

Planning Commission

Official Agenda



AGENDA

City of Greenville

Planning Commission

Regular Meeting

4:00 PM January 20, 2022

Greenville Convention Center, 1 Exposition Drive

AGENDA

1. Call to Order
2. Welcome and Opening Remarks from the Chair
3. Roll Call
4. Approval of Minutes
 - a. December 14, 2021 Workshop
 - b. December 16, 2021 Public Hearing
 - c. December 17, 2021 Special Called Workshop
5. Call for Public Notice Affidavit from Applicants
6. Acceptance of Agenda
7. Conflict of Interest Statement
8. OLD BUSINESS

A. Z-32-2021

Application by City of Greenville for adoption of the Village of West Greenville Small Area Plan.

Documents:

[AGENDA PACKET Z-32-2021 VOWG.PDF](#)

B. SD-21-747

Application by James D. Martin III for a **SUBDIVISION** of 1.00 acre located at **111 S. LEACH STREET** from 1 LOT to 18 LOTS. ("Leach Street Commons") (TM# 008400-05-00100)

Documents:

C. SD-21-890 *Applicant has requested deferral to the February 17th meeting*

Application by Saint Capital, LLC for a SUBDIVISION of 3.18 acres located at 100, 102, 104, 106, 108 PERRY AVENUE AND 121, 125, 127 WARE STREET from 10 LOTS to 47 LOTS. ("Ware Street Townhomes") (TM# 007900-02-01100, 007900-02-01200, 007900-02-01300, portion of 007900-02-02800, 007900-02-03500, 007900-02-03506, 007900-02-03507, 007900-02-03508, 007900-02-03509, 007900-02-03510)

9. NEW BUSINESS

A. AX-1-2021

Application by James H Brown for **ANNEXATION** and **REZONE** of approximately 0.8 acre located at 2901 E. North Street from R-20, Single-family residential district, in Greenville County to R-9, Single-family residential district, in the City of Greenville. (TM# 027700-02-00701)

Documents:

[AGENDA PACKET AX-1-2022 2901 E. NORTH STREET.PDF](#)

B. AX-2-2021

Application by Alvin Johnson for **ANNEXATION** and **REZONE** of approximately 31.9 acres located at Conestee Road and Conestee Lake Road from R-S, Residential suburban district, in Greenville County to RM-1, Single-family and multi-family residential district, in the City of Greenville. (TM# M01302-01-00100)

Documents:

[AGENDA PACKET AX-2-2022 CONESTEE ROAD.PDF](#)

C. FDP-10-2021

Application by NHE, Inc/Taylor Davis for a **FINAL DEVELOPMENT PLAN** on approximately 3.87 acres located at **1200 LAURENS ROAD** for Z-10-2021. ("The Alliance") (TM# 0198000403200, 0198000400200, 0198000400300)

Documents:

[AGENDA PACKET FDP-10-2021 THE ALLIANCE.PDF](#)

D. MD-21-1004 Applicant has requested deferral to the February 17th meeting

Application by DHD Riley, LLC/Drew Schaumber for a **MULTI-FAMILY DEVELOPMENT** on approximately 5.75 acres located at **LOWNDES HILL ROAD AND I-385** for 88 units ("The Riley Overbrook") (TM# 019500-01-00201).

E. SN-21-1005 Applicant has requested deferral to the February 17th meeting

Application by DHD Riley, LLC/Drew Schaumber for a **STREET NAME CHANGE** from Woodlark Street to Oakley Drive between Lowndes Hill Road and I-385.

F. Z-1-2022

Application by City of Greenville for a **TEXT AMENDMENT** to (1) Section 19-6.9. *Single-family residential infill standards* in order to modify standards herein regarding construction of new homes, additions, garages, carports, and driveways within established single-family residential areas; (2) Amend the Design Specifications Manual for *Guidelines for Green Infrastructure & Low Impact Development*; and, (3) Provide Planning & Development Services Staff to administratively create and amend a *Single-Family Infill Instructions and Pattern Book*.

Documents:

[AGENDA PACKET Z-01-2022 TEXT AMENDMENT_INFILL ORDINANCE.PDF](#)

10. Other Business

A. Staff Update on Current Planning Processes

B. Election of 2022 Chair and Vice-Chair

C. Upcoming Dates:

February 15, 2022 – PC Workshop

February 17, 2022 – PC Public Hearing

11. Executive Session, if required

12. Adjournment



**Planning Staff Report to
Greenville Planning Commission
January 14, 2022
for the January 20, 2022 Public Hearing**

Docket Number: Z-32-2021
Applicant: City of Greenville
Proposal: Application by the City of Greenville for adoption of the **Village of West Greenville Micro Area Plan.**
Staff Recommendation: **Approval of Plan by Planning Commission with Proposed Staff Addendum**

Applicable Sections of the City of Greenville Code of Ordinances and State Code:

Sec. 2-372 Function, Powers, and Duties of the Planning Commission
S.C. Code Sec. 6-29-340. Functions, powers, and duties of local planning commissions
S.C. Code Sec. 6-29-520. Advisory committees; notice of meetings; recommendations by resolution; transmittal of recommended plan
S.C. Code Sec. 6-29-530. Adoption of plan or elements; public hearing

Staff Update:

At the November 2021 Planning Commission meeting, this item was deferred by the City to continue to work on the plan.

Staff Analysis:

In February 2021, the City of Greenville engaged Wernick & Co. to create a micro-area plan for the Village of West Greenville. The plan scope is to identify strategies to further economic development patterns, consistent with the unique character of the village and surrounding residential neighborhoods.

Located within the heart of the former Textile Crescent and the western gateway into the City of Greenville, the Village of West Greenville has experienced renewed activity and investment, in recent years, as an emerging arts district and home to artists, galleries, and several creative small businesses.

The Village Action Plan focused on a 20-acre study area, centered around the commercial core area along Pendleton Street. The study area is bounded on four sides by the Norfolk Southern rail corridor (North), Poe West and Mason Street (East), and the City of Greenville municipal boundaries (South and West).

This Planning Process included significant public engagement from February to June 2021, both in-person and through virtual platforms. During this time, the City and Wernick & Co. conducted numerous phone and in-person interviews with stakeholders, artists, business owners, and homeowners, both in and around the study area. A presentation to the Village of West Greenville Business Association, along with a meeting with the West Greenville Neighborhood Association, was also held. Wernick and Co. led a virtual public workshop, attended by city staff and advertised on the City's website. In addition, a public survey was distributed to stakeholders, through various associations, and posted on the City's website, with questions designed to identify the current village user experience of existing conditions and to solicit ideas for future activation and growth. Sixty-six people participated and over 2,500 responses were recorded. Through this public meeting and feedback process, the plan's parameters, elements, and objectives were created. There was significant public involvement and input throughout the process, which formed the foundation of its development.

Staff believes this plan is compatible with and supports the goals and ideals of the GVL2040 Comprehensive Plan and, therefore, staff **recommends approval of the Village of West Greenville Micro Area Plan to Planning Commission with any amendments that Planning Commission would like to include within the plan vote.**

Amendments from Initial Public Draft Plan:

In response to comments received from the initial posted public draft in September, the City and Wernick & Co. has amended that draft plan for this public hearing.

The highlights of these recently included amendments are as follows:

- Located on page 18 of the plan document, zoning legend to be added on the “Existing Zoning” plan page.

Staff Proposed History Addendum:

In response to comments received from the public to the public draft, the City further proposes to insert this addendum into “History of the Village” at various locations:

Following the merge of municipalities, the area continued to flourish with its expanding small downtown and humming textile mills. Then, as with many urban communities throughout South Carolina and the country, highway construction and global economic circumstances produced negative side effects within existing communities in the Greenville area.

The construction of Highway 123 in 1965/1966 displaced dozens of homes in the West Greenville area and cut off the community from Downtown. Together with the construction of Interstates, public and private investment bypassed West Greenville and pushed into other areas of the City and especially into Greenville County. The highways and increased automobile ownership also led to the end of trolley lines, which had for decades connected West Greenville to other mill communities and Downtown.

This era was also especially hard on the Textile industry. While it had been the lifeblood of the community, foreign competition and rising costs forced the closure of several mills in West Greenville and throughout the Upstate. Brandon Mill, built in 1901, closed its doors in 1977. Similarly, Woodside Mill, a fixture of the community since 1902 and once the largest textile mill in the United States, closed its doors in 1986.

The closure of the mills not only led to a loss of jobs for residents in West Greenville, but it also led to a domino effect in the area with business closings and home foreclosures. Further, the population of the area decreased as people moved out of the area to find better living conditions and work. As people moved out, crime moved in and led to further public and private disinvestment.

Although the mills and businesses closed in the community, most of the structures remained intact. Thanks to this preservation and proximity to Greenville’s Downtown, this would lead to West Greenville’s second act.



THE VILLAGE *of West Greenville*

OUR VILLAGE ACTION PLAN

SMALL AREA PLAN FOR THE VILLAGE OF
WEST GREENVILLE ARTS & BUSINESS
DISTRICT

NOVEMBER 2021

wernick&co
PLACEMAKING | LAW

Prepared by **Wernick & Co, PLLC**
for the **City of Greenville, South Carolina**





[Photo courtesy of Joseph Bradley Studio]

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Acknowledgements

Special thanks to City of Greenville's Shannon Lavrin, Jay Graham, Courtney Powell and Harold Evangelista for guidance and collaboration in obtaining source material, coordination of the community engagement questionnaire, site visits with city officials and key stakeholders, and reviewing and providing feedback on the Village Action Plan recommendations.

Thank you to Ryan Johnston and the Village of West Greenville Business Association, Inez Morris, Reverend Vardrey Fleming, and the West Greenville Neighborhood Association for facilitating participation of a robust mix of community stakeholders. Thank you to Joseph Bradley, Sunny Mullarkey, Nick Burns, Robert Satterfield, and other artists active in the Village for generously sharing your time and artistic works for use in this Village Action Plan.

To all of the individuals, artists, small businesses, residents, property owners, and community organizations that work, congregate and care for the Village on a daily basis who generously provided their time and knowledge, thank you for sharing your stories and experiences with us and helping to shape the Village Action Plan.

Thank you to Mill Village Ministries and Sunny Mullarkey for providing photographs used in the Village Action Plan.

It's unconventional. It's gritty; a funky enclave on the edge of the City of Greenville, South Carolina in the heart of the former Textile Crescent; comprised of an eclectic group of people - artists, enterprisers, residents and altruists - who together have revived an artistic and enterprising spirit in this former mill village, re-fostered community, and embarked on a collective effort to find redemption.

THIS IS THE VILLAGE OF WEST GREENVILLE.

It has an authentic sense of place. In fact, it was once its own municipality - the center of commerce and social life for a working-class mill community in the first half of the 20th century, self-contained outside of the City of Greenville. Although incorporated into the City of Greenville in 1948, the Village's geography and urban form have remained intact. The Village serves as the City's arts district. Over the past five to 10 years, a small but critical mass of core commercial building stock has been gradually restored and reactivated with galleries and an eclectic mix of tenants within a walkable village center enhanced by significant City streetscape improvements and propelled by First Friday artwalks, which have become a staple for Greenville's art community and residents who have relocated to the Village. Public art interventions and the recent introduction of an intimate pedestrian plaza make the Village one of the City's most photographed locations and give it an undeniably authentic "personality."

FUNKY (adj.): offbeat, unconventional, eccentric

It is unique to Greenville. The tight-knit urban fabric and compact walkable core centered on Pendleton Street is unlike other commercial districts found in Greenville. It has proven resilient over time, attracting adventuring artists and makers, eclectic boutiques, destination food and beverage, cultural organizations, and a mix of creative professionals all drawn to this urban oasis. It has also become a hub for a growing number of charitable and community-based organizations creating economic opportunities for residents in West Greenville and adjacent underserved communities.

It is preparing for positive change. There are internal and external factors at play that have brought increasing investment and change to Greenville's West Side. The Village is the heart and soul of this resurgence and has seen increased real estate investment. But the paradox is evident. Land values are rising; there is a heightened fear of displacement of existing residents, artists and tenants. Fortunately, the City has identified the need to plan for change and work in collaboration with Village stakeholders to facilitate growth while maintaining the Village's authentic character and identity so important to its vibrancy.

The Village Action Plan is unconventional. In crafting this Village Action Plan, we have taken cues from the Village itself to capture the spirit of this funky enclave that marches to the beat of its own drum. We've taken an intentional approach to break from the mold of conventional plans. While the Action Plan is informed by traditional data, mapping, and technical analysis, we've placed an equal emphasis on community engagement, seeking input from a diverse set of active Village stakeholders. The Village Action Plan focuses significantly on visual connections and imagery of the Village - its existing conditions, its buildings and public realm, and the people who contribute to its identity. It is unequivocally tailored to the Village. Fonts and borders have enhanced texture - a parallel to the textile roots of the Village. We have also incorporated definitions of select words used by stakeholders to describe the Village, placed organically throughout the document like the artwork that permeates the Village.

With this Village Action Plan, we hope to encourage a shared identity and self-awareness of what makes the Village great and where it currently falls short; and to empower City officials and Village stakeholders to be courageous, enterprising, inclusive, and resourceful in pursuing a plan of action for unlocking the potential of the Village.

Section I IDENTITY tells the story of the Village - its evolution from mill village to emerging arts district - and the people and sense of place that make the Village unique. It also sheds light on the diverse makeup of stakeholders and key community anchors supporting the Village's revival, both inside and outside the Village Study Area boundaries.

Section II IT TAKES A VILLAGE sheds light on supporting technical data and maps, highlights the City's building blocks that provide a foundation for reinvestment, and summarizes the extensive community engagement and input from a diverse group of Village stakeholders that inform our collective understanding of the Village today.

Section III SWOT ANALYSIS identifies the Village's strengths, weaknesses, threats, and opportunities - helping to synthesize key internal and external factors at play in the Village, and providing a baseline for many of the recommendations in Section IV.

The Village Action Plan is focused intently on converting ideas into action. **Section IV UNLOCKING POTENTIAL** is about unlocking the Village's potential as a vibrant mixed-use node through inclusive growth, and sets forth an array of recommendations organized around 3 strategies: **Activation, Connectivity, and Regulation**. Recommended policy interventions and placemaking solutions are intended to be consistent with the City's Comprehensive Plan, GVL2040, and further four guiding principals of the Village Action Plan: (1) Maintain the Village's authentic character; (2) Reinforce its unique identity, (3) Facilitate a robust mix of neighborhood uses and services; and (4) Plan for inclusive growth.

Section V READY FOR ACTION sets forth a roadmap for implementation, identifying short-term and long-term action items and key priorities for advancing the Village as one of Greenville's mixed-use nodes. Some recommendations involve low-hanging fruit, initiatives that can be budgeted and advanced in short order. Other recommendations call for additional community input or intergovernmental cooperation. Following the GVL2040 Comprehensive Plan framework, the Village Action Plan provides flexibility to embrace new ideas and opportunities for the Village's evolution in the years to come.

Ultimately, this Plan's success will depend on continued collaboration between Village stakeholders and City officials working together to prioritize resource allocation and how best to implement the recommendations set forth herein.

With that, Wernick & Co presents this Village Action Plan to the City of Greenville and the Village stakeholders. Thank you for allowing us to become a part of this community and to engage with an amazingly diverse, talented, and passionate group of artists, business owners, residents, property owners, and committed community leaders on this journey to unlock the potential of the Village of West Greenville.

UNCONVENTIONALLY YOURS,



Steven J. Wernick
Wernick & Co.

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SCOPE OF WORK



[Credit: Robert William Satterfield / Arcane Remedies]

Located within the heart of the former Textile Crescent and the western gateway into the City of Greenville, the Village of West Greenville has experienced renewed activity and investment in recent years as an emerging arts district, home to artists, galleries, and a number of creative small businesses.

The City of Greenville engaged Wernick & Co. PLLC in connection with an action plan for the Village of West Greenville to identify strategies to further economic development, improved connectivity and mix of uses and development patterns consistent with the unique character of the Village and surrounding residential neighborhoods.

The Village Action Plan is focused on a 20-acre study area comprised of a primarily commercial core centered around Pendleton Street. The study area is bounded by the Norfolk Southern Rail Corridor (North), Poe West and Mason Street (East), and the City of Greenville municipal boundaries (South and West).



Village of West Greenville Study Area

I. IDENTITY



Credit: Ninja Picasso



THE VILLAGE



The Village of West Greenville is home to a colorful and eclectic mix of people living, working, and congregating around art and enterprise, who have a shared passion and love for the Village as Greenville's arts district and hub for creative enterprise.

There is a pervasive work ethic that shines as a continued narrative from the Village's textile roots. Artists, small business owners, and property owners have come together through the **Village of West Greenville Business Association** to support one another and contribute to the Village's unique sense of place.

The Village is home to:

- 60+ unique artists/galleries, services, shops/restaurants
- 4 small business incubators
- 11+ galleries participating in First Friday Artwalk

<https://www.villagewgvl.com/>



"The Village of West Greenville is emerging as a vibrant community with its own unique personality - a welcoming and diverse neighborhood for the arts, hospitality and all things that make our city a great place to live!"

-Mayor Knox White

The Village Action Plan is intended to identify recommendations to unlock the potential of the Village as a vibrant, mixed-use arts district, shaped by the following guiding principles:

1. Maintain the Village's authentic character
2. Reinforce its unique identity
3. Facilitate a robust mix of neighborhood uses and services
4. Plan for inclusive growth

GUIDING PRINCIPLES

HISTORY OF THE VILLAGE

On the western edge of the City of Greenville lies the Village of West Greenville - a prior town center that developed as a center of commerce to support the mill worker communities that were established at Woodside and Brandon Mills for the better part of the 20th century.

The area, generally known as "Stradleyville" during the 1860s, began to attract merchants and wealthy landowners by the early 1900s. Stradleyville gained notoriety throughout Greenville for vagrancy and the sale of unlicensed liquor. It was referred to as the "Wild west," and due to being located outside the City boundaries, was policed by only a single, rural police officer.

But it also had a strategic location within close proximity to the Reedy River, the railroads, and the burgeoning textile mills. By 1914, the area was incorporated as "West Greenville," and the town began to flourish shortly thereafter due to the success of the surrounding textile industry. By 1925, Brandon Mill village had 2,000 residents. Residential, commercial, and institutional development expanded to support the growing mill communities. The mill village was a contained independent unit and economic system, and even had its own baseball team. "Shoeless" Joe Jackson, known widely for his involvement in the Black Sox Scandal of 1919, was a product of Brandon Mill before he went on to star in the major league.

Following the Great Depression, World War II, and changes in the textile industry, West Greenville began to experience a gradual economic decline. In November 1948, West Greenville revoked its charter and merged with the City of Greenville.

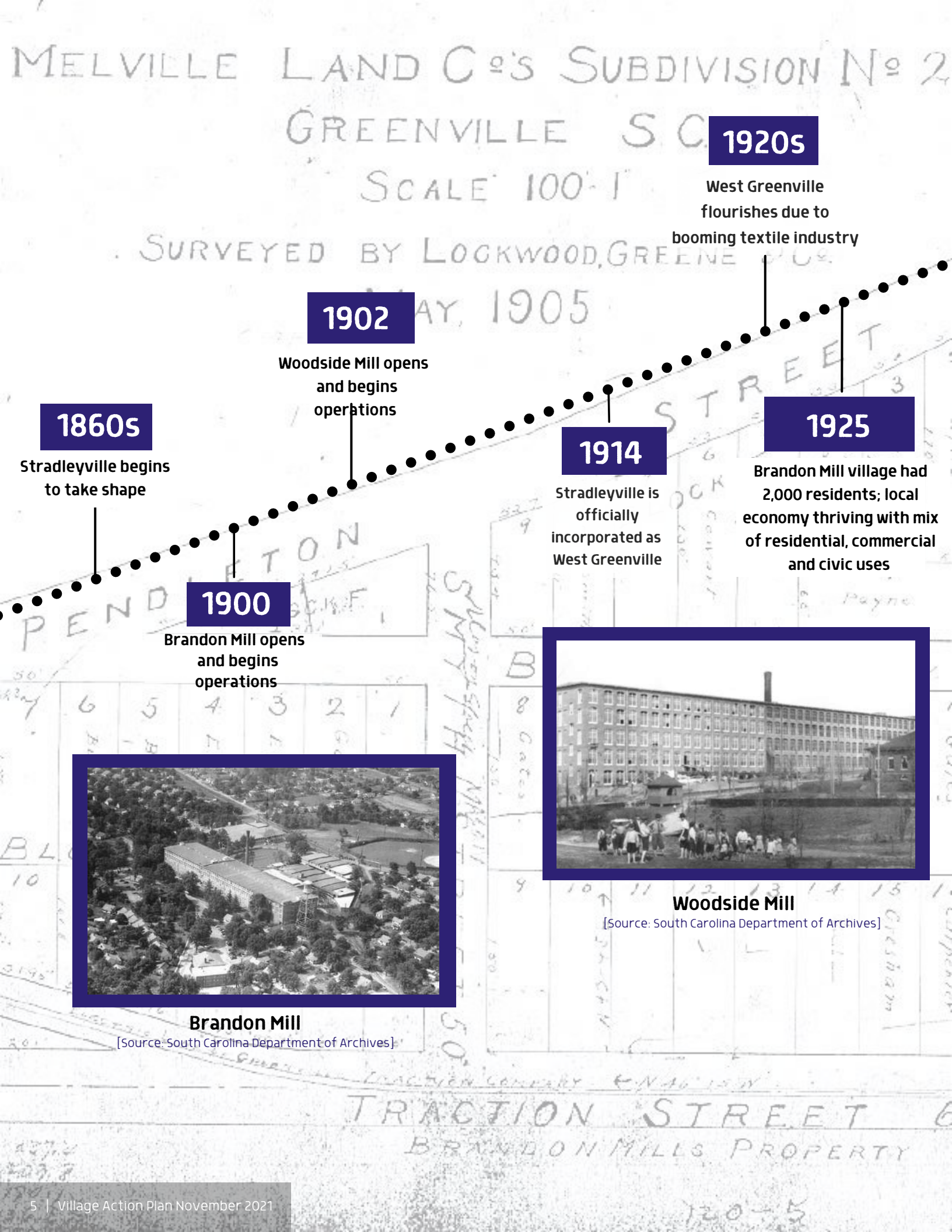
The economic decline of the textile mills and the mill village happened in parallel with the period of racial integration in South Carolina. Prompted by federal mandate in the 1960s, the mills opened their doors to African-American workers. In 1965, only 5% of mill workers were African-American. By 1970, that number increased to 20%. But integration was accompanied by a greater economic shift in the textile industry. According to a 2018 article in the Greenville News, "[t]he combination of cheap imports, mergers, greater automation, and economic recessions in 1973, 1980 and 1983 led the textile industry to shred nearly a million jobs between 1970 and 1996." With 'white flight' to the suburbs, many of the social anchors and facilities vital to the sense of community and civic life were closed or torn down. Brandon and Woodside Mills were eventually shuttered, signaling the end of Greenville's reign as Textile Capital of the World.

Reawakening. In the early 2000s, after decades of disinvestment, artists began to locate in the old abandoned brick buildings lining Pendleton Street and throughout the Village. Most notably, the Brandon Mill General Store was purchased in 2001 by Diane Kilgore Condon and converted into the ArtBomb Studios - a collective of affordable artist studio spaces. A handful of retail and restaurants remained open along the west end of Pendleton Street, with empty storefronts and homes in decline dotting the landscape of the once thriving mill community. Following the artists, businessmen Richard Heusel and Michael Watts started investing in the Village, renovating old commercial buildings for new purposes.

Bridging the Village's industrious history with a new artistic energy, Greenville Center for Creative Arts (GCCA) opened in the renovated West Village Lofts at Brandon Mill in 2015. Today, the Village continues to exhibit many qualities of the past - a sense of entrepreneurship, grit, resiliency, and rebuilding.



Brandon Mill [Courtesy of West Village Lofts at Brandon Mill]



1920s

West Greenville flourishes due to booming textile industry

1902

Woodside Mill opens and begins operations

1860s

Stradleyville begins to take shape

1914

Stradleyville is officially incorporated as West Greenville

1925

Brandon Mill village had 2,000 residents; local economy thriving with mix of residential, commercial and civic uses

1900

Brandon Mill opens and begins operations



Brandon Mill

[Source: South Carolina Department of Archives]



Woodside Mill

[Source: South Carolina Department of Archives]

1948

November 1948 - West Greenville Charter revoked and merged with City of Greenville.

1977

Brandon Mill closes its doors

1950s-1970s

Textile industry begins gradual decline and automate; Economic disinvestment in Village; mill houses sold

2000s

2001 - ArtBomb Studios opens its doors in former Brandon Mill Village Store

Artists move into the Village and an emerging arts district begins to unfold.



Flatiron Building, during First Fridays 6-9pm



[Credit: Sunny Mullarkey]



[Credit: Joseph Bradley Studios]

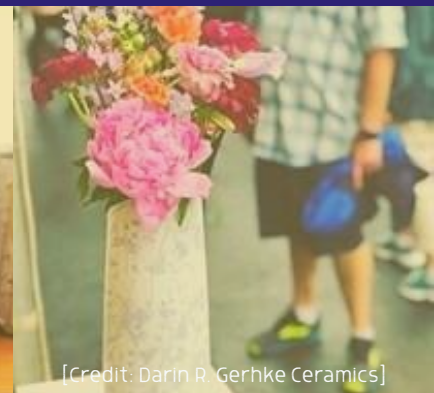


[Credit: Julius Ferguson]

ARTISTS IN ACTION



[Credit: Patricia Kilburg Studio]



[Credit: Darin R. Gehrke Ceramics]

Artists appearing on this page include: (top row) Traci Martin and Sunny Mullarkey, (2nd row) Joseph Bradley and painting by Julius Ferguson, (3rd row) Patricia Kilburg and Darrin R. Gehrke, (bottom row) Mark Mulfinger, Greenville Center for Creative Arts, and Nick Burns (aka Ninja Picasso)



[Credit: Nick Burns]

THE VILLAGE

On the Move

From Mill Village



Greenville was known as the Textile Capital of the world; the Village of West Greenville was the commercial center of the Textile Crescent.



[Source: South Carolina Department of Archives]



WITHIN A 12-YEAR PERIOD FOLLOWING WORLD WAR II, 90% OF MILL HOUSES IN GREENVILLE COUNTY WERE SOLD.*

*CITY OF GREENVILLE HISTORIC RESOURCES SURVEY, 2018

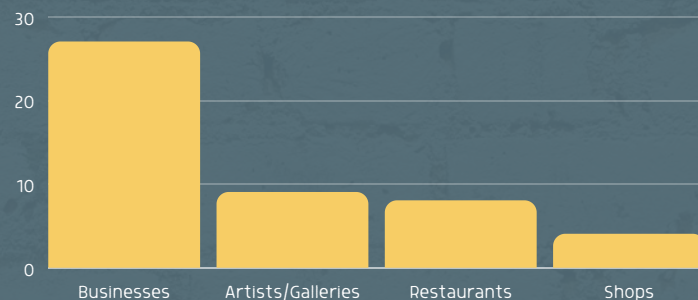
In November 1948, West Greenville revoked its charter and merged with the City of Greenville.*



TO EMERGING ARTS DISTRICT



WHAT'S IN THE VILLAGE?



"ONE OF THE UPOUNTRY CITY'S MOST INTRIGUING AREAS IS WEST GREENVILLE, AN ENCLAVE THAT HAS BEEN TRANSFORMED INTO AN ARTISTIC AND ENTREPRENEURIAL DISTRICT."

-The New York Times

EXISTING CONDITIONS

The Village | At a Glance

The Village is situated at the western edge of the City of Greenville, centered along Pendleton Street. Observing existing conditions within the 20-acre study area, we find significant contrast and transitions in conditions traveling east-west along the Pendleton Street Corridor and traversing north-south within the Village.

Below is a summary of general conditions within the following four geographic sub-areas:

1. **Village Center** | Pendleton Street corridor between Irvine Street and Lois Avenue
2. **Village West** | area between Lois Avenue/Smith Street and City boundaries
3. **Village East** | area between Irvine Street and Mason Street
4. **Village North** | area between Branwood Street and Poe West

These sub-areas include cultural and economic anchors with historic significance connecting back to the textile industry, including Poe West in the north, and Art Bomb and Brandon Mill in the west. These anchors have been largely revitalized in recent years. Due to their size and location, these anchors serve as catalysts for improving the surrounding conditions, and magnets for a complementary business environment.



During the 1920s and 1930s, the north and south sides of Pendleton Street were developed to support the surrounding Brandon and Woodside Mill communities.

The one-story brick and mortar buildings that originally served the mill village have in recent years been adaptively reused into local artist studios, small business shopfronts, restaurants, and personal services. New artistic signage, including painted signs appear on a number of shopfronts, including The Village Grind, which sits in the location of a former home goods store.

The north side of Pendleton exhibits a contiguous, urban, small-scale character, with one and two-story buildings located at the sidewalk edge with a variety of colors and solid brick façades. Façade improvements and intentional variation in colorful building exteriors establish a rhythm that is visually interesting and diversifies the tenant mix. While maintaining a similar urban form and scale, the south side of Pendleton Street consists of longer singular building typologies and larger tenant spaces, primarily operating as F&B establishments today.

Eleven buildings are located on the north side of Pendleton, between Lois Ave and Irvine Street - home to The Village Grind, Coastal Crust, Pace Jewelers, Alchemy Salon, Rocker Belles, Beautiful Demise, Darin R. Gehrke Ceramics, Sovereign Plants, Indigo Flow & Art, and the Salt Box, a small business incubator with an eclectic mix of boutique shops tucked behind storefronts on Pendleton. **Seven** buildings line the south side of Pendleton street, between Smith Street and the terminus of Irvine Street at the West Greenville Plaza Shopping Center - home to a variety of retail, service, and food and beverage establishments, including Bar Margaret, Brains on Fire, RED28, and Lashbar.

Pendleton Street is anchored by the Village Plaza. A former extension of Perry Avenue that intersected with Pendleton Street, just east of the primary intersection with Lois Avenue, the Village Plaza is a welcoming hardscaped/landscaped civic space closed to auto traffic and anchored by Spindle, a sculptural installation donated in 2019. New businesses have located in renovated storefronts opening up to the plaza, including Community Journals, Kuka Juice, Modern Properties and The Anchorage. A two-story brick infill building was recently constructed, helping to complete the frontage of liner buildings framing the Village Plaza, and is currently occupied by Oxford Barber Shop.

This stretch of Pendleton features recent City of Greenville streetscape improvements including new sidewalks, curb cuts for on-street parking and future locations for crosswalks, dedicated landscape areas that provide a buffer between the pedestrian realm and car traffic, and new street lighting and trash cans. This area of the Village has an eclectic representation of public art, including the Pendleton Plaza installation, large building murals, and ironwork.

The main intersection in the Village is at Lois Avenue and Pendleton Street. The buildings along Lois Avenue north of Pendleton Street continue the small-scale character with shopfront entrances at the sidewalk, including Village Wrench and Growler Haus; Pendleton Street is bookended at the Village study area boundaries by a collection of underutilized sites that are coterminous with the current streetscape improvements and demarcate a transition area that has less foot traffic and is devoid of activated building frontage and shops. West of Smith Street there is a former one-story bank building setback on a hill and currently occupied by artist studios. To the west of Lois Avenue is a surface parking lot that serves a variety of businesses on Pendleton Street and Lois Avenue.

Village West

The area west of Lois Avenue along Pendleton Street reflects a mix of existing conditions that varies from activated commercial buildings to auto body shops and vacant lots. The north side of Pendleton Street is generally a continuation of one and two-story legacy buildings with traditional retail shopfronts and a mix of small businesses and personal service establishments, including popular destinations Revival Butchery, The Fringed Gypsy and Arcane Remedies.

Properties south of Pendleton Street are some of the least activated within the Village - with conditions ranging from surface parking lots to auto body shops abutting the City's western municipal boundary with unincorporated Greenville County, which is typically evident by the lack of streetscape improvements and abrupt transition to aging mill homes and odd-shaped vacant lots. The entrance to the Village traveling east on Pendleton Street remains largely industrial and uninviting to pedestrians, with limited pedestrian and bicycle infrastructure. The conditions are highlighted by heavy vehicular traffic entering the Village during the morning commute.

Village West is anchored by **ArtBomb Studios** and West Village Lofts at **Brandon Mill**, and is the home of **Greenville Center for Creative Arts (GCCA)**, a visual arts center offering educational programming and the Brandon Fellowship, a 12-month program for young emerging artists in Greenville. Although located outside the City limits, both facilities played a significant role in the early development of the Village, and were two of the early adaptive use projects that injected life back into the Village and established the Village's artistic identity.

Located in the former Brandon Mill general store at 1320 Pendleton Street, this two-story brick building was acquired and repurposed 20 years ago by Diane Kilgore Condon as a thriving local artist collective workspace. ArtBomb Studios became a sanctuary for artists looking for affordable studio space and a key part of First Fridays Artwalk.

Brandon Mill reflects an important sense of place and identity for the Village. Without Brandon Mill, there would be no Village. Spearheaded by developer Pace Burt, the revitalization of Brandon Mill was one of the first mill conversions, opening in 2016 as the West Village Lofts at Brandon Mill, and home to GCCA. While serving as an anchor and catalyst for reinvestment in West Greenville, it is located outside of the City limits and lacks connectivity to the surrounding neighborhood.





Village East is one of the gateway entrances to the Village along Pendleton Street. The area is generally located between Mason Street and Irvine Street, to the north and south of Pendleton Street.

The area consists of several large vacant or underutilized sites sitting prominently along the north and south sides of Pendleton Street. These include the **West Greenville Plaza Shopping Center**, the second largest commercial site in the Village, with an expansive surface parking lot dotted with a lone ATM and prominent pylon sign fronting on Pendleton and Burdette Streets. The U-shaped commercial center consists of a mix of vacant storefronts and low-traffic tenants. Existing connections within this area are disjointed, with broken, narrow sidewalks or no sidewalks at all. The vacant sites north of Pendleton Street are being used for overflow parking and/or temporary signage to help direct visitors to Poe West. These sites are ripe for future redevelopment.

Between these underutilized sites lies the **Flatiron Building**. Built in the 1920s, it was the sewing department for the Piedmont Plush Mill and later became the gathering place for mill workers to meet and discuss unionization efforts. Representatives from surrounding mill villages would meet on the second story of the Flatiron Building to hold secretive meetings. For many years, the downstairs space was used as art studios while the second story sat empty. The building is currently being restored and activated and will host multiple new tenants in the creative arts and design services with a micro-gallery/lobby accessible from Pendleton Street.

Mason Street, which forms the southeast boundary of the Village study area at Burdette Street and Traction Street, includes a handful of small residential structures that have been renovated and converted into welcoming modest live-work spaces (e.g. Mason Street Studios and Kottkømm). These buildings create a natural transition towards the residential neighborhood. New infill homes have been constructed within walking distance of the Village Center and are attracting residents with an appreciation for living in an active arts and cultural district.

Just east of the study area boundaries, Pendleton Street is home to a number of civic uses. The **Center for Educational Excellence [CEE]** acts as a key community anchor for the West Greenville African-American community. CEE provides educational programs and a renowned youth boxing club aimed at closing the achievement gap affecting minority students in Greenville. Mill Village Ministries is in the process of building a new 2-story structure on the north side of Pendleton Street, which will house the organization's social enterprises serving the community.

Village North

Village North is defined as the area from Branwood Street to Perry Avenue, including the expansive **Poe West**, one of the newly activated anchors in the Village.

Located in the northeast corner of the study area, Poe West is the former Poe Hardware & Supply Company site, which today comprises 60,000 square feet of collaborative commercial and office space, experiential retail, and innovative craft food and beverage operators. Poe West includes Unlocked Coffee Roasters, LaRue Fine Chocolate, Carolina Bauernhaus Brewery & Winery, The Junkyard, 98 Ventures, and the **Truist Center for Culinary and Hospitality Innovation (CHI)**, which opened in summer 2020 and is introducing a variety of programs and training for local residents and underserved populations. Poe West is flanked by the elevated Norfolk Southern railway to the north, Doe Street and West Greenville School to the east, and Perry Avenue to the south.

The area between Branwood Street and Perry Avenue includes small single frontage lots with shallow depths, a scattering of vacant infill sites, single-family homes and duplexes, artist studio space, and a city-owned 23-space surface parking lot accessible from Branwood Street. Perry Avenue has been converted to one-way west of Irvine Street. Cars travel westbound and loop around to Branwood Street, passing the Village Plaza and city-owned parking lot before returning to Irvine Street. Branwood Street is largely treated as the back of house (or rear yard) by the commercial buildings fronting on Pendleton Street.

West Greenville Baptist Church sits on the east side of Irvine Street and Perry Avenue, and falls outside of the study area. To the east of the Study Area along Perry Avenue is the West Greenville residential neighborhood, historically an African-American neighborhood, facing issues of connectivity and access to food and basic goods and services.

Due to the elevation change from Pendleton Street to Perry Avenue, and the Norfolk Southern rail line to the north, the connections to Poe West are limited. Because of the variation in elevation and lack of well-located directional signage, Poe West is not visible from Pendleton Street, making it challenging for new visitors to find, despite its close proximity to Pendleton Street and the Village Plaza.



COMMUNITY IN ACTION

The Village of West Greenville is a resourceful community with diverse stakeholder needs. Community-based organizations play an important role and should continue to do so for the Village to unlock its potential and facilitate inclusive growth.

The Center for Educational Equity (CEE) is one of many non-profit organizations active in the Village and surrounding residential communities. For the past 20 years, CEE has focused on addressing the gap in achievement and discipline affecting minority students in Greenville. CEE operates the Greenville Boxing Club - a boxing club that instills discipline and anger management in youth from underserved communities



Photographer: Will Crooks | Courtesy Center for Educational Equity (CEE)





ENTERPRISE IN ACTION



II. IT TAKES A VILLAGE



[Credit: David Gerhard]



IT TAKES A VILLAGE

To really understand the Village and its current attraction and limitations, we need to see what's going on behind the scenes. **Section II** includes an overview of the physical fitness of the Village, including relevant market data, demographics, and maps showing the Village within the context of the City of Greenville and surrounding communities and former mills. This section also provides information on existing land use, zoning and future land use designation and consistency with GVL2040, as well as a summary of the City's planning efforts and key investments in public infrastructure that form the building blocks for revitalization.

Additionally, **Section II** includes a synopsis and key findings from a public survey conducted in April 2021 by the City of Greenville Planning Department. Local artists, commercial property owners, residents, and small business owners have been active for several years in the Village through the business association and through their own enterprises, making the Village an intriguing destination. In unconventional commercial districts experiencing change and regeneration, like in the Village, direct feedback from a diverse group of stakeholders is helpful to understanding the user experience and identifying where there is consensus among stakeholders on issues and needs within the study area.

6 INGREDIENTS TO A VIBRANT URBAN VILLAGE

- 1. Small and intimate.** The area can comfortably be covered on foot. The scale of the buildings and spaces is suitable and comfortable. The residential density can sustain key services.
- 2. Unique spatial identity.** The area has defined boundaries, an identifiable center, and a sense of place with community landmarks. Regular community events and festivals. Residents create and value collective memories.
- 3. Designed for social interaction.** There is ample public and green space, which is used in many ways. Facilities are provided for community events and everyday activities. Hubs generate social interaction, and there is a network of walkable routes.
- 4. Locally driven and locally responsive.** Community and local business organizations have a voice and involvement in daily life; leadership understands and recognizes its needs and priorities.
- 5. Functional.** A strong mix of both traditional and organically evolving uses.
- 6. A mixed community.** Mix of ages, backgrounds, incomes, and housing tenures. Residents know and trust each other. Presence of long-time stakeholders provides continuity and foundation.

Source: KS Scanlon, London School of Economics (2016)



MAPS | DATA | DEMOGRAPHICS

The following demographic and market analysis was provided by the City of Greenville's Economic Development Department via ESRI (May 25, 2021) and CoStar (February 19, 2021).



Demographics

PEOPLE

The Village of West Greenville had a 2020 estimated **population of 561 people** with a median age of 33.9. The Village's population declined from 604 people in 2010 and the median age increased from 32.5 years old in 2010. The 2025 average household size is only estimated to grow by 0.11%, hovering around 2.94.

In terms of racial groups, the Village is 71.4% Black, 20% White, and 9.1% Hispanic. At one time in the 20th century, one out of three residents was employed in the textile industry. Today, the largest employment by industry is Services (52%), followed by Retail Trade (15.6%), and Manufacturing (9.5%). The population is traditionally working class, with pockets of low-income households on fixed incomes and subsidized housing. Median household income in 2020 was below Greenville's average at \$21,144 and is anticipated to increase to \$22,903 by 2025.

HOUSING & DEVELOPMENT

The total number of **total housing units only increased by three units from 2010 to 2020**, which signals the lack of new housing options in the Village study area. The housing within the Village is predominantly Renter-Occupied, (63.4%), compared to Owner-Occupied (17.6%). Vacant housing units are estimated to be 18.5%. And there has been some conversion and demolition of aging residential structures within the Village.

In conversations with stakeholders and members of the West Greenville Neighborhood Association, there are concerns about the threat of overdevelopment within the Village and the need to provide a mixed-income approach to housing, but also a recognition that promoting housing opportunities for lower income households will require funding mechanisms and other development incentives.

Despite fears of overdevelopment, loss of character, and rising rents, the CoStar report, which represents 2020-2021 market data activity in the Village, indicates very little new construction has been delivered in the Village in the past 10 years. The most recent new construction was in 2017, and that brought approximately 4,000 SF to the Village. The main construction activity in the Village over the past 20 years has been minor additions and renovations to facilitate adaptive reuse of existing commercial and industrial building stock.

EXISTING ZONING



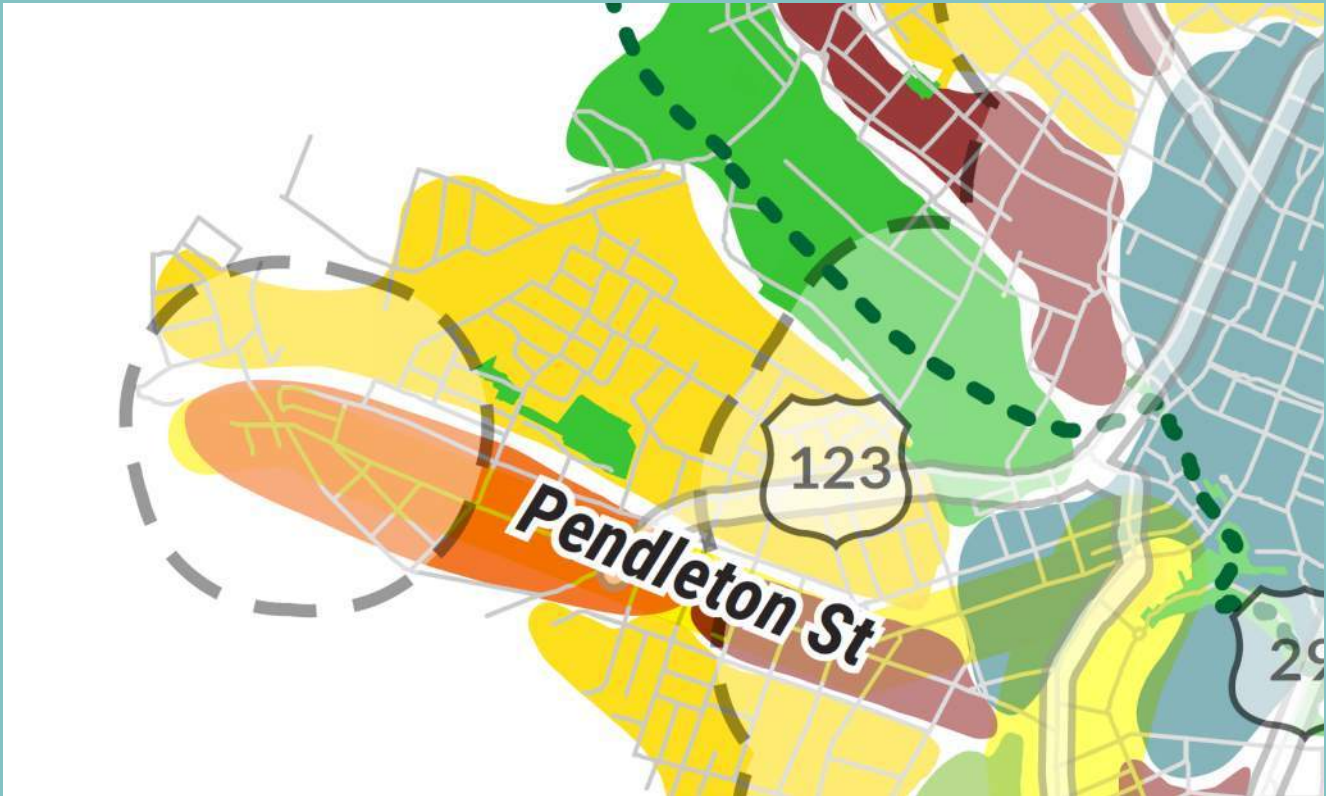
The most prevalent zoning throughout the Village study area is **RDV, Redevelopment District**, which makes up the Village Center, Village West, and most of Village East, followed by **S-1, Service District** (representing the Poe West development) and eight properties along Branwood and Irvine Streets identified as **RM-1, Single-Family, and Multi-Family Residential District**.

PUBLIC PARKING



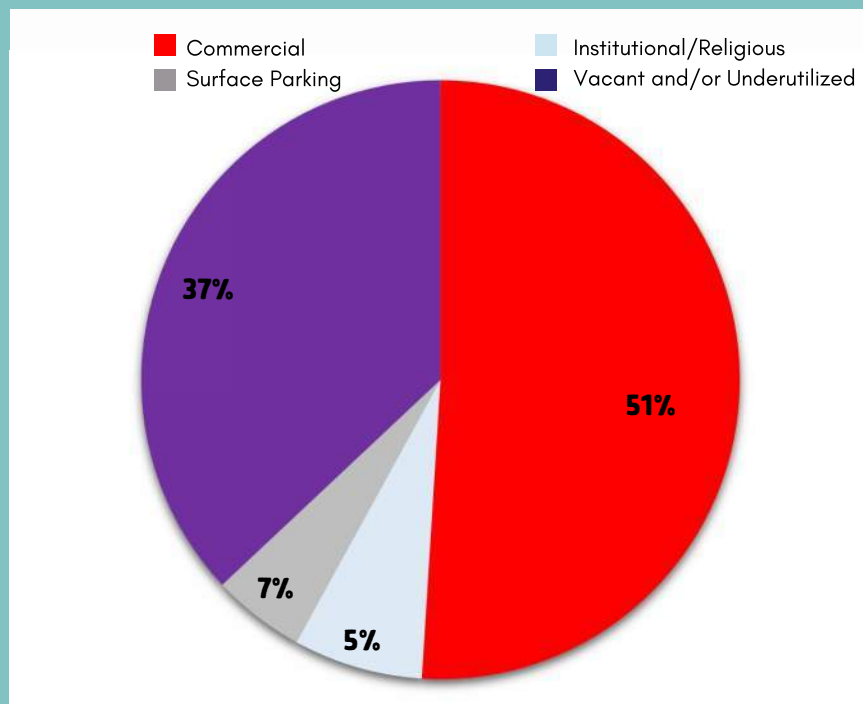
On-Street Parking	Spaces
Pendleton	25
Perry / Branwood	21
Traction	18
Surface Parking Lot	Spaces
Branwood Lot	23
TOTAL PARKING	87

FUTURE LAND USE MAP



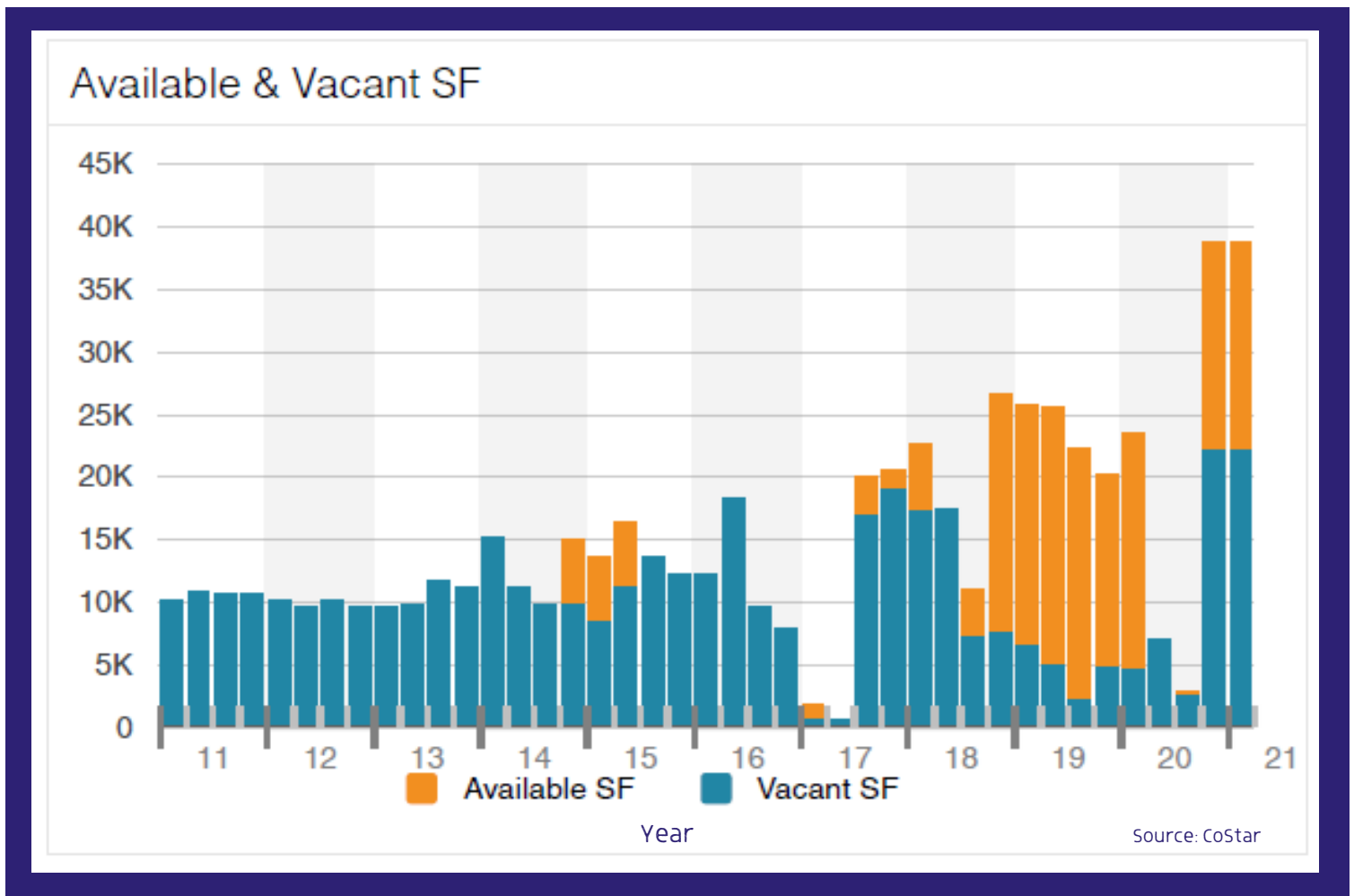
The Future Land Use Map identified in GVL2040 classifies the Village as **Urban Node Mixed-Use**

LAND USE BY THE NUMBERS



Surface parking lots and vacant/underutilized lots (which includes commercial use parcels identified by County Tax Appraiser information) **account for 43.84% of property within the Village study area.**

MARKET ANALYSIS | COMMERCIAL



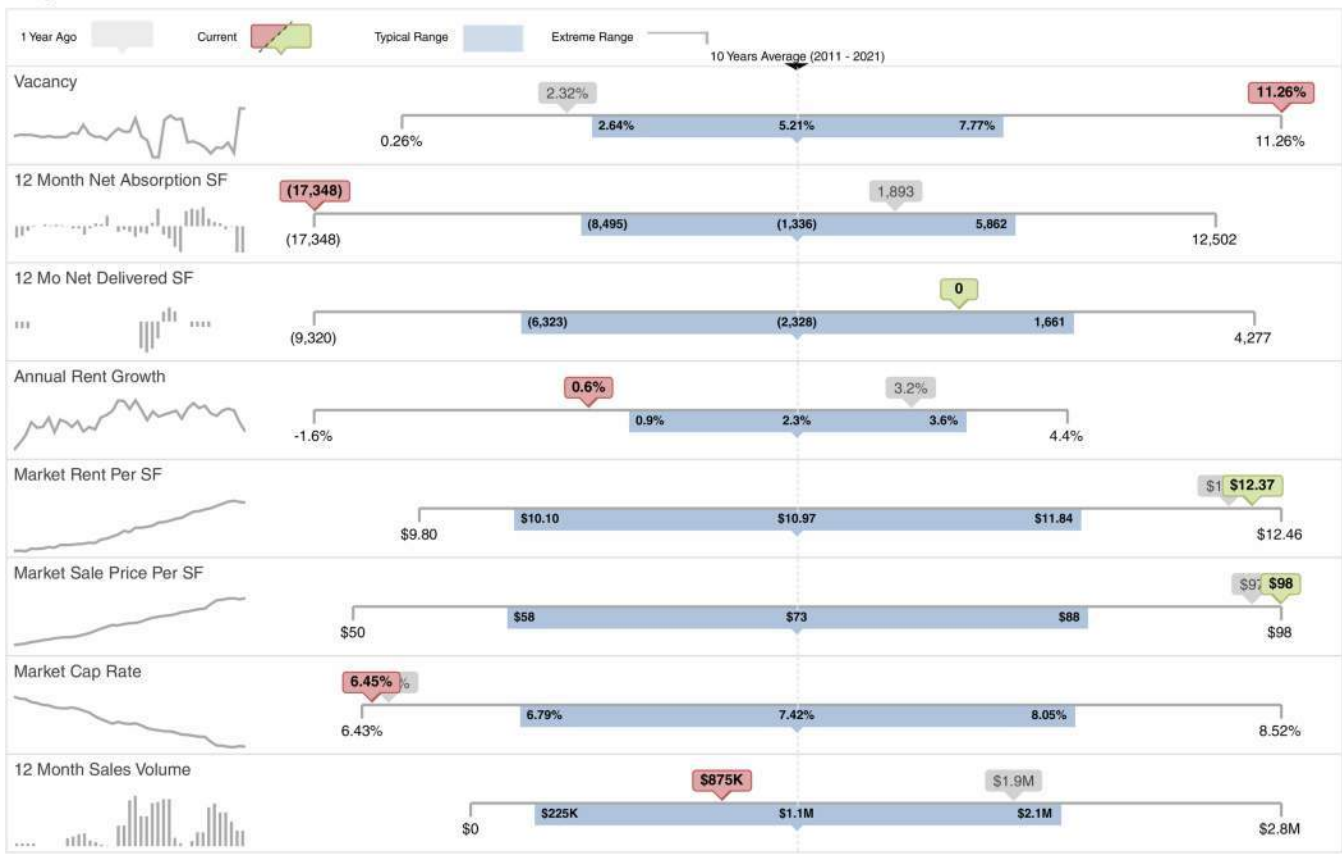
The majority of the buildings along Pendleton Street were vacant as recently as 5-10 years ago. Significant adaptive reuse investments by visionary property owners like Richard Heusel, and Michael Watts, coupled with the City's infrastructure improvements in the Village, have brought creative startups and established local businesses in the Village. The completion and opening of Poe West in 2020 provided a boost in available leasable space in the Village, with the total amount of space just under 40,000 square feet.

MARKET ANALYSIS | COMMERCIAL

The Village has a total of 58 existing structures, with an average building size of 2,100 square feet. Analytics from Co-Star show that over the past 12 months, there has been little to no demolition or new square footage added to the Village. There is increased availability of commercial space (38,700 square feet), however demand has declined by 8.9%.

Search Analytics

Key Performance Indicators



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CoStar

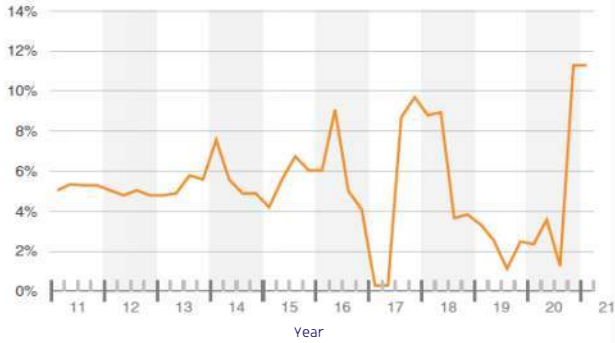
2/19/2021

Page 2

The Village has been through various cycles of growth and contraction. Early 2017 and late 2018 into early 2019 were periods of positive leasing activity and growing business activity in the Village. Late 2017 and early 2020 were periods of high vacancies and low absorption (high available square footage for lease). It is evident the Village was heavily impacted by the pandemic- net absorption was at a record low paired with record high vacancy rates within a 10-year period. Although market rents per square foot have steadily increased from \$9/SF to \$12.50/SF year-over-year, 2020 data identified the largest amount of vacant and available square footage (38,000 SF) since the Village began its emergence as Greenville's arts and destination retail district; primarily due to the opening of Poe West, which sits on over three acres and comprises roughly one-third of the Village study area.

VILLAGE MARKET TRENDS

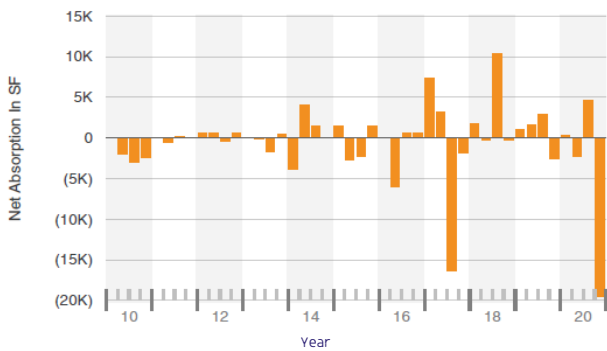
Vacancy Rate



THE VILLAGE HAS BEEN THROUGH VARIOUS CYCLES OF **GROWTH** AND **CONTRACTION**.

VACANCY RATES ARE CURRENTLY AT A RECORD **HIGH**.

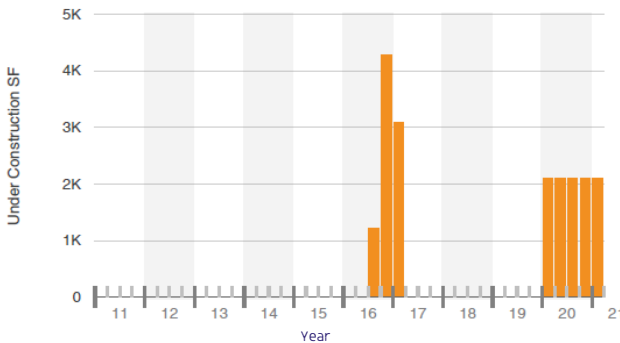
Net Absorption



THE VILLAGE WAS IMPACTED HEAVILY BY THE PANDEMIC.

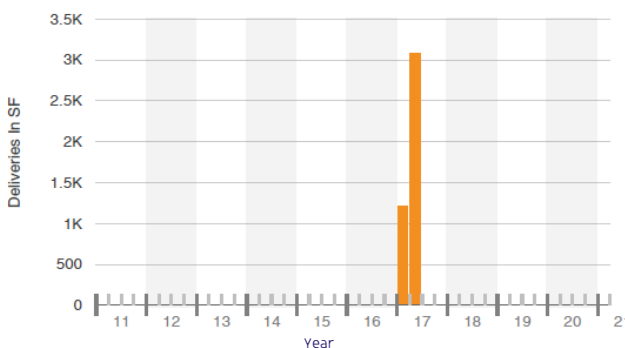
NET ABSORPTION IS CURRENTLY AT A RECORD **LOW**.

Under Construction



LITTLE NEW CONSTRUCTION HAS BEEN DELIVERED IN THE VILLAGE, WITH **ONLY ~4,000 SF** OF NET DELIVERIES ADDED TO THE VILLAGE IN **EARLY 2017**.

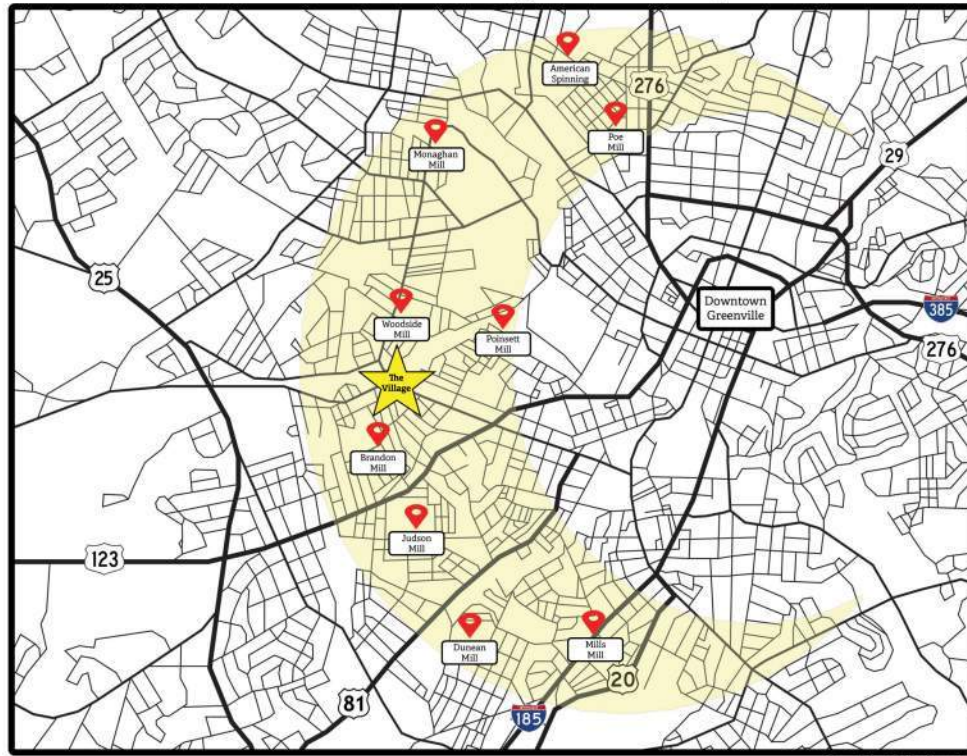
Deliveries



Source: CoStar

BEHIND THE NUMBERS

Textile Crescent Map - Greenville, SC



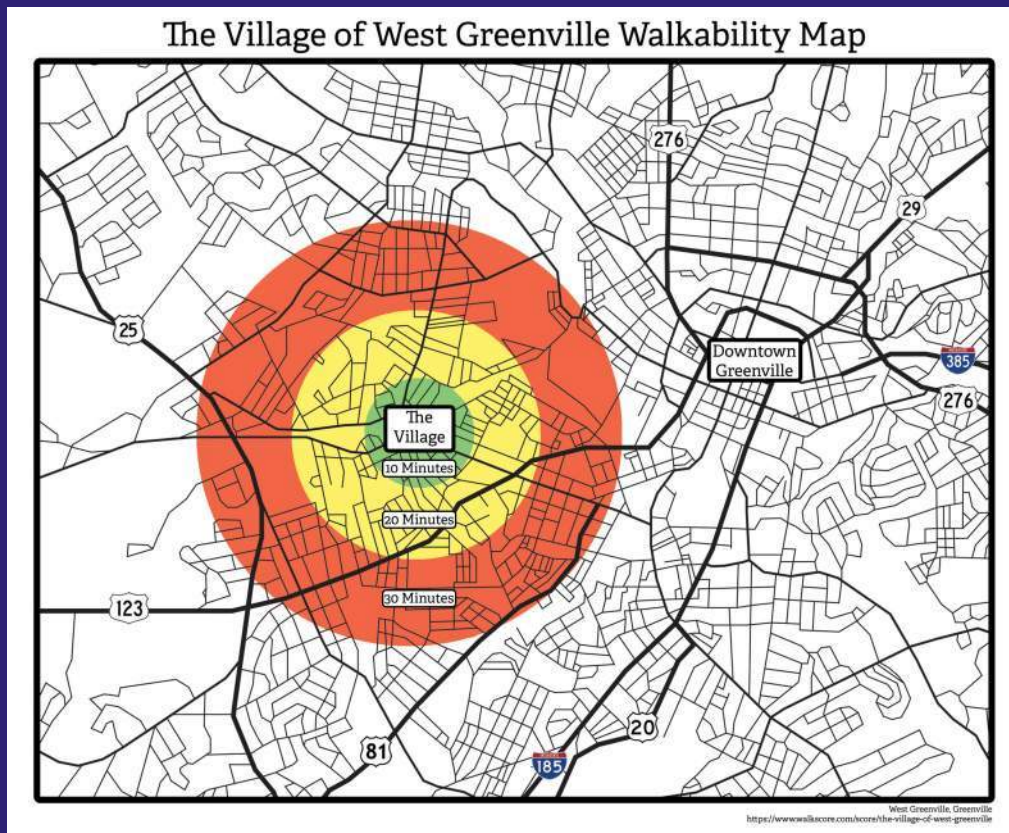
Greenville Revitalization Corporation
<https://greenvillerevitalization.org/about/>

The Village of West Greenville Elevations

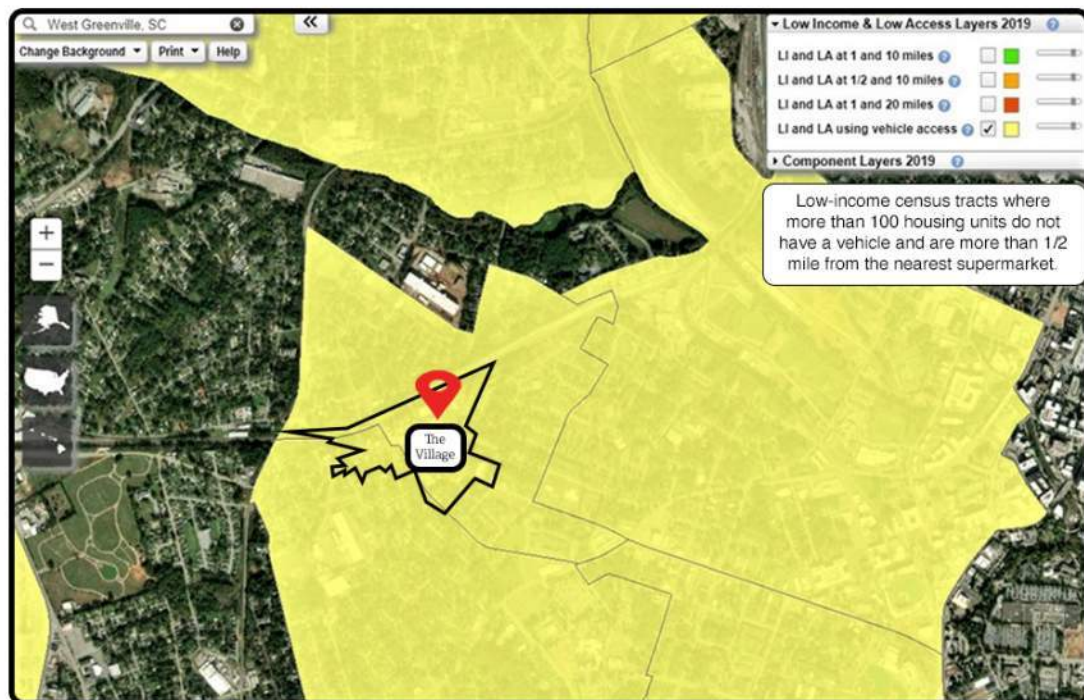


Greenville, Greenville County, South Carolina, United States (34.6933° N, 79.1994° W)
<https://en-us.topographic-map.com/maps/top/Greenville/>

BEHIND THE NUMBERS



USDA Food Desert Map



BUILDING BLOCKS

Over the past 20 years, the City of Greenville has created two plans that specifically contemplate future improvements within the area around the Village of West Greenville - the 2002 West Greenville Master Plan and the 2014 West Side Comprehensive Plan. These plans focus primarily on stabilizing and improving the neighborhoods and residential building stock within West Greenville and reinforcing the importance of Pendleton Street as a walkable mixed-use commercial corridor.

2002 West Greenville Master Plan

The 2002 West Greenville Master Plan focused largely on improvements and infill housing opportunities for increasing homeownership and amenities to support quality of life in the neighborhoods of West Greenville. However, the 2002 plan provided basic goals and strategies to help advance the Village as a commercial district, including strengthening the neighborhood commercial uses along Pendleton Street and increasing density in the areas closest to the business district to support local businesses.

2014 West Side Comprehensive Plan

The 2014 West Side Comprehensive Plan built off of the West Greenville Master Plan, but for a more significant area of Greenville. It included neighborhoods and nodes within the western half of the City of Greenville experiencing renewed life and reinvestment while also serving a diverse population and variety of needs. The 2014 West Side Comprehensive Plan incorporated a number of specific suggestions to enhance the Village, those including:



Source: 2014 West Side Comprehensive Plan

- Design changes to Pendleton Street to create a walkable environment, recognized as critical to its success as a vibrant, mixed use corridor.
- Infrastructure and transit improvements, including streetscaping, the addition of a speed table to slow traffic on the western edge of the Village, an enhanced pedestrian environment, the addition of a trolley circulator route, and creation of a central plaza.
- Improvement of the Lois Avenue/Woodside Avenue underpass.
- Revision of the RDV to provide more development flexibility, support increased residential density, and create a more walkable urban neighborhood.

BUILDING BLOCKS

Following the 2014 West Side Comprehensive Master Plan, the City of Greenville invested in significant public infrastructure throughout the Village, which has helped transform the physical landscape and contributed to its continued revitalization.

City's Investment in Public Infrastructure | Streetscape Improvements

As part of its ongoing commitment to encourage redevelopment and infill for commercial corridors. Since 2012, the City has invested more than \$600,000 in streetscape improvements that include tree and shrub planting, stormwater planters, crosswalks, decorative street lamps, signage, and sidewalk construction. Construction of the first phase of the Pendleton streetscape project was completed in September 2015, and the City has since completed six additional phases of streetscape improvements.



Village Harvest Mural

In 2016, the City also provided funding toward the Village Harvest Mural, a vibrant public art installation by local artists Elizabeth Kinney and Sunny Mullarkey, which adorns the side of The Anchorage at the corner of Pendleton Street and Lois Avenue. It has become one of the most recognizable images of Greenville, appearing in The New York Times and other high profile media on the Village as Greenville's emerging arts district in recent years.



