CITY OF DARIEN TEMPORARY AMENDMENT TO PLANNING AND ZONING COMMISSION MEETING RULES FOR COMPLIANCE WITH ILLINOIS OPEN MEETINGS ACT:

- In person attendance at Planning and Zoning meetings will resume June 1, 2020.
- The public will be permitted to attend a Planning and Zoning meeting but the meeting room will be limited to 50 members of the public at one time. The public will be required to maintain social distancing rules and are required to wear a mask while in the building.
- The public is encouraged to participate in the Planning and Zoning Commission meeting by submitting questions and comments via email to the City Planner Joe Hennerfeind at jhennerfeind@darienil.gov.
- Emails providing public comment shall be submitted prior to the start of the Planning and Zoning Commission meeting.

CITY OF DARIEN
PLANNING AND ZONING COMMISSION

Wednesday, August 5, 2020
7:00 PM
City Hall Council Chambers
1702 Plainfield Road

AGENDA

1. Call to Order
2. Roll Call
3. Regular Meeting
   A. Public Hearing - PZC 2020-07
   ComEd Substation – Lyman Avenue (Tower Height Variation)
   Petitioner Commonwealth Edison seeks approval to vary Section 5A-5-12 (C) of the City Zoning Code, that otherwise requires a 60 foot maximum height for transmitting towers, for a proposed 104-foot tower to replace the existing 65-foot tower at the substation located north of 7700 Lyman Avenue in Darien, Illinois.
4. Correspondence
5. Old Business
6. New Business
7. Approval of Minutes — June 17, 2020
8. Next Meeting — August 19, 2020
9. Public Comments — [On any topic related to planning and zoning]
10. Adjournment

MINUTES
CITY OF DARIEN
PLANNING & ZONING COMMISSION MEETING
June 17, 2020

PRESENT: Lou Mallers – Chairperson, Michael Desmond, Robert Erickson, Steve Hiatt, Julie Kasprowicz, Brian Liedtke, Ralph Stompanato

ABSENT: Bryan Gay, Hilda Gonzalez

OTHERS: Joseph Hennerfeind-City Planner

Chairperson Lou Mallers called the meeting to order at 7:00 p.m. at the Darien City Hall, Council Chambers, 1702 Plainfield Road, Darien, Illinois. Chairperson Mallers declared a quorum present and swore in the audience members wishing to present public testimony.

REGULAR MEETING:

A. **Public Hearing PZC 2020-06– 8131 Lemont Toad (Solar Panel Screening Variation). Petitioner RETHINK Electric seeks approval to vary Section 5A-5-9-8(B)5 of the City Zoning Code requiring non-flush mounted solar panels to be screened at 8131 Lemont Road in Darien, Illinois.**

Mr. Joe Hennerfeind, City Planner reported that the building sits approximately 74 feet from the primary Lemont Road frontage and 100 feet from the north road frontage. He reported that the building is unique in that there is no parapet wall at the cap of the building. He explained that parapet walls typically extend higher than the roof and are often constructed to screen various types of rooftop equipment.

Mr. Hennerfeind reported that Section 5A-9-9(B)5 stated that "panels on a flat roof that are not flush-mounted must have a parapet or screening wall between the panels and the adjacent street and said parapet or screening wall must be at least as high as the panels." He reported that Non-Flush mounted panels are further defined as any panels that extend more than 6 inches above the roof.

Mr. Hennerfeind reported that the petitioner proposes to install a solar array in the flat roof of the building. He reported that solar panels installed on a flat roof must be installed at an angle, and although not excessive in height, are approximately 14 inches off the roof at the highest point. He further reported that the petitioner provided a response to the variation standards noted in the agenda packet and states that the unique condition of the property is the overall height of the building in comparison to surrounding development, and that the panels will not be seen in close proximity to the building. Mr. Hennerfeind reported that the petitioner provided line-of-sight diagrams.

Mr. Hennerfeind reported that the petitioner is asking for a variance because building a wall or a screen is very expensive. He stated that the PZC should consider any decision may be precedent setting and any unique conditions should be stated if approved. He

reported that Lace School is proposing to do something similar but that they are a one-story building and that the panels will be visible. Mr. Hennerfeind reported that more requests for panels will be forthcoming and that there may be a need to revise the Code.

Chairperson Mallers opened the meeting to anyone wishing to present public comment.

Mr. Gil Lopez, Commercial Project Manager-Rethink Electric stated that the petitioner is looking for an exemption to not build walls. He stated that the panels will not be visible.

Commissioner Desmond questioned how many panels will be installed.

Mr. Lopez stated that there would be approximately 304 panels.

Commissioner Liedtke questioned the installation process. He stated that there are unique conditions and that generally he is not a fan of seeing the panels.

Mr. Lopez stated that the installation is set by Commonwealth Edison.

Commissioner Desmond questioned the stored energy.

Mr. Lopez stated that the energy is used while it is produced.

There was no one else wishing to present public comment and Chairperson Mallers closed the public hearing.

Commissioner Liedtke made a motion and is was seconded by Commissioner Kasprowicz approval of a variation as presented to Section 5A-5-9-8(B)5 of the City Zoning Code requiring non-flush mounted solar panels to be screened at 8131 Lemont Road in Darien, Illinois and that the installation of the panels are invisible to the human eye.

Upon roll call vote, THE MOTION CARRIED 7-0.

CORRESPONDENCE

There was no correspondence.

OLD BUSINESS

Chairperson Mallers stated that the Carmelite building has solar panels and that he does not remember them coming before the PZC.

Mr. Hennerfeind reported that the City Council voted against the sign at Plainfield and Cass Avenue. He reported that the City is looking into a low brick wall with a water feature and a monument sign for the Dunkin Donuts and Pizzeria.

Mr. Hennerfeind reported that Steak n' Shake is officially closed.

NEW BUSINESS

Mr. Hennerfeind reported that there is one variation request from ComEd for a tower for their facilities.

APPROVAL OF MINUTES

Commissioner Hiatt made a motion and is was seconded by Commissioner Desmond to approve the June 3, 2020 Regular Meeting Minutes.

Upon voice vote, THE MOTION CARRIED 7-0.

NEXT MEETING

Mr. Hennerfeind announced that the next meeting is scheduled for July 1, 2020 but that it may be canceled.

PUBLIC COMMENTS (On any topic related to planning and zoning)

There was no one in the audience wishing to present public comment.

ADJOURNMENT

With no further business before the Commission, Commissioner Liedtke made a motion and it was seconded by Commissioner Desmond. Upon voice vote, THE MOTION CARRIED unanimously, and the meeting adjourned at 7:46 p.m.

RESPECTFULLY SUBMITTED: **APPROVED:**

_____ _____

Elizabeth Lahey
Secretary

Lou Mallers
Chairperson

AGENDA MEMO
Planning and Zoning Commission
August 5, 2020

Case

PZC 2020-07 ComEd Substation – Lyman Avenue (Tower Height Variation)

Issue Statement

Petitioner Commonwealth Edison seeks approval to vary Section 5A-5-12 (C) of the City Zoning Code, that otherwise requires a 60 foot maximum height for transmitting towers, for a proposed 104-foot tower to replace the existing 65-foot tower at the substation located north of 7700 Lyman Avenue in Darien, Illinois.

General Information

Petitioner / Property Owner:	Commonwealth Edison	
Property Location / PIN#:	Lyman Avenue Substation / 09-29-301-031	
Zoning / Land Use:	Site:	R-2 / substation
	North:	R-2 / Darien-Woodridge Fire Protection Station 89
	East:	B-3 PUD / Darien Towne Center Detention Area
	South:	R-2 / single-family homes
	West:	R-3 / Abbey Woods Townhomes Detention Area
Comprehensive Plan:	Future Land Use:	Municipal/Government
Size of Subject Lot:	330 feet wide by 300 feet deep ~ 99,000 square feet	
Natural Features:	Flat topography with some mature trees and vegetation screening much of the facility to Lyman Avenue. Portions of the property ate located in the floodplain.	
Transportation:	Access drive to Lyman Avenue	

Petitioner Documents (attached to this memo)

1. Application, including variation justification
2. Exhibit A
3. Exhibit B
4. Exhibit C
5. Plans/Details

Staff Documents

6. Location Map
7. Zoning Variation Decision Criteria

Development Description

Commonwealth Edison currently has a 65' communications tower located at the substation on Lyman Avenue. As a part of planned upgrades to the electrical system, ComEd proposes to replace this tower with one at 104' in height (100' tower and 4' lightening rod) to accommodate a Smart Grid Automation Device Monitoring Support Structure. This structure will serve the ComEd communications system exclusively, and will not be a co-location tower in which other entities, such as cellular carriers, could locate equipment.

The upgrades are a part of "smart grid" initiative and would improve monitoring and response and are expected to reduce outage periods, speed repairs, and allow for efficient power switching when accommodating grid interruptions.

The variation approval would permit a transmission tower 44' taller than permitted by code, which is limited to 60'. There is no record of a variation for the existing 65' tower, and is considered legal non-conforming as it pre-dates annexation into the City. The petitioner has provided both examples of other installations, and many views throughout the adjacent neighborhood to show overall effect of the installation. The site plan shows a monopole within the fenced compound just north of building.

Staff Plan Review Comments

The ComEd substation located on Lyman Avenue has existed since the 1970s and pre-dates all development surrounding the complex. In 1987, the property was annexed into Darien and a Special Use approval was granted as required by the R-2 zoning district to which it was designated. For this request, no special use amendment is needed; however, the public utility does not receive an exemption from the zoning code regulating the heights of transmitting towers. Towers are limited to 60' in height regardless of location or zoning district.

All towers must meet primary setbacks as established by the zoning district. In the R-2 District, this requires a 35' front yard setback and a 30' side yard setback. As shown in site plans, the tower would be 117' from the front lot line and 59.5' from the side yard to the north, replacing the existing 65' tall tower in the same location. The tower is 250' from the property line of the nearest residential home. The fire station parking lot to the north of the property is also owned by ComEd, which granted an easement for the lot's construction. Although Darien does not have a 'fall zone' requirement, this would be the only adjacent developed area within immediate proximity.

A similar variation was granted at 419 Plainfield Road in April of 2019. This tower was approved for 130' in height, and could support future cellular communications with an approved special use. The current ComEd request for a tower at 104' has no opportunity for the co-location of cellular facilities and would be less impactful than previous approved precedent.

Findings of Fact

The Petitioner was asked to provide evidence or finding-of-fact that would support the requested variation, especially in terms of the pertinent variation criteria. Although the tower would alter the visual character of the area, the reasonable return, essential need, and net benefit criteria can be interpreted to mean the tower height is needed to accommodate the technical needs of the new communications system for the essential for the public utility improvements.

Meeting Schedule

Municipal Services Committee:	August 17, 2020
City Council:	August 17, 2020

ZONING APPLICATION

CITY OF DARIEN
1702 Plainfield Road, Darien, IL 60561
www.darienil.us 630-852-5000

CONTACT INFORMATION

Christopher Collins - Exelon IT-ComEd Manager Digital Grid Projects	ComEd c/o Mark Primm
Applicant's Name	Owner's Name
ComEd - 3 Lincoln Centre - Oakbrook Terrace, IL 60181	3 Lincoln Centre - Oakbrook Terrace, IL 60181
Address, City, State, Zip Code	Address, City, State, Zip Code
Ofc. 630-437-3150 Mobile: 815-378-1319	c/o Ofc. 630-437-3150 Mobile: 815-378-1319
Telephone	Telephone
christopher.collins@exeloncorp.com	christopher.collins@exeloncorp. com
Email	Email

PROPERTY INFORMATION

ComEd TDC 580 - 7700 Lyman Avenue - Darien, IL 60561	09-29-301-031
Property address	PIN Number(s)
R-2	ComEd Electrical Substation
Zoning District	Current Land Use(s)

(Attach additional information per the Submittal Checklist.)

REQUEST

Brief description of the zoning approval requested. (Contact the City Planner for guidance.)

