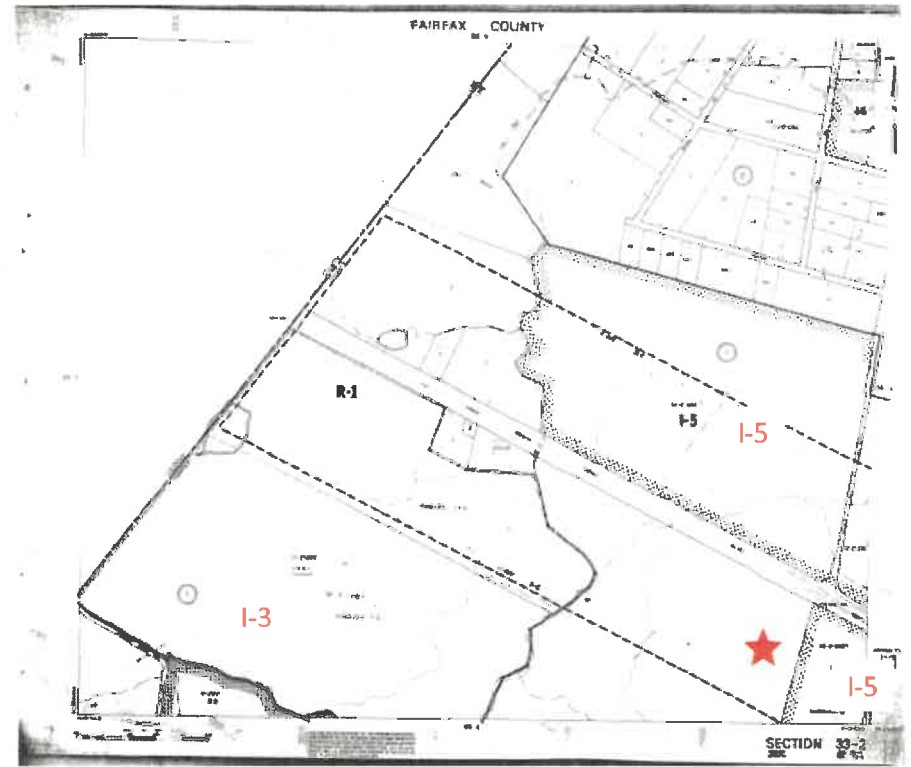
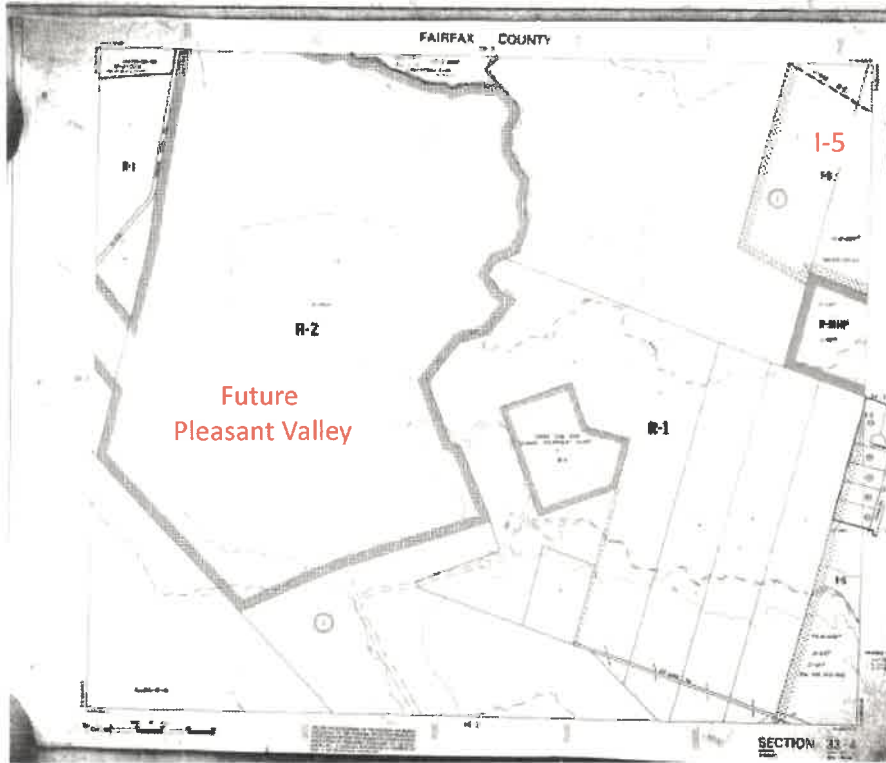
Distance between Pleasant Valley and I-3 = 80 feet

Distance between Pleasant Valley and I-5 = 110 feet

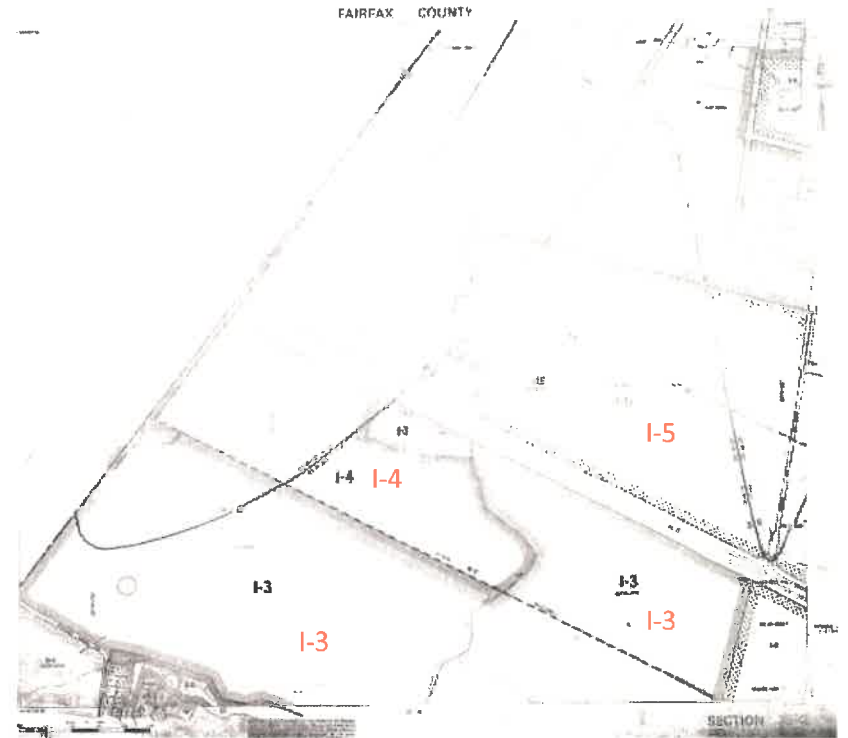
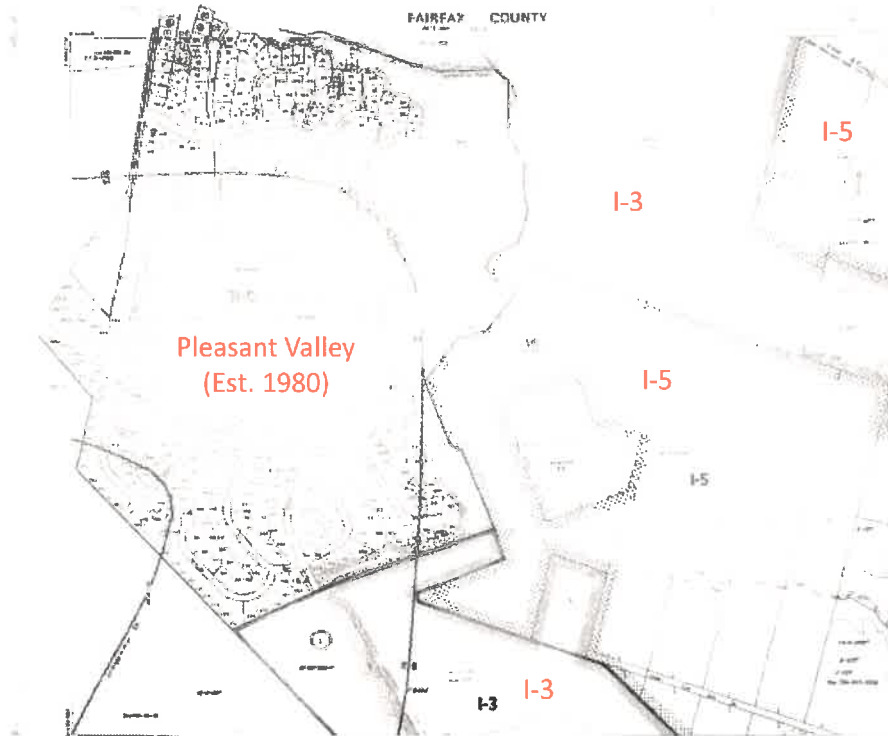
- C-8 The C-8 District provides locations on heavily traveled collector and arterial highways for auto-oriented commercial and service uses. The C-8 District is intended to accommodate uses in a manner that minimizes interference with through traffic movements and to ensure a high standard in site design, layout, and landscaping. Allowed uses in the C-8 District are encouraged in concentrations.
- I-1
- I-2
- I-3 The I-3 District provides areas for scientific research, development and training, offices, light-intensity production of goods, and related supply and supporting nonresidential activities. This district is designed to provide for a broad spectrum of clean industries operating under enhanced performance standards.
- I-4
- I-5 The I-5 District provides for a wide range of industrial and industrially-oriented business activities. Uses must minimize noise, smoke, glare, and other environmental pollutants on the uses within the district and on neighboring areas. Other nonresidential uses generally provide services and supplies to industrial companies, engage in wholesale operations, and are associated with warehouse establishments.
- I-6