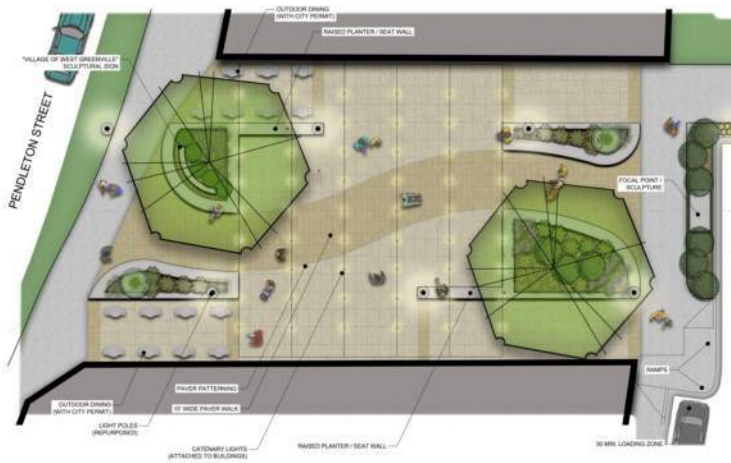
[Courtesy: Cherington Shucker]



BUILDING BLOCKS

Village Plaza

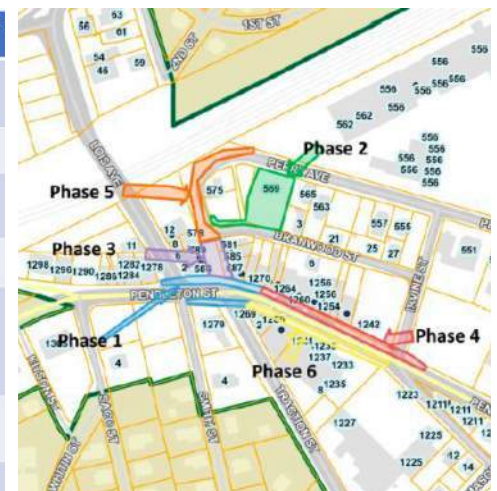
The Village Plaza, located at Branwood Street and Perry Avenue, provided a much-needed urban gathering place for Village residents, tenants, and visitors. Once the terminus of Perry Avenue at Pendleton Street, this neglected asphalt street end was transformed by the City into a Village anchor, providing a right-sized civic square and respite from Pendleton Street, and spurring private reinvestment and activation of The Anchorage and other businesses fronting on the plaza. It is also home to the **Spindle**, a sculpture by artist Blessing Hancock, which pays tribute to the area's textile heritage.



Source: City of Greenville

LAYING THE FOUNDATION

Project Phase	Completion Date	Description of Improvements	City Investment
Phase 1	July 2015	Streetscape Improvements Pendleton Street (intersections with Lois Avenue, Smith Street, Traction Street)	\$163,000
Phase 2	June 2016	New City-owned Public Parking Lot On Branwood Street	\$70,000
Phase 3	July 2017	New Village Plaza inclusive of new paving, lighting, benches, and future location for art installations	\$330,000
Phase 4	January 2018	Streetscape Improvements Pendleton Street (north side to Irvine Street)	\$242,000
Phase 5	January 2019	Streetscape Improvements Branwood Street ; conversion of Branwood Street into one-way vehicular traffic, installation of Plaza art sculpture. Improvements to Traction Street Sidewalks	\$195,000 \$5,360
Phase 6	January 2020	Streetscape Improvements Pendleton Street (South Side to Irvine Street) and sewer improvements	\$385,000
Phase 7*	TBD 2021-2022	Streetscape Improvements Pendleton Street (south side to Mason Street) and traffic control, conversion of Burdette Street to one-way inbound vehicular traffic	\$349,000
Façade Improvement Program	2014-2020	Financial assistance in form of grants to commercial property owners and business owners within the Village for qualified exterior building and site improvements	\$200,000
Total Amount			\$1,939,360



Source: City of Greenville

Spindle: 2019

By Blessing Hancock;
Funding provided by Artisphere and
The City of Greenville's Arts and Public Places Commission



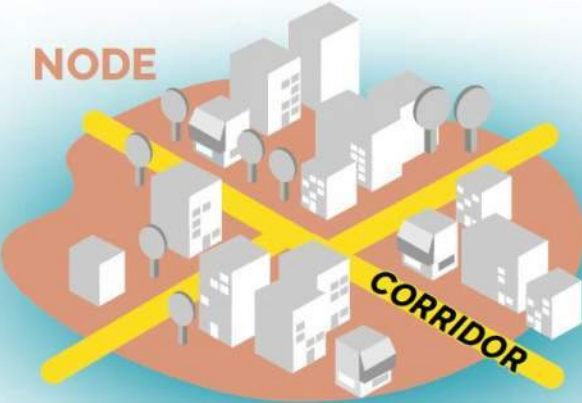
BUILDING BLOCKS

GVL2040

In February 2021, the City of Greenville adopted the GVL2040 Comprehensive Plan, a citywide plan taking a thoughtful approach to shaping growth in Greenville around nodes and corridors, while protecting existing residential neighborhoods. GVL2040 calls for planning policies and strategies that are enterprising, resourceful, inclusive, and courageous.

GVL2040 identifies the Village as a future **Node: a compact, walkable, and mixed-use activity center or hub where an increased concentration of residential, employment, retail, transit, and other uses are located.** Uses in a node may be mixed both vertically and horizontally. Nodes have a traditionally scaled urban form of four-story to six-story buildings and an average of 30 dwelling units per acre.

The City's new comprehensive plan reflects the broadest vision and values of its residents and other stakeholders. It is the most fundamental building block for tailoring strategies and land development regulations for the Village.



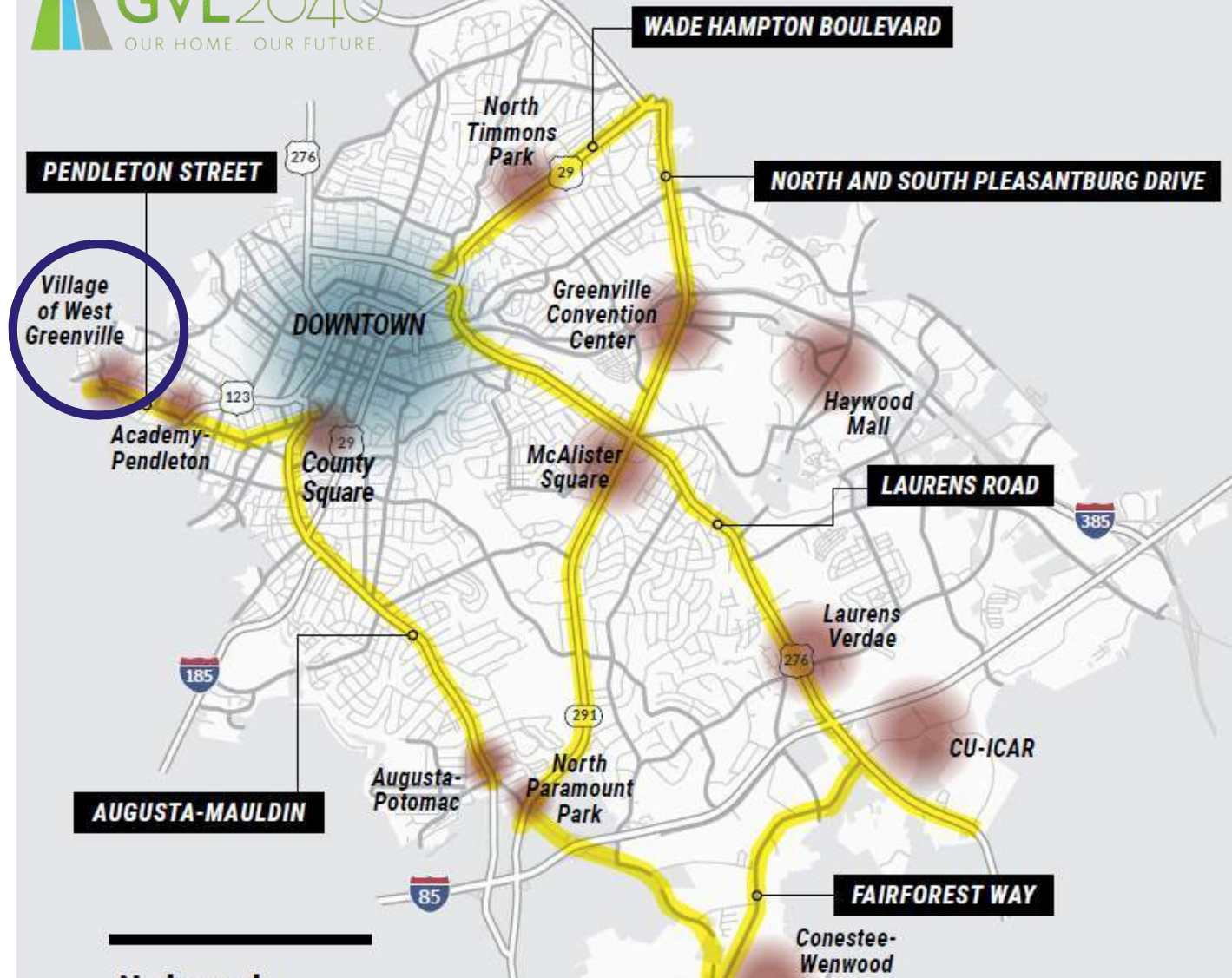
NODES

In the context of GVL2040, a node is an area that evolves over the next 20 years into a **mixed-use community hub** that features housing (some of it with income-restrictions to achieve affordability goals), employment opportunities, and a wide variety of retail, services, and community functions.

Nodes have a traditionally-scaled **urban form of four- to six-story buildings and feel like miniature versions of downtown Greenville.** Careful design of the streets and public spaces, as well as an average density of **30 housing units per acre**, create a vibrant atmosphere that enables walking, biking, and higher levels of transit service as desirable alternatives to cars.

Observation: "Corridors act as 'gateways' to our nodes and it will be important to acknowledge and frame the 'first impressions' they impart to the user as they are traversed."

Source: GVL2040 Comprehensive Plan, Greenville, SC, Pg. 43



Nodes and Corridors

- Existing Nodes
- Potential Nodes
- Potential Corridors
-

Be a courageous community.



GVL2040 IDENTIFIES THE VILLAGE AS A POTENTIAL "NODE"



ENCOURAGES SMALL AREA PLANS TO HELP MAKE BOLD DECISIONS FOR POSITIVE FUTURE GROWTH

COMMUNITY ENGAGEMENT PROCESS

Wernick & Co., in collaboration with City staff, led a variety of public engagement opportunities throughout Phase I. The engagement included in-person site visits throughout the study area, extensive stakeholder interviews, presentations to the West Greenville Neighborhood Association and Village of West Greenville Business Association, and a public survey. The total number of stakeholder participants engaged during Phase I is estimated at 150 - 200 people.

TIMELINE

- **February 16 - 19: Wernick & Co. in Greenville | Site Visits**
 - Met with community leaders and stakeholders, City officials and City staff, and conducted multiple interviews. Site tour of the Village of West Greenville to collect existing condition data and photos of study area.

February 16 - June 1: Stakeholder Interviews

- Conducted phone and in-person interviews and had numerous additional conversations with stakeholders, artists, business owners, and homeowners both in and around the Study Area.
- **February 23: Presentation to Village of West Greenville Business Association**
- **March 1: Meeting with West Greenville Neighborhood Association**
- **April 9 - 16: Stakeholder Public Survey**
 - Public survey distributed to stakeholders through associations and posted on City's website. Questions related to identity of the Village, current experience of existing conditions, and future activation and growth. 66 people participated and over 2,500 responses were recorded.
- **April 15: Virtual Public Workshop**
 - W&Co. led a virtual public workshop attended by City staff; advertised on City's website and mailed notice to property owners of record; invite circulated by associations.



STAKEHOLDER WORKING GROUP

JOSEPH BRADLEY
RYAN JOHNSTON
REV. VARDREY FLEMING
INEZ MORRIS
STEPHEN NAVARRO
HENRY HOROWITZ
KATIE HUGHES
KATIE SKOLOFF
TOM FELTON
CHERINGTON SHUCKER
ANN WRIGHT
WILL ROCHE
ROB POPPLETON
DAN WEIDENBENNER
PAMELA ADAMS
DON KOONCE
SUNNY MULLARKEY

CITY COUNCIL

KNOX WHITE, MAYOR
LILLIAN BROCK FLEMMING
WIL BRASINGTON
JOHN DEWORKEN
DOROTHY DOWE
KEN GIBSON
RUSSELL STALL

CITY MANAGER'S OFFICE

JOHN MCDONOUGH, MANAGER
EDEN FREEMAN
SHANNON LAVRIN

CITY STAFF

JONATHAN B. GRAHAM
COURTNEY POWELL
HAROLD EVANGELISTA
MONIQUE MATTISON
TRACY RAMSEUR
MARY DOUGLAS HIRSCH

PUBLIC SURVEY

[Home](#) > [Departments](#) > [Planning & Zoning](#) > [Master Plans](#) > [Neighborhood Plans](#) > Village of West Greenville Small Area Plan

VILLAGE OF WEST GREENVILLE SMALL AREA PLAN

The City of Greenville has engaged [Wernick & Company](#) for consulting services in connection with an action plan for the Village of West Greenville. Located within the heart of the City's former textile crescent and on the western gateway to the city, the Village has experienced renewed investment in recent years as an emerging arts district, home to artists, galleries, and a number of creative small businesses.

PROJECT SUMMARY

The City has identified a need to reevaluate the City's land development regulations for the study area, and identify strategies to facilitate further economic development, improved connectivity and mix of uses and development patterns consistent with the unique character of the Village and surrounding residential neighborhoods.

The consultant's scope of work involves preparation of an action plan for the Village that identifies short-term and long-term strategies and recommendations informed by existing conditions, code assessment, and key stakeholder input to build on prior and ongoing planning initiatives for the study area.

STUDY AREA



TIMELINE

FEBRUARY - APRIL

Phase I: Background Research on Existing Conditions, Community Engagement

Virtual Public Workshop:

April 15, 6-7:30 p.m.

[Meeting Agenda](#)

[Meeting Link](#)

MAY - JUNE 2021

Phase II: Preparation of Plan

PUBLIC SURVEY

Your input is crucial to the success of the plan, so to help guide our efforts, please take a few minutes to complete a short [online survey](#) by 5 p.m. Friday, April 16.



CONTACT

Would you like more information about the Village of West Greenville Action Plan? Contact Harold Evangelista at hevangelista@greenvillesc.gov.

Wernick & Co., together with City of Greenville Planning staff, prepared and circulated a public survey to stakeholders, which included approximately 25 questions tailored to understanding the identity of the Village, current experiences of existing conditions and services, and future activation and growth possibilities. 66 individuals participated in the survey and over 2,500 responses were recorded.

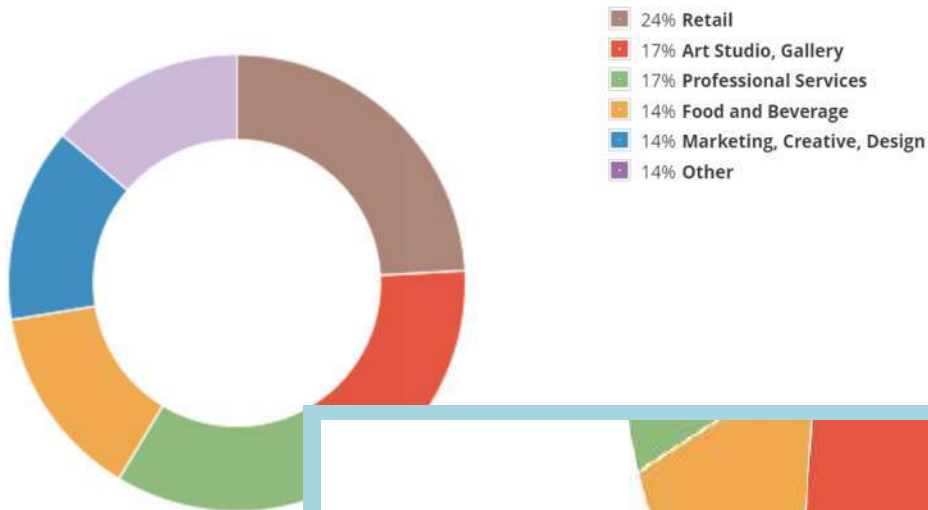
PUBLIC SURVEY RESULTS

What **WORD** best describes the Village of West Greenville's unique character?



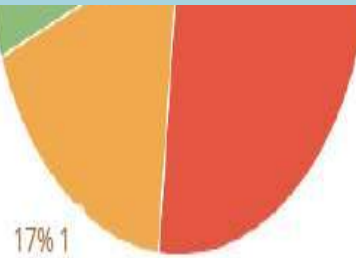
PUBLIC SURVEY RESULTS

* What type of business do you own?



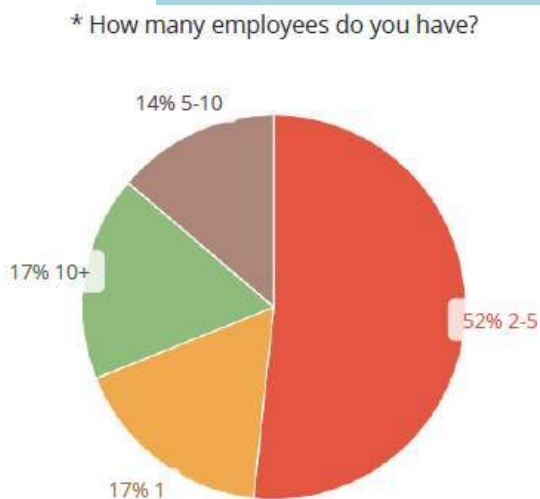
The Village is comprised primarily of locally-owned small businesses, with 66% employing 2-10 employees.

Majority of business owners surveyed have been in the Village for 5+ years. 73% have been operating for more than two years.



29 respondents

* How long has your business been located in the Village of West Greenville?



29 respondents

Survey results indicate a **resiliency** among artists & small business owners committed to growing with the Village, even despite COVID-19 and other challenges.

PUBLIC SURVEY RESULTS

"I love the vibe of The Village. It's also one of the only places close to downtown that is affordable to start a new business."

"We loved the community feel."

"I wanted to be apart of sharing the area with my clients."



"To be apart of the revitalization to the community and uphold its creative history."

"I want to be a part in growing it!"

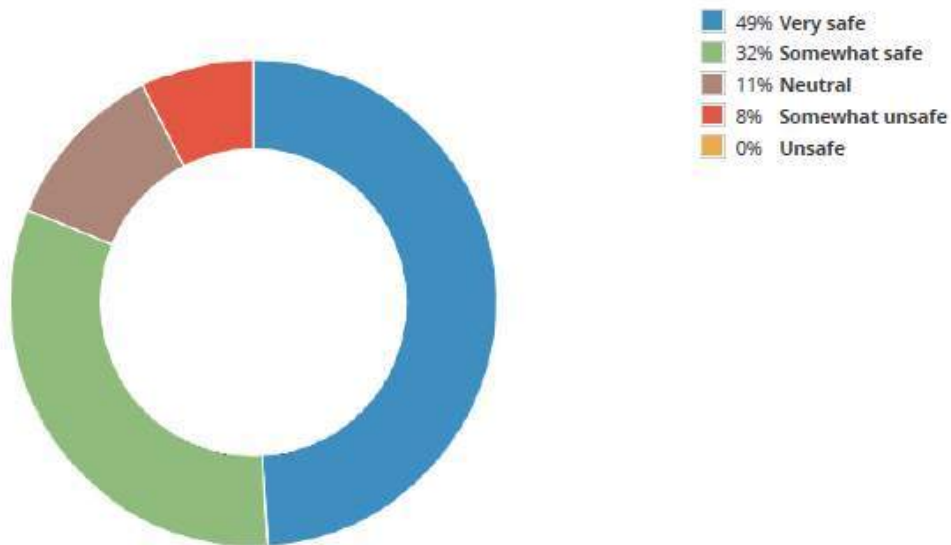
"Feels very artistic, free and open to possibilities"

"Opportunity to make a great place."

"We felt that the atmosphere was more local, directed more toward the community."

PUBLIC SURVEY RESULTS

* How safe do you feel walking along Pendleton Street during the day?



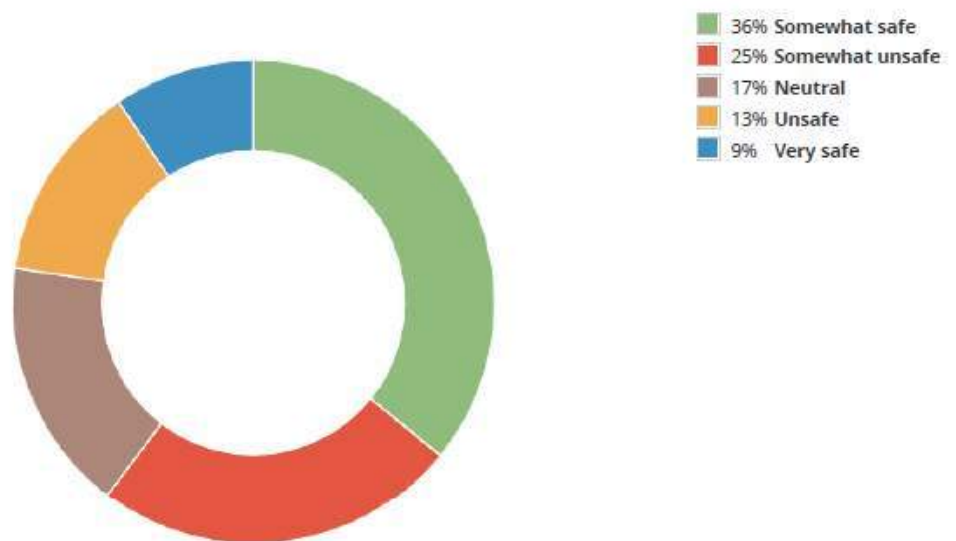
53 respondents

Do you feel safe walking on Pendleton Street ?

81% of respondents felt very safe or somewhat safe during the day.

That number dropped to **45%** at night.

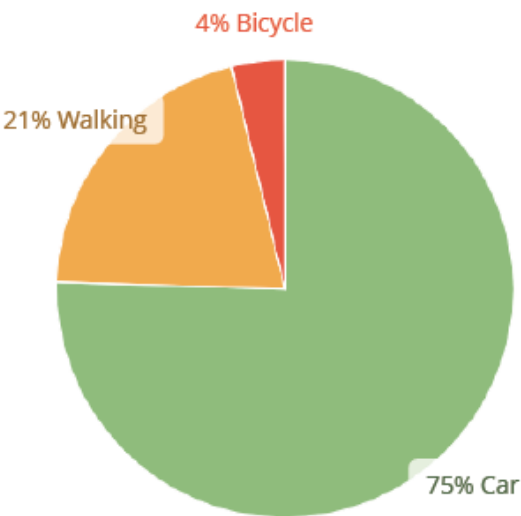
* How safe do you feel walking along Pendleton Street at night?



53 respondents

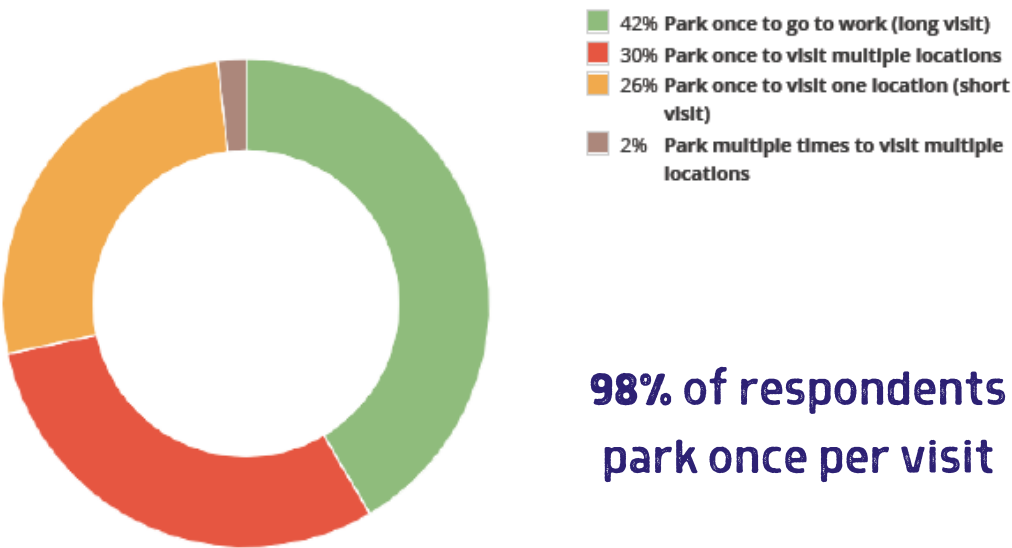
PUBLIC SURVEY RESULTS

* What is your primary mode of transportation to and from the Village of West Greenville?



53 respondents

When you drive to the Village of West Greenville, which of the following best describes your parking behavior?



98% of respondents park once per visit

53 respondents

III. SWOT ANALYSIS



SWOT ANALYSIS

SWOT analysis is a strategic planning tool used to identify and take stock of internal strengths and weaknesses, and to understand external threats and opportunities affecting a particular study area. In the context of the Village, this SWOT analysis plays a critical role in synthesizing data and spatial analysis conducted by Wernick & Co with direct input from City staff, City officials, and Village stakeholders.



STRENGTHS

Unique Character

The Village boasts a collection of one-story and two-story commercial building stock, fronting on Pendleton Street that forms the heart of the Village study area, wrapping around Lois Avenue. These buildings retain the grit and texture of its roots as a mill village. Painted brick facades and recessed windows create a unique visual contrast and rhythm, inviting pedestrians to experience eclectic offerings on Pendleton Street. Side and rear walls provide textured canvasses for murals that reinforce the Village's identity as Greenville's arts district.

Anchored by Arts & Incubators

The Village has an established arts community entrenched in its identity and responsible for its recent revival as an emerging arts district. Original anchors include **ArtBomb Studios** and **Greenville Center for Creative Arts**, a 501c3 housed at West Village Lofts at Brandon Mill dedicated to enriching the cultural fabric of the community through visual arts promotion, education, and inspiration. Located just outside the Village study area and City boundaries, these anchors helped spark **First Friday Artwalks**, which has drawn visitors to the emerging arts district. In addition to local artists working and displaying art, murals, and sculptures can be found throughout the Village. The Village is also home to the **Truist Culinary and Hospitality Innovation Center**. The facility, which opened in 2020, is a public/private partnership through Greenville Tech, providing a neighborhood-based venue for education and job training in culinary arts.

Resourceful in Adaptive Use of Vacant Buildings

The Village's solid brick buildings have been renovated and readily adapted for a mix of uses in recent years, showing the resiliency of the Village to regenerate and reclaim its role in Greenville's renaissance. ArtBomb Studios was one of the first adaptive use projects that brought local artists to the Village. The **Flatiron** dates back to the 1920s and plays a key role in anchoring the eastern gateway to the Village, Pendleton Street's largest single tenant building was converted into 5 distinct storefronts and one large multi-tenant space called **Saltbox**. Taking its name from the vernacular architecture of original mill homes south of Pendleton, this building offers short-term, full-service leases geared toward local startups.



WORKING ARTISTS CONVERGED ON THE INEXPENSIVE BUILDING STOCK,
RECOGNIZING THE ADAPTABILITY OF THE OLD BRICK BUILDINGS



Enterprising Textile Spirit

The Village has maintained its enterprising textile spirit, as small business owners and entrepreneurs have brought authentic goods and services into the Village. The Village is also home to workspaces for creative professionals who express a strong connection to the identity of the Village, and socialize in the Village at lunch or after work hours. Many of the murals and public art installations in the village, as well as painted building signs, reference the Village's industrial past and are the product of local artists with strong ties to the area.

TOP REASONS CITED BY BUSINESS OWNERS FOR LOCATING IN THE VILLAGE IS THE DESIRE TO BE "NEAR THE ARTS" AND "BE PART OF A COMMUNITY"



Diversity Among Stakeholders

Another strength is the diversity of stakeholders actively participating in the Village. These include a broad swath of local artists, small business owners, residents, property owners, and community activists congregating and sharing ideas. Stakeholders range widely in age, race, ethnicity, and gender identification. Based on information provided by the Village of West Greenville Business Association, as of April 2021, **roughly 50% of all tenants located in the Village study area are minority-owned/operated businesses**, including Sovereign Plants, Varsity Goods, Eighty 8th Avenue, RED at 28th, Bar Margaret, and craft industry newcomers, Unlocked Coffee, and Distinct Cider Room. Diversified community and faith-centric organization, like Mill Village Ministries also play a key role in the Village, extending goods and services to underserved communities and seeking partnerships to create economic opportunities for young people.



Proximity to Downtown and City Facilities

The Village is located in the heart of the former Textile Crescent, only two miles from downtown Greenville and one mile west of the historic West End. Although situated on the western edge of the City of Greenville, the Village is within a five minute drive of Unity Park and the Reedy River, the Swamp Rabbit Trail, St. Francis hospital, Fluor Field, Greenville Senior High School, and numerous churches and community services.

Good Bones to Support Future Node

The Village has a **strong sense of place** defined by a **tightly-knit urban fabric** conducive to a traditional village. The Village "grid" facilitates infrastructure reinvestments that can readily be leveraged for improved mobility, safety, and private investment. The City's investment in a series of streetscape improvements, including wider sidewalks, planters, and lighting has helped transform this stretch of Pendleton Street into an inviting, walkable district and played a major role in the Village's revival. New streetscape improvements have also been installed at Poe West on Perry Avenue connecting to the Village Plaza.





WEAKNESSES

Connectivity Gaps

The City's streetscape improvements along Pendleton Street and Perry Avenue adjacent to Poe West in combination with the plaza at the terminus of Perry Avenue at Pendleton Street have been a tremendous boost to walkability and pedestrian activation in the Village. However, the Village remains disconnected - with narrow unprotected sidewalks along Pendleton Street abutting vehicular traffic lanes in both directions, and similar hostile conditions when entering the Village from the north and south.

82% OF VILLAGE STAKEHOLDERS IDENTIFIED CONNECTIVITY AS A PRIORITY AREA OF NEED IN THE VILLAGE



Local thoroughfares within the Village study area, including Traction Street, remain largely unimproved and hostile to pedestrians and cyclists traversing the Village. These gaps are particularly noticeable for visitors traveling to/from the Village at the western and eastern gateways on Pendleton and coming south from Lois Avenue. Due to these existing conditions, the Village exhibits a walkability score much lower than expected.



WALKABILITY SCORE OF 43 HIGHLIGHTS THE CONNECTIVITY GAPS IN THE VILLAGE

Signage and Visibility

Signage and visibility are critical weaknesses hampering the Village's vitality and growth potential. Entering the Village from any direction, there is a mix of awkwardly-placed gateway signage lacking a cohesive message or brand identity. Once off Pendleton Street, pedestrians, cyclists, and drivers are left to their own devices to find their destination. There are a handful of small yellow and green signs identifying public parking facilities in the Village, but without clear guidance on the exact location of the parking lots and distinction between City-owned parking and private parking lots.

The variation in topography and the organic street grid that evolved prior to the City's incorporation of the Village exacerbate the issue of visibility. For example, Perry Avenue sits above both Poe West and Pendleton Street, which means Poe West is not visible from Pendleton Street. The placement of temporary yard signs advertising new businesses reiterates the need for enhanced gateway and directional signage in the Village.

While there are great examples of high quality building and tenant identification signage reflecting, do not currently allow for neon signs or other bold and unique signage reflective of the eclectic character of the Village and its identity as Greenville's emerging arts district. Concurrently existing sign regulations would allow for an array of conventional commercial signage inconsistent with the Village's character.



Mix of Retail Uses & Neighborhood-Oriented Services

While there is an eclectic mix of uses ranging from independent coffee shops to art galleries, there is certainly room for improvement to generate more foot traffic and elevate the experience for visitors and residents.

**62% OF RESPONDENTS TO THE SURVEY SAID RETAIL OFFERINGS
“NEEDS IMPROVEMENT”**

There is also a lack of destinations for everyday goods and services for residents and employees working in the Village. There is no laundromat or grocery store within the Village boundaries and few takeout or fast-casual restaurants where residents or employees working in the Village can purchase a meal for under \$10. The reason, in part, is the residential population and AMI within close proximity does not generate the numbers to support a robust mix of brick and mortar establishments.

**WHEN ASKED HOW RESIDENTS’ AND VISITORS’ EXPERIENCE IN THE
VILLAGE COULD BE IMPROVED, MOST STAKEHOLDERS SAID “EXPAND ON
NEIGHBORHOOD-ORIENTED GOODS AND SERVICES”**

Accessibility to Adjacent Residential Communities

The gaps in physical connectivity to/from the Village for non-motorized transportation accentuate the accessibility gaps experienced by adjacent residential communities and are rooted in the historical context of segregation and disparities in economic opportunities.

Residents living in the Village study area and those active in the West Greenville Neighborhood Association have expressed that the current mix of uses, restaurants, and offerings in the Village are not sufficiently accessible to nearby residents. Employees at local businesses have few options for everyday affordable lunch offerings. This issue is not unique to the Village study area, but persist along Pendleton Street east to the West End. Not surprisingly, stakeholders question how future investment and growth in the Village will help provide more options for daily goods and services, and address the pervasive lack of healthy affordable food options and access to groceries faced throughout communities located in Greenville’s Textile Crescent.



Lighting & Safety Pinch Points

Like streetscape and pedestrian infrastructure, lighting in the Village study area is inconsistent, creating safety pinch points. Interesting to note, respondents to the survey consistently expressed a strong feeling of safety walking on Pendleton Street during the day, with **81%** feeling "Very Safe" or "Somewhat Safe." That number changes significantly at night, when only **45%** of Respondents said they felt either "Very Safe" or "Somewhat Safe."

Lack of Accessible Housing Stock

The pinch points around safety are in direct correlation to the concept of "eyes on the street", including the gaps in proper street lighting and limited housing stock in the Village. Roughly **60%** of respondents to the survey said housing quality in the Village was not up to par.

Parking System Out of Sync

While the Village Center and buildings along Pendleton Street express a strong walkable character, most visitors and employees working in the Village arrive by car. Tenant parking for buildings along Pendleton Street and Lois Avenue (originally constructed with no parking on site) is generally being provided on private off-site surface lots and in the City's Branwood lot, where there are 23 parking spaces.

The City maintains free two-hour on-street parking in various location in the Village, with 25 spaces on Pendleton Street, 21 spaces along Perry and Branwood, and 18 spaces on Traction Street. However, without a functional wayfinding system, visitors and patrons of local businesses struggle to identify where public parking is available on a consistent basis.

ON PARKING, 70% OF RESPONDENTS SAID "NOT A FAN" OR "NEEDS IMPROVEMENT"; ONLY 6% SAID THIS IS A STRENGTH

What factors are contributing to this?

- Lack of wayfinding directional signage creates obstacles for visitors to locate parking facilities in the Village.
- Reserved spots in unimproved surface lots often sit empty, leaving these surface lots appearing abandoned and taking away from the walkability and activation needed to support the district. Others might be slated for redevelopment.

Village of West Greenville Public Survey Results Question #8 - Areas of Improvement

	1 = Not a fan	2 = Needs improvement	3 = OK	4 = This is a strength	5 = Outstanding
Signage	6% 1 = Not a fan	54% 2 = Needs improvement	29% 3 = OK	6% 4 = This is a strength	4% 5 = Outstanding
Lighting	7% 1 = Not a fan	42% 2 = Needs improvement	36% 3 = OK	11% 4 = This is a strength	4% 5 = Outstanding
Connectivity within the Village	13% 1 = Not a fan	31% 2 = Needs improvement	47% 3 = OK	9% 4 = This is a strength	- 5 = Outstanding
Mobility options to/from the Village	13% 1 = Not a fan	38% 2 = Needs improvement	38% 3 = OK	9% 4 = This is a strength	2% 5 = Outstanding
Parking	28% 1 = Not a fan	42% 2 = Needs improvement	24% 3 = OK	6% 4 = This is a strength	- 5 = Outstanding
Tree canopy/cover from elements	13% 1 = Not a fan	48% 2 = Needs improvement	33% 3 = OK	7% 4 = This is a strength	- 5 = Outstanding
Public space	8% 1 = Not a fan	44% 2 = Needs improvement	34% 3 = OK	14% 4 = This is a strength	- 5 = Outstanding
Housing quality	6% 1 = Not a fan	54% 2 = Needs improvement	36% 3 = OK	2% 4 = This is a strength	2% 5 = Outstanding
Housing affordability	15% 1 = Not a fan	36% 2 = Needs improvement	38% 3 = OK	9% 4 = This is a strength	2% 5 = Outstanding
Retail offerings	2% 1 = Not a fan	62% 2 = Needs improvement	23% 3 = OK	12% 4 = This is a strength	- 5 = Outstanding

Source: City of Greenville/Wernick & Co, Public Survey (April 2021)



THREATS

COVID-19

The COVID-19 pandemic had a significant impact on the Village, with net absorption in 2020 at a record low paired with record high vacancy rates over the past 10-year period. At Q1 2021, vacancy rates spiked to 11%, four times the vacancy rate in Q1 2020, before the state of emergency and social distancing measures.

**MORE THAN 2.3 MILLION JOBS IN HOSPITALITY INDUSTRY
WERE LOST ACROSS THE UNITED STATES IN 2020**

The arts and hospitality industry were two of the hardest hit areas of the economy. More than 2.3 million jobs were lost in 2020. Additionally, 48% of South Carolina's non-profit organizations were identified in need of financial help, just to keep the lights on. COVID-19 also put a halt to the community gatherings and events that brought people and foot traffic to the Village to patronize the artists and shops.

Displacement of Local Artists & Businesses by Rising Rents

Too often, successful arts districts are a victim of their own success. As artists and other creative industries create a buzz, real estate appreciates and sparks more investment. That can be incredibly positive for reinvestment into infrastructure, lighting and other safety improvements, but can also lead to increases in rents, becoming less affordable to the artists and local businesses that were in part responsible for the growth. With market forces in play, there is a concern that rising land values will displace small businesses and service providers from the Village and will either leave the area further underserved, or new development and tenants will cater to a higher income demographic and tourists coming to the Village as a cultural destination, while ongoing renovations and activation of former mills and large scale industrial sites like Hampton Station could draw tenants away from the Village.

RDV Zoning Incompatible with Village Character

The majority of properties within the Village study area, and particularly properties fronting on Pendleton Street, are classified on the City's Zoning Map as RDV (Redevelopment District). The intent of the RDV classification is to promote appropriate investment and development in areas that are depressed or underdeveloped.

However, it does not address the need and goal of inclusive growth nor does it contemplate protections for the Village's unique character.

- There are no design guidelines or land development regulations specifically tailored to the Village.
- Residential density is capped at 20 units per acre, which creates challenges to developing new housing within the Village to support neighborhood oriented services and retailers and at price points affordable to artists and working households.
- The RDV does not contemplate the robust and eclectic uses desired, nor does it particularly facilitate attracting new types of tenants and uses that would be accretive to the Village and its identity.
- Conventional parking and loading requirements create hurdles to infill development compatible with the Village's character and tying up vacant lots that would otherwise be prime redevelopment sites necessary for the Village's continued evolution.

As far back as 2014, the City's West Side Plan recognized this disconnect between the RDV and the Village's character and need for inclusive growth. And there has been virtually no new development since that time. Only one new commercial building has been constructed within the Village study area since 2014 - a two-story vintage brick building fronting the Village Plaza with roughly 4,000 square feet of commercial/office space. No new housing has been constructed within the Village study area, which contributes to a lack of critical mass and "eyes on the street."

Parking Requirements Not Suited for Traditional Mixed-Use Urban Village

The City's parking requirements are not tailored to the existing urban form found in the Village, and present two particular challenges when planning for walkable urban nodes that depend on pedestrian activity and a vibrant street life.

First, parking requirements are regressive, with high variation in parking generation rates between commercial uses. For example, conversion of a 2,000 SF ground floor space currently used as a creative design office (1 per 600 SF) to ground floor restaurant (1 per 125 SF) - which should be encouraged - generates an additional 12 parking spaces. Applying conventional suburban parking standards in a walkable urban node like the Village ignores the higher utilization of ride share and policy of encouraging a mix of mobility options, as well as the impacts of too much parking on the vitality of the business district.

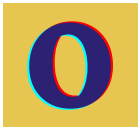
Existing one-story and two-story commercial structures in the Village core were largely constructed prior to the establishment of zoning requirements and typically do not have on-site parking. However, the City's parking ordinance only extends flexible parking standards within C-4 zoning (Downtown). In the Village, adaptive reuse of existing structures still requires at least 75% of code-mandated parking ratios be satisfied. As land values rise, this could become an increasing threat to affordability for attracting local business tenants and threat of demolition, ultimately contributing to the loss of the Village's character.



Vacant and Underutilized Lots

The Village study area only includes approximately 20 acres in land area. Looking at existing conditions, the current snapshot reveals **roughly 46% of land area in the Village categorized as vacant or underutilized commercial property, including underutilized surface lots.**

Housing cars on these lots might be practical today, but it severely interrupts the enjoyable walking experience of being in the arts district and correlates to the lack of tree canopy protecting pedestrians from the elements. This is particularly noticeable during First Friday Art Walks, where area residents and stroller-laden young families can be seen traversing the Village grid and dodging a myriad of parked and moving vehicles. The proliferation of vacant lots is a major threat to emerging arts districts of the size and scale of the Village. Underutilization of key infill sites within the Village study area detracts disproportionately from the Village's strengths - its unique character and pedestrian experience - and curtails the building stock available to attract a robust mix of uses and "eyes on street."



OPPORTUNITIES

Poe West & Truist Culinary & Hospitality Innovation Center

Poe West is one of the Village's largest anchors. Located at 556 Perry Avenue, adjacent to the Norfolk Southern Line, the 57,000 SF historic home of Poe Hardware and Supply was acquired and renovated by The Furman Co. in 2016.

Poe West opened in 2019 as a mixed-use community around food and innovators. It is home to creative start-ups like 98 Ventures, Unlocked Coffee, LaRue Fine Chocolates, and The Junkyard fitness training facility.

Its marquee anchor tenant, the Truist Culinary & Hospitality Innovation Center (CHI), is a neighborhood-based venue delivering recreational classes for home cooks, corporate team building, job training, and community reinvestment in the heart of West Greenville.

Opening its doors in 2020, in the midst of the COVID-19 pandemic, CHI bridges social and economic gaps. Led by energetic and acclaimed chef Alan Scheidhauer, CHI supports Greenville's burgeoning hospitality and culinary industry by providing workforce development training while also serving as a neighborhood gathering place where community members can access education and participate in the Village's growth. In recent months, CHI has launched on-site events and partnered with the West Greenville School, which serves at-risk students with learning disabilities in grades 6-12.

Given its location and underutilization during certain times of the week, the Poe West Park could be an attractive site for temporary activations and expanding affordable offerings of food and other goods by local purveyors and entrepreneurs to locate in brick and mortar spaces.



[Credit: Mill Village Ministries]

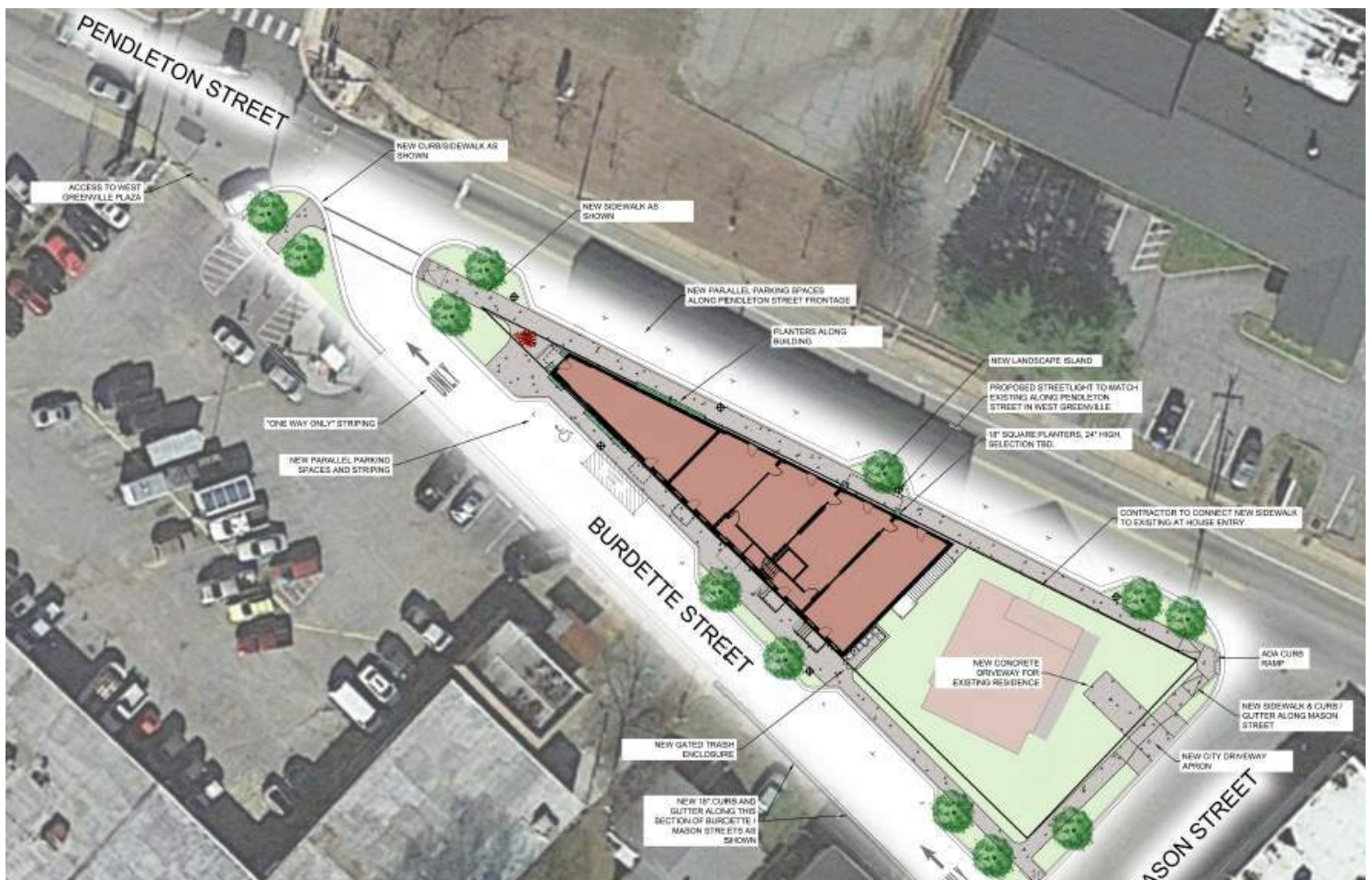
Flatiron Streetscape Improvements

The Flatiron is one of the Village's landmark buildings. Sitting prominently at the eastern gateway to the Village, it also serves as a terminated vista looking east from the Village Center. The two-story brick building was constructed in the late 1920s and was the sewing department for the Piedmont Plush Mill. The building was the site of the General Textile Strike of 1934 – the largest strike in the United States at the time – which brought martial law to the City of Greenville. In 2020, Katie Skoloff, an interior designer and chair of the City's Arts in Public Places Commission, acquired the building and introduced a renovation plan to restore the building.

In May 2021, City Council approved funding of roughly \$349,000 toward streetscape improvements along Pendleton Street. The project includes widened sidewalks and ADA ramps, accompanied by new 18" curb and gutter on Mason Street and Burdette Street, landscape islands, new street lighting, and 13 new on-street parallel parking spaces. The project also includes conversion of Burdette Street to one-way traffic inbound toward the Village and re-alignment of the intersection of Burdette Street and Pendleton Street, anchored by a pedestrian plaza with a public art installation.

These streetscape improvements will mark a key step in bridging connectivity gaps and providing enhanced safety and walkability.

Phase VII Streetscape Improvements at the Flatiron Building will provide improved pedestrian access to the Village for area residents



Flatiron Plaza Streetscape Plan
Seamon Whiteside & Associates, Inc. (April 2021)

GVL2040 | Framework for Village as Future Node

GVL2040, the City of Greenville's comprehensive plan, was adopted by City Council in February 2021. Setting a new vision for the City's future, GVL2040 identifies urban **Nodes** and **Corridors** as recipient areas for directed growth, concentrated density, and mobility improvements while protecting and preserving residential neighborhoods. GVL2040 calls for "an urban form of 4 to 6 story buildings and front streets and other public spaces designed to a human scale." These defined areas emphasize vertical mixed-use development with activated ground floor commercial and retail uses and office/residential uses on upper floors. Nodes are anticipated with average residential density of 30 units per acre.

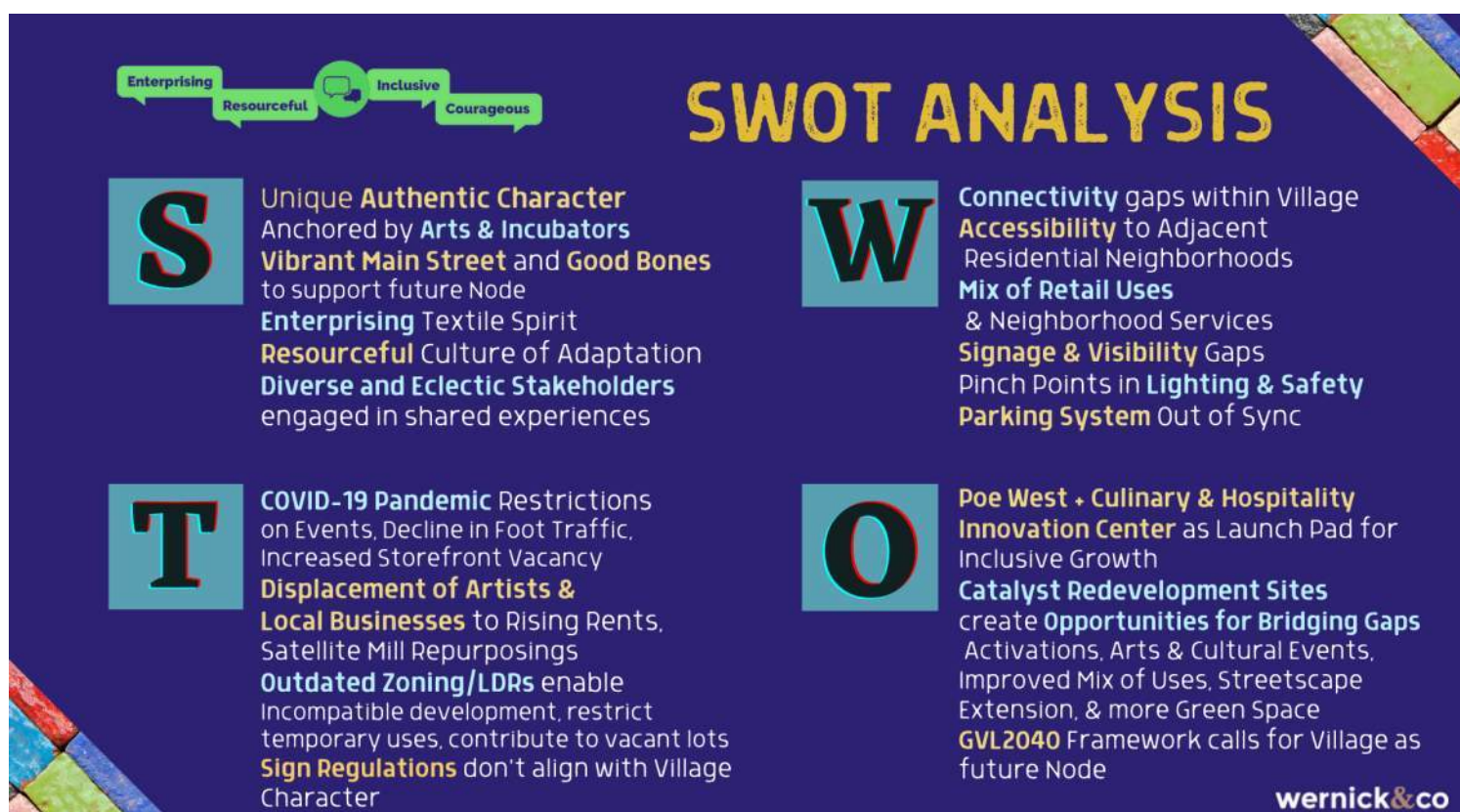
The Village is one of a handful of specific nodes called for in the citywide plan. As a corollary, Pendleton Street is identified as a prime commercial corridor for directing future transportation and mobility improvements.

GVL2040 empowers the creation of small area plans to lay out a bold vision for future development compatible with the identity and authentic character of a place. This presents a timely opportunity to revisit the current RDV zoning and shape land development regulations and policies to the Village's character, addressing the need for a more robust mix of uses - including a neighborhood grocery store, artisan/maker spaces, and other active uses desirable in the Village, and encouraging new residential development and attainable housing options in the Village at densities commensurate with a vibrant Urban Mixed-Use Node.



Urban Node Mixed-Use

The Urban Nodes have an urban form of 4 to 6 story buildings and front streets and other public spaces designed to a human scale. These areas include more vertical mixed-use than horizontal mixed-use with a preference for commercial/retail uses on the first two floors and office and/or residential uses on the upper floors. Average residential density is 30 housing units per acre.



IV. UNLOCKING POTENTIAL



[Courtesy: H. Horowitz]





UNLOCKING POTENTIAL

The Village of West Greenville has witnessed a revival, largely as a result of an **eclectic group** of individuals - including artists and enterprisers, small business owners, residents, and community organizations - deciding to locate within this funky enclave, and roll up their sleeves to restore the Village to its place as the beating **heart of the Textile Crescent** and Greenville's **authentic working arts district**.

POTENTIAL (noun): the inherent ability or capacity for growth, development, or future success

The Village has received significant national media attention in recent years as Greenville's emerging arts district. In 2019, the New York Times highlighted the Village and its eclectic mix of small businesses, citing GCCA, The Anchorage, Village Grind, the Flatiron Building, and Indigo Flow & Art as five places to visit in Greenville. In March 2021, Forbes Magazine featured the Village as a "Neighborhood to Watch," calling it "The Soho of Greenville, with a heavy emphasis on the arts and independent creative businesses."

Yet, as reflected in the SWOT analysis and input from Village stakeholders, there is still work to do to unlock the full potential of the Village.

Section IV of this Village Action Plan is about building on the foundation established - to address the Village's weaknesses and reinforce its strengths, to combat external threats and leverage immense opportunities already organically underway as the Village emerges from COVID-19. This Village Action Plan builds on the City's strong planning tradition and the "**Try Things**" spirit reflected in the Village, identifying a set of action-oriented recommendations, consistent with the values of GVL2040 - to be ENTERPRISING, RESOURCEFUL, INCLUSIVE and COURAGEOUS.

The Village Action Plan recommendations are organized into three strategy areas, which speak to the guiding principles for unlocking potential:

- **Connectivity**
- **Activation**
- **Inclusive Growth**

TOWARD INCLUSIVE GROWTH

With its compact urban form and walkability centered around a major transportation corridor in Pendleton Street, and the burgeoning arts district serving as a draw for artists, local startup businesses and creative professionals, the Village is primed to become one of Greenville's nodes for future growth and infill development.

But, success does not come without challenges. With its prime location in the heart of the former Textile Crescent, a mile from Unity Park and just two miles from Main Street, the Village sits on high ground and has attracted increasing interest. As with other "hot" Sunbelt cities experiencing growth and new investment, rising land values and the pace of change pose a tangential threat of displacement of long-time residents, artists, galleries, and other small businesses that call the Village home and have been largely responsible for the Village's revival and renewed interest.

"Success will be measured through community vitality over time; not just for merchants and participants in the revitalization process, but also those that have lived here and made the village a place to be."

-Stephen Navarro, Property Owner, Furman Co.



[Credit: Mill Village Ministries]

In response to the potential "SoHo Effect" experienced in other arts districts around the United States, Village stakeholders have recognized the importance of identifying a shared vision and foundational action plan to grow inclusively, in a manner that protects the unique and eclectic character of the Village, further activates the Village and expands on the robust mix of uses needed for the Village to thrive, and creates economic opportunities that benefit current stakeholders as well as new residents and businesses.

The City of Greenville should consider the following principals to guide future investments and policy decisions:

- **Invest in Human Capital.** Continue to encourage community-led authentic dialogue through Village of West Greenville Business Association, the West Greenville Neighborhood Association, and the public/private partnerships and community engagement initiatives fostered today in the Village through GCCA, Mill Village Ministries, CEE, CHI, and many other community organizations. Consider additional investment into community policing practices and community services to be located within the Village study area.
- **Invest in Infrastructure.** Reinvest in infrastructure improvements balanced equally between physical infrastructure and community infrastructure that support public health, safety and welfare, and increase the overall tax base of Greenville. This may include public investments through land acquisition and easements to plan ahead for future growth and to ensure opportunities for public facilities and community services.

- **Embrace the Unconventional.** If GVL2040 encourages policymaking that is ENTERPRISING and COURAGEOUS, there is nowhere more natural to start than the Village. The funky, unconventional, and eclectic identity of the Village is in large part what makes it Greenville’s arts district and a “place to be.” Given its recognition as a node in GVL2040, it may require departing from typical approaches appropriate for other commercial areas within the City of Greenville. This may mean initiating changes to the City’s code and land development regulations for policy initiatives, like a Temporary Use Program or Pop-Up Markets, uniquely tailored to the Village, which foster inclusive economic participation, incubation of small businesses, and innovation that supports start-up enterprises and the arts.
- **Think Outside the Box.** Explore the expansion of the Village to its natural organic edges, based on the location of Brandon Mill and Woodside Mill, including potential annexation of areas currently outside of the City’s municipal boundaries between Brandon Mill, Art Bomb and the commercial core on Pendleton Street. Furthermore, several of the recommendations around connectivity will require a concerted effort and intergovernmental coordination between City, County, and State agencies.
- **Allow Market Flexibility and Local Participation.** When it comes to urban revitalization and emerging arts districts, many of the recent success stories around the country – including Miami’s Wynwood, Dallas’ Deep Ellum, East Nashville, and Austin’s Rainey Street – would not have been possible without local government officials making concerted policy decisions to allow these unique enclaves the flexibility to allow artists and business owners to explore the possibilities within a delineated district. In the case of Wynwood Arts District, its evolution as a Top 10 destination for art tourism and the world’s largest street art museum was only possible by relaxing established codes around graffiti and parking requirements for adaptive use of existing building stock. The recommendations set forth below include creation of new signage standards tailored to the unique identity and authentic character of the Village, with input from artists, tenants, and other stakeholders.



PHOTO OF THIRD THURSDAY AT POE WEST (JULY 2021)
VILLAGE LAUNCH MAKER'S MARKET



[Credit: Mill Village Ministries]



[Credit: Mill Village Ministries]

Looking at the Village today, the key ingredients to success are already present. Half of the current business establishments and artists active in the Village are minority and/or LGBTQ-owned. There are conscious efforts underway to expand educational and training programs, events to spark further investment in surrounding underserved residential neighborhoods, and programs geared toward supporting local artists.

Village stakeholders have organically found this collective path toward inclusive growth. There is a culture of acceptance and “Trying Things” that is distinguishable from other parts of Greenville, and now there is a conscious effort to bring more people to participate in the Village’s evolution, adding to its identity, and restoring the Village to its role as the heart of the Textile Crescent.

It’s about the people, and ultimately, it’s a story about **Redemption**.

REDEMPTION (NOUN): TO BE EXTRICATED FROM OR HELP TO OVERCOME SOMETHING DETRIMENTAL TO RELEASE FROM BLAME OR DEBT; TO FREE FROM THE CONSEQUENCES OF SIN; CHANGE FOR THE BETTER.



[Credit: Sunny Mullarkey]



"My roots in the Village of West Greenville run deep. My grandfather worked at Brandon Mill for 35 years. My father was born & raised here. I'm proud to be part of this community working to resurrect abandoned storefronts and breathe life back into the Village in such powerful and redemptive ways."

- Joseph Bradley, Local Artist & Property Owner

Multi-Color Bench | Pendleton Street (2021)
West Greenville Plaza Shopping Center



RECOMMENDATIONS

1. Connectivity

Connectivity is about **bridging the gaps** between the strengths and weaknesses; connecting Pendleton to the Village anchors and bringing people to place. The following recommendations include uniquely tailored short-term and long-term initiatives to improve safety, walkability, accessibility, and sense of place to enhance the Village as a destination for residents and tourists alike. Some recommendations can stand alone; others are best leveraged in combination with other strategies and tools within Connectivity, Activation and Inclusive Growth.

1.1. Wayfinding Signage

- Wayfinding signage is a priority intervention to reinforce the Village identity
- Provides much-needed directional signage for visitors to parking and Village anchors, Village Plaza, Poe West/CHI, GCCA/West Village Lofts at Brandon Mill, etc.
- Wayfinding signage should include a strategic mix of pole mounted and monument signs giving drivers entering the Village a better sense of direction and helping to guide them to public parking facilities; should also include a pedestrian kiosk located in the Village Plaza



1.2. Gateway Signage

Gateway signage should be tied to branding/art of wayfinding signage. There is a unique opportunity to utilize local artists active within the Village to maximize engagement and visibility

- **Western** Gateway (Pendleton Street eastbound at City boundary)
- **Eastern** Gateway (Pendleton Street westbound at Mason Street)
- **Northern** Gateway (Lois Avenue southbound at Norfolk/Southern Rail Overpass)

1.3. Extension of Streetscape Improvements on Pendleton Street

Currently, streetscape improvements end at Irvine Street. Based on SWOT analysis, completion of streetscape improvements within study area would fill in gaps in walkability present today.

- Implement Phase VII streetscape improvements along Pendleton Street at Mason and Burdette Streets, including configuration of intersection, widened sidewalk, ADA improvements, and public art installation.
- Focus priority on eastern gateway and connections from Pendleton Street to Poe West/Perry Ave

1.4. Mid-Block Colorful Crosswalk Intervention on Pendleton Street

Mid-block crosswalk ramp connections were installed with the City's streetscape improvements at two separate locations on Pendleton Street between Lois Avenue and Irvine Street; however, no crosswalk exists to connect pedestrians across Pendleton Street. Car traffic on Pendleton Street coming east down the hill from the intersection of Lois Avenue and Pendleton Street presents visibility and safety issues for pedestrians; particularly at dawn/dusk during rush hour commutes.

- A painted crosswalk would be a low-cost tactical intervention that emphasizes sense of place and follows the lead of other progressive cities and urban business districts that have used artistic interventions to better protect pedestrians in retail districts where foot traffic is critical.
- Because Pendleton Street is a state highway, implementation will require intergovernmental cooperation with South Carolina Department of Transportation (SCDOT) and approval by SCDOT of non-standard crosswalk improvements subject to compliance with MUTCD criteria/materiality and potential maintenance agreement with City of Greenville



1.5. Gateway Pedestrian Islands

The western gateway entrance to the Village is at the City municipal boundary. Today there are multiple auto body shops on the south side and a mix of conditions on the north side of Pendleton. The pedestrian island is barren and could host an interesting and low-cost intervention to break up the width of Pendleton Street, introduce more tree canopy and calm traffic entering the intersection at Pendleton Street and Lois Avenue.

- The City should consider a small landscape design project to spruce up the triangular pedestrian island in front of Revival Butchery at the City's municipal boundary. This could also be in conjunction with a new gateway sign location.



1.6. Pendleton Buffered Bike Lane Connecting the West End to the Village

There is currently a single striped bike lane along Pendleton Street that is seldom used and unprotected from car traffic.

- Design and implement a buffered bike route running east-west along Pendleton Street to West End; consistent with GVL2040 mobility objectives, and 2021 West End Small Area Plan.
- Further connect Main Street from downtown to West Side.

1.7. Village Public Parking Garage

Based on site visits and consistent responses to the survey, current parking conditions are less than ideal. While the City has invested in significant streetscape improvements and maintains on-street spaces, the current City parking lot has a maximum of 23 parking spaces. Visitors often do not know how to access that parking lot or whether there will be spaces available.

- To address current disjointed parking conditions and plan for future growth of the Village, the City should strongly consider pursuing site acquisition to expand its current parking lot and for future construction of a vertical mixed-use parking garage.
- Reserving public land in the right location can have a significant return on investment in terms of connectivity, and facilitate continued adaptive use of legacy structures on Pendleton that do not have on-site parking. The timing of design/construction of a future garage could be several years into the future, but this may be one of very few sites that could hold a public garage
- Locate behind Pendleton Street to draw vehicular traffic away from the Village's commercial core and help bridge the gap between Poe West and Pendleton Street
- The future parking facility could be funded partially by the Village Parking Trust Fund (See 3.2).
- Activated ground floors could be purposed for attainable local maker space, accessible community space, or a visitor center for the Village



Museum Garage, Miami's Design District
(4 levels of parking screened by 7 different art canvases)



Holmes Avenue Parking Deck, Huntsville, Alabama
(Multi-modal function, ground floor retail and decorative design)

1.8 Multi-Modal Connections to Unity Park

The Village is only one (1) mile from the soon to be completed Unity Park, but by automobile, the trip becomes two (2) plus miles. A multimodal connection from the Village to Unity Park could provide a direct route and accessibility for area residents, reducing future automobile trips on Pendleton Street through the neighborhood around Woodside Mill.

- Explore multi-modal connectivity options between the Village and Unity Park to connect these two important activity centers in the City of Greenville.



1.9. Mobility Hub

The Village has a walkable core that is conducive to alternative transportation and in time should be linked to West End and downtown. A multi modal hub could range from small low-cost tactical intervention (bike racks) to a smart integrated hub with wi-fi capability, anticipating innovation in technologies beyond scooters and e-bikes.

- A micro-mobility hub to be strategically located at the terminus point of the Village Plaza and Branwood, including bike racks and digital pedestrian information kiosk in Village Plaza; this could be installed in conjunction with a special event or First Friday artwalk to guide visitors to area galleries and would ultimately become a component of the Village wayfinding signage.
- Potential to tie-in future public parking garage and funding through Village Parking Trust Fund.



Source: Better Bike Share Partnership

1.10. Annexation Area Between City Boundaries and Brandon Mill

- Explore process and map out next steps for future annexation of properties.
- Potential annexation area located between current municipal boundary on Traction Street, south to Mason Street and west to Draper Street.





2. Activation

Activation is about elevating the interactions of people within the built environment; giving residents and visitors reasons to come to the Village to live, work, eat, shop, and participate in arts and cultural programming. Currently, there is a lack of consistent foot traffic to support a robust mix of neighborhood and destination-retail and services, particularly with respect to accessible food options and groceries. The Village Action Plan seeks to change that narrative, including short-term and long-term strategies uniquely tailored to activate sites within the Village with a mix of uses and provide basic food and other services here.

"The Village is one of a kind. And the culture is welcoming. Imagine the potential ... if we invest in expanding on the arts and cultural offerings to include musical performances and other programming that reflects the diversity here in the Village."

- Katie Hughes, Owner, Indigo Flow & Art

2.1. Temporary Use Pilot Program

Based on the survey, **87%** of respondents said live music would be a welcome addition to the Village. However, City Code (Sec. 19-4.5) currently prohibits temporary use interventions and temporary structures that may be beneficial and well-suited for the Village. The Temporary Use Pilot Program would allow for flexibility in exploring activation of vacant/underutilized sites on a daily or weekly basis without requiring full compliance with land development regulations, while being mindful of protecting nearby residential neighborhoods through hours of operation and other quality control measures.

- 12-month pilot program allowing applicant landowners temporary commercial use, food service and entertainment not ordinarily allowed under City Code.
- Operating and employment plan approved by city manager and relevant departments
- Establish maximum occupancy loads, waste management, bathrooms, hours of operation not to extend beyond 9 p.m.
- Reduced parking requirements via payment into Village Parking Trust Fund
- Street trees to be planted as condition of permit



Traction Street showing example of temporary use activation



2.2 Pop Up Market

Pop-up markets have gained traction as a productive temporary use of underutilized surface parking lots or vacant land in areas that have a limited mix of daily goods and services. Based on the survey, stakeholders are looking for more variety in accessible food options and locally-sourced goods and services. *Third Thursday at Poe West started in June 2021*

- Economic opportunities for local makers, micro retailers
- Brings enhanced foot traffic to Village to support local businesses
- Opportunity to reinforce Village's unique identity (unconventional; authentic, funky, gritty)



Source: Nahalat Binyamin Arts and Crafts Fair

2.3 Village Green/Performing Arts Venue

The Village lacks permanent programmed green space. Most green space is occurring in landscaped islands and vacant lots. As the Village grows, it is important to plan for a Village green that can be City-owned land or dedicated open space via future public-private partnership.

- Identify site for a Village Green that can act as an area for picnics, performing arts, yoga, and civic life; also can contribute additional shade trees and respite from heat during summer months.

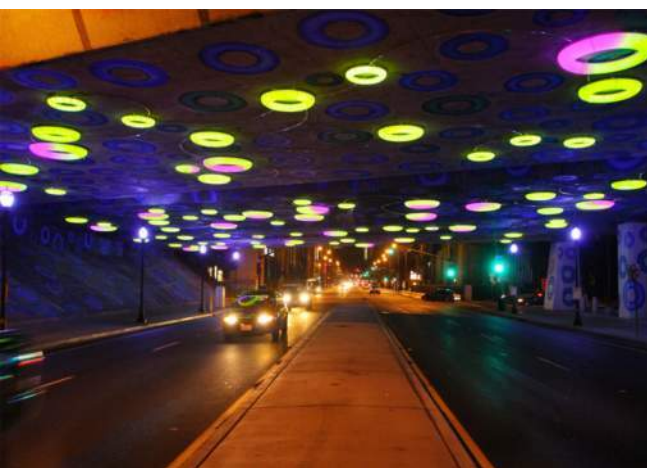
2.4 Lois Avenue Gateway Tactical Art Intervention

Today, the entrance to the Village on Lois Avenue has a sizeable grade change, tight sidewalk condition, and stark appearance discouraging people from crossing under the Norfolk Southern rail bridge. Cars and trucks speed around the corner with limited visibility.