(See Addendum attached)

Christopher Collins
Applicant Signature

DEBORAH J CHOATE
Official Seal
Notary Public - State of Illinois
My Commission Expires Jul 21, 2023

As Notary Public, in and for DuPage County in Illinois, I do hereby certify that Christopher Collins is personally known by me to be the same person whose name is subscribed above and has appeared before me this day in person and acknowledged that they have signed this document as their own free and voluntary act, for the purposes therein set forth.
Given under my hand and seal, this 17 day of June 2020.

Deborah J. Choate
Notary Public

For office use only	
Date Received:	6/23/20
Case Number:	PZC 2020-07
Fee Paid:	405.00
Hearing Date:	7/15/20

Addendum One - Brief Description of Zoning Approval Requested

ComEd proposes to install a 104-foot Smart Grid Distribution Automation Device Monitoring Support Structure ("Structure") at its "TDC 580" substation located at 7700 Lyman Avenue. In light of the 60-foot height limit for "transmitting towers" set forth in Section 5A-5-12(C) of the Darien Zoning Ordinance (and to the extent the Village determines that ComEd's supporting structure used solely for electrical grid purposes is a "transmitting tower" or "radio tower" within the meaning of the Zoning Ordinance), ComEd is requesting a 44-foot height variation to allow for installation of its 100-foot Structure (which will hold five monitoring antennae) to which is attached a 4-foot-long lightning rod at the top. The Structure will be installed inside the substation on ComEd property approximately 12 feet north of the existing substation control building, and it will replace a 65-foot-tall wood supporting structure currently inside the substation and already used for grid-related communications. The Structure will only communicate with ComEd's electrical devices/equipment on the electrical grid system. It will not be used for commercial communication services. The project installation will improve reliability of the electric grid and reduce customer outages and outage durations.

Addendum Two -- Project Justification Narrative (including addressing of decision criteria)

The planned 104-foot-tall Distribution Automation Device Monitoring Support Structure ("Structure") at ComEd's existing electrical substation on Lyman Avenue is part of the company's wide-ranging implementation of its multi-year "smart grid" initiative. The smart grid initiative includes an upgrading of the existing electrical distribution communication system with newer technology and infrastructure. The Structure is a key aspect of that infrastructure and technological upgrade. Key resulting community benefits are the reduction of electrical outages and the duration of outages, and increased voltage efficiencies along each distribution line, resulting in smoother electric grid operations.

ComEd's new technology and infrastructure involves the creation of a ComEd-only radiofrequency network in which sensors and monitoring devices being installed within distribution circuits and/or on distribution poles communicate in real time with antennae support facilities like the Structure. The sensors and devices control and monitor equipment within the distribution lines such as line reclosures, cap banks and switches which are important for reliability and "voltage optimization" -- meaning, promotion as much as possible of a steady voltage through a particular distribution circuit (given that voltage on a distribution line tends to become less strong as the distance on the line increases from a particular substation).

The benefit of the new wireless technology can be explained with reference to a lightning strike and its impact on a distribution line. With "legacy" technology, a lightning strike to a distribution line would likely cause removal of a larger portion of a distribution circuit -- and the customers served by such circuit -- until ComEd crews could determine the precise location of the strike and re-route power around the affected area. By contrast, once the newer wireless technology is deployed in a particular area, the sensors in the distribution circuit -- including at the top of a distribution pole -- would communicate the fault to receiving antennae on the Structure, which directly links to fiber optic infrastructure tied into ComEd's centralized command and control center. The precise area of the fault is known and crews can be dispatched efficiently to the precise location. Further, the Structure antennae can direct receiving equipment on the distribution lines how to switch power around the fault.

The efficacy of the new technology depends on clear, clean wireless communication and strong security given the criticality of the electrical grid to the nation's infrastructure system. Existing electrical substations have been selected for locations of the support structures since they offer necessary security, along with the indispensable link to the company's high-speed existing fiber optics backbone network. The necessary IT equipment accompanying the Structure is housed in an existing substation control building, so no new equipment enclosure is required, thereby minimizing any external "footprint" resulting from the upgraded technology. And electrical substations are already locations which contain pre-existing taller electrical infrastructure (and/or community expectations for such taller infrastructure), mitigating visual concerns.

The request for a 44 foot height variation (covering the 100-foot Structure and its 4-foot-tall lightning rod) is related to the need for five receiving and transmitting antennae on the Structure (each antenna mount is a very thin two inches in diameter, just under 5 feet long and installed only 3 feet from the Structure) to support the approximately 200 monitoring and sensing

devices to be installed in Darien-area distribution circuits over the next two years. The five antennae are needed for proper radiofrequency capacity, since a reduced number of antennae on the Structure installed at lower heights result in an overburdened and less effective wireless communication system (resulting in numerous "dropped" or "blocked" calls to use cellular telephone analogies) or "garbled" communications related to foliage interference. For proper system functioning, the lowest antenna should be installed at a minimum height of 35 feet to avoid foliage blockage. Each additional antenna must be installed a minimum of 15 feet away vertically to avoid technological interference. It is this required minimum spacing and the need for five antennae for effective network functioning which creates the need for the height variation. Without the variation, the Structure would be limited to 60 feet and two antennae, with the lower of the two at or above 35 feet. Two antennae are not enough to allow for seamless functioning of the Darien-area wireless technology imbedded in (or to be imbedded in) the distribution circuits and on distribution poles.

ComEd is careful and judicious in its selection of locations for new support structures. To the greatest extent feasible, ComEd installs its antennae on ComEd existing taller structures (other than transmission towers where such installation is not feasible), such as taller rooftops or existing taller microwave towers. New structures are placed at substations which have physical space within the existing footprint (so that a physical expansion of the outer substation footprint can be avoided), space within an existing substation control building (so that development of a new equipment enclosure is obviated), a secure link to the ComEd fiber backbone and, where possible, an existing communications support structure which can be swapped out (this having minimal impact on existing viewsheds of the substation). The substation at 7700 Lyman Avenue meets all of these criteria, particularly given that the Structure will replace a 65-foot-tall wooden structure already deployed for grid-related communications.

The Structure should have limited impact on surrounding property. Dense foliage separates the substation from residential homes to the south, thereby providing effective existing screening. To the north is a fire station, with its own taller communications infrastructure. Densely planted land is located to the east and west of the substation.

As a regulated public utility and given that the Structure relates to core aspects of the electrical grid, ComEd respectfully suggests that the Village's land use authority may not apply to the company's implementation of an upgraded and taller communications support structure at its electrical substation. Nonetheless, ComEd is voluntarily submitting this request in an effort to work on its project cooperatively with the Village.

With the explanation above now set forth, the following decision criteria of Section 5A-2-2-3(G) of the Zoning Ordinance are addressed:

2 (a) The property in question cannot yield a reasonable return if permitted to be used only under the conditions allowed by the regulations in the zone.

For the reasons described above, the ComEd Distribution Automation Device Monitoring system cannot effectively function with a support structure limited to 60 feet at this location and thus only two antennae. Device communication would become compromised due to overcapacity for

the two antennae. This, in turn, leads to a gap in radiofrequency coverage since the support structures and their attached antennae are generally evenly spaced to allow for effective coverage. The 60-foot height limitation essentially precludes regional effectiveness of ComEd's smart grid distribution automation network.

2 (b) The plight of the owner is due to unique circumstances.

ComEd's plight and hardship justification is related to its unique needs for 24-hour, 7-day per week secure, clear and stable electrical grid monitoring as a regulated public utility, providing the community's reliable and stable electric energy.

2 (c) The variation if granted will not alter the essential character of the locality.

The Structure, as noted above, will replace an existing 65-foot-tall communications structure and is just south of taller communications structures operated by the local fire protection district. The Structure is also in the area of multiple existing taller electrical structures. Significant vegetative screening exists on the east, west and south sides of the property, and none of this screening is to be altered.

3 (a) Essential Need: The owner would suffer substantial difficulty or hardship and not mere inconvenience or a decrease in financial gain if the variation is not granted.

For the reasons described herein, ComEd's Distribution Automation Device Monitoring technology system would suffer significant degradation if the Structure were limited to 60 feet and two antennae. The increased height is for technological effectiveness for the benefit of the community's electrical users and to avoid a "gap" in the network.

3 (b) Problem With Property: There is a feature of the property such as slope or shape or change made to the property, which does not exist on neighboring properties, which makes it unreasonable for the owner to make the proposed improvement in compliance with this title. Such feature or change was not made by the current owner and was not known to the current buyer at the time of purchase.

The unique feature of the subject property justifying the need for the height variation is the non-replicable secure link to the ComEd high-speed fiber network connecting electrical substations to a central command and control center. This is the key intersection needed between the Structure and improved electrical grid functioning. Although the fiber backbone network was installed by ComEd some time ago, it was not foreseen (given that the applicable technology had not yet matured) that the availability of this secure network would be critical to the development of a region-wide effective and safe "smart" electrical grid monitoring system using evenly-spaced occasional support structures exceeding the applicable 60-foot height limit for effective, coordinated functioning.

3 (c) Smallest Solution: There is no suitable or reasonable way to redesign the proposed improvements without incurring substantial difficulty or hardship or reduce the amount of variation required to make such improvements.

There is no way to redesign the proposed improvement except potentially by installing multiple 60-foot support structures to achieve effective technological implementation through additional provision of antennae capacity. However, the maximum 60-foot height limitation, even if multiple support structures were installed, leads to sub-optimum wireless communication to the distribution-line monitoring and control equipment due to foliage and other barriers to uninterrupted line-of-sight signal communications. ComEd decided against installation of multiple support structures due to space and safety constraints and the potential for added visual impact. Additionally, ComEd has a 100-foot horizontal separation design requirement. So if multiple support structures were installed at a 60-foot height, each would have to be 100 feet apart from one another, which is not practical from several perspectives.

3 (d) Create Neighbor Problem: The variation, if granted, will not cause a substantial difficulty, undue hardship, unreasonable burden, or loss of value to the neighboring properties.

The variation should not affect neighboring properties. As noted above, there is substantial screening on all sides of the Structure, except to the north where a public safety use also utilizes communication support structures. The Structure is set back a substantial distance from each lot line. The Structure replaces an existing communications structure, resulting in limited change to the existing viewshed.

3 (e) Create Community Problem: The variation, if granted, may result in the same or similar requests from other property owners within the community, but will not cause an unreasonable burden or undesirable result within the community.

The variation if granted should not result in any undesirable result in the community. The variation need is driven by unique public service obligations of ComEd as the Village's only regulated electric utility and its deployment of smart grid technology.

3 (f) Net Benefit: The positive impacts to the community outweigh the negative impacts.

There are strong community benefits resulting from the 44-foot variation, chiefly tied to fully clear and clean wireless communication between the distribution circuit monitoring equipment and the Structure. These benefits include:

- reduction of distribution outages
- reduction in the duration of outages
- increase voltage efficiencies along the distribution lines
- increase efficiency of electrical grid operations

3 (g) Sacrifice Basic Protections: The variation, if granted, will comply with the purposes and intent of this title set forth in subsection 5A-1-2(A) of this title and summarized as follows: to lessen congestion, to avoid overcrowding, to prevent blight, to facilitate public services, to conserve land values, to protect from incompatible uses, to avoid nuisances, to enhance

aesthetic values, to ensure an adequate supply of light and air, and to protect public health, safety, and welfare.

The variation, if granted, advances a central purpose of the Zoning Ordinance which is to facilitate public services and protect public safety and welfare. The community benefits of the "smart" wireless system which is functioning optimally with a 5-antennae Structure of 100 feet (plus a 4-foot lightning rod) does just that.

July 27, 2020

Supplement Project Narrative -- ComEd application for height variation

This document is intended as a supplement to the project narrative and response to variation standards included in our official variation application filed with the City in late June 2020. It is set up in a question and answer format to address specific matters which have arisen since our original filing. In some places, the information below duplicates text previously submitted, but solely for convenience so that relevant information is pulled together in a single document.