1978



1984



Existing Data Centers

The screenshot displays a web application for data center mapping. The top navigation bar includes 'BAXTEL', 'NEWS', 'DATA CENTER MAP', and 'EVENTS'. A search bar is present with the text 'Search location or company', along with 'LOGIN' and 'SIGN UP' buttons. Below the navigation, there are tabs for 'Overview', 'Map', 'Sites', 'Construction', 'News', 'Events', and 'Files'. The map interface includes a filter box for 'Filter results by name', a map view selector with 'Streets' selected and 'Satellite' unselected, and a legend on the right side. The legend identifies red dots as 'Existing Data Center' and blue stars as 'Proposed Data Center'. The map shows several red dots in the Pleasant Valley and Chantilly areas, and one blue star in Pleasant Valley. A list of data centers is provided on the left side of the map.

Name	Region	Company
Amazon IAD61	AWS US East (N. Virginia)	Amazon AWS
Amazon Willard Road (Land)	AWS US East (N. Virginia)	Amazon AWS
Amazon 25020 Willard Road	AWS US East (N. Virginia)	Amazon AWS
Amazon IAD22	AWS US East (N. Virginia)	Amazon AWS
Amazon IAD1	AWS US East (N. Virginia)	Amazon AWS
Lafayette Center Drive Campus - Digital Realty	Northern Virginia	Digital Realty Trust
IBM Softlayer Chantilly WDC01	Northern Virginia	IBM Cloud
Amazon IAD9	AWS US East (N. Virginia)	Amazon AWS
Amazon 13600 EDS Drive	AWS US East (N. Virginia)	Amazon AWS

Map Legend:

- Existing Data Center (Red Dot)
- Proposed Data Center (Blue Star)

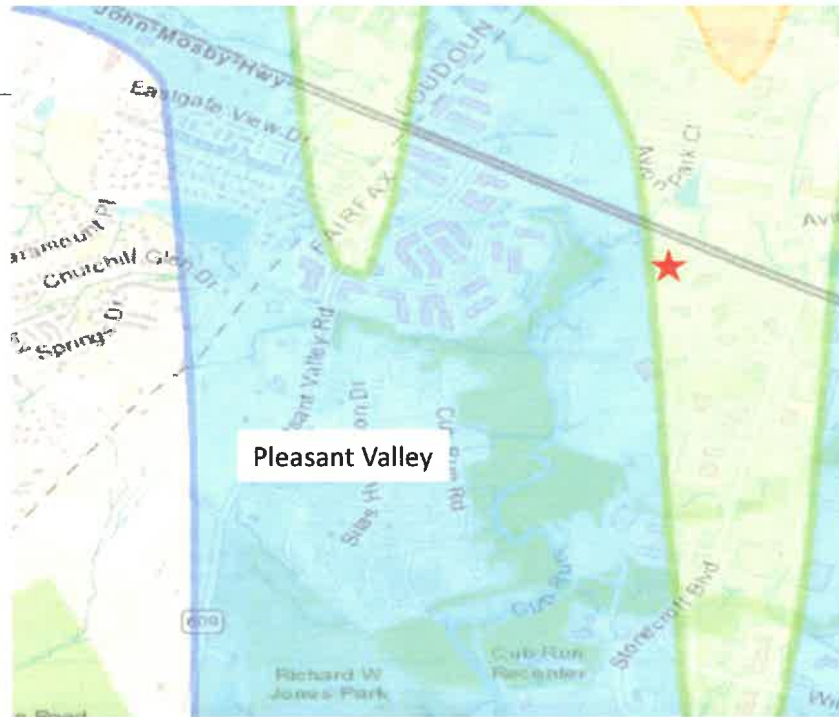
Map Labels:

- Site: Amazon Willard Road (Land) Region: AWS US East (N. Virginia) Company: Amazon AWS
- Chantilly Crushed Stone
- Social House Kitchen & Tap
- Eastgate
- Pleasant Valley
- Hampton Inn
- Chantilly

