File #: LN-687

PLANNING AND ZONING BOARD
Meeting Date: MARCH 26, 2025

TEXT AMENDMENT - SYNTHETIC TURF

Request:	Text Amendment
P&Z#	N/A
Owner:	N/A
Project Location:	N/A
Folio Number:	N/A
Land Use Designation:	N/A
Zoning District:	N/A
Commission District:	N/A
Agent:	N/A
Project Planner:	Max Wemyss (max.wemyss@copbfl.com / 954-786-4671)

SUMMARY OF CURRENT REGULATIONS:

During the March 12, 2024 City Commission Meeting, the Commission asked Staff to look into the City's artificial turf regulations. This item was first presented to the Planning and Zoning Board at the February meeting where staff was given some feedback and the item was tabled for more information. Specifically, the setback of synthetic turf from property lines; the requirement for a "hard barrier" or "edging" where synthetic turf is abutting a property line; the setback of the synthetic turf from a waterway or canal property line; requirements for living material on property; requirements for a certain area around the base of a tree to remain as a natural non-compacted ground cover. Additional information on these points is provided at the end of this staff report. Possible changes to the proposed regulation language based on feedback are provided at the conclusion of this report.

Original Report Language:
The Zoning Code (Chapter 155, Code of Ordinances) includes the required pervious/impervious areas for a property within a particular Zoning District (Article 3); as well as the definitions and interpretations section (Article 9) that provides an explanation for the measurement of pervious area, including any non-living materials within the pervious area. Artificial turf is calculated as either an impervious surface or a pervious non-living area.

For example, if you have an 8,000 square foot lot (80ft x 100ft) in an RS-2 Zoning District, the following would apply:

RS-2 Zoning District Intensity/Dimensional Standards (abbreviated)

Front yard setback, minimum (ft)	25
Pervious area, minimum (% of lot area)	30
Required Front Yard, Pervious Area, minimum (% of Required Front Yard)	50

AND the following definitions would apply:

Impervious Surface
Land surface that does not allow, or minimally allows, the penetration of water. Examples are buildings and nonporous concrete and asphalt pavements.

Pervious Area
The area of a site covered by living plant material that allows precipitation to infiltrate directly into the ground. Up to 15% of the area may be covered with mulch or other types of non-living pervious materials.

With that established, the following calculations and determinations can be made:
The front yard is 80 feet wide and 25 feet deep = 2,000 square feet
The required pervious area of the total property (8,000 x 30%) = **2,400 square feet**
The required pervious area required within the front yard (2,000 x 50%) = **1,000 square feet**

The front yard will typically contain the driveway, frequently a path to the front door, and maybe a front porch. These paved (impervious) areas may take **up to** half of the front yard. The remaining 1,000 square feet must be pervious.

The total lot will typically contain, in addition to the impervious areas in the front yard, the foundation, garage, rear patio and paved areas, pool, and other accessory structures on a foundation like a shed, etc. These paved (impervious) areas may take **up to** 70% of the total lot area. The remaining 2,400 square feet must be pervious (1,000 of which is in the front yard, described above).

GIVEN THAT, artificial turf may be used anywhere on the lot that is not required to be pervious (the 70% impervious area) AND/OR artificial turf may be used within the required pervious areas up to the 15% that is allowed to be a non-living material.

The national average for the size of a single-family home is approximately 1,700 square feet. Assuming this is all on a single story, the area left on a lot that may be used for artificial turf surfaces is (8,000 [total lot] - 2,400 [pervious area required] - 1,700 [approx. size of foundation of home] = **3,900 square feet on the lot**. The front yard may include up to **1,000 square feet**. However, the front yard is often occupied by a driveway that consumes much of the permitted impervious area. Additionally, 15% of the required pervious area of the total lot, or an **additional 360 square feet,** may be used for non-living material such as artificial turf. In this scenario, the total area on the lot, excluding the area of the home itself, that may be used for impervious surfaces (including artificial turf, driveways, walkways, and patios) is **4,260 square feet**.

The issue that many property owners face is that they often want to replace more of the lawn area (where 30% of the property is required to be living/pervious) with artificial turf rather than with living grass and often the entirety of the front yard with artificial turf (where 50% of the front yard area is required to be living/pervious material), and many property owners do not realize that artificial turf is regulated by our codes in this way,

often resulting in violations. Additionally, stormwater retention requirements must be met on-site and the swale area must remain pervious or sloped toward a storm drain. Certain artificial turf systems may be pervious and have integrated drainage systems that can be evaluated for compliance during permit review. However, such standards are not established in our code and the artificial materials do not meet our pervious area requirements.

