

POLK COUNTY DEVELOPMENT REVIEW COMMITTEE STAFF REPORT

DRC Date:	October 10, 2025	Level of Review:	4
PC Date:	December 3, 2025	Type:	LDC Text Amendment
BoCC Date:	January 6, 2026	Case Numbers:	LDCT-2025-24
	January 20, 2026	Case Name:	Powerline Landscaping Buffer
Applicant:	Polk County	Case Planner:	Kyle Rogus, Planner II

Request:	An LDC text amendment to Chapter 3, Section 303, Solar Electric-Power Generation Facility, to modify landscaping requirements; amending Chapter 7, Section 720, Landscaping and Buffering, to include a Utility Buffer; providing for severability; and providing for an effective date.
Location:	n/a
Property Owner:	n/a
Parcel Size (Number):	n/a
Development Area:	n/a
Nearest Municipality:	n/a
DRC Recommendation:	Approval
Planning Commission Vote:	Pending Hearing

The changes to Chapter 3, Section 303, Solar Electric-Power Generation Facility:

- Modify existing landscape buffering requirements to new Utility Buffer.

The changes to Chapter 7, Section 720, Landscaping and Buffering are:

- Modify Figure 7.3 Buffer Types and Requirements to include new Utility Buffer.
- Clarify that trees planted within 30 feet of existing power line easements shall adhere to the proximity to power line height restrictions (P/L column) in Appendix B.
- Clarify 2:1 planting ratio canopy trees to understory trees.

Summary:

Over the past several years, the County has experienced a substantial increase in overall development, including significant investment in Solar Electric-Power Generation Facilities. As these projects have expanded, staff have seen a reoccurring pattern: nearly every solar facility located adjacent to roadways must request a waiver to avoid planting canopy trees that conflict with both solar panel efficiency and, when present, overhead utility clearance requirements.

At the same time, it is important to recognize the essential role that power line utilities play within our society. Overhead transmission and distribution lines are critical components of the electrical grid, delivering reliable power to homes, businesses, and essential services. Maintaining safe, unobstructed clearance around these lines is not simply a preference of the County, but it is a vital public safety measure that prevents outages, reduces wildfire risks, ensures service reliability, and supports the overall functioning of the community. Landscaping standards that inadvertently require vegetation to grow into utility clearance zones create avoidable safety hazards and maintenance burdens for utility providers.

By updating the Land Development Code (LDC), the County aligns its landscaping requirements with both the operational needs of modern solar facilities and the essential safety standards

governing public utility infrastructure. This amendment will support continued responsible growth while preserving the reliability and integrity of the power systems upon which residents and businesses depend.

Data and Analysis Summary

The current LDC requires a Type “A” Landscape Buffer along roadway frontages. This buffer includes canopy tree, understory tree, and shrub requirements in specific quantities, and it applies regardless of the presence of overhead power lines. Additionally, the Code states that trees planted within 30 feet of power line easements must comply with the mature-height restrictions identified in Appendix B.

In practice, these requirements have led to an increase in waiver requests, primarily because:

1. Canopy trees conflict with the operational needs of solar facilities, as their mature height casts shade on solar arrays and reduce system efficiency.
2. Overhead power lines along roadway frontages prohibit or severely restrict canopy tree plantings due to utility clearance requirements and safety standards.
3. As a result, applicants routinely seek waivers to substitute lower growing species or reduce the number of required plantings within the buffer area.

Given the frequency and predictability of these waivers, the County is pursuing a new landscape requirement specifically for sites with power lines along road frontages. The intent is to establish a buffer standard that is compatible with both solar facility operations and utility clearance requirements, eliminating the need for routine waivers that can cause uncertainty in design and delays in project completion.

The proposed amendment would therefore:

1. Reduce or eliminate the need for waivers under Section 932 by creating a buffer standard inherently compatible with the constraints of Solar Electric-Power Generation Facilities.
2. Remove canopy tree requirements where overhead utility lines exist allowing only understory trees, shrubs, or utility-compatible species.
3. Ensure compliance with Appendix B height restrictions while still maintaining the effective visual screen.

