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Legal	<input checked="" type="checkbox"/>
Finance	<input type="checkbox"/>
Engineer	<input type="checkbox"/>
City Administrator	<input checked="" type="checkbox"/>
Community Development	<input checked="" type="checkbox"/>
Purchasing	<input type="checkbox"/>
Police	<input type="checkbox"/>
Public Works	<input type="checkbox"/>
Parks and Recreation	<input type="checkbox"/>

Agenda Item Number

Planning and Zoning Commission #1

Tracking Number

PZC 2025-05

Agenda Item Summary Memo

Title: Data Center Development Standards (Text Amendment)

Meeting and Date: City Council – June 24, 2025

Synopsis: Proposed a text amendment to establish specific regulations for data center developments.

Council Action Previously Taken:

Date of Action: CC – 6/10/25 Action Taken: This agenda item was tabled to 6/24/25.

Item Number: PZC 2025-05

Type of Vote Required: Majority

Council Action Requested: Approval

Submitted by: Sara Mendez Community Development
Name Department

Agenda Item Notes:



Memorandum

To: City Council
From: Sara Mendez, Senior Planner
CC: Bart Olson, City Administrator
Krysti Barksdale-Noble, Community Development Director
David Hansen, Senior Planner
Date: June 17, 2025
Subject: **PZC 2025-05** Data Center Development Standards – Text Amendment

UPDATE FROM JUNE 10, 2025 CITY COUNCIL MEETING

At the June 10, 2025, City Council meeting, a discussion was held related to the proposed data center text amendments. Alderman Funkhouser requested to revise the language of two (2) of the proposed text amendments regarding building separation and fencing for data centers as detailed below:

BUILDING SEPARATION

Below is staff's originally proposed building separation standard:

- a. Minimum of a 500-foot building separation from the nearest data center building or structure (primary or accessory) to the nearest residential or commercial structures.

Staff originally recommended a building-to-building separation to prevent a large-scale data center buildings or structures from being located too close to residential homes. The City's Unified Development Ordinance (UDO) states that one of its goals is to regulate how intensely land is used and to make sure there's enough open space around buildings to provide adequate light and air and protect public health. Therefore, staff prioritized enhancing the distance between data center structures (primary or accessory) and nearby residential buildings to help protect the well-being of adjacent residents.

Proposed Changes from June 10th City Council Meeting

Below is the recommended update made at the June 10th City Council meeting:

- a. Minimum of a 500-foot building separation from the nearest data center building or structure (primary or accessory) to the nearest residential **lot line intended for dwelling purposes** or commercial structures.

Staff has concerns about the visual impact that a large data center structure could have on nearby residential buildings as the proposed revision shifts the standards from a building separation to a building setback, changing how the distance is measured. To address this while still allowing flexibility in site layout, staff recommends using a building separation standard.