- Originally noted as a goal in the 2014 Greenville West Side Comprehensive Plan, introducing mural art and lighting to the underpass is an opportunity for artistic intervention, and to create a more inviting gateway to the Village and pedestrian condition for area residents. This can also become an opportunity to involve the community in the design.



[Credit: Greenville West Side Comprehensive Plan, 2014]



Sensing YOU, San Jose, CA



Atlanta Beltline, Atlanta, GA



NoMa Underpass, Washington, DC

2.5 Arts & Cultural District Economic Incentives

A. Arts & Enterprise Property Tax Credit The City of Greenville has utilized a synthetic TIF model as a mechanism for attracting quality investment and projects providing public benefits like affordable housing. Contemplated in GVL2040 as a tool for encouraging the development of new affordable housing, Synthetic TIF is effectively a rebate on the City's portion of property tax increases over and above the established base year. Applications are considered and approved by City Council.

Based on the needs of the Village, a synthetic TIF would be a meaningful tool to pursue a dual strategy of maintaining affordability and mitigating displacement of artists and small businesses as the Village continues to grow.

An Arts & Enterprise Property Tax Credit Program would be made available to properties with operating arts and cultural establishments, including traditional artists as well as arts-related businesses such as photographers, art galleries, craft jewelry makers, design related studios, etc. The synthetic TIF would capture and rebate up to 50% of the amount of incremental value on an annual basis accruing for a period of 10 years, so long as the property is maintained in continuous use. The City could also consider a local preference mechanism that allows for a two-tier rebate system, with a higher rebate for existing owner-occupied properties.



Norfolk, VA

Establishing the Downtown Arts and Cultural District increases awareness and support for arts and culture in the city, which in turn supports arts and cultural venues, increases capital investment, creates jobs, and promotes Norfolk as the arts and cultural center of the region. Incentives include permit fee exemptions, micro grant opportunities, and matching grant opportunities for public art installations.

Kansas City, MO

Kansas City has implemented a tax abatement program for the Crossroads District, specifically for owners of buildings that house art-related businesses. The abatement plan provides financial assistance to qualified applicants by freezing property taxes at designated rates for properties occupied for arts and cultural uses. This program was renewed for another 15 years in 2016.



B. Arts Enterprise Business Tax Receipt Classification/Exemption. The City may consider revisiting business tax receipt fee schedules to provide local artists and arts-related establishments a discounted annual renewal fee or waiver of fee. The City should consider this tool for areas like the Village where rising real estate costs and inflation disproportionately impact working artists and small businesses.

2.6 Maintain Facade Improvement Grant Program. The City runs an effective facade improvement grant program that has resulted in roughly \$200,000 in grants allocated to exterior tenant building improvements. Grants have supported numerous buildings along Pendleton Street. The City should continue to offer facade improvement grants as new tenants come into the Village and consider expanding the program to residential neighborhoods with historic ties to the area.

2.7 Shared Waste Collection Program/In-Ground Application

Commercial tenants in the Village Center, including in buildings fronting the Village Plaza, are using small hand carts for trash collection - leaving them exposed on Branwood and Traction Streets. New technology places receptacles partially (or entirely) in-ground. Poe West has recently installed two medium size containers. The City should explore potential public-private partnerships.





3. Regulation

The third strategy area for recommendations for unlocking the potential of the Village is Regulation.

GVL2040 directs future growth into identified Nodes within the City of Greenville, and to adoption of appropriate land development regulations to implement the Future Land Use Element and shape context-appropriate growth in these areas. **The key to unlocking the potential of the Village and facilitating a vibrant node is striking a balance between redevelopment and reinvestment to serve both existing and future residents and businesses.**

The recommended approach underlying the new zoning district and companion regulatory tools is to create a cohesive framework that balances the need for new development with preservation of the authentic character and unique identity of the Village. Given the needs around housing and public infrastructure, there is a conscious effort to create the right mix of "carrots and sticks." Public and private sector investment will guide the quality of future growth. Precedent examples from other cities and districts are cited for added context.

GVL2040 CALLS FOR A NEW ZONING FRAMEWORK THAT DIRECTS GROWTH INTO NODES, INCLUDING THE FOLLOWING POLICIES:

- **Higher density growth**
- **Street and accessway layout – grid, modified grid and/or other urban patterns**
- **Mixed-use development with commercial/retail uses on the first floors of buildings that front significant streets**

Density and height should be:

- **No less than 30 residential units per acre**
- **Typical height range of 4, 5, and 6 stories**
- **Build-to-zones to create a consistent building street wall with exceptions for public spaces such as pocket parks, plazas, and outdoor s**
- **Corner lots have two front yards**
- **Parking permitted in rear and side yards only**
- **Pedestrian alleyways connecting streets and public spaces to parking areas**
- **Shared parking provisions to reduce parking requirements**
- **Inclusion of dedicated public parks and open space within developments**
- **Phasing plans for large developments**
- **Buildings that engage the street**
- **Entryways fronting streets with connecting sidewalks**
- **First floor transparency requirements**

Excerpt from GVL2040 Comprehensive Plan for Greenville, SC,
Chapter 4: Our Path Forward

3.1 Village of West Greenville Zoning Framework

- **Purpose and Intent:** A cohesive zoning district to replace the current RDV designation, appropriate to an urban mixed-use node consistent with goals, objectives and policies of GVL2040 and compatible with the Village Action Plan guiding principles of maintaining authentic character, reinforcing identity, providing for robust mix of uses and services, and planning for inclusive growth.
- **Relationship to LDRs:** Given the threats and opportunities identified in the SWOT analysis, the new zoning district should be implemented as an independent zoning district that can be adopted within the City's existing LMO and then incorporated into the City's planned overhaul given the uncertainty in timing for the citywide zoning ordinance adoption process..
 - **Precedent Example: Unity Park Neighborhood District Code**
- **Content and Standards:** The new zoning district should include permitted/conditional uses, density, intensity and open space standards, inclusive of performance standards for development bonuses, urban form and building disposition standards, parking and loading standards, including fee in lieu program via a Parking Trust Fund, and signage standards compatible with Village's established character.
- **Geographic Boundaries:** Inclusive of properties within the Village study area; potential consideration of areas north of Norfolk Southern on Lois Avenue and annexation area west of municipal boundaries. The eastern boundaries should be re-evaluated to determine if additional properties currently zoned RDV should be incorporated.



Goals, Objectives, Policies

ROBUST MIX OF USES

- **Encourage traditional neighborhood serving uses + unconventional artistic commercial uses compatible with the Village's identity.** Permitted uses should include a robust mix of traditional residential, office and commercial uses, including neighborhood-oriented grocery store, plus small-scale unconventional uses. Arts and cultural establishments should be encouraged and broadly defined to include: art studios, performance art venues, tattoo artists, salons, and other artisan maker spaces that include elements of light manufacturing, office, and retail sales and services.
 - **Restrict auto-oriented and large-scale commercial uses to protect Village character.**

RESIDENTIAL DENSITIES TO SUPPORT VIBRANT NODE

- **Encourage Residential Densities Consistent with GVL2040:** GVL2040 targets a minimum of 30 units per acre within Urban Mixed Use Nodes to create the necessary local population to support a vibrant mix of uses and pedestrian and bicycle infrastructure desired in these more urban areas. The Village zoning framework establishes base average density of 30 units per acre within the Village district boundaries. Additional density should be made available for redevelopment of V-3 Catalyst Sites through performance standards (up to 90 units per acre).
 - **Provide incentives to encourage the development of affordable housing units and live-work spaces within the Village, including density, bonus height, and parking reductions.**



Loft Construction on Buncombe Rd, Greenville, SC



The Shed, Artisanal Grocery, Healdsburg CA



Live-Work Building for Artists, Loveland, CO

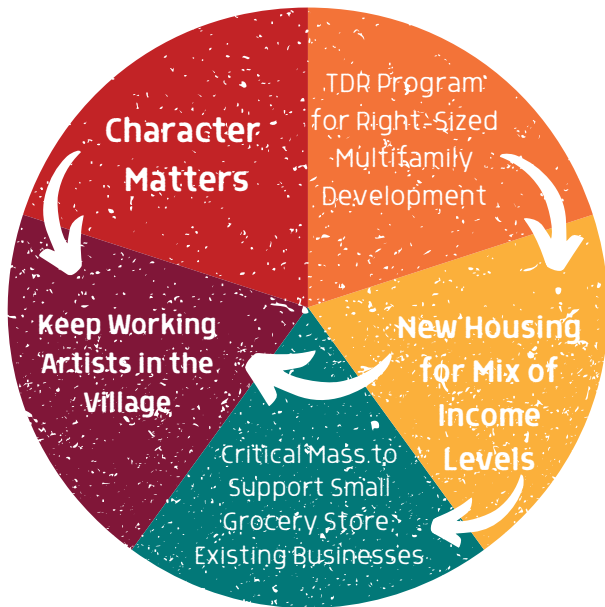
MIXED USE REDEVELOPMENT WITH ACTIVATED GROUND FLOOR RETAIL USE

- **Encourage mixed-use infill development on Catalyst sites with ground floor retail on all frontages and mix of multi-family housing at different price points that can activate and connect gaps within the urban fabric.** Frontages within the Village core should be heavily activated to help fill in the existing gaps present today that interrupt the pedestrian realm and detract from safety and connectivity to residential neighborhoods.
 - **Encourage bold art and architectural interventions on facade treatments.**

PARKING STANDARDS TAILORED TO VILLAGE CHARACTER

- **Revamp parking requirements in line with traditional walkable commercial districts to allow more flexibility to retain Legacy Structures, attract robust tenant mix, and activate pedestrian environment.** Shared use parking ratios should reflect current utilization and trip sharing numbers for the Village. Adaptive use of existing buildings should have reduced parking requirements or have option to pay fee in lieu of off-site parking, particularly for small-scale establishments and legacy structures.

The Art of Zoning - Striking a Balance



TDRS: WHAT ARE THEY? AND WHO USES THEM?

Transfer of Development Rights (TDRs) are a zoning tool that allow for shifting of density (units) from a protection zone to a receiving zone for multifamily housing.

The VOWG District anticipates TDRs as an incentive to preserve existing Legacy Structures; to be transferred to Catalyst redevelopment sites

Zoning Framework | Subdistricts

Legacy Zone. This subdistrict forms the core of the Village business district on Pendleton Street; preserving existing building typologies along a common frontage line, with additional setback requirements above the second story. Legacy Structures should be incentivized for adaptive reuse; ability to pay into a Parking Trust Fund; creative and permissive wall signs and painted signs; and an ability to transfer unused density to V-3 Catalyst Sites.

Live-Work Zone. This is a transition sub-area primarily on Mason Street and adjacent aimed at small-scale infill development to facilitate live/work opportunities for artists and maintain residential-friendly character of areas between the Village and surrounding residential neighborhoods.

Catalyst Zone. This is intended for medium and large redevelopment sites, exceeding 30,000 square feet; for mixed-use development, including multi-family residential of 4-6 stories, on-site parking, and site improvements that enhance connectivity and public realm.

CATALYST Development Capacity

* GVL2040 establishes a target minimum of 30 units/acre for Urban Mixed-Use Nodes. Densities included herein are subject to verification of adequacy of public facilities.

	BY RIGHT	BONUS	Bonus Performance Standards
Density*	30 u/acre	30 – 60 u/acre 90 u/acre max	Bonus density available through: - TDRs received from VOWG Legacy Sites (1:1) - Affordable Housing <120% AMI = (1:1) <80% AMI = (2:1)
Lot Coverage	75% max		
Setbacks	Front setback: 10 ft Above 2 nd story: 15 ft (with exceptions for lot depth) *All building facades facing a street shall be considered frontages (front setback required)		Additional setback required above 4 th story. Waiver available for projects providing Affordable Housing
Development Capacity Height	4 stories	+2 stories 6 stories max	Development sites to comply with the following additional performance standards: - Elevated streetscape improvements consistent with Pendleton Streetscape Program - Requires 1 of following: 10% of Units as Affordable Housing, or Fee in Lieu Option to be paid into Community Benefit Trust Fund, or - Dedication of Village Green or publicly accessible civic space not less than 15% of Lot Area
Additional Considerations	All projects should have restrictions on commercial and office establishments not to exceed 20,000 SF, except for grocery store		Limited to residential use above 4 th story Design review for projects exceeding 4 stories or 100,000 square feet

VILLAGE ZONING FRAMEWORK

- Preserving Authentic Character
- Facilitating Robust Mix of Traditional and Unconventional Uses
- Planning for Inclusive Growth



LEGACY | V-1

Intended for existing commercial properties fronting on Pendleton Street

Goals: (1) Facilitate preservation/reuse of existing building stock through flexibility in signage and parking (2) encourage character signage and mix of commercial/retail/artistic uses

Typology: 3 stories by right

90% lot coverage; additional setbacks above 2nd story

Ability to transfer TDRs to Catalyst Sites

Adaptive use parking flexibility/option for fee in lieu paid into Parking Trust Fund



LIVE-WORK | V-2

Intended for transition areas to residential neighborhoods on Village study area eastern boundaries

Goals: (1) Facilitate accessible and affordable live-work space for artists and artisans to help maintain their role in the community

Typology: 2 Stories by Right, 1-story bonus for Affordable Housing

70% lot coverage; on-site parking

Arts and Enterprise uses permitted on ground floor

Residential use above ground floor



CATALYST | V-3

Intended for redevelopment sites with multiple frontages

Goals: (1) Facilitate mixed-use residential development (2) provide for enhanced urban design and connectivity (3) complement existing character and Legacy Structures in the Village

Typology: 4 stories by right; 2-story bonus with performance standards

75% Lot Coverage / Setbacks above 2nd Story or 4th story

Receiving sites for Legacy TDRs

May utilize additional density up to 90 units/acre through Affordable Housing or acquisition of Legacy TDR Units

3.2. Village Parking Program & Parking Trust Fund

Parking requirements in the Village are out of sync with needs and demand for sustainable growth. **66%** of survey respondents said parking is "Broken" or "Needs Improvement." At the same time, **46%** of land area within the Village is either vacant or reserved to satisfy off-site parking requirements for tenants of buildings located on Pendleton Street. Because of the condensed land area within the Village, scattered surface lots become an obstacle to inclusive growth and critical new housing in the Village. In order to unlock future redevelopment sites and continue to promote preservation of legacy structures, the City should adopt a new parking program tailored for the Village more similar to parking in downtown Greenville, which has similar pedestrian orientation. Additionally, although **75%** of survey respondents arrive in the Village by car, **only 2%** park multiple times to visit multiple establishments, which could be justification to deviate from conventional minimum off-street parking standards, assuming independent car trips generated for each use.

The Village Parking Program should include **adaptive use parking flexibilities** for Legacy Structures and arts and cultural establishments and to allow for the **option of payment of fee in lieu of required parking through a new Village Parking Trust Fund**.

- Fee in lieu of required parking spaces to be available for legacy structures and infill development within the Village for sites that cannot accommodate on-site parking deck.
- Limited use for large scale new development (up to 25%) to monetize reductions sought by developers
- Creates new revenue stream to support mobility, including acquisition/operation of City parking facilities, ped/bike/transit improvements, wayfinding signage
- Amount to be set below per space cost of construction and adjusted on annual basis; annual admin fee charged to maintain active participation in the Trust Fund
- Should be established as companion legislation with new Village zoning district



Main Highway, Coconut Grove, FL

Coconut Grove, FL

- Parking Trust Fund allows for payment of fee in lieu of required on-site parking for commercial and residential uses in Village Center, incentivizes preservation of existing building stock and quality of pedestrian realm.
- Payment: One-time fee (\$6,000) or annual installments
- Purposes: Parking Trust Fund utilized for investing in upgrades to Miami Parking Authority facilities, wayfinding signage, and streetscape improvements
- Outcome: Has contributed to Coconut Grove's resurgence as a destination restaurant district over the past 10 years

Pasadena, CA

- The Zoning Credit Parking Program allows businesses to use existing off-site parking spaces to satisfy parking requirements
- Payment: Annual application processing fee (\$804)
- Purposes: Zoning Credit Parking Program utilized to generate meter funds allocated toward streetscape improvements and maintenance
- Outcome: Has revitalized the downtown district by encouraging adaptive reuse to create a vibrant downtown



Colorado Blvd, Old Pas, Pasadena, CA

3.3 Village Signage Regulations

The City's existing signage standards are not tailored to the identity and distinct character of the Village. Signage specifications for Pendleton Street would be generally the same as Laurens Road or other auto-oriented commercial corridors. For example, painted signs are treated as wall signs in the City Code, limited to 200 square feet in surface area and other specifications. This limits the creative expression of artists and tenants working together to create authentic signage that relates to the building materials and the Village's character and identity. That said, the public survey identified, perhaps not surprisingly, a wide array of preferences on the exact nature and boldness of sign type, size, and materials.

- Specific signage regulations should be developed, as a companion to the new zoning framework, that reflect the unique identity of the Village as Greenville's eclectic arts district.
- Signage regulations should have input from artists, tenants, and property owners.
- Allow for painted wall signs by right with greater flexibility and creative license for artists
- Allow for icon signage, including rooftop industrial signs on Catalyst Sites with heightened approval process



3.4 VOWG Community Benefit Fund

To plan for inclusive growth, cities are increasingly looking at striking a balance between redevelopment and reinvestment in existing neighborhoods and identifying tools to mitigate displacement of existing communities.

- The VOWG Community Benefit Fund will allow for new development on Catalyst Sites to access bonus height floor area in exchange for contributions at an established price per square foot and can be used as a fee in lieu of affordable housing units. The dollars received in the Community Benefit Fund will be reinvested into various community benefits and infrastructure improvements throughout the Village and adjoining West Greenville neighborhood.

WYNWOOD NORTE PUBLIC BENEFITS TRUST FUND

The Wynwood Norte Public Benefits Fund was adopted by City of Miami in March 2021 as part of legislation to implement the Wynwood Norte Community Vision Plan. The Public Benefits Fund serves as a value capture mechanism. New development can access bonus height floor area in exchange for contributions at an established price per square foot (currently \$13.66 per square foot). The dollars received into the trust fund are reinvested into existing affordable housing and community infrastructure within the NRD-2 boundaries.

3.5 Village Action Plan Implementation Committee

Given the diverse and active stakeholders present in the Village and that many of the recommendations would benefit from local input, a practical recommendation is to form an implementation committee to work together with staff to identify priorities and opportunities to advance action items forward. Committee members should include artists, small business owners, property owners, nonprofit organizations and residents living in the Village.



V. READY FOR ACTION



Ready for Action

The timing of the Village Action Plan comes about on the heels of the adoption of GVL2040, the City's blueprint for sustainable growth and improving quality of life for Greenville's residents for the next 20 years. The Village Action Plan is aligned and articulates the values of **Enterprising**, **Resourceful**, **Inclusive**, and **Courageous**.

Looking at the factors at play, the City has an opportunity with the Village Action Plan to chart a course for implementation of an authentic urban node focused around strategies for connectivity, activation, and inclusive growth to unlock the potential of the Village of West Greenville.

It's safe to say the Village is ready for action. Many of the recommendations set forth in Section IV of the Village Action Plan come directly from Village stakeholders and City officials, rolling up their collective sleeves to advance positive change in the Village. Several recommendations have found legs in recent months, including the Phase 7 Pendleton Streetscape Improvements, which will strengthen the eastern gateway anchor of the Village and enhance accessibility for area residents. Community organizations and property owners in the Village have also started exploring activation strategies like Third Thursdays at Poe West, which create new opportunities for local entrepreneurs, artists, and residents to participate in the evolution of the Village.

Section V sets forth a roadmap for implementation, identifying recommendations as short-term versus long-term, and those items which anticipate the need for intergovernmental coordination. Additionally, the **Priorities in Action** include those key recommendations ripe for immediate implementation as "**First Movers**" because they are critical to unlocking the Village's potential and/or they are items that have already gained momentum during preparation of the Village Action Plan.



Village Action Plan PRIORITIES IN ACTION



CONNECTIVITY

- WAYFINDING SIGNAGE
- PENDLETON STREETScape IMPROVEMENTS (PH 7)
- PENDLETON PROTECTED BIKE LANE



ACTIVATION

- TEMPORARY USE PILOT PROGRAM
- POP-UP MARKET
- LOIS AVENUE GATEWAY ART INTERVENTION
- VILLAGE ARTS & CULTURAL DISTRICT ECONOMIC INCENTIVES



REGULATION

- VOWG ZONING FRAMEWORK
- PARKING TRUST FUND
- SIGNAGE REGULATIONS
- VILLAGE ACTION PLAN IMPLEMENTATION COMMITTEE



YOU CAN DO IT!

READY FOR ACTION

GUIDING PRINCIPLES

-  AUTHENTIC CHARACTER
-  UNIQUE IDENTITY
-  QUALITY NEIGHBORHOOD
-  INCLUSIVE GROWTH

INTER-
GOVERNMENTAL
COOPERATION

TIMEFRAME

CONNECTIVITY			
1.1 - WAYFINDING SIGNAGE 1.2 - GATEWAY SIGNAGE 1.3 - PENDLETON STREETScape IMPROVEMENTS (PHASE VII) 1.4 - PENDLETON STREET COLORFUL CROSSWALK INTERVENTION 1.5 - VILLAGE WEST GATEWAY PEDESTRIAN ISLAND 1.6 - PENDLETON STREET PROTECTED BIKE LANES 1.7 - CENTRALIZED PUBLIC PARKING GARAGE 1.8 - UNITY PARK MULTI-MODAL CONNECTOR 1.9 - MICRO-MOBILITY HUB 1.10 - VILLAGE WEST ANNEXATION AREA	        	LONG TERM SHORT TERM SHORT TERM SHORT TERM LONG TERM LONG TERM LONG TERM LONG TERM LONG TERM	         
ACTIVATION			
2.1 - TEMPORARY USE PILOT PROGRAM 2.2 - POP-UP MARKET 2.3 - VILLAGE GREEN / PERFORMANCE ART VENUE 2.4 - LOIS AVENUE TACTICAL ART INTERVENTION 2.5 - VILLAGE ARTS & CULTURAL DISTRICT 2.5.1. ARTS ENTERPRISE PROPERTY TAX CREDIT 2.5.2. BUSINESS TAX RECEIPT ARTS ENTERPRISE EXEMPTION 2.6 - FACADE IMPROVEMENT GRANT PROGRAM 2.7 - SHARED WASTE COLLECTION PROGRAM		SHORT TERM SHORT TERM SHORT TERM SHORT TERM LONG TERM SHORT TERM SHORT TERM	        
REGULATION			
3.1 - VOWG ZONING FRAMEWORK 3.2 - VOWG PARKING TRUST FUND 3.3 - VOWG SIGNAGE REGULATIONS 3.4 - VOWG COMMUNITY BENEFIT FUND 3.5 - VILLAGE ACTION PLAN IMPLEMENTATION COMMITTEE		LONG TERM LONG TERM LONG TERM LONG TERM SHORT TERM	    

IMPLEMENTATION



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**Planning Staff Report to
Greenville Planning Commission
January 14, 2022
for the January 20, 2022 Public Hearing**

Docket Number:	SD 21-747
Applicant:	James D. Martin III, Arbor Land Design, LLC
Property Owner:	Chelsea Investments, LLC
Property Location:	111 S. Leach Street
Tax Map Number(s):	0084000500100
Acreage:	± 1.00 acres
Zoning:	RM-2, Single- & Multi-Family Residential District
Proposal:	Major subdivision for an 18 lot, single-family attached residential development
Staff Recommendation:	APPROVE, with staff comments and conditions

Applicable Sections of the City of Greenville Code of Ordinances:

Sec. 19-2.1.2(A), *Administrative and decision-making bodies, Planning commission, Powers and duties*
Sec. 19-2.2.4(C), *Common procedures, Neighborhood meetings, Neighborhood meeting required*
Sec. 19-2.3.13(A), *Land development, Subdivision*
Sec. 19-6.7.2, *Access standards*
Sec. 19-6.7.3, *Utility standards*

Project Overview:

The applicant proposes a major subdivision of 1 lot into 18 lots, for single-family attached residences, located on S. Leach Street. This development utilizes existing public roads to meet road frontage requirements and proposes no new streets. Sidewalks are existing on S. Leach Street with new sidewalks proposed along Ethel Street and Griffin Street. Common Open Space is provided in various locations within the development.

Procedural Requirements:

Pre-Application and Development Meetings

Multiple pre-application meetings were held between the applicant and City Staff with the Planning, Civil Engineering, Environmental Engineering, Traffic Engineering, and Fire departments prior to submittal of this development plan. Discussions included orientation of units towards existing streets, interior driveways and garages, setbacks, improvements to Ethel Street and Griffin Street, and provision of open space.

Neighborhood Meeting

The Applicant held a neighborhood meeting, as part of the Sterling Neighborhood Association Meeting, on October 14, 2021, as required by subsection 19-2.2.4 of the Land Management Ordinance. A list of attendees and their concerns is included in the meeting packet. A member of City Planning Staff attended this meeting.

An additional meeting between the Applicant, members of the Sterling Community, and City Staff was conducted on October 27, 2021 to discuss some of the concerns presented by the neighborhood at the October 14th meeting.

Site Information

The applicant proposes to subdivide 1 lots into 18 lots for single-family attached residences located along the east side of S. Leach Street between intersections with Griffin Street and Ethel Street, 0.15 miles south of Pendleton Street.

The property is zoned RM-2, Single- & Multi-Family Residential District and is in the Sterling Special Emphasis Neighborhood. Adjacent land uses, on all sides, include single-family detached residential. The GVL2040 Future Land Use Map shows this property as an "Urban Residential" designated area, which prescribes a "mixture of low-density and medium-density housing types, including multifamily units, single-family detached and single-family attached dwellings" at a density of 10-20 dwelling units per acre.

Staff Analysis:

Development Use, Layout and Dimensional Requirements

The RM-2, Single- & Multi-Family Residential District allows for development density up to 20 residential units per acre, with no minimum lot size for single-family attached developments. The total acreage for this project is 1.0 acres, which could allow 20 residential dwellings.

The location of units on the plan reflect compliance with minimum dimensional standards for single-family attached residences. Orientation of the front of the structures towards the existing streets, as proposed, is desirable and consistent with standards for attached residential units. Corner units should incorporate a design that presents similar architectural features on the secondary frontage as is required on the front of the units, specifically relevant to units on Lots 6 and 12.

Vehicle and Pedestrian Access

No new roadways are proposed with this application. Griffin Street will be widened with curbing on the south side of the street to the extent of the project to allow for sufficient width for one-way traffic. The apron at the Griffin Street intersection with S. Leach Street will need to be replaced due to its poor condition. Ethel Street will be widened to allow for sufficient width for two-way traffic and fire aerial access, as necessary. Curbing will be installed along the north side of Ethel Street, with the street width tapering to the existing width of the street as it approaches the eastern extent of the project. Improvements to S. Leach Street include the closure of the existing curb cut to match the existing curbing, curb lawn, and sidewalk.

A private paved drive is proposed to the interior of the site, with two-way traffic to access garages at the rear of all proposed lots, with guest parking on the east side of the property.

Existing sidewalks and curb lawn will be maintained along S. Leach Street. New 5-foot-wide sidewalks, with 2-foot curb lawns, are proposed on the development side of both Griffin Street and Ethel Street. The front entrance of each new unit will need to be connected to the existing or new sidewalks proposed along the street. The Cluster Box Unit mail kiosk will need a sidewalk connection to the Ethel Street sidewalk.

Parking

Parking requirements, for a single-family attached development, is a minimum of 2 spaces per dwelling with an additional 0.25 guest spaces per unit. Parking for individual units will be provided in garage spaces at the rear of all units. Guest parking is provided, with spaces at the east side of the development, at the termination of the private drive.

Landscaping, Buffering & Open Space

A preliminary landscape plan has not been submitted. Street tree requirements will be enforced along the existing and proposed roads. Landscape and tree protection will be addressed during the permit process.

Common open space or recreational space is required at a rate of 200 square feet per dwelling unit for single-family attached residential developments. Open space has been provided at the minimum required rate for this project.

STAFF RECOMMENDATION:

APPROVE, with staff comments and conditions

Staff Comments & Conditions

Planning Comments

- 1) Design of the single-family attached units shall meet standards consistent with the multifamily design standards and will be reviewed for compliance during building permit plan review.
- 2) Corner units shall incorporate a design that presents similar architectural features on the secondary frontage as is required on the front of the units, specifically relevant to units on Lots 6 and 12.
- 3) The front entrance of each new unit shall be connected to the existing or new sidewalks proposed along each street.
- 4) The Cluster Box Unit mail kiosk shall have a sidewalk connection to the Ethel Street sidewalk.

City Engineer Comments

Recommend approval subject to the applicant satisfying all conditions of the Civil and Environmental Engineering Divisions.

Civil Engineer Comments and Conditions

Standard Comments

- 1) The development shall meet the requirements of *Article 19-2.3.13(A) Land Development – Subdivision* of the Land Management Ordinance of the City of Greenville.
- 2) All proposed public and private improvements shall meet the requirements of Section 19-6.7 Site Development and Related Infrastructure of the City's Land Management Ordinance. The design and construction of the public and private infrastructure shall conform to all applicable federal and state regulations and the requirements of the City's design and specifications manual.
- 3) A Site Plan Permit will be required for the development detailing the demolition, grading and stormwater, utility improvements and site access.
- 4) The improvements shall comply with Chapter 11 of the International Building Code for site accessibility. Per Section 1104, a minimum of one accessible route shall be provided from each site arrival point (public transportation stops, accessible parking, accessible passenger loading zones and public streets or sidewalks) to the accessible building entrance served. Additionally, an accessible route shall be provided within the site to connect accessible buildings, facilities, elements and spaces on the site. Additionally, an accessible route shall be provided within the site to connect accessible buildings, facilities, elements and spaces on the site.
- 5) Final Plat – A Final Plat shall be recorded for the subdivision. The final plat will require a separate application and shall be submitted in conformance with the Final Plat requirements as outlined in Appendix F of the City's Administrative Manual. All required public and private infrastructure improvements shall be permitted, constructed and accepted by the respective agencies or a bond in the amount of 125% of the infrastructure costs shall be provided to the City prior to recording the final plat.

Site Specific Comments

- 6) Sidewalk on Ethel Street and Griffin Street will also need to be five-foot sidewalk and two-foot curb lawn.

- 7) City Driveway Apron - If a driveway is to be constructed the driveway apron must meet the requirements of the City of Greenville's *Residential/Commercial* Driveway Detail as shown in standard drawing 13.01/13.02.
- 8) HOA Covenants, Conditions and Restrictions – A declaration of covenants, conditions and restrictions shall be recorded with the Greenville County Register of Deeds Office establishing ownership and maintenance responsibilities of the stormwater management features, green space and other common elements of the subdivision. A reference to the declaration of covenants and restrictions shall be provided on the final plat.
- 9) Solid Waste Collection – The development shall subject to providing a solid waste management plan in accordance with Chapter 32 of the City Code of Ordinances. The plan shall indicate how the solid waste will be collected and the location and placement of any proposed dumpsters or rolled carts proposed with the plan.
- 10) Due to the utility cuts on Ethel Street and Griffin Street, these streets will need to be milled and repaved the entire length of the new development.
- 11) The driveway apron at the intersection of Griffin Street and South Leach Street will need to be removed and replaced. It is already in bad shape, but with all the traffic during construction, it will definitely need to be redone.

Environmental Engineer Comments and Conditions

- 1) Final Plat approval will require a 25' sanitary sewer easement for the sewer mains serving this site.
- 2) Wastewater – Wastewater service for the development will be subject to the following conditions:
 - a. There are existing City sewer mains available to serve this development. The developer must confirm that the existing sewer system/treatment plant has available flow from the City and ReWa by submitting a Sewer Capacity Request Form (Service Lateral Fillable Form aka PSSAR).
 - b. The wastewater permitting and acceptance process shall meet those requirements set forth in the City of Greenville Design and Specifications Manual Chapter 8.
 - c. Each building shall have a separate and direct connection to the City's sanitary sewer main.
 - d. Prior to using an existing lateral, the existing lateral must be tested to ensure that it conforms to City of Greenville performance requirements. Provide a video documenting the condition of the existing service connection prior to its reuse. A new lateral will be required if the existing lateral is in poor condition. The final Certificate of Occupancy will not be issued until the lateral is shown to be in good condition or a new lateral is installed.
 - e. Each building shall require a new service fee through ReWa.
- 3) Stormwater Management – The development is considered a larger common plan and must be performed in conformance with the City's stormwater ordinance (Article 19-7: Stormwater Management). Specifically, you will need to have a Professional Engineer prepare a non-single family site plan for the development and it will be subject to the following conditions:
 - a. A stormwater plan is required to be submitted with the non-single family site plan permit. Submit the major, minor or the soil erosion and sediment control stormwater plan as appropriate.
 - b. At a minimum, a stormwater plan should include:
 - i. Proposed layout.
 - ii. Appropriate erosion control best management practice standard details.
 - iii. A construction entrance.
 - iv. A concrete washout.
 - v. Silt fence
 - c. The plan should also show any drainage details needed to ensure the development will not adversely impact adjacent properties and will adequately control runoff from offsite.
 - a. If the proposed development creates a new impervious surface greater than or equal to 0.25 acres, water quantity will be required for the 2,10 & 25 year 24 hour storm event with no significant increase in the 100 year 24 hour storm event.
 - b. Any stormwater drainage system conveying offsite water shall be designed in compliance with the Stormwater Ordinance.

- c. Water quality treatment is required when either:
 - The proposed development has a total impervious surface area ratio of 60% or greater and disturbs 50% or more of the parcel or larger common plan over a five year period; or;
 - The proposed development creates a new impervious surface greater than or equal to 0.25 acres.
- 4) Floodplain – A portion of the subject property is not located in a FEMA floodplain as determined utilizing 2019 Flood Insurance Rate Maps.

Traffic Engineer Comments and Conditions

A traffic impact study is required for this development. Given the small net gain of units, it is anticipated that the traffic impact to the surrounding area will be minimal.

Parks & Recreation Comments

No comments

Tree and Landscape Comments and Conditions

A tree survey will be required at time of permit submission. Tree survey should include all trees on site that are greater than 6" DBH. Site plan should show all trees that will be removed due to construction. Mitigation will be required for any protected trees that are removed with either inch per inch replacement or fee-in-lieu. A landscape plan will be required showing the required street trees, parking lot trees, and replacement trees should that apply. Tree density of 1 per 2000 sf minus building footprints should be maintained for each individual lot.

Fire Department Comments and Conditions

If building heights exceed 30 feet as measured in 2018 IFC D105.1, street widths will have to be increased to meet the requirements for aerial access. At time of site plan submittal for permit, all fire access requirements and provisions of 2018 IFC D105 must be met.



city of greenville

APPLICATION FOR SUBDIVISION

Contact Planning & Development (864) 467-4476

Office Use Only:

Application# _____ Fees Paid _____
Date Received _____ Accepted By _____
Date Complete _____ App Deny Conditions _____

APPLICANT/OWNER INFORMATION

*Indicates Required Field

APPLICANT

PROPERTY OWNER

*Name:	JAMES D. MARTIN III	LITHESEA INVESTMENTS, LLC
*Title:	LANDSCAPE ARCHITECT	OWNER
*Address:	49 GREENLAND DRIVE, GREENVILLE	101 E. WASHINGTON STREET STE 400
*State:	SC	SC
*Zip:	29615	29601
*Phone:	864-444-1896	864-655-5160
*Email:	JDM3@ALD.LLC.NET	KONRADE@CORBLESTONEHOMES.COM

PROPERTY INFORMATION

*SELECT SUBDIVISION TYPE: _____ Major Preliminary (3-10 lots) ☒ Major Preliminary (11+ lots) _____ Minor (2 lots)
_____ Major Final (3-10 lots) _____ Major Final (11+ lots)
_____ Modification (Major 3+ lots) _____ Modification (Minor 2 lots)

*STREET ADDRESS 111 S. LEACH STREET, GREENVILLE, SC, 29601

*TAX MAP #(S) 0084000500100

*CURRENT ZONING DESIGNATION R-M2

*ORIGINAL APPLICATION # N/A

*SUBDIVISION PLAT # N/A

*SUBDIVISION NAME LEACH STREET COMMONS

*TOTAL ACREAGE 1.0

*# ORIGINAL LOTS 1 (5 DUPLEX UNITS) *# PROPOSED LOTS 19

INSTRUCTIONS

1. The applicant is encouraged to schedule a preapplication conference at least one (1) month prior to the scheduled submission deadline. At this time, the applicant may also be encouraged to schedule a sufficiency review one (1) to two (2) weeks prior to the scheduled submission deadline to allow staff review of the application. Call (864) 467-4476 to schedule an appointment.

PREAPPLICATION MEETING DATE Oct. 14, 2021

2. If the application includes more than one (1) parcel and/or more than one (1) owner, the applicant must provide the appropriate deed book/page references, tax parcel numbers, and owner signatures as an attachment.

3. All applications and fees (made payable to the City of Greenville) for designation as a Major Subdivision Preliminary Plat must be received by the planning and development office no later than 2:00 pm of the date reflected on the attached schedule.

- | | |
|--|--|
| A. Major Subdivision – New (3-10 lots) | \$300.00 – Preliminary Plat review, <i>public hearing required</i>
\$300.00 – Final Plat review, <i>administrative review</i> |
| B. Major Subdivision – New (11+ lots) | \$550.00 – Preliminary Plat review, <i>public hearing required</i>
\$550.00 – Final Plat review, <i>administrative review</i> |
| C. Major Subdivision – Modification | \$150.00 / \$275.00 – <i>public hearing may be required</i> |
| D. Minor Subdivision – New (2 lots) | \$300.00 – Summary Plat review, <i>administrative review</i> |
| E. Minor Subdivision – Modification | \$150.00 – <i>administrative review</i> |

4. Staff will review the application for “sufficiency” pursuant to Section 19-2.2.6, Determination of Sufficiency. If the application is deemed insufficient, staff will notify the applicant and request that the application be revised and resubmitted to address insufficiency comments. In this event, the item will be postponed to a subsequent regularly scheduled planning commission meeting.
5. Subdivision Plat format and content requirements are reflected in the Administrative Manual at Appendix ‘F’. Please refer to **Section 19-2.3.13, Land Development**, for additional information.
6. **Public Notice Requirements.** Major Subdivision applications require a planning commission public hearing. The applicant is responsible for sign posting the subject property at least 15 days (but no more than 18 days) prior to the scheduled planning commission hearing date.

Major Subdivision applications also require a developer-led neighborhood meeting, which is to be held at least eight (8) days prior to the scheduled planning commission hearing (Sec. 19-2.2.4, Neighborhood meetings). See *Instructions for Organizing a Developer-Led Neighborhood Meeting* for more information.

Upon planning commission recommendation, the application item will be scheduled for city council hearing.

(To be filled out at time of application submittal)

_____ Public Hearing signs are acknowledged as received by the applicant

_____ Instructions for Organizing a Developer-Led Neighborhood Meeting are acknowledged as received by the applicant

***APPLICANT SIGNATURE** _____

7. **Please verify that all required information is reflected on the plan(s), and submit one (1) paper copy and one (1) electronic version of the application submittal package.**

8. **Please read carefully:** The applicant and property owner affirm that all information submitted with this application; including any/all supplemental information is true and correct to the best of their knowledge and they have provided full disclosure of the relevant facts.

In addition, the applicant affirms that the applicant or someone acting on the applicant’s behalf has made a reasonable effort to determine whether a deed or other document places one or more restrictions on the property that preclude or impede the intended use and has found no record of such a restriction.

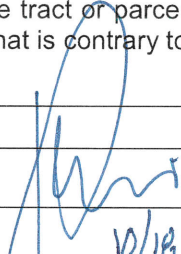
If the planning office by separate inquiry determines that such a restriction exists, it shall notify the applicant. If the applicant does not withdraw or modify the application in a timely manner, or act to have the restriction terminated or waived, then the planning office will indicate in its report to the planning commission that granting the requested change would not likely result in the benefit the applicant seeks.

***APPLICANT SIGNATURE**

DATE

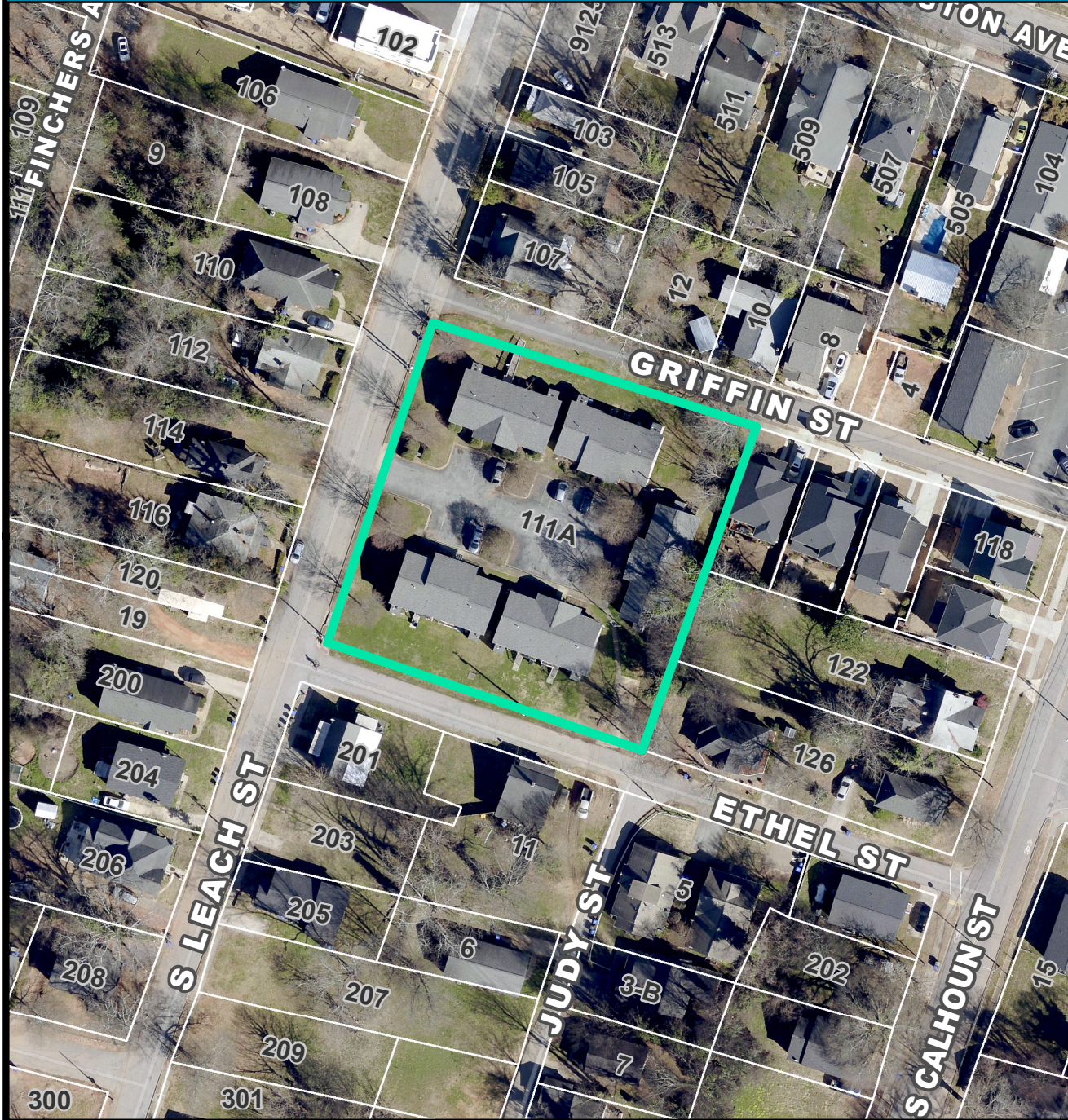
Oct 18, 2021

9. To that end, the applicant hereby affirms that the tract or parcel of land subject of the attached application is ____ or is not ☒ restricted by any recorded covenant that is contrary to, conflicts with, or prohibits the requested activity.

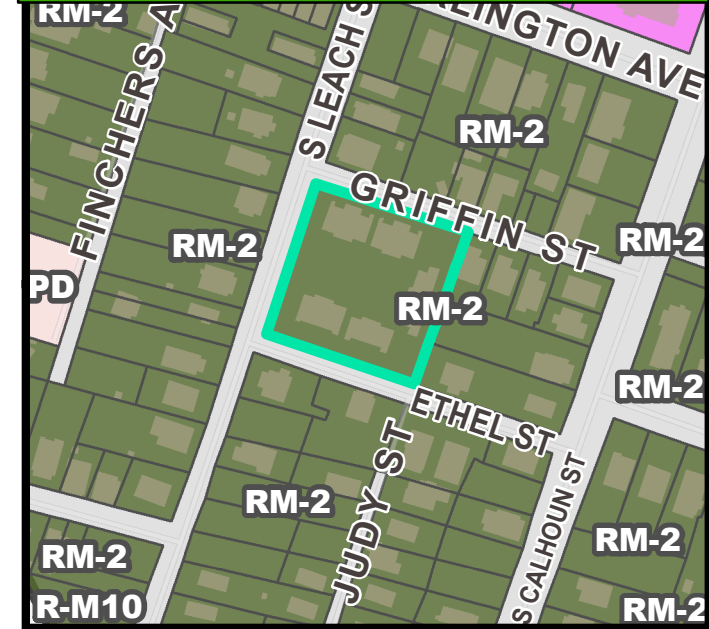
*Signatures	
Applicant	
Date	10/18/21
Property Owner/Authorized Agent	James D. Martin III
Date	10/18/21

SD-21-747 • 111 S. LEACH STREET

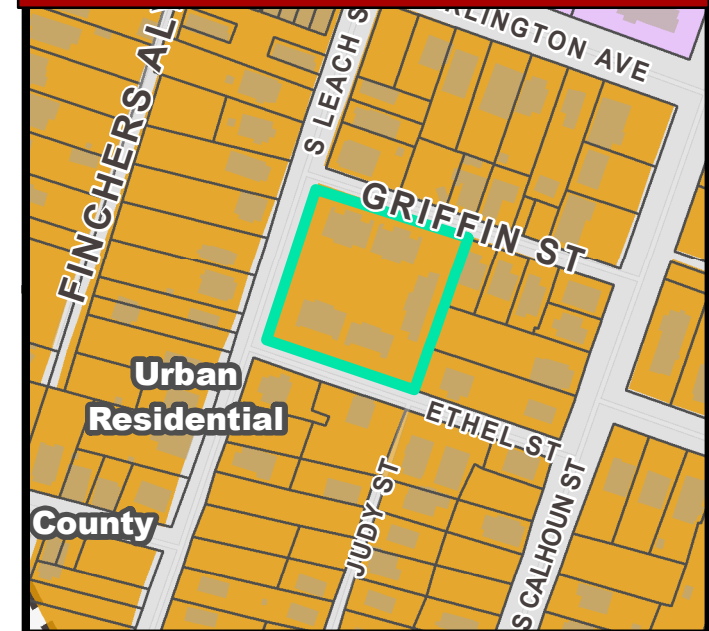
AERIAL VIEW



CURRENT ZONING

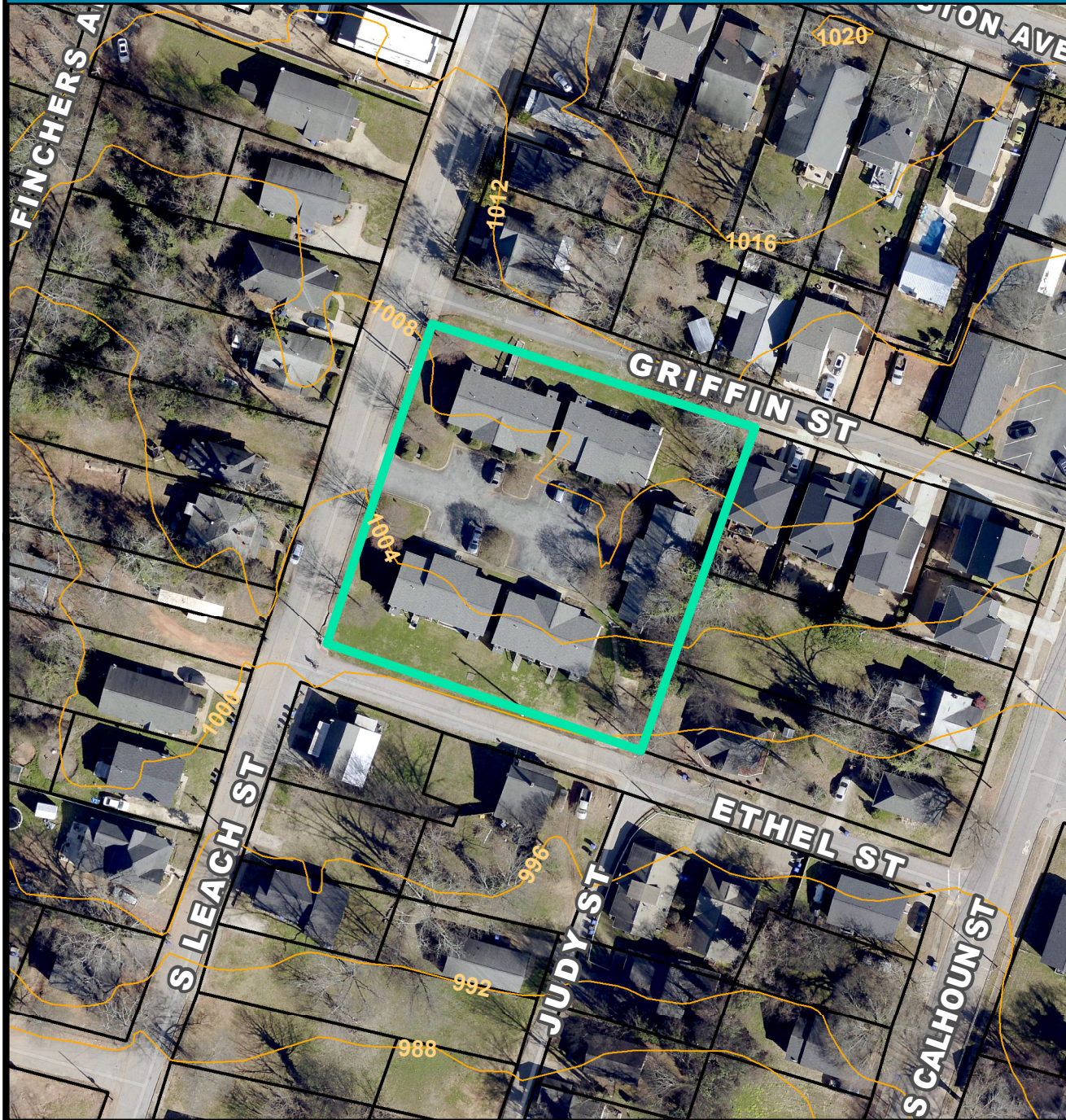


FUTURE LAND USE

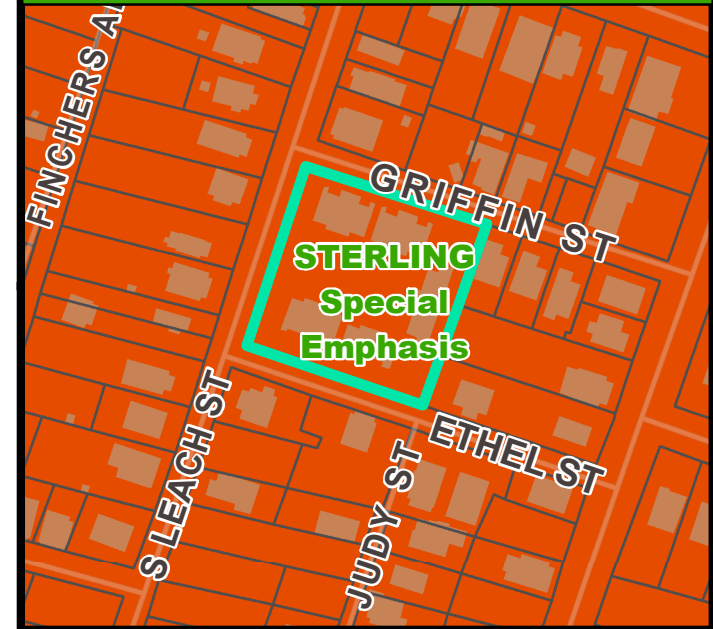


SD-21-747 • 111 S. LEACH STREET

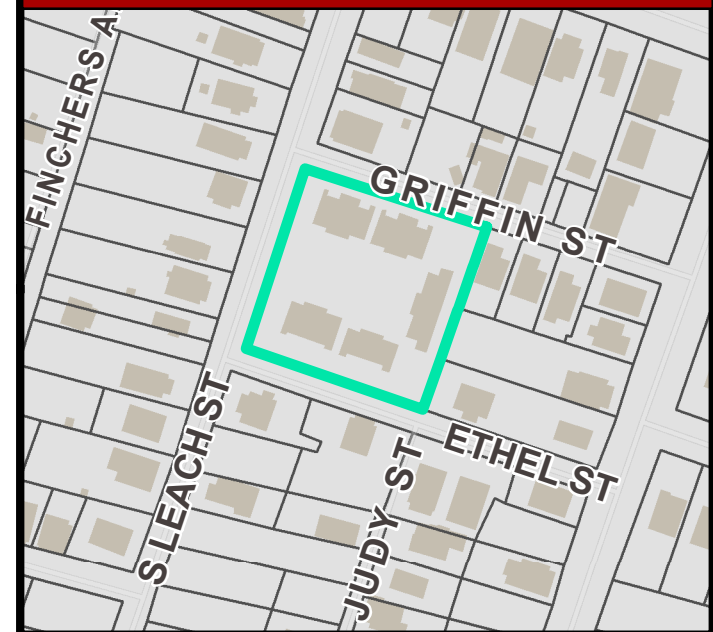
NATURAL / ENVIRONMENTAL FEATURES



SPECIAL EMPHASIS NEIGHBORHOODS



PRESERVATION OVERLAYS



Line #	Length	Direction
L1	19.29	N19° 17' 53"E

PRELIMINARY PLAN NOTES:

1. TAX MAP NUMBER 0084000500100.
2. THE PROPERTY IS ZONED R-6.
3. REFERENCE PLAT BY MATT THOMPSON (FRF), TITLED "COBBLESTONE HOMES" DATED SEPTEMBER 1, 2021.
4. POTABLE WATER BY GREENVILLE WATER SYSTEM, (EXISTING AS SHOWN)
5. ELECTRICAL POWER BY DUKE ENERGY, (OVERHEAD LINES ALONG ETHEL STREET AND SOUTH LEACH STREET)
6. NATURAL GAS BY PIEDMONT NATURAL GAS, (EXISTING AS SHOWN)
7. SANITARY SEWER COLLECTION BY CITY OF GREENVILLE
8. FIRE PROTECTION BY THE CITY OF GREENVILLE FIRE DEPARTMENT.
9. SANITATION SERVICES BY GREENVILLE PUBLIC WORKS.
10. UNDERGROUND STORM WATER SYSTEM ON-SITE WILL BE LOCATED WITHIN THE PRIVATE DRIVE.
11. TOPOGRAPHY INTERVALS ARE TWO FOOT CONTOURS PROVIDED BY FRF - SEPTEMBER 1, 2021.
12. A STORMWATER AND EROSION CONTROL PLAN WILL BE SUBMITTED AND APPROVED BY THE CITY OF GREENVILLE PRIOR TO CONSTRUCTION.
13. CURRENT PROPERTY OWNER IS LISTED AS CHELSEA INVESTMENTS, LLC AND SLIM, LLC.
14. THIS PLAT HAS BEEN PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND DOES NOT NECESSARILY INDICATE ALL ENCUMBRANCES ON THE PROPERTY.
15. ACCORDING TO THE FEMA MAP, NO FLOOD ZONE EXISTS ON SITE.
16. NO WETLANDS EXIST ON THE SUBJECT PROPERTY.
17. PRIVATE DRIVES WILL SERVE UNITS 1-18 (REAR FACING GARAGES) AND ARE NOT FOR PUBLIC ACCESS.
18. ALL EXISTING BUILDINGS, DRIVEWAYS, AND PARKING ON SITE ARE TO BE REMOVED.
19. ALL PROPERTIES WILL BE ADDRESSED OFF OF GRIFFIN STREET, SOUTH LEACH STREET, AND/OR ETHEL STREET.
20. BUILDING SETBACKS FOR LOTS ARE CONSISTENT SETBACKS ALONG GRIFFIN STREET, SOUTH LEACH STREET, AND/OR ETHEL STREET.
21. A 20' REAR SETBACK IS PROVIDED ALONG SOUTH LEACH STREET UNITS.
22. A 15' REAR SETBACK IS PROVIDED ALONG GRIFFIN STREET AND ETHEL STREET UNITS.
23. 15' SIDE SETBACK EXCEPT WHERE THE COMBINATION ADJACENT SETBACKS IS GREATER THAN 25'.



 PROPOSED WATER LINE
 PROPOSED SANITARY SEWER LINE
 PROPOSED FIRE HYDRANT
 PROPOSED SANITARY SEWER MANHOLE

SITE: 1.00 AC +/-
ZONING: RM-2
DENSITY ALLOWED: 20 UNITS/AC=20 UNITS
DENSITY PROVIDED: 18 SF ATTACHED UNITS
OPEN SPACE REQUIRED: 200 SF/UNIT=3,600 SF
OPEN SPACE PROVIDED: 3,615 SF



LEACH STREET COMMONS

COBBLESTONE HOMES	ARBOR LAND DESIGN, LLC
955 W WADE HAMPTON BLVD #11B	P.O. BOX 263
GREER, SC 29650	GREENVILLE, SC 29602
(864) 655-5160	(864) 495-4446
DEVELOPER	ENGINEER

NO. OF ACRES 1.00 MILES NEW ROAD 0.00 NO OF LOTS 18



Box 263 Greenville, S.C. 29602
Telephone: (864) 495-4446
Fax: (864) 233-6274
Email: postmaster@aldllc.net

LANDSCAPE ARCHITECTS - CIVIL ENGINEERS - LAND SURVEYORS
RECREATIONAL PLANNERS - LAND PLANNERS

DRAWN JM3	DESIGN JM3	CHECK AMA	DATE: OCTOBER 18, 2021
FILE 21157-PLM.DWG	JOB NUMBER F21157		

Neighborhood Meeting

Project Name: LEACH STREET COMMONS

Location: 2091

Time of the meeting: 6 PM

Date: OCTOBER 14 2011

Representative holding meeting: STERLING NEIGHBORHOOD ASSOCIATION (APROR LAND DESIGN)

Name	Street Address	Email
1 DOT RUSSELL	804-918-1511	POINT OF CONTACT
2 JAMES MARTIN	49 GREENLAND DRIVE	
3 AUSTIN BURN	49 GREENLAND DRIVE	
4 SUGAN BERT	8 GREEN STREET	
5 CITY OF GREENVILLE		
6 VALERIE MORGAN	810 KUNDA STREET	
7 ANASTASIA THYRUFF	9 GREEN STREET.	
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LEACH STREET COMMONS MEETING MINUTES
A PART OF THE STERLING NEIGHBORHOOD ASSOCIATION MEETING
OCTOBER 14, 2021 – 6 PM

On Thursday October 14, 2021, Arbor Land Design and Cobblestone Homes were invited to present the proposed development of 1 acre of land surrounded by Griffin Street to the north, South Leach Street to the west, and Ethel Street to the south. The property is better identified by the tax map number 0084000500100 – the owner of record is Chelsea Investments LLC and Sllim LLC. The presentation occurred during the regular monthly meeting of the Sterling Neighborhood Association. Konrad Nyblom (Cobblestone) was unable to connect to the Zoom Meeting due to technical difficulties. James Martin and Austin Allen presented the project and fielded questions and concerns from the community.

PRESENTATION

James Martin focused on the following items in the presentation of the project:

1. The property is RM-2 which allows 20 units per acre. The proposed development contains 19 single-family attached homes.
2. Access to the property is from Griffin Street to the north and Ethel Street to the south. No access from South Leach Street.
3. Private drives will provide access to the rear of homes facing South Leach Street and Griffin Street
4. Homes facing Ethel Street will have driveways onto Ethel Street.
5. Drives on Ethel Street will be ribbon drives.
6. Garages facing Ethel Street will be designed in such a way that they do not appear to be garages.
7. Although the site slopes from north to south, the developer will most likely need a 3rd floor of living space.
8. Unlike the units on Arlington Avenue, these units will not be Federal Style with a flat roof. The Roof will have hips, gables, and dormers so that the 3rd floor does not appear to be a 3rd floor.
9. There will be no on street parking, guest parking is along internal private drives.
10. Garbage collection will be in the same manner as the collection in the area.
11. Cluster Box Units will be provided.
12. Open space exceeding 3,800 square feet will be provided.

QUESTIONS/COMMENTS

1. There was concern about Griffin Street to the north. Griffin Street is a one-way street that has been improved partially. Mr. Martin indicated that Griffin Street would be improved between the western edge of the property and Leach Street. Mr. Martin indicated that the developer would explore eliminating the drive connection to Griffin Street.
2. There was likewise concern that Ethel Street was not wide enough to handle additional traffic. Mr. Martin indicated that Ethel Street would be improved from the western edge of the property to Leach Street. Mr. Martin indicated at this time that South Leach Street would not be improved but was not in need of improvement. Mr. Martin indicated that the current access would be eliminated to the site and new curb/gutter and sidewalk installed.
3. Dot Russell was concerned with the number of units located on the site. It is currently 10 and would go to 19.
4. Dot Russell and several other residents indicated concern over the displacement of the existing residents. Mr. Martin indicated that the current owner held the responsibility for relocating the

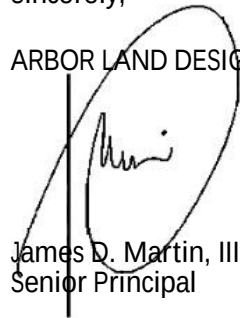
displaced neighbors and that the developer would purchase the property after the relocation of the residents. Note: A second meeting was set for October 27th to discuss this matter.

5. The neighbors were concerned about the height of the proposed homes. Mr. Martin indicated that the roof would have hips, gables, and dormers so that the 3rd floor does not appear to be a 3rd floor. The neighbor indicated that the “straight up and down” was the issue and that this solution would work.
6. The most significant discussion centered on the current residents and the need for affordable housing in the community.
7. Konrad’s availability was questioned and led to a long discussion. That discussion was resolved after the meeting by setting an additional meeting on October 27th.

Please accept these as the minutes for the meeting. Members of the Sterling Neighborhood Association, the City of Greenville, and other presenters were in attendance.

Sincerely,

ARBOR LAND DESIGN LLC

A handwritten signature in black ink, appearing to read "J. Martin", is written over a vertical line. The signature is enclosed within a large, hand-drawn oval.

James D. Martin, III, RLA
Senior Principal



**Planning Staff Report to
Greenville Planning Commission
January 14, 2022
for the January 20, 2022 Public Hearing**

Docket Number:	AX-1-2022
Applicant:	James H. Brown
Property Owners:	J. Haskell Brown and Sandra M Brown
Property Location:	2901 E. North Street
Tax Map Number:	0277000200701
Acreage:	0.842 acre Right-of-way area: 0.424 acre Total area (to be annexed): 1.266 acres
Existing Zoning:	R-20, Single-family residential district (Greenville County)
Proposed Zoning:	R-9, Single-family residential district (City of Greenville)
Adjacent Zoning:	N: R-20, Single-family residential district (Greenville County) E: R-20, Single-family residential district (Greenville County) S: RM-2 Single-family and multi-family district (City of Greenville) W: R-20, Single-family residential district (Greenville County)
District:	Council District 1
Staff Recommendation:	Recommend Approval for Annexation, Rezone, and Future Land Use Designation of Sub-urban Residential

Applicable Sections of the City of Greenville Code of Ordinances:

Sec. 2-372 Function, Powers, and Duties of the Planning Commission
Sec 19-1.3 Purpose and Intent
Sec.19-2.1.2 (A) (2) (b) Zoning District Map Amendments (Rezoning)
Sec.19-2.1.2 (A) (10) Annexation of properties into the corporate limits
Sec.19-2.3.2 (E) (2) Amendments to Zoning District Map
Sec.19-3.2 District Descriptions

Project Overview:

The applicant has petitioned the City of Greenville to annex an approximately 0.842 acre of lot area into the Greenville city limits and to zone it R-9, Single-family residential district. Approximately 0.424 acre of street right-of-way will also be annexed.

Procedural Requirements:

Pre-Application and Development Meetings

A pre-application meeting was held between the applicant and Planning staff prior to submittal of this annexation application.

Neighborhood Meeting

The applicant conducted a neighborhood meeting on November 29, 2021, as required by subsection 19-2.2.4 of the Land Management Ordinance. The meeting attendance record and meeting notes are attached to the packet.

Site Information

The acreage is located on E. North Street and is currently R-20, Single-family residential district in Greenville County. The property is not located in any Special Emphasis Neighborhood within Greenville County.

The applicant requests to annex the property into the City with a R-9 zoning designation. The R-9 zone is intended to preserve and encourage single-family residential development with a minimum lot size of 9,000 square feet. Complementary uses customarily found in residential districts, such as community recreation facilities, places of worship, and schools, may be allowed.

Staff Analysis:

Staff offers the following responses to the standards to rezone found at Section 19-2.3.2 (E) (2), *Amendments to Zoning District Map*.

1. Consistent with the Comprehensive Plan: The Future Land Use Map (FLUM), associated with the GVL2040 Comprehensive Plan, designates a portion of the subject area for annexation as “*Sub-urban residential*.” Sub-urban residential is described as land within this designation is largely comprised of single-family homes, with a range of 5-8 housing units per acre. Lots are generally larger than what is in Urban Residential areas and many streets do not have sidewalks or streetlights. Complementary uses customarily found in residential districts, such as community recreation facilities, places of worship, and schools, may be allowed in areas adjacent to Corridors and Urban Nodes.
2. Changed conditions since the original designation: The process of annexation requires the property be assigned a City zoning designation.
3. Addresses a demonstrated community need: The R-9 zoning designation allows for an appropriate range of uses and dwelling unit density for the area.
4. Compatible with surrounding uses: Surrounding uses include a mix of similar zoned properties with similar uses. The proposed R-9 zoning classification will allow for development that is compatible with the surrounding properties.
5. Promotes logical development pattern: The proposed zoning designation provides uses that are logical to the future development pattern of the area.
6. Will not result in “strip” or ribbon commercial development: The proposed zoning does not include commercial uses.
7. Will not create an isolated zoning district: Adjacent properties in the City are zoned RM-2, OD, and C-2. The adjacent County properties are zoned R-20. As the City has not previously annexed any of the large lot residential properties on the north side of E. North Street, there is currently no City R-9 in the area. However, if the City annexes further into the corresponding neighborhood, the same

recommended zoning district of R-9 is to be expected. The City's R-9 designation is the closest single-family residential designation to the County's R-20 designation.

8. Surrounding property values: It is not anticipated that the proposed annexation and rezone will result in significant adverse impacts on the property values of adjacent lands. The R-9 zoning designation is compatible with other properties in the area.
9. Effect on natural environment: The proposed zoning amendment is not anticipated to have any adverse impacts on the natural environment. All future development is required to comply with environmental standards.
10. Public facilities and services: Public facilities and services are available for this site. The property is currently in the Wade Hampton Fire District (WHFD) and will remain within it upon annexation per the City's Intergovernmental Agreement with WHFD. Metro Sewer District is the primary sanitary sewer provider for the property. Greenville Water maintains an 8-inch, looped water main on E. North Street and 6" main on Biscayne Drive capable to serve the property.

STAFF RECOMMENDATION:

APPROVE, with staff comments

Staff Comments

Planning Comments

Recommend: Approve w/ Comments

Comments:

1. Staff recommends that the Future Land Use designation be "*Sub-urban residential*," in accordance with the Greenville 2040 Comprehensive Plan.

Traffic Engineer Comments

Recommend: Approve

Comments:

No comments.

Environmental Engineer Comments

Recommend: Approve

Comments:

Approved with no comments.

Civil Engineer Comments

Recommend: Approve

Comments:

Approved with no comments.

Fire Department Comments

Recommend: Approve

Parks & Recreation Comments**Comments:**

No comment

Tree and Landscape Comments

Recommend: Approve w/ Comments

Comments:

Any removal of protected trees, those 6-inch DBH or greater, will be subject to mitigation through either replacement at an inch-for-inch rate of at least 3-inch caliper canopy trees or a fee-in-lieu of \$50 per inch removed. Any removed heritage trees, those 20-inch DBH in the setback or 40-inch DBH anywhere on site, will be subject to a fine of \$45 per inch removed and mitigation. Any development will be subject to providing a landscape plan to include applicable landscaping. A mitigation plan, if applicable, and landscape plan showing all requirements should be submitted with any site disturbance or building permits.



CITY OF GREENVILLE
206 South Main Street
P.O. Box 2207
Greenville, SC 29602

100 Percent
PETITION FOR ANNEXATION

The person(s) whose signatures appear below are freeholders owning real estate in an area which is contiguous to the City of Greenville and which is proposed to be annexed into the City. In general, the area can be described as 2901 E. NORTH ST. and consisting of approximately .8 acres _____ (street number). That area is identified more particularly by the tax map parcel number(s) provided below and the Annexation Plat which is being provided to the City of Greenville Planning Commission in conjunction with this petition. Any and all plats are incorporated by reference as a description of the area. By their signatures, the freeholder(s) petition(s) the City Council of the City of Greenville to annex the entire area shown as being annexed on the plats, and such additional acreage within the outer boundaries of the area as the owners through their agent may designate.

This petition is submitted under the provisions of S.C. Code ' 5-3-150, authorizing the City Council to annex an area when presented with a petition signed by all persons owning real property in the area proposed to be annexed. This petition and all signatures thereto shall be open for public inspection on demand at the City Hall, located at the address set forth above. All zoning processes will be in accordance with state statutes and city ordinance otherwise existing.