Map Footer: © Mapbox © OpenStreetMap Improve this map



Dulles Noise Contours Map




LEGEND
2019 Ultimate Conditions Noise Contours

Contour

- 60 DNL
- 65 DNL
- 70 DNL
- 75 DNL

For Planning Use Only

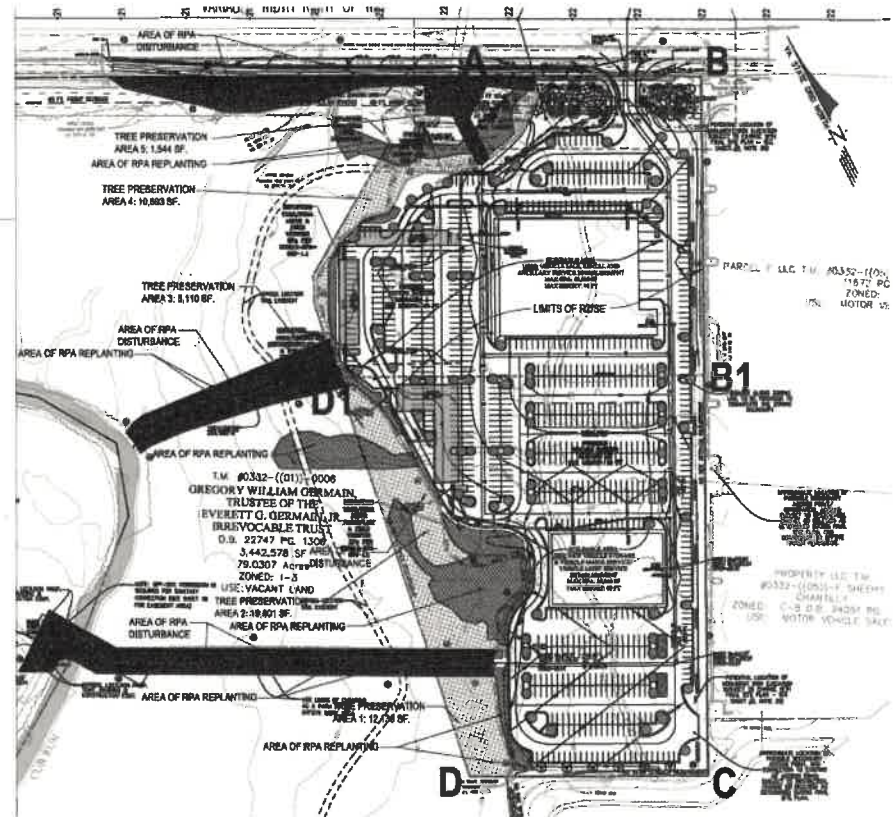


METROPOLITAN WASHINGTON AIRPORTS AUTHORITY

0 0.25 0.5 1 1.5 2 2.5 Miles

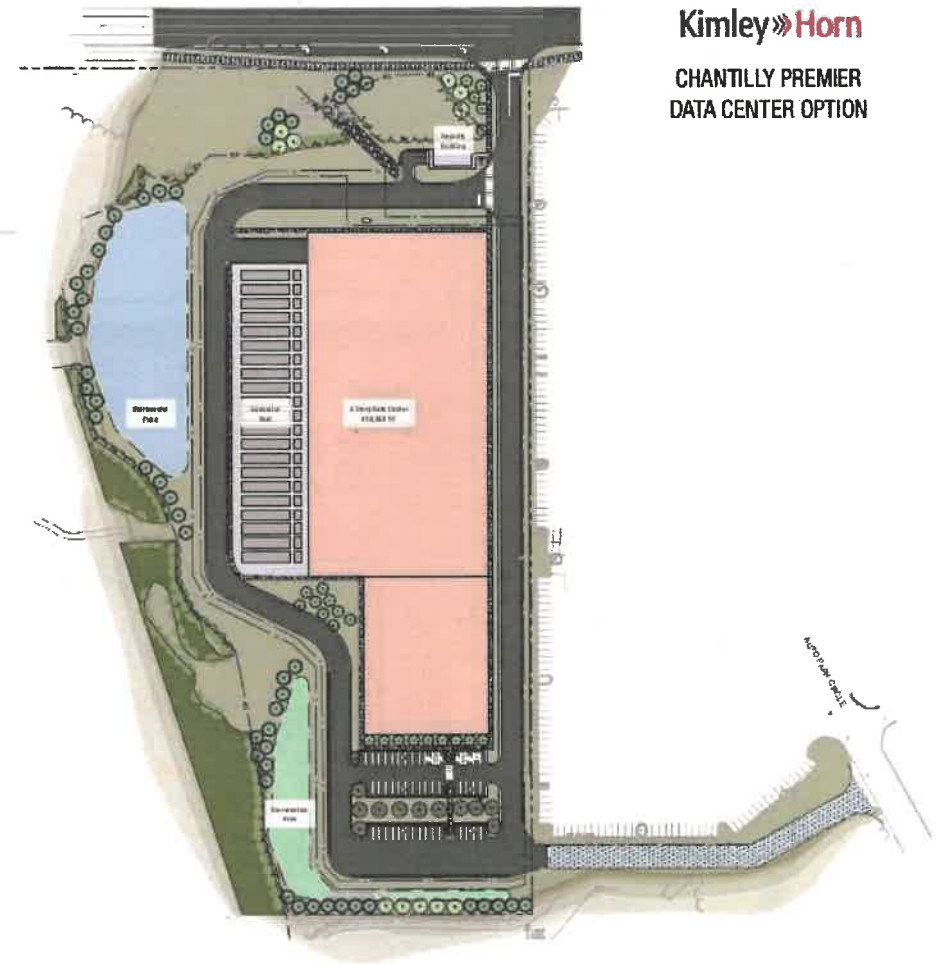
Existing Approval

- RZ 2019-SU-021 and SE 2019-SU-022 approved July 28, 2020
- Split-zoned C-8/I-5 for car dealership and service center (60k sf)
- RPA impact = 1.3 acres
- 60' max height (exclusive of rooftop equipment)
- 817 parking spaces
- 4 loading spaces



Proposal – Option 1 (Data Center)

- Proposed zoning: I-5
- RPA impact = .19 acres
- .8 FAR (402k sf)
- 110' max height (inclusive of rooftop equipment)
- 50 parking spaces
- 2 loading spaces
- LEED Silver minimum target



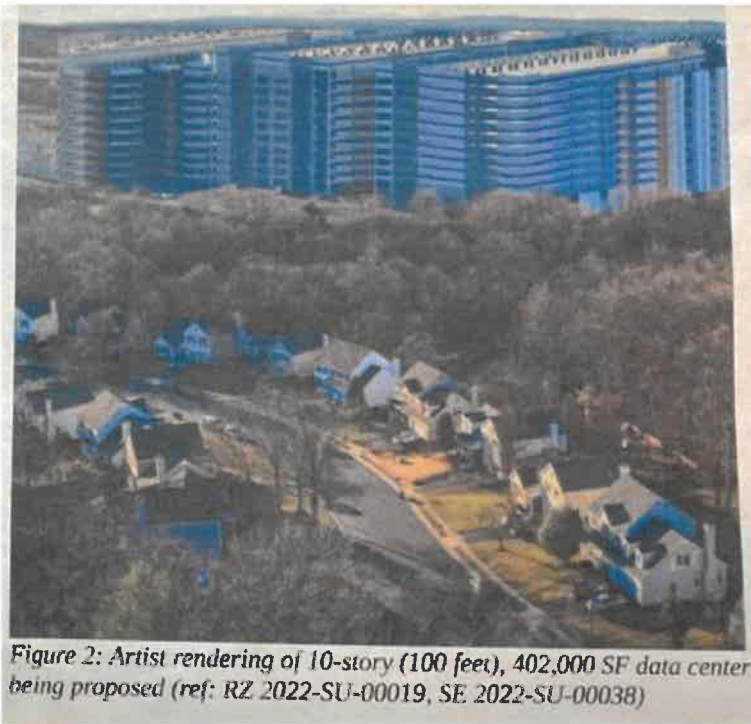
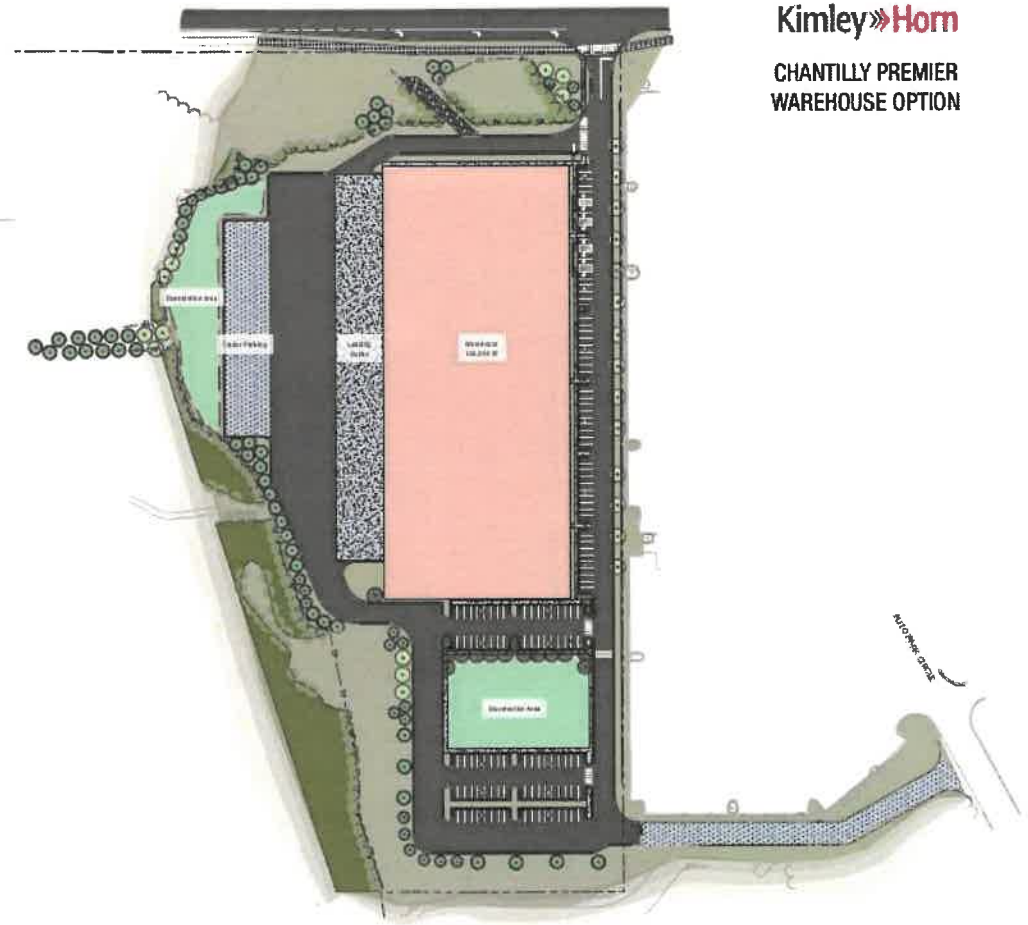


Figure 2: Artist rendering of 10-story (100 feet), 402,000 SF data center being proposed (ref: RZ 2022-SU-00019, SE 2022-SU-00038)



Proposal – Option 2 (Warehouse)

- Proposed zoning: I-5
- RPA impact = .19 acres
- .3 FAR (150k sf)
- 55' max height (exclusive of rooftop equipment)
- 150 parking spaces
- 30 loading spaces
- LEED Certified minimum target



Noise

Predicted project sound levels at nearest neighborhood area during 100% load operation.