Findings of Fact

1. *The request is a Land Development Code text amendment to Chapter 3, Section 303, Solar Electric-Power Generation Facility, to modify landscaping requirements; amending Section 720, Landscaping and Buffering to include a Utility Buffer.*
2. *This amendment applies to all lots or parcels within the unincorporated areas of the County regardless of the Future Land Use Map district where road frontage is aligned with power lines.*
3. *Section 303, Solar Electric-Power Generation Facility, subsection 1.e.i of the Land Development Code regulates the visual impacts of the solar panels, solar arrays and any solar energy system by requiring a Type A Landscape Buffer along the frontage of all public rights-of-way. If this buffer is determined to affect the functionality of the solar arrays and system, the applicant may apply for a waiver to this requirement. This amendment reduces or eliminates the waiver to landscaping requirements by modifying the Type A Landscape buffer with a new power line landscape buffer.*

4. *Section 720, Landscaping and Buffering addresses guidelines for landscape design, promotes appropriate plant selection and maintenance for mitigating potential conflicts between different land uses. This amendment clarifies the different landscape design and plant selection for uses sharing frontage with overhead utilities compared to the code's standard roadway Type A Landscape Buffer.*
5. *Section 720, Landscaping and Buffering, subsection E.5.d addresses trees planted within 30 feet of existing power line easements shall adhere to the proximity to power line height restrictions (P/L column) in Appendix B.*
6. *Section 720, Figure 7.3 addresses three landscape buffer types and planting requirements. Landscape buffers requirements are determined by the intensity of the proposed use to the intensity of the abutting uses. Buffer type and intensity are directly correlated. More intense uses abutting less intense uses require higher mitigation strategies through buffer width and planting requirements. This amendment moves to add a Power Line Buffer for more intense roadway frontage.*
7. *Planning staff has reviewed the land development requirements of 13 central Florida counties that bear commonalities with Polk. Staff found that three of the 13 jurisdictions surveyed identify specific power line/overhead utility landscape buffers. Of the remaining jurisdictions, six of the 13 specified tree separation requirements based on classification (maturity height), and four of the 13 jurisdictions only require understory tree and shrub plantings when abutting road frontage. Every jurisdiction regulates landscape buffering along power lines/overhead utilities to a different capacity. This amendment will make Polk County the fourth jurisdiction to utilize a specific power line/overhead utilities buffer, but consistent with all other jurisdictions by removing canopy tree plantings and adhering to proximity to power line height restrictions*

Development Review Committee Recommendation:

The Land Development Division, based on the information provided with the proposed text amendment application, finds that the proposed text change request is **CONSISTENT** with the Polk County Land Development Code and the Polk County Comprehensive Plan. Staff recommends **APPROVAL** of LDCT-2025-24.

Analysis:

This amendment updates the County's landscaping standards to better address conditions along roadway frontages that contain overhead power lines and solar electric-power generation facilities. Under the current Code, the required Type "A" landscape buffer includes canopy trees that often conflict with utility clearance requirements and solar system functionality creating recurring waiver requests. The amendment introduces a new utility-compatible buffer that replaces canopy trees with understory trees and shrubs in these constrained areas, while retaining the standard Type "A" buffer where overhead utilities are not present. This approach preserves the visual and environmental benefits of landscaping while ensuring compatibility with essential power infrastructure. Overall, the amendment improves safety, reduces administrative waivers, and aligns the Code with real-world site conditions and responsible development practices. The following is a detailed explanation of the changes proposed, benefit-cost analysis, regulatory history, scope, jurisdictional comparison, and review of Comprehensive Plan and Florida statutes.

Section 303 – Solar Electric-Power Generation Facility

Section 301 establishes the fundamental purpose of regulating conditional uses: Conditional uses have unique characteristics that require the imposition of development criteria to ensure they are not harmful to the health, safety, and welfare of residents, surrounding uses, and surrounding properties. These criteria may be applied in relation to use, occupation, location, construction, design,

character, scale, manner of operation, or the necessity of making complex or unusual determinations.

Solar electric-power generation facilities fall within this framework. They present unique operational, locational, and design challenges particularly with respect to how landscaping interacts with solar array efficiency. Section 303 provides specific conditions applicable to solar electric-power generation facilities across the County, including, but not limited to, landscaping and buffering. This section currently mandates canopy trees, understory trees, and shrubs consistent with that of a Type “A” Landscape buffer along roadway frontage. This section also interacts with Section 932, Waivers to Technical Standards, by offering waiver eligibility to the required landscaping buffer along the frontage of all public rights-of-way if it is determined to affect the functionality of the solar arrays and system.