Property Owner(s)	Address/ Tax Map Number	Signature	Date
J. Haskell Brown	0 277000200701	x J. Haskell Brown mo	x NOV 4/21
Sandra M. Brown	0 277000200701	x Sandra M. Brown	11-4-21



city of greenville

APPLICATION FOR ANNEXATION

Planning Department (864) 467-4476

Office Use Only:

Application# _____ Fees Paid _____

Date Received _____ Accepted By _____

Date Complete _____ App Deny Conditions _____

APPLICANT/OWNER INFORMATION

*Indicates Required Field

Clear Form

APPLICANT

PROPERTY OWNER

*Name:	James H Brown	J. Haskell Brown & Sandra M. Brown
*Title:	Son	Owners
*Address:	101 Reedy View Dr #616	6 Chateau Dr
*State:	SC	SC
*Zip:	29601	29615
*Phone:	864.303.3333	
*Email:	jimhbrownii@gmail.com	

LEGAL REPRESENTATIVE (if applicable)

Name:	
Title:	
Address:	
Phone:	
Email:	

PROPERTY INFORMATION

*TAX MAP #(S) 0277000200701

*TOTAL ACREAGE .8 acres

*COUNCIL DISTRICT district 1

*CURRENT ZONING DESIGNATION (County) R-20

*PROPOSED ZONING DESIGNATION (City) R-9

*DEED RESTRICTIONS Detached single-family dwellings

*FRONTAGE ON PUBLIC ROAD (feet) 227'

*WATER DISTRICT Greenville Water

*SEWER DISTRICT Wade Hampton

*FIRE DISTRICT Wade Hampton

*SANIATION DISTRICT GGSC

*OVERLAY DISTRICT/SPECIAL EMPHASIS NEIGHBORHOOD

TYPE OF ANNEXATION

*Please select one (1) type:



100%



75%



25%

For 100% and 75% Annexations, please Include the corresponding **Annexation Petition** with the application submittal.

CITY OF GREENVILLE APPLICATION FOR ANNEXATION

Rev. 9/29/2021

PAGE 1 OF 4

INSTRUCTIONS

1. The applicant is strongly encouraged to schedule a preapplication conference with Economic Development prior to the scheduled submission deadline. At this time, the applicant may also be encouraged to schedule a sufficiency review two (2) weeks prior to the scheduled submission deadline to allow staff review of the application. Call (864) 467-4476 to schedule an appointment.
2. Submit an electronic copy of the **draft plat** signed by a registered surveyor **and legal description** (see requirements below) **2 weeks prior to the application filing deadline**. Failure to do so may result in delay of the application. The draft plat can be sent to jhamlett@greenvillesc.gov.
3. If the application includes more than one (1) parcel and/or more than one (1) owner, the applicant must provide the appropriate deed book/page references, tax parcel numbers, and owner signatures as an attachment.
4. If the application is to annex a portion of a property as otherwise described by deed, a survey of the parcel reflecting the requested annexation by courses and distances must be included in the submittal package.
5. All applications and fees (made payable to the City of Greenville) for Annexation must be received by the planning and development office **no later than 2:00 pm** of the date reflected on the attached schedule.

A. Annexation

\$550.00 – public hearing required

6. Staff will review the application for "sufficiency" pursuant to Section 19-2.2.6, Determination of Sufficiency. If the application is deemed insufficient, staff will notify the applicant and request that the application be revised and resubmitted to address insufficiency comments. In this event, the item will be postponed to a subsequent regularly scheduled planning commission meeting.
7. Please refer to ***Sections 19-1.9, Annexations*** for additional information.
8. **Public Notice Requirements.** Annexation applications require a planning commission public hearing. The applicant is responsible for sign posting the subject property **at least 15 days (but no more than 18 days) prior** to the scheduled planning commission hearing date.

Annexation applications also require a neighborhood meeting, which is to be held **at least eight (8) days prior** to the scheduled planning commission hearing (Sec. 19-2.2.4, Neighborhood meetings). See *Instructions for Organizing a Developer-Led Neighborhood Meeting* for more information.

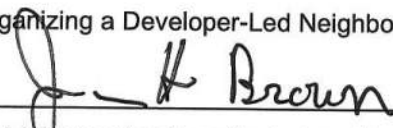
Upon planning commission recommendation, the application item will be scheduled for city council hearing.

(To be filled out at time of application submittal)

☒ Public Hearing signs are acknowledged as received by the applicant

☒ Instructions for Organizing a Developer-Led Neighborhood Meeting are acknowledged as received by the applicant

***APPLICANT SIGNATURE**



9. **Please verify that all required information is reflected on the application, and submit one (1) paper copy and one (1) electronic version of the application submittal package.**
10. **Please read carefully:** The applicant and property owner affirm that all information submitted with this application; including any/all supplemental information is true and correct to the best of their knowledge and they have provided full disclosure of the relevant facts.

In addition, the applicant affirms that the applicant or someone acting on the applicant's behalf has made a reasonable effort to determine whether a deed or other document places one or more restrictions on the property that preclude or impede the intended use and has found no record of such a restriction.

If the planning office by separate inquiry determines that such a restriction exists, it shall notify the applicant. If the applicant does not withdraw or modify the application in a timely manner, or act to have the restriction terminated or waived, then the planning office will indicate in its report to the planning commission that granting the requested change would not likely result in the benefit the applicant seeks.

Furthermore, my signature (applicant) indicates that I understand and consent that this matter will appear before the Planning Commission for consideration and that any recommendation, for approval or denial, by the Planning

CITY OF GREENVILLE APPLICATION FOR ANNEXATION

Commission will be presented to the City Council at their next regularly scheduled meeting to be held on the fourth Monday of the month following the Planning Commission meeting in which the matter was heard.

Jan H. Brown
4 November 2021

*APPLICANT SIGNATURE

DATE

11. To that end, the applicant hereby affirms that the tract or parcel of land subject of the attached application is ___ or is not X restricted by any recorded covenant that is contrary to, conflicts with, or prohibits the requested activity.

*Signatures	
Applicant	<u>Jan H. Brown</u>
Date	<u>4 November 2021</u>
Property Owner/Authorized Agent	<u>X J. Hamlett Brown & Sandra M. Brown</u>
Date	<u>4 November 2021</u>

APPLICATION REQUIREMENTS CHECKLIST

- ☐ **Draft plat** signed by a registered surveyor and legal description (see requirements below) submitted **2 weeks prior to the application filing deadline**. Failure to do so may result in delay of the application. The draft plat can be sent to jhamlett@greenvillesc.gov.
- o A **draft plat** of the area to be annexed showing the following (Please see ANNEXATION PLAT REQUIREMENTS for more details):
 - Metes and bounds of the entire proposed annexation, showing the POB (Point of Beginning for annexation)
 - Any adjacent contiguous right-of-way not already within the corporate limits of the City. (The City reserves the right to exclude certain right-of-ways)
 - Label and show all contiguous corporate limit lines, including existing and new City Limit lines.
 - Acreage of Real Property, right-of-ways, and total acreage in a table format.
 - Easements
 - Private roads and drives (clearly marked as such)
 - Tax map numbers and owners for all lots to be annexed and adjacent lots
 - o A **legal description** including metes and bounds of the property to be annexed and a separate description of the metes and bounds of any right-of-way to be annexed. The legal description must be included in a document separate from the annexation plat.
- ☐ **A completed application form.**
- ☐ **Annexation petition** signed by the required number of freeholders (owners of real property) or a representative with clear authority to sign such a petition for annexation. If the owner is a corporation, the petition must be signed by a duly authorized officer of the corporation. Corporate minutes of a resolution of the Board of Directors should accompany the petition. The signature of a real estate agent, broker or developer without specific authority to sign as to annexation is not acceptable. A petition with less than all freeholders signing is not acceptable for filing without a written statement from the City Attorney that the petition appears on its face to comply with state law regulating such petitions.
- ☐ **A letter of intent** (reason for annexation).
- ☐ The **fee** for the requested zoning classification as set by the City's fee schedule. (These fees are used to pay for administrative and advertising expenses incurred as a result of the petition).
 - ☐ **Three (3) copies of a recordable Final Plat and a true to scale electronic copy of the Final plat signed by the registered surveyor** must be provided with all requested revisions with the application submittal.

ANNEXATION PLAT REQUIREMENTS

1. Drawing size shall be no smaller than "C" size (17" x 22") and no larger than "E" size (34" x 44").
2. The entire boundary of the proposed annexation shall be contained on "1" (one) drawing.
3. The title of the Annexation shall be noted in the title block as "Annexation Plat for (Show the Owner of Record) and

(Project Site Name, if known).

4. A location map shall be shown in the upper right hand side of the drawing that shows the location of the proposed annexation and the surrounding streets.
5. Drawing shall show the dates of the survey, scale in feet, and stamped by the engineer or surveyor with registration number.
6. The "Existing City Limit Line" shall be shown on the drawing in a distinguishable line symbol that is easily recognized and in a different line symbol than the "Existing City Limit Line". This line shall be noted on the drawing as "New City Limit Line".
7. The "New City Limit Line" shall be shown on the drawing in a distinguishable line symbol that is easily recognized and in a different line symbol than the "Existing City Limit Line." This line shall be noted as "New City Limit Line".
8. The proposed annexation shall be contiguous to the "Existing City Limit Line".
9. When directed by City staff, you may be required to include/capture adjacent street Right-of-Way as part of the annexation. When you are required to annex certain street right-of-ways that are adjacent to or contained within the proposed annexation, these areas, in square feet and acres, shall be noted on the drawing within these boundaries.
10. The area, in square feet and acres, of the real property that is to be annexed shall be noted on the drawing within these boundaries.
11. The Tax Parcels contained within the boundary of the proposed annexation shall be shown and their Tax Parcel ID numbers noted on the drawing. Also, all adjacent parcels shall be shown and labeled with their Tax Parcel ID.
12. The bearings and distances around the outer boundary of the proposed annexation shall be shown on the drawing. The linear dimensions shall be expressed in feet and decimals of a foot. All angular measurements shall be expressed in bearings to the nearest minute. Curves, that have been surveyed, shall be defined on the drawing by a radius, central angle, tangent, arc and chord bearings and chord distances. Areas of the annexation that have not been surveyed, such as adjacent street right-of-way, may be noted as "more or less" or "+-". The "total area" of the annexation will consist of the area of real property and any street right-of-way contained in the annexation. These areas shall be noted in a "text box" on the drawing titled "Area of Annexation". The area of real property shall be noted and the area of any street right-of-ways shall be noted and then the "total area" noted.
13. Do not "traverse" the "New City Limit Line" along the center of a street.
14. A Legal Description of the annexation shall be written that traverses the outer boundary of the annexation. The "POB" (Point of Beginning) shall be noted on the drawing. When preparing the Legal Description, note any time that the traverse goes "along the Existing City Limit Line".
15. If the annexation contains any existing structures, the present street address for these structures shall be noted within the corresponding parcel/structure.
16. The proposed annexation will be reviewed by City Staff and any corrections that are needed to the annexation plat will be noted and relayed to the Engineer, Surveyor, and/or owner,

IMPORTANT NOTE:

Prior to applying for annexation, contact the City of Greenville's Engineering Department to verify the "availability" of utilities such as sanitary sewer and water.



CITY OF GREENVILLE
206 South Main Street
P.O. Box 2207
Greenville, SC 29602

CERTIFICATION OF PETITION SIGNATURE

Sandra M. Brown

I, [here put name], have this 4th day of November, 2021,
certified my signature previously given and dated for the annexation into the City of Greenville of
one (1) or more parcels in which I have ownership interest by initialing a copy of the signature as
previously given and dated. The parcel tax map number(s) is(are) as follows:

0 277 000 200 701

X Sandra M. Brown
Signature

Sandra M. Brown
Please Print Name



CITY OF GREENVILLE
206 South Main Street
P.O. Box 2207
Greenville, SC 29602

CERTIFICATION OF PETITION SIGNATURE

J. Haskell Brown

I, [here put name], have this 4th day of November, 2021,
certified my signature previously given and dated for the annexation into the City of Greenville of
one (1) or more parcels in which I have ownership interest by initialing a copy of the signature as
previously given and dated. The parcel tax map number(s) is(are) as follows:

0277000200701

J. Haskell Brown
Signature

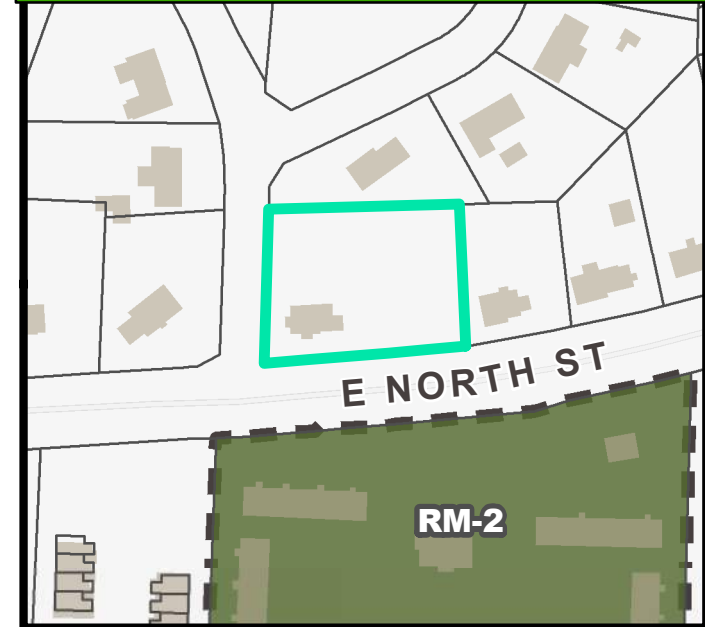
J Haskell Brown
Please Print Name

AX-1-2022 • 2901 E. NORTH STREET

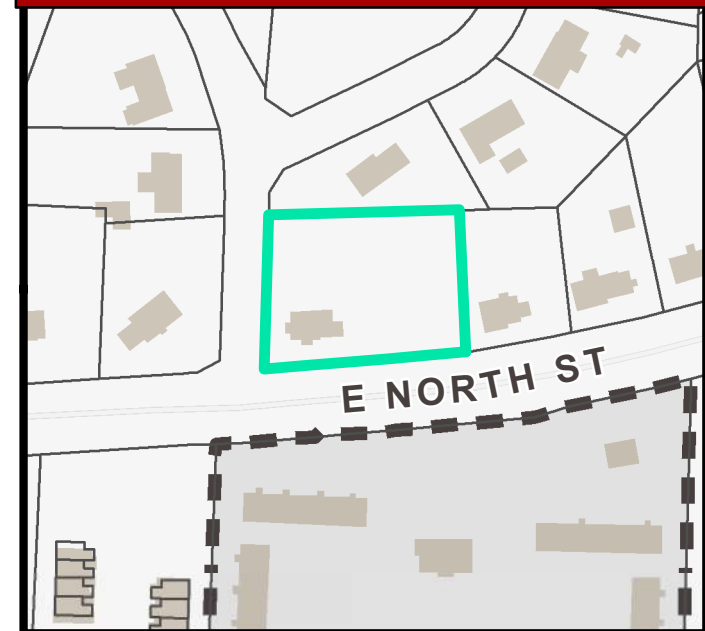
AERIAL VIEW



CURRENT ZONING

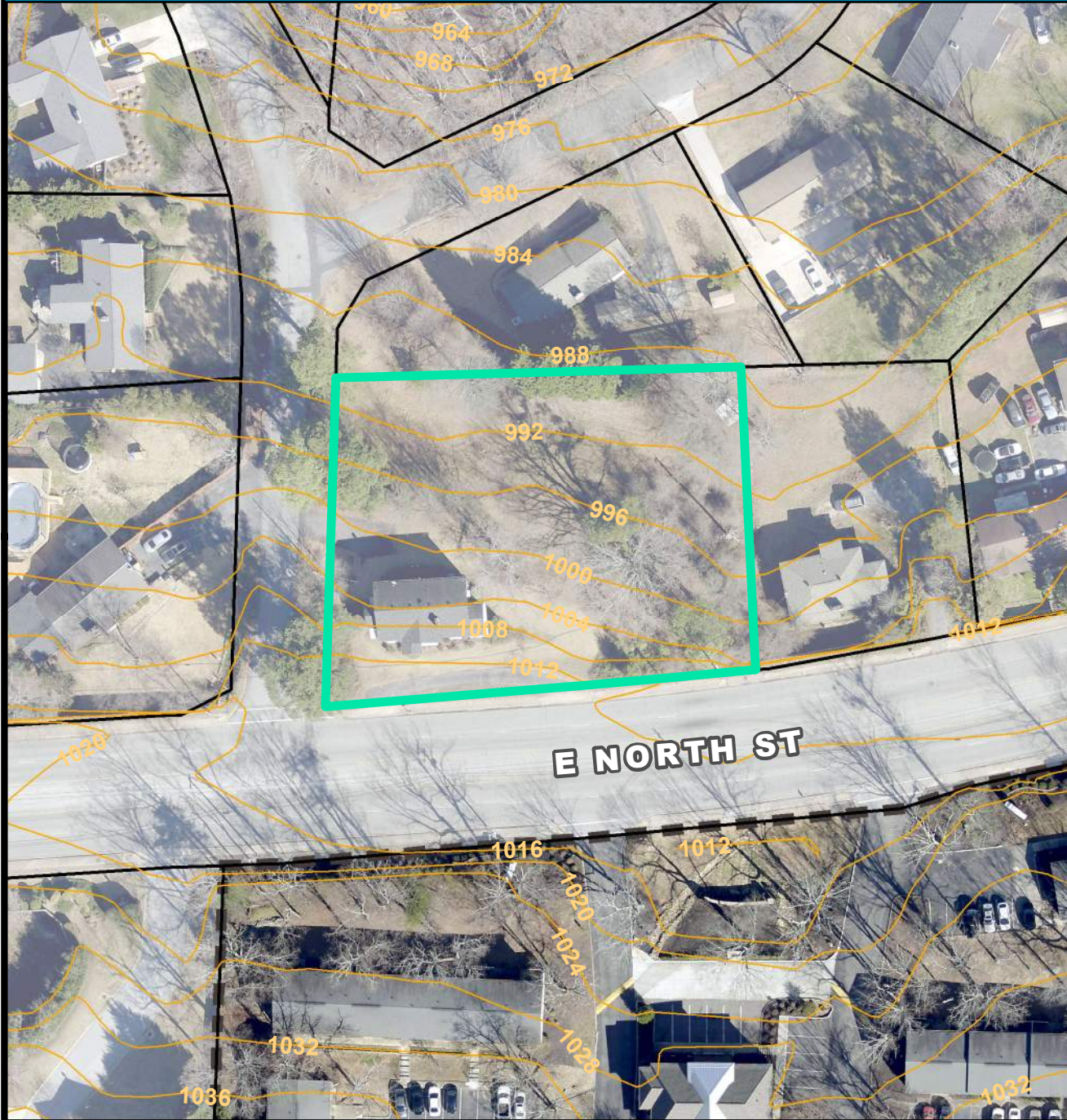


FUTURE LAND USE

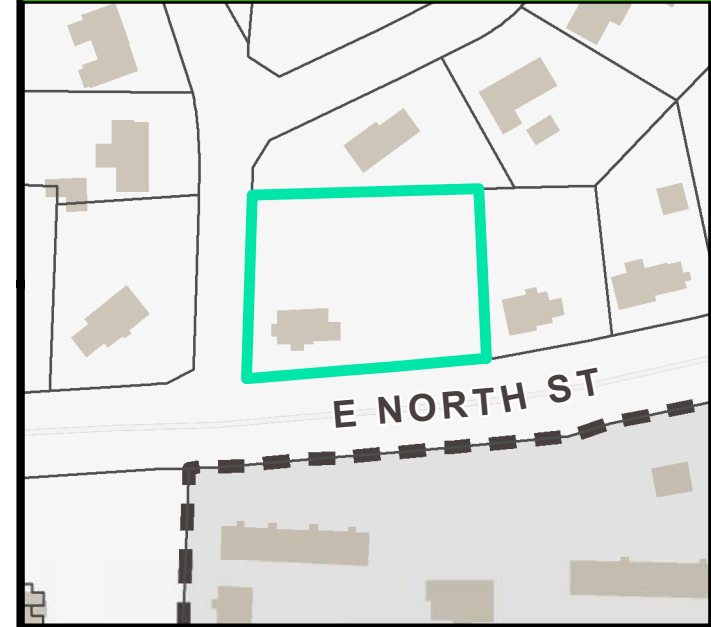


AX-1-2022 • 2901 E. NORTH STREET

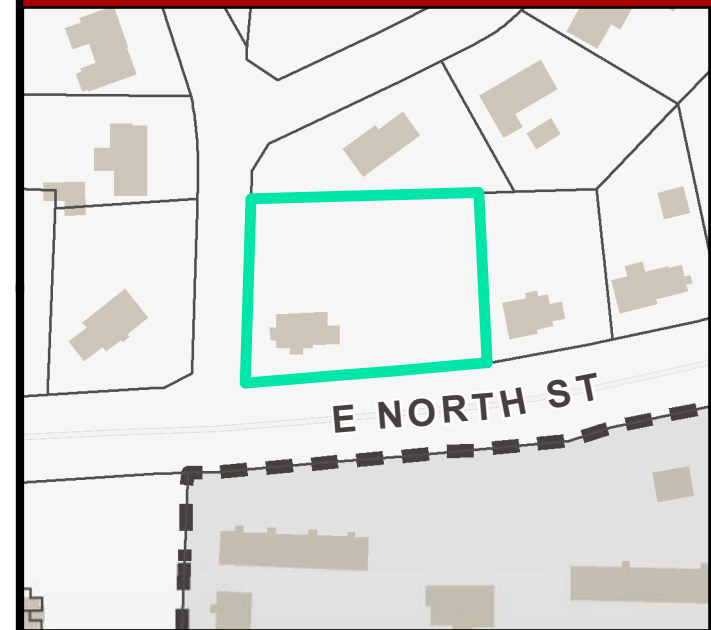
NATURAL / ENVIRONMENTAL FEATURES



SPECIAL EMPHASIS NEIGHBORHOODS



PRESERVATION OVERLAYS



0277000200820

0277000200821

0277000200822

0277000227200

0277000227300

- UNINCORPORATED GREENVILLE COUNTY -

BISCAYNE DR

0277000200701

REAL PROPERTY:
36,679.563 SQFT
0.842 ACRES

0277000227100

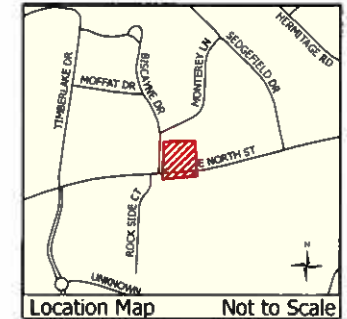
E NORTH ST

RIGHT OF WAY:
18,448.019 SQFT
0.424 ACRES

- CITY OF GREENVILLE -

0279000100504

0279000100505



ANNEXATION MAP

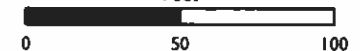
for
2901 East North Street
Tax Map No.
0277000200701
into the
City of Greenville

- Greenville City Limits
- Total Annexation Area

Total Area of Annexation:
55,127.582 Sq.Ft.
Total Acreage of Annexation:
1.266 Acres
Existing County Zoning: **R-20**
Proposed City Zoning: **R-9**
City Council District: **1**
Census Tract: **18.05 and 18.09**



Feet



This map is a product of the City of Greenville, SC and was compiled from plats and other available information. No actual field survey was performed. Reasonable efforts have been made to ensure the accuracy of this map. The City of Greenville expressly disclaims any responsibility or liability with regard to the use of this map.
Copyright: The City of Greenville, SC

11/23/21
City Attorney Date

2008031915 PLAT/LG
1 PG
Book: PLL 1063 Page: 99-99
Apr. 1 04, 2008 12:58:43
Rec: \$10.00 Cnty Tax: \$0.00 State Tax: \$0.00
FILED IN GREENVILLE COUNTY, SC

THIS PLAT IS NOT A SUBDIVISION
AS DEFINED BY THE GREENVILLE
COUNTY LAND DEVELOPMENT REGULATIONS
4/4/08 SKIP LIMBAKER
Date Authorized Representative of
Greenville County Planning Commission

TAX #0277000227200
LINNA M. PETERS N/F
D.B. 1583, PG. 623
P.B. EE, PG. 4

N/F
THERESA G. BRAMLETT
TAX #0277000200701
D.B. 1959, PG. 28
34,697 Sq. ft.
0.80 Acres
ZONED R-20

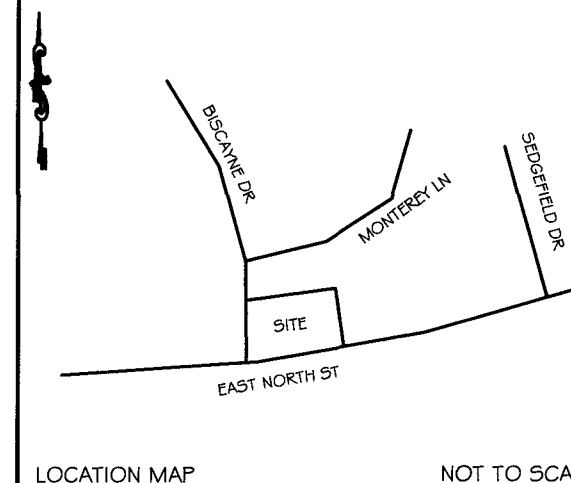
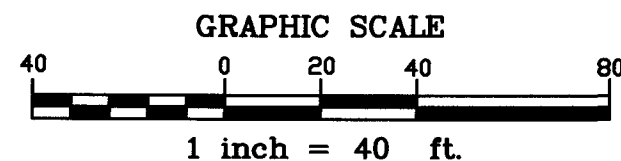
TAX #0277000227100
PAUL CHRISTIAN BLUMER N/F
D.B. 2185, PG. 776
P.B. EE, PG. 4

PROPERTY LINE TABLE		
LINE	DIRECTION	DISTANCE
L1	N86°13'41"W	91.14
L2	N37°57'58"W	6.66

NOTES:

- 1.) REFERENCE.
DEED BOOK 1959, PG. 29
DEED BOOK 2185, PG. 776
DEED BOOK 1583, PG. 623
SCDOT FILE 23 642, SHEET 14
- 2.) THE PROFESSIONAL SURVEYOR HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE, OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE
- 3.) SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT SURVEYED OR EXAMINED OR CONSIDERED AS PART OF THIS SURVEY. NO EVIDENCE OR STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONDITIONS, CONTAINERS OR FACILITIES THAT MAY AFFECT THE USE OR DEVELOPMENT OF THIS PROPERTY.
- 4.) THIS PROPERTY IS SUBJECT TO ANY AND ALL EASEMENTS, RIGHTS OF WAY AND/OR RESTRICTIONS OF RECORD OR NOT OF RECORD.
- 5.) ALL CORNERS 5/8" REBAR UNLESS LABELED OTHERWISE.

FILED FOR RECORD IN GREENVILLE COUNTY, SC ROD
2008031915 Book: PLL 1063 Page: 99-99
Apr. 1 04, 2008 12:58:43
Trinity J. Manning

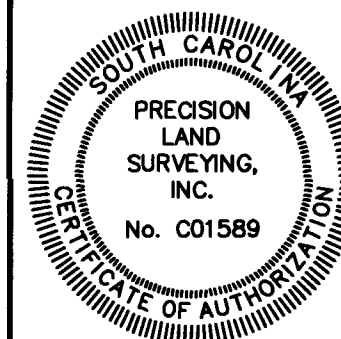


LEGEND

○	IPF	IRON PIN FOUND	CT	CRIMP TOP
○	IPS	IRON PIN SET	RB	REBAR
○	PKF	PK NAIL FOUND	SR	SOLID ROD
○	PKS	PK NAIL SET	OT	OPEN TOP
○	N&C	NAIL & CAP	SS	SANITARY SEWER LINE
○	MH	MANHOLE	T	TELEPHONE LINE
○	PP	POWER POLE	OHP	OVERHEAD POWER
○	EXF	EXISTING FENCE	EP	EDGE OF PAVEMENT
⊗	WV	WATER VALVE	R/W	RIGHT OF WAY
⊗	GV	GAS VALVE	BL	BUILDING LINE
⊗	LP	LIGHT POLE	GAS	GAS LINE
⊗	UGP	UNDERGROUND POWER	SSE	SANITARY SEWER EASEMENT
⊗	W	WATER LINE	SS	SANITARY SEWER MAIN

CC # G

I HEREBY STATE TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THE SURVEY SHOWN HEREIN WAS MADE IN ACCORDANCE WITH THE REQUIREMENTS OF THE MINIMUM STANDARDS MANUAL FOR THE PRACTICE OF LAND SURVEYING IN SOUTH CAROLINA, AND MEETS OR EXCEEDS THE REQUIREMENTS FOR A CLASS "B" SURVEY AS SPECIFIED THEREIN; ALSO THERE ARE NO VISIBLE ENCROACHMENTS OR PROJECTIONS OTHER THAN THOSE SHOWN.



CLOSING SURVEY FOR:

JAMD

GREENVILLE COUNTY, SOUTH CAROLINA

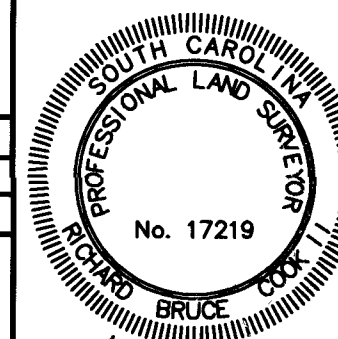
DATE: 3/26/08 TAX MAP NO.: 0277000200701

SCALE: 1" = 40' PROJECT NO.: 08066

PROPERTY ADDRESS: 2901 E NORTH STREET

PRECISION
LAND SURVEYING, INC.

351 PRADO WAY : GREENVILLE, SC 29607
(864) 627-8067 Fax: (864) 627-1940



Property Description

ALL that piece, parcel or lot of land with any improvements thereon, situate, lying and being in the State of South Carolina, County of Greenville, being shown and designated as 0.80 acres, more or less, according to a plat entitled "Closing Survey for: JAMD", prepared by Precision Land Surveying, Inc dated March 26, 2008, and recorded in the Office of the Register of Deeds for Greenville County, SC on April 4, 2008 in Plat Book 1063 at Page 99. Reference to said plat is hereby craved for a more accurate and complete metes and bounds description.

This the same property conveyed to the Grantor herein by deed of James H. Brown dated March 21, 2011, and recorded in the Office of the Register of Deeds for Greenville County, SC on March 29, 2011 in Deed Book 2386 at Page 1803.

TMS# 02770002-00701

Property address: 2901 E North Street, Greenville, SC

Property Description for Right-of-Way

To include the 0.424 acres of E. North Street right-of-way as shown within the associated Annexation Map exhibit.

2901 E. North Street Neighborhood Meeting Attendance

November 29, 2021

Austin Rutherford	arutherford@greenvillesc.gov
Caroline Greene	my2ootie@yahoo.com
Jim Brown	jimbrown@flagshipsc.com
John Hamlett	jhamlett@greenvillesc.gov
Jacob Kittleson	jacob.kittleson@gmail.com
Tony Moncini	tony.moncini@foxcarolina.com
Perry B	itssewyou@gmail.com
TOLGA OZARSLAN	tolga_ozarlan@yahoo.com
Edward Butler	elbutler3@gmail.com
Lanny McCormack	lanmack70@gmail.com

Neighborhood Meeting Questions

2901 E. North St. Annexation

11/29/21

1. Q- What is this about? A- A request to annex the property.
2. Q- Will this affect any other properties? A- No.
3. Q- Is R-9 the largest residential zoning designation the city has? A- Yes.
4. Q- Can the lot be split and leave half in the county? A- The property owner wishes to annex the entire property.
5. Q- Is the property contiguous even though the city limits are across E. North St.? A- Yes, the city can annex across rights of way.
6. Q- Where will the water runoff go (when the house is built on the subdivided lot)? A- Before any permit is issued by the city it is reviewed by engineering to ensure water drainage is not altered to the detriment of adjoining properties.
7. Q- Who will pave Biscayne Dr? A- Biscayne will remain a county road so the county will be responsible for any repaving.



**Planning Staff Report to
Greenville Planning Commission
January 14, 2022
for the January 20, 2022 Public Hearing**

Docket Number:	AX-2-2022
Applicant:	Alvin Johnson
Property Owners:	Burdette Enterprises Inc
Property Location:	Conestee Road and Conestee Lake Road
Tax Map Number:	M013020100100
Acreage:	31.983 acres Right-of-way area: 3.211 acres Total area (to be annexed): 35.194 acres
Existing Zoning:	R-S, Residential suburban district (Greenville County)
Proposed Zoning:	RM-1, Single-family and multifamily residential district (City of Greenville)
Adjacent Zoning:	N: I-1 Industrial District (Greenville County) R-S, Residential suburban district (Greenville County) E: R-S, Residential suburban district (Greenville County) S: R-MA, Multifamily residential district (Greenville County) W: C-3, Regional commercial district (City of Greenville) I-1 Industrial District (Greenville County) S-1, Services district
District:	Council District 2
Staff Recommendation:	Recommend Approval for Annexation, Rezone, and Future Land Use Designations of Urban Residential and Parks-Green Space

Applicable Sections of the City of Greenville Code of Ordinances:

Sec. 2-372 Function, Powers, and Duties of the Planning Commission
Sec 19-1.3 Purpose and Intent
Sec.19-2.1.2 (A) (2) (b) Zoning District Map Amendments (Rezoning)
Sec.19-2.1.2 (A) (10) Annexation of properties into the corporate limits
Sec.19-2.3.2 (E) (2) Amendments to Zoning District Map
Sec.19-3.2 District Descriptions

Project Overview:

The applicant has petitioned the City of Greenville to annex approximately 31.983 acres of lot area into the Greenville city limits and to zone it RM-1, Single-family and multifamily residential district. Approximately 3.211 acres of street right-of-way will also be annexed.

Procedural Requirements:

Pre-Application and Development Meetings

A pre-application meeting was held between the applicant and Planning staff prior to submittal of this annexation application.

Neighborhood Meeting

The applicant conducted a neighborhood meeting on December 2, 2021, as required by subsection 19-2.2.4 of the Land Management Ordinance. The meeting attendance record and meeting notes are attached to the packet.

Site Information

The acreage is located on Conestee Road and is currently zoned R-S, Residential suburban district in Greenville County. The property is not located in any Special Emphasis Neighborhood within Greenville County.

The applicant requests to annex the property into the City with a RM-1 zoning designation. The RM-1 zone is intended to encourage a mixture of low-density and medium density housing types, including multifamily units, townhouses, single-family detached, and single-family attached dwellings. The maximum density for multifamily development is ten units per acre. Complementary uses customarily found in residential districts, such as community recreation facilities, places of worship, and schools, may be allowed.

Staff Analysis:

Staff offers the following responses to the standards to rezone found at Section 19-2.3.2 (E) (2), *Amendments to Zoning District Map*.

1. Consistent with the Comprehensive Plan: The Future Land Use Map (FLUM), associated with the GVL2040 Comprehensive Plan, will designate a portion of the subject area for annexation as “*Urban Residential*” and “*Parks-Green Space*.” Urban Residential is intended to be a mixture of low-density and medium-density housing types that includes multifamily units, townhouses, single-family detached and single-family attached dwellings. Urban Residential neighborhoods are near the downtown area and pockets east of Laurens Road. This classification allows for a density of 10-20 units per acre and is intended to allow compact development within Greenville’s historic and traditional neighborhoods with smaller lots and walkable streets. Complementary uses, customarily found in residential districts, such as community recreation facilities, places of worship, and schools, may be allowed. Parks-Green Space is intended to include parks, open spaces, and trails. It is intended that the Parks-Green Space would apply to the areas of the parcel unbuildable due to floodway, flood plain, and terrain of the Reedy River and Laurel Creek.
2. Changed conditions since the original designation: The process of annexation requires the property be assigned a City zoning designation.
3. Addresses a demonstrated community need: The RM-1 zoning designation allows for an appropriate range of uses and dwelling unit density for the area.
4. Compatible with surrounding uses: Surrounding uses includes a mix of similar zoned properties within the County, suburban residential uses, and industrial, service-oriented uses. The future mixed-use redevelopment of the Conestee Mill is across Conestee Road from this location. The proposed RM-1 zoning classification will allow for development that is compatible with the surrounding properties.

5. Promotes logical development pattern: The proposed zoning designation provides uses that are logical to the future development pattern of the area. The RM-1 designation will allow for up-to medium density residential near the mixed-use redevelopment of Conestee Mill.
6. Will not result in "strip" or ribbon commercial development: RM-1 does not allow most commercial uses.
7. Will not create an isolated zoning district: Adjacent properties in the City are zoned C-3. Adjacent County properties are zoned R-MA, a multifamily residential district. The proposed RM-1 zoning designation is consistent with zoning districts of nearby properties within unincorporated Greenville County. If the City were to annex the adjacent county properties at a future date, they would likely receive a similar zoning classification
8. Surrounding property values: It is not anticipated that the proposed annexation and rezone will result in significant adverse impacts on the property values of adjacent lands. The RM-1 zoning designation is compatible with other properties in the area.
9. Effect on natural environment: The proposed zoning amendment is not anticipated to have any adverse impacts on the natural environment. All future development is required to comply with environmental standards.
10. Public facilities and services: Public facilities and services are available for this site. The property is currently in the Belmont Fire District but would be serviced by the Greenville City Fire Department upon annexation. The property is 5.1 miles away from Greenville City Fire Station 3. Metro Sewer District is the primary sanitary sewer provider for the property. Greenville Water maintains a 20-inch, looped water main on Conestee Road capable to serve the property.

STAFF RECOMMENDATION:

APPROVE, with staff comments

Staff Comments

Planning Comments

Recommend: Approve w/ Comments

Comments:

1. Staff recommends that the Future Land Use designation be "*Urban Residential*" and "*Parks-Green Space*" in accordance with the Greenville 2040 Comprehensive Plan.

Traffic Engineer Comments

Recommend: Approve

Comments:

No comments.

Environmental Engineer Comments

Recommend: Approve w/ Comments

Comments:

- 1) Wastewater – Wastewater service for the development will be subject to the following conditions:
 - a. There are no existing City sewer mains available to serve this development. The developer must confirm that the existing sewer system/treatment plant has available flow from Metro/ReWa by submitting a Sewer Capacity Request Form (Service Lateral Fillable Form aka PSSAR).
 - b. The wastewater permitting and acceptance process shall meet those requirements set forth in the City of Greenville Design and Specifications Manual Chapter 8.

c. Each building shall have a separate and direct connection to the City's sanitary sewer main or a Metro Sanitary Sewer Main.

d. Prior to using an existing lateral, the existing lateral must be tested to ensure that it conforms to City of Greenville performance requirements. Provide a video documenting the condition of the existing service connection prior to its reuse. A new lateral will be required if the existing lateral is in poor condition. The final Certificate of Occupancy will not be issued until the lateral is shown to be in good condition or a new lateral is installed.

e. Each building shall require a new service fee through ReWa.

2) Stormwater Management – The development is considered a larger common plan and must be performed in conformance with the City's stormwater ordinance (Article 19-7: Stormwater Management). Specifically, you will need to have a Professional Engineer prepare a non-single family site plan for the development and it will be subject to the following conditions:

a. A stormwater plan is required to be submitted with the non-single family site plan permit. Submit the major, minor or the soil erosion and sediment control stormwater plan as appropriate.

b. At a minimum, a stormwater plan should include:

i. Proposed layout.

ii. Appropriate erosion control best management practice standard details.

iii. A construction entrance.

iv. A concrete washout.

v. Silt fence

c. The plan should also show any drainage details needed to ensure the development will not adversely impact adjacent properties and will adequately control runoff from offsite.

a. If the proposed development creates a new impervious surface greater than or equal to 0.25 acres, water quantity will be required for the 2,10 & 25 year 24 hour storm event with no significant increase in the 100 year 24 hour storm event.

b. Any stormwater drainage system conveying offsite water shall be designed in compliance with the Stormwater Ordinance.

c. Water quality treatment is required when either:

- The proposed development has a total impervious surface area ratio of 60% or greater and disturbs 50% or more of the parcel or larger common plan over a five year period; or;

- The proposed development creates a new impervious surface greater than or equal to 0.25 acres.

3) Floodplain – A portion of the subject property is located in a FEMA floodplain as determined utilizing 2019 Flood Insurance Rate Maps.

4) a. Compensatory storage is required for all storage lost or displaced in a regulatory floodplain. Hydraulically equivalent compensatory storage requirements for fill or structures in a riverine regulatory floodplain shall be at least equal to 1.5 times the volume of regulatory floodplain storage lost or displaced. Such compensation areas shall be designed to drain freely and openly to the channel and shall be located opposite or adjacent to fill areas. A deed or plat restriction is required to prohibit any modification to the compensation area. The regulatory floodplain storage volume lost below the existing ten-year frequency flood elevation must be replaced below the proposed ten-year frequency flood elevation. The regulatory floodplain storage volume lost above the ten-year existing frequency flood elevation must be replaced above the proposed ten-year frequency elevation.

b. If the proposed development would result in a change in the mapped regulatory floodplain, regulatory floodway, or the BFE on a site, the applicant shall submit sufficient data to the city and FEMA to obtain the appropriate letter of map change (LOMC). All adjacent property owners, communities, and the state department of natural resources shall be notified prior to any alteration or relocation of a floodplain, and submit copies of such notifications to the city. A LOMC due to fill does not preclude a development from meeting the compensatory storage requirements.

4) Wetland provisions: All impacts to jurisdictional waters of the U.S. and waters of the state must be permitted in compliance with all federal and state standards. This includes any permits from the Army Corp of Engineers and any mitigation requirements.

a. Submittal requirements:

1. The applicant shall delineate all wetland area boundaries in accordance with the current federal wetland determination methodology on the plans.

2. All federal and state permitting documents relating to wetlands shall be provided to the city along with all permits issued.
3. All federal and state wetland monitoring reports shall be provided to the city.

b. Restrictions: Preservation of wetlands shall be provided by deed or plat restrictions.

Civil Engineer Comments

Recommend: Approve

Comments:

Approved with no comments.

Fire Department Comments

Recommend: Approve

Parks & Recreation Comments

Comments:

No Comment.

Tree and Landscape Comments

Recommend: Approve with comments

Comments:

Any removal of protected trees, those 6-inch DBH or greater, will be subject to mitigation through either replacement at an inch-for-inch rate of at least 3-inch caliper canopy trees or a fee-in-lieu of \$50 per inch removed. Any removed heritage trees, those 20-inch DBH in the setback or 40-inch DBH anywhere on site, will be subject to a fine of \$45 per inch removed and mitigation. Any development will be subject to providing a landscape plan to include applicable landscaping. A mitigation plan, if applicable, and landscape plan showing all requirements should be submitted with any site disturbance or building permits.



APPLICATION FOR ANNEXATION

Planning Department (864) 467-4476

Office Use Only:

Application# _____ Fees Paid _____

Date Received _____ Accepted By _____

Date Complete _____ App Deny Conditions _____

APPLICANT/OWNER INFORMATION

*Indicates Required Field

Clear Form

APPLICANT

PROPERTY OWNER

*Name:	Alvin Johnson	Burdette Enterprises Inc
*Title:	Director, Entitlements & Due Dilligance, Levi Grantham	
*Address:	572 Savannah Highway, Charleston	1598 Edwards Rd, Woodruff, SC 29388
*State:	SC	
*Zip:	29407	
*Phone:	843-573-9635 ext 5127	
*Email:	alvin.johnson@levigrantham.com	

LEGAL REPRESENTATIVE (if applicable)

Name:	
Title:	
Address:	
Phone:	
Email:	

PROPERTY INFORMATION

*TAX MAP #(S) M013020100100

*TOTAL ACREAGE 31.9

*COUNCIL DISTRICT District 24

*CURRENT ZONING DESIGNATION (County) R-S

*PROPOSED ZONING DESIGNATION (City) RM-1

*DEED RESTRICTIONS N/A

*FRONTAGE ON PUBLIC ROAD (feet) 1740

*WATER DISTRICT Greenville Water

*SEWER DISTRICT Metropolitan Sewer Sub District

*FIRE DISTRICT Belmont Fire District

*SANIATION DISTRICT Greater Greenville Sanitation Commission

*OVERLAY DISTRICT/SPECIAL EMPHASIS NEIGHBORHOOD N/A

TYPE OF ANNEXATION

*Please select one (1) type:



100%



75%



25%

For 100% and 75% Annexations, please Include the corresponding **Annexation Petition** with the application submittal.

INSTRUCTIONS

1. The applicant is strongly encouraged to schedule a preapplication conference with Economic Development prior to the scheduled submission deadline. At this time, the applicant may also be encouraged to schedule a sufficiency review two (2) weeks prior to the scheduled submission deadline to allow staff review of the application. Call (864) 467-4476 to schedule an appointment.
2. Submit an electronic copy of the **draft plat** signed by a registered surveyor **and legal description** (see requirements below) **2 weeks prior to the application filing deadline**. Failure to do so may result in delay of the application. The draft plat can be sent to jhamlett@greenvillesc.gov.
3. If the application includes more than one (1) parcel and/or more than one (1) owner, the applicant must provide the appropriate deed book/page references, tax parcel numbers, and owner signatures as an attachment.
4. If the application is to annex a portion of a property as otherwise described by deed, a survey of the parcel reflecting the requested annexation by courses and distances must be included in the submittal package.
5. All applications and fees (made payable to the City of Greenville) for Annexation must be received by the planning and development office **no later than 2:00 pm** of the date reflected on the attached schedule.

A. Annexation

\$550.00 – *public hearing required*

6. Staff will review the application for "sufficiency" pursuant to Section 19-2.2.6, Determination of Sufficiency. If the application is deemed insufficient, staff will notify the applicant and request that the application be revised and resubmitted to address insufficiency comments. In this event, the item will be postponed to a subsequent regularly scheduled planning commission meeting.
7. Please refer to ***Sections 19-1.9, Annexations*** for additional information.
8. **Public Notice Requirements.** Annexation applications require a planning commission public hearing. The applicant is responsible for sign posting the subject property **at least 15 days (but no more than 18 days) prior** to the scheduled planning commission hearing date.

Annexation applications also require a neighborhood meeting, which is to be held **at least eight (8) days prior** to the scheduled planning commission hearing (Sec. 19-2.2.4, Neighborhood meetings). See *Instructions for Organizing a Developer-Led Neighborhood Meeting* for more information.

Upon planning commission recommendation, the application item will be scheduled for city council hearing.

(To be filled out at time of application submittal)

_____ Public Hearing signs are acknowledged as received by the applicant

_____ Instructions for Organizing a Developer-Led Neighborhood Meeting are acknowledged as received by the applicant

***APPLICANT SIGNATURE**

 President

9. **Please verify that all required information is reflected on the application, and submit one (1) paper copy and one (1) electronic version of the application submittal package.**
10. **Please read carefully:** The applicant and property owner affirm that all information submitted with this application; including any/all supplemental information is true and correct to the best of their knowledge and they have provided full disclosure of the relevant facts.

In addition, the applicant affirms that the applicant or someone acting on the applicant's behalf has made a reasonable effort to determine whether a deed or other document places one or more restrictions on the property that preclude or impede the intended use and has found no record of such a restriction.

If the planning office by separate inquiry determines that such a restriction exists, it shall notify the applicant. If the applicant does not withdraw or modify the application in a timely manner, or act to have the restriction terminated or waived, then the planning office will indicate in its report to the planning commission that granting the requested change would not likely result in the benefit the applicant seeks.

Furthermore, my signature (applicant) indicates that I understand and consent that this matter will appear before the Planning Commission for consideration and that any recommendation, for approval or denial, by the Planning

CITY OF GREENVILLE APPLICATION FOR ANNEXATION

Commission will be presented to the City Council at their next regularly scheduled meeting to be held on the fourth Monday of the month following the Planning Commission meeting in which the matter was heard.

Alvin T. Johnson, Jr.
12/7/21

*APPLICANT SIGNATURE

DATE

11. To that end, the applicant hereby affirms that the tract or parcel of land subject of the attached application is ___ or is not X restricted by any recorded covenant that is contrary to, conflicts with, or prohibits the requested activity.

*Signatures	
Applicant	Alvin T. Johnson, Jr. Digitally signed by Alvin T. Johnson, Jr. DN: C=US, E=alvin.johnson@levigranham.com, O=Levi Grantham Land Group, CN=Alvin T. Johnson, Jr. Date: 2021.12.08 10:09:13-05'00'
Date	
Property Owner/Authorized Agent	<u>Alvin T. Johnson, Jr.</u>
Date	<u>12/7/21</u>

APPLICATION REQUIREMENTS CHECKLIST

- ☒ **Draft plat** signed by a registered surveyor **and legal description** (see requirements below) submitted **2 weeks prior to the application filing deadline**. Failure to do so may result in delay of the application. The draft plat can be sent to jhamlett@greenvillesc.gov.
 - o A **draft plat** of the area to be annexed showing the following (Please see ANNEXATION PLAT REQUIREMENTS for more details):
 - Metes and bounds of the entire proposed annexation, showing the POB (Point of Beginning for annexation)
 - Any adjacent contiguous right-of-way not already within the corporate limits of the City. (The City reserves the right to exclude certain right-of-ways)
 - Label and show all contiguous corporate limit lines, including existing and new City Limit lines.
 - Acreage of Real Property, right-of-ways, and total acreage in a table format.
 - Easements
 - Private roads and drives (clearly marked as such)
 - Tax map numbers and owners for all lots to be annexed and adjacent lots
 - o A **legal description** including metes and bounds of the property to be annexed and a separate description of the metes and bounds of any right-of-way to be annexed. The legal description must be included in a document separate from the annexation plat.
- ☒ **A completed application form.**
- ☒ **Annexation petition** signed by the required number of freeholders (owners of real property) or a representative with clear authority to sign such a petition for annexation. If the owner is a corporation, the petition must be signed by a duly authorized officer of the corporation. Corporate minutes of a resolution of the Board of Directors should accompany the petition. The signature of a real estate agent, broker or developer without specific authority to sign as to annexation is not acceptable. A petition with less than all freeholders signing is not acceptable for filing without a written statement from the City Attorney that the petition appears on its face to comply with state law regulating such petitions.
- ☒ **A letter of intent** (reason for annexation).
 - ☐ The **fee** for the requested zoning classification as set by the City's fee schedule. (These fees are used to pay for administrative and advertising expenses incurred as a result of the petition).
 - ☐ **Three (3) copies of a recordable Final Plat and a true to scale electronic copy of the Final plat signed by the registered surveyor** must be provided with all requested revisions with the application submittal.

ANNEXATION PLAT REQUIREMENTS

1. Drawing size shall be no smaller than "C" size (17" x 22") and no larger than "E" size (34" x 44").
2. The entire boundary of the proposed annexation shall be contained on "I" (one) drawing.
3. The title of the Annexation shall be noted in the title block as "Annexation Plat for (Show the Owner of Record) and

(Project Site Name, if known).

4. A location map shall be shown in the upper right hand side of the drawing that shows the location of the proposed annexation and the surrounding streets.
5. Drawing shall show the dates of the survey, scale in feet, and stamped by the engineer or surveyor with registration number.
6. The "Existing City Limit Line" shall be shown on the drawing in a distinguishable line symbol that is easily recognized and in a different line symbol than the "Existing City Limit Line". This line shall be noted on the drawing as "New City Limit Line".
7. The "New City Limit Line" shall be shown on the drawing in a distinguishable line symbol that is easily recognized and in a different line symbol than the "Existing City Limit Line." This line shall be noted as "New City Limit Line".
8. The proposed annexation shall be contiguous to the "Existing City Limit Line".
9. When directed by City staff, you may be required to include/capture adjacent street Right-of-Way as part of the annexation. When you are required to annex certain street right-of-ways that are adjacent to or contained within the proposed annexation, these areas, in square feet and acres, shall be noted on the drawing within these boundaries.
10. The area, in square feet and acres, of the real property that is to be annexed shall be noted on the drawing within these boundaries.
11. The Tax Parcels contained within the boundary of the proposed annexation shall be shown and their Tax Parcel ID numbers noted on the drawing. Also, all adjacent parcels shall be shown and labeled with their Tax Parcel ID.
12. The bearings and distances around the outer boundary of the proposed annexation shall be shown on the drawing. The linear dimensions shall be expressed in feet and decimals of a foot. All angular measurements shall be expressed in bearings to the nearest minute. Curves, that have been surveyed, shall be defined on the drawing by a radius, central angle, tangent, arc and chord bearings and chord distances. Areas of the annexation that have not been surveyed, such as adjacent street right-of-way, may be noted as "more or less" or "+-". The "total area" of the annexation will consist of the area of real property and any street right-of-way contained in the annexation. These areas shall be noted in a "text box" on the drawing titled "Area of Annexation". The area of real property shall be noted and the area of any street right-of-ways shall be noted and then the "total area" noted.
13. Do not "traverse" the "New City Limit Line" along the center of a street.
14. A Legal Description of the annexation shall be written that traverses the outer boundary of the annexation. The "POB" (Point of Beginning) shall be noted on the drawing. When preparing the Legal Description, note any time that the traverse goes "along the Existing City Limit Line".
15. If the annexation contains any existing structures, the present street address for these structures shall be noted within the corresponding parcel/structure.
16. The proposed annexation will be reviewed by City Staff and any corrections that are needed to the annexation plat will be noted and relayed to the Engineer, Surveyor, and/or owner,

IMPORTANT NOTE:

Prior to applying for annexation, contact the City of Greenville's Engineering Department to verify the "availability" of utilities such as sanitary sewer and water.

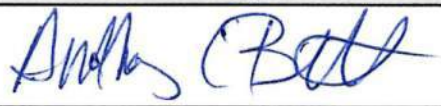


CITY OF GREENVILLE
206 South Main Street
P.O. Box 2207
Greenville, SC 29602

100 Percent
PETITION FOR ANNEXATION

The person(s) whose signatures appear below are freeholders owning real estate in an area which is contiguous to the City of Greenville and which is proposed to be annexed into the City. In general, the area can be described as Intersection of Conestee Rd and Conestee Lake Rd and consisting of approximately 31.9 acres 1 Conestee Rd (street number). That area is identified more particularly by the tax map parcel number(s) provided below and the Annexation Plat which is being provided to the City of Greenville Planning Commission in conjunction with this petition. Any and all plats are incorporated by reference as a description of the area. By their signatures, the freeholder(s) petition(s) the City Council of the City of Greenville to annex the entire area shown as being annexed on the plats, and such additional acreage within the outer boundaries of the area as the owners through their agent may designate.

This petition is submitted under the provisions of S.C. Code ' 5-3-150, authorizing the City Council to annex an area when presented with a petition signed by all persons owning real property in the area proposed to be annexed. This petition and all signatures thereto shall be open for public inspection on demand at the City Hall, located at the address set forth above. All zoning processes will be in accordance with state statutes and city ordinance otherwise existing.

Property Owner(s)	Address/ Tax Map Number	Signature	Date
Burdette Enterprises Inc	M013020100100		12/7/21

[illegible]

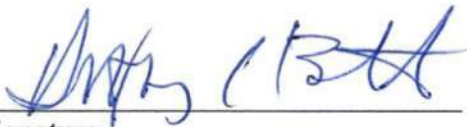


CITY OF GREENVILLE
206 South Main Street
P.O. Box 2207
Greenville, SC 29602

CERTIFICATION OF PETITION SIGNATURE

I, Anthony C Burdette, have this seventh day of December, 2021,
certified my signature previously given and dated for the annexation into the City of Greenville of
one (1) or more parcels in which I have ownership interest by initialing a copy of the signature as
previously given and dated. The parcel tax map number(s) is(are) as follows:

M013020100100



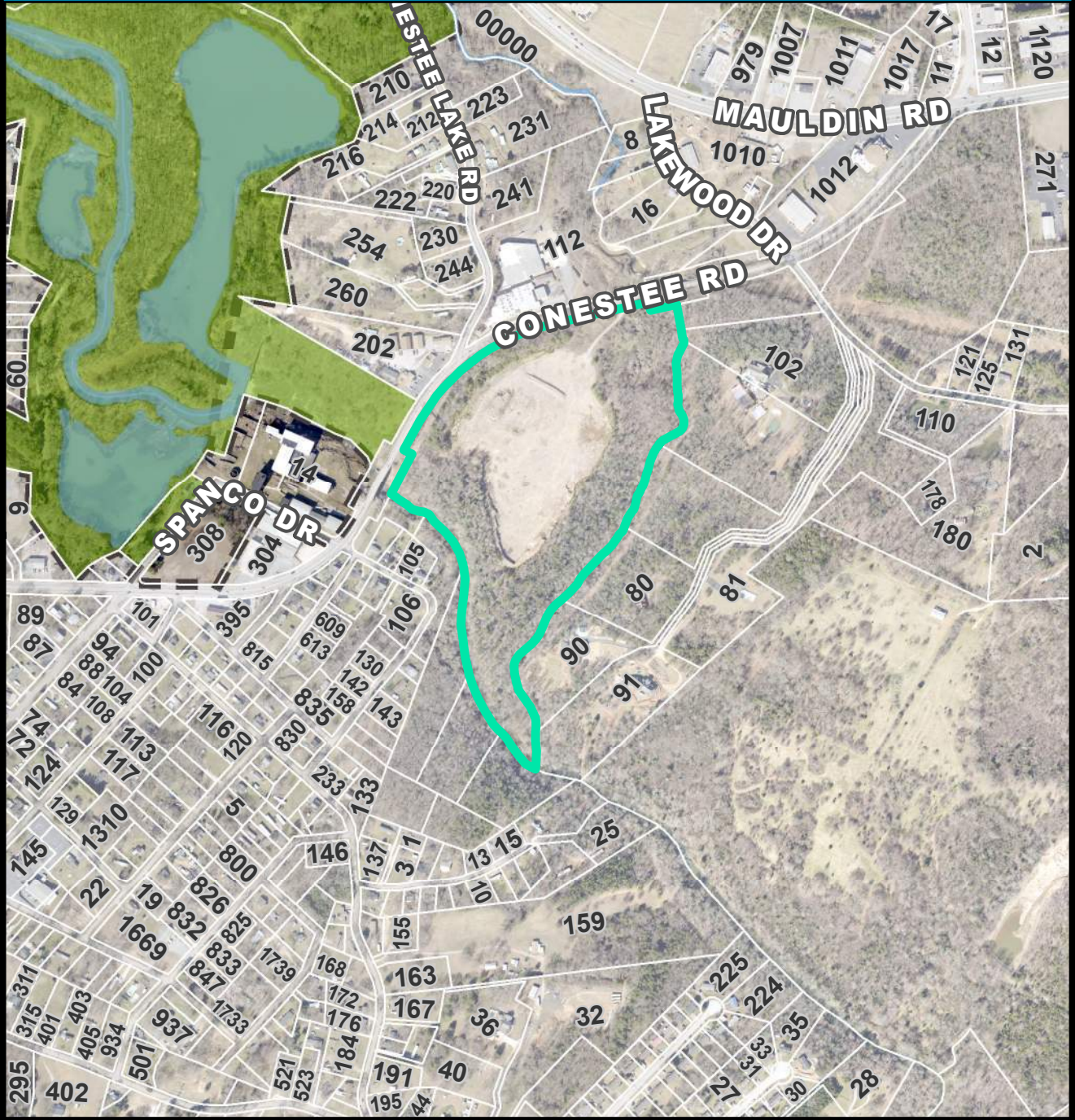
Signature

Anthony C. Burdette

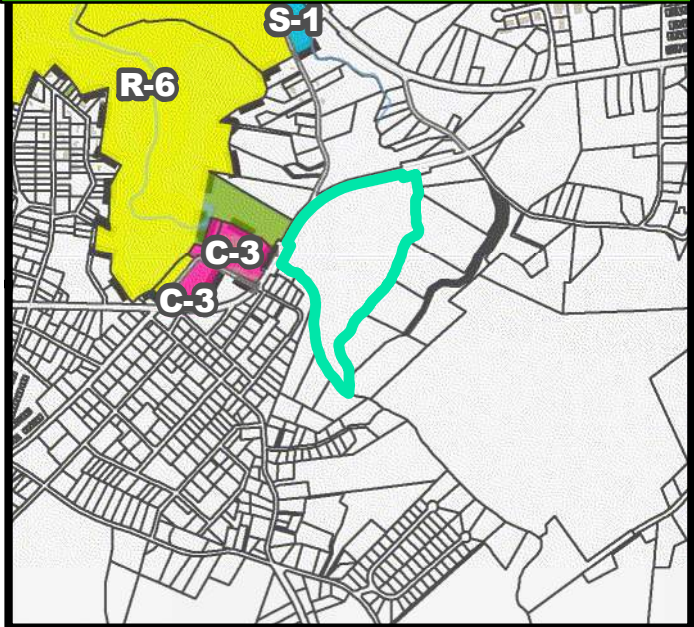
Please Print Name

AX-2-2022 • CONESTEE ROAD AND CONESTEE LAKE ROAD

AERIAL VIEW



CURRENT ZONING

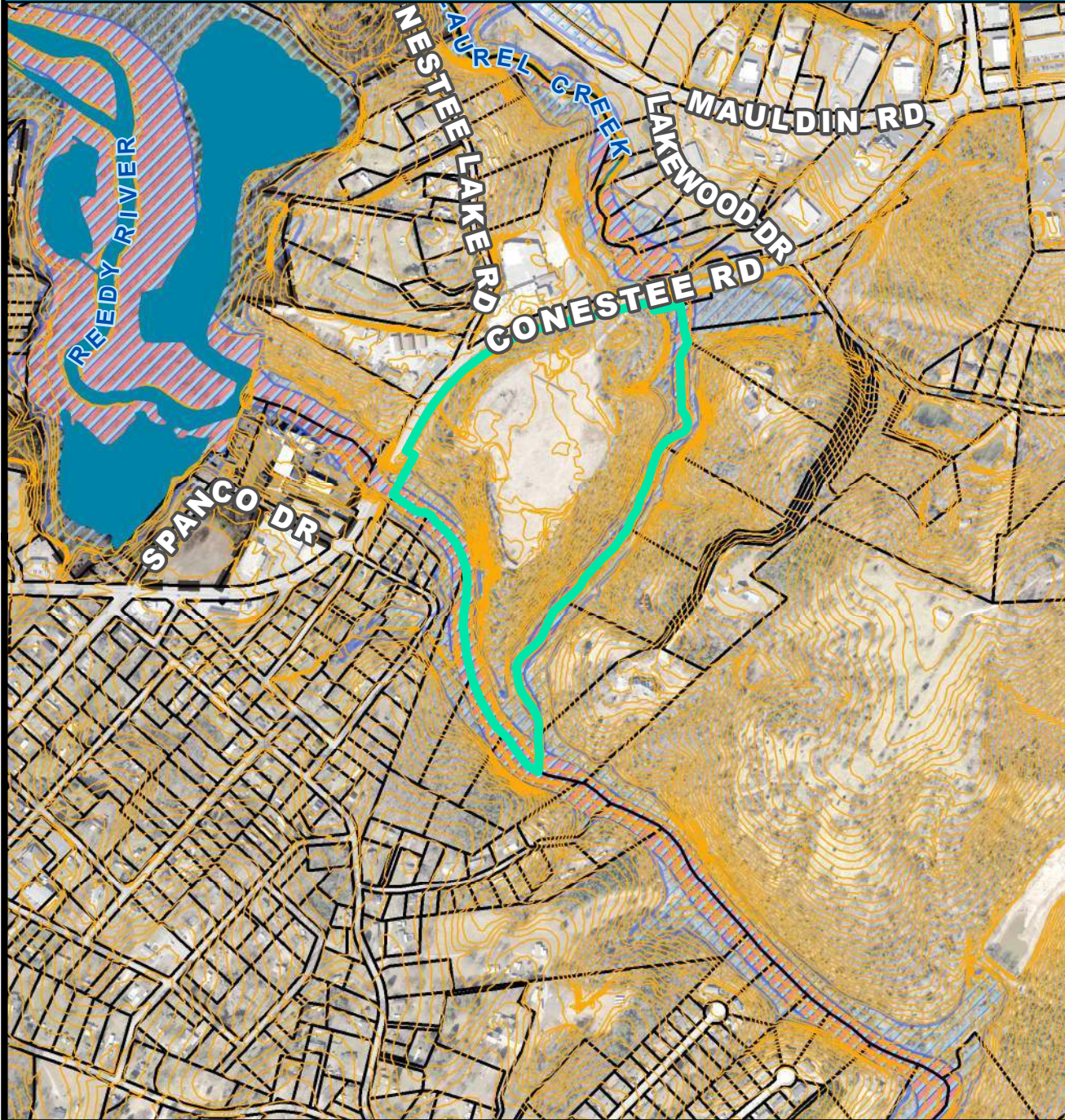


FUTURE LAND USE

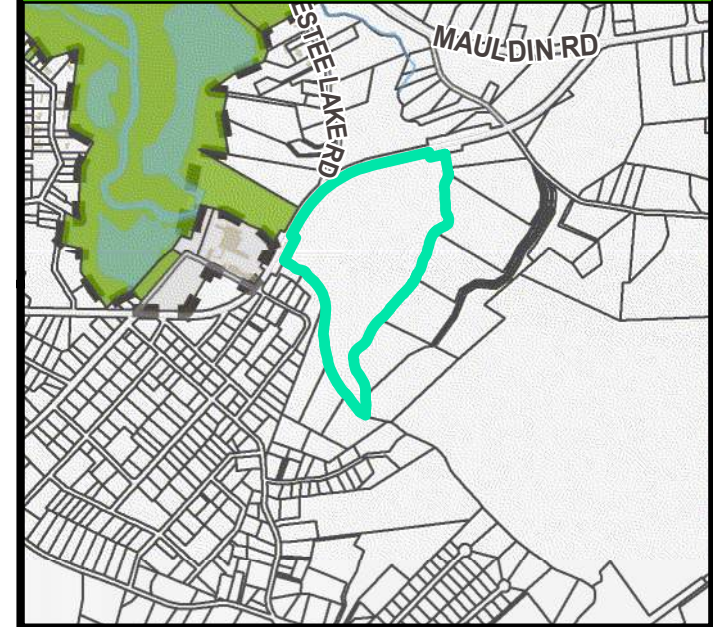


AX-2-2022 • CONESTEE ROAD AND CONESTEE LAKE ROAD

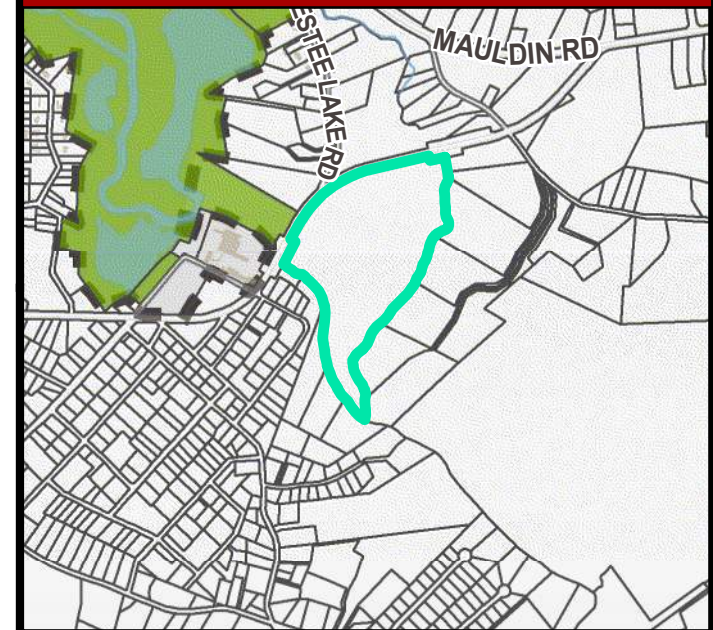
NATURAL / ENVIRONMENTAL FEATURES

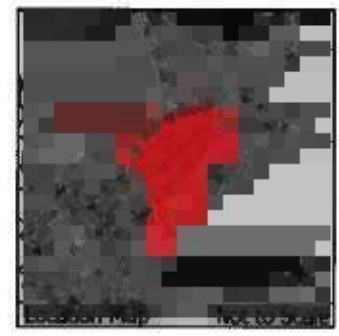


SPECIAL EMPHASIS NEIGHBORHOODS



PRESERVATION OVERLAYS







Letter of Intent for Annexation

TO: City of Greenville

FROM: Seamon Whiteside And Associates

DATE: 11.22.2021

RE: TMS# M013020100100 Annexation into City of Greenville

CC: Levi Grantham

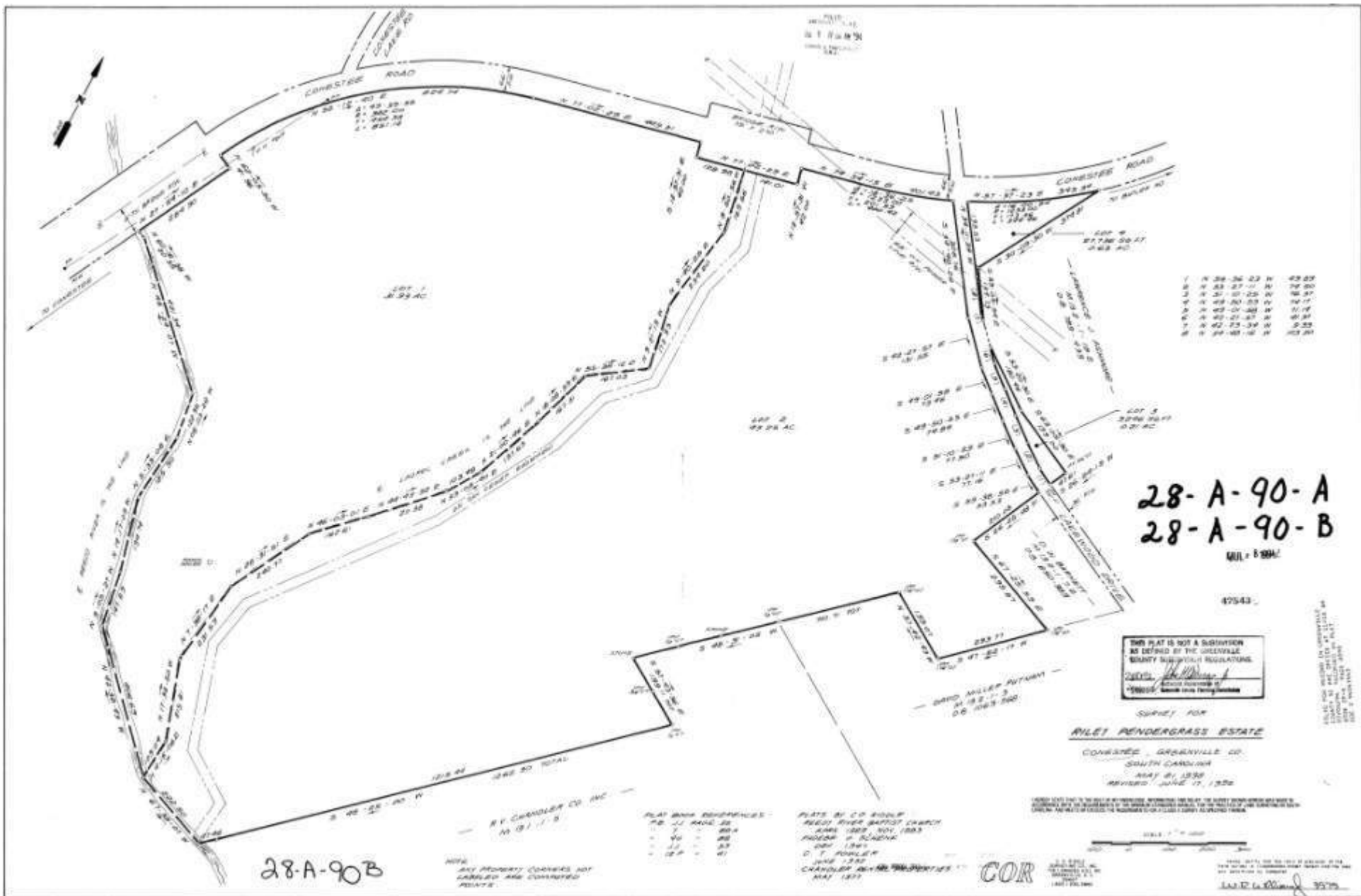
We are seeking annexation into the City of Greenville for TMS# M01302010010, currently zoned R-S in Greenville Couty. The proposed uses for the property are Single Family Residential Attached and Single Family Residential Detached. We plan to put +/- 120 single family lots on the 31.9 acre site. Annexation into the city of Greenville will provide us with the support and flexibility needed to develop the site in an efficient way, due to the opportunity to use the cluster subdivision oridnance.