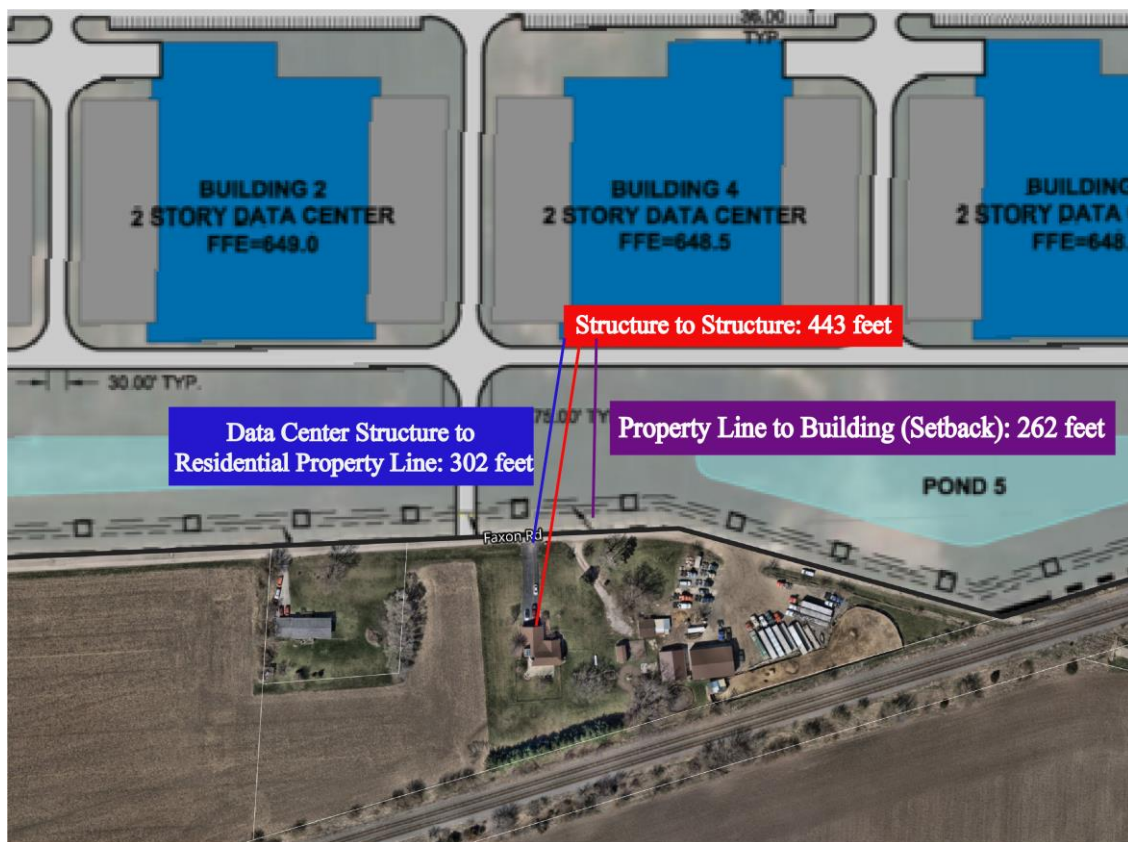
The Unified Development Ordinance (UDO) defines building setback line as *"a parallel line across a lot or parcel of land, establishing the minimum open space to be provided between the line of a building or structure"*. A building setback acts as a blanket restriction for all structures on the site, which would limit design options and reduce buildable area. In contrast, a building separation refers to *"the horizontal distance or gap between building structures"*.

Building Setback vs Building Separation Analysis

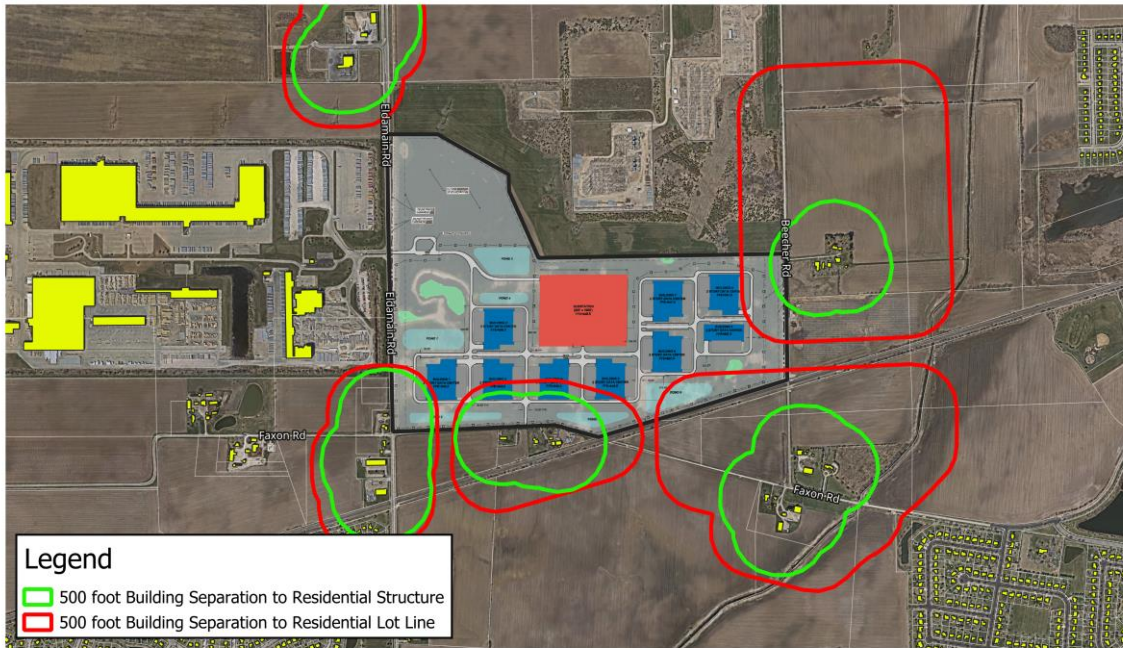
City Council directed staff to prepare aerial images demonstrating how the proposed change in text would affect the recently approved or proposed data center projects in the city. Below is an analysis in relation to the three (3) approved and/or proposed data center projects, Cyrus One, Project Steel, and Project Cardinal.