Typical Sound Pressure Levels Associated with Common Noise Sources			
Sound Pressure Level (dBA)	Subjective Evaluation	Environment	
		Outdoor	Indoor
140	Deafening	Jet aircraft at 75 ft	
130	Threshold of pain	Jet aircraft at 300 ft during takeoff	
120	Threshold of feeling		Rock band concert
110	Extremely Loud	Accelerating motorcycle at a few feet away.	
100	Very Loud	Auto horn at 10 ft	
90		Jackhammer at 50 ft	Noisy factory
80	Loud	Diesel truck (40 mph) at 50 ft Noisy urban street	Cafeteria with sound-reflecting surfaces
70	Moderately Loud	Busy highway at 100 ft	Vacuum cleaner at 10 ft
60	Moderate		Face-to-face conversation
50	Quiet	Small town residence	Open office area
40			Quiet dishwasher
30	Very quiet	Rustling leaves	Bedroom, typical residence (without TV or sound system)
20			Audiometric testing room Whisper
10	Just audible		Human breathing
0	Threshold of hearing		

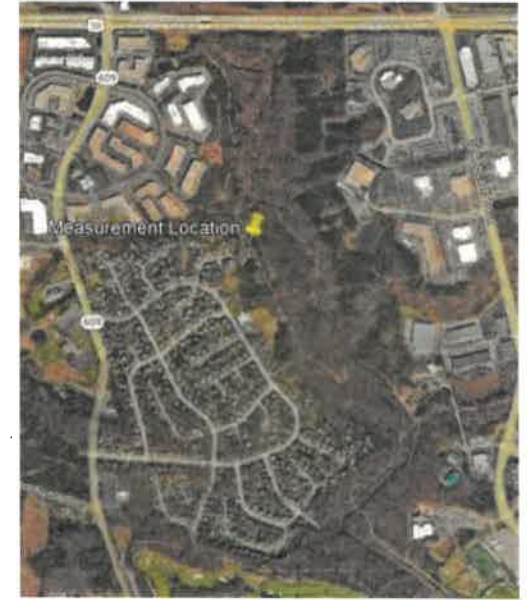
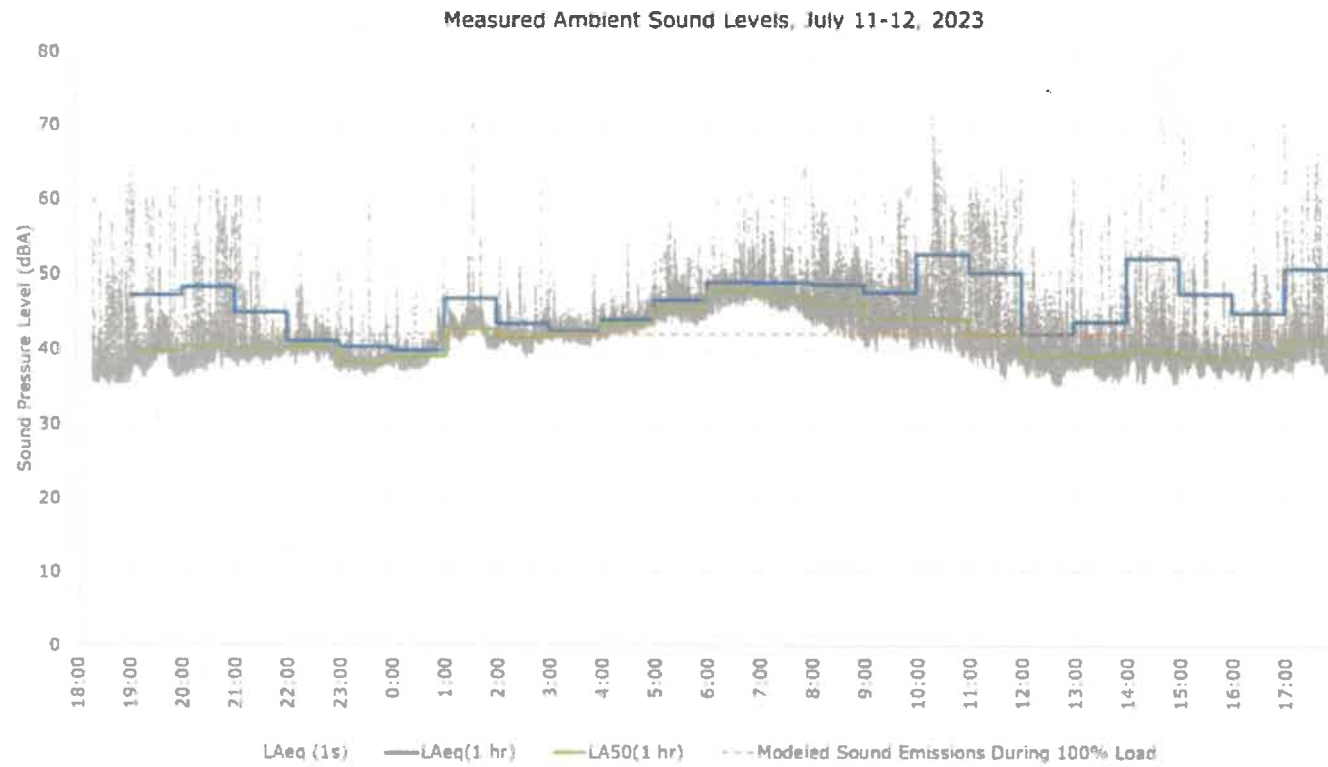
Modeled Sound Emissions for 100% Load Operation



Modeled Sound Emissions for Generator Maintenance/Testing



Measured Ambient Sound Levels - July 11-12, 2023



Traffic

Traffic Impacts

Chantilly Premier
 Trip Generation Comparison^{(1) (2)}

Scenario	Land Use Code	Amount	Units	Weekday						
				AM Peak Hour			PM Peak Hour			Average Daily Trips
				In	Out	Total	In	Out	Total	
Approved Development (RZ 2019-SU-021/SEA 2019-SU-022)⁽³⁾										
Auto Dealership (Automobile Sales-New)	840	60,000	GSF	82	30	112	52	78	130	1,690
Proposed Development Options										
<u>Option 1</u>										
Data Center	160	402,000	GSF	24	20	44	11	25	36	398
<u>Option 2</u>										
High-Cube Parcel Hub Warehouse	156	150,000	GSF	53	52	105	65	31	96	695