The site contains an abundance of natural features, including significant frontage on the Reedy River and Laurel Creek. There are wooded areas, flood zones and steep slopes adjacent to these natural features. We desire to conserve these valuable natural areas undisturbed and cluster single family development on the previously cleared central portion on the site adjacent to Conestee Rd. This requires a denser zoning and smaller, more flexible lot size than the existing county zoning of R-S allows.

We are looking for a density of approximately four units/acre. We chose to seek an annexation into the city and the RM-1 zoning because it allows us to achieve the density and smaller lot size we desire, while conserving the natural resources of the property. R-M1 will allow us to mix attached single family and detached single family uses to create a relatively dense single-family community, surrounded by, and with access to, the preserved natural areas on the site. Greenspace, and recreational access to it, is a priority for the development and there will be several park areas and walking trails included in the development. The incorporation of alleys and rear-loaded units will help the development feel less vehicle centered, by hiding garages behind the houses and prioritizing pedestrian circulation along the main streets.

We believe an R-M1 zoning in the City of Greenville will allow us to provide a thoughtful and high quality single-family community for the City of Greenville.

Thank you for your consideration.



Property Description

All that certain piece, parcel or lot of land, situate, lying and being in the State of South Carolina, County of Greenville, being shown and designated as Lot No. 1, containing 31.93 acres, more or less, as shown on plat prepared for Riley Pendergrass Estate by C. O. Riddle Surveying Co., Inc. dated May 24, 1992 and revised June 17, 1992 and recorded in the ROD Office for Greenville County, SC in Plat Book 28-A, Page 90-A & 90-B. For a more complete and particular description, reference is hereby made to the above referred to plat and record thereof.

This being the same property conveyed to Burdette Construction, Incorporated by deed of Burdette Enterprises Inc. of South Carolina dated April 12, 2012 and recorded in the ROD Office for Greenville County, SC. in Deed Book 2404, Page 1339 on April 17, 2012.

Property Description for Right-of-Way

To include the 3.211 acres of Conestee Road right-of-way as shown within the associated Annexation Map exhibit.

Austin Rutherford

From: Paul Talbert <PTalbert@seamonwhiteside.com>
Sent: Friday, December 3, 2021 8:33 AM
To: Austin Rutherford; 'bedward640@gmail.com'; 'dtaylor@ahold.com'; 'tom@shaunandshari.com'; 'j_rousey@bellsouth.net'; 'garth@commandready.com'; 'lavish0332@gmail.com'
Cc: Caroline Donaldson; 'Alvin Johnson'
Subject: Presentation - Conestee THs
Attachments: Neighborhood Meeting Presentation draft.pdf

CAUTION: This email is from an EXTERNAL source. Ensure you trust this sender before clicking on any links or opening attachments.

Austin,
Please refer to the attached presentation from last night.

Attendees were as follows:

The development team – Alvin Johnson, Jay Harvey, Caroline Donaldson, Paul Talbert

Nellie Ruth Melvin – Conestee Lake Rd

Joe Tringale – Lakewood Dr

Dave Taylor – 3rd Ave

Brenda Edward – Mauldin Rd

Tony Burdette – N/A

Frank Case – N/A

Tom Grindstaff – N/A

James Rousey – N/A

Garth Massey – N/A

La Verne Davis – N/A

Alex ? – N/A



Paul Talbert, PE
Civil Engineering Team Lead
P: (864) 298-0534 x 506
C: (904) 885-0188
PTalbert@SeamonWhiteside.com
www.seamonwhiteside.com

CONESTEE ROAD RESIDENTIAL

Proposed Single Family Development Project
Levi Grantham Land Group



PROJECT TEAM INTRODUCTION

Developer | **Levi Grantham Land Group**

- Alvin Johnson - Director, Entitlements & Due Diligence
- Jay Harvey - Director, Land development



Land Planning and Engineering | **SeamonWhiteside**

- Paul Talbert - Civil Engineering Project Lead
- Caroline Donaldson - Land Planning Project Lead



PROJECT OVERVIEW

Annexation into the City of Greenville:

- Currently, the project is submitted for annexation from Greenville County into City of Greenville
- Existing Zoning is R-S, proposed zoning is RM-1

Proposed Major Subdivision:

- Proposed Subdivision of +/- 112 Units
- Mix of attached and detached, front and rear loaded
- Emphasis on Open space and natural resources of the site





LOCATION

Conestee Rd, Greenville, SC
Map Number: M013020100100

SITE

M013020100100

CITY OF GREENVILLE
SR 427

CITY OF MAULDIN

CITY OF MAULDIN
MAULDIN
M013010100500

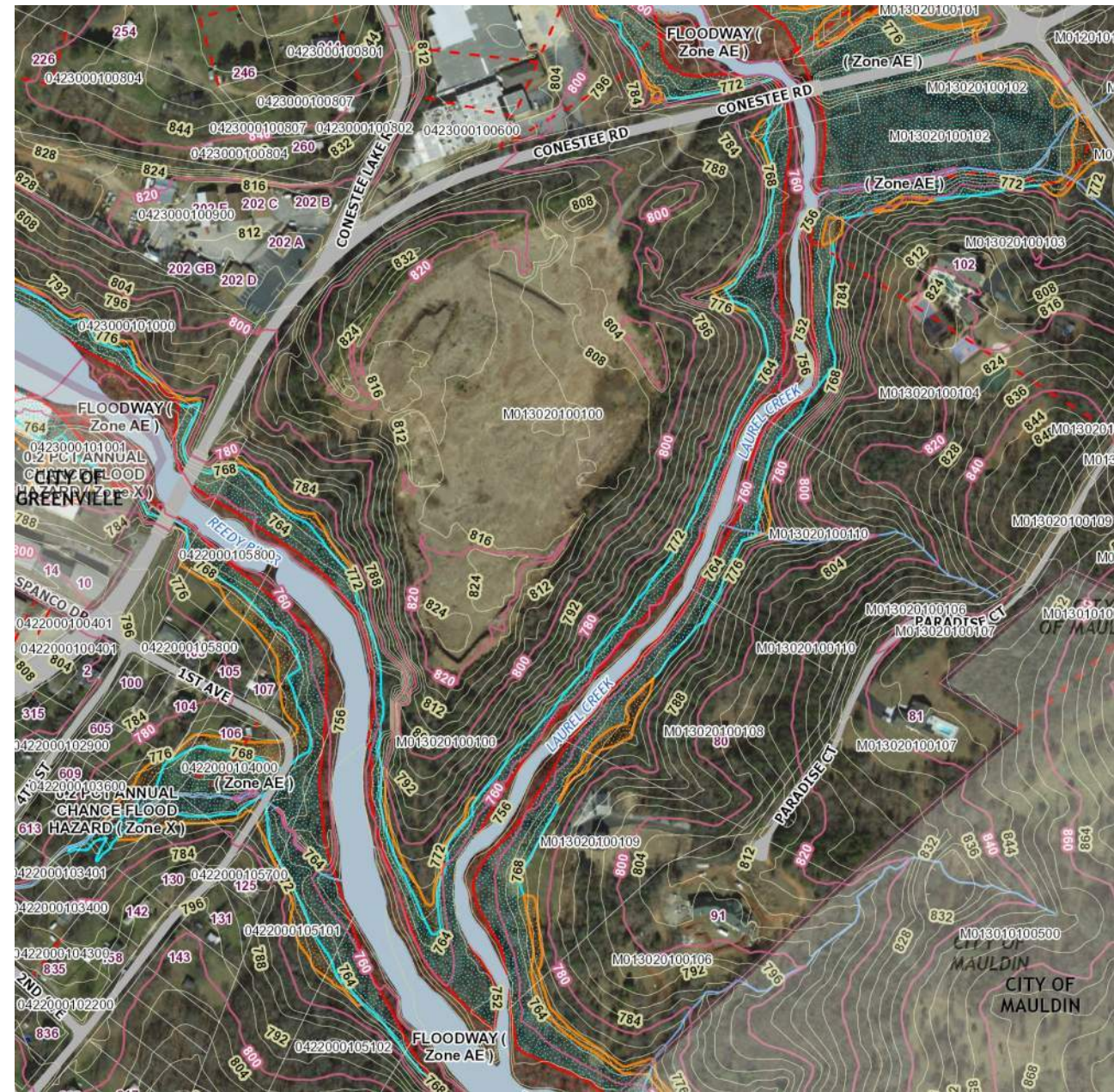
EXISTING SITE

Site Data:

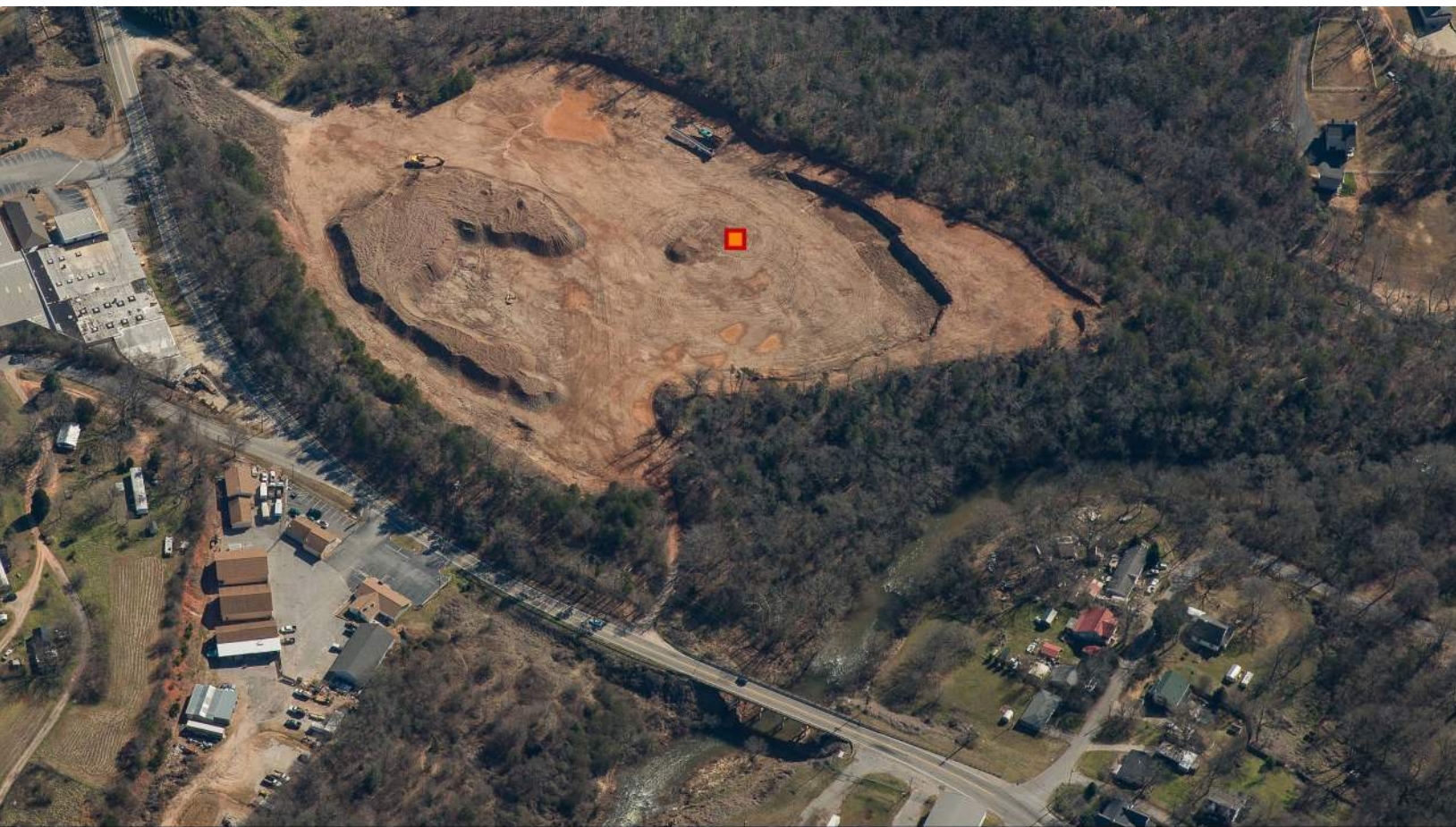
- Zoned R-S in Greenville County
- +/- 32 acres
- Frontage on Conestee Rd

Site Features:

- Bordered by Reedy River and Laurel Creek
- Significant Topography adjacent to Creeks
- Cleared and mass graded by previous owner



EXISTING SITE IMAGERY



ANNEXATION

Goal:

- Annex Property into City of Greenville
- Proposed Zoning: RM-1

Why?

- City of Greenville allows cluster development, allowing preservation of natural resources and clustering of houses.



PROPOSED SUBDIVISION

Goal:

- Get subdivision approval from City of Greenville following annexation.
- Mix of attached and detached units and front and rear loaded lots
- +/- 50% of site preserved as open space
- Recreational access to natural resources is a priority

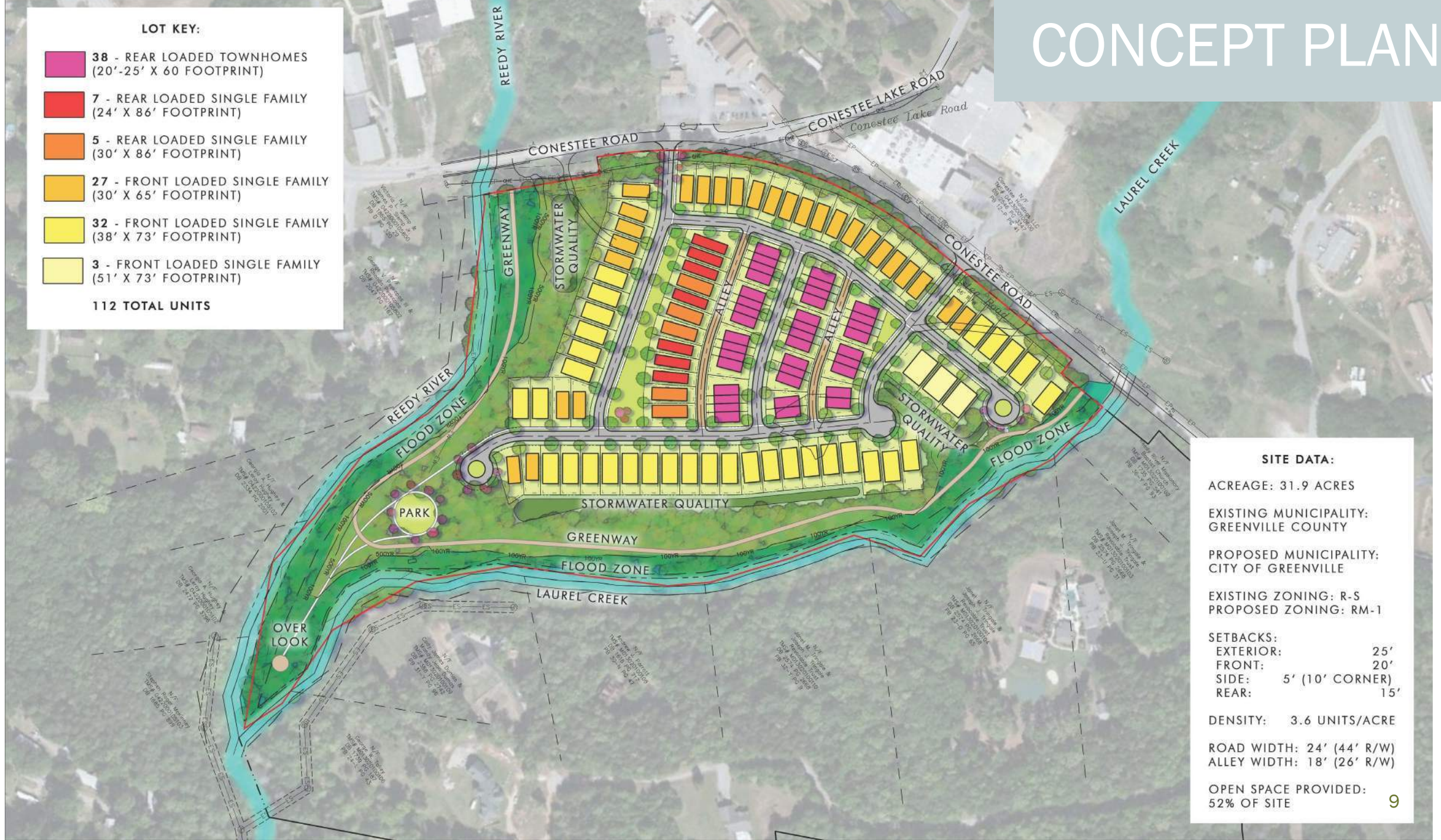


CONCEPT PLAN

LOT KEY:

- 38** - REAR LOADED TOWNHOMES
(20' X 25' X 60 FOOTPRINT)
- 7** - REAR LOADED SINGLE FAMILY
(24' X 86' FOOTPRINT)
- 5** - REAR LOADED SINGLE FAMILY
(30' X 86' FOOTPRINT)
- 27** - FRONT LOADED SINGLE FAMILY
(30' X 65' FOOTPRINT)
- 32** - FRONT LOADED SINGLE FAMILY
(38' X 73' FOOTPRINT)
- 3** - FRONT LOADED SINGLE FAMILY
(51' X 73' FOOTPRINT)

112 TOTAL UNITS



SITE DATA:

ACREAGE: 31.9 ACRES

EXISTING MUNICIPALITY:
GREENVILLE COUNTY

PROPOSED MUNICIPALITY:
CITY OF GREENVILLE

EXISTING ZONING: R-S
PROPOSED ZONING: RM-1

SETBACKS:
EXTERIOR: 25'
FRONT: 20'
SIDE: 5' (10' CORNER)
REAR: 15'

DENSITY: 3.6 UNITS/ACRE

ROAD WIDTH: 24' (44' R/W)
ALLEY WIDTH: 18' (26' R/W)

OPEN SPACE PROVIDED:
52% OF SITE

INSPIRATION IMAGERY



THANK YOU
Questions?





**Planning Staff Report to
Greenville Planning Commission
January 14, 2022**
for the January 20, 2022 Public Hearing

Docket Number: FDP-10-2021
Applicant: NHE Inc./Taylor Davis
Property Owner: Laurens Road Church of God; Church of God TRS; Ovata Land Holdings LLC
Property Location: LAURENS ROAD AND ACKLEY ROAD
Tax Map Number: 019800-04-03200, 019800-04-00200, 019800-04-00300
Acreage: 3.87 Acres
Zoning: PD, Planned Development District

Proposal: FINAL DEVELOPMENT PLAN OF 3.87 ACRES
Staff Recommendation: Recommend Approval with Conditions and Comments
Staff Analysis:

Applicable Sections of the City of Greenville Code of Ordinances:

Sec. 2-372, *Function, Powers, and Duties of the Planning Commission*
Sec. 19-1.3, *Purpose and Intent*
Sec. 19-2.1.2, *Planning Commission Powers and Duties*
Sec. 19-6.5, *Design Standards for Nonresidential Development*
Sec. 19-6.8, *Design Standards for Multifamily Residential*
Sec. 19-2.3.3, *Planned Development District*

Project Overview:

The applicant requests a Final Development Plan (FDP) for the previously approved Planned Development District. The PD request, Z-10-2021, was approved by City Council on July 12, 2021. This approval included the Staff condition that the FDP reappear before Planning Commission for approval. The project is a 112-unit affordable apartment complex with a commercial component.

Procedural Requirements:

Pre-Application and Development Meetings

A pre-application meeting was held between the applicant and Planning staff prior to submittal of this FDP application.

Neighborhood Meeting

The applicant conducted a neighborhood meeting on December 16, 2021, as required by subsection 19-2.2.4 of the Land Management Ordinance. The meeting attendance record and meeting notes are attached to the packet.

Staff Analysis:

The applicant proposes an FDP to a previously approved PD, Planned Development District. The proposed site is within the Nicholtown Special Emphasis Neighborhood and included in the recently adopted Swamp Rabbit Trail Extension Master Plan.

The site is the current home to the Laurens Road Church of God, a meeting hall used by the church, parsonages, and a single-family home. These structures will be demolished as part of the proposed redevelopment. The property is surrounded by single-family residential homes and one office building. Across Ackley Road is a strip commercial center. Across Laurens Road is a former textile building that has been converted to a storage center.

Compliance to PD:

The FDP appears to be generally consistent with the PD and its Statement of Intent. The 112 units is in line with the 112-116 proposed in the PD and 6,500 sf and 4,000 sf of commercial and amenity space is in line with the PD as well.

The FDP proposed architecture has been refined from the PD proposal and remains consistent. The site will be improved with two 4-story apartment buildings. The corner building incorporates the commercial and amenity uses that may be accessed from the street. The FDP proposes a unit breakdown of 19 studio, 55 1-bedroom, ten 2-bedroom, and 28 3-bedroom apartments. The structures use brick on the pedestrian activated ground floor, while the upper stories utilize other additional materials, such as Hardiboard, with pops of yellow color.

The site plan is also generally consistent with the PD. The site retains a large, passive open space to the rear of the site where existing trees will be preserved. The site will also feature active open space such as a plaza area between the two buildings, wider sidewalk areas, playground, and a gazebo.

To meet the conditions of PD approval, the applicant replaced traditional dumpsters with in-ground Sutura units and incorporated a future cross connection to the adjacent parcel along Laurens Road. The applicant also incorporated more ADA-compliant parking spaces to meet building code requirements. The applicant has supplied staff with a cut-sheet of the required 6-foot opaque fencing between the subject property and the adjacent residential.

The site is connected by the existing street network and pedestrian walkways. Vehicular access is provided by one (1) point of access on Ackley Street. Laurens Road is a South Carolina Department of Transportation (SCDOT) right-of-way and all traffic or sidewalk improvements, during the permit stage must receive final review and approval by SCDOT. Likewise, Ackley Road is a City of Greenville right-of-way and will need similar approvals from City departments.

In addition, per Planning Commission's conditions, the applicant has worked with Greenlink on a new bus stop along Laurens Road on the eastern side of the location. They have also worked with staff and Duke Energy on the provisions of street tree conflicts.

The applicant has supplied a sign placement package for the development. Staff notes that sign permits, one for each sign, will be required in addition to the building permits. Staff also notes that all sign design work shall meet the requirements of Appendix J: Sign Standards and Design Guidelines. There is a potential issue with the number of proposed blade signs. Staff notes that regulations only allow one blade sign per tenant.

Staff finds the application to be in general compliance to the purpose and intent of the approved planned development district as stated above.

Design Review Board Comments

- Give careful consideration to how new sidewalks will connect in a sensitive way.
- "Beautiful building". It is nice to see diversity in architecture for area. Buildings have great articulation.
- Providing TLC [acronym for Tender Loving Care] and a good precedent for Laurens Road
- This is what Laurens Road needs. Love the choice of colors.

STAFF RECOMMENDATION:

Recommend Approval for Rezone to PD, Planned Development with conditions and comments

Planning Staff Conditions:

1. At the time of the Certificate of Occupancy, a sign shall be placed at the planned road stub out, with notation that it is to be used as an area of future connectivity to the adjacent parcel(s).
2. At the time of permit, the architecture for the gazebo shall be provided to staff. The location and size shall be generally consistent to that shown within the FDP and the design shall be generally consistent with the architecture of the buildings.
3. All signage shall obtain a sign permit. Each sign is required to obtain its own individual permit. Signage must meet the requirements of Appendix J: Sign Standards and Design Guidelines.

Traffic Engineer:

Recommend: Approve w/ Comments

Comments:

A queuing memo is requested to determine the required storage length for exclusive left- and right-turn lanes.

Loading zone space needs to be removed from Ackley Rd.

Parks & Recreation:

Recommend: Approve

Fire Department Comments:

Recommend: Approve w/ Comments

Comments:

At time of site permit, they will have to show aerial fire access (26') drive aisles on property. The access from Laurens is too busy. When this continues for future development, we will give further comments if needed.

City Engineer Comments

Recommend: Approve w/ Comments

Comments:

1. Application review approval is subject to the applicant satisfying all conditions and requirements of the engineering divisions.
2. As discussed, the option to add a turn lane within the right of way of Ackley Rd. will be reviewed in conjunction with site plan approval.

Environmental Engineer Comments

Recommend: Approve

Comments: No Comments

Civil Engineer Comments

Recommend: Approve w/ Comments

Comments:

Standard Comments

- 1) All proposed public and private improvements shall meet the requirements of Section 19-6.7 Site Development and Related Infrastructure of the City's Land Management Ordinance. The design and construction of the public and private infrastructure shall conform to all applicable federal and state regulations and the requirements of the City's design and specifications manual.

- 2) All improvements proposed within the City's public right of way shall be subject to the requirements of Articles I and II of Chapter 36 – Streets, Sidewalks and Other Public Places of the City of Greenville Code of Ordinances. As required, all improvements or construction activity performed within the public right of way require an approved encroachment permit.
- 3) A Site Plan Permit will be required for the development detailing the demolition, grading and stormwater, utility improvements, and site access.
- 4) A traffic impact analysis will be required as a condition of site permit approval if the administrator determines that a proposed development will generate 100 or more traffic trips during the peak hour or if the administrator determines that a proposed development involving substantial improvement or change of use will generate 125 or more traffic trips during the peak hour. Improvements to the existing transportation infrastructure by a developer will be required as a condition of permit issuance if the projected level of service for the build-out year of the development descends below level "D" for any intersection within the study area as a result of the proposed development.
- 5) The improvements shall comply with Chapter 11 of the International Building Code for site accessibility. Per Section 1104, a minimum of one accessible route shall be provided from each site arrival point (public transportation stops, accessible parking, accessible passenger loading zones and public streets or sidewalks) to the accessible building entrance served. Additionally, an accessible route shall be provided within the site to connect accessible buildings, facilities, elements and spaces on the site.

Site Specific Comments

- 6) Loading zone space needs to be removed from Ackley Road.
- 7) The City is currently looking into installing a left turn lane with at least 100 feet of storage. All improvements will be placed in the existing right of way. However, this may impact the proposed location of the new sidewalk installed in front of the proposed apartments.

Tree and Landscape Comments

Recommend: Approve w/ Comments

Comments:

Applicant should be sure to mitigate any tree removals according to 19-6.3 Tree Protection. Parking lots should be sure to meet the interior parking lot landscaping requirements. Keep in mind no more than 10 parking spaces should be in line without a landscape island that contains a canopy tree. For every 2000 sf of parking area, one canopy tree and 8 shrubs are required. Parking lots should be screened from any adjacent use or public right of way. Street trees are required at 1 per 40 feet of street frontage for canopy trees or 1 per 20 feet for understory trees if overhead utilities are present. Foundation plantings according to non-single family residential are also required as per 19-6.5. Please also screen any ground level utilities such as sutera units, transformers, HVAC, etc, with both a fence at least the height of the utility and 48-inch evergreen shrubs around all sides except for sides used for accessibility. Site disturbance and building permit applications should include a detailed landscape and mitigation plan for review by landscape staff.



**APPLICATION FOR
FINAL DEVELOPMENT PLAN (FDP)**

Contact Planning & Development (864) 467-4476

Office Use Only:

Application# _____ Fees Paid _____
Date Received _____ Accepted By _____
Date Complete _____ App Deny Conditions _____

APPLICANT/OWNER INFORMATION

*Indicates Required Field

APPLICANT

PROPERTY OWNER

*Name:	NHE, Inc - Taylor Davis	Laurens Road Church of God
*Title:	CEO	
*Address:	PO Box 5539 Greenville	PO Box 309, Mauldin
*State:	SC	SC
*Zip:	29606	29662
*Phone:	864-323-5792	
*Email:	rdavis@nhe-inc.com	

*SELECT REVIEW TYPE: ____ FDP Planning Commission Review ☒ FDP Staff Review

*PD NAME Ackley Road Apartments

*PD ORDINANCE # 2021-55

*ORIGINAL APPLICATION # (provide # of rezoning request) Z-10-2021

*STREET ADDRESS 1200 Laurens Road

*TAX MAP # 0198000403200, 0198000400200, 0198000400300 *ACREAGE 3.87

*BUILDING/PHASE 2 buildings, 1 phase

*PROPOSED USE mixed use (multi-family & commercial)

INSTRUCTIONS

- The application and fee, **made payable to the City of Greenville**, must be submitted to the Planning and Development Office no later than 2:00 on the date reflected on the attached schedule for Planning Commission.
 - PD Final Development Plan (FDP) – Initial Approval \$200.00, *public hearing may be required*
 - PD Final Development Plan (FDP) – Major Modification \$100.00, *public hearing required*
 - PD Final Development Plan (FDP) – Minor Modification \$50.00, *administrative review*
- Staff will review the application for sufficiency pursuant **Section 19-2.2.6, Determination of Sufficiency**, prior to routing the application for staff review. If the application is determined to be insufficient, the Administrator shall contact the Applicant to request that the Applicant resolve the deficiencies. You are encouraged to schedule an application conference with a planner, who will review your application for sufficiency at the time it is submitted. Please call (864) 467-4476 to schedule an appointment.
- If the plan is determined to be inconsistent with the preliminary approval granted by the planning commission (i.e. not a "minor deviation" as defined at **Section 19-2.3.3(D)(7), Minor Deviations**), the administrator shall defer action pending the applicant submitting an application to the commission to consider a revised preliminary plan pursuant to **Section 19-2.2, Common procedures**.

CITY OF GREENVILLE APPLICATION FOR FINAL DEVELOPMENT PLAN (FDP)

PAGE 1 OF 3

4. **Public Notice Requirements.** Final Development Plan (FDP) applications require a planning commission public hearing. The applicant is responsible for sign posting the subject property at least 15 days (but no more than 18 days) prior to the scheduled planning commission hearing date.

(To be filled out at time of application submittal)

x _____ Public Hearing signs are acknowledged as received by the applicant
_____ Received information for materials board requirements

***APPLICANT SIGNATURE**

5. **Please read carefully:** The applicant and property owner affirm that all information submitted with this application; including any/all supplemental information is true and correct to the best of their knowledge and they have provided full disclosure of the relevant facts.

In addition, the applicant affirms that the applicant or someone acting on the applicant's behalf has made a reasonable effort to determine whether a deed or other document places one or more restrictions on the property that preclude or impede the intended use and has found no record of such a restriction.

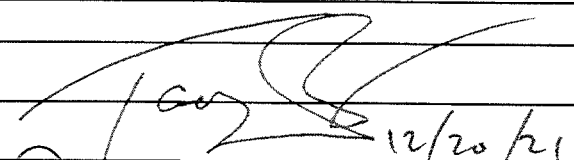
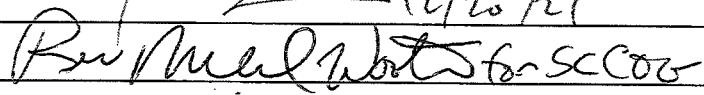
If the planning office by separate inquiry determines that such a restriction exists, it shall notify the applicant. If the applicant does not withdraw or modify the application in a timely manner, or act to have the restriction terminated or waived, then the planning office will indicate in its report to the planning commission that granting the requested change would not likely result in the benefit the applicant seeks.

Furthermore, my signature (applicant) indicates that I understand and consent that this matter will appear before the Planning Commission for consideration and that any recommendation, for approval or denial, by the Planning Commission will be presented to the City Council at their next regularly scheduled meeting to be held on the fourth Monday of the month following the Planning Commission meeting in which the matter was heard.

***APPLICANT SIGNATURE**

DATE

6. To that end, the applicant hereby affirms that the tract or parcel of land subject of the attached application is ____ or is not x restricted by any recorded covenant that is contrary to, conflicts with, or prohibits the requested activity.

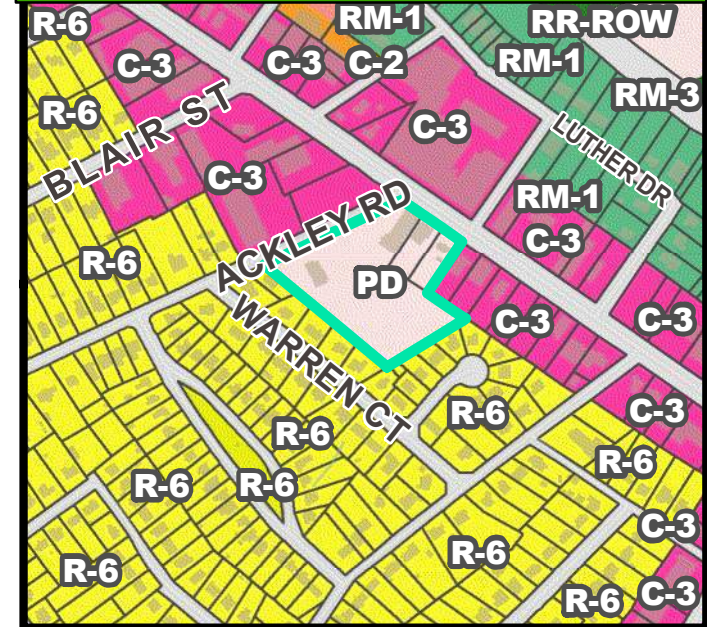
*Signatures	
Applicant	
Date	12/20/21
Property Owner/Authorized Agent	
Date	12/21/21

FDP-10-2021 • 1200 LAURENS ROAD

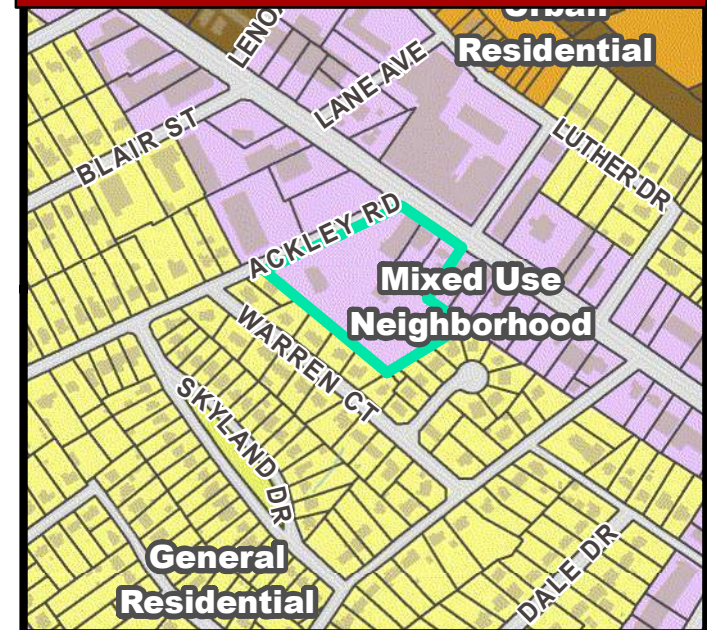
AERIAL VIEW



CURRENT ZONING



FUTURE LAND USE

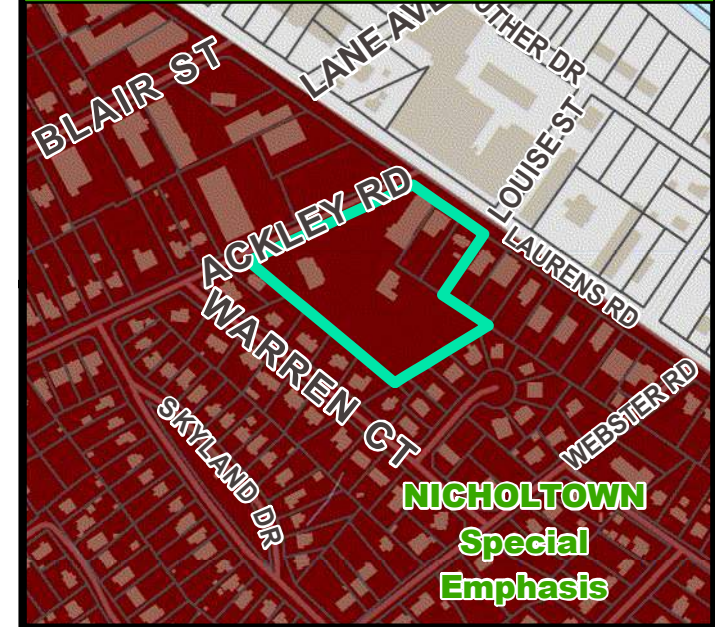


FDP-10-2021 • 1200 LAURENS ROAD

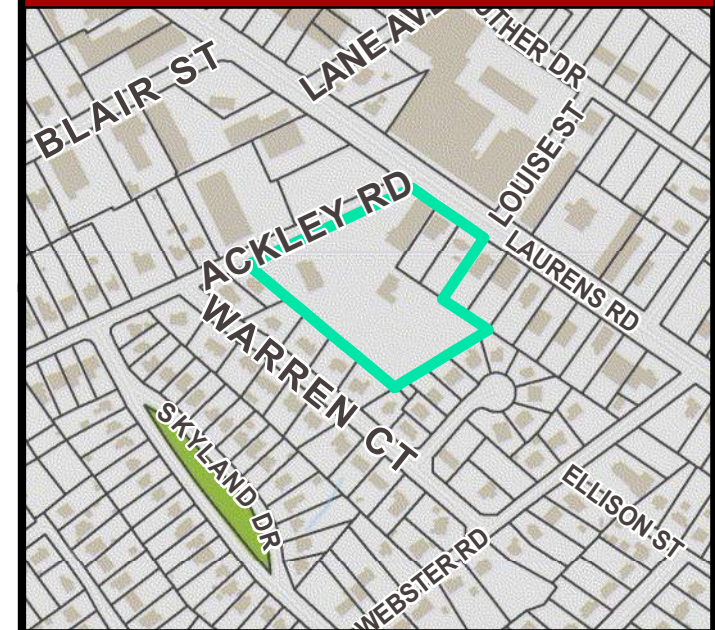
NATURAL / ENVIRONMENTAL FEATURES



SPECIAL EMPHASIS NEIGHBORHOODS



PRESERVATION OVERLAYS



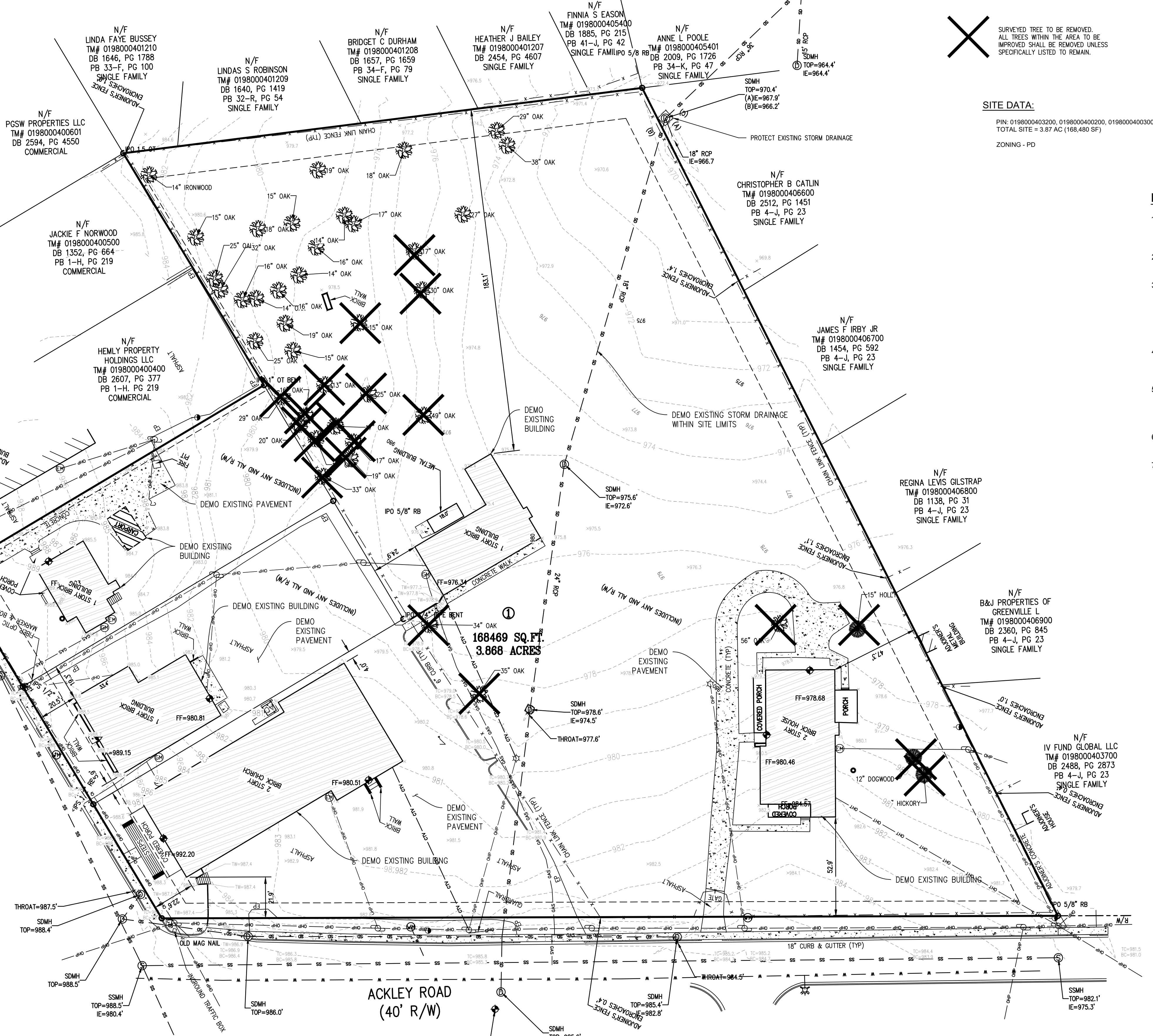
LAURENS ROAD (US HWY 276)
(75' R/W)

CAUTION



Know what's below.
Call before you dig.

THE UTILITIES SHOWN ARE SHOWN FOR THE CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF THE WORK. ALL DAMAGE MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

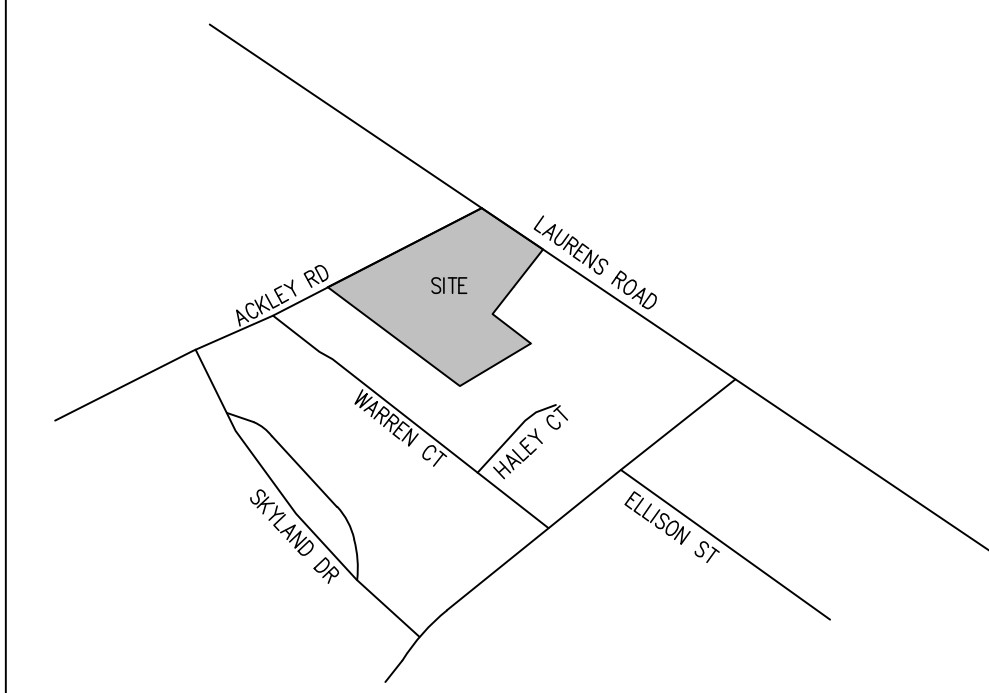


SURVEYED TREE TO BE REMOVED.
ALL TREES WITHIN THE AREA TO BE
IMPROVED SHALL BE REMOVED UNLESS
SPECIFICALLY LISTED TO REMAIN.

SITE DATA:

PIN: 0198000403200, 0198000400200, 0198000400300
TOTAL SITE = 3.87 AC (168,480 SF)
ZONING - PD

LOCATION MAP



NOT TO SCALE

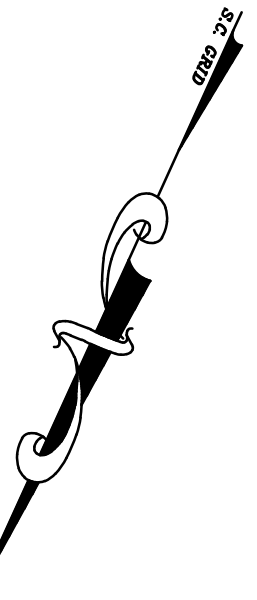
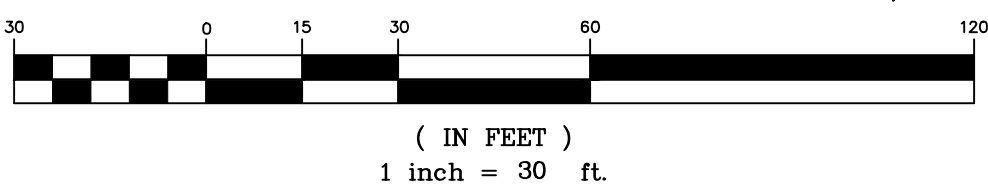
DEMOLITION NOTES

- DEMOLITION AND REMOVAL IS NOT NECESSARILY LIMITED TO THE ITEMS SHOWN ON THIS PLAN. CONTRACTOR SHALL REMOVE ADDITIONAL EXISTING UNSUITABLE MATERIAL OR STRUCTURES WITHIN THE CONSTRUCTION AREA AS NECESSARY.
- THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY IF UNDERGROUND STORAGE TANKS OR OTHER EQUIPMENT IS UNEARTHED OR OTHERWISE DISCOVERED.
- ALL EXISTING UTILITY DEMOLITION, REMOVAL, OR ABANDONMENT (WATER, SEWER, STORM DRAINAGE, ELECTRIC, GAS, TELEPHONE, CABLE, ETC.) SHALL BE DONE IN ACCORDANCE WITH THE STANDARDS, RULES, REGULATIONS, AND REQUIREMENTS OF THE APPLICABLE GOVERNING UTILITY ENTITY. CONTRACTOR SHALL COORDINATE UTILITY WORK WITH THE APPROPRIATE UTILITY ENTITY. CONTRACTOR TO VERIFY USEFULNESS OF EXISTING SITE UTILITIES WITH THE APPROPRIATE UTILITY ENTITY.
- THE CONTRACTOR SHALL OBTAIN ALL PERMITS FROM THE CITY OF GREENVILLE NECESSARY OR REQUIRED TO PERFORM DEMOLITION. THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER DISPOSAL OF DEMOLITION DEBRIS.
- THE CONTRACTOR SHALL CONDUCT ALL DEMOLITION, REMOVAL, STORAGE, CLEANUP, ETC. IN ACCORDANCE WITH ALL REGULATING AUTHORITIES INCLUDING BUT NOT LIMITED TO THE CITY OF GREENVILLE, SCDHEC, AND THE U.S. ENVIRONMENTAL PROTECTION AGENCY.
- NO WORK MAY BE PERFORMED WITHIN THE STATE RIGHT-OF-WAY WITHOUT AN APPROVED SCDDOT ENCROACHMENT PERMIT.
- EVERY ATTEMPT TO RECYCLE DEMOLISHED MATERIALS SHOULD BE MADE. COORDINATE WITH ON-SITE CONSTRUCTION MATERIALS TESTING FIRM TO IDENTIFY ANY MATERIAL TO BE RECYCLED.

LEGEND

SYMBOLS		ABBREVIATIONS	
CB	CATCH BASIN	BL	BUILDING LINE
DI	DROP INLET	CL	CENTERLINE
	ELEC TRANSFORMER	CT	CRIMP TOP
x 90.0	ELEVATION (EXIST. GRADE)	DE	DRAINAGE EASEMENT
x 90.0	ELEVATION (FINISH GRADE)	EP	EDGE OF PAVEMENT
x 90.0	FIRE HYDRANT	FE	FINISHED FLOOR ELEVATION
x 90.0	GAS METER	FG	FINISHED GRADE
x 90.0	GAS VALVE	IE	INVERT ELEVATION
x 90.0	IRON PIN	IPS	IRON PIN SET
x 90.0	IRON PIN OLD	IPO	IRON PIN OLD
x 90.0	MANHOLE (BELLSOUTH)	N&C	NAIL & CAP
x 90.0	MANHOLE (SD)	OT	OPEN TOP
x 90.0	MANHOLE (SS)	RB	REBAR
x 90.0	POWER POLE	RCP	REINFORCED CONCRETE PIPE
x 90.0	TELEPHONE	R/W	RIGHT OF WAY
x 90.0	WATER METER	SSE	SANITARY SEWER EASEMENT
x 90.0	WATER VALVE	SL	SETBACK LINE
x 90.0	STORMWATER FLOW	VCP	VITRIFIED CLAY PIPE
x 90.0	TRAFFIC FLOW		
LINETYPES			
---CIV	CABLE TV	SS	SANITARY SEWER - EXIST.
---X	CHAIN LINK FENCE (PROPOSED)	SS	SANITARY SEWER - NEW
---X	CHAIN LINK FENCE (EXISTING)	SF	SILT FENCE
---680	CONTOURS - EXIST. GRADE	SD	STORM SEWER - EXIST.
---(678)	CONTOURS - FINISHED GRADE	SD	STORM SEWER - NEW
---FOC	FIBER OPTIC	UGP	UNDERGROUND POWER
---FM	FORCE MAIN	UGP	UNDERGROUND TEL
---GAS	GAS LINE	W	WATER LINE - EXIST.
---OP	OVERHEAD POWER	W	WATER - NEW
---OHT	OVERHEAD TELEPHONE	W	WOOD FENCE
---RD	ROOF DRAIN - NEW	WPCS	LIMITS OF DISTURBANCE

GRAPHIC SCALE



SITE DESIGN, INC.

CIVIL ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS



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225 ROCKY CREEK ROAD
GREENVILLE SC 29615
PH: (864) 271-0486

THE ALLIANCE
APARTMENT
HOMES

CITY OF GREENVILLE
GREENVILLE COUNTY
SOUTH CAROLINA

HORZ. SCALE: 1" = 30'
VERT. SCALE: N/A
DESIGNED BY: AB
DRAWN BY: AB
CHECKED BY: PFM
DATE: 02/04/2021

S201421 BASE

EXISTING
CONDITIONS
AND REMOVALS

SHEET 1 OF 4

C100

SITE DATA:

PIN: 0198000403200, 0198000400200, 0198000400300
TOTAL SITE = 3.87 AC (168,480 SF)

NOTES:

1. SLOPES WITHIN ADA PARKING AREAS CANNOT EXCEED 2% IN ANY DIRECTION. ALL ADA PARKING AREAS ARE TO BE CONSTRUCTED WITH CONCRETE.
2. SIDEWALK CROSS SLOPES ARE NOT TO EXCEED 2%.
3. ANY SIDEWALK EXCEEDING 5% RUNNING SLOPE IS CONSIDERED A RAMP. ANY RAMP RISING GREATER THAN 6" MUST HAVE AN ADA APPROVED HANDRAIL ON BOTH SIDES. RAMPS MUST NOT EXCEED 8% RUNNING SLOPE.
4. ANY EXCESS SOIL HAULED OFF-SITE MUST BE TO AN APPROVED PERMITTED SITE. SPOT ELEVATIONS SHOWN DENOTE BOTTOM OF CURB, TOP OF ASPHALT, OR GROUND SURFACE ELEVATION UNLESS OTHERWISE NOTED.
5. TC = TOP OF CURB / BC = BOTTOM OF CURB.
6. TW = TOP OF WALL / BW = BOTTOM OF WALL.
7. BUILDING ROOF DRAINAGE WILL TIE TO UNDERGROUND STORMWATER DRAINAGE SYSTEM. COORDINATE WITH MEP PLANS.

LOCATION MAP

NOT TO SCALE

GRADING NOTES:

1. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES BY CALLING UTILITY LOCATION SERVICE AT 811 THREE (3) DAYS PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER FOR A REVIEW SHOULD ANY DISCREPANCIES BE DISCOVERED AT THE SITE OR ON THE DRAWINGS.
3. PROOFROLLING AND COMPACTION TESTS SHALL BE ACCOMPLISHED IN THE FIELD TO TEST FILLED AREAS. INITIAL COMPACTION TESTS WILL BE CONDUCTED AT OWNER'S EXPENSE. RETESTING REQUIRED BECAUSE OF POOR COMPACTION SHALL BE CONDUCTED AT CONTRACTOR'S EXPENSE. CONTRACTOR SHALL SUPPLY RESULTS TO THE ENGINEER BEFORE ANY PRELIMINARY AND/OR FINAL APPROVALS.
4. THE GRADING CONTRACTOR SHALL PROOFROLL THE CONSTRUCTION AREA WITH HEAVY RUBBER-TIRED EQUIPMENT. ALL SOFT SPOTS SHALL BE STABILIZED BY FURTHER COMPACTIVE EFFORT OR UNDERCUT AND BACKFILLED WITH COMPACTED STRUCTURAL FILL MATERIAL.
5. EARTHWORK SHALL BE TO THE GRADES AND LINES SHOWN. EXISTING AND PROPOSED CONTOUR INTERVALS ARE AT 1'.
6. ALL NEW ELEVATIONS SHOWN ARE FINISH ELEVATIONS. THE GRADING CONTRACTOR SHALL DEDUCT THE APPROPRIATE AMOUNT TO ESTABLISH SUBGRADE ELEVATION.
7. WALL ELEVATIONS WHERE NOTED ARE TOP OF WALL AND FINISH GRADE AT BOTTOM OF WALL. SEE RETAINING WALL PLANS FOR DETAILED CONSTRUCTION INFORMATION.
8. CONTRACTOR SHALL REMOVE TOPSOIL AS NECESSARY (MINIMUM OF 4") TO PROVIDE ADEQUATE SUBGRADE FOR ROADWAYS.
9. ALL EXCAVATION SHALL BE "UNCLASSIFIED EXCAVATION". ALL NEW FILL AND UTILITY TRENCH BACKFILL SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR (ASTM D-698). IN ADDITION, THE UPPER 18" OF ALL FILL MATERIALS BENEATH FLOOR SLABS AND PAVEMENTS SHALL BE COMPACTED TO AT LEAST 98% OF THE MAXIMUM DRY DENSITY (ASTM D-698).
10. THE CONTRACTOR SHALL CONDUCT ALL WORK IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
11. ALL REINFORCED CONCRETE PIPE SHALL BE CLASS III, UNLESS OTHERWISE NOTED, AND SHALL CONFORM TO SCDOT SPECIFICATIONS. ALL JOINTS SHALL BE TONGUE AND GROOVE WITH MASTIC MATERIAL.
12. CATCH BASINS SHALL BE PRECAST REINFORCED CONCRETE DRAINAGE BOX WITH SOLID WALL PER SCDOT STANDARD DRAWING 719-17A OR APPROVED EQUAL.
13. ALL WORK ON STATE, COUNTY, OR CITY RIGHT-OF-WAYS, INCLUDING DRIVEWAY APRONS, WATER AND SEWER TAPS OR ANY OTHER WORK REQUIRES AN ENCROACHMENT PERMIT FROM THE APPROPRIATE AGENCY.
14. STANDING GRASS MUST BE EVIDENT IN AREAS THAT WERE SEEDDED.
15. AN AS-BUILT CERTIFICATION OF THE STORMWATER MANAGEMENT SYSTEM WILL BE REQUIRED PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR THE SITE. THE DESIGN ENGINEER WILL NOT BE RESPONSIBLE FOR THE DELAYS RESULTING FROM NON-COMPLIANCE WITH THE DESIGN DRAWINGS.
16. CONTRACTOR TO CONFIRM ALL ELEVATIONS AND ADA COMPLIANCE PRIOR TO INSTALLING CURB, SIDEWALK, OR PAVEMENT AND BRING ANY DISCREPANCIES TO THE ENGINEER'S ATTENTION.

LEGEND

SYMBOLS

- CB CATCH BASIN
- DI DROP INLET
- ELEC TRANSFORMER
- ELEVATION (EXIST. GRADE)
- ELEVATION (FINISH GRADE)
- FIRE HYDRANT
- GAS METER
- GAS VALVE
- IRON PIN
- LIGHT POLE
- MANHOLE (BELLSOUTH)
- MANHOLE (SD)
- MANHOLE (SS)
- POWER POLE
- TELEPHONE
- WATER METER
- WATER VALVE
- STORMWATER FLOW
- TRAFFIC FLOW

ABBREVIATIONS

- BL BUILDING LINE
- CL CENTERLINE
- CT CRIMP TOP
- DE DRAINAGE EASEMENT
- EP EDGE OF PAVEMENT
- FFE FINISHED FLOOR ELEVATION
- FG FINISHED GRADE
- IE INVERT ELEVATION
- IPS IRON PIN SET
- IPO IRON PIN OLD
- N&C NAIL & CAP
- OT OPEN TOP
- RB REBAR
- RCP REINFORCED CONCRETE PIPE
- R/W RIGHT OF WAY
- SSE SANITARY SEWER EASEMENT
- SL SETBACK LINE
- VCP VITRIFIED CLAY PIPE

LINETYPES

- CTV CABLE TV
- CHAIN LINK FENCE (PROPOSED)
- CHAIN LINK FENCE (EXISTING)
- CONTOURS - EXIST. GRADE
- (770) CONTOURS - FINISHED GRADE
- FOC FIBER OPTIC
- FM FORCE MAIN
- GAS GAS LINE
- OWP OVERHEAD POWER
- OHT OVERHEAD TELEPHONE
- RD ROOF DRAIN - NEW
- SS SANITARY SEWER - EXIST.
- SS SANITARY SEWER - NEW
- SF SILT FENCE
- SD STORM SEWER - EXIST.
- SS STORM SEWER - NEW
- UGP UNDERGROUND POWER
- UGT UNDERGROUND TEL
- WAT WATER LINE - EXIST.
- WAT WATER - NEW
- WOOD FENCE
- LPDES LIMITS OF DISTURBANCE

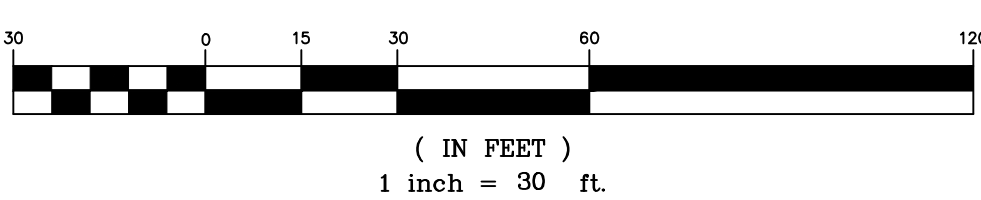
CAUTION



Know what's below.
Call before you dig.

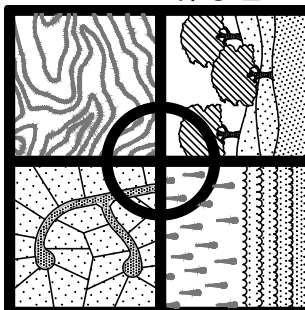
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GRAPHIC SCALE



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225 ROCKY CREEK ROAD
GREENVILLE SC 29615
PH: (864) 271-0496

NO.	DATE
1.	10/13/2021
2.	8/12/2021
3.	5/18/2021
4.	
5.	
6.	
7.	
8.	
9.	
10.	

SC. REG. NO. 1245

THE ALLIANCE
APARTMENT
HOMES

CITY OF GREENVILLE
GREENVILLE COUNTY
SOUTH CAROLINA

HORZ. SCALE: 1" = 30'
VERT. SCALE: N/A
DESIGNED BY: AB
DRAWN BY: AB
CHECKED BY: PFM
DATE: 02/04/2021

S201421 BASE

GRADING
PLAN

SHEET 3 OF 4

C400

LAURENS ROAD/US HWY 276
(75' R/W)

CAUTION



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NOTES:

1. WATER AND SEWER SERVICES WILL CONNECT TO EXISTING MAINS. NO MAIN EXTENSIONS ARE REQUIRED.

LOCATION MAP

NOT TO SCALE

UTILITY NOTES:

1. ALL UTILITIES LOCATED ON THIS PLAN SHOULD BE CONSIDERED APPROXIMATE. CONTRACTOR SHALL COORDINATE LOCATION OF UNDERGROUND UTILITIES WITH THE UTILITY LOCATING SERVICE, BY CALLING 811 THREE (3) DAYS PRIOR TO CONSTRUCTION, AND UTILITY PROVIDERS.
2. CONTRACTOR SHALL NOTIFY THE ENGINEER FOR A REVIEW SHOULD ANY DISCREPANCIES BE DISCOVERED AT THE SITE OR ON THE DRAWINGS.
3. NEW UTILITY TRENCH BACKFILL SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST (ASTM D-698). IN ADDITION, THE UPPER 18" OF ALL FILL MATERIALS BENEATH FLOOR SLABS AND PAVEMENTS SHALL BE COMPACTED TO AT LEAST 98% OF THE MAXIMUM DRY DENSITY (ASTM D-698).
4. CONTRACTOR SHALL CONSTRUCT DOMESTIC WATER SERVICE TO BUILDINGS AND FIRE LINE AS SHOWN ON DRAWING. EXACT LINE SIZE, TYPE AND LOCATION TO BE COORDINATED WITH MEP PLANS AND THE GOVERNING UTILITY AUTHORITY. TAPS TO BE INSTALLED TO THE SPECIFICATIONS OF THE GOVERNING UTILITY AUTHORITY.
5. CONTRACTOR SHALL CONSTRUCT SANITARY SEWER SERVICE TO BUILDINGS. EXACT SIZE, TYPE AND LOCATION TO BE COORDINATED WITH MEP PLANS AND THE GOVERNING UTILITY AUTHORITY. SERVICE TO BE INSTALLED TO THE SPECIFICATIONS OF THE GOVERNING UTILITY AUTHORITY. INSTALL CLEAN OUTS AT 75' INTERVALS (MAX) AND AT ALL DEFLECTIONS.
6. CONTRACTOR SHALL COORDINATE ALL OTHER UTILITY CONNECTIONS WITH LOCAL PROVIDERS. CONTRACTOR SHALL INSTALL ALL UTILITIES TO THE SPECIFICATIONS AND REQUIREMENTS OF THE ACCEPTING UTILITY AUTHORITY.
7. THE CONTRACTOR SHALL CONDUCT ALL WORK IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION.
8. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY UTILITY SCREENING TO MEET THE REQUIREMENTS OF THE CITY OF GREENVILLE.

LEGEND

SYMBOLS

- CB CATCH BASIN
- DI DROP INLET
- ELEC TRANSFORMER
- ELEVATION (EXIST. GRADE)
- ELEVATION (FINISH GRADE)
- FIRE HYDRANT
- GAS METER
- GAS VALVE
- IRON PIN
- IRON PIN SET
- IRON PIN OLD
- IRON PIN CAP
- MANHOLE (BELL/SOUTH)
- MANHOLE (SD)
- MANHOLE (SS)
- POWER POLE
- TELEPHONE
- WATER METER
- WATER VALVE
- STORMWATER FLOW
- TRAFFIC FLOW

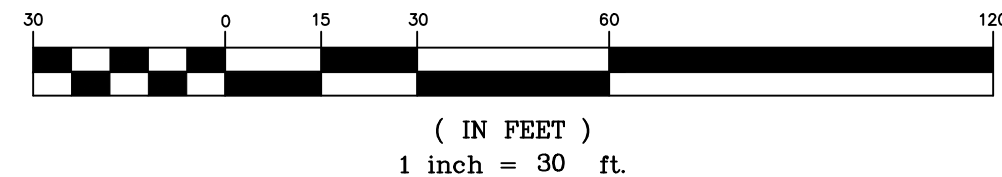
ABBREVIATIONS

- BL BUILDING LINE
- CL CENTERLINE
- CT CRIMP TOP
- DE DRAINAGE EASEMENT
- EP EDGE OF PAVEMENT
- FF FINISHED FLOOR ELEVATION
- FG FINISHED GRADE
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- R/W RIGHT OF WAY
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- SL SETBACK LINE
- VCP VITRIFIED CLAY PIPE

LINETYPES

- CTV CABLE TV
- CHAIN LINK FENCE (PROPOSED)
- CHAIN LINK FENCE (EXISTING)
- 680 CONTOURS - EXIST. GRADE
- (675) CONTOURS - FINISHED GRADE
- FOC FIBER OPTIC
- FM FORCE MAIN
- GAS GAS LINE
- OHP OVERHEAD POWER
- OHT OVERHEAD TELEPHONE
- RD ROOF DRAIN - NEW
- SS SANITARY SEWER - EXIST.
- SS SANITARY SEWER - NEW
- SF SILT FENCE
- SD STORM SEWER - EXIST.
- SD STORM SEWER - NEW
- UGP UNDERGROUND POWER
- UGT UNDERGROUND TEL
- W WATER - EXIST.
- W WATER - NEW
- WOOD FENCE
- NPDS LIMITS OF DISTURBANCE

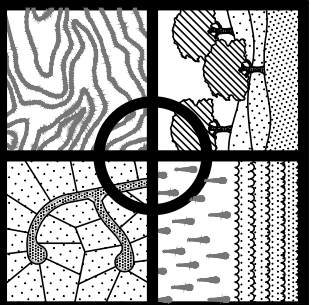
GRAPHIC SCALE



(IN FEET)
1 inch = 30 ft.

SITE DESIGN, INC.