1. Cyrus One

The Cyrus One data center campus was approved by the City in July 2024. The project spans approximately 228 acres and includes nine (9) data center buildings. The map below illustrates the estimated distances between Building #4 of the data center campus and the nearest residential structure (structure to structure), the residential property line (structure to lot line), and the distance from the data center campus property line to the data center Building #4 (setback).



The map below illustrates the distances between the nearest residential structures and the data center buildings within the Cyrus One development, along with buffer areas surrounding nearby residential properties. The green buffer represents staff's proposed 500-foot building separation from data center structure-to-residential structure. The red buffer reflects the updated recommendation from the June 10th City Council meeting, which measures a 500-foot separation from the data center structure to the residential lot line.



CYRUS ONE - DATA CENTER

United City of Yorkville, Illinois
 Date: June 13, 2025
 Data: Kendall County

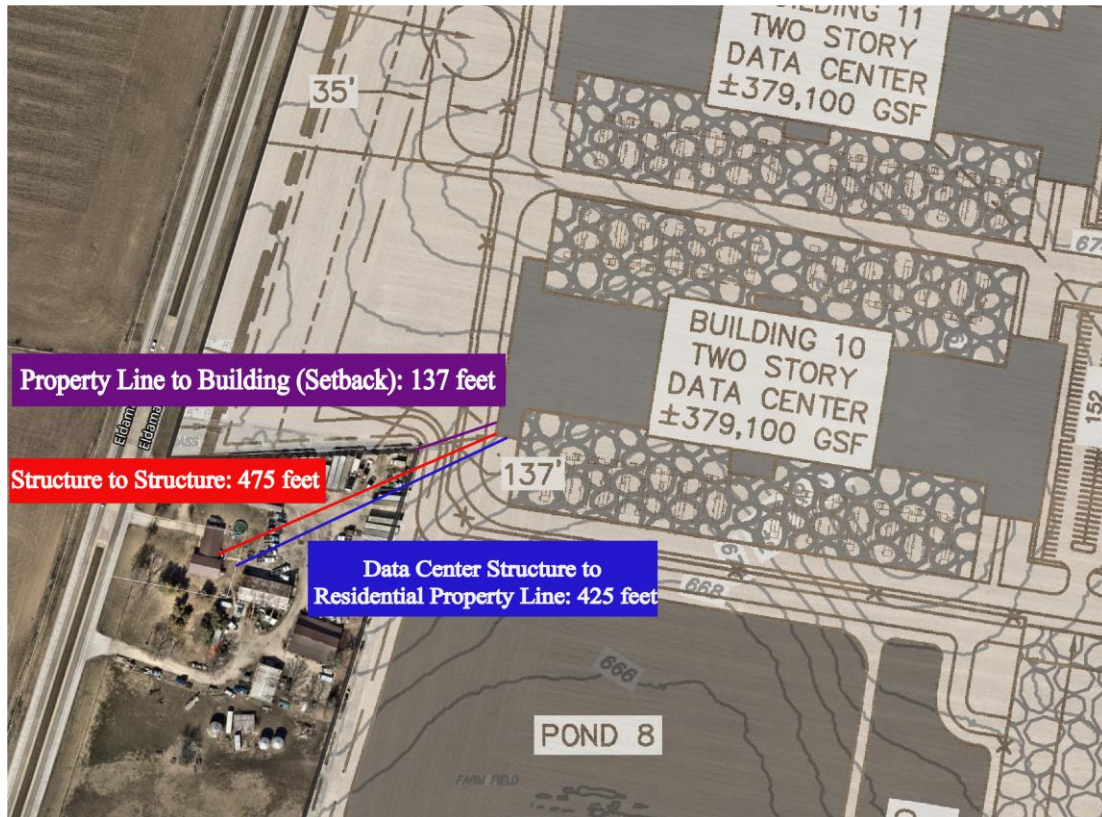


	Distance	Does the plan meet the proposed 500-foot standard?	Impact
Structure to Structure – Staff’s Proposal	443 feet	No	Below proposed requirement by 57 feet
Structure to Property Line – Proposed from June 10th City Council	302 feet	No	Below proposed requirement by 198 feet
Building to Property Line – Standard in UDO	262 feet	No	Below proposed requirement by 238 feet

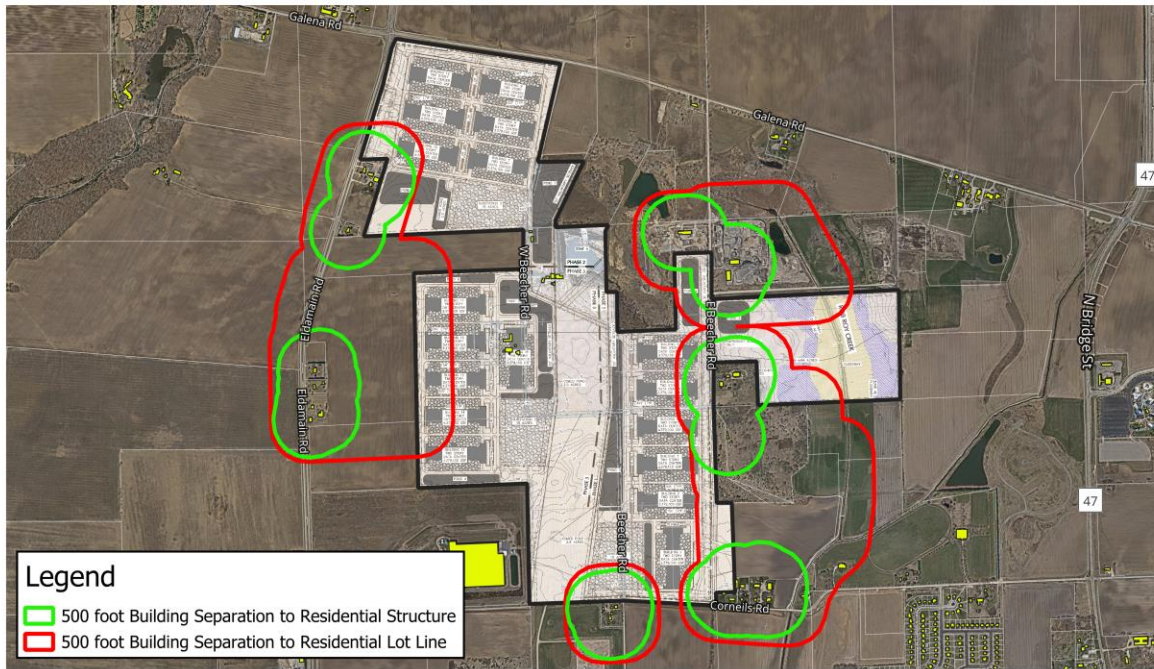
As demonstrated in the table above, the site plan falls 57 feet short of staff’s original building-to-building separation. Additionally, the plan does not meet the June 10th City Council recommended 500-foot building to property line falling short almost 200 feet. Finally, if a standard building to property line (setback) were established the proposed plan would fall short over 230 feet. Although Cyrus One’s building-to-building distance does not meet the staff proposed 500-foot separation, the project was approved prior to the adoption of the standard, and the approved site plan is more aligned with staff’s recommended approach than with the revised standard proposed on June 10th.