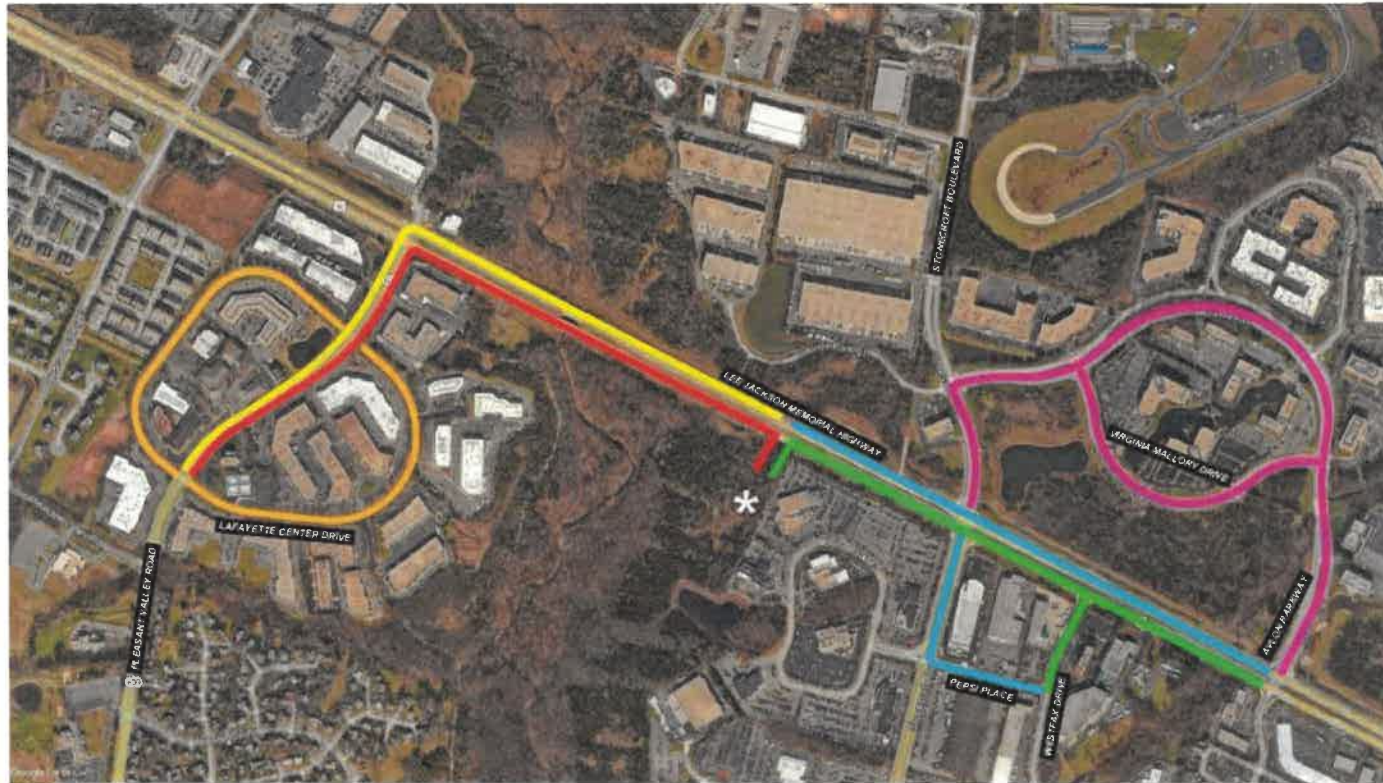
Option 1: 1,292 reduction in avg. daily trips compared to approved GDP

Option 2: 995 reduction in avg. daily trips compared to approved GDP

Note(s):
 (1) Trip generation based on the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 11th Edition.
 (2) For purposes of this operational analysis, all peak hour trips are based on the Peak Hour of the Adjacent Street.
 (3) Trip generation estimates based on ITE's Trip Generation Manual, 10th Edition, consistent with the application's Operational Analysis (OA).









Visibility

OVERVIEW

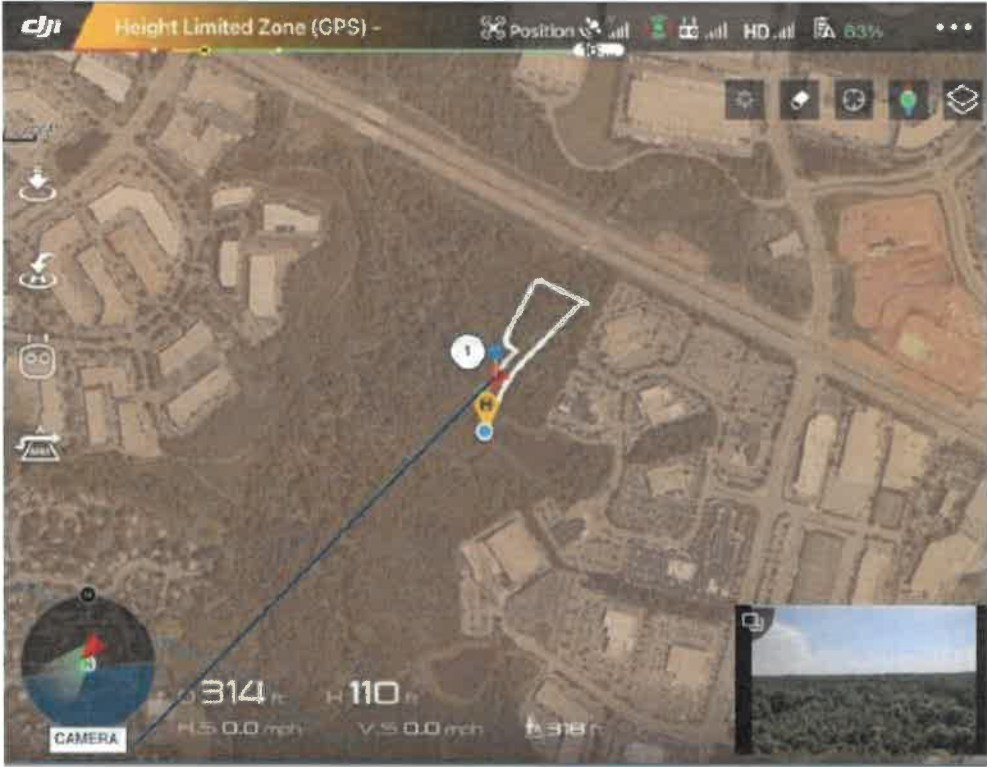
- Date of site visit – 07/06/2023
- Aerial images taken at Point #1 and Point #2
- Aerial imagery captured at approximately 110 ft.
- Ground camera in neighborhood was positioned in direction of Points #1 and #2