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GREENVILLE, SC 29615
PH: (864) 271-0496

NO.	DATE
1.	10/13/2021
2.	8/12/2021
3.	5/18/2021
4.	
5.	
6.	
7.	
8.	
9.	
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SC. REG NO 1245

THE ALLIANCE
APARTMENT
HOMES

CITY OF GREENVILLE
GREENVILLE COUNTY
SOUTH CAROLINA

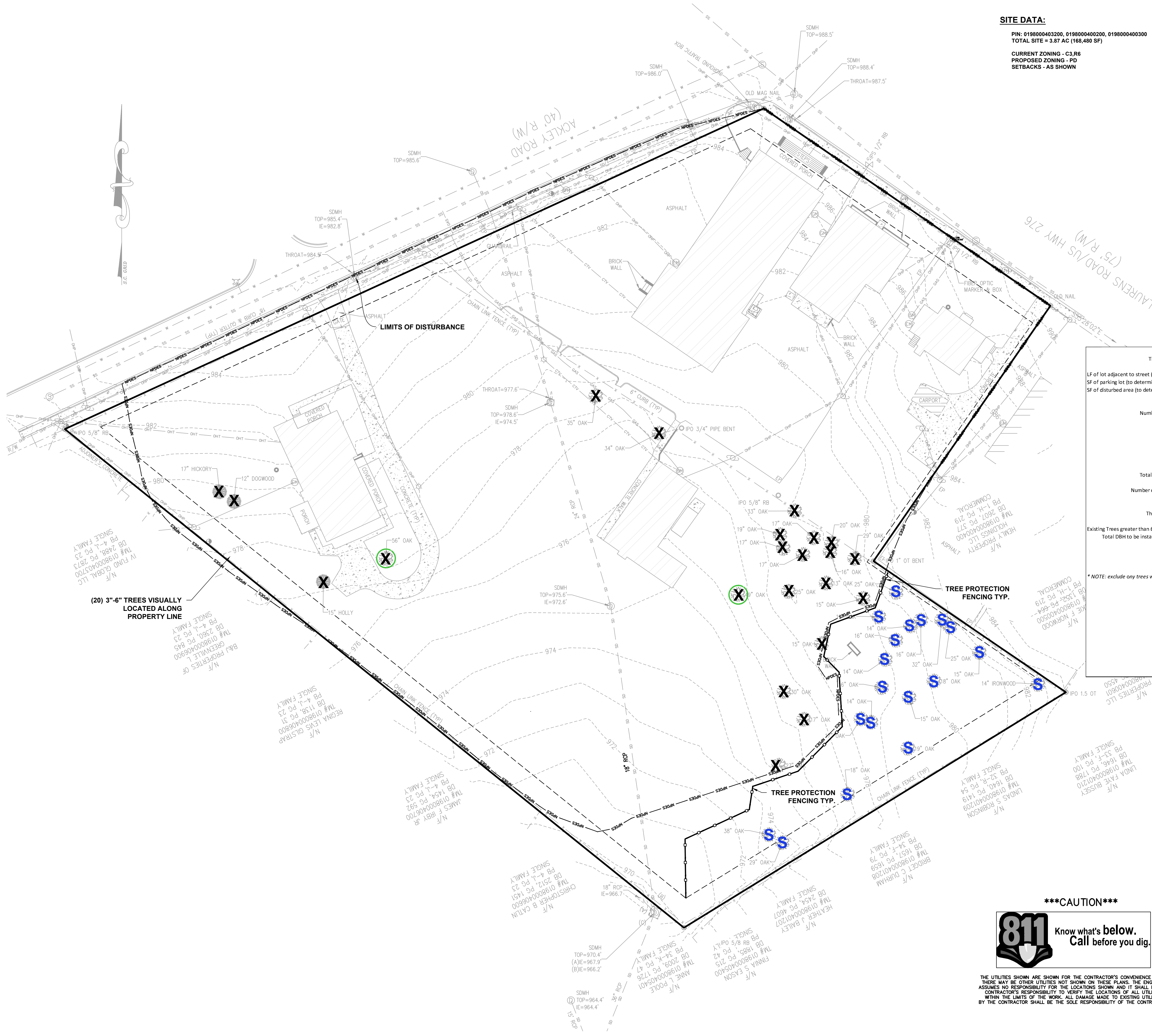
HORZ. SCALE: 1" = 30'
VERT. SCALE: N/A
DESIGNED BY: AB
DRAWN BY: AB
CHECKED BY: PFM
DATE: 02/04/2021

S201421 BASE

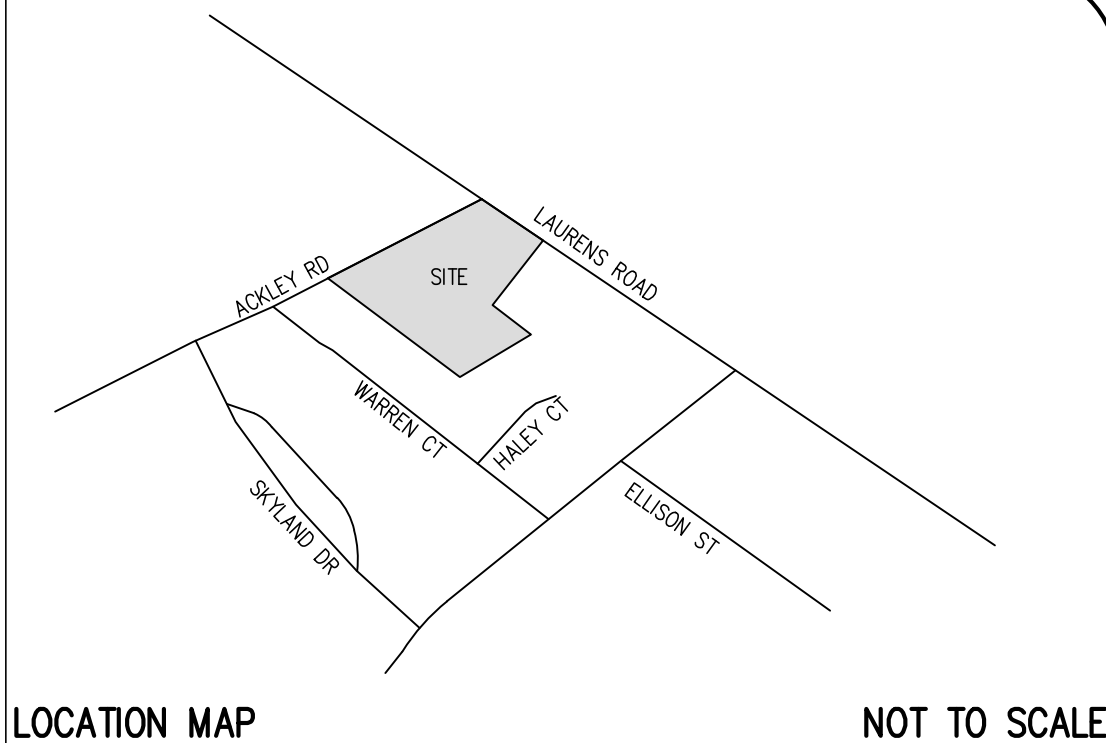
UTILITY
PLAN

SHEET 3 OF 4

C500



SITE DATA:
PIN: 0198000403200, 0198000400200, 0198000400300
TOTAL SITE = 3.87 AC (168,480 SF)
CURRENT ZONING - C3,R6
PROPOSED ZONING - PD
SETBACKS - AS SHOWN

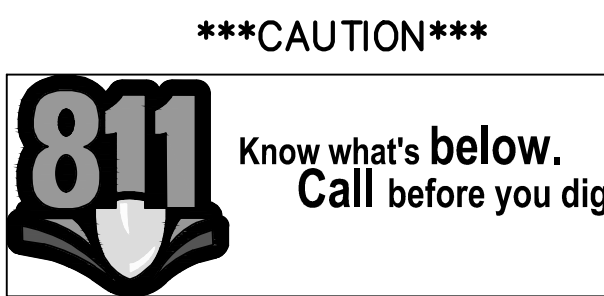
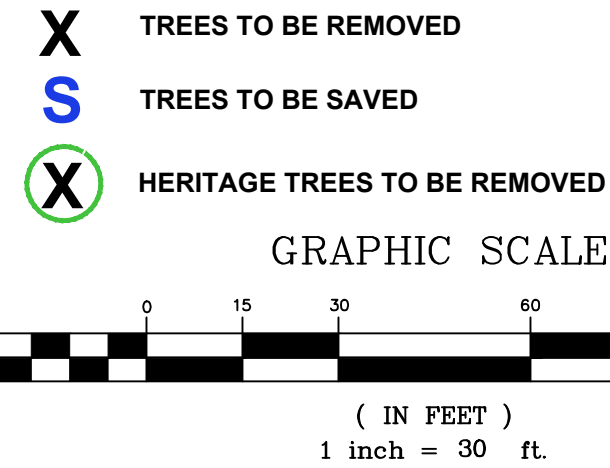


TREE REQUIREMENTS PER LANDSCAPE ORDINANCE	
This table is to be used to determine the minimum number of trees that will be required per the landscape ordinance.	
LF of lot adjacent to street (to determine street tree requirements)	692.49
SF of parking lot (to determine parking lot requirements)	64740
SF of disturbed area (to determine tree density requirements)	150969
Combined Building Footprints	33791
Athletic fields and courts	0
Number of Existing Trees between 3" and 6" to be saved	0
Total area for 1 tree per 2,000 sf	117178
Trees required for 1 per 2,000sf	59
Trees required for parking lot	33
3" Canopy Street trees required at 1 per 40' - or -	18
2" Ornamental Street Trees required at 1 per 20'	35
Total Required number of trees per landscape ordinance	59
Credit for Saved Trees	0
Number of new tree to be installed per landscape ordinance	59

TREE REQUIREMENTS PER TREE PRESERVATION ORDINANCE (1:1 replacement)	
This table is to be used to determine the mitigation requirements for removed trees per the tree preservation ordinance.	
Existing Trees greater than 6" to be removed (including heritage trees)*	464
Total DBH to be installed as indicated on landscape plan plus saved trees	324
Will require survey information	324
User input via landscape plan and all trees between 3" - 6"	140
Difference of Mitigation minus installed	140
Additional DBH Required	140
Optional Fee-in-lieu of for mitigation	\$7,000

* NOTE: exclude any trees which are exempt per ordinance

TREE REQUIREMENTS PER TREE PRESERVATION ORDINANCE (Heritage Tree Removal Fees)	
This table is to be used to determine the fine for removal of heritage trees	
Heritage trees being removed	105
Mandatory Heritage tree removal fees	\$4,725
Total Fees Required for 1:1 Mitigation Fee and Heritage Tree Fines	\$7,000
Optional Fee-in-lieu of for mitigation	\$7,000
Mandatory Heritage tree removal fees	\$4,725
Total of Fee-in-lieu of plus Heritage Removal Fees	\$11,725



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GREENVILLE, SC 29615
PH: (864) 271-0486

DATE									
10.	9.	8.	7.	6.	5.	4.	3.	2.	1.
NO.									

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SC. REG. NO. 552

THE ALLIANCE APARTMENT HOMES
CITY OF GREENVILLE
GREENVILLE COUNTY
SOUTH CAROLINA

HORIZ. SCALE:	1" = 30'
VERT. SCALE:	N/A
DESIGNED BY:	JAW
DRAWN BY:	JAW
CHECKED BY:	AGB
DATE:	01/03/2022

TREE MITIGATION PLAN
SHEET 1 OF XX
L000

PIN: 0198000403200, 0198000400200, 0198000400300
TOTAL SITE = 3.87 AC (168,480 SF)

CURRENT ZONING - C3.R6
PROPOSED ZONING - PD
SETBACKS - AS SHOWN

112-116 RESIDENTIAL UNITS - 1.5 SPACES PER UNIT
6,500-SF COMMERCIAL/RETAIL - 1 SPACE PER 500-SF

PARKING SPACES REQUIRED

RETAIL/COMMERCIAL	10
RESIDENTIAL	168
TOTAL	178

PARKING LOT INTERIOR/ROADSIDE LANDSCAPING:

- SEE ATTACHED SPREADSHEET FOR CALCULATIONS

SCREENING AND BUFFERING:

- SCREENING MUST BE PROVIDED ALONG SIDE AND REAR EXTERIOR LOT LINES , WHERE ANY NON-RESIDENTIAL USE IS ADJACENT TO A RESIDENTIAL USE
- A 6-FOOT WALL, FENCE, BERM, EVERGREEN SCREENING PLANT MATERIAL, OR A COMBINATION WITH A COMBINED MINIMUM HEIGHT OF 8 FEET ABOVE GRADE
- WIDTH OF THE BUFFER MUST BE AT LEAST 15 FEET

TREE PRESERVATION:

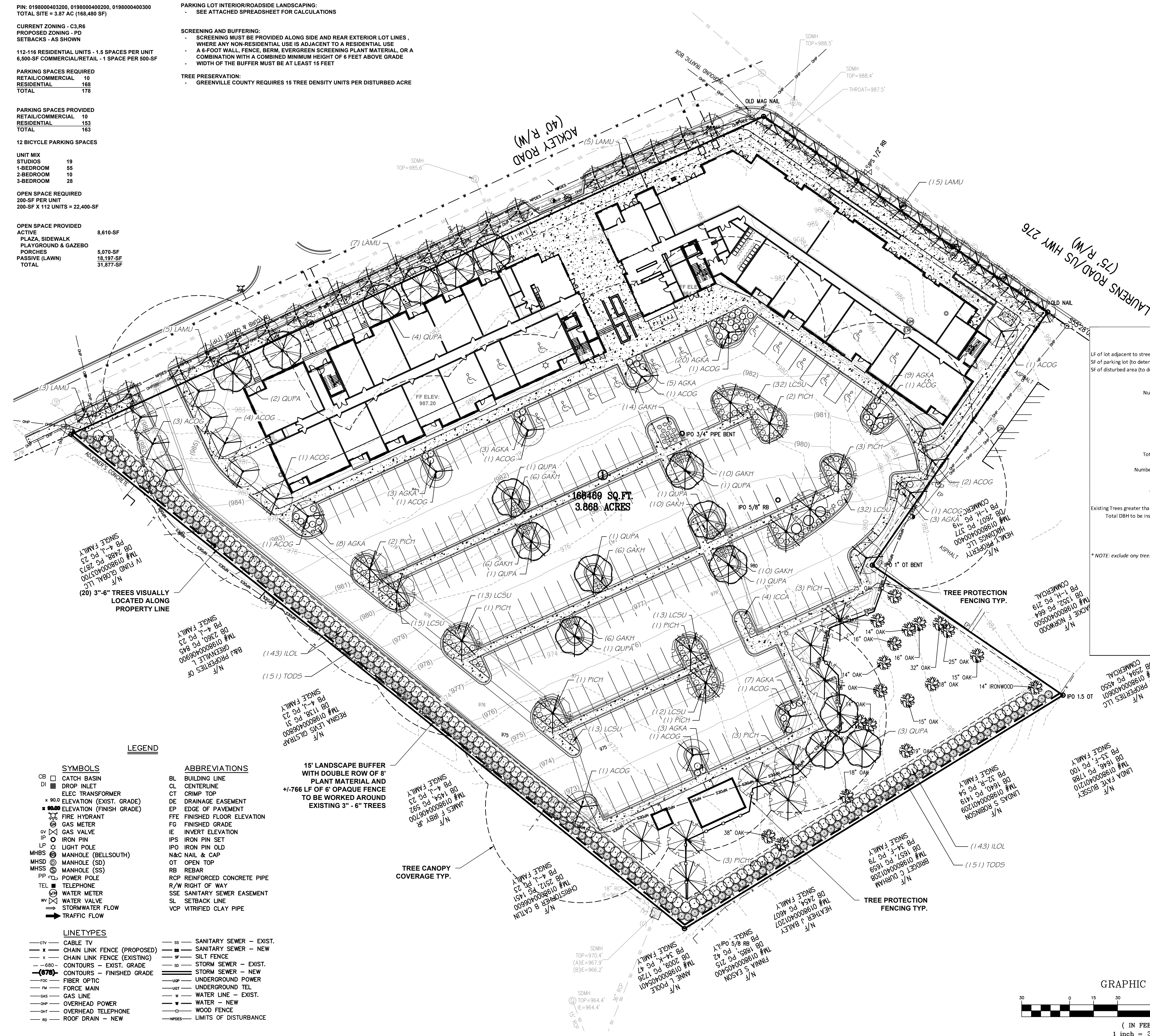
- GREENVILLE COUNTY REQUIRES 15 TREE DENSITY UNITS PER DISTURBED ACRE

PARKING SPACES PROVIDED	
RETAIL/COMMERCIAL	10
RESIDENTIAL	153
TOTAL	163

UNIT MIX	
STUDIOS	19
1-BEDROOM	55
2-BEDROOM	10
3-BEDROOM	28

200-SF X 112 UNITS = 22,400-SF

OPEN SPACE PROVIDED	
ACTIVE	8,610-SF
PLAZA, SIDEWALK	
PLAYGROUND & GAZEBO	
PORCHES	5,070-SF
PASSIVE (LAWN)	<u>18,197-SF</u>
TOTAL	<u>31,877-SF</u>



TREE REQUIREMENTS PER LANDSCAPE ORDINANCE	
This table is to be used to determine the minimum number of trees that will be required per the landscape ordinance.	
LF of lot adjacent to street (to determine street tree requirements)	692.49
SF of parking lot (to determine parking lot requirements)	64740
SF of disturbed area (to determine tree density requirements)	15069
Combined Building Footprints	33791
Athletic fields and courts	0
Number of Existing Trees between 3" and 6" to be saved	20
Total area for 1 tree per 2,000 sf	117178

	No. of Trees	
Trees required for 1 per 2,000sf	59	<i>Which may include parking lot and street tree totals</i>
Trees required for parking lot	33	<i>Parking lot trees are part of the total required</i>
3" Canopy Street Trees required at 1 per 40' - or -	18	<i>Street trees are part of the total required</i>
2" Ornamental Street Trees required at 1 per 20'	35	<i>Street trees are part of the total required</i>

Total Required number of trees per landscape ordinance	59
Credit for Saved Trees	20
Number of new tree to be installed per landscape ordinance	39

TREE REQUIREMENTS PER TREE PRESERVATION ORDINANCE (1:1 replacement)

This table is to be used to determine the mitigation requirements for removed trees per the tree preservation ordinance

Combined DBH

Existing Trees greater than 6" to be removed (including heritage trees)?	454 <i>Will require survey information</i>
Total DBH to be installed as indicated on landscape plan plus saved trees	234 <i>User input vs landscape plan and all trees between 3" - 6"</i>
	140 <i>Difference of Mitigation minus installed</i>

140 Additional DBH Required

\$7,000 Optional Fee-in-lieu for mitigation

** NOTE: exclude any trees which are exempt per ordinance*

TREE REQUIREMENTS PER TREE PRESERVATION ORDINANCE (Heritage Tree Removal Fees)

This table is to be used to determine the fine for removal of heritage trees

Combined DBH

Heritage trees being removed	105
	\$4,725 Mandatory Heritage tree removal fees

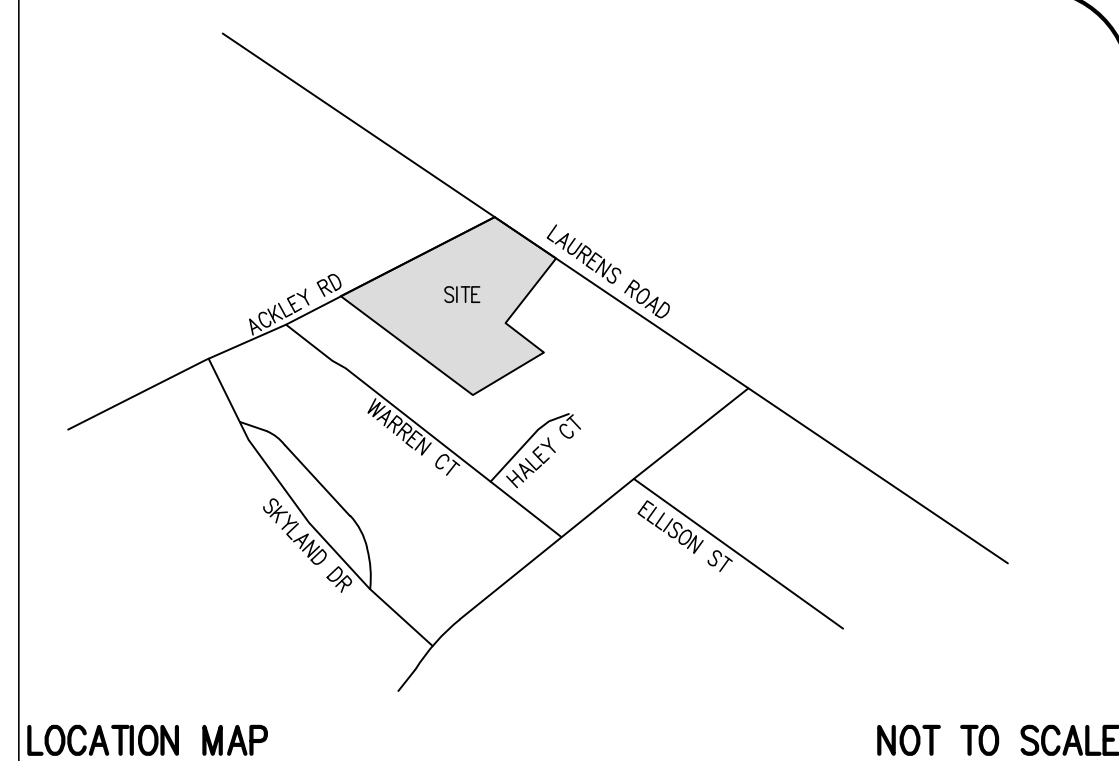
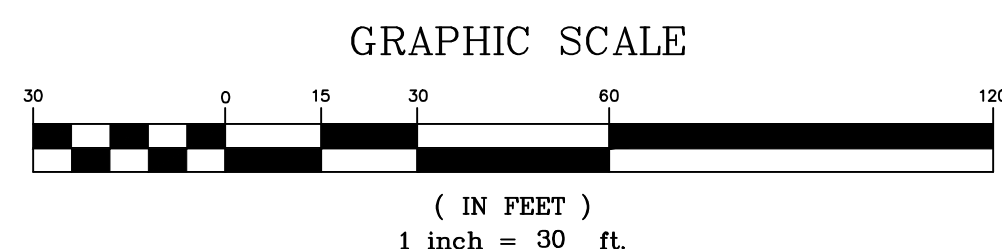
TOTAL FEES REQUIRED FOR 1:1 MITIGATION FINE AND HERITAGE TREE FINES

	\$7,000 Optional Fee-in-lieu of fee for mitigation
	\$4,725 Mandatory Heritage tree removal fees
	\$11,725 Total of Fee-in-lieu-of plus Heritage Removal Fees

*****CAUTION*****

Know what's **below**.
Call before you dig.

THE UTILITIES SHOWN ARE SHOWN FOR THE CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF THE WORK. ALL DAMAGE MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

[illegible]

SITE DATA:

PIN: 0198000403200, 0198000400200, 0198000400300
TOTAL SITE = 3.87 AC (168,480 SF)

CURRENT ZONING - C3,R6
PROPOSED ZONING - PD
SETBACKS - AS SHOWN

112-116 RESIDENTIAL UNITS - 1.5 SPACES PER UNIT
6,500-SF COMMERCIAL/RETAIL - 1 SPACE PER 500-SF

PARKING SPACES REQUIRED
RETAIL/COMMERCIAL 10
RESIDENTIAL 168
TOTAL 178

PARKING SPACES PROVIDED
RETAIL/COMMERCIAL 10
RESIDENTIAL 153
TOTAL 163

12 BICYCLE PARKING SPACES

UNIT MIX
STUDIOS 19
1-BEDROOM 55
2-BEDROOM 10
3-BEDROOM 28

OPEN SPACE REQUIRED
200-SF PER UNIT
200-SF X 112 UNITS = 22,400-SF

OPEN SPACE PROVIDED
ACTIVE 8,610-SF
PLAZA, SIDEWALK
PLAYGROUND & GAZEBO
PORCHES 5,070-SF
PASSIVE (LAWN) 18,197-SF
TOTAL 31,877-SF

PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	DETAIL	REMARKS
	ACOG	22	Acer rubrum 'October Glory'	October Glory Red Maple	3" Cal. 14' Ht.		10' Clear Trunk
	LAMU	35	Lagerstroemia indica 'Muskogee'	Muskogee Crape Myrtle	2" Cal. 10' Ht.		3 Canes Min.
	PICH	20	Pistacia chinensis	Chinese Pistache	3" Cal. 14' Ht.		10' Clear Trunk
	QUPA	16	Quercus palustris	Pin Oak	3" Cal. 14' Ht.		10' Clear Trunk
1"-4" EVERGREEN SHRUB	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	DETAIL	REMARKS
	AGKA	61	Abelia x grandiflora 'Kaleidoscope'	Glossy Abelia	3 gal		18" Ht. Min.
	GAKH	68	Gardenia jasminoides 'Kleim's Hardy'	Kleim's Hardy Gardenia	3 gal		18" Ht. Min.
	ICCA	4	Ilex cornuta 'Carissa'	Carissa Holly	3 gal		18" Ht. Min.
	LCSU	130	Loropetalum chinense 'Suzanne'	Suzanne Fringe Flower	3 gal		18" Ht. Min.
6" + EVERGREEN SHRUB	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	DETAIL	REMARKS
	TODS	151	Thuja occidentalis 'Degroot's Spire'	Degroot's Spire Arborvitae	8' Ht.		6' Min. Ht.
SMALL EVERGREEN TREE	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	DETAIL	REMARKS
	ILOL	143	Ilex x 'Oak Leaf'	Oak Leaf Holly	8' Ht.		

TREE REQUIREMENTS PER LANDSCAPE ORDINANCE

This table is to be used to determine the minimum number of trees that will be required per the landscape ordinance.

LF of lot adjacent to street (to determine street tree requirements)	692.49
SF of parking lot (to determine parking lot requirements)	64740
SF of disturbed area (to determine tree density requirements)	150969
Combined Building Footprints	33791
Athletic fields and courts	0
Number of Existing Trees between 3" and 6" to be saved	0
Total area for 1 tree per 2,000 sf	117178
No. of Trees	
Trees required for 1 per 2,000sf	59
Trees required for parking lot	33
3" Canopy Street trees required at 1 per 40' -or-	18
2" Ornamental Street Trees required at 1 per 20'	35
Total Required number of trees per landscape ordinance	59
Credit for Saved Trees	0
Number of new tree to be installed per landscape ordinance	59

TREE REQUIREMENTS PER TREE PRESERVATION ORDINANCE (1:1 replacement)

This table is to be used to determine the mitigation requirements for removed trees per the tree preservation ordinance

Existing Trees greater than 6" to be removed (including heritage trees)*	464
Total DBH to be installed as indicated on landscape plan plus saved trees	324
Combined DBH	
140 Difference of Mitigation minus installed	

* NOTE: exclude any trees which are exempt per ordinance

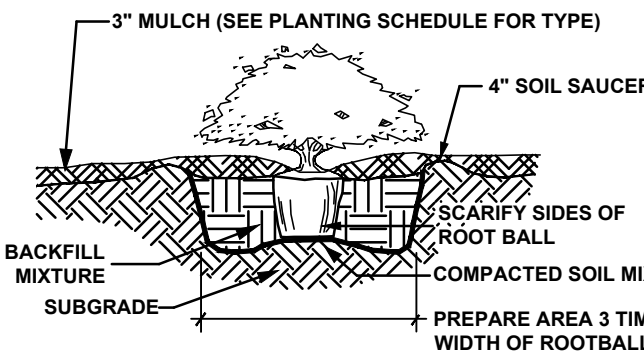
TREE REQUIREMENTS PER TREE PRESERVATION ORDINANCE (Heritage Tree Removal Fees)

This table is to be used to determine the fine for removal of heritage trees

Heritage trees being removed	105
140 Additional DBH Required	
\$7,000 Optional Fee-in-lieu of for mitigation	
\$4,725 Mandatory Heritage tree removal fees	

TOTAL FEES REQUIRED FOR 1:1 MITIGATION FILO AND HERITAGE TREE FINES

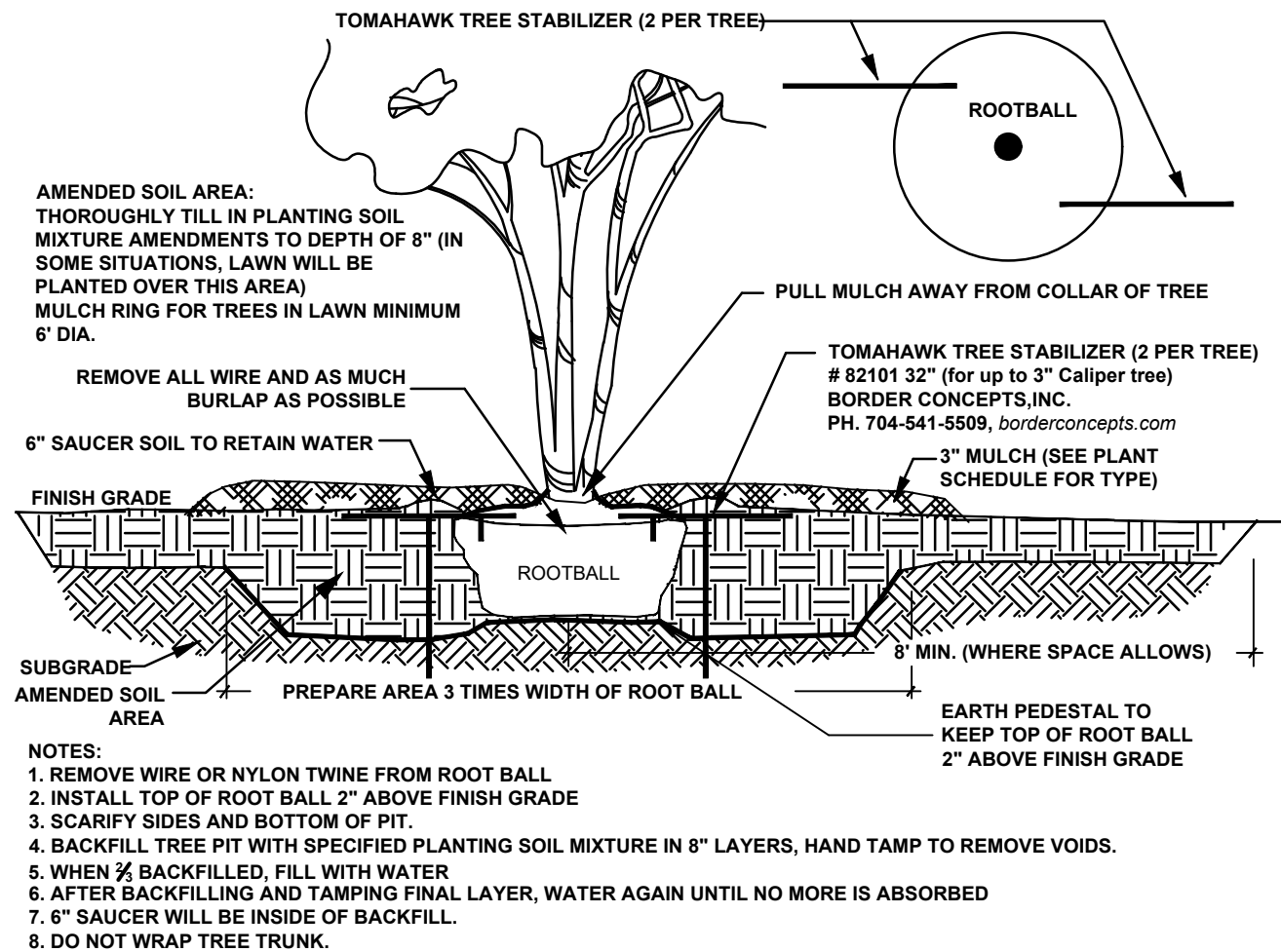
\$7,000 Optional Fee-in-lieu of for mitigation
\$4,725 Mandatory Heritage tree removal fees
\$11,725 Total of Fee-in-lieu-of plus Heritage Removal Fees



NOTES:

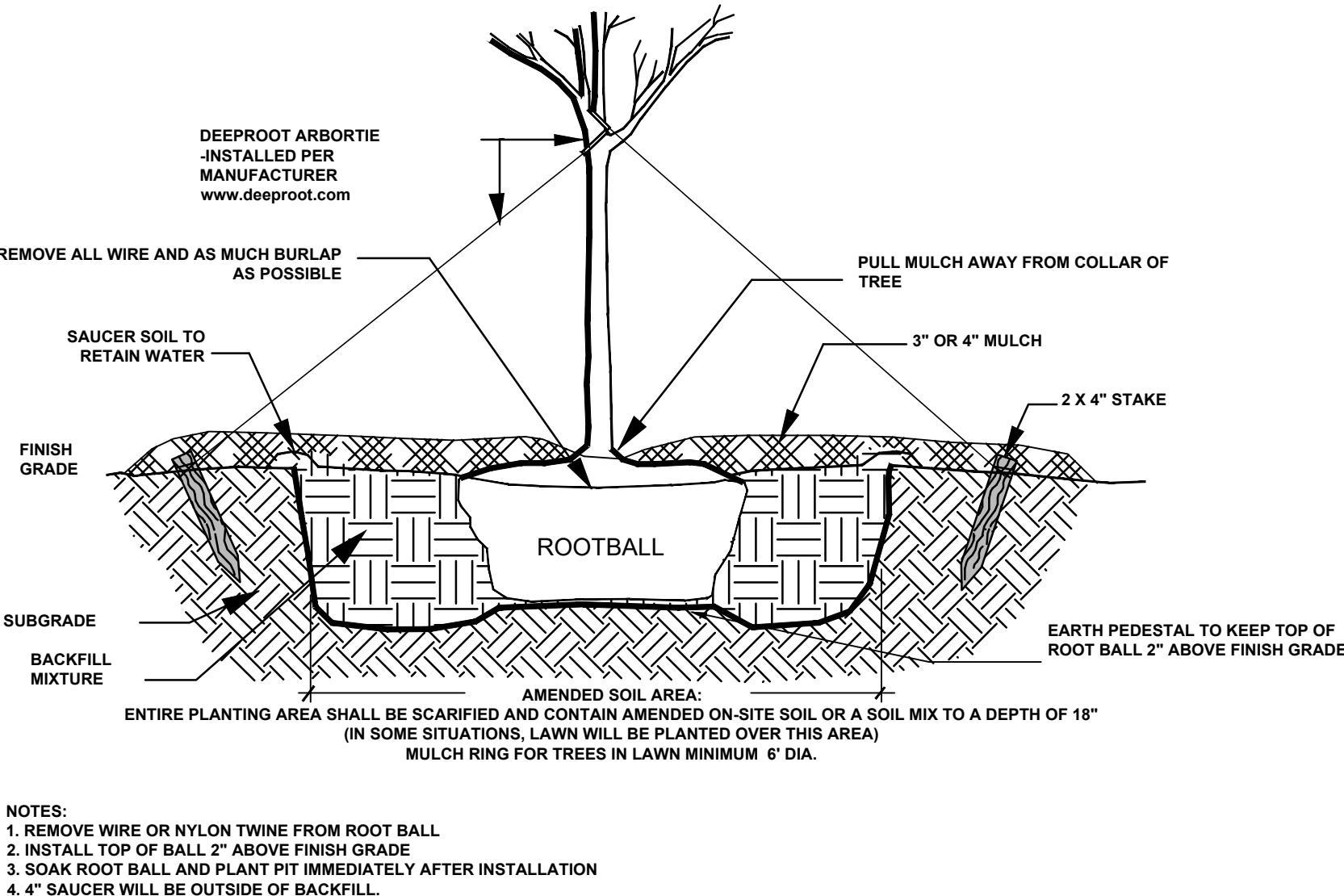
1. REMOVE WIRE, NYLON TWINE OR CONTAINER FROM ROOT BALL.
2. SCARIFY SIDES AND BOTTOM OF HOLE AS WELL AS THE ROOT BALL.
3. INSTALL TOP OF BALL 2" ABOVE FINISH GRADE
4. ROOT BALLS GREATER THAN 2" IN DIAMETER SHALL SIT ON MOUND OF UNDISTURBED SOIL TO PREVENT SETTLING.
5. ROOT BALLS SMALLER THAN 2" MAY SIT ON COMPACTED SOIL MIXTURE.
6. BACKFILL PIT WITH SPECIFIED PLANTING SOIL MIXTURE IN 8" LAYERS, HAND TAMP TO REMOVE VOIDS.
7. WHEN ¾ BACKFILLED, FILL WITH WATER
8. AFTER BACKFILLING AND TAMPING FINAL LAYER, WATER AGAIN UNTIL NO MORE IS ABSORBED.
9. 4" SAUCER WILL BE OUTSIDE OF BACKFILL.

SHRUB PLANTING
N.T.S.



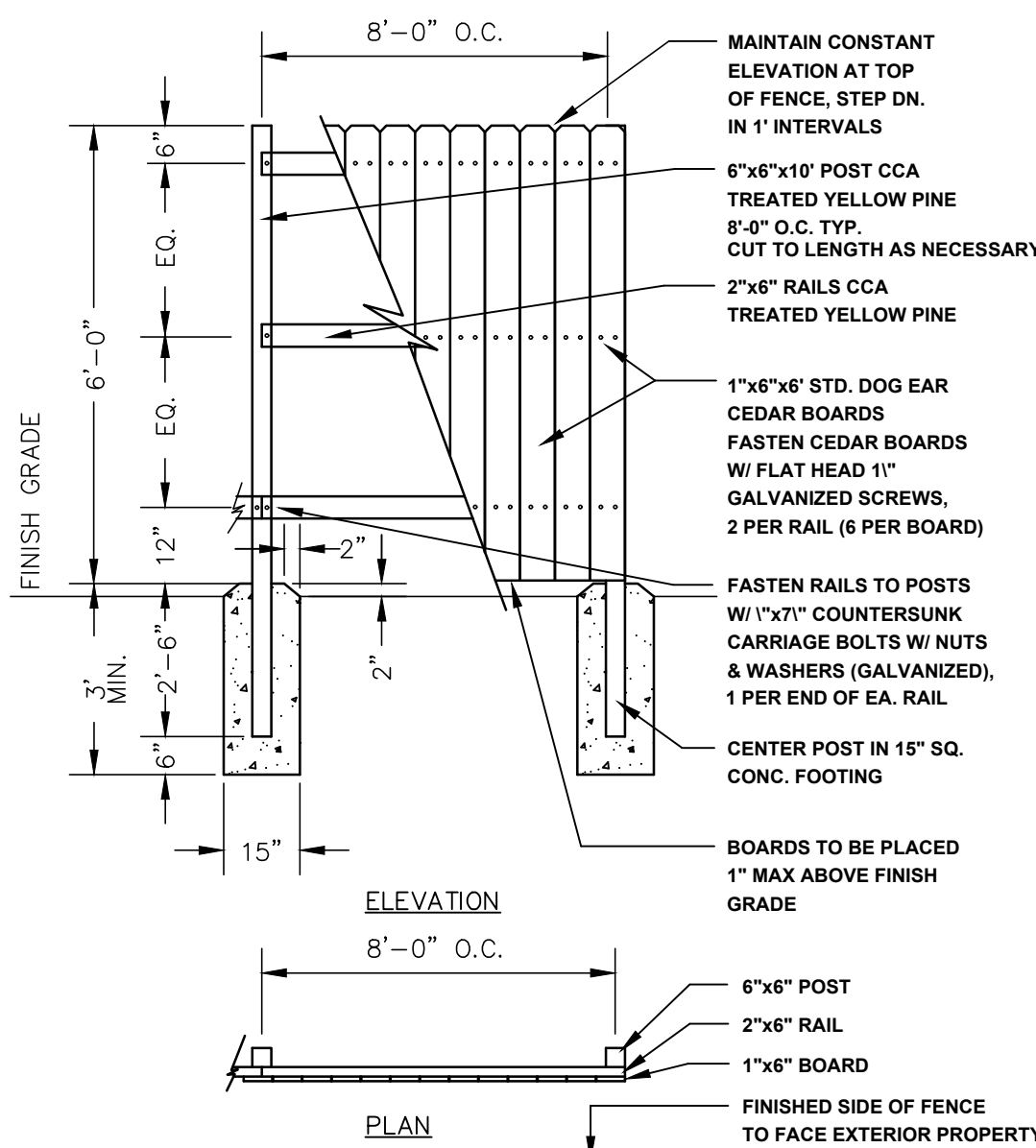
- NOTES:
1. REMOVE WIRE OR NYLON TWINE FROM ROOT BALL
 2. INSTALL TOP OF ROOT BALL 2" ABOVE FINISH GRADE
 3. SCARIFY SIDES AND BOTTOM OF PIT.
 4. BACKFILL TREE PIT WITH SPECIFIED PLANTING SOIL MIXTURE IN 8" LAYERS, HAND TAMP TO REMOVE VOIDS.
 5. WHEN ¾ BACKFILLED, FILL WITH WATER
 6. AFTER BACKFILLING AND TAMPING FINAL LAYER, WATER AGAIN UNTIL NO MORE IS ABSORBED
 7. 6" SAUCER WILL BE INSIDE OF BACKFILL.
 8. DO NOT WRAP TREE TRUNK.

MULTI-TRUNK TREE
N.T.S.

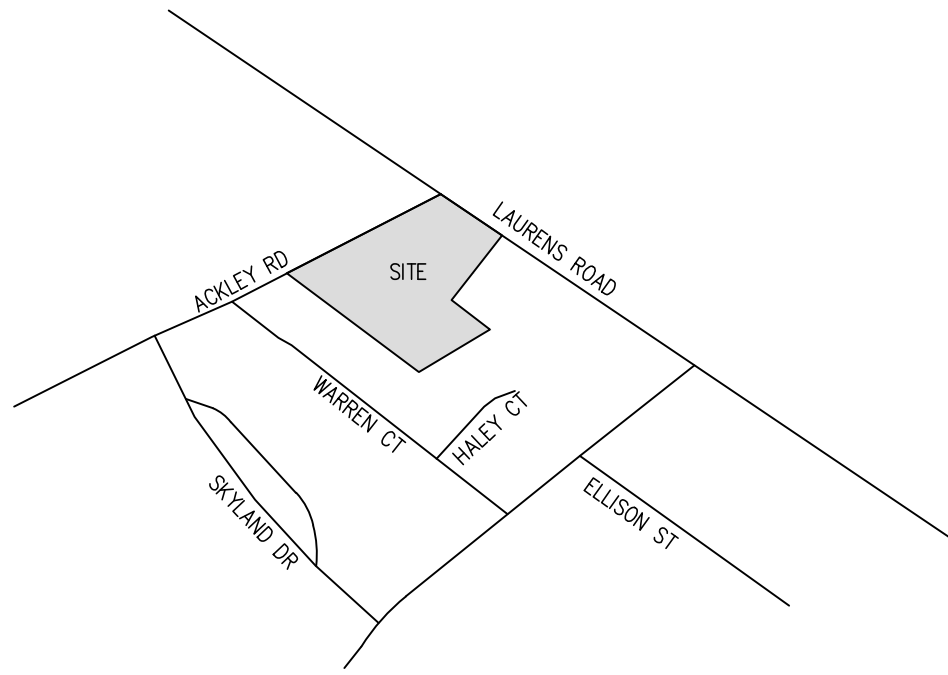


- NOTES:
1. REMOVE WIRE OR NYLON TWINE FROM ROOT BALL
 2. INSTALL TOP OF BALL 2" ABOVE FINISH GRADE
 3. SOAK ROOT BALL AND PLANT PIT IMMEDIATELY AFTER INSTALLATION
 4. 4" SAUCER WILL BE OUTSIDE OF BACKFILL.

TREE OVER 2" CAL. WITH STAKING
N.T.S.



6' HEIGHT WOOD PRIVACY FENCE
N.T.S.



LOCATION MAP

NOT TO SCALE

GENERAL NOTES & SPECIFICATIONS

LAWN INSTALLATION: Lawn areas shall be fine graded to a smooth, positively draining slope, removing all stones over 3/4". Agricultural limestone shall be incorporated into the soil at a rate of 50 pounds per 1000 square feet. Apply specified seed at recommended rate. Straw mulch or hydromulch shall be used as deemed necessary by the Landscape Contractor and Landscape Architect. The Landscape Contractor shall be responsible to establish a full stand of grass and will repair any bare spots 1'-0" square due to uneven seed distribution, drought or erosion.

SOD INSTALLATION: Sodded lawn areas shall be fine graded to a smooth, positively draining slope, removing all stones over 3/4". Sod shall be healthy, thick sod placed so that joints are butt tight. Staple as necessary. Sod shall be trimmed to match bed lines shown on plan. Startup fertilizer shall be incorporated into the soil at the manufacturer's recommended rate. Any area of sod that fails to root, settles or dies will be replace by the Landscape Contractor.

UTILITY LOCATION: The Landscape Contractor is responsible for contacting the utility locator service and is responsible for any damage done to utilities.

QUANTITIES Plant quantities are shown for the contractor's convenience only. **PLANTS SHALL BE INSTALLED AS SHOWN.** Contractor is responsible for confirming all quantities prior to bidding and installation.

BIDS In order to keep all bids standard, all bids are to have unit prices listed. The Owner has the option to delete any portion of the contract prior to signing the contract or beginning work. This will be a unit price contract.

PLANT QUALITY All plants shall be nursery grown, have a full habit of growth as is characteristic of that species, and shall be free of disease or insects. General plant quality shall be as specified in the "USA Standard for Nursery Stock" (published by the American Association of Nurserymen). Please contact the Landscape Architect if there is difficulty in locating a particular plant. If necessary, a substitute plant will be recommended by the Landscape Architect.

PLANTING AREA PREPARATION: Entire planting area shall be scarified and contain amended on-site soil or a soil mix to a depth of no less than 18". (see planting detail for more information.)

SETTING OF PLANTS The root ball of container grown plants shall be scarified in several places prior to planting. Plant shrubs and trees so that after initial settlement, the top root balls will be even with or slightly above the adjacent soil line. Around root balls, 1/2 of the original soil shall be removed from the planting hole and thoroughly mixed with the same quantity peat moss or well rotted, fine textured bark. (Only in areas where the existing soil is 100% fertile, loose topsoil (brown or black in color) can plants be placed directly in the soil with no amendments). **PLANTINGS NOT DONE IN THIS MANNER SHALL BE REMOVED AND PROPERLY REPLANTED.**

PREPARATION OF GROUND COVER AND SEASONAL COLOR BEDS : The existing soil in ground cover and seasonal color beds shall be thoroughly cultivated 6 inches deep, to a fine texture (no clods over 1/2") with a mechanical tiller. A plant mix of 60% screened shredded topsoil, 20% sand, and 20% well rotted sawdust or peat shall then be thoroughly incorporated into the existing soil with the tiller so that the soil mix (6" deep) is 1/2 original soil and 1/2 plant mix. All groundcover and seasonal color beds shall receive a 2" layer of fine textured, screened, pine bark mulch, or equal.

PLANTINGS NOT DONE IN THIS MANNER SHALL BE REMOVED AND PROPERLY REPLANTED.

FERTILIZING Upon completion of plantings, all shrubs shall receive 1/6 cup of 16-4-8 fertilizer (50% of nitrogen slow release) evenly broadcast at the base of the plants. Trees shall receive 1/4 cup of 16-4-8 fertilizer (50% of nitrogen slow release) per inch of caliper. Ground cover beds shall be fertilized at the rate of 20 pounds of 16-4-8 (50% of nitrogen slow release) per 1000 square feet.

STAKING OF TREES Deciduous trees, 1 1/2" in caliper and over, and evergreen trees, 8" and taller shall be staked. Rubberhose to be used to cover the wire at the point of its contact with the tree. The Landscape Contractor is responsible for all wind damage to trees, (provided winds are less than 60mph) during the guarantee period, and may stake other trees (for his own protection) at his option. **TRANSPLANTS** All plant material to be transplanted shall be transplanted according to guidelines set by AAN standards. Transplanted material will not be guaranteed by the landscape contractor.

MULCHING As specified on planting list. Hardwood mulch: All beds to receive a 3" layer of aged hardwood bark mulch (free of wood chips or large chunks of bark). Fresh hardwood bark mulch is not recommended to be used, as water run-off may cause staining on adjacent concrete surfaces. All damages incurred by the use of fresh hardwood mulch shall be the responsibility of the landscape contractor. **Pinestraw:** All beds to receive a 4" layer (prior to compaction) of pinestraw. After natural compaction, pinestraw should have a depth of 2". All trees located in lawn areas shall receive a 3" diameter ring of mulch. Mulch in these areas is to follow the above listed guidelines. A weed barrier shall be provided in all bed areas under mulch layer.

GRADING All final grading shall be the responsibility of the landscape contractor. The responsibility for any additional grading (if needed) shall be determined prior to bidding.

BACKFILL Landscape contractor to verify any additional backfill/topsoil needed prior to beginning work. A unit price for topsoil shall be included in all bid documents to allow for circumstances that might arise during installation.

STABILIZATION Landscape contractor shall ensure that all plantings are stabilized with ground covers, mulches or other approved materials to prevent soil erosion and allow rainwater infiltration.

CLEAN UP Final clean up of any disturbances occurring as a result of landscape operations shall be the responsibility of the landscape contractor.

INSPECTION It shall be the contractor's responsibility to provide for inspection of the plant material by the Landscape Architect prior to installation. All plant material will be inspected. Plants not conforming precisely to the plant list will not be accepted and shall be replaced at the contractor's own expense.

LICENSES The contractor will be responsible for obtaining all licenses necessary to complete the work.

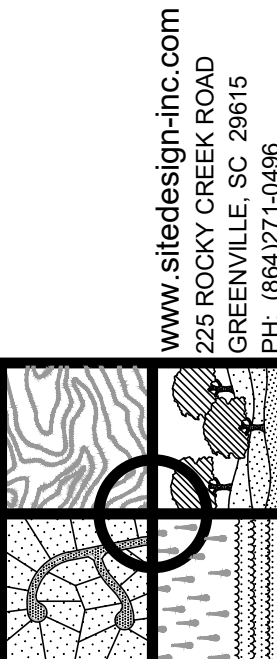
INSURANCE With the submittal of bid documents, the landscape contractor shall also submit a certificate of insurance for workman's compensation and a contractor's general liability. Contractors not providing evidence of such insurance will be ineligible to receive the contract for the job

GUARANTEE All plant material and workmanship to be guaranteed for one year from the date of acceptance by the Owner. Plant replacement to occur only once. The contractor will not be responsible for defects resulting from neglect by the Owner, abuse or damage by others, or unusual phenomena or incidents beyond the landscape contractor's control which result from natural causes such as floods, lightning, storms, freezing rains, or winds over 60 miles per hour, fire, vandalism or theft.

IRRIGATION Unless otherwise specified, if an automatic irrigation system is desired or required, it will be the responsibility of the contractor to have the system designed and installed. No irrigation to be placed in the SCDOT ROW.

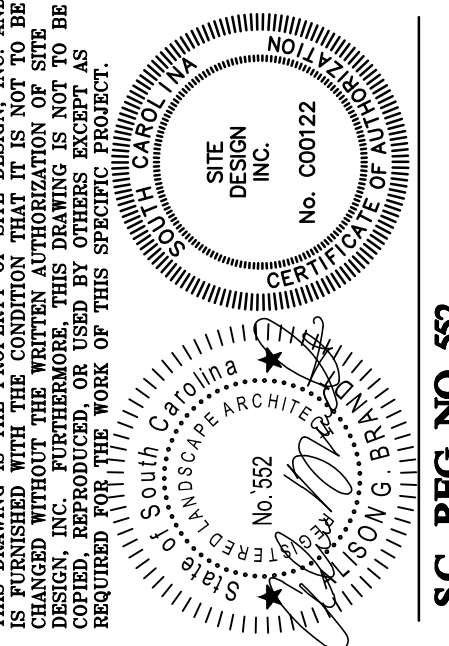
SITE DESIGN, INC.

CIVIL ENGINEERS - SURVEYORS - LANDSCAPE ARCHITECTS



www.sitedesign-inc.com
228 ROCKY CREEK ROAD
GREENVILLE, SC 29615
PH: (864) 271-0486

DATE	NO.
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	NO.



THE ALLIANCE
APARTMENT
HOMES

CITY OF GREENVILLE
GREENVILLE COUNTY
SOUTH CAROLINA

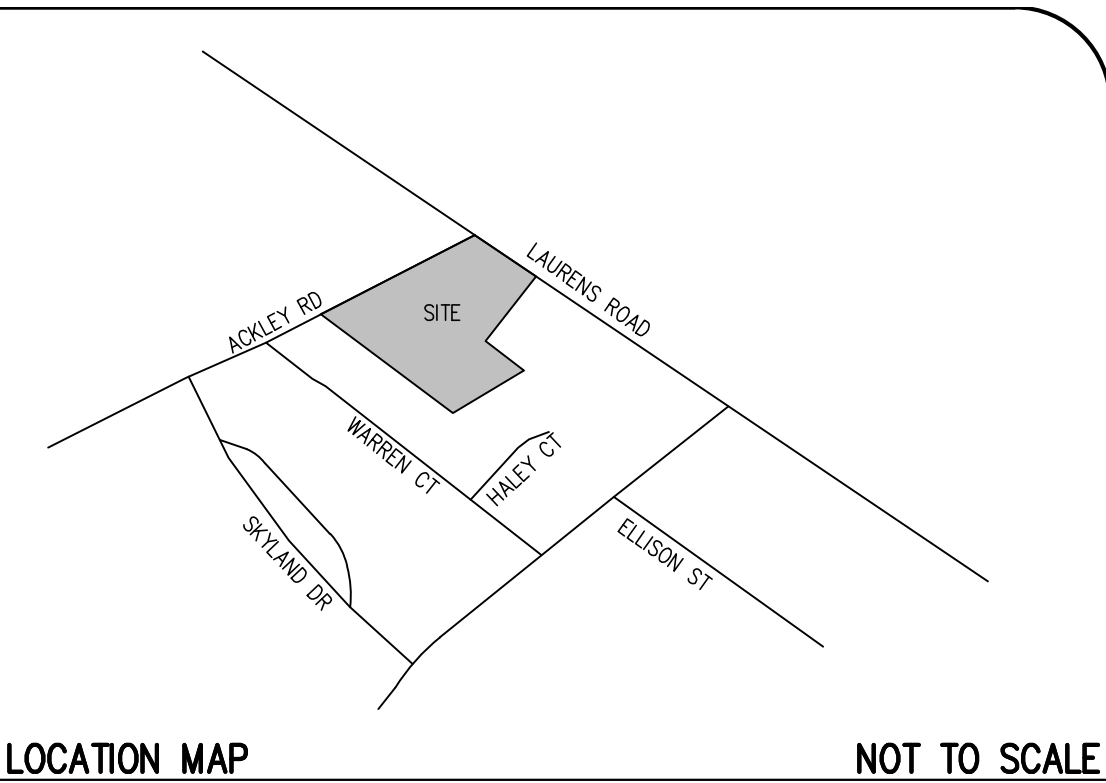
HORZ. SCALE:	N/A
VERT. SCALE:	N/A
DESIGNED BY:	JAW
DRAWN BY:	JAW
CHECKED BY:	AGB
DATE:	01/03/2022

S201421 LANDSCAPE.dwg

LANDSCAPE
DETAILS

SHEET 3 OF XX

L101



SCHEMATIC LANDSCAPE PLAN PROVIDED.
PERMIT LANDSCAPE PLAN WILL COMPLY WITH
THE CURRENT CITY LANDSCAPE ORDINANCE AND
THE PLANNED DEVELOPMENT STATEMENT OF
INTENT.

- LEGEND**
- | SYMBOLS | ABBREVIATIONS |
|----------------------------------|------------------------------|
| CB CATCH BASIN | BL BUILDING LINE |
| DI DROP INLET | CL CENTERLINE |
| ELEC TRANSFORMER | CT CRIMP TOP |
| x 90.0 ELEVATION (EXIST. GRADE) | DE DRAINAGE EASEMENT |
| * 90.00 ELEVATION (FINISH GRADE) | EP EDGE OF PAVEMENT |
| FIRE HYDRANT | FFE FINISHED FLOOR ELEVATION |
| GAS METER | FG FINISHED GRADE |
| GV GAS VALVE | IE INVERT ELEVATION |
| IP IRON PIN | IPS IRON PIN SET |
| LP LIGHT POLE | IPO IRON PIN OLD |
| MHBS MANHOLE (BELLSOUTH) | N&C NAIL & CAP |
| MHSD MANHOLE (SD) | OT OPEN TOP |
| MHSS MANHOLE (SS) | RB REBAR |
| PP POWER POLE | RCP REINFORCED CONCRETE PIPE |
| TEL TELEPHONE | R/W RIGHT OF WAY |
| WM WATER METER | SSE SANITARY SEWER EASEMENT |
| WV WATER VALVE | SL SETBACK LINE |
| STORMWATER FLOW | VCP VITRIFIED CLAY PIPE |
| TRAFFIC FLOW | |
- LINETYPES**
- | | |
|-----------------------------------|------------------------------|
| —CIV— CABLE TV | —SS— SANITARY SEWER — EXIST. |
| —X— CHAIN LINK FENCE (PROPOSED) | —SS— SANITARY SEWER — NEW |
| —X— CHAIN LINK FENCE (EXISTING) | —SF— SILT FENCE |
| —680— CONTOURS — EXIST. GRADE | —SD— STORM SEWER — EXIST. |
| —(675)— CONTOURS — FINISHED GRADE | —SD— STORM SEWER — NEW |
| —FOC— FIBER OPTIC | —UOP— UNDERGROUND POWER |
| —FM— FORCE MAIN | —UGT— UNDERGROUND TEL. |
| —GAS— GAS LINE | —W— WATER LINE — EXIST. |
| —OWP— OVERHEAD POWER | —W— WATER — NEW |
| —OHT— OVERHEAD TELEPHONE | —W— WOOD FENCE |
| —RD— ROOF DRAIN — NEW | —NPD— LIMITS OF DISTURBANCE |

CAUTION

811 Know what's below.
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GREENVILLE, SC 29615
PH: (864)271-0496

NO.	DATE
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7.	
6.	12/20/2021
5.	FDP SUBMITTAL
4.	SC HOUSING SUBMITTAL
3.	GHA SUBMITTAL
2.	REVISED FOOTPRINTS
1.	REVISED DUMPSTER AREA

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SC. REG. NO. 12345

**THE ALLIANCE
APARTMENT
HOMES**

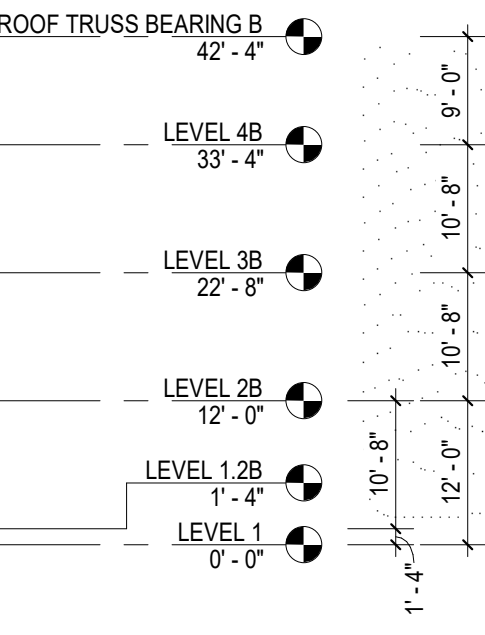
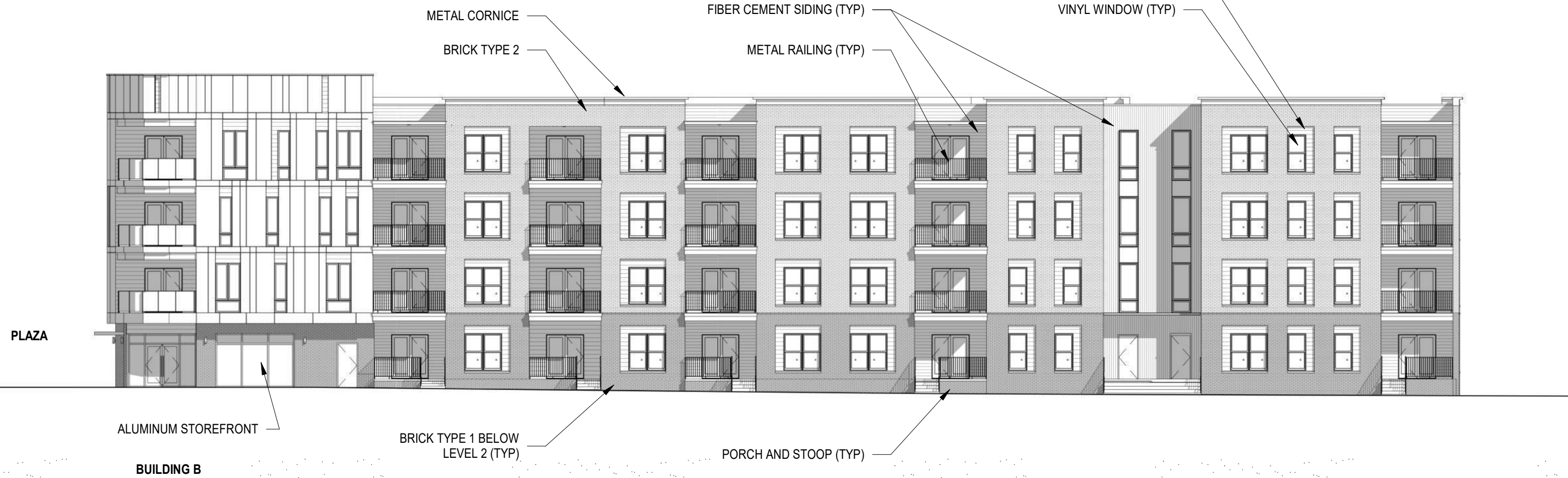
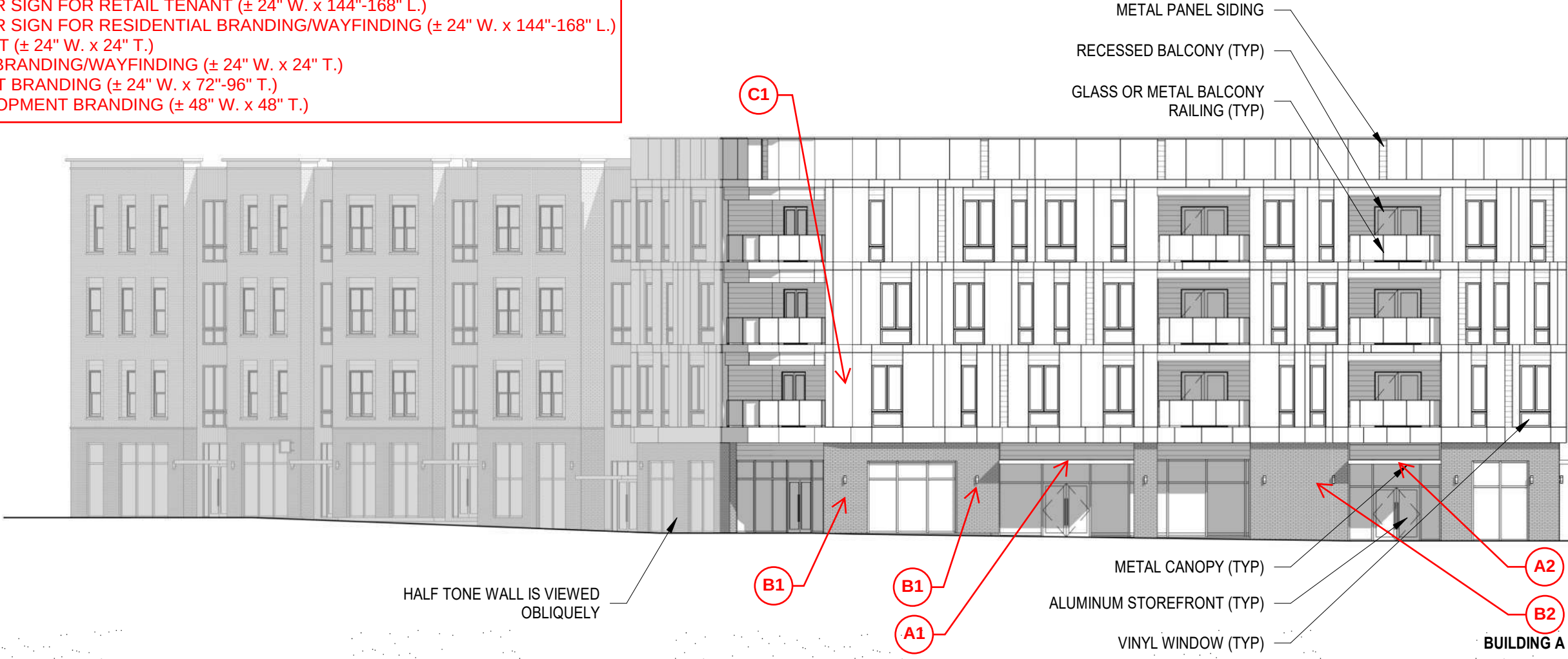
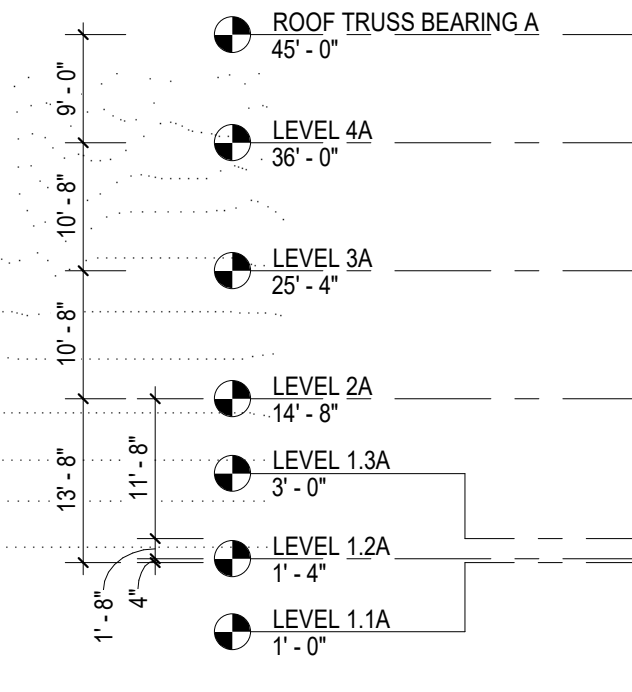
**CITY OF GREENVILLE
GREENVILLE COUNTY
SOUTH CAROLINA**

HORZ. SCALE:	1" = 30'
VERT. SCALE:	N/A
DESIGNED BY:	AB
DRAWN BY:	AB
CHECKED BY:	PFM
DATE:	02/04/2021
S201421 BASE	
LANDSCAPING VINETTE	
SHEET 4 OF 4	
L100	

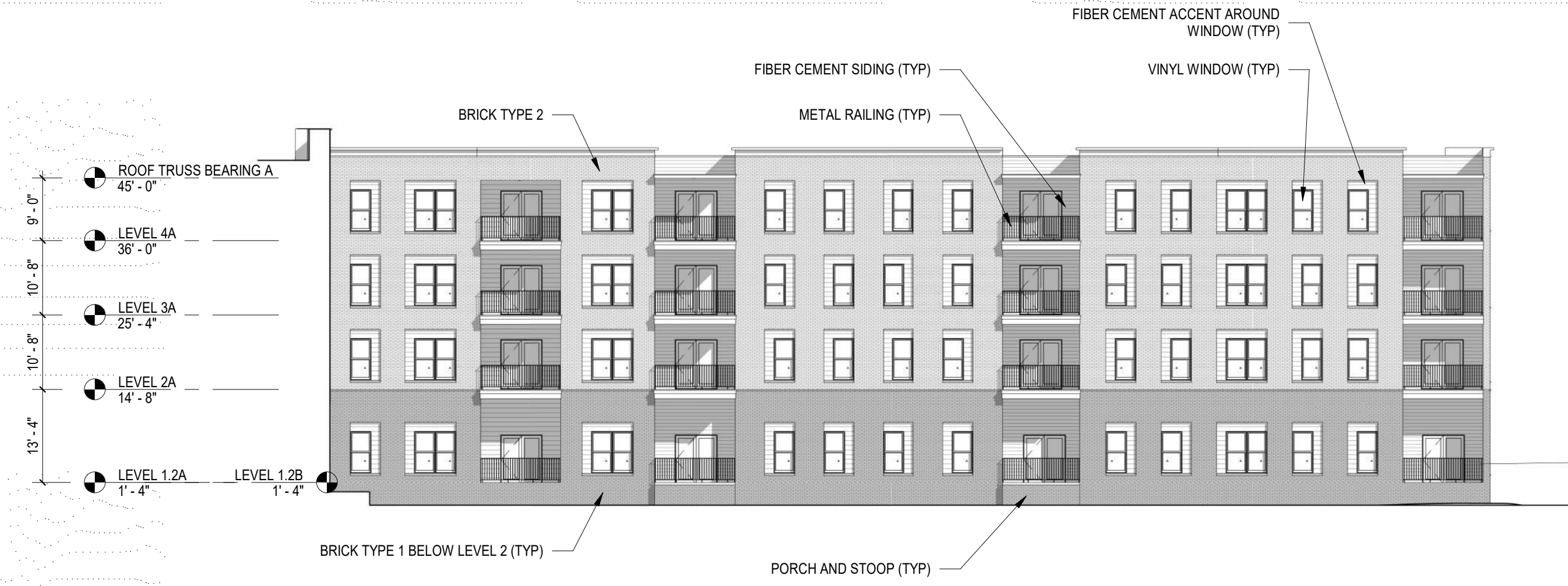
REVISED 01/03/2022.

CONCEPTUAL SIGNAGE OPTIONS INDICATE APPROXIMATE LOCATION, TYPE AND SIZE ONLY. LOCATIONS AND TYPES ARE OPTIONAL. NOT ALL SIGNS MAY BE UTILIZED/REQUIRED. FINAL COMPREHENSIVE SIGNAGE PLAN TO BE SUBMITTED AT PERMIT.

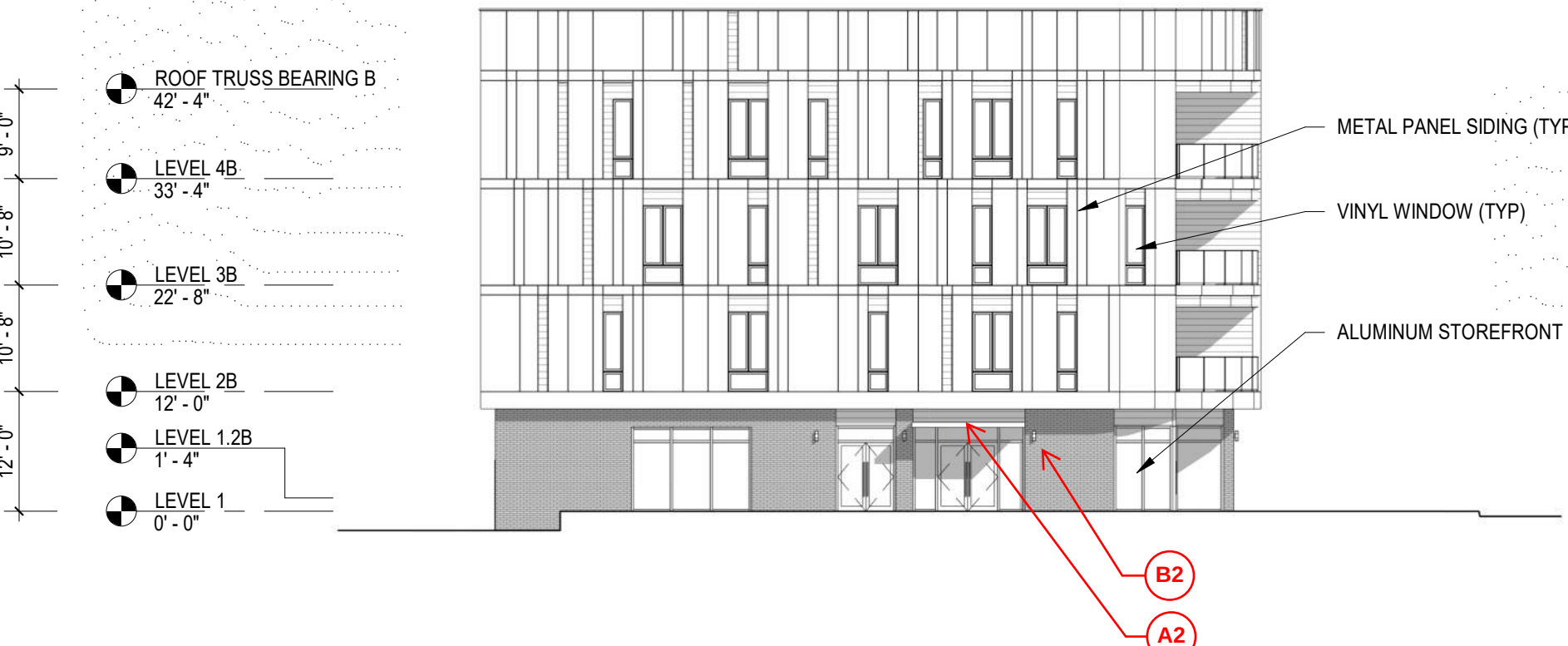
A1: CANOPY-MOUNTED INDIVIDUAL CHANNEL LETTER SIGN FOR RETAIL TENANT (± 24" W. x 144"-168" L.)
A2: CANOPY-MOUNTED INDIVIDUAL CHANNEL LETTER SIGN FOR RESIDENTIAL BRANDING/WAYFINDING (± 24" W. x 144"-168" L.)
B1: WALL-MOUNTED BLADE SIGN FOR RETAIL TENANT (± 24" W. x 24" T.)
B2: WALL-MOUNTED BLADE SIGN FOR RESIDENTIAL BRANDING/WAYFINDING (± 24" W. x 24" T.)
C1: WALL-MOUNTED BLADE SIGN FOR DEVELOPMENT BRANDING (± 24" W. x 72"-96" T.)
C2: WALL-MOUNTED DIMENSIONAL SIGN FOR DEVELOPMENT BRANDING (± 48" W. x 48" T.)