The current Type “A” Landscape buffer does not adequately address these unique characteristics, resulting in adverse impacts on the facility’s operation, uncertainty in design, and delay in project completion by requiring determinations through the waiver process. The proposed amendment to Section 303 is therefore a direct application of Section 301’s purpose and intent: to apply appropriate, use-specific development criteria that protect safety, ensure compatibility, and reduce unnecessary hardship on both surrounding properties and the conditional use itself.

Issue Identified

When solar electric-power generation facilities are located along roadway networks, the current Type “A” buffer creates significant conflicts:

- **Operational Conflicts for Solar Facilities:** Canopy trees cast shade that reduces solar production and interferes with facility efficiency and design.
- **Administrative Burden:** Nearly all solar projects in these contexts request and receive waivers, demonstrating that the Code’s current standards do not reflect the real-world conditions of this conditional use.
- **Misalignment With Section 301 Principles:** The existing buffer requirement fails to account for the unique, location-specific characteristics of solar facilities, forcing repetitive “complex or unusual determinations” through waivers, exactly what Section 301 seeks to avoid.

Proposed Amendment to Section 303

The proposed amendment introduces a utility buffer applicable for properties where solar electric-power generation facilities and overhead power lines exist. This new buffer:

- Eliminates canopy tree requirements in areas constrained by solar facilities.
- Allows only understory trees, large shrubs, or compatible species that meet Appendix B height restrictions.
- Maintains the visual screening intent while avoiding shading of solar arrays.
- Reduces or eliminates the need for waivers under Section 932 by creating a buffer standard inherently compatible with the constraints of Solar Electric-Power Generation Facilities.

Section 720 – Landscaping and Buffering

Section 720 governs the guidelines for landscape design by referencing the need to promote visual quality and aesthetics of a community through mitigating visual impacts, providing aesthetic value, and reducing potential nuisances for surrounding properties. Landscaping and buffering under this section are intended to:

- Reduce noise, airborne sediments, and erosion
- Mitigate heat island and light pollution effects
- Enhance visual quality and aesthetics, supporting economic perception
- Promote appropriate plant selection and maintenance, including water conservation
- Provide separation between land uses to minimize nuisances such as light, glare, dirt, litter, signage, and parking/storage impacts

The existing buffer requirements are guided by the Buffer Matrix (Table 7.12), which assigns buffer types (A, B, C) based on the intensity of development and the nature of adjacent uses, with diagrams provided in Figure 7.3.

The Type “A” landscape buffer is primarily designated along roadway frontages. The Type “A” buffer, as illustrated in Figure 7.3, includes canopy trees, understory trees, and shrubs arranged to provide a continuous visual screen and mitigate noise, glare, dust, and other potential nuisances. While this buffer has historically served to enhance roadway aesthetics and provide environmental benefits, it presents challenges when overhead power lines are present. Canopy trees within the Type “A” buffer may violate utility clearance requirements and create potential safety hazards. Additionally, plantings within 30 feet of power line easements are limited by the height restrictions outlined in Appendix B, further restricting the species and size of landscape materials.

To address these constraints, the proposed amendment introduces a utility-compatible roadway buffer specifically for areas adjacent to overhead power lines, while retaining the Type “A” buffer in areas without utilities. This newly proposed buffer mirrors the visual continuity of Buffer “A”, maintaining shrubs and understory trees to provide effective screening, reduce noise and glare, and preserve the visual quality of the roadway corridor. Canopy trees are replaced with understory trees and or utility-compatible species at a ratio of 2:1 complying with Appendix B height restrictions, ensuring public safety, minimizing conflicts with power lines, and reducing administrative burden associated with waiver requests. By creating a dual-buffer system retaining Type “A” where feasible and implementing a specialized utility-compatible buffer along power line corridors the amendment ensures that landscaping continues to fulfill its intended aesthetic, environmental, and nuisance mitigation functions while accommodating critical overhead utilities. This approach harmonizes the visual intent of the existing buffer with the operational and safety realities of utility infrastructure, providing a clear and practical framework for developers and staff.

Issue Identified

Development adjacent to roadways with overhead power lines face operational and safety constraints:

- Canopy tree requirements within the Type “A” buffer conflict with power line clearance, creating safety risks and potential utility violations.

The current standard does not differentiate between areas with and without overhead utilities, leading to routine requests for waivers under Section 932 to modify plant types or densities.