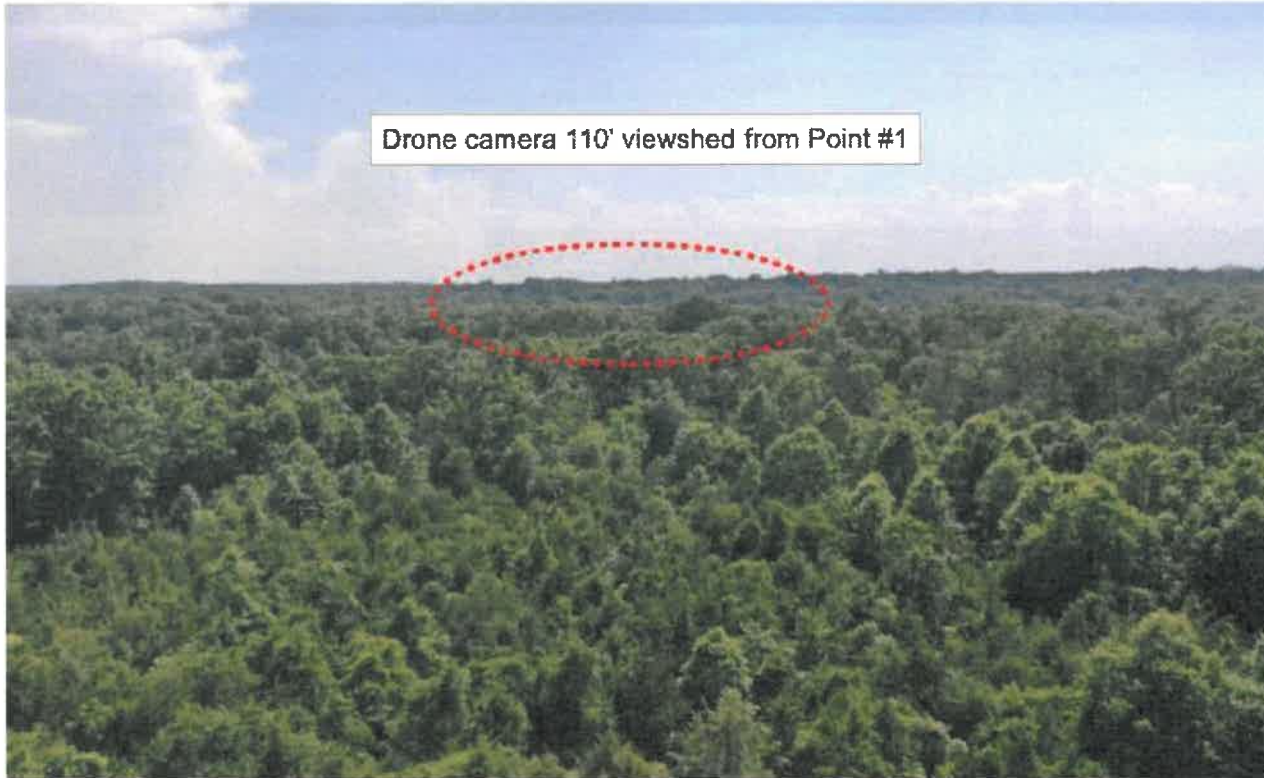


Labeled iPad screenshot showing drone position relative to nearby community



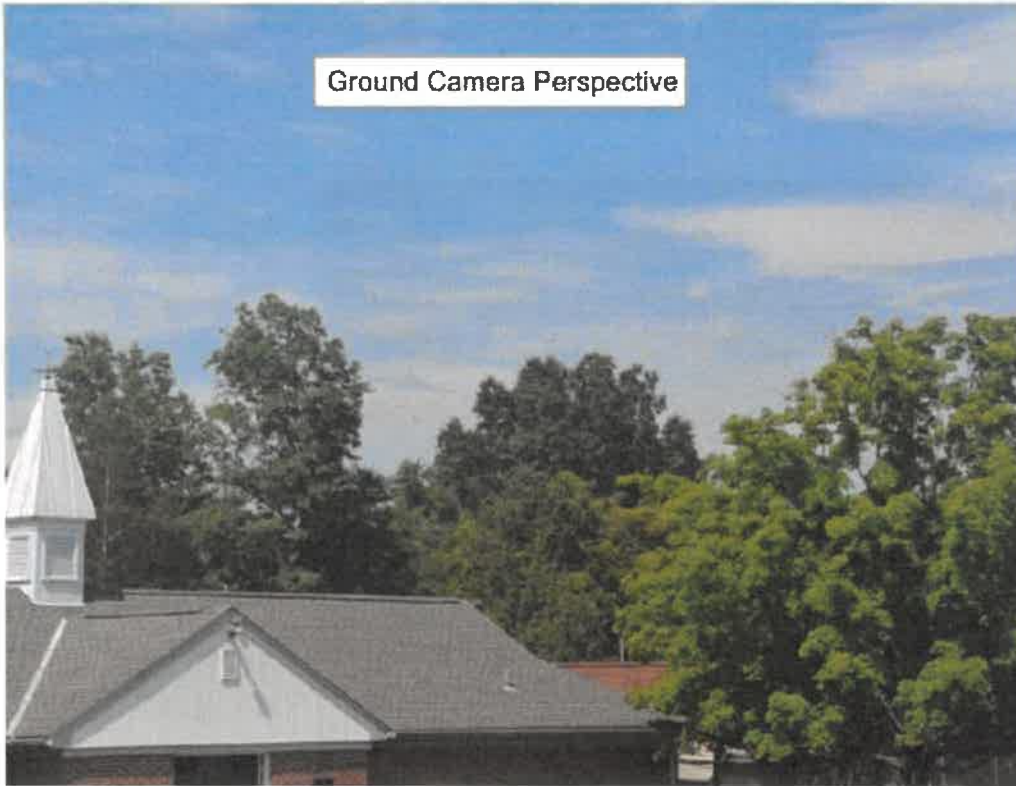
Point #1





Tops of some residences visible

Ground Camera Perspective

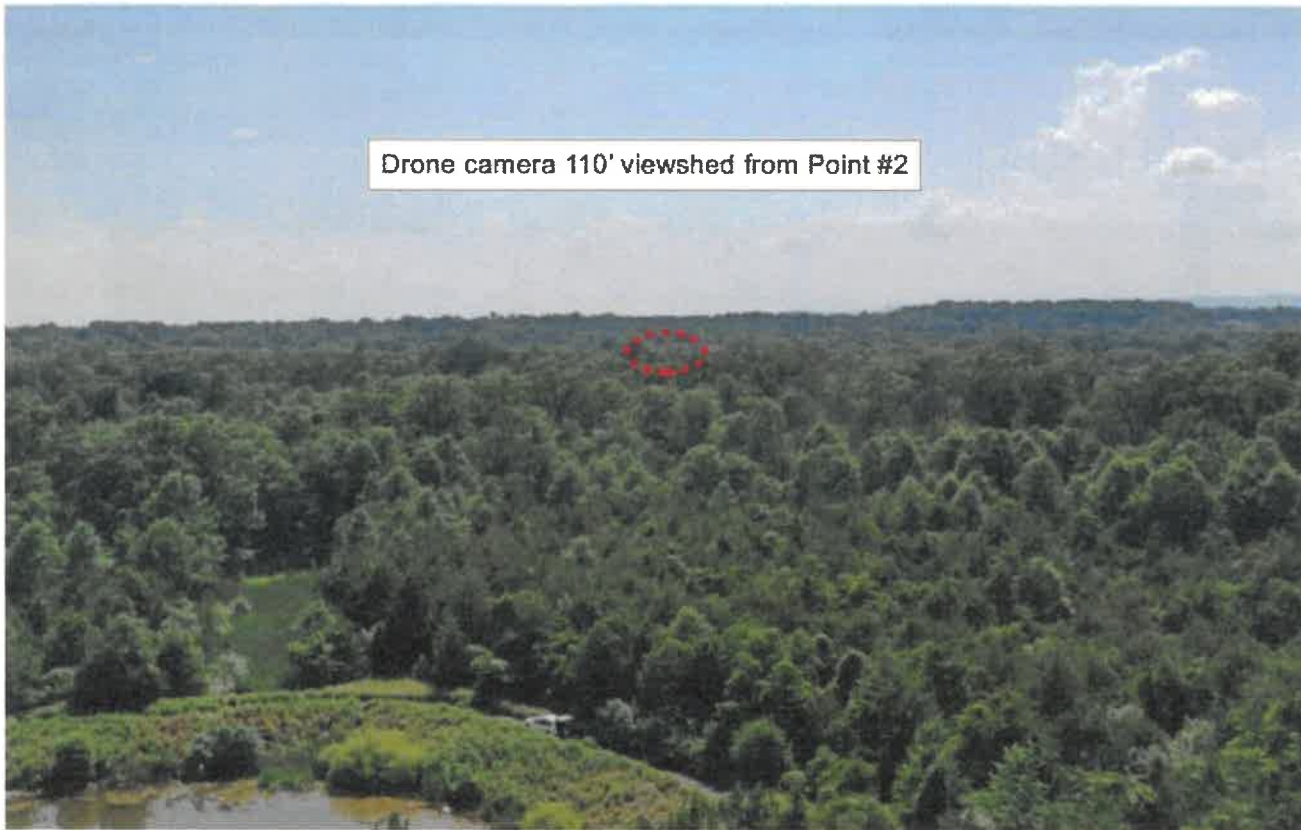




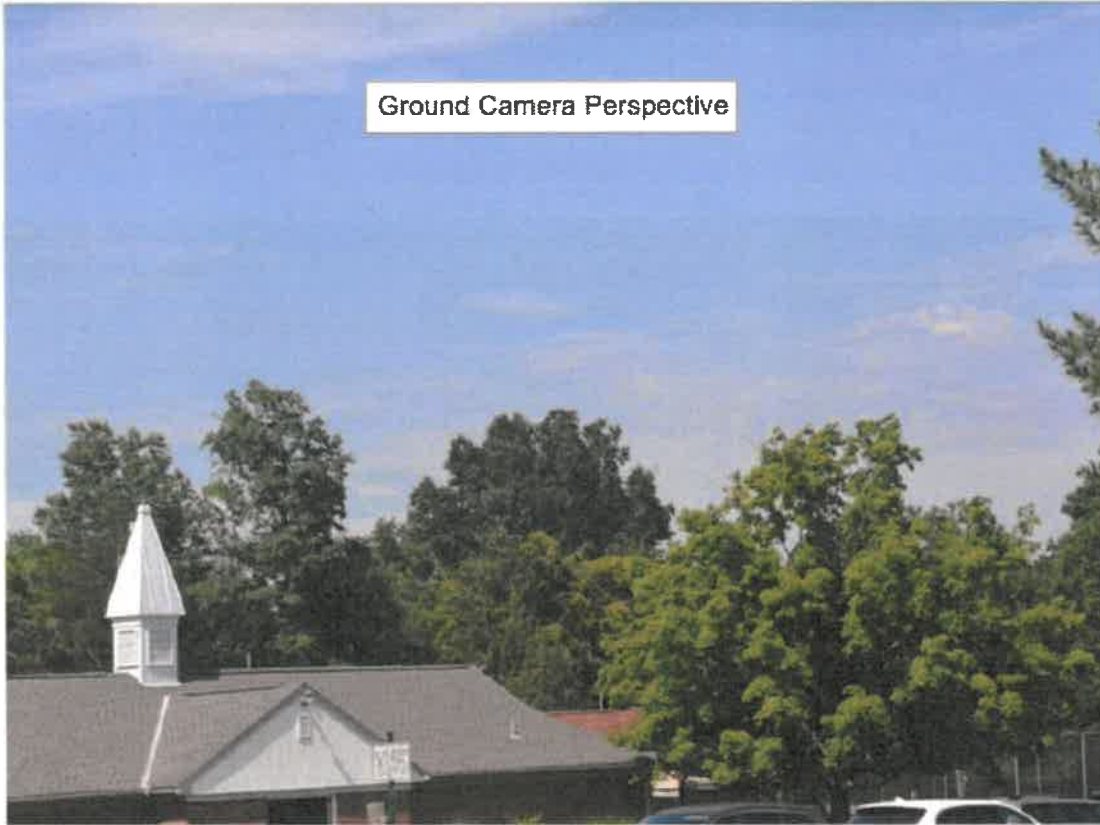
Point #2



Drone camera 110' viewshed from Point #2



Ground Camera Perspective



TREE LINE COMPARISON



Map date: 02/18/23

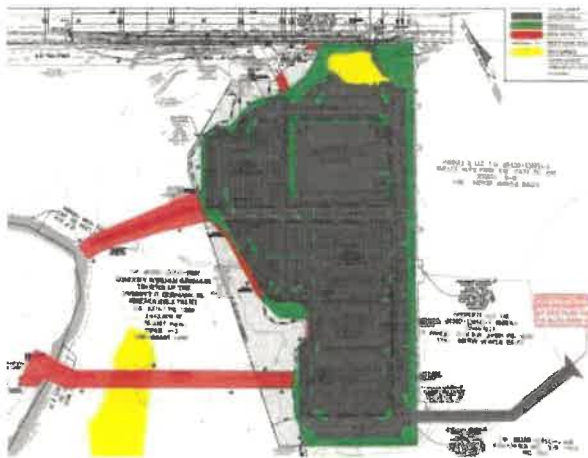


Map date: 05/21/23

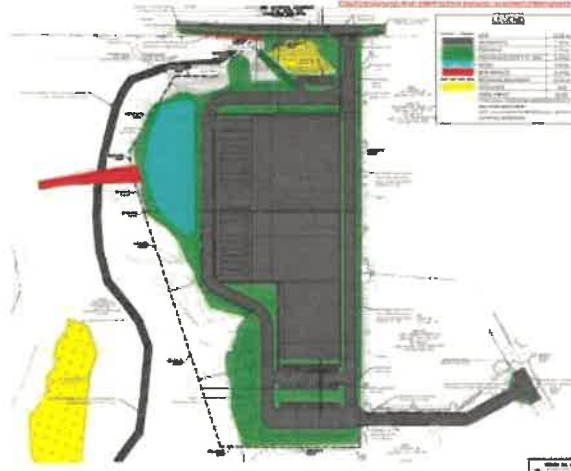
Environmental

Reduced RPA Impacts

Approved Car Dealership



Option 1 (Data Center)



Option 2 (Warehouse)



Diesel Storage and Containment Regulations

- Federal Regulations
 - US EPA's Spill Prevention, Control, and Countermeasure (SPCC) regulation (40 CFR Part 112)
- State Regulations
 - Virginia DEQ Tank Compliance Program - <https://www.deq.virginia.gov/our-programs/land-waste/petroleum-tanks/aboveground-storage-tanks>
 - Must comply with State Water Control Board regulations for above-ground storage tanks (ASTs) - <https://law.lis.virginia.gov/admincode/title9/agency25/chapter91/section130/>
- County Regulations
 - Fairfax County Fuel Storage Tanks Regulations - <https://www.fairfaxcounty.gov/plan2build/fuel-storage-tanks>