1. Why does ComEd need a 104-foot communications structure at the subject location?

Response: The planned 104-foot-tall Distribution Automation Device Monitoring Support Structure ("Structure") is part of the company's wide-ranging implementation of its multi-year "smart grid" initiative. The smart grid initiative includes an upgrading of the existing electrical distribution communication system with newer technology and infrastructure. The Structure is a key aspect of that infrastructure and technological upgrade. Key resulting community benefits are the reduction of electrical outages and the duration of outages, and increased voltage efficiencies along each distribution line, resulting in smoother electric grid operations.

ComEd's new technology and infrastructure has resulted in the creation of a ComEd-only radiofrequency network in which sensors and monitoring devices being installed within distribution circuits and/or on distribution poles communicate in real time with antennae support facilities like the Structure. The sensors and devices control and monitor equipment within the distribution lines such as line reclosures, cap banks and switches which are important for reliability and "voltage optimization" -- meaning, promotion as much as possible of a steady voltage through a particular distribution circuit (given that voltage on a distribution line tends to become less strong as the distance on the line increases from a particular substation).

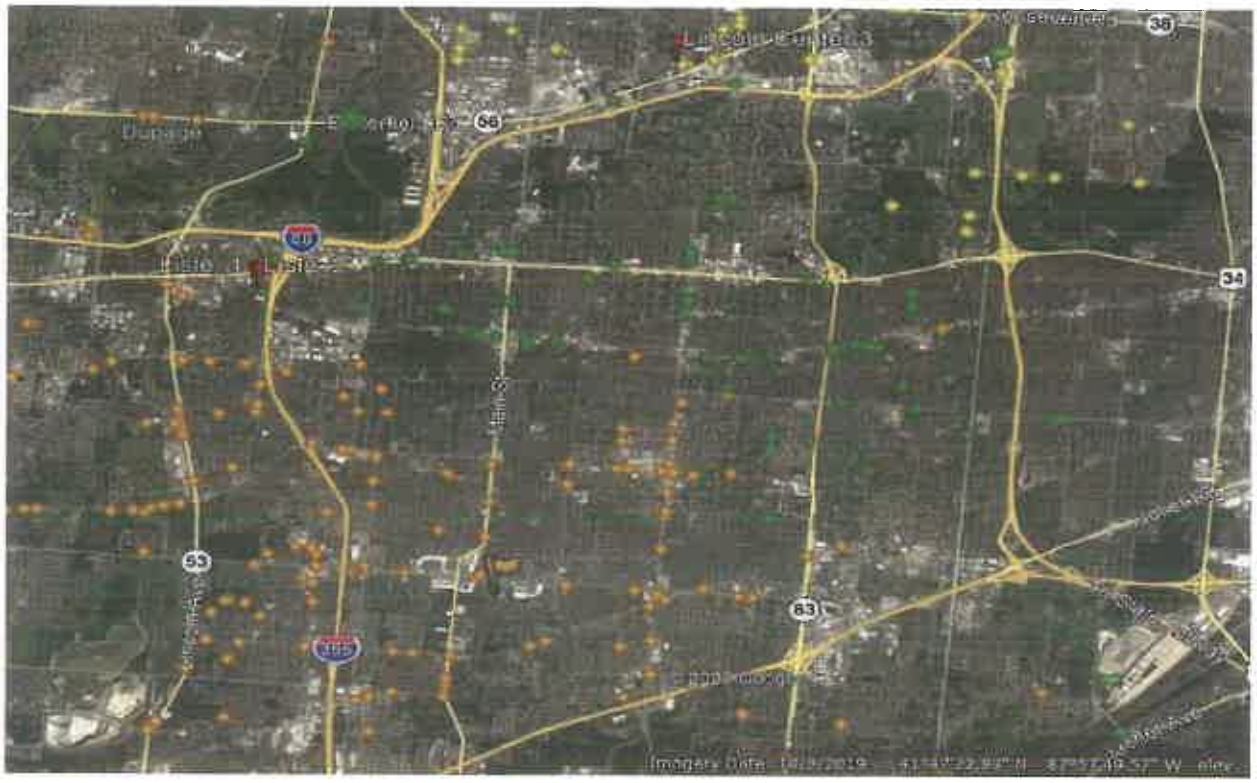
The benefit of the new wireless technology can be explained with reference to a lightning strike and its impact on a distribution line. With "legacy" technology, a lightning strike to a distribution line would likely cause removal of a larger portion of a distribution circuit -- and the customers served by such circuit -- until ComEd crews could determine the precise location of the strike and re-route power around the affected area. By contrast, once the newer wireless technology is deployed in a particular area, the sensors in the distribution circuit -- including at the top of a distribution pole -- would communicate the fault to receiving antennae on the Structure, which directly links to fiber optic infrastructure tied into ComEd's centralized command and control center. The precise area of the fault is known and crews can be dispatched efficiently to the precise location. Further, the Structure antennae can direct receiving equipment on the distribution lines how to switch power around the fault.

The efficacy of the new technology depends on clear, clean wireless communication and strong security given the criticality of the electrical grid to the nation's infrastructure system. Existing electrical substations have been selected for locations of the support structures since they offer necessary security, along with the capacity for the indispensable link to the company's high-speed existing fiber optics backbone network.

The request for a 44 foot height variation (covering the 100-foot Structure and its 4-foot-tall lightning rod) is related to the need for five receiving and transmitting antennae on the Structure

to support the approximately 200 monitoring and sensing devices to be installed in Darien-area distribution circuits over the next two years.

Below is a computerized graphic which shows an existing "gap" in the ComEd distribution automation device monitoring network. The locations with "flags" (red and green) indicate existing communication structures and the proposed structure on Lyman Avenue is assigned an orange flag. The orange-colored dots are existing sensors and monitoring devices in the Darien area operating on ComEd's radiofrequency network. These devices are communicating wirelessly to a communications structure located at a substation in Lisle, just southwest of the intersection of I-355 and I-88. The antennae on this structure are over capacity, and this condition will only be aggravated as the additional 200+ devices are installed within Darien-area distribution circuits over the next two years.



"Green" flags above indicate additional existing communication structures in Willow Springs (near Archer Avenue and Willow Springs Road) and Oak Brook (on Swift Drive near I-294) and there is a "red" flag indicating an over-capacity structure in Oakbrook Terrace at the Lincoln Centre office complex. The Willow Springs structure cannot effectively monitor Darien-area devices due to substantial grade changes and foliage interference. Distance, too, prevents the Oak Brook- and Oakbrook Terrace-situated communications structures from monitoring Darien-area existing and proposed devices. The graphic above dramatically illustrates the important role in the network carried out by the proposed Structure on Lyman Avenue.

The five antennae on the Structure are needed for proper radiofrequency capacity, since a reduced number of antennae on the Structure installed at lower heights result in an overburdened and less effective wireless communication system (resulting in numerous "dropped" or "blocked"

calls to use cellular telephone analogies) or "garbled" communications related to foliage interference. For proper system functioning, the lowest antenna should be installed at a minimum height of 35 feet to avoid foliage blockage. Each additional antenna must be installed a minimum of 15 feet away vertically to avoid technological interference. It is this required minimum spacing and the need for five antennae for effective network functioning which creates the need for the height variation. Without the variation, the Structure would be limited to 60 feet and two antennae, with the lower of the two at or above 35 feet. Two antennae are not enough to allow for seamless functioning of the Darien-area wireless technology imbedded in (or to be imbedded in) the distribution circuits and on distribution poles.

2. Please provide a list of local comparable installations.

Response: Similar 104-foot Smart Grid Distribution Automation Device Monitoring support structures can be found nearby at ComEd's Willow Springs substation and its substation in Pleasant Hills (near West Chicago).

Willow Springs

The Willow Springs substation carries the common address of 8600 Willow Spring Road in Willow Springs, but it is actually located on the south side of an industrial access road (leading to Valvoline's Willow Springs facility) across the street from a Speedway gas station and just south of the Tri-State Fire Protection District station which is situated at 8259 Willow Springs Road in Willow Springs.

A picture of the structure as located at the Willow Springs substation was included in our application and is set forth below for convenience. A location aerial photo is also provided.

The structure is located to the rear of the substation control building. Note that if one visits the Willow Springs substation, one will see a cellular telephone facility outside the boundaries of the substation but adjacent to it. Know that neither ComEd's Structure at the Lyman Avenue substation nor any portion of the Lyman Avenue substation property will be used for personal wireless service (5G or otherwise) or any other commercial communications function other than the Structure and other ComEd-only grid-related monitoring and functioning communications.

Pleasant Hills

The Pleasant Hills substation is located on the east side of Pleasant Hill Road just south of the Great Western Trail and St. Charles Road and a short distance south of North Avenue. The substation is north of Geneva Road, north of the Village of Winfield and south of the Village of Carol Stream. (The address assigned to the substation for property tax purposes is 1N701 Pleasant Hill Road, Winfield. Our experience is that this address does not show up on common mapping applications such as Google Maps. The street address of the business to the north is 26W115 St. Charles Road in Carol Stream to provide a Google-friendly geographic reference point.)

A picture of the structure as located at the Pleasant Hill substation is set forth below as is a location aerial photo.

The structure in the Pleasant Hills substation is located on the north side of the substation just west of the substation control building. Like in Willow Springs, there is a cellular telephone

facility outside of the substation itself. Again, by contrast, a cellular telephone facility does not exist at ComEd's Darien substation and is not proposed whatsoever.

3. What visual impact, if any, will the proposed structure have on nearby properties?

Response: ComEd conducted a detailed photographic study of the possible visual impact of the Structure from numerous vantage points surrounding the substation. This study consists of three exhibits which are attached.

Exhibit A contains site renderings from Lyman Avenue directly north and south of the substation. The views from both Locations 23 and 24 included in this Exhibit show the existing 65-foot communications structure at the substation and the limited additional impact of the Structure, given that these views are from the adjacent roadway and the presumption that area motorists are already accustomed to seeing vertical equipment at the substation location.

Exhibit B contains a Photographic Study Locations Map showing for reference the locations from which the various photographs included within Exhibits A and C were taken.

The full study is attached as Exhibit C. The methodology included the taking of a current photograph at the locations indicated on the map attached as Exhibit B and then adding in a rendering of the Structure to those photographs based on modeling of height, angle and existing foliage to indicate any potential for Structure visibility.

Due to the substantial foliage lying in between the Structure and residential uses to the south, west and northwest, the Structure is likely to have no visual impact on most of the residential properties along Marlborough Lane and Wakefield Drive.

There are several locations along these streets at which the Structure may be visible, but generally obscured by foliage. These include Location 3, 2400 Marlborough Lane, Location 4, 2410 Marlborough Lane, and Location 14, 7555 Wakefield Drive (at this Location, only the very top of the Structure is visible).

The Structure is likely to be partially visible from the south sidewalk of Marlborough Lane at approximately 2401 Marlborough. However, the reverse view from this view appears to be primarily a garage door as opposed to windows in the residence at 2401 Marlborough.

On Abbey Lane, the Structure should generally not be visible from the residential homes. However, the Structure could be visible from certain specific view corridors to pedestrians as described below:

- The Structure could be visible from Location 17, a point on the northeastern pedestrian path (southeast of 2418 Abbey Lane) closest to the substation and Fire Protection District facility. Today, from this vantage point, the roof-mounted Fire Protection District communication mast (at approximately 70 feet in height) is already clearly visible. It is not known whether the Structure will be visible from the residence just to the northwest of this point. However, views of the Structure may be materially mitigated (or even potentially not existent) from these townhomes given the southwestern-facing orientation of the townhomes just north of Location 17. This presumption about mitigated views or the absence of views from the northeastern

townhomes derives in part from the views at Location 16 -- just to the south of the aforementioned northeastern townhomes on Abbey Lane -- at which, due to the prominence of the dense tree line, neither the Fire Protection District communications mast nor the existing 65-foot wooden substation pole is visible and for this reason the Structure should also not be visible.

• The Structure could be visible from Location 20, southwest of 2450 Abbey Lane. Like with Location 17, because of the orientation of the townhomes, the Structure may not be visible from the townhomes themselves. However, standing near the intersection of the driveway and sidewalk and facing to the southeast, the Structure may be visible. If one turns around 180 degrees at Location 20, there is no residence - only landscaping. This view is documented within Exhibit C, intended to demonstrate the limited potential future aesthetic impact of the Structure from this location.