Proposed Amendment

The proposed text amendment introduces a specific overhead utilities buffer along roadways while retaining the existing Type “A” buffer for other portions of the site:

- **New Utility Buffer:**
- Applied along roadway frontages where overhead power lines exist
- Maintains appropriate visual screening and aesthetics

- Allows only understory trees, large shrubs, or species compatible with utility height restrictions (per Appendix B)
- Eliminate canopy trees to avoid utility conflicts
- **Retention of Type “A” Buffer:**
- In areas not affected by overhead utilities, the standard Type “A” buffer continues to apply, preserving the landscape character and the benefits outlined in the Code.

The amendment to Section 720 creates a dual-buffer approach: a utility-compatible buffer along power line corridors and the standard Type “A” buffer elsewhere. This approach:

- Preserves the overall landscape and aesthetic benefits of the Code
- Addresses unique operational constraints of solar electric-power generation facilities
- Protects essential utility infrastructure
- Reduces administrative burden while maintaining compatibility with surrounding uses

This targeted modification ensures Section 720 remains practical, enforceable, and aligned with the overall goals of landscaping, buffering, and sustainable development within the County.

Benefit-cost Analysis of the Amendment

Who does it help?

The proposed amendment benefits multiple stakeholder groups. Solar electric-power generation facility owners and developers gain the most direct benefit because the new utility-compatible buffer eliminates shading conflicts, reduces the need for waivers, and provides clearer, more predictable design requirements. Utility providers also benefit from improved safety and reduced maintenance issues, as the amendment ensures vegetation remains compatible with overhead power line clearance standards. County staff gain efficiency by no longer processing routine landscape waivers, allowing for more consistent and streamlined review. The general public and adjacent property owners benefit from the continued provision of visual screening, reduced glare, maintained aesthetic quality, and improved safety and reliability of electric infrastructure.

Who does it hurt?

The amendment results in minimal negative impacts. Developments without overhead utilities are still required to provide the full Type A buffer, including canopy trees, but this is not a new burden, only the continuation of existing standards found in Appendix B. Projects that prefer canopy trees for aesthetic reasons in areas with overhead utilities may experience reduced design flexibility, as canopy trees will no longer be allowed where they could interfere with utility infrastructure. However, these limitations are necessary to comply with safety and clearance requirements. Overall, the amendment avoids creating new hardships and instead corrects existing conflicts within the Code.

What is the cost?

Developers may experience lower landscape installation and maintenance costs because understory trees and shrubs are generally less expensive than canopy trees and more compatible with areas constrained by utilities. Eliminating the need for waivers further reduces consulting, engineering, and processing expenses. The County similarly benefits from reduced administrative burden, as staff will no longer need to process routine waiver requests. Utility providers may also see reduced vegetation-management costs due to fewer canopy trees near overhead power lines. Overall, no new financial obligations are created, and the amendment aligns existing requirements with practical site conditions.

Limits of the Proposed Ordinance

While the proposed ordinance effectively resolves conflicts between existing landscape standards, solar facility operations, and overhead utility infrastructure, it does have certain limits. The amendment applies only to areas with overhead power lines or solar electric-power generation facilities, meaning the full Type “A” buffer, including canopy trees, remains required in all other areas, even where developers may prefer a more flexible or lower-maintenance landscape design. The ordinance does not eliminate all height or species limitations, as plantings must still comply with Appendix B and other County landscaping requirements, which may restrict aesthetic options. Additionally, while the ordinance reduces the need for waivers, it cannot fully eliminate unique site-specific situations that may still require administrative review. Finally, the amendment focuses exclusively on frontage buffers; it does not address potential landscaping or screening issues on interior property lines or other parts of a development where similar constraints might occur. Overall, the ordinance is intentionally narrow in scope, addressing a specific and recurring issue but not redesigning the broader landscape framework.

Comparisons to other Jurisdictions:

Staff commonly survey counties on the I-4 corridor for regulatory comparisons because they are most closely similar to Polk. Some of the abutting counties are reviewed. Alachua and Duval are also reviewed because of similar demographic and urban-rural mixture. This method of selection creates a survey of 13 total local jurisdictions.