2. Project Steel

Project Steel, a data center campus, is currently under review. The project spans approximately 540 acres and includes eighteen (18) data center buildings totaling approximately 6.8 million square feet. The map below illustrates the estimated distances between Building #10 of the data center campus and the nearest residential structure (structure to structure), the residential property line (structure to lot line), and the distance from the data center campus property line to the data center Building #10 (setback).



The map below illustrates the distances between the nearest residential structures and the data center buildings within the proposed Project Steel development, along with buffer areas surrounding nearby residential properties. The green buffer represents staff's proposed 500-foot building separation from data center structure-to-residential structure. The red buffer reflects the updated recommendation from the June 10th City Council meeting, which measures a 500-foot separation from the data center structure to the residential lot line.



PROJECT STEEL - DATA CENTER

United City of Yorkville, Illinois

Date: June 13, 2025

Data: Kendall County

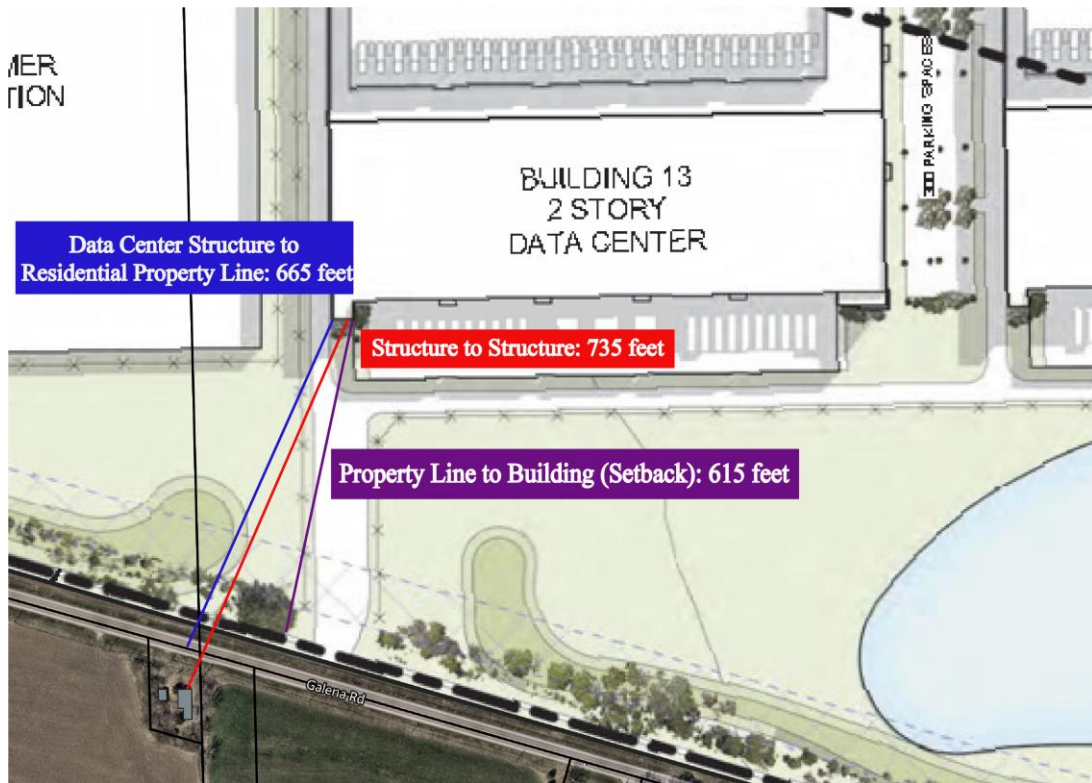


	Distance	Does the plan meet the proposed 500-foot standard?	Impact
Structure to Structure – Staff’s Proposal	475 feet	No	Below proposed requirement by 25 feet