• A similar obscured view of the Structure may be visible from Location 22, in front of 2502 Abbey Lane. Like with Location 20, aesthetic impacts should be limited from Location 22 given that a garage door, as opposed to residential windows, faces in the direction of the Structure. This is documented in the "reverse" photo for Location 22 included in Exhibit C.

4. Please provide information about the type of antenna, any health concerns and whether the frequency is licensed by the FCC.

Response: The antennas proposed for use on the Structure operate in the frequency range of 902-928 MHz with a center frequency of 915 MHz. These frequencies are a small part of the designated industrial, scientific and medical (ISM) radio bands. The FCC opened these ISM frequency bands for wireless communications in 1985. Parties using this frequency range in the manner of ComEd are not generally required to obtain use, structure or antenna licenses from the FCC (and are not so required in ComEd's specific situation), but must comply with FCC regulations (47 CFR Part 15) on how the frequencies are used, including the maximum output power of the antennas on the Structure. The output power of the ComEd antennas is extremely low, at 1 Watt or less. Further, the antennas only operate intermittently and do not continuously transmit. By observing these two key operating criteria, along with compliance with all of the other applicable federal regulations, ComEd's Structure will operate in a manner protective of public health and safety, in that radiofrequency emissions are highly attenuated.

Other wireless devices operate in the frequency range of 902-928 MHz, with a center frequency of 915 MHz -- most notably, ComEd's smart meters. The Structure is not being used for smart meter functions. Although certain household wireless equipment operates at 915 MHz, most notably certain cordless phones, baby monitors, and wireless home security systems, most household wireless equipment now operates within the 2.4-GHz frequency band.

Like any system which chooses to operate with the ISM radio bands, ComEd's Smart Grid Distribution Automation Device Monitoring System must tolerate the potential for occasional interference from other wireless devices in use. At the same time, ComEd has engineered its system to minimize any potential interference through incorporation of specific technical features such as signal encryption and security which, like the smart meter system using the same frequency range, have a now-proven record of safe, effective, reliable operation without material impact to existing household wireless devices. In addition to these specific technical features, in

accordance with FCC regulations and as a technique to ensure minimal interference, the electronic equipment used in the Distribution Automation Device Monitoring System utilize a protocol called "frequency hopping" within subchannels spread evenly across the frequency range of 902-928 MHz. Such "frequency hopping" allows for efficient use of the full range of the allowable spectrum while minimizing interference risk.

5. Does the FCC need to review the specific siting of this Structure?

Response: No. First, as explained above, parties such as ComEd may use the frequency range involved in the antennas on the Structure without a specific license granted by the FCC. In addition, in terms of compliance with the federal National Environmental Policy Act (to which the FCC is subject), the FCC has delegated to each applicant the responsibility of determining whether a proposed structure is "categorically excluded" from environmental review under NEPA when there is minimal or no impact on the environment, or whether a Environmental Assessment need to be prepared.

FCC rules categorically exclude all actions -- including ComEd's Structure -- from detailed environmental review unless such a structure: (a) is located in a wilderness area or wildlife preserve; (b) might affect threatened or endangered species or their habitat; (c) might affect properties included in or eligible for inclusion in the National Register of Historic Places or Indian religious or cultural sites; (d) will be located in a floodplain; (e) involve construction involving significant changes in surface features, such as effects on wetlands, water, ground disturbances, deforestations, etc.; (f) structures of over 450 feet potentially affecting migratory birds; or (g) structures involving high-intensity lighting in a residential area or those which would cause RF radiation in excess of FCC-established limits.

ComEd, through its consultant team, determined that the placement of the Structure within an existing developed substation in replacement of an existing structure currently used for communications would have none of these impacts and therefore that the Structure is appropriately categorically excluded from NEPA review.

6. Based on FAA requirements, is the Structure required to have a beacon and/or designated paint?

Response: No. ComEd received a determination from the FAA as of February 6, 2020 that its Structure will not be a hazard to air navigation and thus no lighting or special markings are required. ComEd's Structure will not be illuminated in any way or painted any special color.

7. In addition to the zoning variation requested, what additional permitting is required for this project?

Response: ComEd will be applying for a building permit from the City of Darien. No additional known governmental permits are necessary. ComEd will secure any additional necessary permits which may be identified during the building permit process.

Head End Structure – Example

ComEd
An Exelon Company

EXHIBIT A TO SUPPLEMENTAL INFORMATION

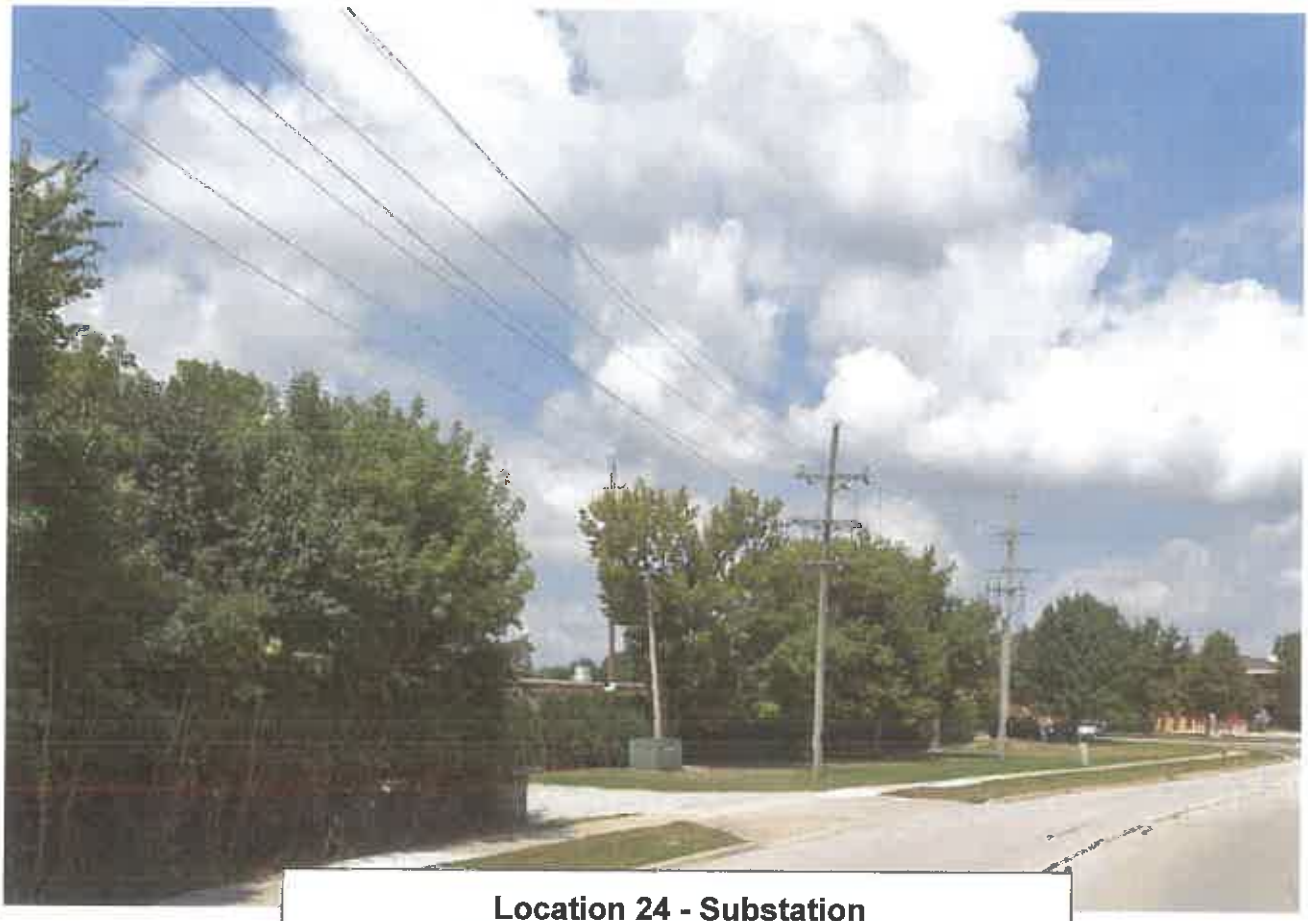
***

SUBSTATION RENDERINGS

COMMONWEALTH EDISON - APPLICATION FOR HEIGHT VARIATION

Location 23 - Substation
Existing view looking southwest
Existing 65' structure partially visible

Location 23 - Substation
Proposed view looking southwest
104' Structure partially visibie



Location 24 - Substation
Existing view looking northwest
Existing 65' structure partially visible

Location 24 - Substation
Proposed view looking northwest
104' Structure partially visible