- Diesel fueling areas will be design and graded to drain away from stormwater areas and collect at an oil-water separator that keeps the diesel from entering the site stormwater pipes.

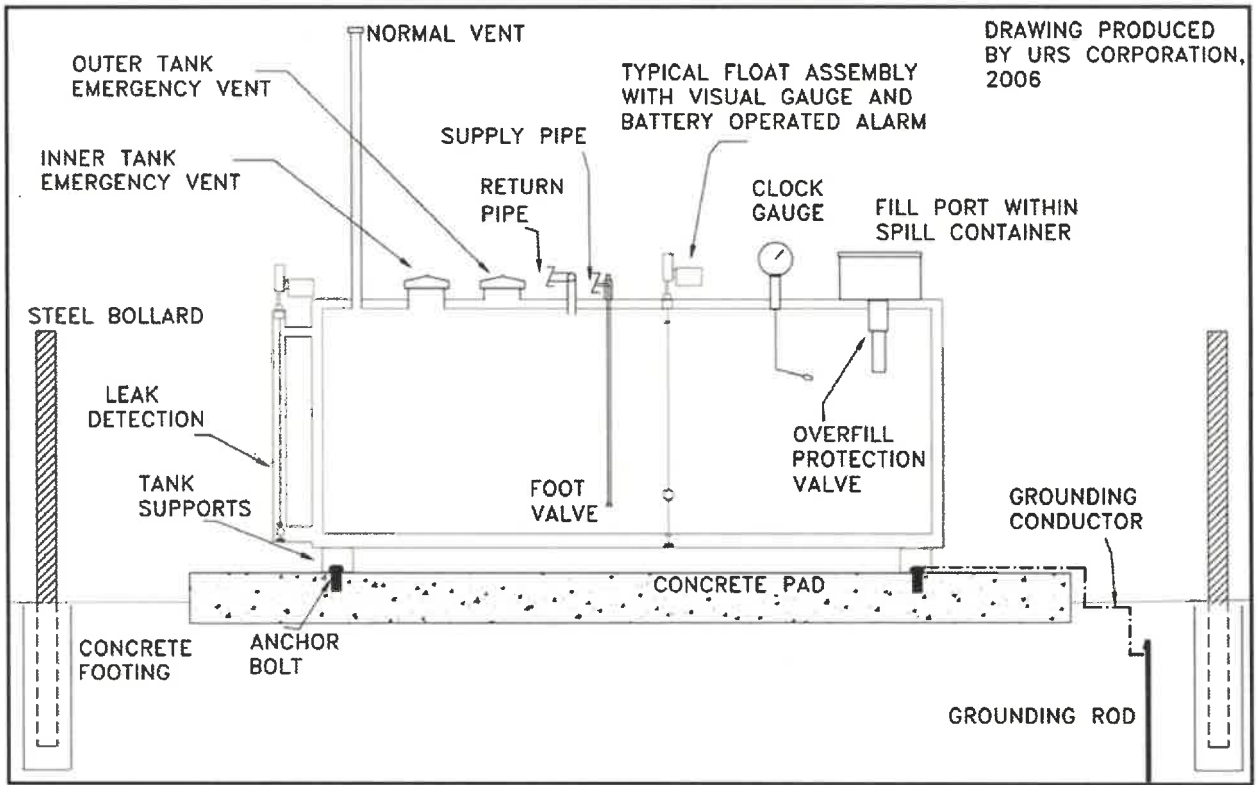


Figure 1
Typical U.L. 142 Double-wall Aboveground Storage Tank

THANK YOU



Appendix

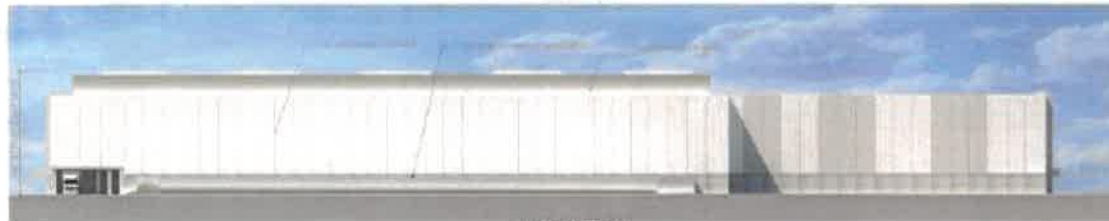
Proffer Commitments and Other Regulations

- Must comply with applicable water treatment and discharge standards of Chapter 67.1 of the Fairfax County Code (nothing atypical/toxic being introduced into sewer system)
- All lighting must comply with Fairfax County outdoor lighting standards, including full cut off fixtures and LED lighting for all streetlights
- SWM facilities will be designed to minimize stream erosion through use of the “energy balance method” (mimicking forested existing conditions)
- Pre- and post-construction acoustical analyses
- Generator testing limited to 2 hours per day between 9 a.m. and 9 p.m.
- Must comply with State Water Control Board regulations for above-ground storage tanks (ASTs)

Data Center



EAST ELEVATION



WEST ELEVATION



NORTH ELEVATION



SOUTH ELEVATION

*Conceptual drawings only subject to change at site plan.