A review of comparable jurisdictions shows a wide variation in how local governments address landscaping requirements in areas affected by overhead utilities, particularly regarding whether specialized buffers are required, whether canopy trees may be substituted, and how tree spacing is regulated for safety and maintenance compatibility. Of the 13 jurisdictions, the majority do not provide a dedicated overhead utility or power-line buffer; only 3 of the 13 jurisdictions establish a formal, stand-alone utility buffer with defined widths, planting counts, or opacity standards. However, among the 10 jurisdictions that do not require a specific utility buffer, most still address overhead utility constraints through alternative compliance measures. A significant portion of these jurisdictions either prohibit canopy trees entirely within utility corridors or allow substitution of understory trees and shrubs in place of canopy species to ensure compliance with height and clearance limitations. Several also require coordination with utility providers, impose height-based species restrictions, or specify tree spacing standards to avoid conflicts with overhead lines. While only a minority of jurisdictions offer a formal utility-specific buffer, the overwhelming majority recognize the operational and safety conflicts created by overhead lines and respond by modifying plant selection, plant height, spacing, or substitution standards.

Taken together, these jurisdictions demonstrate a common recognition of utility-related planting constraints, but they vary substantially in structure: some rely on substitution rules within standard buffers, others impose explicit overhead-utility buffers with defined planting counts, and others simply require compatibility with utility height limits. This comparison supports the need for a clear, predictable, and utility-compatible buffer standard, such as the one proposed in the amendment.

Staff focused on the overarching themes reflected in Table 1 to follow. Whether jurisdictions provide a dedicated overhead-utility buffer, how they address planting requirements through canopy tree prohibitions or substitutions, and what tree separation or spacing standards they apply in utility-conflict areas. Details of this survey are found in Table 1 to follow.

Table 1

Jurisdiction <i>(Code citation)</i>	Provide power line/overhead utility buffer?	Planting Requirements? <i>Canopy trees prohibited or substitution?</i>	Tree Separation Requirement?
Alachua County <i>Sec. 407.43 Sec. 407.70 Table 407.50.1</i>	Yes. Width: 10' Length: 100 LF Canopy: N/A Understory: 4 Shrubs: Depends on required opacity	No.	Yes. Overhead or underground utility service facilities shall provide utility providers' separations from all trees and landscaping.
Brevard County <i>Sec. 62-4341-42</i>	No.	Yes. To not interfere with utility services or create an unsafe visual clearance or other safety or maintenance hazard. This does not prohibit the appropriate plantings within utility easements.	No.
Duval County <i>Sec. 656.1215</i>	No.	No.	Yes. Required trees reaching a mature height greater than 25 feet shall be located at least 20 feet away from the power line
Hardee County <i>Sec. 5.13.07.03 Sec. 5.13.07.08 Table 5.13.07.C Figure 5.3.11.A</i>	No.	Yes. Easements for overhead wires only prohibit the planting of large trees , so understory trees are allowed in narrow buffer yards under power lines.	Yes. Large and medium sized trees should not be planted closer than 15 feet
Highlands County <i>Sec. 12.11.105.2 Sec. 12.11.105.5 Figure 12.11.105.5.A</i>	No.	Yes. No shade tree that exceeds 40 feet in height at maturity shall be placed within 15 feet of any overhead utility.	Yes. Large and medium sized trees should not be planted closer than 15 feet
Hillsborough County <i>Sec. 6.06.06</i>	No.	Yes. Consultation with the local utility representative should occur for assistance on selecting suitable vegetative species.	Vegetation that exceeds 25 feet in height at maturity shall not be planted closer than 30 feet of the vertical plane of an existing power line, excluding service wires.
Lake County <i>Sec. 9.01.05 Sec. 9.01.06</i>	No.	Yes. Special precautions Shall be taken to not locate canopy trees under or near utility easements.	No.
Manatee County <i>Sec. 701.4 Sec. 902.7 Figure 7-2</i>	Yes. Width: 10' Length: 100 LF Canopy: N/A Understory: 5 Shrubs: 50	Yes. For roadway buffers that contain overhead power lines, the requirement for canopy trees may be reduced to allow understory trees	No.
Orange County <i>Sec. 24-4 Sec. 24-5</i>	No.	Yes. When a required buffer lies within 10 feet of an above ground power or other utility line, understory trees may be planted in the affected buffer in lieu of shade trees.	No.
Osceola County <i>Sec. 4.8.3 Sec. 4.8.5</i>	No.	Yes. For local streets, where overhead utilities exist and would be in conflict with required plantings, small trees may be planted in lieu of large trees at a 2:1 ratio.	Yes. Overhead or underground utility service facilities shall be designed to provide clearance from the mature height of trees and landscaping proposed on the landscape plan.
Pasco County <i>Sec. 905.2</i>	No.	Yes. Consultation with the affected utility should occur for assistance with the selection of suitable vegetative species.	Yes. Where interference with overhead utility lines is probable, ornamental trees shall be planted with a