EXHIBIT B TO SUPPLEMENTAL INFORMATION

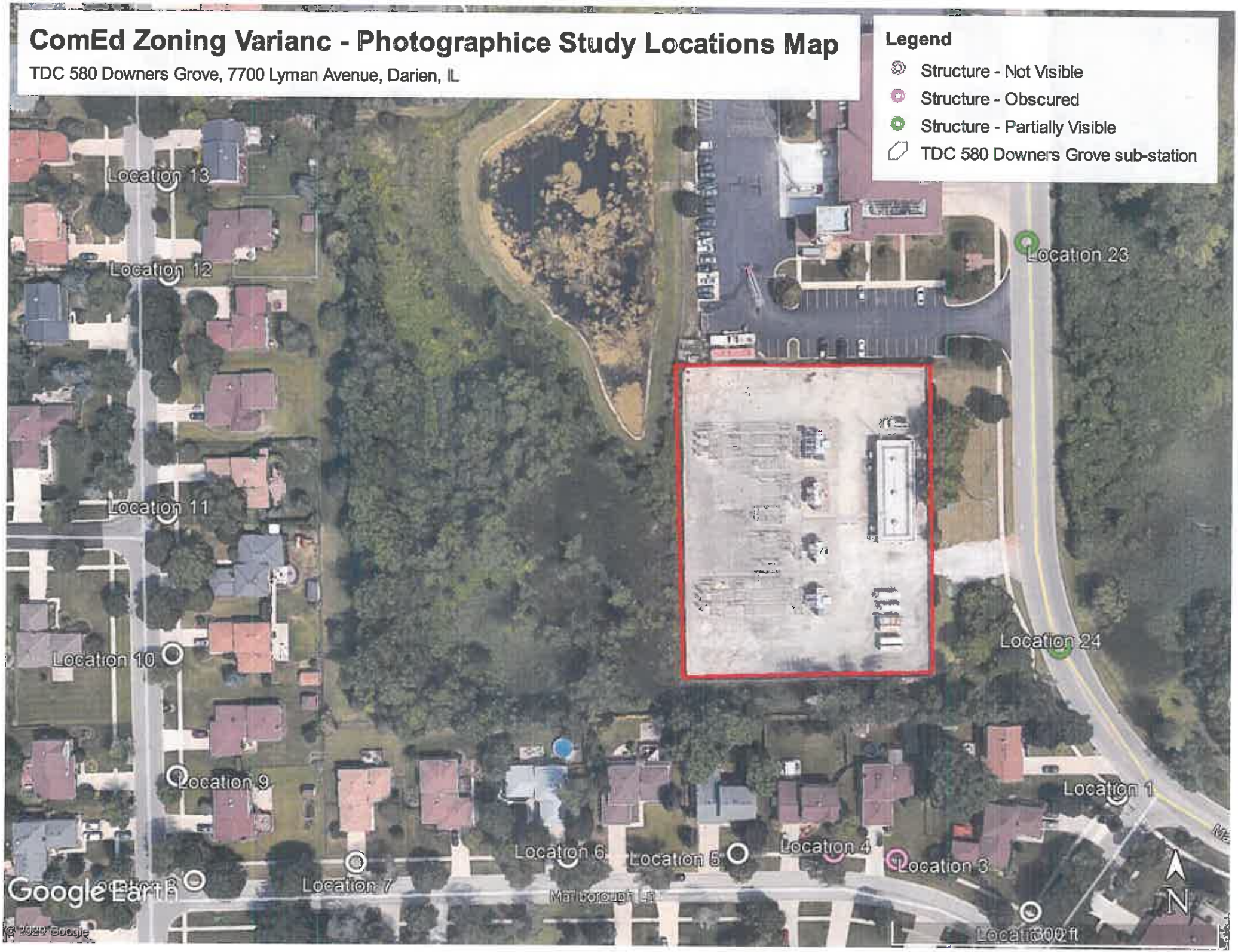
***

PHOTGRAPHIC STUDY LOCATIONS MAP

COMMONWEALTH EDISON - APPLICATION FOR HEIGHT VARIATION

ComEd Zoning Varianc - Photographice Study Locations Map

TDC 580 Downers Grove, 7700 Lyman Avenue, Darien, IL



ComEd Zoning Varianc - Photographice Study Locations Map

TDC 580 Downers Grove, 7700 Lyman Avenue, Darien, IL

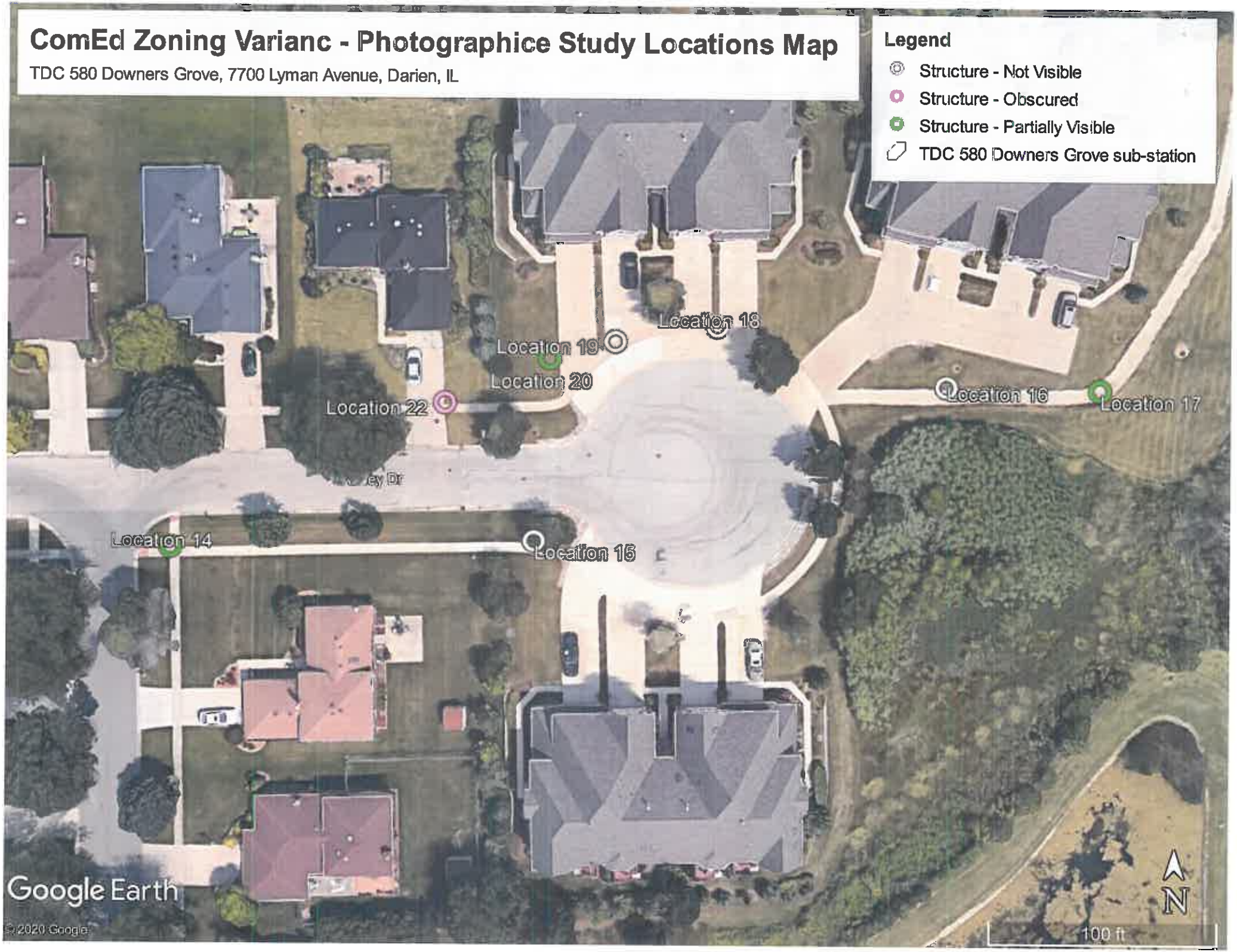
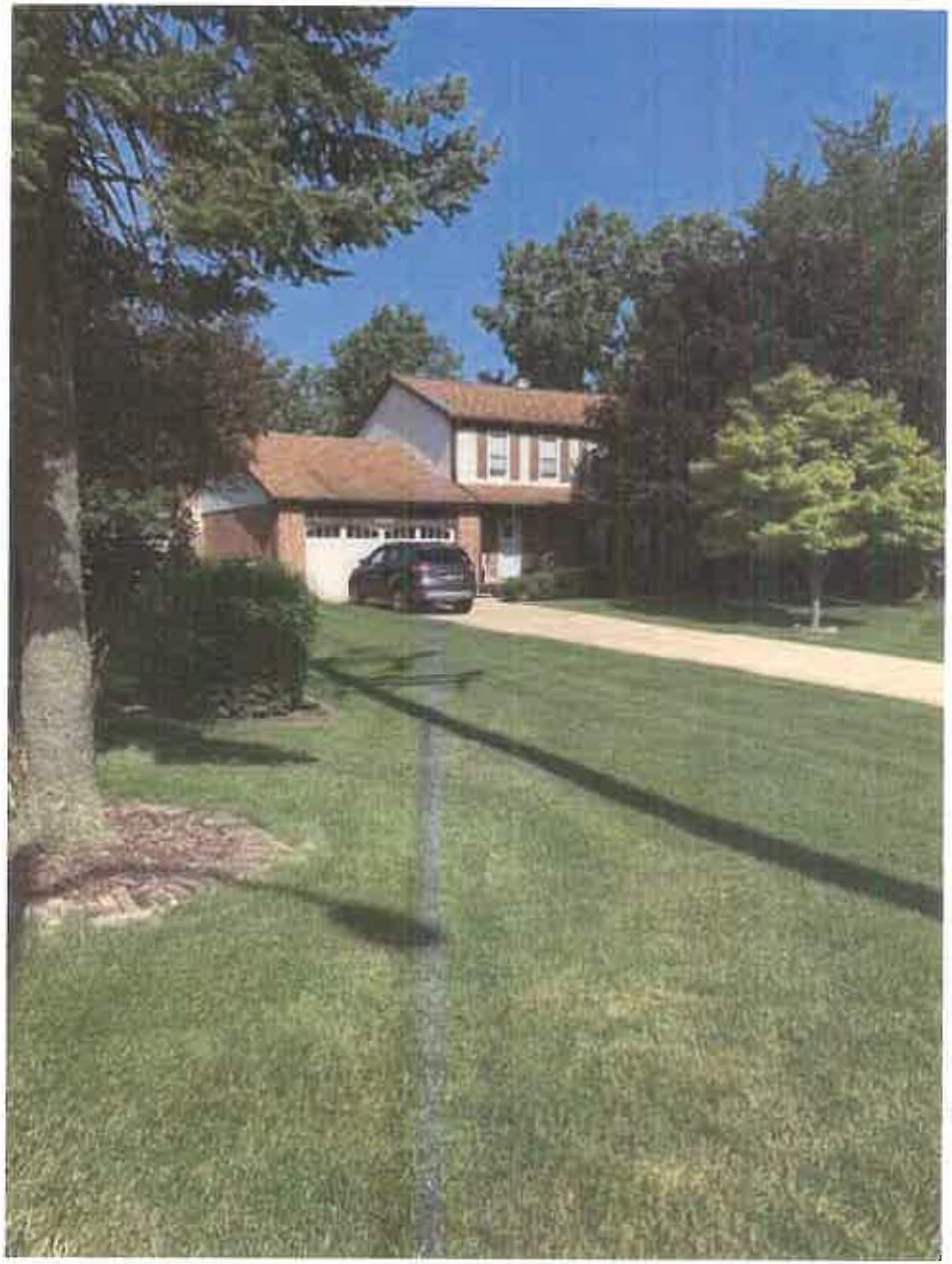


EXHIBIT C TO SUPPLEMENTAL INFORMATION

***

PHOTOGRAPHIC STUDY

COMMONWEALTH EDISON - APPLICATION FOR HEIGHT VARIATION



Location 1 - 7700 Lyman Avenue, Darien
Existing View - Looking northwest
Existing 65' structure not visible

Location 1 - 7700 Lyman Avenue, Darien
Proposed view - Looking northwest
104' Structure not visible

Location 2- NW Corner - Lyman/Marlborough
Existing view - looking northwest
Existing 65' structure not visible

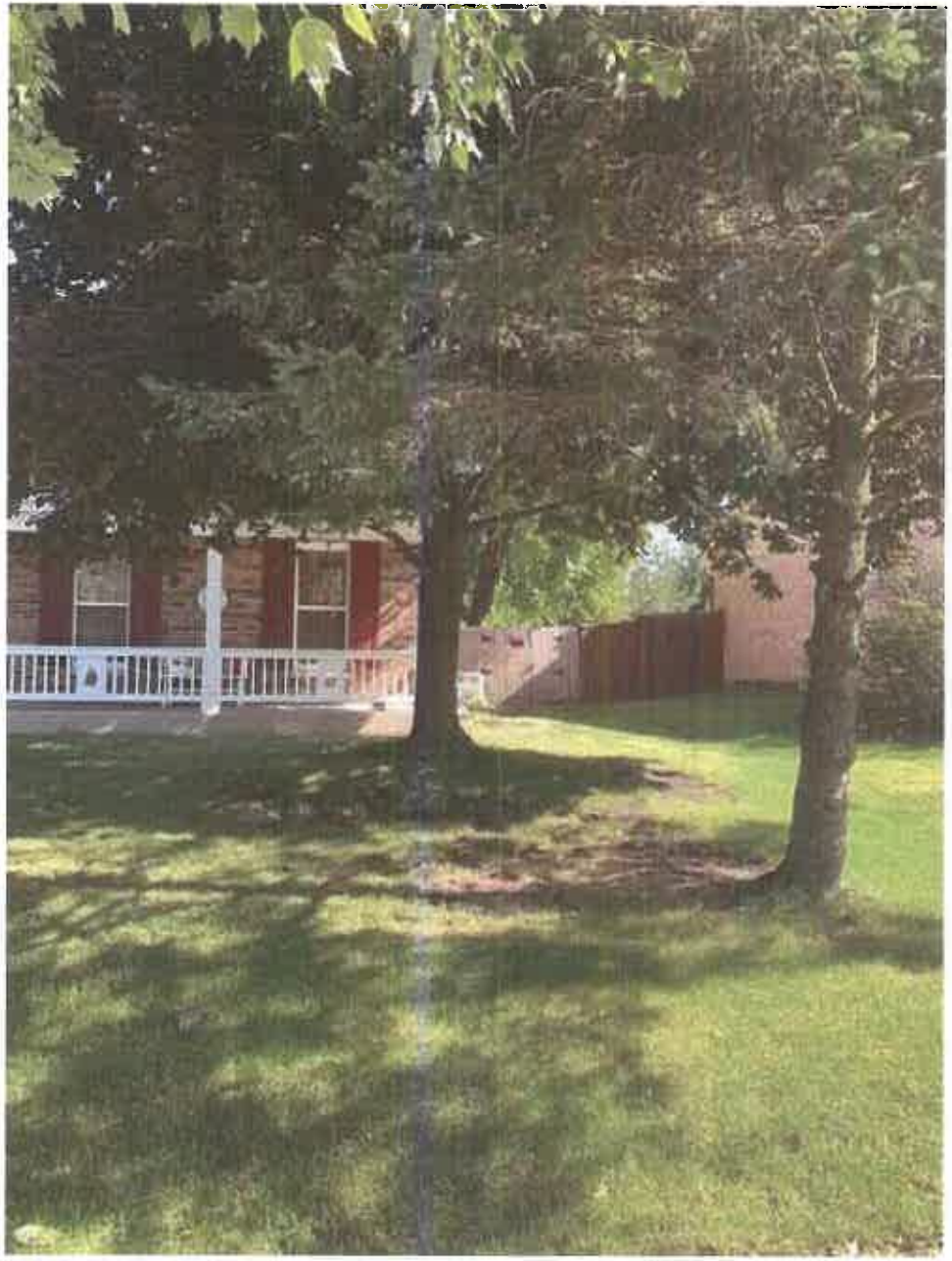
Location 2 - NW Corner - Lyman/Marlborough
Proposed view - looking northwest
104' Structure not visible