2 View from Northwest



1 View from Southeast



2 View from Southeast



2 View from Northeast

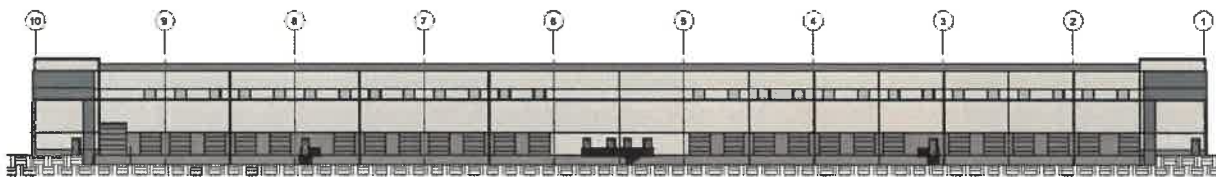
***Conceptual drawings only subject to change at site plan.**

Warehouse

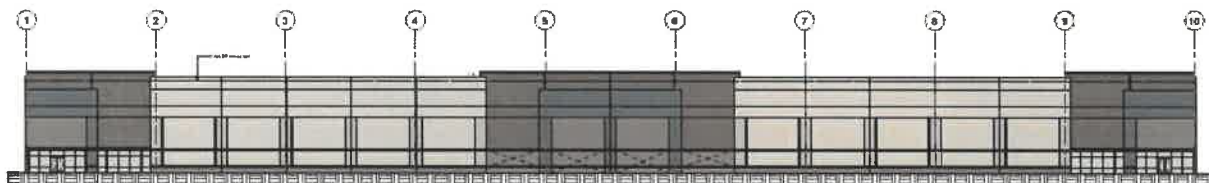


4 EAST ELEVATION
1/16" = 1'-0"

5 WEST ELEVATION
1/16" = 1'-0"



6 NORTH ELEVATION
1/16" = 1'-0"



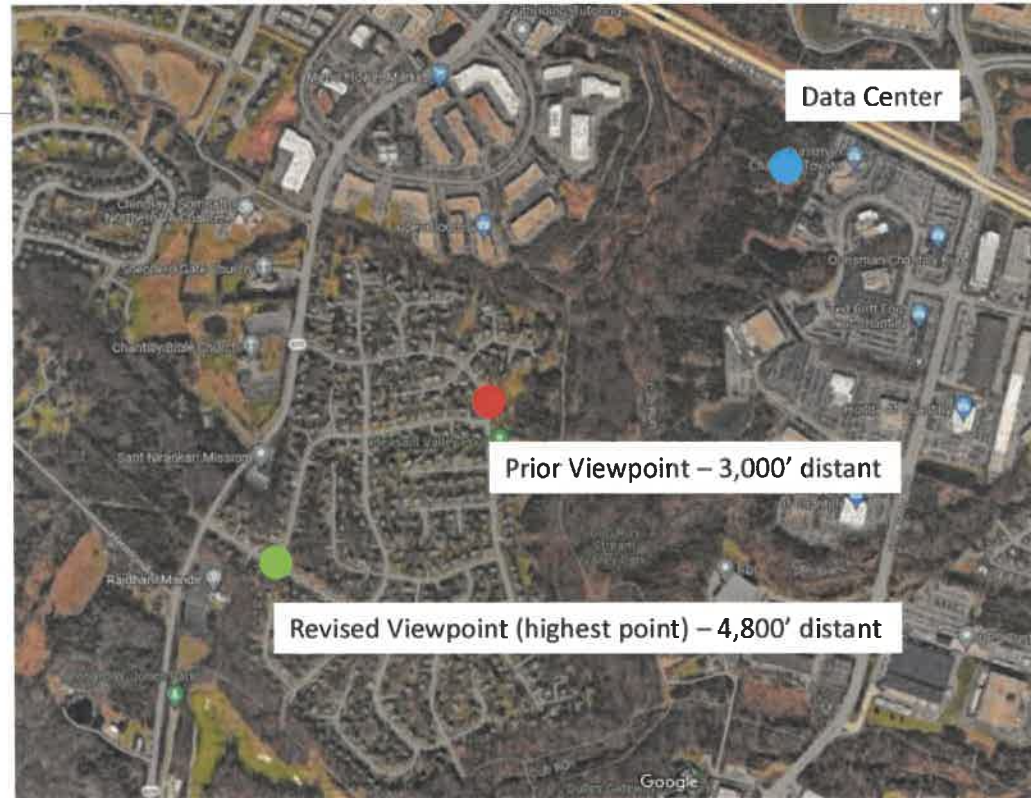
7 SOUTH ELEVATION
1/16" = 1'-0"

*Conceptual drawings only subject to change at site plan.



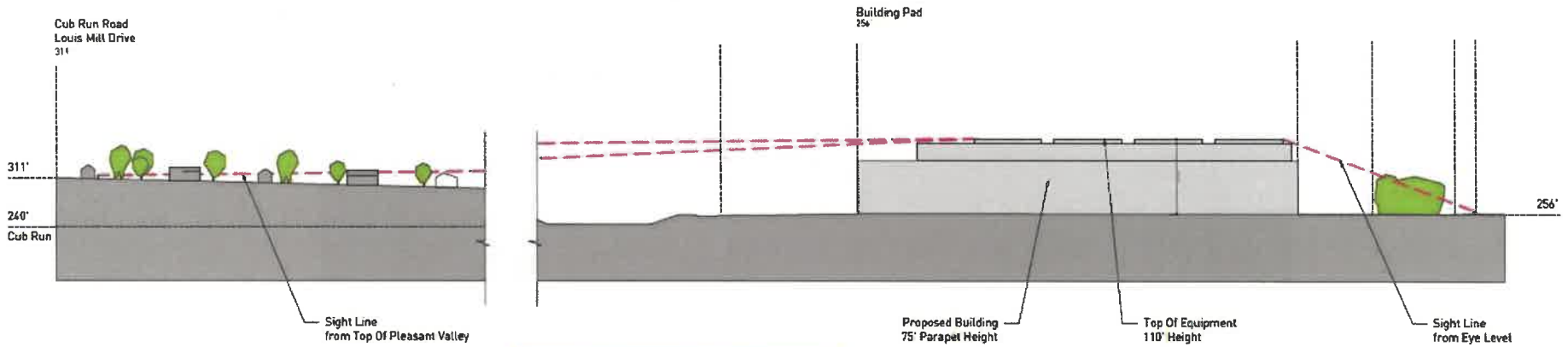
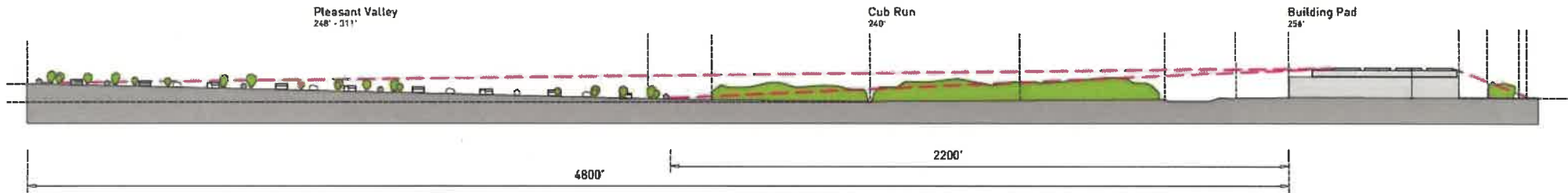
*Conceptual drawings only subject to change at site plan.

Revised Sight Line Study



Revised Viewpoint (Google Streetview)





Revised Viewpoint (Google Earth)



Tree Preservation Area