RATIONALE FOR REGULATION

Healthy lawns clean and cool the air by absorbing carbon dioxide, releasing oxygen, and collecting dust and dirt. They filter stormwater runoff, facilitate groundwater recharge, and reduce erosion, glare, heat island effect, and noise. Natural grass/sod/ground cover plays a significant role in reducing water runoff in urban and suburban environments that have significant areas of impervious surfaces, such as sidewalks and driveways. Artificial turf does not provide the cooling effect of a living lawn and becomes quite warm on a sunny day. Soil health is another factor. Instead of increasing the life of your soil, it compacts soil and creates an inhabitable environment for the living organisms in the soil, rendering it unable to grow other plant materials until that soil has been brought back to life. While some artificial turf systems are designed with a permeable base layer, the compaction may not permit water absorption into the subgrade, unless properly designed. This can cause runoff onto adjacent properties or into the streets/sewers instead of being absorbed into the ground like with natural grass/sod/groundcover.

Although natural groundcover requires the use of water, mowing (perhaps with carbon-emitting engines), and often fertilizer to maintain the condition of the lawn, these burdens may be worth the cost when required. Cleaning and regular maintenance are still required with applications of artificial turf. Fertilizer in and of itself isn’t bad for the environment; however, over-fertilizing is and this is often the standard practice. Allowing water to naturally percolate through the lawn and uncompacted soil to recharge the aquifer is a much better way of collecting water than as runoff from the patio or artificial turf surfaces through a centralized drainage system, which will also require regular maintenance. Water collecting in an inadequate system will inevitably flow to public drainage networks or to adjacent property rather than be allowed to percolate through our natural systems.

It should be recognized that many public athletic fields incorporate artificial turf due to the benefit of reduced maintenance and a controllable appearance. The regular and repeated use of an athletic field can kill a natural sod, result in an uneven playfield, and reduce the appearance of the field and field markings. All of this is much easier to control with an artificial surface. This public benefit has been used to justify the limited use of artificial turf within public fields.

The City’s landscape code regulations protect the general welfare of Pompano Beach residents and visitors by promoting water conservation and enhancing the city's appearance. As stated in the purposes of the Landscaping Code, this is done in part to enhance property values, the environment, and the city's aesthetic qualities. The landscape code regulations also support natural habitats for urban wildlife and clean air and water.

REVIEW OF REGULATIONS IN OTHER AREA MUNICIPALITIES

As an appendix to this memo, the artificial turf standards of many municipalities are provided as a basis for comparison. Here is a summary of the types of standards generally regulated:

Definition

Artificial turf means a dense and continuous surface of synthetic fibers mounted on a permeable backing and of sufficient density and green color to replicate the appearance of healthy natural grass.

Is artificial turf considered pervious, or an allowable pervious surface?
Codes frequently require that artificial turf be mounted to a permeable backing with various standards for sufficient drainage. Where compliant, artificial turf may be considered pervious, as is the case in Lighthouse Point, Lantana, Marco Island, Ocean Ridge, and Surfside, for example. However, this is not always the case; the City of Orlando, West Palm, and Winter Park, for example, treat artificial turf the same as an impervious surface while requiring a minimum permeability.

What are the design/material standards?
Artificial turf standards for design and materials consistently include language on the appearance (as a living lawn), on a minimum pile/fiber height and density, material, and permeability. Often a warranty guaranteeing color and height for a number of years is required. Many codes require that documentation stating the materials are lead-free and that the materials are disposable per certain protocols is provided.

What are the installation standards?
Installation standards typically require the following:

- Anchored to ensure that the turf will withstand the effects of wind
- All seams are fitted to resemble a natural look
- It must be installed over a subgrade prepared to provide positive drainage. Proper drainage shall be provided for all artificial turf installations to prevent excess runoff or pooling of water.
- Have an infill medium consisting of clean silica sand or other mixture, pursuant to the manufacturer's specifications or as approved by the city engineer
- Artificial turf shall be visually level, with the grain pointing in a single direction.
- An appropriate solid barrier device (e.g., concrete mow strip, bender board) is required to separate artificial turf from soil and live vegetation.
- Precautions for installation around existing trees shall be monitored and may be restricted to ensure tree roots are not damaged with the installation of the base material and that the overall health of the tree will not be compromised.