Location 3 - 2400 Marlborough
Existing view looking north
Existing 65' structure partially visible through trees

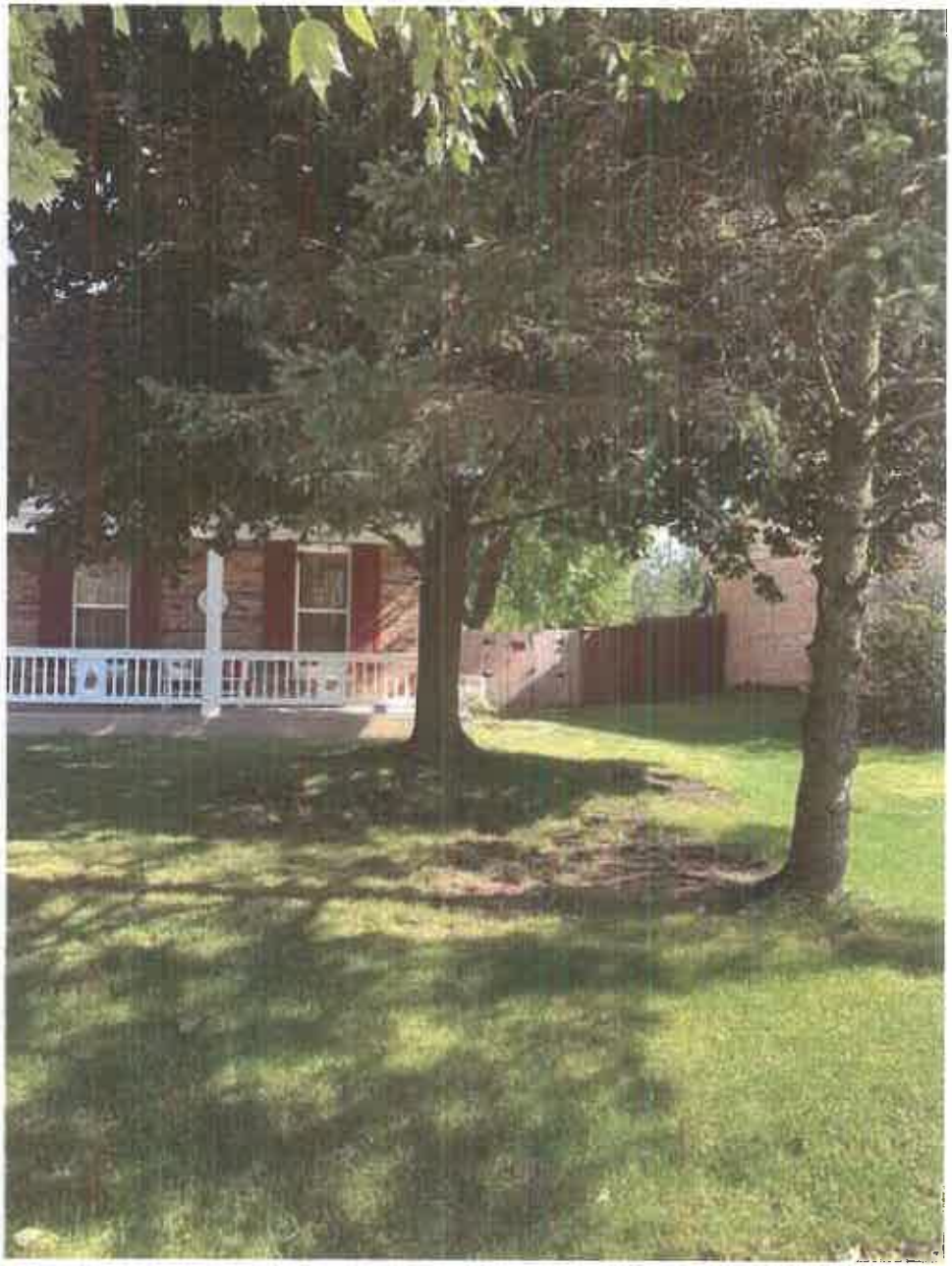
Location 3 - 2400 Marlborough
Proposed view looking north
104' Structure partially visible through trees

Location 4 - 2410 Marlborough
Existing view looking north
Existing 65' structure obscured

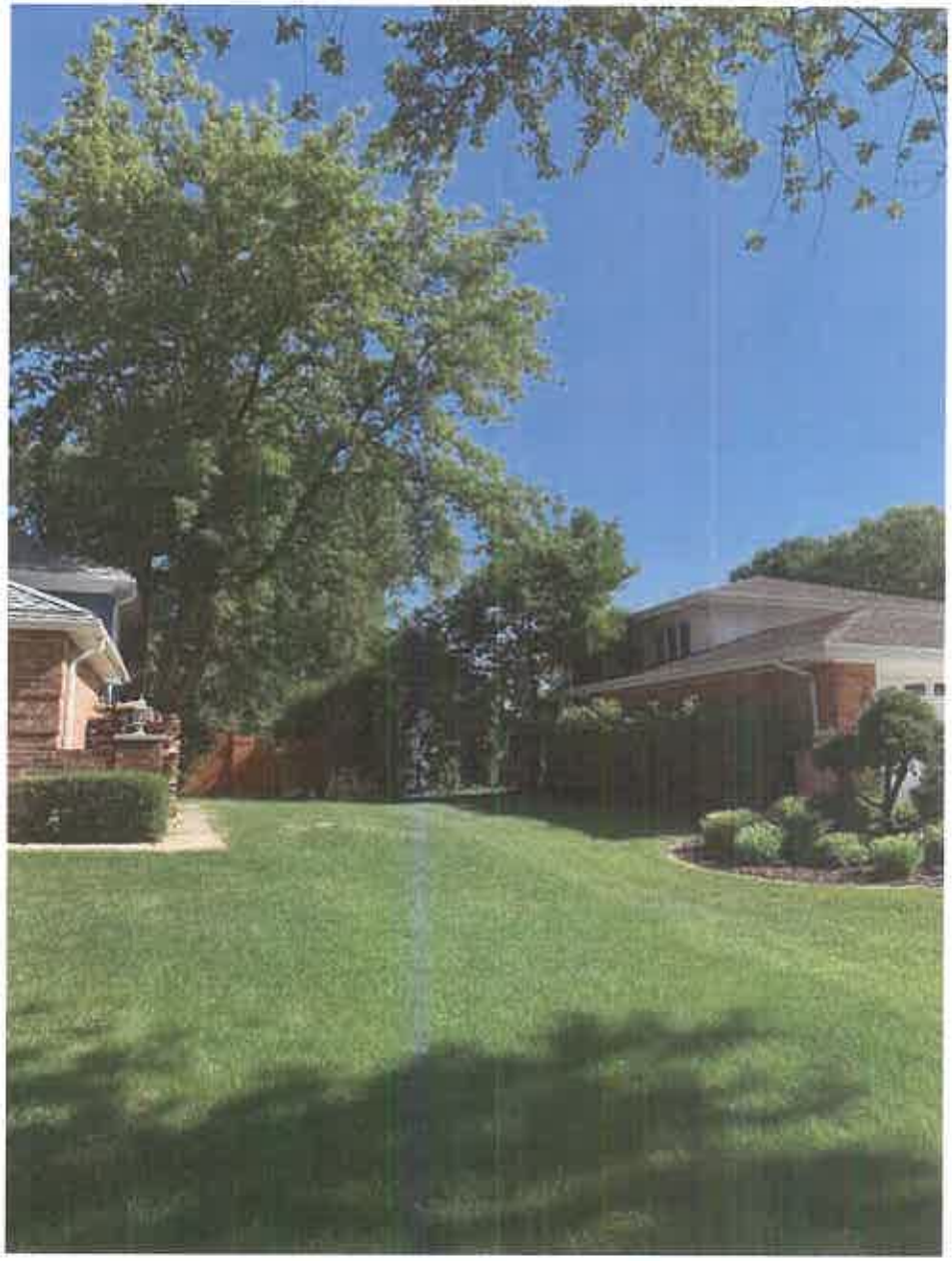
Location 4 - 2410 Marlborough
Proposed view looking north
104' Structure obscured



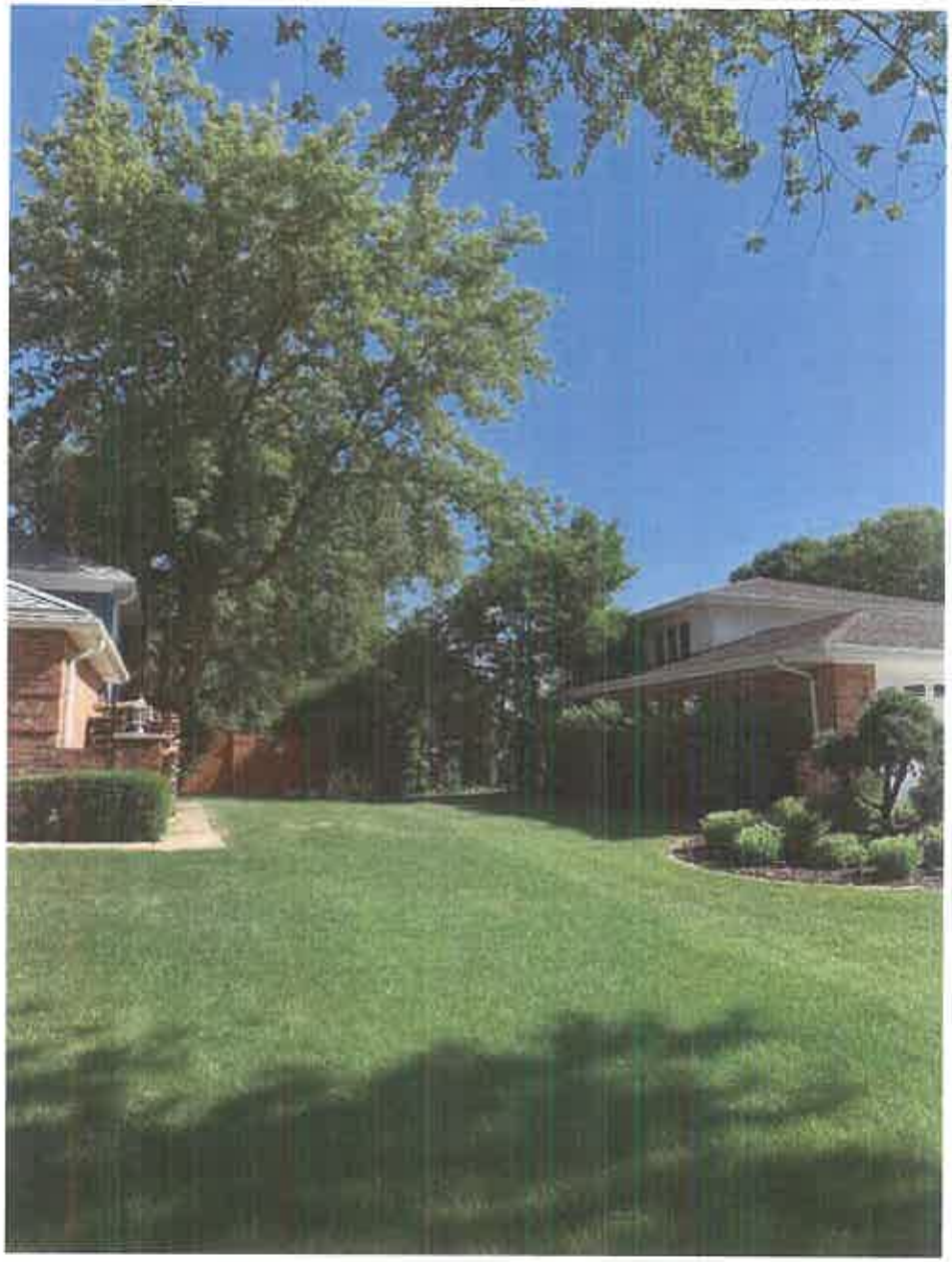
Location 5 - 2418 Marlborough
Existing view looking northeast
Existing 65' structure not visible