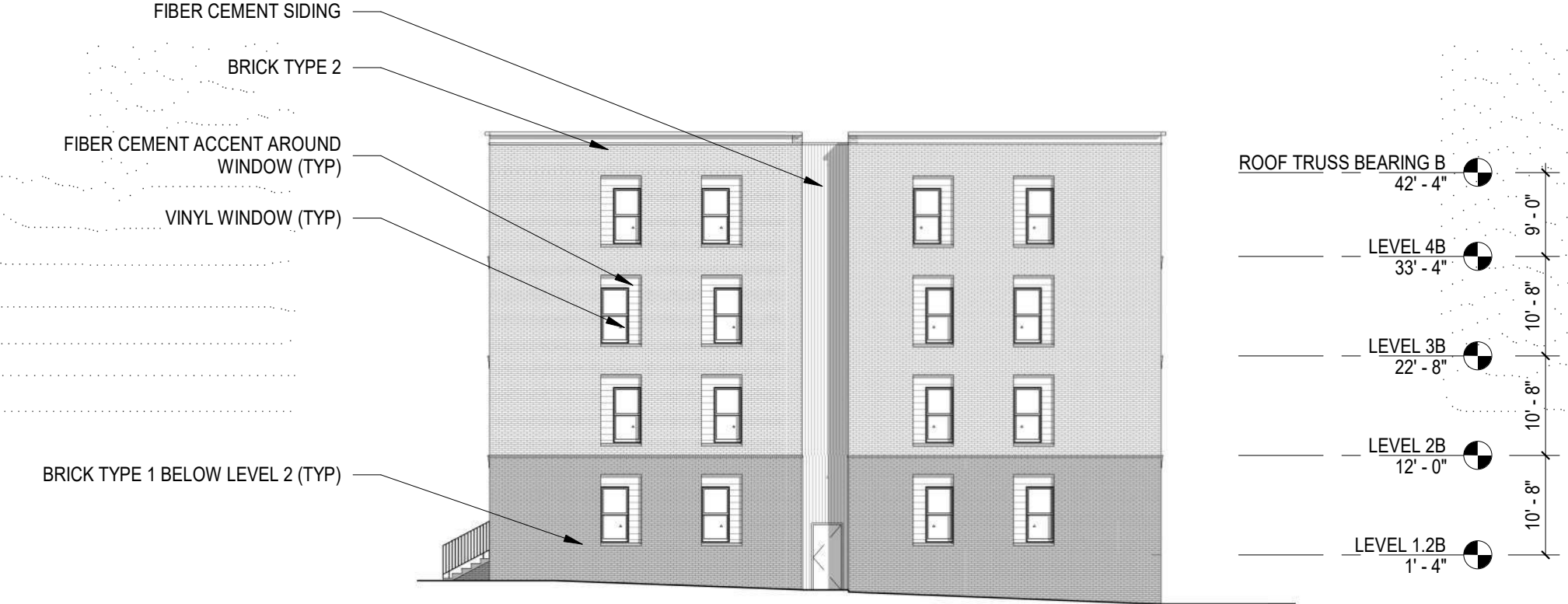
D1 NORTH ELEVATION (ACKLEY ROAD)
A2.01 1/16" = 1'-0"



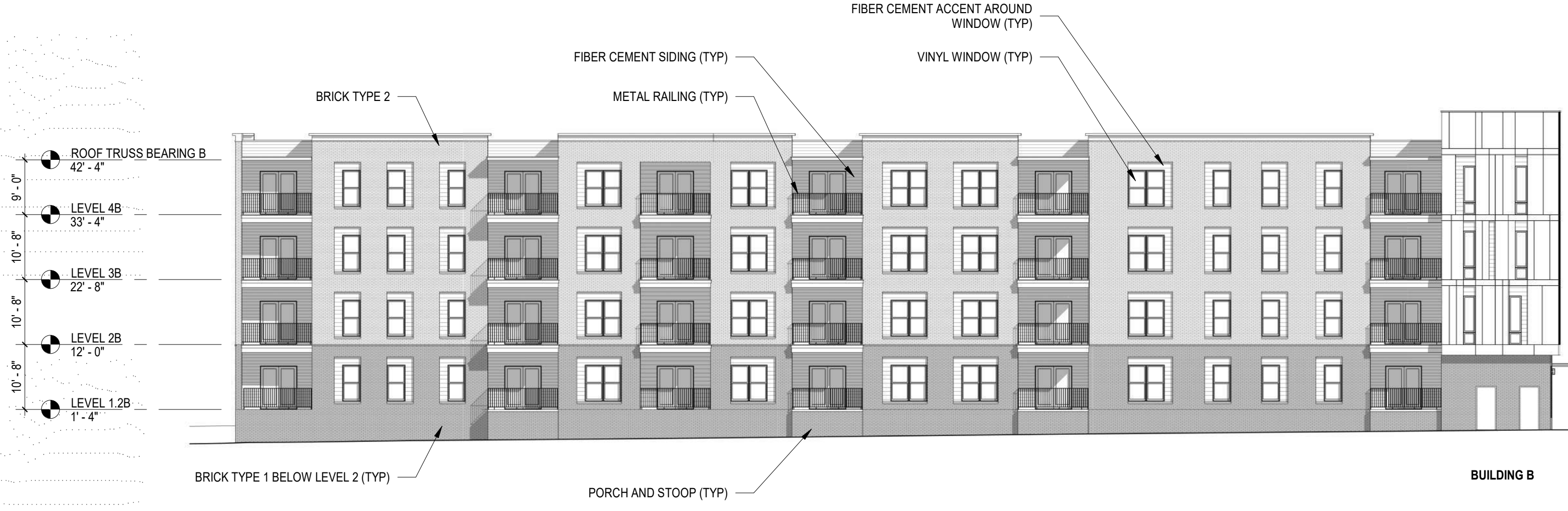
C1 PARTIAL WEST ELEVATION - BUILDING A (PARKING LOT)
A2.01 1/16" = 1'-0"



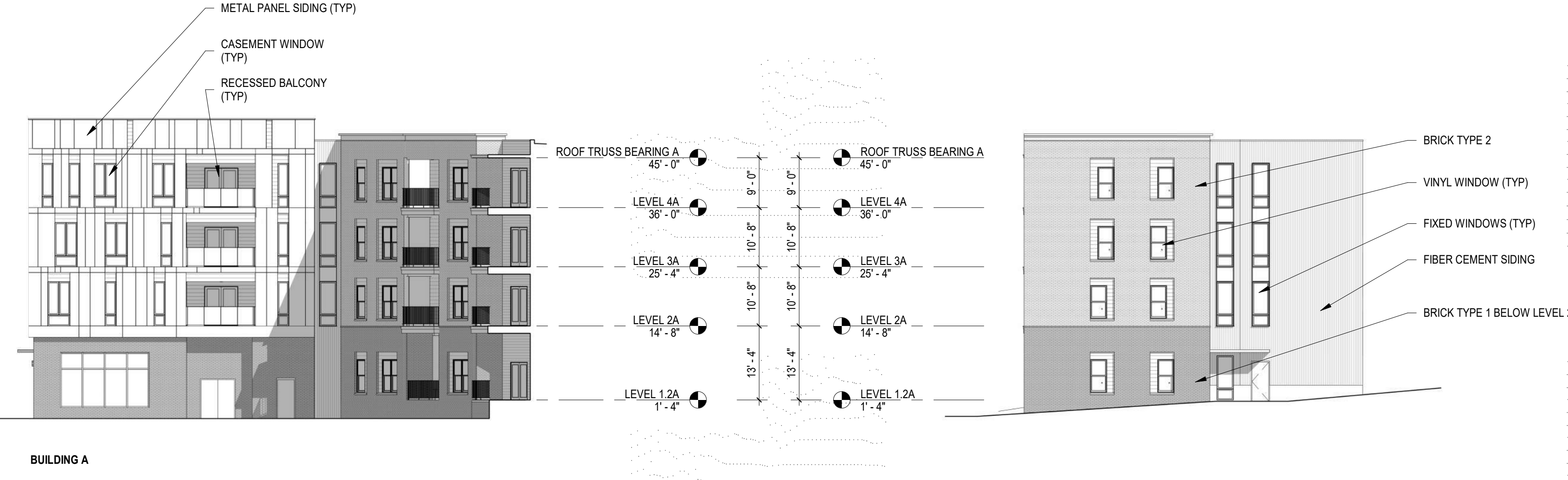
C3 PARTIAL EAST ELEVATION - BUILDING B
A2.01 1/16" = 1'-0"



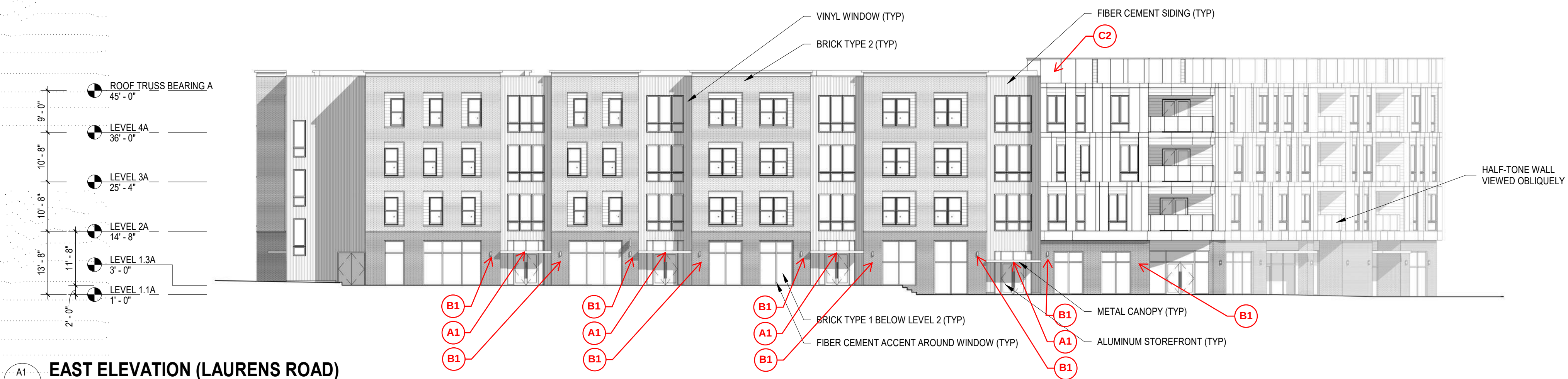
C4 PARTIAL WEST ELEVATION - BUILDING B
A2.01 1/16" = 1'-0"



B1 SOUTH ELEVATION (PARKING LOT)
A2.01 1/16" = 1'-0"



B4 PARTIAL SOUTH ELEVATION - BUILDING A
A2.01 1/16" = 1'-0"



A1 EAST ELEVATION (LAURENS ROAD)
A2.01 1/16" = 1'-0"



A4 PARTIAL WEST ELEVATION - BUILDING A
A2.01 1/16" = 1'-0"

SHEET ISSUE:			
NO.	DATE	DESCRIPTION	BY
A	04/19/21	PD REZONING	MPS
C	10/15/21	TQHA PRELIMINARY APPLICATION	MPS
E	12/20/21	FINAL DEVELOPMENT PLAN	MPS

PRINCIPAL IN CHARGE:
PROJECT ARCHITECT:
DRAWN BY:

LL
RC
DT/ROIC

SHEET TITLE:
EXTERIOR
ELEVATIONS

SHEET NO. PROJ. NO.
020520.00

A2.01

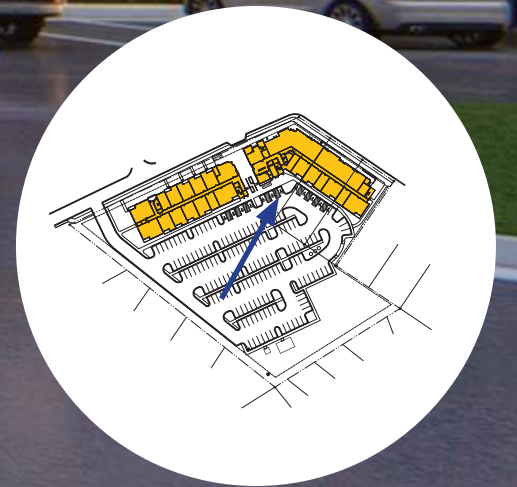






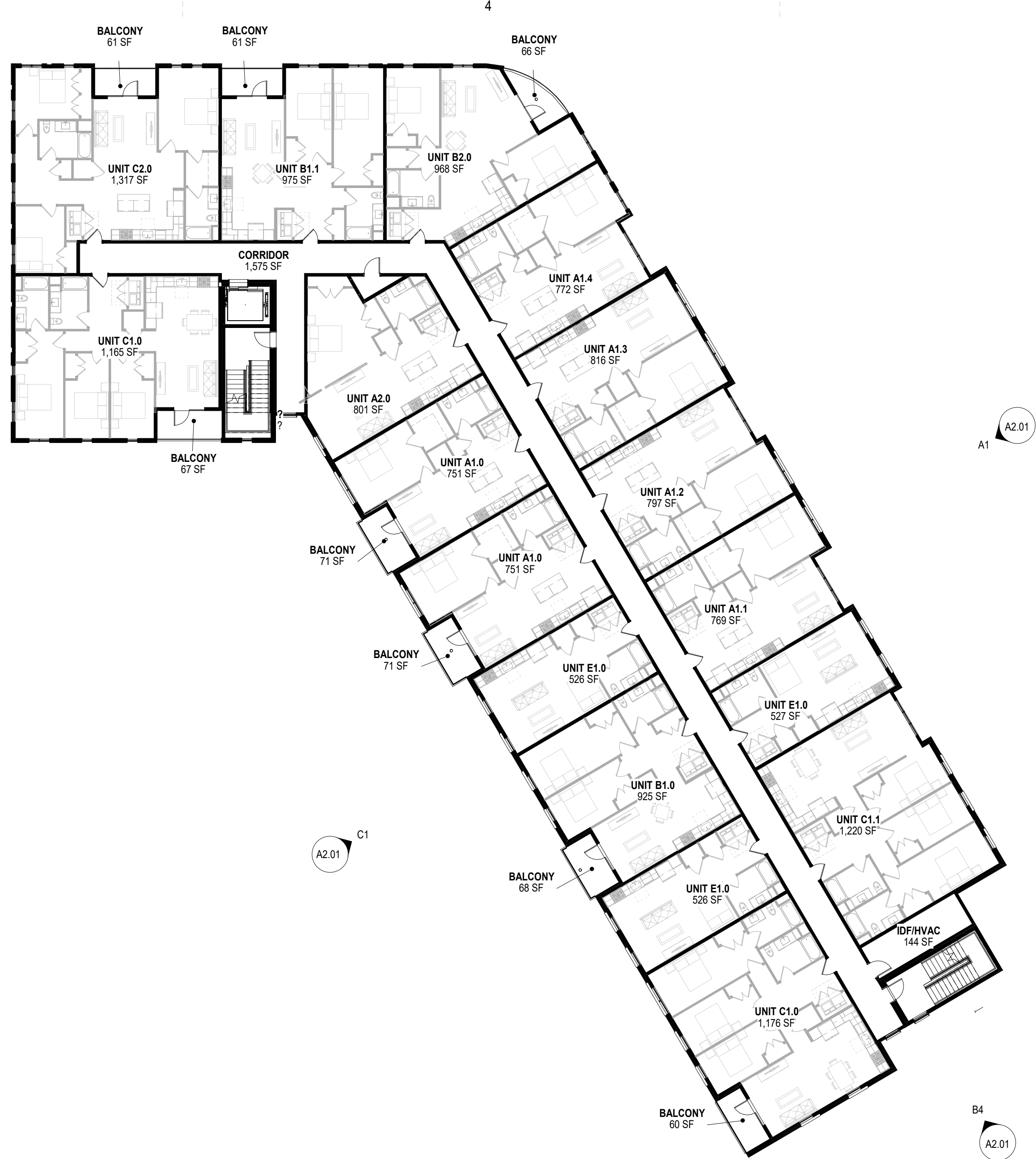






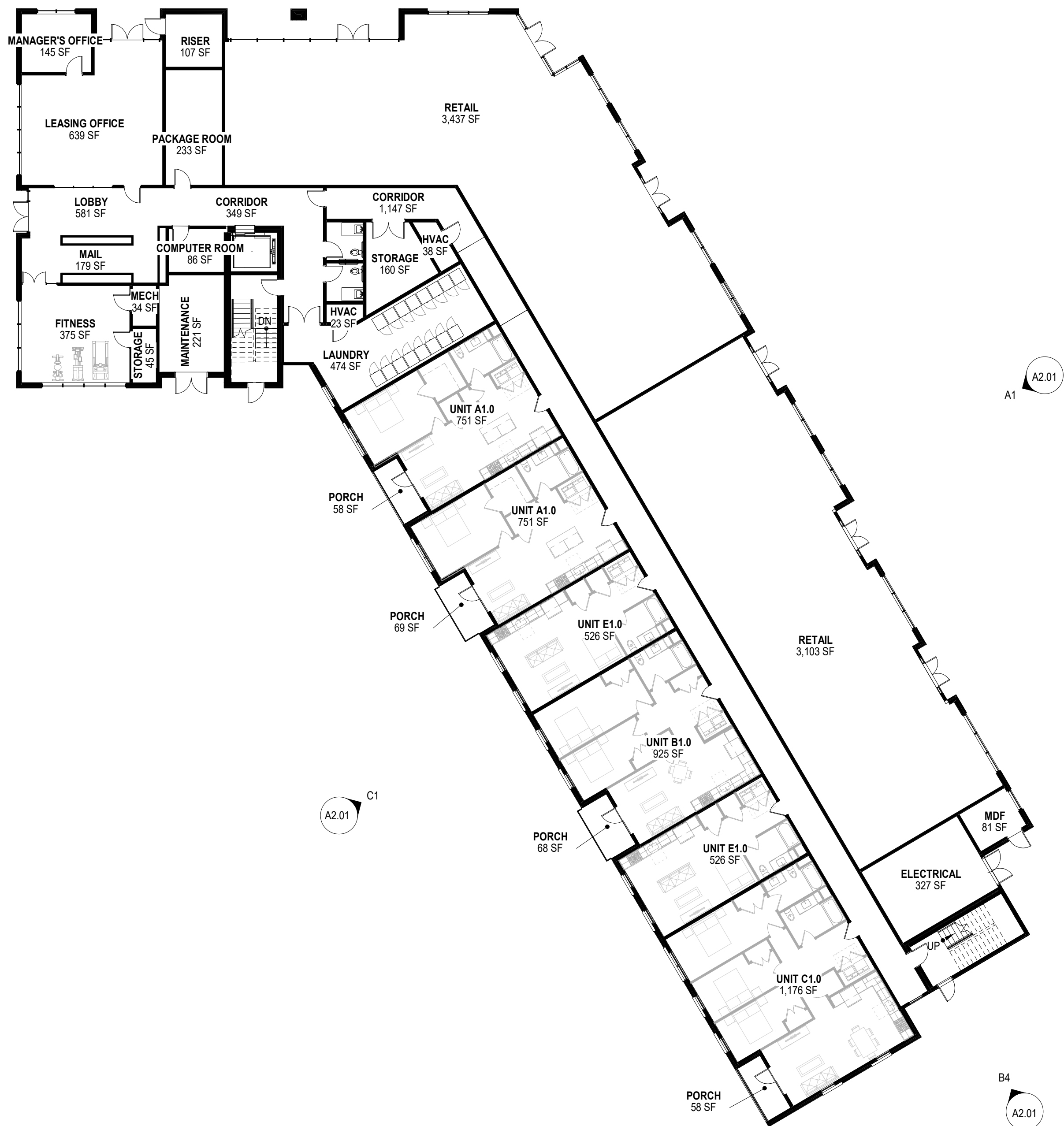


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C1 OVERALL FLOOR PLAN - LEVEL 2

A1.01 1/16" = 1'-0"



A1 OVERALL FLOOR PLAN - LEVEL 1

A1.01 1/16" = 1'-0"

SHEET ISSUE:			
NO.	DATE	DESCRIPTION	BY
A	04/19/21	PD REZONING	MPS
C	10/15/21	TQHA PRELIMINARY APPLICATION	MPS
E	12/20/21	FINAL DEVELOPMENT PLAN	MPS

PRINCIPAL IN CHARGE: LL
PROJECT ARCHITECT: RC
DRAWN BY: DT/RO/RC

SHEET TITLE:
FLOOR PLANS

SHEET NO. PROJ. NO.
020520.00

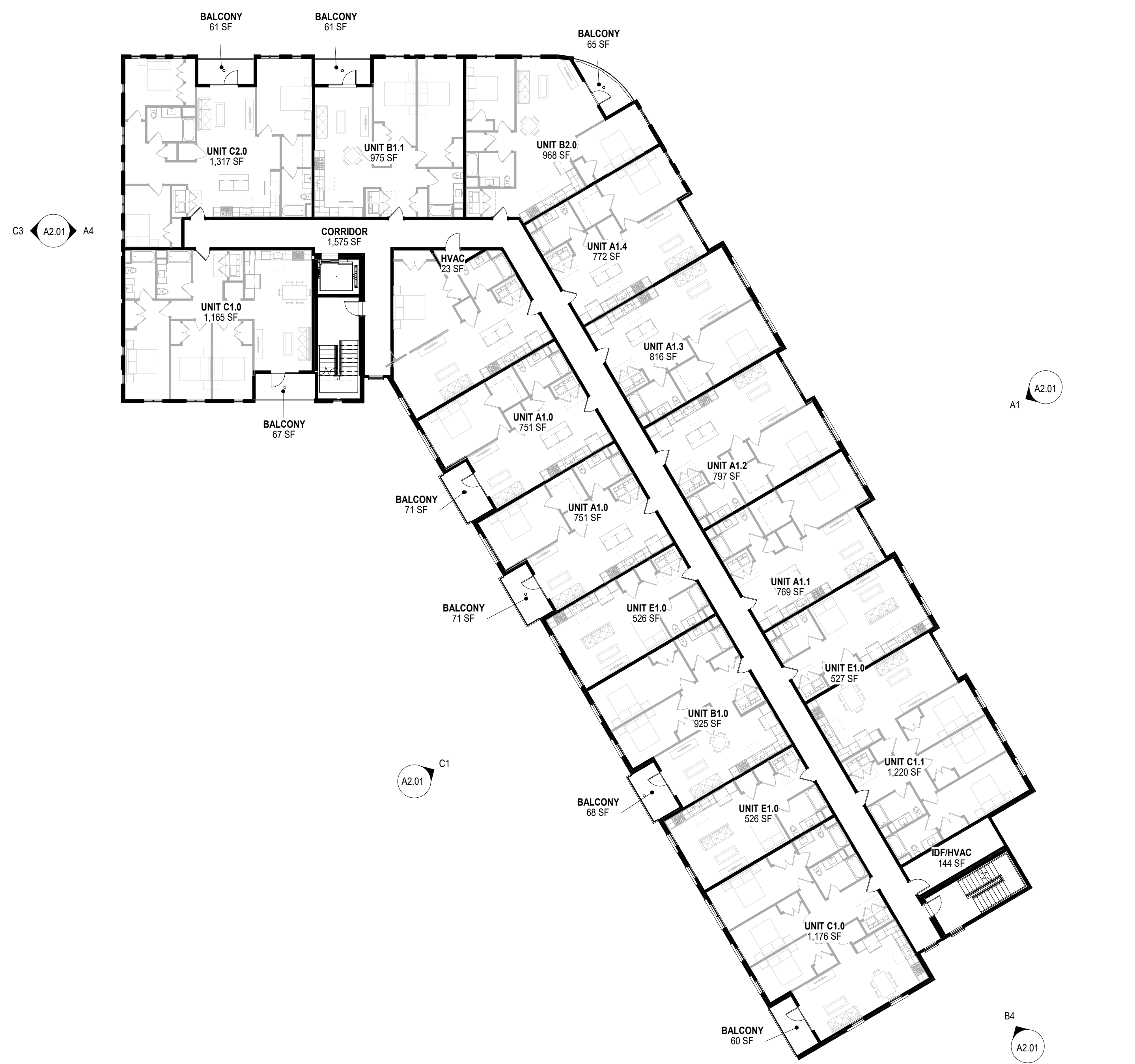
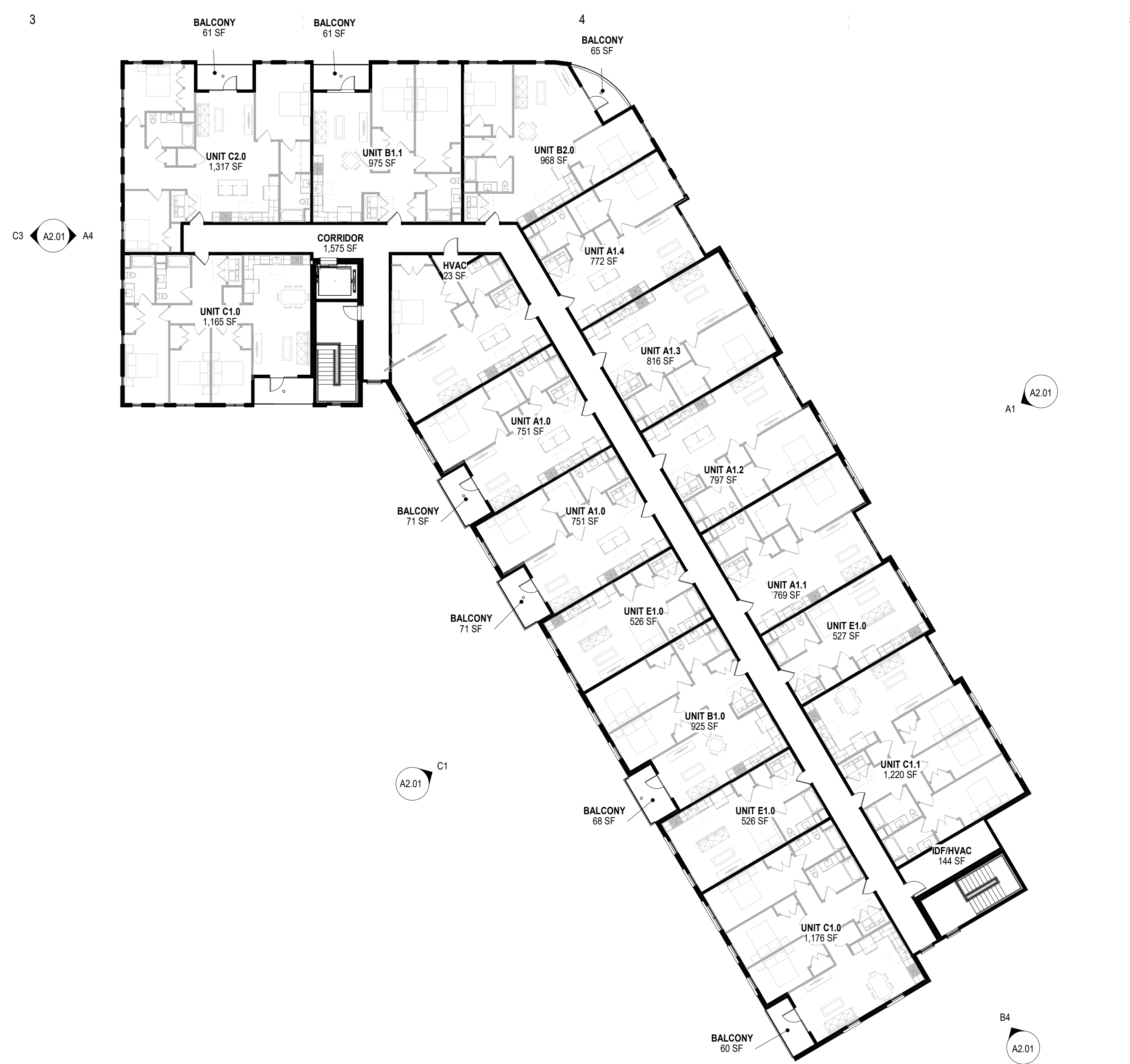
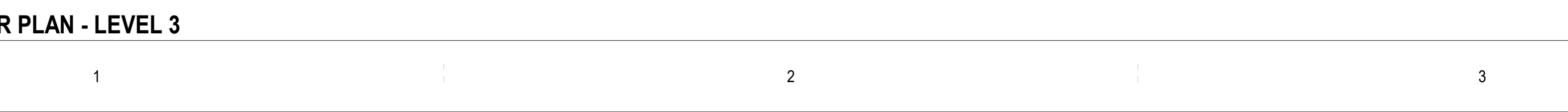
A1.01

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C1
A1.02
OVERALL FLOOR PLAN - LEVEL 4
1/16" = 1'-0"



A1
A1.02
OVERALL FLOOR PLAN - LEVEL 3
1/16" = 1'-0"



SHEET ISSUE:			
NO.	DATE	DESCRIPTION	BY
A	04/19/21	PD REZONING	MPS
C	10/15/21	TCHM PRELIMINARY APPLICATION	MPS
E	12/20/21	FINAL DEVELOPMENT PLAN	MPS

PRINCIPAL IN CHARGE: LL
PROJECT ARCHITECT: RC
DRAWN BY: DT/RO/RC

SHEET TITLE:
FLOOR PLAN

SHEET NO. PROJ. NO.
026520.00

A1.02

FEATURES & SPECIFICATIONS

INTENDED USE — The 6" Wafer-Thin LED recessed downlight with remote driver box combines high quality light output and efficiency while eliminating the pot light housing for competitive affordability. This innovative wafer-slim Type IC design allows easy installation for new construction or remodel from below the ceiling without the requirement of a pot light housing. The LED module maintains at least 70% light output for 36,000 hours. These LED Wafer downlights are intended for closets, attics, hallways, bathrooms, kitchens, basements, soffits, entry ways, porches, garages, stairwells, corridors, nursing/retirement homes, condos, elevators, apartments, and any other small areas.

CONSTRUCTION — Ideal for shallow ceiling plenum since a pot light housing is NOT required. IC rated driver and fixture - approved for direct contact with insulation. Aluminum die cast outer frame. Durable, powder coat paint to prevent rust. Round fixture with integral edge-lit LED's. Steel spring clip for easy installation. Plenum rated cable connector to connect from module to remote driver box. Isolated driver integrated inside steel remote box with four 7/8" knockouts with slots for pryout. Not suitable for pulling wires.

PATENT PENDING.

INSTALLATION — Ideal for shallow ceiling plenum; no housing required. Steel spring clip for easy installation. 6" cut out template is provided to ensure a correct sized hole is cut into ceiling for proper installation of the trim. Size of hole should not exceed 6 1/4 inches for this product. Suitable for installation in t-grid and drop ceiling applications.

OPTICS — Wafer-Thin downlight edge-lit LED technology uses light guided plate to distribute light. Polycarbonate lens provides even illumination throughout the space. Utilized 3000K and 4000K color temperature LEDs.

ELECTRICAL — Connect directly to 120V power supply via provided UL recognized driver. High efficient driver with power factor > 0.9. Ambient operating temperature: -40°F (-40°C) to +104°F (+40°C). Dimming down to 10% (See page 2 for recommended dimmers). Standard input wattage is 13W, 79 lumens per watt.

LISTINGS — CSA certified to US and Canadian safety standards. ENERGY STAR® certified product. Wet location. Air Tight certified in accordance with ASTM E283-2004.

WARRANTY — 5-year limited warranty. Complete warranty terms located at:

www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

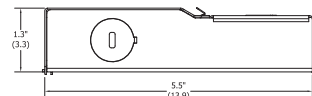
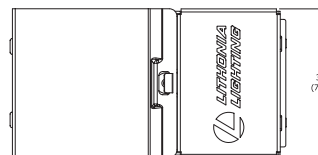
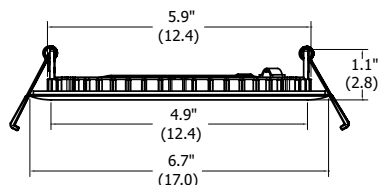
Note: Actual performance may differ as a result of end-user environment and application.

All values are design or typical values, measured under laboratory conditions at 25 °C.

Specifications subject to change without notice.

Specifications

Aperture:	4.9 (12.4)
Ceiling opening:	6 (15.2)
Overlap trim:	6.7 (17)
Height:	1.1 (2.8)



All dimensions are in inches (centimeters) unless otherwise indicated.

Catalog Number
Notes
Type

The Alliance FDP
01/03/2022
Basis-of-Design product for
exterior balcony lights.

Wafer LED Recessed Downlight

WF6

6" LED Module

IC/Non-IC

New Construction/Remodel



Matte black



Brushed nickel



Oil-rubbed bronze

ORDERING INFORMATION

For shortest lead times, configure product using **standard options (shown in bold)**.

Example: WF6 LED 30K MW

Series	Lamp	CCT/CRI/W/Lumens ¹	Finish
WF6 6" wafer-thin LED downlight	LED LED	30K 3000K/80CRI/13W/1020L	MW Matte white
		40K 4000K/80CRI/13.6W/1200L	MB Matte black
	LL LED Low Lumen LED	27K 2700K/80CRI/12.7W/780L	BN Brushed nickel
		30K 3000K/80CRI/12.6W/865L	ORB Oil-rubbed bronze
		40K 4000K/80CRI/12.9W/944L	

Accessories: Order as separate catalog number.

WF6 PAN R12	6" new construction pan, retail pack of 12
WFJB R4	Remodel joist bar, retail pack of 4
WFEXC6 U	6' FT4 cable
WFEXC10 U	10' FT4 cable
WFEXC20 U	20' FT4 cable



WF3_Pan



Joist



Extension Cable

Notes

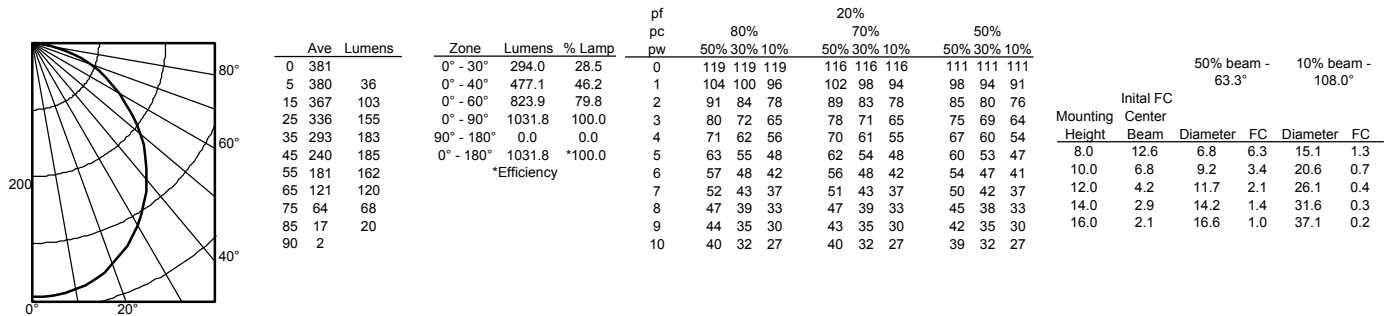
1 Total system delivered lumens.

WF6 6" LED Wafer Module

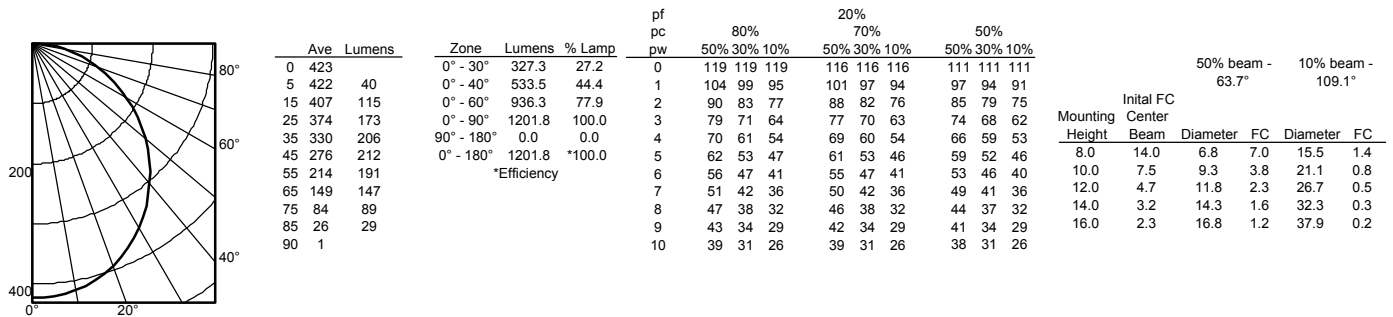
PHOTOMETRICS

Distribution Curve	Distribution Data	Output Data	Coefficient of Utilization	Illuminance Data at 30" Above Floor for a Single Luminaire
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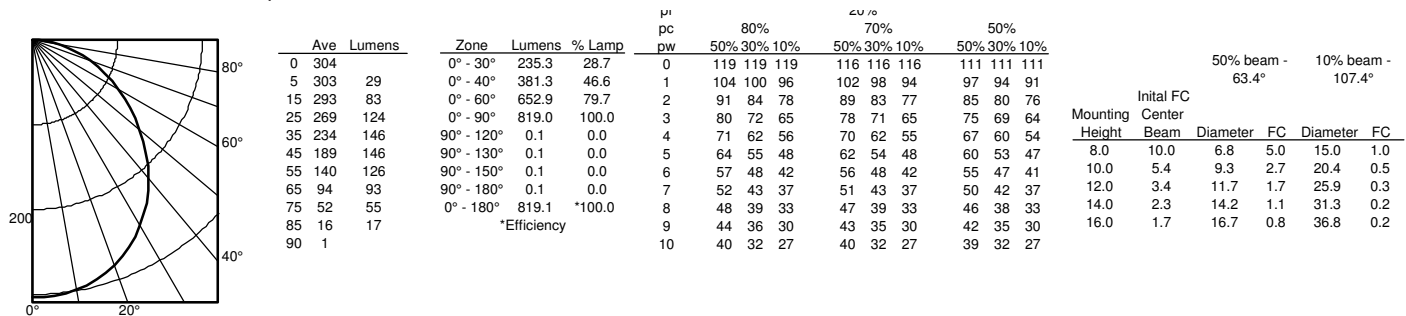
WF6 LED 30K, 3000 K LEDs, input watts: 13, delivered lumens: 1020, LM/W=78.5, test no. ISF 30024



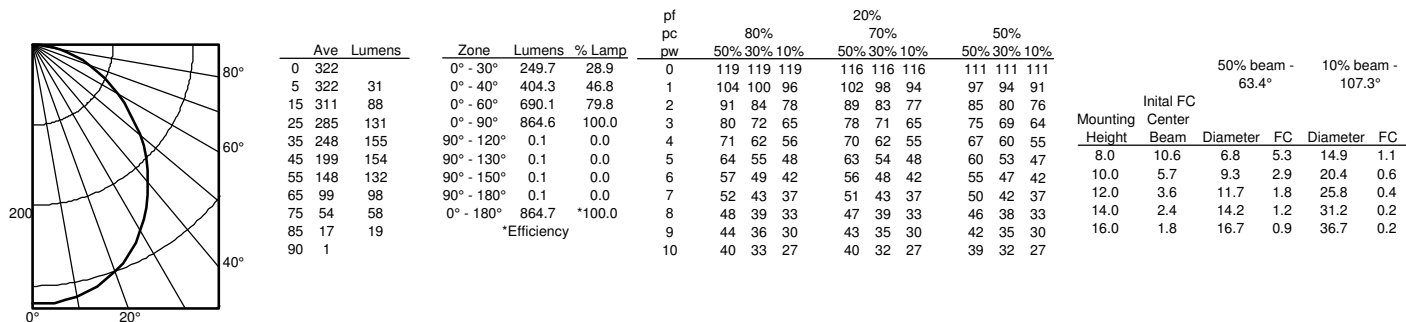
WF6 LED 40K, 4000 K LEDs, input watts: 13.6, delivered lumens: 1200, LM/W=88.2, test no. ISF 30376



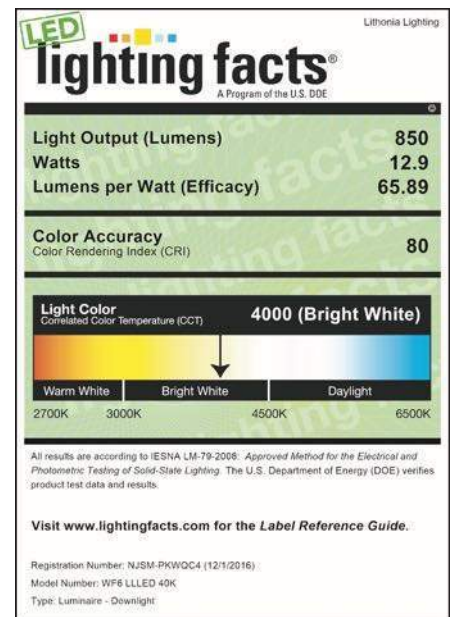
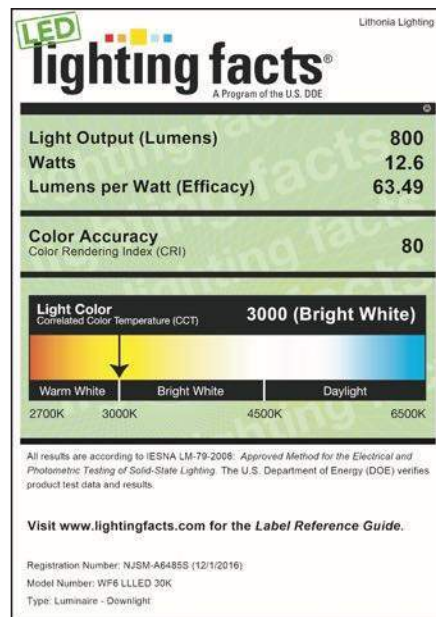
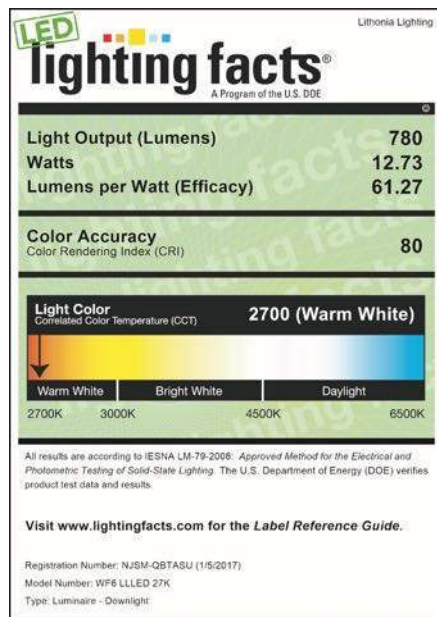
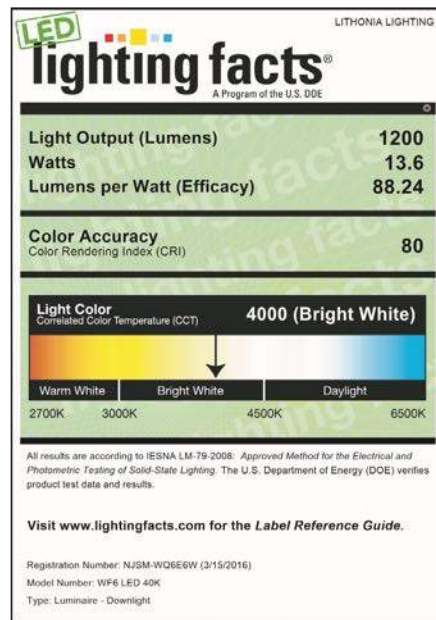
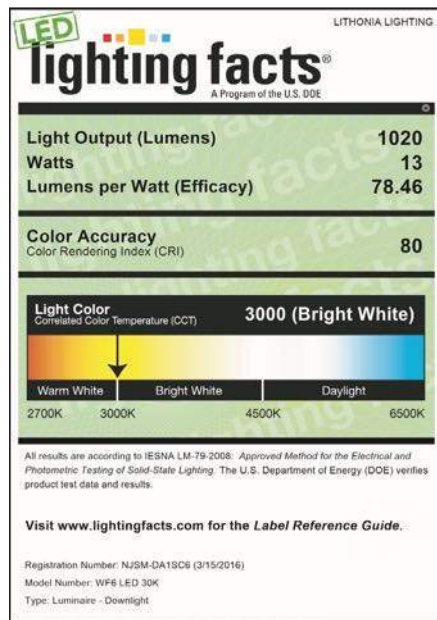
WF6 LL LED 27K, 2700 K LEDs, input watts: 12.7, delivered lumens: 819, LM/W=64.4, test no. ISF 32780P1



WF6 LL LED 30K, 3000 K LEDs, input watts: 12.6, delivered lumens: 865, LM/W=68.7, test no. ISF 32781



LIGHTING FACTS



Cylinder

Wall Mounted • Damp Location Listed **PROGRESS LED**

Description:

5" LED up down wall cylinder - wall lantern in Black. The P5675 Series are ideal for a wide variety of interior and exterior applications including residential and commercial. The Cylinders feature a 120V alternating current source and eliminates the need for a traditional LED driver. This modular approach results in an encapsulated luminaire that unites performance, cost and safety benefits. Specify P860045 top cover lens for use in wet locations.

Specifications:

- Black finish.
- Powder coat finish.
- Die-cast aluminum construction with durable powder coated finish
- 1,100 lumens 26 lumens/watt per module (delivered)
- 3000K color temperature, 90+ CRI
- Meets California Title 24 high efficacy requirements for outdoor use only.
- Dimmable to 10% with many ELV dimmers
- Dimmable to 10% brightness (See Dimming Notes)
- Back plate covers a standard 4" recessed outlet box: 4.5 in W., 4.5 in ht., 2.95 in depth
- Mounting strap for outlet box included
- 6 in of wire supplied

Performance:

Number of Modules	2
Input Power	17 W
Input Voltage	120 V
Input Frequency	60 Hz
Lumens/LPW (Down-Source)	795/46 (LM-82) per module
Lumens/LPW (Up-Source)	795/46 (LM-82) per module
Lumens/LPW (Source)	795/46 (LM-82)
Lumens/LPW (Delivered)	1,100/26 (LM-79)
CCT	3000 K
CRI	90 CRI
Life (hours)	60000 (L70/TM-21)
EMI/RFI	FCC Title 47, Part 15, Class B
Max. Operating Temp	30 °C
Warranty	5-year Limited Warranty
Labels	cCSAus Damp Location Listed

P5675-31/30K



Dimensions:

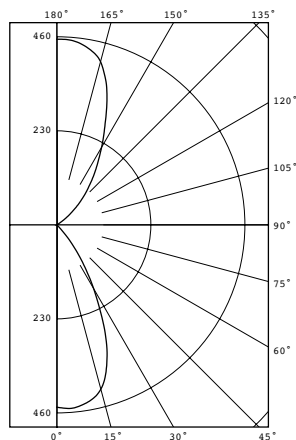
Width: 5 in
Height: 14 in
Depth: 8-7/8 in
H/CTR: 8 in

Photometrics:

ELECTRICAL DATA		P5675-31/30K
Input Voltage		120 V
Input Frequency		60 Hz
Power Factor		0.929
THD		<20%
EMI/RFI		FCC Title 47, Part 15, Class B
Operating Temperature		-30 °C to 30 °C
Dimming		Yes*
Over-voltage, over-current, short-circuit protected		
*See Dimming Notes for more information		

P5675-31/30K

LED Light Engine: 3000 K 90 CRI
 System Wattage: 17
 Fixture delivered lumens: 830
 Fixture Efficacy: 24.4
 Spacing Criteria: 0.8



Test 17.02768 Test Date 10/20/17

CANDELA DISTRIBUTION

DEG	CANDELA	LUMENS
0	446	
5	450	43
15	416	115
25	272	123
35	104	65
45	2	8
55	1	0
65	0	0
75	0	0
85	0	0
90	0	
95	0	0
105	1	0
115	2	2
125	17	18
135	83	64
145	167	104
155	282	130
165	413	114
175	452	43
180	454	

P5675-31/30K

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%FIXT
0-30	280	33.8
0-40	346	41.7
0-60	354	42.7
0-90	354	42.7
90-120	3	0.3
90-130	21	2.5
90-150	189	22.8
90-180	476	57.3
0-180	830	100.0

Cylinder

Wall Mounted • Damp Location Listed The Progress LED logo, consisting of the word "PROGRESS" in a sans-serif font followed by "LED" in a bold, sans-serif font, all enclosed within a circular border.

P5675-31/30K

Dimming Notes:

P5675-31/30K is designed to be compatible with many ELV/Reverse Phase controls.

The following is a partial list of known compatible dimmer controls.

Dimming Controls:

Lutron_Diva DVELV-300P

Lutron_Nova NTELV-300

Lutron_Vierti VTELV-600

Lutron_Maestro MAELV-600

Lutron_spacer/system SPSELV-600

Leviton_Renoir II AWRMG-EAW

Leviton_6615-P

Dimming capabilities will vary depending on the dimmer control, load, and circuit installation.

Always refer to dimmer manufacturer instructions or a controls specialist for specific requirements.

Dimmer control brand names where identified above are trade names or registered trademarks of each respective company.

Neighborhood Meeting

Project Name: THE ALLIANCE

Location: 112 REBECCA ST (NICHOLTOWN COMMUNITY CENTER)

Time of the meeting: 6:30 PM

Date: NOV 16TH, 2021

Representative holding meeting: JOSEPH KASS / ROB COUCH / Paul MILLS

Name	Street Address	Email
1 Linda Robinson	11 Haley Court	
2 Bridget Durham	9 Haley Court	
3 Robert Taylor	20 REBECCA ST	
4 Chandler Chittom	5 Haley Court	chanchi11om@gmail.com
5 Annie L. Fuller	123 Ackley Rd. Greenville 29607	
6 Louella Butler	310 Ackley Rd. Greenville 29607	louellabutler1@gmail.com
7 Milton & Regina Smith	26 Warren Ct + 209 Maco	gto65.co@yahoo.com
8 Katie Taylor	36 Glenn St, Greenville, 29607	betamsteru@icloud.com
→ 9 Mario & Liz Brown	5 Dale Drive, Greenville, SC	marioandlizbrown@gmail.com
10 Whitney Wright	15 Eastlan Dr, Greenville, 29607	whitney.wrightsc@gmail.com
11 ROBERT BROWN	23 BROWN AVE 29607	
12 SGT AGATHEN	GREENVILLE PD	
13 Ben Able	28 Wrentham St, Greenville SC 29611	babdo@greenvillesc.gov
14 THOMAS BROOKS	705 NEXFORD WAY Easley, SC 29642	cbryan@bellsouth.net
15 GRADY BUTLER	234 ALAMEDA ST 29607	
16 ALAN MITCHELL	212 REBECCA ST 29607	AMITCHELL56@GMAIL.COM
17		
18		
19		
20		
21		
22		
23		
24		
25		



The Alliance Neighborhood Meeting

12/17/21

Zoom Attendees

Alan Mitchell
Pastor Calvin Hailstock
919-841-3284
Whitney Wright
617-750-7210
James Jordon
Amy Connor
Ashana Taylor
Brian
Carsten
Clint
Della Scott
George Rabanal
Helen
Herdie Ferguson
Jacob Siler
Jerry Stephens
Joseph Kass
Kate Yaeger
Kecia Richardson
Kenneth Gibson
Kerry Fair
Laurie Rappl
Meghan Meier
Merle Johnson
Monique Mattison
Oscar Bennett
Ofc. N. Howard
Paul Mills
Robinson Villa
Rodney Acker
Shannon
Sylvia Palmer
Taylor Davis
Thomas Porter
Whitney Wright
Yvonne
Ed



meeting minutes

Issue Date: 12/20/2021

Meeting Date: 12/16/2021

Meeting Location: Zoom

Project Name: The Alliance

Project Number: 020520.00

Attendees:

NHE

Taylor Davis
Joseph Kass
Ashana Taylor
Robinson Villa

JCC

James Jordon

McMillan Pazdan Smith (MPS)

Rob Couch
Rita Odintsova

Site Design

Paul Mills

Public

See attached sign-in sheet

Distribution: (if different from above) Austin Rutherford, City of Greenville

Writer: Rob Couch

The following notes represent our understanding of matters discussed and actions agreed upon. Please report corrections and/or omissions to the writer within five (5) working days.

1. (Meghan Meier via Zoom chat) I like this exterior design better than the first draft y'all shared. The first one looked too much like a college dorm. Still wish it could be more craftsman/cottage style and blend into the neighborhood more.
2. (Jerry Stephens via Zoom chat) Add over 100 units and no traffic impact? Not possible.
 - a. (Yvonne via Zoom chat) They said no significant change!!!
3. (Ken Gibson) Clint Link with the City is here to answer any questions.

meeting minutes

4. (Kate Yaeger via Zoom chat) The only egress is onto Ackley Road. How can you say with straight faces that this will not have any meaningful impact? You NEED to adjust the traffic lights or you will have backups.
5. (Clint) Have reviewed traffic study and concur with analysis. Performed by professional traffic engineer. New trips and traffic generated. Traffic will grow over time regardless. Based on traffic generated, there is still more than an acceptable level of service at the intersection. Meets the city's requirements. City will continue to monitor and will adjust timing of light if needed in future. Okay with report and analysis. Biggest adjustment might be to add a turn lane. Would certainly help. If City saw a real issue, then it's something that could be done.
6. (Jerry Stephens via Zoom chat) Did you do your model in COVID when no one was traveling?
7. (Yvonne via Zoom chat) There are 9 + ways to get out of Nicholtown!!!!
8. (Kate Yaeger via Zoom chat) Are there plans to install a smart traffic light that senses backups?
9. (Helen via Zoom chat) There's already a 4 minute wait to turn left off Ackley onto Lauren's Rd.
10. (Jacob Siler via Zoom chat) A designated left turn light onto Ackley would be great!
11. (Jerry Stephens via Zoom chat) What about other roads with a light at Glenn or Blair?
12. (Kate Yaeger via Zoom chat) Just do it from the beginning. You know there's much more growth coming. Do it right the first time.
13. (Yvonne via Zoom chat) Would like to see a right-hand turn lane onto Laurens. Those of us that live here have created the issue already.
14. (Meghan Meier via Zoom chat) Still hoping for a right turn lane onto Laurens from Ackley. We need the right turn lane now.
15. (Paul Mills) Did not do traffic study during COVID. DOT doesn't allow traffic counts during summer when school is out. Similar situation with COVID. DOT also publishes traffic counts every few years.
16. (Sylvia Palmer) Is there a sensor on Ackley that you have to roll over?
 - a. (Clint) I believe so and it is working as far as I know. Are you experiencing issues?
17. (Alan) Request that City take a look at intersection.
18. (Jerry via Zoom chat) If you did it before March 2020 it was not 'normal.'
19. (Brian via Zoom chat) With the Swamp Rabbit extension on the other side of the road, will the cross walk become safer with these changes?
20. How long before complete?
 - a. (Joseph) About 16 month construction timeline, so Fall 2023.
21. Any interest from specific retailers?
 - a. (Joseph) Having discussions with Community Works to find business connected to the Nicholtown community. Want them to be neighborhood focused and not a national retailer. Also talking to Greenville Housing Fund about taking some space.
22. Any studies on Haley Court and effect on property values?
 - a. (Joseph) No specific studies, but housing values are going up in Greenville County. Believe that affordable housing will help neighborhood while not having a negative effect on property values.
23. Question from neighbors on Haley and Warren Court. What type of trees will be planted in buffer? What height at maturity?
 - a. (Paul) City has list of plants that can be used. Most likely a type of oak. Standard is about 2" diameter at chest height when planted. Could also plant fewer, larger caliber trees.

meeting minutes

24. Mentioned a 6' tall fence. At what time will that be completed? Would you consider an 8' tall fence? All brush has been cleared and can see straight through to Laurens and Ackley.
- (Paul) Fence will be installed at end of construction. City has limit on height of fence. Will take a look at it.
25. (Marty) 60% AMI is hard to hit. Any encouragement of bikes with SWT extension? Some of the streets surrounding Ackley could be impacted if traffic backs up on Ackley. Could a speed bump be added on one of those streets?
- (Paul) Speed bumps would be a City decision. Bike racks are provided.
 - (Jerry Stephens via Zoom chat) Good questions, but speed bumps haven't slowed traffic on Beechwood Ave.
 - (Steve via Zoom chat) Emergency vehicles use Ackley, so speed bumps will not work.
 - (Sylvia Palmer via Zoom chat) Traffic engineering told the Association a while back that Ackley Rd. is a major artery for Nicholtown and Speed humps are not placed on major roads in a community.
26. (Jacob Siler via Zoom chat) Who would be the best person at the city to contact with traffic concerns? Would that be Clint?
- (Clint via Zoom chat) You're welcome to send any traffic related questions my way but the City Traffic Engineering Division is the appropriate group to best answer your questions. I can certainly facilitate getting any questions to our traffic engineers.
27. (Luella Butler, 310 Ackley Road) Lifetime resident of Nicholtown. Residents of Nicholtown need another opportunity to speak about new apartments. Light at Laurens stays red for far longer than it should. Can foresee some real traffic congestion. Already some traffic with shopping strip at Family Dollar. Adding more traffic will not be an attribute to the community. Are there other housing types that could be considered or could you build less units?
28. (Regina Smith) How many parking spaces in development. How are cars factored. Maybe need to be scaled back.
- (Rob) Retail and residential parking is factored based on market demand. Calculations were submitted with preliminary Planned Development and approved by City.
 - (Joseph) 163 total parking spaces.
 - (Joseph) 84 of 112 units are studios or one-bed or two-beds. Will be fewer cars based on types of units provided in the development.
29. (Katie Taylor, Glen Street) Lived in Nicholtown since 1992. Can't use my street [to turn onto Laurens Road] because of traffic on Laurens Road. Have to go down to Ackley. Only three spots on left hand turn from Laurens onto Ackley. Traffic gets backed up and is horrific. Request study for speed on Laurens Road. Don't care what traffic studies show. I live there and know what it's like.
- (Jerry via Zoom chat) I support Katie. I didn't hear anyone answer her questions. Please address them.
30. How are we moving forward in the Spring? Will you be working on details while under construction? Don't see how that many parking spaces will fit on site.
- (Joseph) Planning to start construction in summer, June or July.
31. (Ann Fuller, Ackley Road) Really concerned about apartments and value of property. Would you consider single family houses?

meeting minutes

- a. (Joseph) The property fronts Laurens Road and is adjacent to commercial properties. GVL 2040 plans calls for corridor to continue to develop with commercial uses in mind. Feel that the proposed project is in keeping with the 2040 plan which calls for mixed use, public transportation, some commercial, but overwhelmingly residential use.
- 32. Will there be another meeting dedicated to just this project?
 - a. (Joseph) Open to that. City requires that we use the regularly scheduled neighborhood meeting dates for the presentation.
- 33. (Steve via Zoom chat) The presentation has answered my concerns. I support the project. I live at 113 Ackley, two blocks from the project.
- 34. (Meghan Meier via Zoom chat) Shouldn't these concerns have been brought up months ago when JCC, Joseph and MPS originally presented to us?
 - a. (Jerry via Zoom chat) Meghan, is there some reason you don't want the community to be heard?
 - b. (Kate via Zoom chat) I think everyone has a right to be heard up until this thing is voted/approved.
 - c. (Meghan via Zoom chat) Not at all, but this is all very redundant of the conversations we've already had. If we have to keep rehashing every reason every decision was made at each meeting it's a waste of everyone's time.
 - d. (Sylvia via Zoom chat) This is not the first meeting to discuss this development with Nicholtown neighbors.
 - e. (Meghan via Zoom chat) This development project has been the most transparent of any other project that's been presented to us in years past and I'm very thankful for that.
 - f. (Jerry via Zoom chat) So, today's issues/questions shouldn't be addressed?
 - g. (Meghan via Zoom chat) This project has had agenda time at every meeting for the past year. Most of these questions have already been addressed, Jerry.
 - h. (Jerry via Zoom chat) So as more information is learned, people aren't allowed to ask new questions? Interesting.
 - i. (Meghan via Zoom chat) SO interesting
 - j. (Jerry via Zoom chat) Sounds like a lot of people here don't really want community input.
- 35. (Sylvia) Some of this has already been addressed in previous meetings. Like the new design.
- 36. (Sarah Siler) How will sidewalk merge with current sidewalk on Ackley?
 - a. (Paul) Will have a section that juts back to existing sidewalk once off property.
- 37. (Rodney) Agree that additional traffic from the development will not impact the intersection. But other than this development the use of the intersection is going to increase. Future development may necessitate a right-hand turn lane. Understand that building placement will not allow for a right-hand turn lane. Government should take care of that now.
 - a. (Ken) That is something that the City is looking at. Some issues with width of street in both ways. I can assure you that we are looking at these traffic issues especially at that intersection. Agree that when development on Laurens Road kicks in there will be issues with traffic. Not something that we're ignoring, just some obstacles that need to be overcome.
- 38. (Alan) Was just supposed to be an update on the project. Was not a dedicated meeting. Recommend that developers send out notification per City requirements if another meeting is needed.

meeting minutes

- a. (Ken) The City has insisted that the developer make special notification to nearby residents which they did. Agree that if people don't feel their questions have been answered then developer should respond.
- 39. (Ed) Can rent be raised?
 - a. (Joseph) PD zoning requires it to be affordable. Funding sources require it to be deed restricted for 35 years at 60% AMI.
 - b. (Ed) What happens at 35 years?
 - c. (Joseph) Typically refinanced for another 35 years around year 20. Typically continues to be affordable for much longer than that.

End of Document



**Planning Staff Report to
Greenville Planning Commission
January 14, 2022
for the January 20, 2022 Public Hearing**

Docket Number: Z-1-2022

Applicant: City of Greenville

Proposal: TEXT AMENDMENT to MODIFY Article 19-6-9 of the Land Management Ordinance.

Staff Recommendation: Recommend Approval

Applicable Sections of the City of Greenville Code of Ordinances:

Article 19-6.9. *Single-family residential infill standards*

Background

Planning and Development staff submits this text amendment to replace the existing provisions in the Land Management Ordinance for Section 19-6.9. *Single-family residential infill standards*. Proposed amendments will focus standards within existing single-family residential areas to achieve more balanced growth and maintenance of neighborhood character, integrity, diversity, affordability, and environmental features. This amendment will be applicable to new lots, construction of a new structure, additions of garages/carports, installation/expansion of driveways, and significant renovations and additions within residential zoning districts. Generally, this amendment is comprised of standards for neighborhood character protection, stormwater mitigation, and tree canopy protection.

In many of our City neighborhoods, residents experience negative impacts from new homes that are not compatible in mass or form to the existing neighborhood, are inundated with stormwater issues that arise post construction, and experience losses of traditional tree canopy that characterizes how their community looks and functions. This proposal addresses this demonstrated community need through the creation of measured protections for existing single-family residential areas. These protections have been designed to provide a consistent development pattern and a responsible approach to the local environment moving forward.

Staff Analysis:

The amendment proposes modification to existing standards for single-family residential infill. These changes are intended to result in construction more consistent with the existing fabric of neighborhoods throughout the City. The amendment will further align single-family infill standards with recent amendments to tree protection and replacement standards and goals for stormwater mitigation.

The proposal is consistent with the purpose and intent of the Ordinance, particularly Land Management Ordinance "Purpose and Intent" Section 19-1.3.4, "Promote diverse quality housing, protect neighborhoods" and Section 19-1.3.10, "Create harmonious community", as the amendment promotes the protection of existing single-family residential areas in residential zoning districts.

Additionally, the GVL2040 Comprehensive Plan indicates, as a primary principle, the "strengthening and preserving existing neighborhoods, including careful infill development that adds variety and inclusiveness to neighborhood housing". Adoption of this proposed amendment is directly connected to this identified goal. This request is strongly connected to the community's core values in the protection of neighborhoods, and reflects a resourceful, inclusive, and courageous effort.

Greenville has experienced considerable growth in both commercial and residential development throughout the city over the past decade, which has added stress to existing neighborhoods to accommodate more and larger

development. Additional protections are needed to ensure neighborhoods retain their character and remain affordable to those that would traditionally reside in those existing residential areas.

The adoption of this text amendment, in conjunction with acceptance of the *Guidelines for Green Infrastructure & Low Impact Development* and Staff publication of the "Infill Instructions and Pattern Book", provides regulations and a toolkit for users that will result in residential development significantly more in character with existing neighborhoods.

Note: Planning Commission's action on this item should include two separate motions:

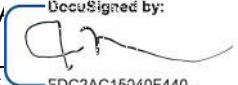
- 1) Recommendation to the City Council on the proposed text amendment; and
- 2) Final decision on amendment to the Design and Specifications Manual and adoption of the *Guidelines for Green Infrastructure & Low Impact Development*

Application # _____	Fees Paid _____
Date Received: _____	Accepted by _____
Date deemed complete _____	App Deny Conditions _____



APPLICATION FOR ORDINANCE TEXT AMENDMENT CITY OF GREENVILLE, SOUTH CAROLINA

APPLICANT INFORMATION

City of Greenville NAME 206 S Main Street ADDRESS Greenville, SC 29601 (864) 467-4476 PHONE	(864) 467-4510 FAX planning@greenvillesc.gov EM/DocuSigned by:  SIG FDC2AC15040F440... 1/14/2022 DATE
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REQUEST

PERTINENT CODE SECTION(S):

Amendment to Article(s) 19-6-9 of the Land Management Ordinance

NARRATIVE DESCRIPTION/PROPOSED REVISION(S):

This text amendment will replace the existing provisions in the Land Management Ordinance for Section 19-6-9. Single-family residential infill standards. Proposed amendments will focus standards within existing single-family residential areas to achieve more balanced growth and maintenance of neighborhood character, integrity, diversity, affordability, and environmental features. This amendment will be applicable to new lots, construction of a new structure, additions of garages/carports, installation/expansion of driveways, and significant renovations and additions within residential zoning districts. Generally, this amendment is comprised of standards for neighborhood character protection, stormwater mitigation, and tree canopy protection.

INSTRUCTIONS

1. THE APPLICATION AND FEE, **MADE PAYABLE TO THE CITY OF GREENVILLE**, MUST BE RECEIVED BY THE PLANNING AND DEVELOPMENT OFFICE NO LATER THAN 5:00 PM OF THE DATE REFLECTED ON THE ATTACHED SCHEDULE.
2. THE APPLICANT MUST RESPOND TO THE "STANDARDS" QUESTIONS ON PAGE 2 OF THIS APPLICATION (YOU MUST ANSWER "WHY" YOU BELIEVE THE APPLICATION MEETS THE TESTS FOR GRANTING A TEXT AMENDMENT). SEE ALSO **SECTION 19-2.3.2, AMENDMENTS TO TEXT AND ZONING DISTRICT MAP**, FOR ADDITIONAL INFORMATION. YOU MAY ATTACH A SEPARATE SHEET ADDRESSING THESE QUESTIONS.
3. YOU MUST ATTACH THE REQUIRED APPLICATION FEE: \$ 100.00.
4. THE ADMINISTRATOR WILL REVIEW THE APPLICATION FOR "SUFFICIENCY" PURSUANT TO **SECTION 19-2.2.6, DETERMINATION OF SUFFICIENCY**, PRIOR TO PLACING THE APPLICATION ON THE PLANNING COMMISSION AGENDA. IF THE APPLICATION IS DETERMINED TO BE "INSUFFICIENT", THE ADMINISTRATOR WILL CONTACT THE APPLICANT TO REQUEST THAT THE APPLICANT RESOLVE THE DEFICIENCIES. **YOU ARE ENCOURAGED TO SCHEDULE AN APPLICATION CONFERENCE WITH A PLANNER, WHO WILL REVIEW YOUR APPLICATION FOR "SUFFICIENCY" AT THE TIME IT IS SUBMITTED. CALL (864) 467-4476 TO SCHEDULE AN APPOINTMENT.**

APPLICANT RESPONSE TO SECTION 19-2.3.2(E)(1), AMENDMENTS TO TEXT (YOU MAY ATTACH A SEPARATE SHEET)

1. DESCRIBE THE WAYS IN WHICH THE PROPOSED AMENDMENT IS CONSISTENT WITH THE COMPREHENSIVE PLAN.

The GVL2040 Comprehensive Plan indicates as a primary principle "strengthening and preserving existing neighborhoods, including careful infill development that adds variety and inclusiveness to neighborhood

housing". The adoption of this proposed amendment is directly connected to this identified goal. Additionally, this request is strongly connected to the community's core values, engaging in the protection of neighborhoods that reflects a resourceful, inclusive, and courageous effort.

2. DESCRIBE THE WAYS IN WHICH THE PROPOSAL IS CONSISTENT WITH THE PROVISIONS OF THE ORDINANCE AND RELATED CITY REGULATIONS.

The amendment proposes modification to existing standards for single-family residential infill. These changes will result in construction more consistent with the existing fabric of neighborhoods throughout the City. The amendment will further align single-family infill standards with recent amendments to tree protection and replacement standards and goals for stormwater mitigation.

3. DESCRIBE THE CONDITIONS THAT HAVE CHANGED FROM THE CONDITIONS PREVAILING AT THE TIME THAT THE ORIGINAL TEXT WAS ADOPTED.

Greenville has experienced considerable growth in both commercial and residential development throughout the city over the past decade, which has added stress to existing neighborhoods to accommodate more and larger development. Additional protections are needed to ensure neighborhoods retain their character and remain affordable to those that would traditionally reside in those existing residential areas.