Structure to Property Line – Proposed from June 10th City Council	425 feet	No	Below proposed requirement by 75 feet
Building to Property Line – Standard in UDO	137 feet	No	Below proposed requirement by 363 feet

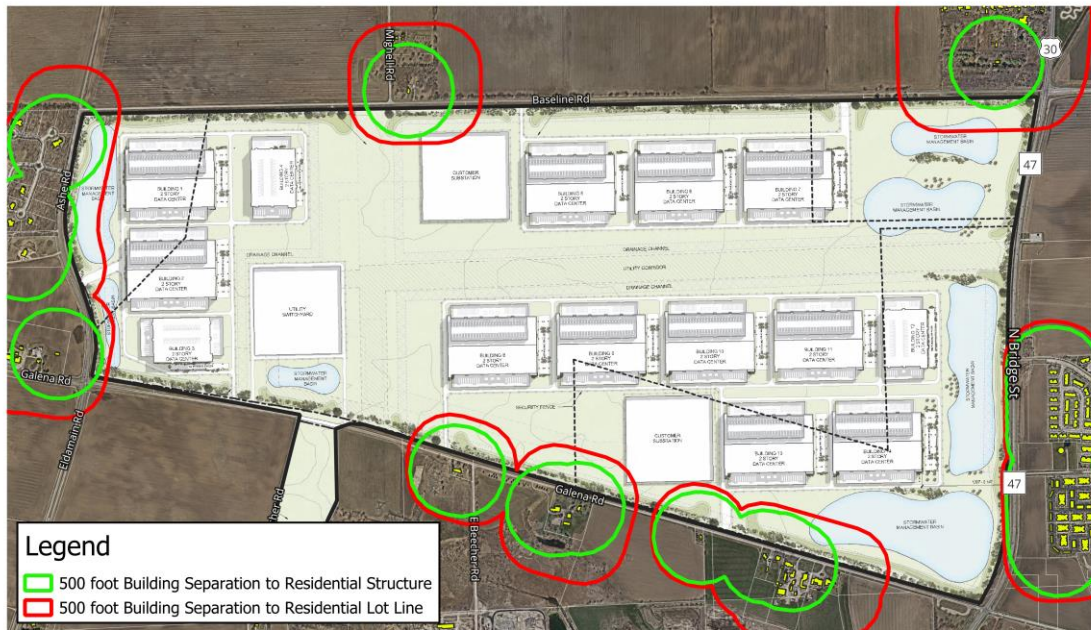
As demonstrated in the table above, the site plan falls 25 feet short of staff’s original building-to-building separation. Additionally, the plan does not meet the June 10th City Council recommended 500-foot building to property line falling short 75 feet. Finally, if a standard building to property line (setback) were established the proposed plan would fall short over 360 feet. Although Project Steel’s current site plan does not fully meet staff’s proposed 500-foot separation, there is potential to adjust the site plan if necessary. Overall, the proposed site plan aligns more closely with staff’s recommended approach than with the revised standard proposed on June 10th.

3. Project Cardinal

Project Cardinal, a data center campus, is currently under review. The project spans approximately 1,037 acres and includes fourteen (14) data center buildings totaling approximately 17 million square feet. The map below illustrates the estimated distances between Building #13 of the data center campus and the nearest residential structure (structure to structure), the residential property line (structure to lot line), and the distance from the data center campus property line to the data center Building #13 (setback).