What are the maintenance standards?
Synthetic turf shall comply with all of the following maintenance standards and shall:

- All artificial turf shall be maintained in a green fadeless condition and shall be maintained free of dirt, mud, stains, weeds, debris, tears, holes, and impressions. Maintenance shall include, but not be limited to, cleaning, brushing, and debris removal; repairing of depressions and ruts to maintain a visually-level surface; elimination of any odors, flat or matted areas, weeds, and invasive roots; and all edges of the artificial turf shall not be loose and must be maintained with appropriate edging or stakes.
- All artificial turf must be replaced if it falls into disrepair with fading, holes, or loose areas. Replacement and/or repairs shall be done with like-for-like materials from the same manufacturer and done so in a manner that results in a repair that blends in with the existing artificial turf.

In what way is the use of artificial turf prohibited?
The use of artificial turf is typically prohibited within rights-of-way (i.e., swales) and within required on-site drainage features. Often, artificial turf is prohibited within a certain distance of natural waterways. Both of these separation requirements from artificial turf and the drainage areas or waterways are due to the potential for contamination resulting from the infill materials required at the time of installation and with maintenance over time. Outdoor plastic carpeting as a replacement for turf is often prohibited. Rubber may also be

considered as a prohibited material for infill. Artificial turf may also be prohibited within the drip line of any tree.

What are the standards related to the placement or permitted locations on residential properties?
Although the location of the artificial turf on a property is not always regulated, the City of West Palm and Ocean Ridge provides that turf may only be located in a side or rear yard (excludes the front yard). Other towns, such as Lighthouse Point permit artificial turf within a front yard when in conjunction with living plant materials (shrubs, vines, trees, or groundcovers). The City of Winter Park prohibits artificial turf within 5 feet of a side or rear property line and 10 feet from a street front or side property line. Often artificial turf is not to be installed within a certain number of feet from a natural body of water or not within a swale or drainage area.

What is the permitting process?
A building permit is generally required. The City of West Palm requires the approval of a "Special Use Permit" (Zoning Board of Appeals equivalent).

SUMMARIZED BEST PRACTICES

A code update may be necessary to address the growing desire to install artificial turf in residential zoning districts where artificial turf is not specifically defined and regulated in the landscape code requirements. Based on the current regulations and the review of neighboring municipalities, the following best practices are recommended for the use of artificial turf in Pompano Beach:

- Establish a definition.
- Develop guidelines specifying where and how artificial turf can be installed, considering typical regulations outlined above.
- Engage with the community to gather feedback and address concerns related to the use of artificial turf.
- Drainage and Environmental Considerations: Ensure that artificial turf installations comply with drainage requirements and environmental regulations and use materials that are eco-friendly and safe.
- Monitoring and Maintenance: Implement a monitoring system to ensure that installed artificial turf is properly maintained and does not pose hazards or environmental risks over time.
- Continued Review: Regularly review and update regulations based on emerging technologies and best practices in artificial turf installations.

Staff recommends implementing the above with the intent to maintain the minimum landscaping requirements as well as maintaining sufficient drainage for all properties, if desired by the City Commission. Staff proposes to revise the code to allow artificial turf regardless of the living pervious area, where a drainage plan is approved and implemented consistent with requirements of Chapter 152 (Single-Family/Duplex Stormwater Retention). This allowance, along with a new section in the zoning code related to artificial turf (definition, exemptions, standards, maintenance, etc.), will result in more clarity for residents regarding where and how artificial turf is permitted and reduce the incidence of code compliance issues.

The backup to this memo includes an indexed consolidation of comparable municipal codes as well as staff recommended text amendment, subject to review and amendment.

Addendum, following first review of this item by the Planning and Zoning Board:

1. *the setback of synthetic turf from property lines*
   - City of Winter Park: "Installations are not permitted within five feet of any side or rear property line. Installations are not permitted within ten feet from the front property line or within ten feet of any side street property line."
   - City of Marco Island: "Turf shall not be permitted within 36 inches of an unfenced side property lot line. The 36-inch buffer shall be landscaped with living plant material."