Table 1

Jurisdiction <i>(Code citation)</i>	Provide power line/overhead utility buffer?	Planting Requirements? <i>Canopy trees prohibited or substitution?</i>	Tree Separation Requirement?
			maximum spacing of 20 feet on center.
Seminole County <i>Sec. 30.14.3 Sec. 30.14.4 Sec. 30.14.5 Sec. 30.14.7</i>	Yes. Width: Depends on required opacity Length: 100 LF Canopy: N/A Understory: 5 Shrubs: 16	Yes. Substitution of 3:1 ratio in the event where canopy trees are required.	No.
Volusia County <i>Sec. 72-284</i>	No.	Yes. Tree selection shall be limited to those trees that will not, at mature height, conflict with overhead utilities. Substitution of understory trees or shrubs for required canopy and/or mid-story trees.	Yes. Canopy (height at maturity of greater than 30 feet): 30' Mid-story (height at maturity between 20 and 30 feet): 20' Understory trees (height at maturity of less than 20 feet): No offset.

Consistency with the Comprehensive Plan

POLICY 2.125-D3: PRIVATE UTILITY COORDINATION - The County shall require applicants/developers to submit plans and plats to the power companies at the same time plans are submitted to the county for review to assist in the planning and programming of utility service.

Consistency with the Florida Statutes

The proposed text amendment is consistent with Section 163.3205, Florida Statutes, which authorizes local governments to establish buffering and landscaping requirements for solar facilities provided that such standards are not more restrictive than those applied to comparable uses. The amendment aligns with this statutory direction by creating a utility-compatible buffer that resolves operational conflicts with solar arrays and overhead power lines without imposing additional or more onerous requirements beyond what is already required for similar development types. The modification supports the Legislature's expressed intent to encourage renewable solar energy production while allowing counties to tailor landscaping standards to protect public safety and surrounding properties.

Comments from Other Agencies: None.

Draft Ordinance: under separate attachment

Exhibits:

Exhibit 1 – Figure 7.3

Exhibit 2 – Utility Buffer

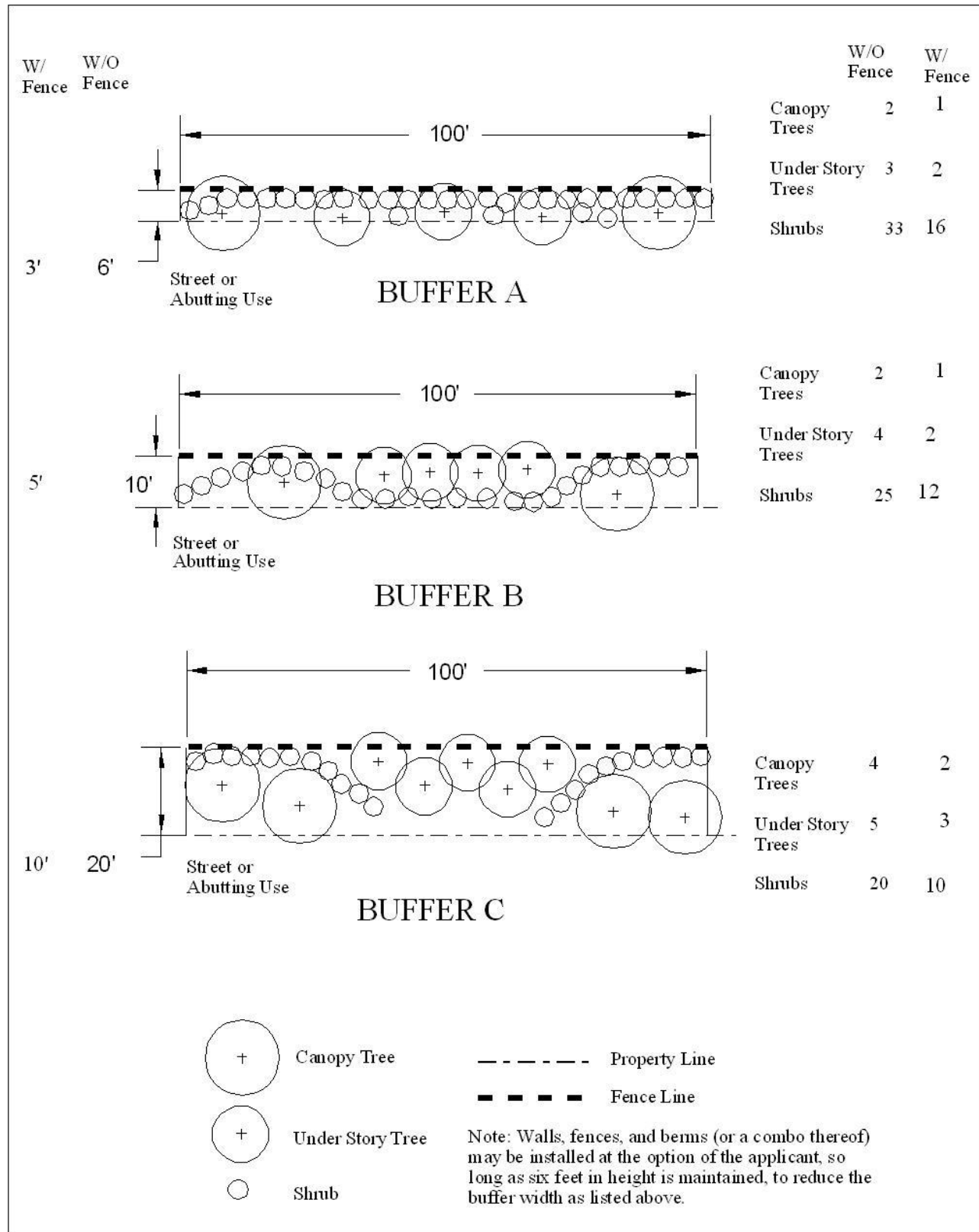
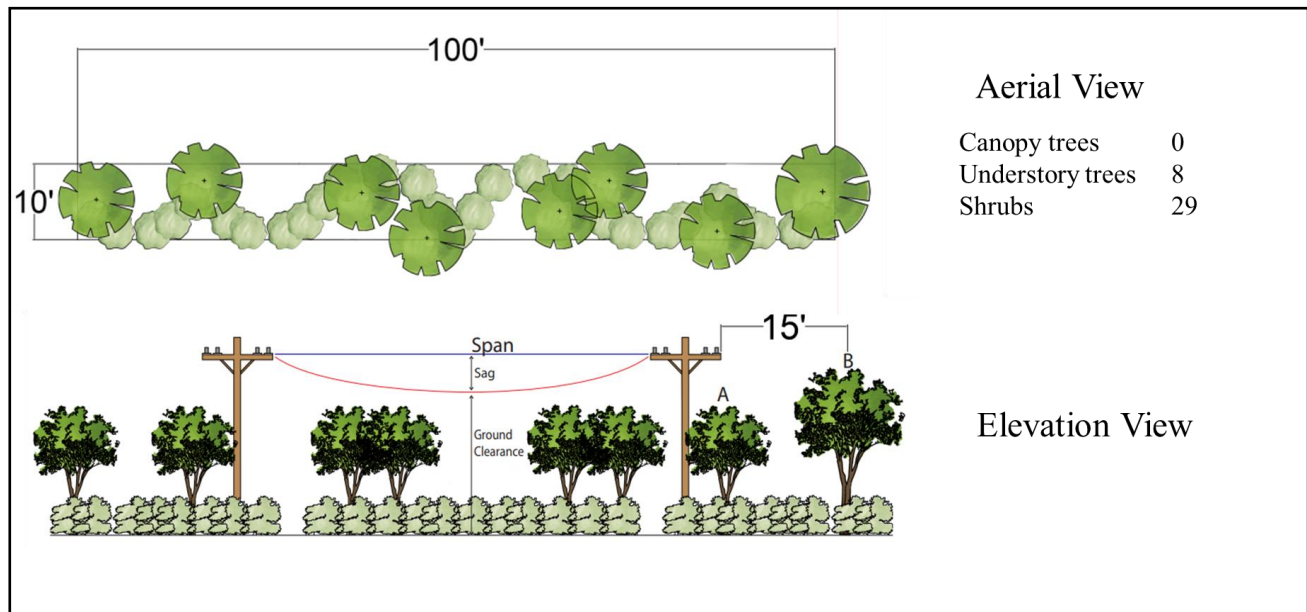


Figure 7.3 Buffer Types and Requirements



Utility Buffer