Location 5 - 2418 Marlborough
Proposed view looking northeast
104' Structure not visible



Location 6 - 2426 Marlborough
Existing view looking northeast
Existing 65' structure not visible



Location 6 - 2426 Marlborough
Proposed view looking northeast
104' Structure not visible

Location 7 - 2442 Marlborough
Existing view looking northeast
Existing 65' structure not visible

Location 7 - 2442 Marlborough
Proposed view looking northeast
104' Structure not visible

Location 8 - NE Corner - Marlborough/Wakefield
Existing view looking northeast
Existing 65' structure not visible

Location 8 - NE Corner - Malborough/Wakefield
Proposed view looking northeast
104' Structure not visible

Location 9 - 7657 Wakefield
Existing view looking east
Existing 65' structure not visible

Location 9 - 7657 Wakefield
Proposed view looking east
104' Structure not visible

Location 10 - 7649 Wakefield
Existing view looking east
Existing 65' structure not visible

Location 10 - 7649 Wakefield
Proposed view looking east
104' Structure not visible

Location 11 - 7641 Wakefield
Existing view looking east
Existing 65' structure not visible

Location 11 - 7641 Wakefield
Proposed view looking east
104' Structure not visible

Location 12 - 7617 Wakefield
Existing view looking east
Existing 65' structure not visible

Location 12 - 7617 Wakefield
Proposed view looking east
104' Structure not visible

Location 13 - 7611 Wakefield
Existing view looking east
Existing 65' structure not visible

Location 13 - 7611 Wakefield
Proposed view looking east
104' Structure not visible

Location 14 - 7555 Wakefield
Existing view looking east
Existing 65' structure not visible

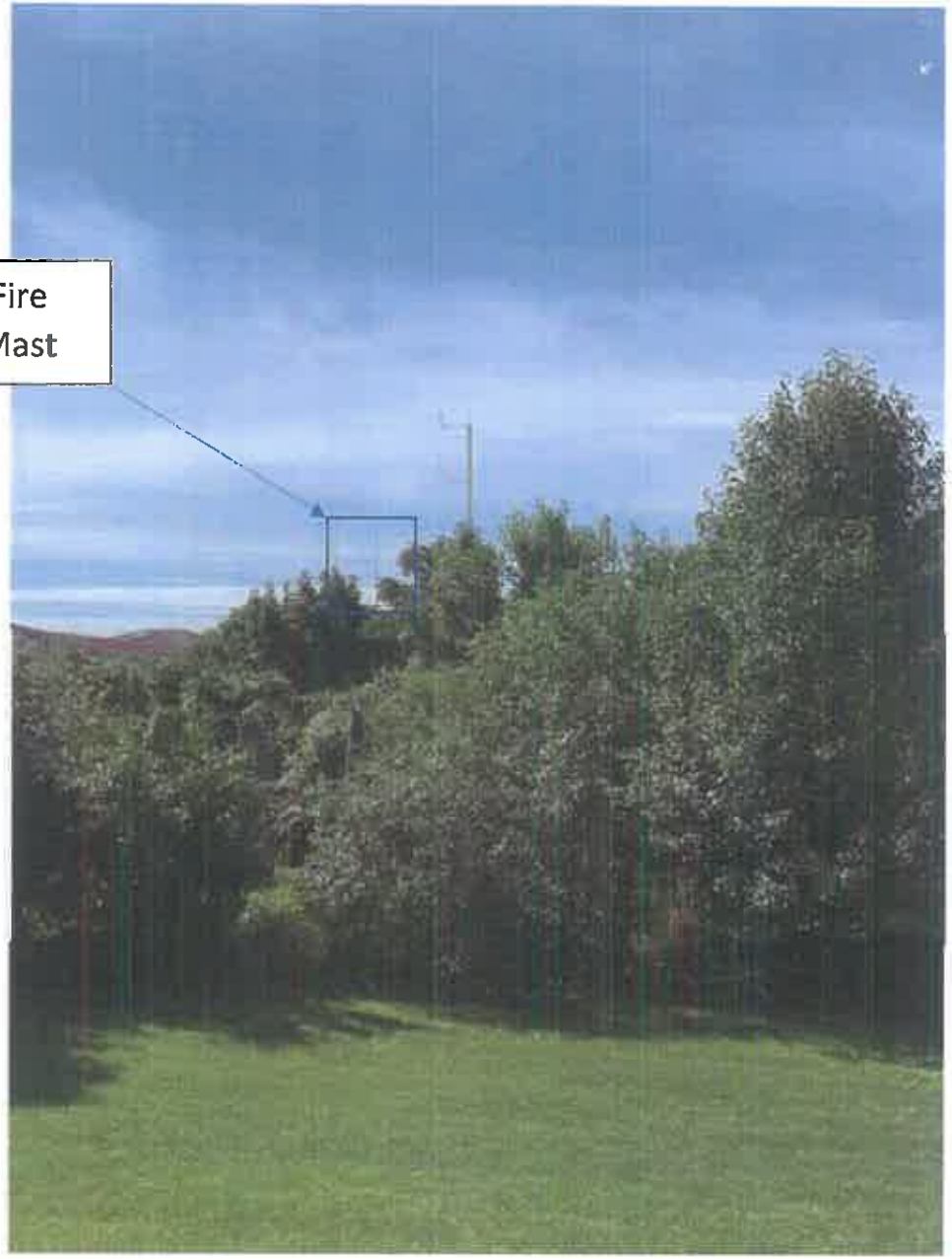
Location 14 - 7555 Wakefield
Proposed view looking east
Most of 104' Structure not visible, although very top may be visible

Location 15 - 2449 Abbey
Existing view looking southeast
Existing 65' structure not visible (Fire Dpt. mast is visible)

Location 15 - 2449 Abbey
Proposed view looking southeast
104' Structure not visible (Fire Dpt. mast is visible)

Location 16 - 2418 Abbey
Existing view looking southeast
Existing 65' structure not visible

Location 16 - 2418 Abbey
Proposed view looking southeast
104' Structure not visible



Location 17 - path in front of 2418 Abbey
Existing view looking southeast
Existing 65' structure not visible (Fire Dpt. mast is visible)

Location 17 - path in front of 2418 Abbey
Proposed view looking southeast
104' Structure is visible (Fire Dpt. mast also visible)

Location 18 - 2432-2438 Abbey
Existing view looking southeast
Existing 65' structure not visible

Location 18 - 2432-2438 Abbey
Proposed view looking southeast
104' Structure not visible

Location 19 - 2446-2450 Abbey
Existing view looking southeast
Existing 65' structure not visible

Location 19 - 2446-2450 Abbey
Proposed view looking southeast
104' Structure not visible

Location 20 - 2450 Abbey
Existing view looking southeast
Existing 65' structure partially visible

Location 20 - 2450 Abbey
Proposed view looking southeast
104' Structure partially visible

Location 20 (reverse) – 2450 Abbey
Reversed view from Location 20 – looking northwest
Landscape screening line

Location 22 - 2502 Abbey
Existing view looking southeast
Existing 65' structure partially visible through trees

Location 22 - 2502 Abbey
Proposed view looking southeast
104' Structure partially visible through trees

Location 22 (reverse) – 2502 Abbey
Existing view looking northwest
Garage door and other doors (limited windows)

SK580-100A_S2020-0012

6 5 4 3 2 1

E D C B A

(12 D) (6 D) OILED STONE ROAD ℄ OF LYMAN AVE.

APPROX. WEST RIGHT-OF-WAY 70'-0" EASEMENT FRONT LINE LOT SIDE LOT LINE

(BLCK TOP) STREET 75th

72'-0" 181'-0" 109'-5" SIDE LOT LINE

BASE LINE 2 ℄ CF ROADWAY 10' 10' 41'-0" 24'-0" 20' GATE

2'-0" 2" PLSTC. DUCT 4'-0" 20'-0" 10'-0" 12'-0" 12'-0"

CHAIN LINK FENCE 7'-0" OVER BARBS

MASONRY CONTROL BLDG. 59'-6" 12'-6" 50'-0" 45'-0" 25'-0" 5' 14'-0" 3'-0" 3'-0"

IND. SW. CAB. NEUT. IND. AUX. POW. TRS. SSN MONOPOLE

(12 D) CAP. (12 D) (10 D) (5) 9 MVAR CAP. BKS.

(4) 9 MVAR CAP. BKS. ℄ OF 20' ROADWAY (10 D) (10 D) (10 D) 28'-6"

40 MVA TR. 74 40 MVA TR. 73 40 MVA TR. 72 40 MVA TR. 71

M.O.D. 88-4 M.O.D. 89-3 M.O.D. 88-2 M.O.D. 89-1

REM. LINKS A# B# C# MAN. OPER. DISC. SW. 78-5 B.T. CIR. SWR. 89-7 MAN. OPER. DISC. SW. 88-3

31'-6" 30'-0" 12'-6" 16'-0" 13'-0" 11'-6" 11'-6" 18'-0" 15'-0" 13'-0" 19'-6" 15'-0" 13'-0" 13'-0" 15'-0" 18'-0"

MAN. OPER. DISC. SW. 138KV O.C.B. MAN. OPER. DISC. SW. 138KV OIL POTHEADS

BASE LINE 1 BASE LINE 2

L 1809 L 1803 L 1802 L 1803

2-6" PIPES 2-6" 3-3½" STAINLESS STEEL COATED PIPES 70'-0"

100'-0" (N.T.S.) 93'-0" LEASE TO DARIEN-WOODRIDGE FIRE PROTECTION DISTRICT 25'-0" EASEMENT

REAR LOT LINE 8'-0" 8'-0" 46'-0" 19'-6" 31'-0" 46'-0" 8'-0" 8'-0"

140'-0" 150'-0" 93'-0" 280'-0" 30'-0" 413'-0" 1325'-9" (N.T.S.)