The map below illustrates the distances between the nearest residential structures and the data center buildings within the proposed Project Cardinal development, along with buffer areas surrounding nearby residential properties. The green buffer represents staff's proposed 500-foot building separation from data center structure-to-residential structure. The red buffer reflects the updated recommendation from the June 10th City Council meeting, which measures a 500-foot separation from the data center structure to the residential lot line.



PROJECT CARDINAL - DATA CENTER

United City of Yorkville, Illinois

Date: June 17, 2025

Data: Kendall County



	Distance	Does the plan meet the proposed 500-foot standard?	Impact
Structure to Structure – Staff’s Proposal	735 feet	Yes	Exceeds proposed requirement by 235 feet
Structure to Property Line – Proposed from June 10th City Council	665 feet	Yes	Exceeds proposed requirement by 165 feet
Building to Property Line – Standard in UDO	615 feet	Yes	Exceeds proposed requirement by 115 feet

As shown in the table above, the recommendation made at the June 10th City Council meeting to measure from the data center structure to the residential property line does meet the 500-foot standard, exceeding it by 165 feet. Additionally, this site plan exceeds staff’s original proposal of a 500-foot building separation by 235 feet and offering the most distance between data center structures and residential structures.

Staff Conclusion on Building Separation

As seen in the images and tables above, staff's proposal of a building separation allows for the greatest flexibility in site design while still maintaining meaningful distance between structures, minimizing impact on adjacent residential structures. Therefore, staff supports the originally proposed building separation standard of a 500-foot building separation from the nearest data center building or structure (primary or accessory) to the nearest residential structure.

Alternatively, City Council may choose to establish a 500-foot minimum building setback from all property lines for data centers, alleviating the need for a building separation standard if preferred.

FENCING

Additionally, there was a recommendation to revise the proposed fencing standards by expanding the list of permitted materials and widening the prohibition of chain-link and barbed wire fencing to apply to the entire property, rather than just along public-facing edges or adjacent to residential uses. Below are the proposed fencing standards, with redlined recommended updates:

1. Fencing shall be security style aluminum, steel, wrought iron, **rigid metal grid fencing**, or similar materials.
2. Chain-link or barbed wire fencing is prohibited ~~along public-facing edges and properties adjacent to residential land uses.~~

The image below illustrates a rigid metal grid fence.



Project Cardinal's site plan includes two (2) onsite electrical substation and one (1) electrical switchyard, Project Steel will have three (3) and Cyrus One will have one (1). Developers for Project Cardinal have informed staff that once an easement is granted to ComEd, they no longer have control over how the electrical substations or utility switchyards are secured. According to their ComEd contact, wall enclosures may be used in the future for security purposes, but no guarantees have been made for this specific project.

Staff supports the original language of the text amendment, which prohibits chain-link or barbed wire fencing only along public-facing edges and properties adjacent to residential land uses. This approach allows developers flexibility to use chain-link or barbed wire fencing within the interior of the data center campus,

specifically around electrical substations. Since these substations will be located within the secured campus and out of public view, staff recommends maintaining the original, less restrictive language

FINAL STAFF RECOMMENDATIONS

1. Building Separation:

Staff recommends maintaining the originally proposed building separation standard. This approach provides the intended physical distance between residential and data center structures while minimizing the impact on proposed site plans. It also allows for greater flexibility in site design compared to a building setback requirement, which applies broadly to all structures and may limit buildable area.

2. Fencing

Staff supports the inclusion of rigid metal grid fencing as an acceptable material. However, staff recommends keeping the original fencing standard that prohibits chain-link and barbed wire only along public-facing edges and adjacent to residential uses. This approach allows developers flexibility to use chain-link or barbed fire fencing within the interior of the data center campus, specifically around electrical substations. Once an easement is granted to ComEd, developers no longer have control over the fencing material used around these electrical substations.