2. *the requirement for a "hard barrier" or "edging" where synthetic turf is abutting a property line*
   - Town of Lantana: "An appropriate solid barrier device (e.g., concrete mow strip, bender board) is required to separate artificial turf from soil and live vegetation."
   - City of West Palm Beach: "An appropriate solid barrier device (e.g., concrete mow strip, bender board) is required to separate artificial turf from soil and live vegetation."
   - City of Marco Island: "Synthetic turf shall be separated from planter areas and tree wells by a concrete mow strip, bender board, or other barrier with a minimum three-eighths inch thickness to prevent the intrusion of living plant material into the synthetic turf areas."
   - Town of Ocean Ridge: "An appropriate barrier device (e.g., concrete mow strip, bender board, brick pavers, river rock, landscaping) is required to separate artificial turf from soil and live vegetation."
   - Town of Surfside: "Synthetic turf shall be separated from the public right-of-way area by a vertical visual barrier at the property line, such as a hedge or fence." … "Synthetic turf shall be separated from planter areas and tree wells by a concrete mow strip, bender board or other barrier with a minimum four-inch thickness to prevent the intrusion of living plant material into the synthetic turf."

3. *the setback of the synthetic turf from a waterway or canal property line*
   - City of Winter Park: "Artificial turf may not be installed within 50 feet of any artificial or natural water body."
   - City of Orlando: Artificial turf may not be installed within 50 feet of any artificial or natural water body.

4. *requirements for living material on property*
   - Town of Lighthouse Point: "Areas of living plant material shall be installed and/or maintained in conjunction with the installation of synthetic turf when utilized in the front yard area. Living plant material shall include a combination of two or more shrubs, vines, trees, or groundcovers in separate planter areas and tree wells."
   - City of Marco Island: "Areas of living plant material shall be installed or maintained in conjunction with the installation of synthetic turf when utilized in the front yard area. Living plant material shall include shrubs, vines, trees and groundcovers in separate planter areas and tree wells."
   - Town of Surfside: "Areas of living plant material shall be installed and/or maintained in conjunction with the installation of synthetic turf. Trees and shrubs shall be provided per the minimum code requirements."

5. *requirements for a certain area around the base of a tree to remain as a natural non-compacted ground cover*
   - Town of Lighthouse Point: "Synthetic turf shall be separated from planter areas and tree wells

by a concrete mow strip, bender board or other barrier with a minimum three-eighths-inch thickness to prevent the intrusion of living plant material into the synthetic turf."

- City of Winter Park: "Installations are not allowed under tree canopies, or within the drip line of any existing tree canopy."
- City of Orlando: "Artificial turf must be installed outside of the drip line of any tree."

Staff Summary of Addendum following first review:

1. *the setback of synthetic turf from property lines*
   - It is reasonable that this purpose is accommodated by a hard barrier or "mow strip". This could also be accomplished by requiring a fence/wall/hedge. Should a setback be required, 3 feet is recommended for shared property lines, unless fenced or hedged. For example, "Turf shall not be permitted within 36 inches of an interior side or rear property lot line, unless a fence or hedge is provided on the property line. The 36-inch buffer shall be landscaped with living plant material."
2. *the requirement for a "hard barrier" or "edging" where synthetic turf is abutting a property line*
   - Should we agree on the setback requirement, a hard barrier or mow strip may not be necessary at the property line. However, a version of the below language already exists within the draft. This can be expanded to include the front property line where abutting the swale area.

     "Synthetic turf shall be separated from areas with <u>living ground cover</u> and/or tree wells by a concrete mow strip, bender board or other barrier with a minimum <u>four-inch</u> thickness to prevent the intrusion of living plant material into the synthetic turf."

3. *the setback of the synthetic turf from a waterway or canal property line*
   - Both of the examples provided are from municipalities that do not have similar canal conditions to Pompano Beach. All coastal community examples researched are silent on this requirement except regarding the pinning of turf immediately behind the seawall rather than attached to.
4. *requirements for living material on property*
   - Language in draft:

     "Areas of living plant material shall be installed and/or maintained in conjunction with the installation of synthetic turf when utilized in the front yard area. Living plant material shall include a combination of two or more shrubs, vines, trees, or groundcover in separate planted areas and tree wells allowing natural percolation directly in to the critical root zones."

     AND

     "Properties proposing synthetic turf as a pervious surface shall be in, or brought in to, full compliance with the requirements of the landscape code."

5. *requirements for a certain area around the base of a tree to remain as a natural non-compacted ground cover*
   - Language in draft:

     "Areas of living plant material shall be installed and/or maintained in conjunction with the installation of synthetic turf when utilized in the front yard area. Living plant material shall include a combination of two or more shrubs, vines, trees, or groundcover in separate planted areas and tree wells allowing natural percolation directly in to the critical root zones."