NORTH LINE OF SW ¼ OF SEC. 29-36-11 SOUTH LINE OF NORTH HALF OF SW ¼ OF SEC. 29-36-11

(12 D) TO C.E. CO. R.O.W. 1482'-0" 331'-5" 229'-0" 80'-0"

BYRON FARVIEW DARIEN RD. LYMAN AVE. TDC 580 DOWNERS GROVE MAIN ST. LEMONT RD. 294N

LOCATION PLAN
NO SCALE

REV	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
	06-22-20	HEIGHT VARIATION REQUEST			

Sargent & Lundy
55 EAST MONROE ST., CHICAGO, IL

PROJ. No. 13812-022

ComEd An Exelon Company
Commonwealth Edison Co.
Chicago, Illinois
Transmission and Distribution Operations

SITE PLAN – HEIGHT VARIATION EXHIBIT

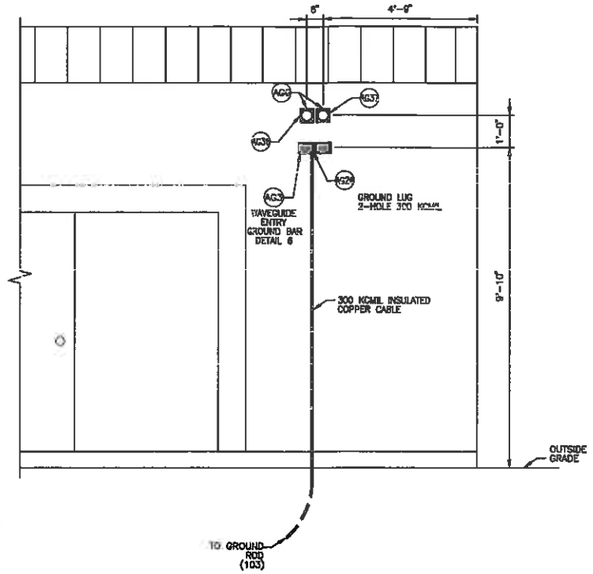
TDC 580 DOWNERS GROVE DC 00 SC

SCALE 1" = 20'-0" DATE 2-27-97

DRAWN BY AAP

ENG. BY RJJ

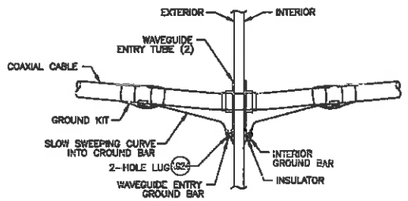
SK580-100A_S2020-0012



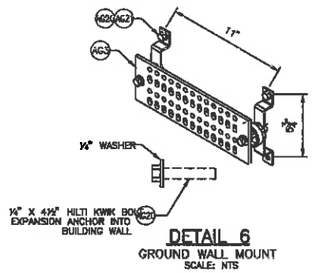
SECTION C-C
EXTERIOR WAVEGUIDE ENTRANCE

CONSTRUCTION NOTES:

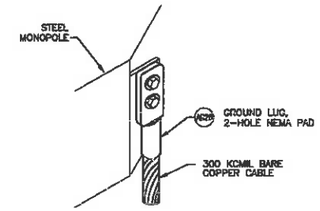
1. CONTRACTOR/INSTALLER SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO ENSURE THE SAFETY OF ALL PEOPLE LOCATED ON THE WORK SITE, INCLUDING CONTRACTOR'S/INSTALLER'S PERSONNEL (OR THAT OF ITS SUBCONTRACTOR(S)) PERFORMING THE WORK.
2. FOR GENERAL NOTES SEE DWG. 580E-100.



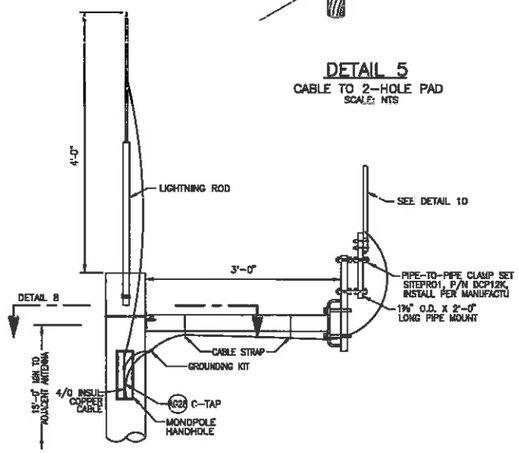
DETAIL 4
WAVEGUIDE BOND TO GROUND BAR
AT BUILDING



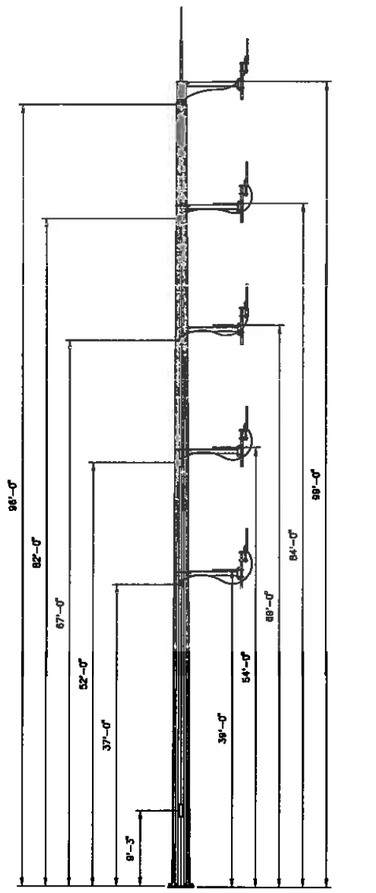
DETAIL 6
GROUND WALL MOUNT
SCALE: NTS



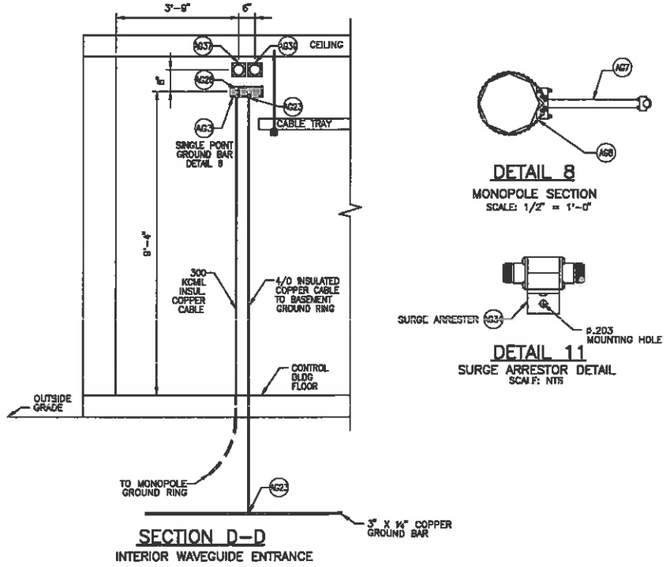
DETAIL 5
CABLE TO 2-HOLE PAD
SCALE: NTS



DETAIL 7
MONOPOLE TOP
SCALE: 1/2" = 1'-0"



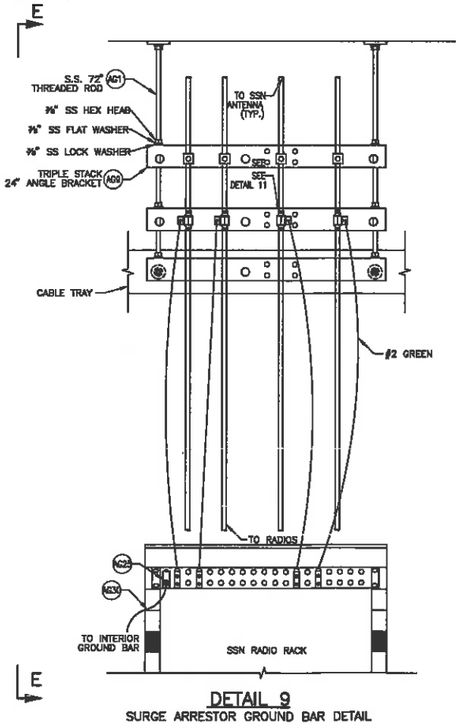
DETAIL 12
STRUCTURE ELEVATION
SCALE: 1/8" = 1'-0"
FOR ALL MONOPOLE DETAILS SEE DWGS (580.X-X THROUGH 580.X-X)



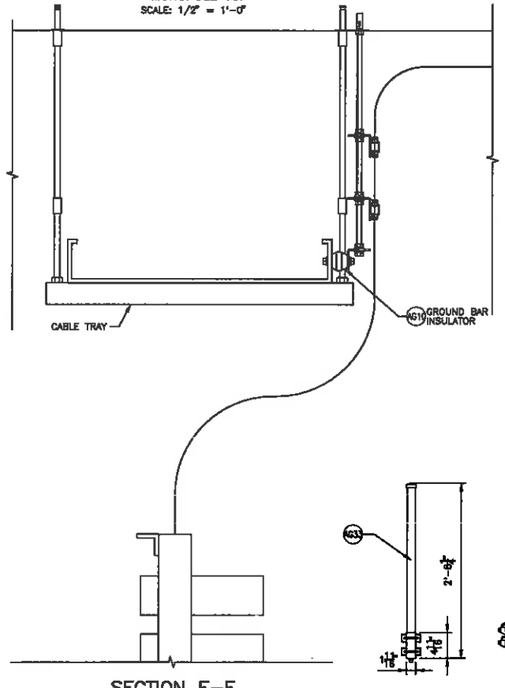
SECTION D-D
INTERIOR WAVEGUIDE ENTRANCE

DETAIL 8
MONOPOLE SECTION
SCALE: 1/2" = 1'-0"

DETAIL 11
SURGE ARRESTER DETAIL
SCALE: NTS



DETAIL 9
SURGE ARRESTOR GROUND BAR DETAIL



SECTION E-E
SURGE ARRESTOR GROUND BAR DETAIL

DETAIL 10
SSN ANTENNA DETAILS
SCALE: NTS

Sargent & Lundy LLC
55 EAST MONROE ST., CHICAGO, IL
hbk ENGINEERING

REFERENCE DRAWINGS:
PLANS, SECTIONS, DETAILS OF SSN MONOPOLE (SH. 1 OF 2) (105D)

REV	DATE	DESCRIPTION	TECH.	ENG.
1				

ComEd — An Exelon Company
Commonwealth Edison Co.
Chicago, Illinois
Transmission and Distribution Operations

ComEd Structure TDC 580 Downers Grove, 7700 Lyman Avenue, Darien Exhibit

TDC 580 DOWNERS GROVE DC 28 SC

SCALE	NTS	DATE	01-28-20
DRAWN BY	S&L		
ENG. BY	S&L		

580E-105E_S2020-0012

DuPage County
Information Technology Department
GIS Division
421 N County Farm Rd.
Wheaton, IL 60187
Ph# (630)407-5000
Email: gis@dupageco.org

DuPage Maps Portal:
http://dupage.maps.arcgis.com/home

DuPage County, Illinois Web Site:
www.dupageco.org

N

CITY OF DARIEN

ZONING VARIATIONS

JUSTIFICATION NARRATIVE

Purpose

To be consistent and fair, the City is obligated to make decisions on zoning variation requests based on findings-of-fact. The Applicant should write a justification narrative that contains evidence (facts) that support a conclusion (finding) that the variation is necessary and would not cause problems. It should include: a) explanation of why the variation is being requested, b) describe the 'hardship condition' of the property that makes it difficult to conform, c) estimate the impact on neighbors , and d) respond to each of the decision criteria below.

Decision Criteria (See City Code Section 5A-2-2-3)

2a. The property in question cannot yield a reasonable return if permitted to be used only under the conditions allowed by the regulations in the zone.

2b. The plight of the owner is due to unique circumstances.

2c. The variation if granted will not alter the essential character of the locality.

3a. Essential Need? The owner would suffer substantial difficulty or hardship and not mere inconvenience or a decrease in financial gain if the variation is not granted.

3b. Problem with Property? There is a feature of the property such as slope or shape or change made to the property, which does not exist on neighboring properties, which makes it unreasonable for the owner to make the proposed improvement in compliance with the Zoning Code. Such feature or change was not made by the current owner and was not known to the current buyer at the time of purchase.

3c. Smallest Solution? There is no suitable or reasonable way to redesign the proposed improvements without incurring substantial difficulty or hardship or reduce the amount of variation required to make such improvements.

3d. Create Neighbor Problem? The variation, if granted, will not cause a substantial difficulty, undue hardship, unreasonable burden, or loss of value to the neighboring properties.

3e. Create Community Problem? The variation, if granted, may result in the same or similar requests from other property owners within the community, but will not cause an unreasonable burden or undesirable result within the community.

3f. Net Benefit? The positive impacts to the community outweigh the negative impacts.

3g. Sacrifice Basic Protections? The variation, if granted, will comply with the purposes and intent of the Zoning Code set forth in Section 5A-1-2(A) and summarized as follows; to lessen congestion, to avoid overcrowding, to prevent blight, to facilitate public services, to conserve land values, to protect from incompatible uses, to avoid nuisances, to enhance aesthetic values, to ensure an adequate supply of light and air, and to protect public health, safety, and welfare.