4. DESCRIBE THE WAYS IN WHICH THE PROPOSAL ADDRESSES A DEMONSTRATED COMMUNITY NEED.

In many City neighborhoods, residents are being surrounded by homes that are not compatible in mass or form, are being inundated with stormwater issues, and are losing traditional tree canopy characterizing how their community looks and functions. The proposal addresses this demonstrated community need by creating additional protections for existing single-family residential areas ensuring a consistent development pattern and environmental protections moving forward.

5. DESCRIBE THE WAYS IN WHICH THE PROPOSAL IS CONSISTENT WITH THE PURPOSE AND INTENT OF THE ZONING DISTRICTS IN THE ORDINANCE, WILL PROMOTE COMPATIBILITY AMONG USES, AND WILL PROMOTE EFFICIENT AND RESPONSIBLE DEVELOPMENT WITHIN THE CITY.

The proposal is consistent with the purpose and intent of the Ordinance which is to guide development in accordance with the existing and future needs of the city and to promote the public health, safety, morals, convenience, order, appearance, prosperity, and general welfare of the property owners and residents of the city, and other members of the public. The proposal is particularly consistent with Land Management Ordinance "Purpose and Intent" Section 19-1.3.4, "Promote diverse quality housing, protect neighborhoods" and Section 19-1.3.10, "Create harmonious community", as the amendment promotes the protection of existing single-family residential areas in residential zoning districts.

6. DESCRIBE THE WAYS IN WHICH THE PROPOSAL PROMOTES A LOGICAL AND ORDERLY DEVELOPMENT PATTERN.

The proposal will ensure a logical and orderly development pattern of the city by protecting the existing character of existing neighborhoods, requiring homes to appear similarly sized, lot sizes to remain consistent within neighborhoods, and retaining relatively equivalent spacing between homes to maintain the rhythm and harmony of structures in existing residential areas.

7. DESCRIBE THE WAYS IN WHICH THE PROPOSED AMENDMENT WILL RESULT IN BENEFICIAL IMPACTS ON THE NATURAL ENVIRONMENT AND ITS ECOLOGY, INCLUDING BUT NOT LIMITED TO: WATER; AIR; NOISE; STORMWATER MANAGEMENT; WILDLIFE; VEGETATION; AND, WETLANDS.

The proposed amendment will positively impact the natural environment through more stringent requirements relating to retention of tree canopy and additional requirements for stormwater mitigation of single-family residential properties not previously regulated.

8. DESCRIBE THE WAYS IN WHICH THE PROPOSED AMENDMENT WILL RESULT IN DEVELOPMENT THAT IS ADEQUATELY SERVED BY PUBLIC FACILITIES AND SERVICES (ROADS, POTABLE WATER, SEWERAGE, SCHOOLS, PARKS, POLICE, FIRE, AND EMERGENCY FACILITIES).

The proposed amendment will ensure a development pattern consistent with existing development in an area, resulting in a very predictable impact on existing public facilities. In many cases, the proposed requirements should ensure minimal new burden is added to existing public facilities and infrastructure.

19-6.9 Single-family residential infill standards

19-6.9.1 General

(A) **Purpose and intent.** This section is intended to establish infill development standards that will allow balanced growth and maintain the character, integrity, diversity, affordability, and environmental features of the City's neighborhoods.

(B) **Applicability.** The provisions of this section shall apply to all following development activities located in established single-family residential areas:

- (1) New lots created by summary plat or major subdivision (*Section 19-2.3.13*).
- (2) Construction of any new structure.
- (3) Addition of an attached garage/carport.
- (4) Installation and/or expansion of a driveway.
- (5) Renovations/additions to a dwelling whose construction value exceeds 50 percent of the fair market value of the property as reflected on the Greenville County Tax Assessor's role. All costs of renovations/additions phased over a five-year period shall be combined to determine applicability of the percent threshold criteria.
- (6) Additions that increase the principle building footprint square footage by more than 40 percent. All square footage of additions phased over a five-year period shall be combined to determine the applicability of the percent threshold criteria.

(C) **Definitions.** For the purposes of this section, the following definitions apply:

Block, in the context of residential infill means the lots and residential buildings fronting both sides of a section of street located between intersecting streets or, in the absence of intersecting streets, the lots and residential buildings fronting both sides of a section of street within 300 feet of each side of the subject property, on which the lot fronts, whichever is greater.

Established single-family residential area, in the context of residential infill, means any property located within a residential zone district.

Form, in the context of residential infill, refers to the shape and scale of a building. Form and its opposite, space, constitute primary elements of architecture and place. Both form and space are given shape and proportion in the design process. Therefore, the placement of a building form in relation to its immediate site and neighboring buildings is a crucial aspect of this form/space relationship.

Form Analysis, in the context of residential infill, means an analysis that combines a number of aspects that must be considered in order to analyze or design a resilient architectural form and resultant placement of that form, including shape, mass, size, proportion, and space.

Height. See *Height of building, Section 19-1.11*.

Mass means the three-dimensional representation of a structure and is the resultant of an analysis of the width, height and overall presentation of an individual existing structure.

Proportion of building means the comparative relation between elements of building size and height.

Shape, in the context of residential infill, refers to the configuration of surfaces and edges of a two- or three-dimensional object. Shape is the contour or silhouette, rather than the detail, of identified structures and is expressed in both plan (2D) and form (3D).

Size, in the context of residential infill, means the spatial dimensions, proportions, magnitude or bulk of a structure or lot configuration.

Space, in the context of residential infill, means the area in, around and between adjacent forms. (With respect to structures within existing neighborhoods, the area and volume between and around existing structures and, with respect to land subdivision, the width and depth of existing lots)

Yard, Rear, in the context of residential infill, means the open space area, at grade, located behind the rear wall of the habitable residential structure on the lot and the rear lot line and extending the full width of the lot.

Yard, Front, in the context of residential infill, means the yard area located in front of the front wall of the habitable residential structure on the lot.

Yard, Side, in the context of residential infill, means the yard area located between the front wall and the rear wall at both sides of the habitable residential structure on the lot.

Yard, Special Side, in the context of residential infill, means the yard area located between the front wall and the rear wall of a habitable residential structure located on a corner lot at the elevation that faces the second street. A special side yard may only occur as a conditioned approval by the Administrator.

19-6.9.2 Neighborhood Character Protection

Character. This section is intended to establish infill development standards that will propagate the existing aggregate of features and traits that compose an existing individual neighborhood, in which an infill project is proposed.

Protection. This section is intended to establish infill development standards that will both protect and maintain the character and integrity of the city's established single-family residential areas.

(A) Mass and Form Analysis. Prior to submittal for a building permit, the applicant shall perform a mass and form analysis of the immediate area that surrounds the proposed building site. The completed analysis shall be submitted with the building permit application and shall be used to establish the scale, height and placement of a new or replacement structure on the lot.

(1) Mass Analysis. A mass analysis is required to determine the relative appearance of the size and scale of structures in the applicable neighborhood and to ensure that the existing fabric of the neighborhood remains intact as new structures are added and older or damaged structures are replaced.

(a) To conduct the mass analysis, determine the approximate width and height of all the individual residential structure elevations within the same block and then summarize as a representative average.

(b) All new structures or replacements must provide a front elevation design that is within plus or minus 20 percent of the representative average of the width of the existing structure elevations as determined by the mass analysis.

- (c) All new structures or replacements must provide a front elevation design that does not exceed the average height of the existing elevations present within the block by more than one story.

(2) Form Analysis. A form analysis is also required to ensure that the existing fabric of the neighborhood remains intact as new structures are added, older or damaged structures are replaced, or new lot subdivisions are proposed. The form analysis is required to preserve and maintain the block *pattern* and *placement* of any new or replacement structure, lot or subdivision.

- (a) To conduct the form analysis, determine the shape and proportions of all the residential structure elevations and the spaces between all the residential structure buildings, identified in the mass analysis phase, and then include the finding with the results of the mass analysis.
- (b) For subdivision proposals, determine the shape, width and square footage pattern of the existing lots within the study block area and average the result to determine the allowable minimum lot width and size for the neighborhood. Resultant lots shall be within plus or minus 20 percent of the representative average lot width and lot area to ensure sufficient dimensions for a building and spacing between structures consistent with the block pattern, as required in this ordinance.

(3) Exception.

- (a) Existing lots, present at the date of adoption of this ordinance, that
 - i. are significantly narrower than the average width of existing lots within the block; and
 - ii. which prevent the placement of a new structure that is able to comply within plus or minus 20 percent of the representative average width of the structure elevations by the mass analysis; and
 - iii. which prevent the ability to comply with the average spacing between existing structures as established by the form analysismay petition the Administrator to provide a building elevation width that complies with the applicable required side setback of the zoning district, even if the overall elevation is too narrow to comply with the average elevation width of this ordinance.
- (b) If a new structure is unable to meet the minimum spacing between structures, as determined by the form analysis step, due to an existing narrow lot width, then the front elevation must:
 - 1. Be designed to not exceed the average existing elevations average height present with the block; and
 - 2. May add one story with a step back no less than 20 feet from the front entry wall elevation. All analysis results shall be reported on the Mass and Form Analysis form, provided by the city, and submitted with an application for a certificate of appropriateness or the building permit application, whichever is applicable.

(B) Structure Removal and Replacement. Prior to the removal or replacement of any structure in an established residential neighborhood, the applicant must:

(1) Determine if the property is in a neighborhood within a Preservation Overlay District, Historic Overlay District, Historic Resources List or the list of Local Landmarks. If so, *Section 19-2.3.8* will apply.

(2) Must obtain a demolition permit prior to any work.

(C) New Structure Placement. Prior to the placement of any structure in an established residential neighborhood, the applicant must:

(1) Determine if the property is in a neighborhood within a Preservation Overlay District or Historic Overlay District. If so, *Section 19-2.3.8* will apply.

(2) Must obtain a building permit prior to any work.

(D) Structure Support Features. To minimize the impact of support features, such as garages, carports, accessory structures and driveways, on the character of established single-family residential areas, this section is intended to establish infill development standards that will address the location of garages or carports and driveways and the orientation of garage or carport openings relative to the street. The following shall apply:

(1) In established single-family residential areas, garages, carports, and driveways shall be constructed in a way that is consistent with the predominant development pattern and rhythm of the block.

(2) Attached garages or carports shall not open onto a front yard, unless:

(a) A majority of the existing dwellings in the block also have attached garages or carports which open onto a front yard; and

(b) The garage or carport adheres to all the following conditions:

1. The garage or carport is integrated into the design of the house.

2. The front wall of the garage or carport must be set back at least 10 feet from the front wall of the house. This setback may include up to 5 feet of the depth of a front porch that spans at least 50 percent of the front façade of the house and is at least five feet in depth.

3. The new garage or carport width shall not exceed 25 percent of the lot width of the building lot.

4. The new garage or carport may be allowed access, via an apron the width of the garage opening, up to a standard two car garage opening.

(3) Attached garages or carports may open onto the special yard of a corner lot. The front door of the house shall not face the special yard. Garages or carports, located in a special side yard that front any road with a speed limit posted above 30mph or any road that is classified as a major residential collector must:

(a) provide a driveway configuration that is a minimum of 24 feet deep from the edge of the road pavement to the face of the garage; and

(b) allow enough space for a vehicle to reorient and enter traffic nose first.

(4) All detached garages/carports shall comply with the provisions of *Section 19-4.4. Accessory uses and structures*.

- (5) If a garage or carport is not eligible to open onto a front or special side yard, then driveways and parking shall generally be directed and located to the side and/or rear of the dwelling and shall comply with the following requirements:
 - (a) The maximum width of a driveway, or the aggregate of multiple driveways or driveway entries into a single lot, shall not exceed 25 percent of the lot width, except in the rear yard.
 - (b) The lot width used for this calculation is the actual lot width up to a maximum of 80 feet. All lot widths in excess of 80 feet have a maximum driveway width of 20 feet.
 - (c) All driveway widths may not exceed the calculated allowable width of 20 feet, until the driveway either:
 - 1. Extends into a side yard area in compliance with the same dimensional restrictions of *Section 19-6.9.2(D)(2)(b) 2, 3 and 4*; or
 - 2. Extends into the rear yard area.
- (6) Parking pads may be allowed in the front yard provided the pad conforms with all the following:
 - (a) Parking pads shall not be located within any required zoning district setback; and
 - (b) Parking pads may be allowed in the area between any required zoning district setback and the front wall of the primary residential structure; and
 - (c) Parking pad placement must include a minimum of a 5-foot landscape buffer between the edge of the parking pad closest to the residential structure and the front wall or porch of the residential structure.
- (7) Circular driveways may be allowed in the front yard provided the driveway conforms with all the following:
 - (a) The ingress and egress of circular driveways must conform to *Section 19-6.9.2(D)(5)* for driveway width.
 - (b) Circular driveways shall not be located within any required zoning district setback.
 - (c) Circular driveways may be allowed in the area between any required zoning district setback and the front wall of the primary residential structure.
 - (d) Circular driveway placement must include a minimum of a 5-foot landscape buffer between the edge of the drive closest to the residential structure and the front wall or porch of the residential structure.
- (8) Parking in a front yard may be allowed by the administrator when conditions exist that do not allow access to the side or rear yard (i.e. topography, limited space between an existing house and the lot line (an area less than 10 feet wide), provided the limiting conditions are not created by the applicant or a lack of foresight by the applicant's builder or designer of the building placement on the lot.
- (9) Backup space in a front yard may be allowed by the administrator when access to an adjacent street may be difficult due to traffic patterns on any road with a speed limit posted above 30mph or any road that is classified as a major residential collector.

19-6.9.3 Stormwater Mitigation

(A) Stormwater Retention/ Detention Standards. For subdivisions where stormwater quantity requirements of *Article 19-7. Stormwater Management* apply to infill subdivisions, where above ground detention/retention facilities are proposed, they shall:

- (1) Be located at least 20 feet from an exterior property line;
- (2) Be sloped in a manner that is easily maintained; and
- (3) Be designed as an amenity to the development, when deemed feasible by the administrator. Amenity features may include additional landscaping, fountains, trails or other features acceptable to the administrator.

(B) Stormwater Standards other than Detention/Retention. For single family lots or subdivisions, where the property is not part of a larger common plan and where major or minor stormwater permits are not required or where water quality requirements, as part of a minor stormwater permit are not required, then the following requirements shall apply:

- (1) Any increase in the impervious surface shall be mitigated on site using the techniques outlined in the Guidelines for Green Infrastructure & Low Impact Development.
- (2) Any removal and replacement of existing impervious surface shall be mitigated on site using the Guidelines for Green Infrastructure & Low Impact Development.
- (3) A grading plan that includes details and mitigation techniques as specified above shall be submitted with the application. The grading plan shall conform to the following:
 - (a) Setback slopes shall not exceed a 4:1 ratio, i.e. no more than a 1 foot change in elevation per 4 horizontal feet.
 - (b) Runoff collected and concentrated from impervious surfaces shall be discharged within the property boundaries and no closer than 20 feet to the property line, unless discharge is dissipated by a design approved by the Administrator.
 - (c) On site infiltration mitigation techniques may be up to the property line.
- (4) On-site mitigation options not otherwise listed in the Guidelines for Green Infrastructure & Low Impact Development may be used only upon approval of the Administrator.
- (5) Where the applicant cannot meet the requirements of on-site mitigation due to adverse site conditions, the Administrator may approve a grading plan that incorporates best management practices for conveyance and dissipation of stormwater runoff off-site.

19-6.9.4 Tree Canopy Protection

(A) Tree protection and replacement. Protection of existing tree cover, and the incremental growth of the city's tree canopy, is intended to enhance and preserve the environmental and aesthetic qualities of the city; to encourage site design techniques that preserve the natural environment and enhance the developed environment; to control erosion, slippage, and sediment runoff into streams and waterways; to increase slope stability; to improve air quality; to protect wildlife habitat and migration corridors; and to reduce homeowner energy costs.

- (1) **Tree Surveys.** Tree surveys are not required for single-family lots or single-family subdivisions. However, the location, species, and size of trees that are proposed to be retained and/or planted to meet these requirements shall be shown on the required site plan. Additionally, trees which are defined as heritage trees per *Section 19-6.3.2(H)* and are slated for removal must be noted on the plans.

- (2) **Tree Planting.** Including required street trees, one canopy tree shall be planted for each 2,000 square feet of lot area or portion thereof, minus building footprint. Such trees shall be a minimum 3-inch caliper and may be planted anywhere on the lot. For all existing canopy trees proposed to be retained and measuring at least 6 inches in diameter, their cumulative DBH caliper inches may be counted toward these planting requirements. Retained trees may not be counted toward any optional tree-planting storm water credits per 19-6.9.3.
- (3) **Street Trees.** Street trees are required at one shade tree per 40 linear feet of street frontage, or one ornamental tree per 20 linear feet of street frontage. Street tree requirements may count toward the one tree per 2,000 sf requirement of *Section 19-6.9.4(A)(2)*.
- (a) Trees that are retained to meet the requirement of *Section 19-6.9.4(A)(2)* above shall be protected during construction consistent with the provisions of *Section 19-6.3.3*.
- (4) **Heritage Trees.** All trees greater than 20 inches in diameter and located within the buffers and setbacks of the lot, or any tree greater than 40 inches in diameter located on the property, are defined as heritage trees per *Section 19-6.3.2(H)* and shall be subject to those same protections or mitigations.

CITY OF GREENVILLE

SINGLE-FAMILY INFILL INSTRUCTIONS AND PATTERN BOOK

Section 1

- A. Getting Started
- B. Tools and Resources

Section 2

- A. Mass Analysis
- B. Example Worksheet

Section 3

- A. Form Analysis
- B. Example Worksheet

Section 4

- A. Pattern Book

Section 1

A. Getting Started

1. City or County GIS Maps may be used to collect data
2. Define and create study area parameters
3. Create list of study properties based on defined subject area

B. Tools and Resources

City of Greenville GIS Interactive Map:

<https://citygis.greenvillesc.gov/Html5Viewer/Index.html?viewer=AddressSearch>

Greenville County GIS Interactive Map:

<https://www.gcgis.org/apps/greenvilleis/>

Section 2

A. Mass Analysis

1. Measure lot width for each property within the study area
2. Measure building width for each property within the study area
3. Measure number of building stories for each property within the study area
4. Measure building height for each property within the study area
5. Determine if there are any properties that are considered to be an anomaly and remove from calculations
6. Calculate averages for each item and compare to proposed subject property

B. Example Worksheet

Part B: Mass Analysis

Surrounding Property Address ¹		Lot Width (ft.)	Building Width (ft.)	Building Number of Stories ^{2,3}	Building Height (ft.) ⁴	Property Conditions Anomaly (Yes or No)
Part B.1.A	1 Sample Drive	120 ft	81 ft	2 stories	25 ft	No
	5 Sample Drive	122 ft	73 ft	2 stories	25 ft	No
	7 Sample Drive	131 ft	87 ft	2 stories	25 ft	No
	2 Sample Drive	137 ft	99 ft	2 stories	25 ft	No
	4 Sample Drive	92 FT	55 ft	1 story	15 ft	Yes
	6 Sample Drive	128 ft	83 ft	2 stories	25 ft	No
Part B.1.B	Surrounding Property Total	730 ft	478 ft	11 stories	140 ft	
	Surrounding Property Average (AVG)	121.66 ft	79.66 ft	1.83 stories	23.33 ft	
Calculations Minus Anomaly(ies) [If applicable, use these calculations in Part B.2.B]						
Part B.1.C	Surrounding Property Total	379 ft	235 ft	10 stories	125 ft	
	Surrounding Property Average (AVG)	126.33 ft	78.33 ft	2 stories	25 ft	
Subject Property Address		Lot Width (ft.)	Building Width (ft.)	Building Number of Stories	Building Height (ft.)	
Part B.2.A	3 Sample Drive	138 ft	87ft	2 stories	22 ft	
Part B.2.B	Subject Property Percentage of Surrounding Property Average (AVG)	+10% Increase of AVG	+13% increase of AVG	0% increase of AVG	-10% decrease of AVG	

NOTES:

1. See Pattern Book Image: Figure TBD: Infill Study Area
2. See Pattern Book Image: Figure TBD: Building Story and Height Calculations

Section 3

A. Form Analysis

1. Measure distance from both the right-hand and the left-hand side of each principal structure to the adjacent principal structure for all properties within the subject area
2. Determine if there are any properties that are considered to be an anomaly and remove from calculations
3. Calculate average and compare to proposed subject property

B. Example Worksheet

Part C: Form Analysis

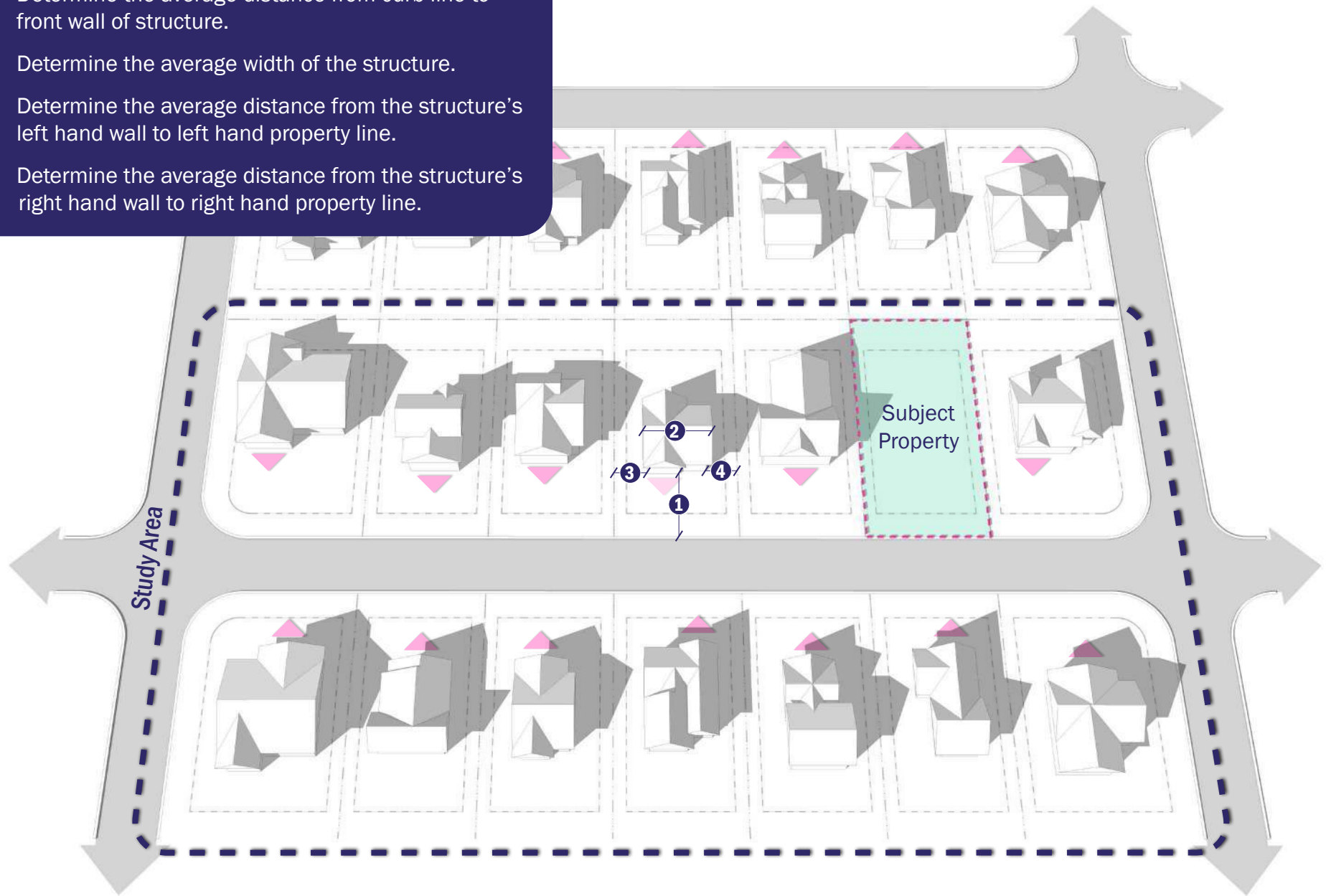
Surrounding Property Addresses ¹ (Between [INSERT Address] and [INSERT Address])		Space Between Side Building Walls (ft.)	Property Conditions Anomaly (Yes or No)
Part C.1.A	2 Sample Drive and 4 Sample Drive	50 ft	Yes
	4 Sample Drive and 6 Sample Drive	78 ft	
	6 Sample Drive and 8 Sample Drive	75 ft	
	5 Sample Drive and 7 Sample Drive	72 ft	
Part C.1.B	Surrounding Property Total	275 ft	
	Surrounding Property Average (AVG)	68.75 ft	
Calculations Minus Anomaly(ies) [If applicable]			
Part C.1.C	Surrounding Property Total	225 ft	
	Surrounding Property Average (AVG)	75 ft	
Subject Property Address		Space Between Side Building Walls (ft.)	
Part C.2.A	3 Sample Drive	66	
Part C.2.B	Subject Property Percentage of Surrounding Property Average (AVG)	-13% decrease of average	

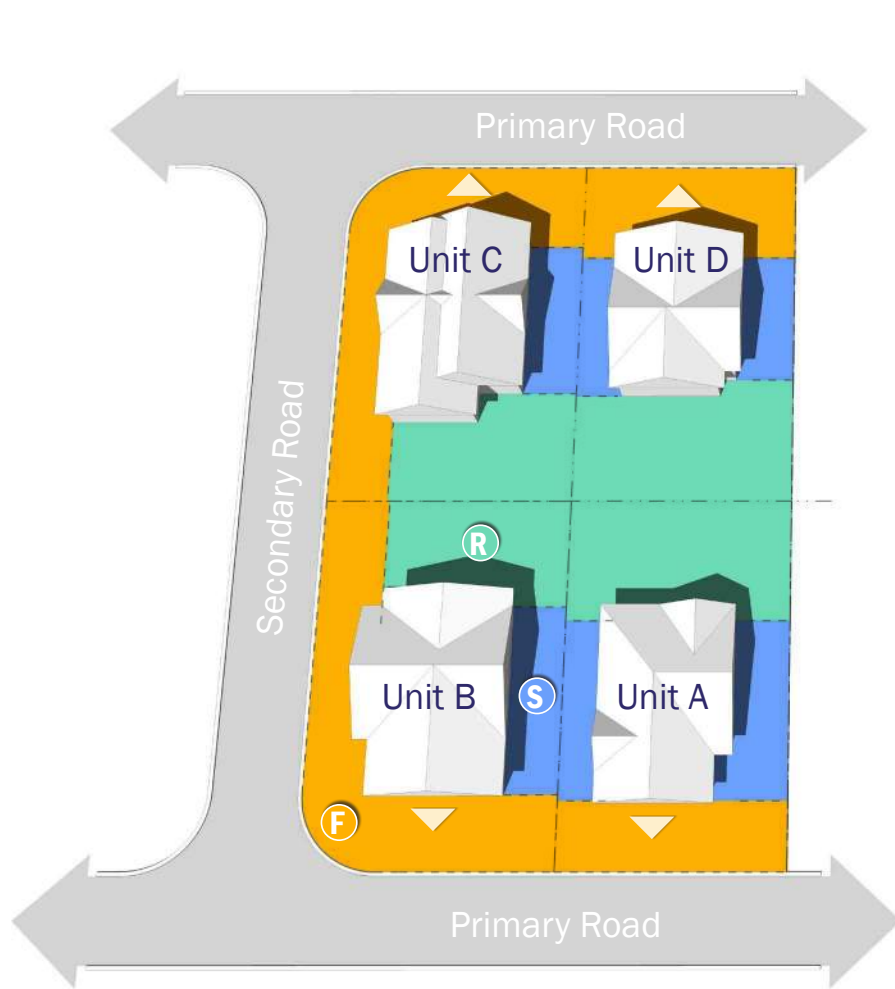
NOTES:

1. See Pattern Book Image: Infill Study Area

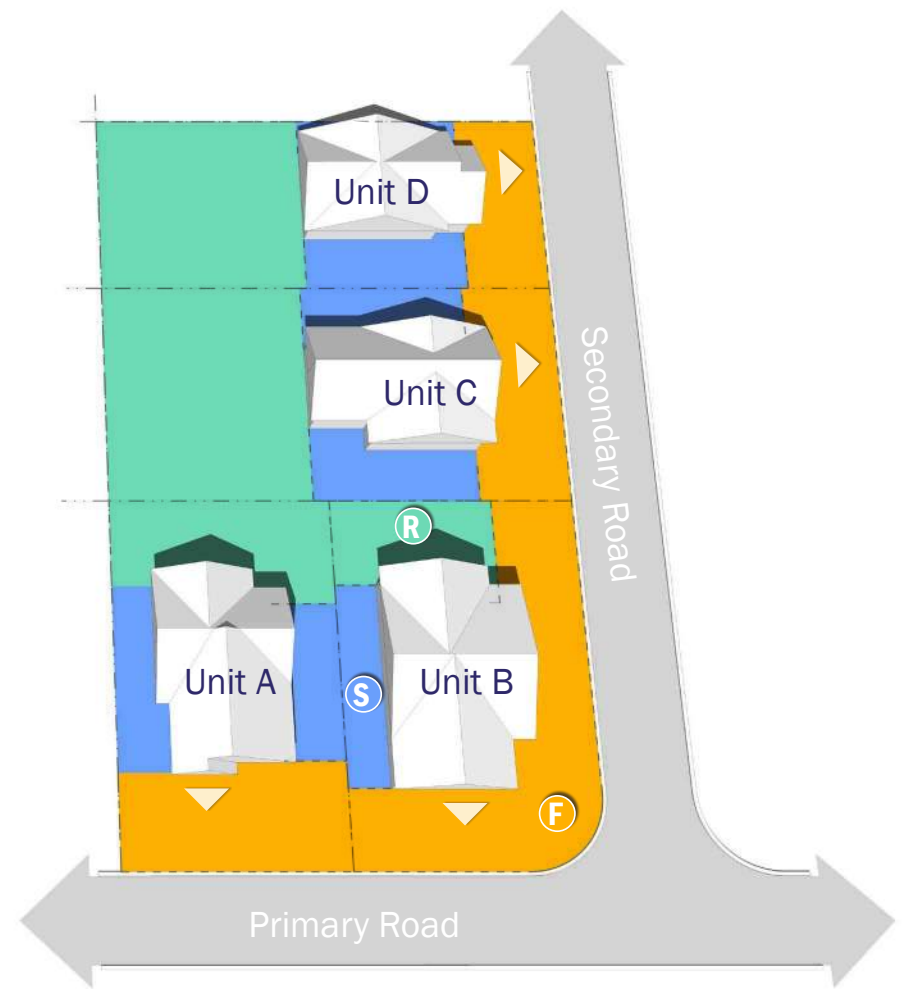
Study Area Form Analysis:

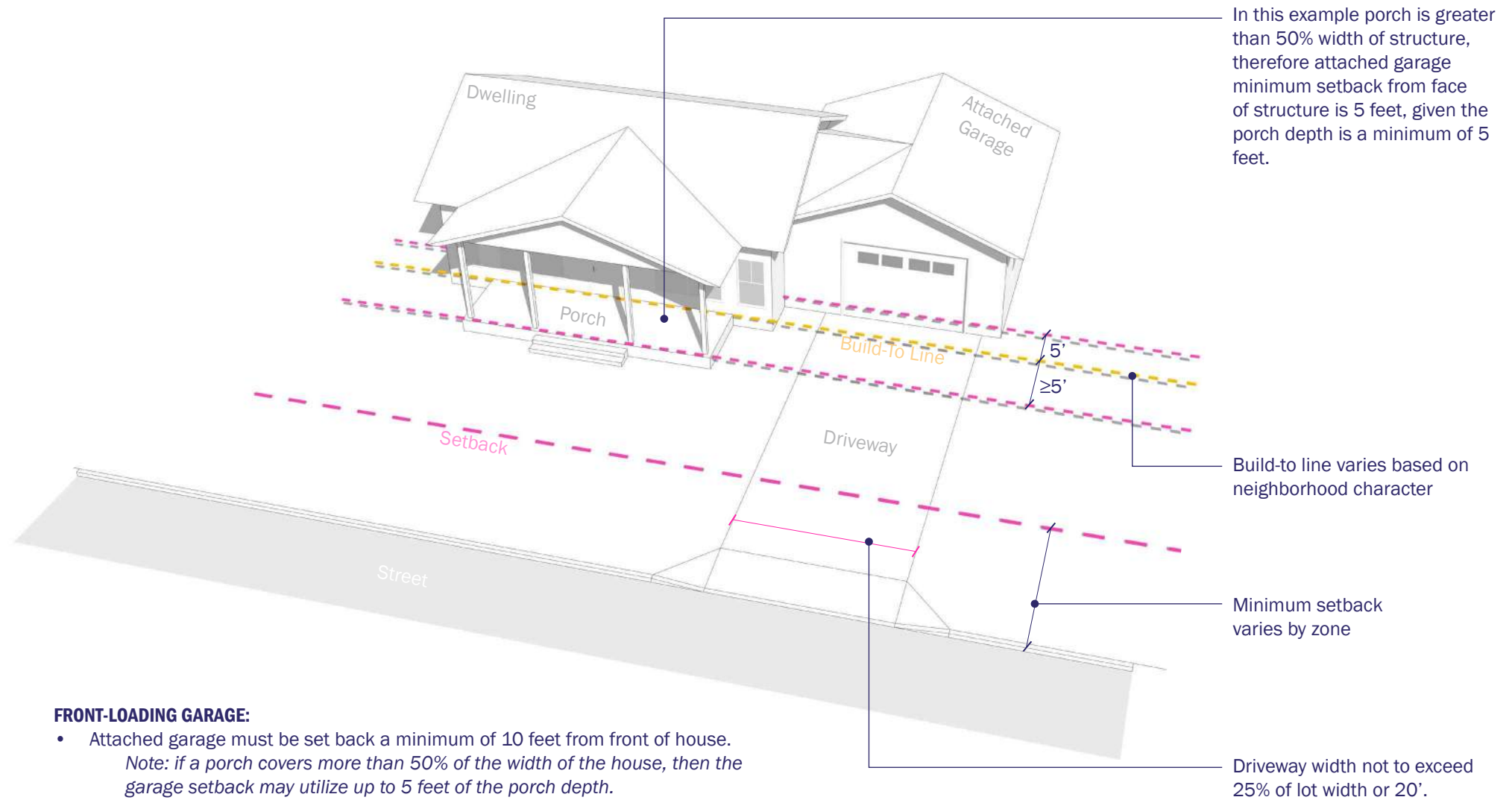
1. Determine the average distance from curb line to front wall of structure.
2. Determine the average width of the structure.
3. Determine the average distance from the structure's left hand wall to left hand property line.
4. Determine the average distance from the structure's right hand wall to right hand property line.

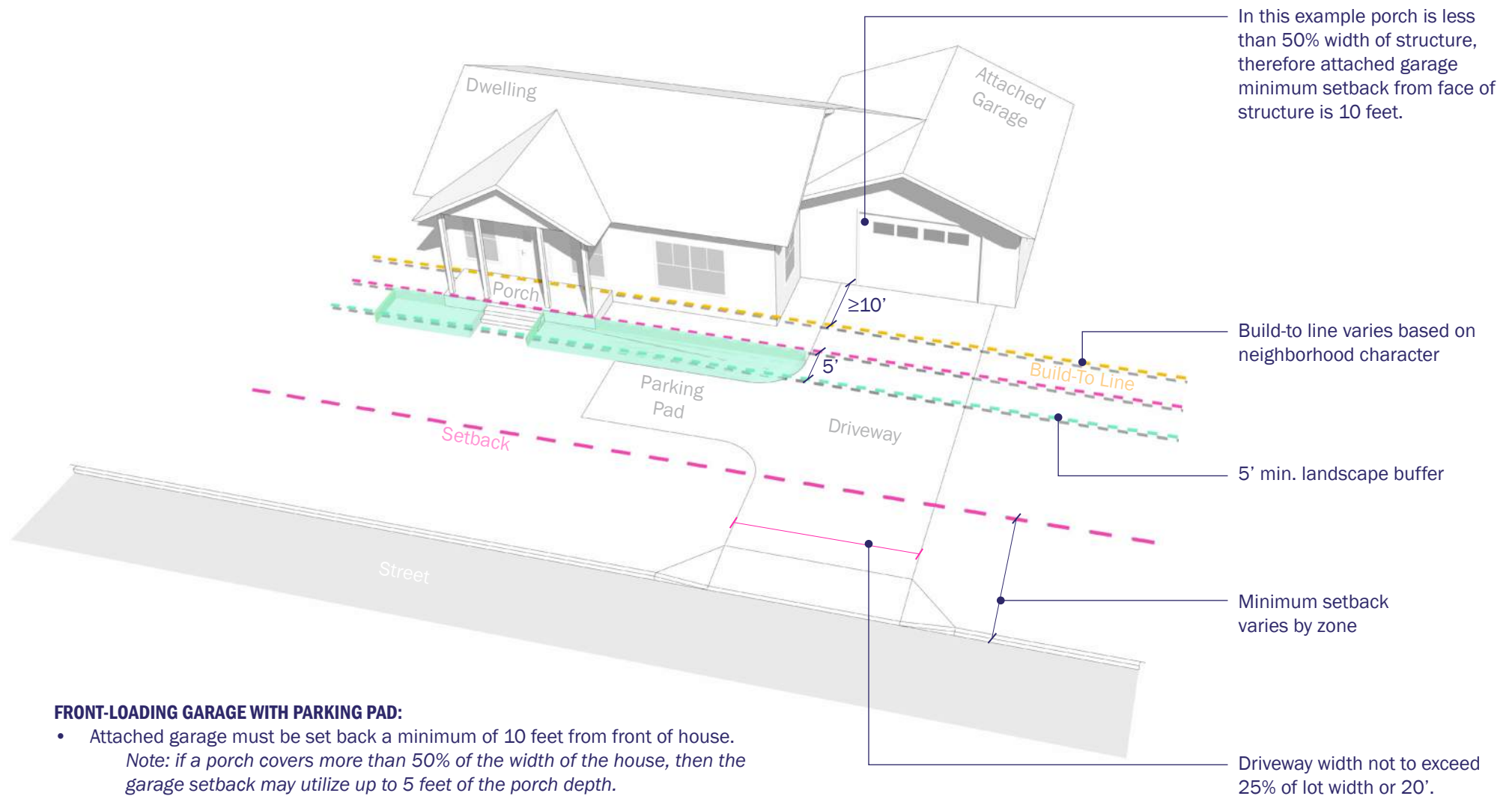




- F** Front Yard
- S** Side Yard
- R** Rear Yard

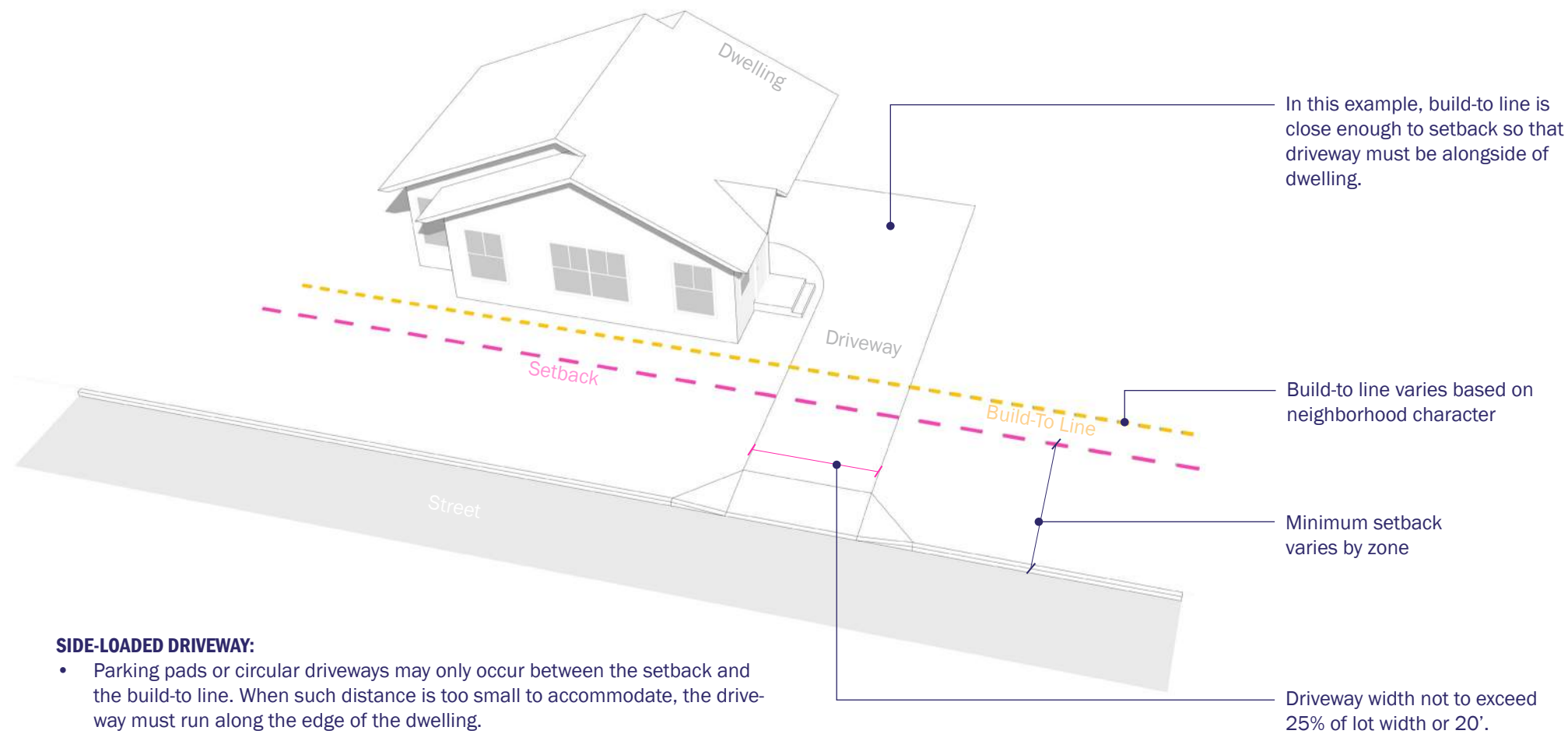


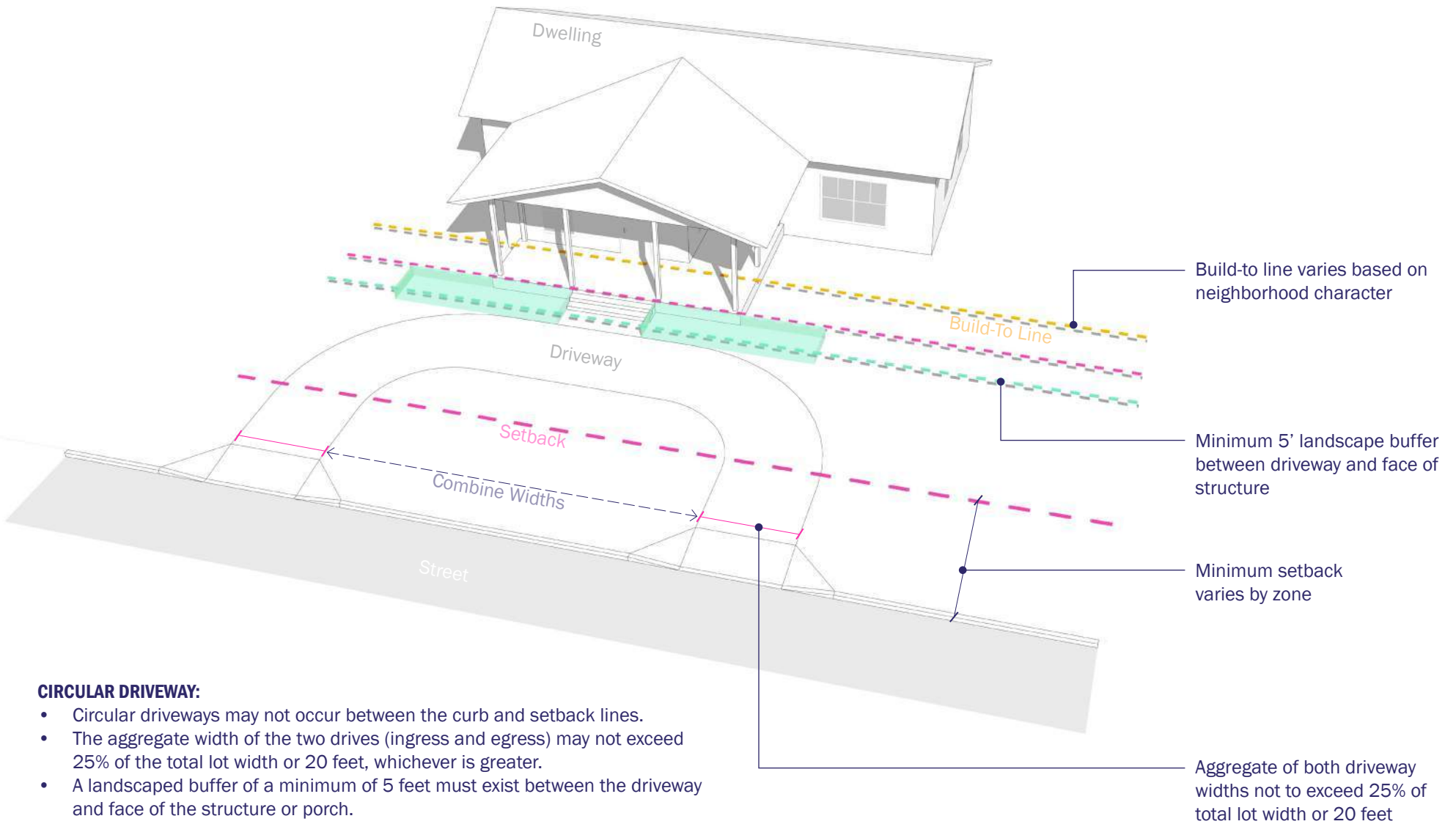




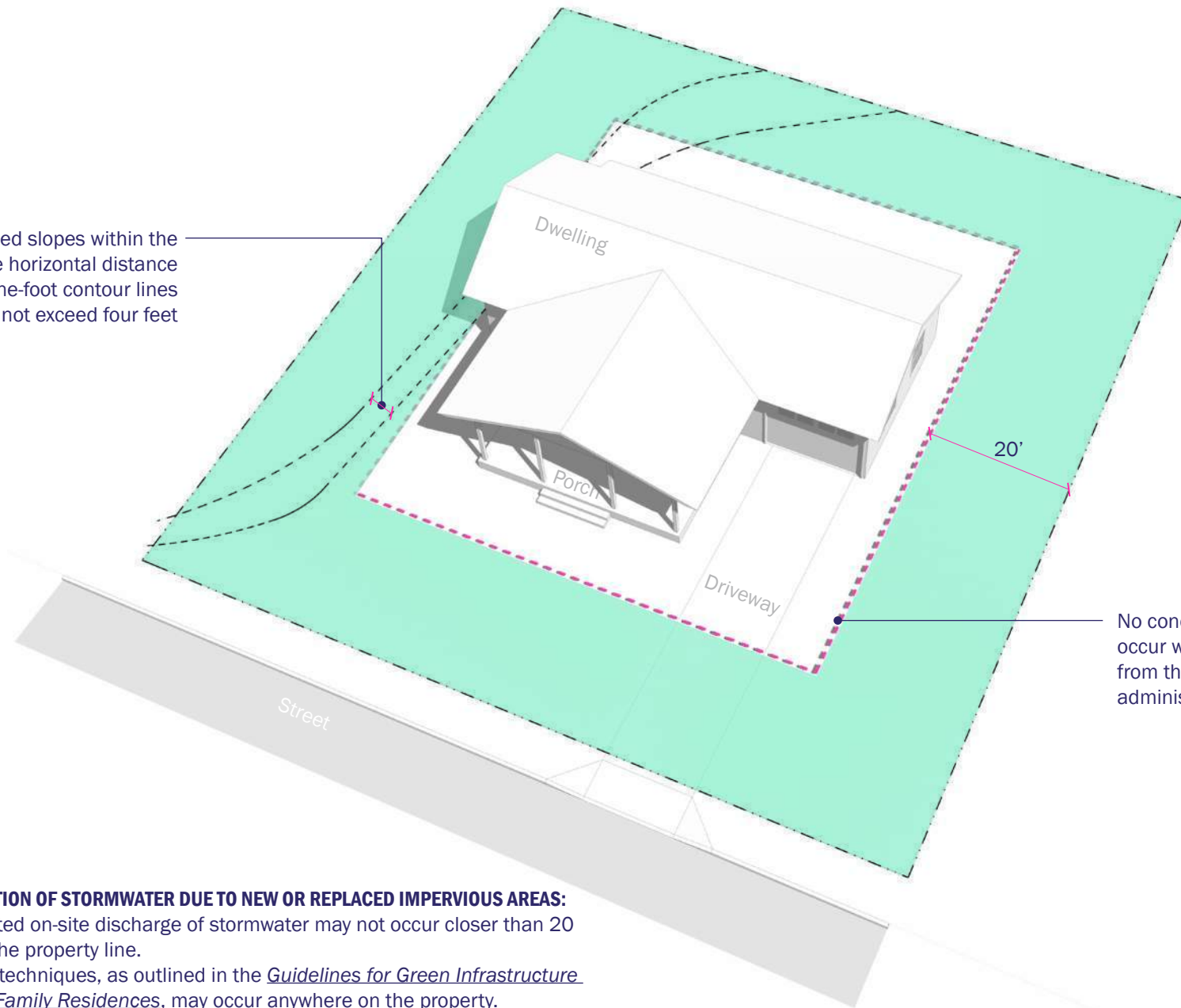
FRONT-LOADING GARAGE WITH PARKING PAD:

- Attached garage must be set back a minimum of 10 feet from front of house.
Note: if a porch covers more than 50% of the width of the house, then the garage setback may utilize up to 5 feet of the porch depth.
- The maximum width of a driveway or aggregate of all driveways may not exceed 25% of the lot width (max. 20 feet).
- Parking pads are allowed only between the required setback and the front of the house, and must be separated from the house or porch by a minimum 5 foot landscape buffer.





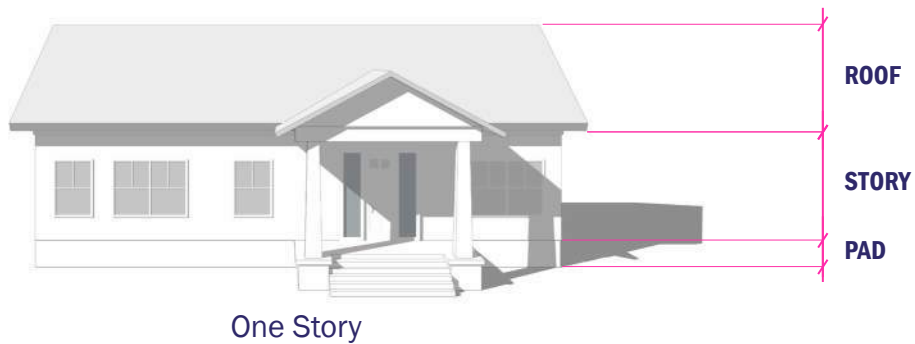
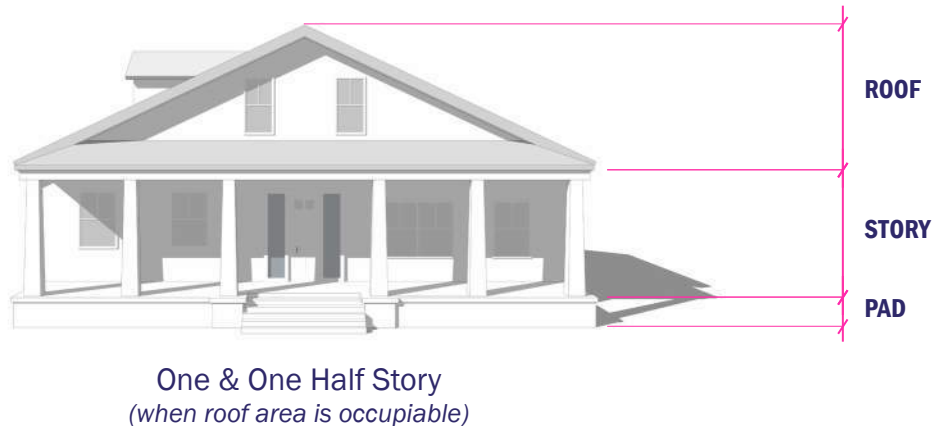
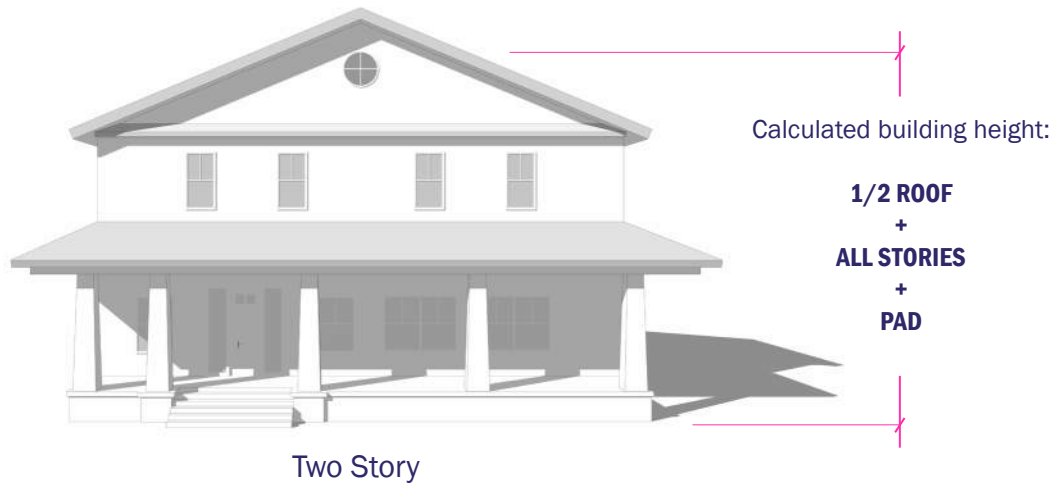
For graded slopes within the setback, the horizontal distance between one-foot contour lines shall not exceed four feet



No concentrated discharge may occur within a 20 foot buffer from the property line without administrator approval

ON-SITE MITIGATION OF STORMWATER DUE TO NEW OR REPLACED IMPERVIOUS AREAS:

- Concentrated on-site discharge of stormwater may not occur closer than 20 feet from the property line.
- Mitigation techniques, as outlined in the [*Guidelines for Green Infrastructure for Single Family Residences*](#), may occur anywhere on the property.
- Setback slopes shall not exceed a 4:1 run to rise ratio.



DETERMINING BUILDING STORY AND ELEVATION:

Total building height, regardless of how many stories, is calculated using the formula: **PAD + ALL STORIES + 1/2 ROOF**

1. **PAD** is the base upon which the building sits, measured from average front finish grade to first floor.
2. **STORY** is the occupiable space between floor and ceiling. For an 8' interior ceiling height assume a 9' STORY height; for a 9' interior ceiling height assume a 10' STORY height; etc.
3. **ROOF** is the distance measured from soffit to ridge.

2021



city of
greenville

Guidelines for Green Infrastructure & Low Impact Development

INTRODUCTION

Background and Purpose

Land development permanently alters the way in which stormwater flows across a site due to grading, compaction, and the installation of impervious cover. Water quantity control is intended to reduce the impacts of development on surrounding properties by storing runoff on site, encouraging infiltration, and preventing erosive concentrated flows. At a state level, water quantity control is mandated by South Carolina Regulation 72-300, which includes provisions for local governments to provide modified or alternative design criteria in response to specific watershed needs.

The purpose of the City of Greenville Guidelines for Green Infrastructure and Low Impact Development is to provide guidance for selecting and installing the appropriate stormwater management measures primarily on smaller sites under 1 acre in size. These guidelines employ simplified design standards that are more applicable to the small site development experience, thus avoiding the need for complex engineering calculations and analysis. These guidelines are meant to complement the use of the City of Greenville Design and Specifications Manual.

Submittal Information

All projects that are not single-family building projects require a site plan application process prior to building permit submittal. For single-family building projects, a site plan will be reviewed alongside the building permit application. The plans for LID projects will be reviewed during either the respective site plan application or building permit application submittal.

The LID practices within these Guidelines should be designed and installed based on the recommendations provided in the section for each practice, or as approved by the City Engineering Department. The City Engineering Department reserves the right to modify these practices or approve other practices at their discretion.

Pictures should be taken of each individual LID practice during installation, before underground features (e.g., perforated underdrain, Dry Well tank, level spreader trench, required excavation depth for stone subbase, amended soil, or filter media) are covered up. Additional pictures should be taken after installation is complete. All pictures should include site-specific landmarks such as unique signs, buildings, or backgrounds, and be provided to the City for verification of installation.

Typically, a Maintenance Agreement is recorded to document the LID installation and maintenance responsibilities and is required as a part of the site plan permitting process.

Frequently Asked Questions

The following section provides, in a question and answer format, information to aid in understanding of these Guidelines and when and how they apply.

What types of projects may utilize the City of Greenville Guidelines for Green Infrastructure and Low Impact Development?

In general, the intent is for the Guidelines for Green Infrastructure and Low Impact Development to be used for projects under 1 acre in size that need to provide water quantity control. This may include:

- Individual residential lots not part of a larger common plan
- Commercial lots that are adjacent to an existing single-family detached use
- Other scenarios at the discretion of the City of Greenville

For ease of discussion, projects utilizing these guidelines for Low Impact Development (LID) practices will be referred to as LID projects below.

What portions of LID projects require Stormwater Management?

These requirements are intended to capture the **major** portions of impervious areas, described below.

Impervious cover is defined as *a surface composed of any material that significantly impedes or prevents the natural percolation of water into soil, which includes, but is not limited to, rooftops, buildings, streets and roads, and any gravel, concrete or asphalt surface.*

The area draining to each practice is called the “contributing drainage area” and normally consists of 100% impervious area for these LID practices, though incidental small pervious areas can be included if unavoidable, and the areas are stabilized to eliminate soil erosion.

What are the principles for managing stormwater on LID projects?

LID projects are not required to provide the same types of stormwater management as major subdivisions or commercial projects; however, certain requirements must be met to ensure that stormwater runoff does not overwhelm stormwater infrastructure or impact adjacent property. The key principles for managing stormwater from LID projects are:

- Green Infrastructure (GI) (see section below);
- Reliance on infiltration only where the water table or bedrock layer is at least two feet below the bottom of the practice in use; and
- Proper installation and maintenance of downspouts, channels, or any other drainage features for concentrated flow.

Note: Many of the native soils in the City of Greenville do not allow for adequate infiltration, therefore a perforated underdrain is required for practices that rely on infiltration. The perforated underdrain must flow to a stable outlet that daylights (emerges from the ground and is open to the air) or tie into a stormwater conveyance system. Specific underdrain requirements for each SFR practice will be discussed in the appropriate sub-section.

What is Green Infrastructure?

The terms Green Infrastructure (GI) and Low Impact Development (LID) refer to practices that reduce runoff by utilizing stormwater practices that encourage the interception, evapotranspiration, infiltration and/or capture of stormwater runoff. Examples of applicable Green Infrastructure techniques include any appropriate combination of the following techniques:

- Installing a rain garden or bioretention area;
- Replacing traditionally impervious surfaces (driveways, patios, etc.) with pervious paving;
- Routing downspouts to underground dry wells;
- Routing downspouts to modified French drains; or
- Directing sheet flow to undisturbed natural water quality buffers or densely vegetated areas.

The goal of these techniques for use in the City is to reduce the volume of runoff and minimize the impact of a site's stormwater runoff on adjacent sites for small, frequent, storm events. GI and LID practices typically do not provide large amounts of runoff storage to address large storm events.

How are Green Infrastructure techniques sized on LID projects?

In order to minimize the effort required for LID projects, sizing tables and/or guidance are provided for each LID practice based on its drainage area. As an alternative to the LID practices in these guidelines, other GI or LID practices that employ runoff reduction techniques to provide storage for 1-inch of runoff may be used in lieu of these techniques with the assistance of a design professional and proper documentation of design criteria and details.

What is in the rest of this document?

The remainder of the document contains:

- A set of six information/specification sheets, one for each of the LID practices recommended for use. For each measure, the last two pages are a set of specifications that can be filled in and submitted with the permit application.
- Appendix A describing infiltration requirements and testing methods for these LID practices.
- Appendix B describing the filter media mix for use in Rain Gardens (LID-05).

Acknowledgements

The City of Greenville Stormwater Division would like to acknowledge and thank the Greenville County Land Development Division and the City of Atlanta, Georgia Department of Watershed Management for making their Green Infrastructure guidelines available for use and modification in the creation of the City of Greenville Guidelines for Green Infrastructure and Low Impact Development.

Technical Specification for:

LID-01 DRY WELL

1.0 Dry Well

1.1 Description

Dry wells are excavated stone-filled systems designed to intercept and temporarily store stormwater runoff until it infiltrates into the soil or leaves the system through a perforated underdrain that drains to a stable outlet. The stone filled excavation may contain either a seepage tank or a perforated pipe and standpipe in order to facilitate movement of runoff through the stone. The use of the seepage tank option is recommended, as it provides more storage volume and reduces the amount of area and excavation required compared to the perforated standpipe option.

Dry wells utilizing a seepage tank are particularly well suited to receive rooftop runoff entering the tank via an inlet grate or direct downspout connection. When properly sized, installed, and maintained, dry wells may provide reductions in stormwater runoff and pollutant loads.

Dry wells are an infiltration-based LID practice which must reliably drain to function as designed. Many of the native soils in the City of Greenville do not allow for adequate infiltration, therefore a perforated underdrain is required. The perforated underdrain must flow to a stable outlet that daylights (emerges from the ground and is open to the air) or tie into a stormwater conveyance system. The City acknowledges that on flat sites, this may be difficult or infeasible due to the depth of Dry Wells. **If installation of an underdrain that daylights is infeasible, infiltration testing must be performed (see Appendix A) to demonstrate an infiltration rate of 0.5 in/hr in order to use a dry well.** If the infiltration rate is inadequate and an underdrain that daylights is infeasible, use other LID practices.

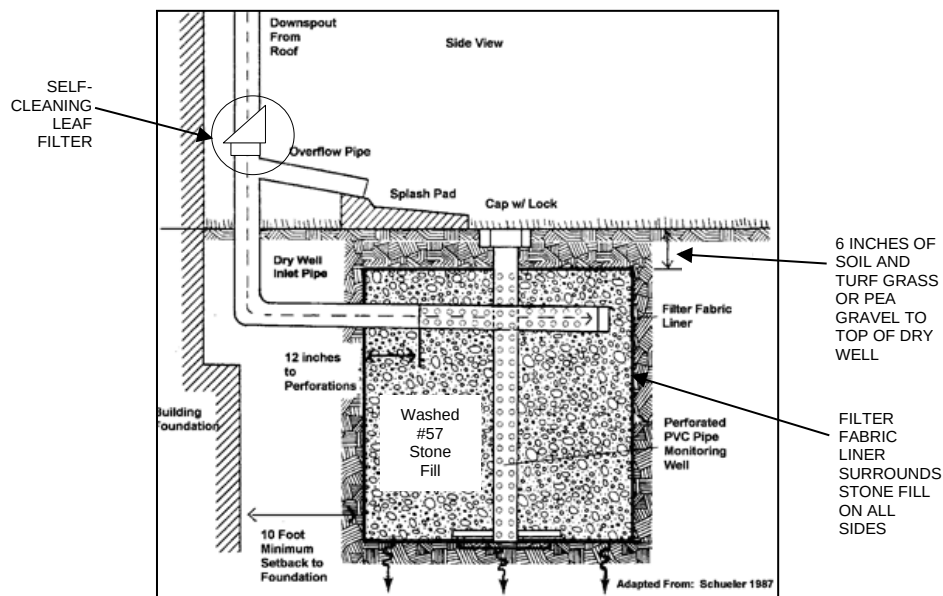
1.2 Using Dry Wells

- Dry wells must be located at least 10 feet from building foundations.
- To reduce the chance of clogging, dry wells should drain only impervious areas and runoff should be pretreated to remove leaves, debris, and other larger particles.
- Ensure the dry well drains through the underdrain and/or infiltration within a drain time of 72 hours or less.
- Dry wells should be located in a lawn or other pervious (unpaved) area and should be designed so that the top of the dry well is located as close to the surface as possible.
- Dry wells should not be located: (1) beneath an impervious (paved) surface; (2) above an area with a water table or bedrock less than two feet below the trench bottom; (3) over other utility lines; or, (4) uphill from or within 20 feet of a septic drain field. Always call 811 to locate utility lines before you dig.



1.3 Construction

- Consider the drainage area size and the soil infiltration rate when determining the size of the dry well. See comments on infiltration rate and underdrains in Section 1.1 above and design guidance on specifications sheet.
- The sides of the excavation should be trimmed of all large roots that will hamper the installation of the permeable drainage fabric used to line the sides and top of the dry well.
- For seepage tank dry wells, the dry well hole should be excavated a minimum of 1 foot deeper and two feet larger in diameter than the seepage tank to allow for a minimum 12-inch stone fill jacket.
- The native soils along the bottom of the dry well should be scarified or tilled to a depth of 3 to 4 inches.
- Install geotextile filter fabric between native soils and the washed #57 stone and dry well tank.
- Fill below and around dry well with a minimum of 12 inches of clean, washed #57 stone. #57 stone diameter averages ½ inch to 1½ inches.
- Fill the final 6 inches of the excavation with native soil. Optionally, pea gravel or #8 stone can be carried to the surface. This top layer should also be separated from the washed stone by geotextile filter fabric.
- For rooftop runoff, install a leaf screen in the gutter or down spout prior to entering the dry well to prevent leaves and other large debris from clogging the dry well. For non-rooftop runoff, precede dry well with an in-ground sump grate inlet leaf trap.
- A stabilized overflow area, such as a vegetated filter strip or grass channel, should be designed to convey the stormwater runoff generated by larger storm events safely bypassing the dry well.
- See specifications sheet for typical seepage tank dry well components and installation.
- See figure below for perforated standpipe dry well constructed of a stone pit and perforated vertical standpipe connected to the inlet pipe. This option also requires a perforated underdrain at the elevation of the bottom of the stone pit (required but not shown below) or infiltration testing if an underdrain is infeasible (see Appendix A).



- If you elect to measure infiltration rate (see Appendix A) and find it is greater than or equal to 1.0 in/hr, the dry well size can be reduced. For every 0.5 in/hr increase in measured infiltration rate above the required 0.5 in/hr, subtract ten percent of the required dry well size, as measured in

contributing area captured (square feet) which determines the volume and dimensions of the dry well.

1.3.1 Vegetation

- The landscaped area above the surface of a dry well should be covered with pea gravel when water enters a dry well through surface features rather than the pipe. This pea gravel layer provides sediment removal and additional pretreatment upstream of the dry well and can be easily removed and replaced when it becomes clogged.
- Alternatively, a dry well may be covered with an engineered soil mix and planted with managed turf or other herbaceous vegetation.

1.4 Maintenance

Annual maintenance is important for dry wells, particularly in terms of ensuring that they continue to provide stormwater management benefits over time.

- Inspect gutters and downspouts, removing accumulated leaves and debris.
- Inspect dry well following rainfall events.
- If applicable, inspect pretreatment devices for sediment accumulation. Remove accumulated trash and debris.
- Inspect top layer of filter fabric for sediment accumulation. Remove and replace if clogged.



1.5 Design Example

The fundamental principle of Dry Well design is to provide the required volume based on the drainage area. This requires calculations that will vary based on the size and shape of dry well tanks and the excavation of the stone pit around the tanks. The sub-sections below provide example calculations for a simplified design scenario. Note that Dry Well design is not limited to the tanks and excavation geometries used in this example, as these will vary based on available materials and site-specific constraints.

1.5.1 Calculating Required Volume

A home has a drainage area of 2400 sf that is to be treated for water quality using dry wells following SFR-01 Dry Well guidance. Calculate the required volume for **all dry wells** using the equation from the specification, shown below.

$$\text{Volume required [cf]} = 0.0833 * \text{Drainage Area [sf]}$$

$$\text{Volume required [cf]} = 0.0833 * 2400 \text{ sf}$$

$$\text{Volume required [cf]} = 200 \text{ cf (all dry wells)}$$

The house is rectangular in footprint and the drainage area flows to each corner equally, with 600 sf draining to each corner. A dry well will be installed at each corner, for a total for four dry well installations around the home. Calculate the required volume for **each dry well** using the equation from the specification, shown below.

$$\text{Volume required [cf]} = 0.0833 * \text{Drainage Area [sf]}$$

$$\text{Volume required [cf]} = 0.0833 * 600 \text{ sf}$$

$$\text{Volume required [cf]} = 50 \text{ cf (each of the 4 dry wells)}$$

The volume required for each dry well is 50 cf and the total volume required on the site is 200 cf. Calculations in the sub-sections below are for **one of the four dry wells**, assuming all four will be installed for full site compliance. Note that sites with uneven drainage area distributions may have different required volumes at different treatment locations.

1.5.2 Calculating Provided Volume

The dimensions of the dry well tanks and rock aggregate pit will be assessed by calculating the volume provided by the design and comparing it to the volume required (50 cf per dry well in this example). The volume provided by the design is calculated by adding the storage volume in the tank and the volume capacity of the surrounding rock aggregate, using the equation from the specification, shown below.

$$\text{Volume provided [cf]} = TV \text{ [cf]} + (RV)(P)[cf]$$

TV = Tank volume

RV = Rock aggregate volume

P = Rock aggregate porosity

Tank volume (TV) is calculated from the dimensions of the tank. Rock volume (RV) is calculated from the dimensions of the rock aggregate, adjusted by the rock aggregate porosity (P) since only the volume of the pore space around the rock is available volume to be counted as volume provided.

The following sub-sections elaborate on calculations for TV and RV in two different scenarios, one with a cylindrical rock aggregate pit and another with a rectangular rock aggregate pit.

1.5.2.1 Scenario 1: Cylindrical Tank and Cylindrical Pit Excavation

In this example, the design will use stackable, round dry well tanks with a 2 ft diameter (D) and a height (H) of 2 ft.

Two dry well tanks (each 2' D x 2' H) will be stacked on top of each other to create a 2' D x 4' H dry well tank.

The tank volume is calculated using the formula for the volume of a cylinder, as follows:

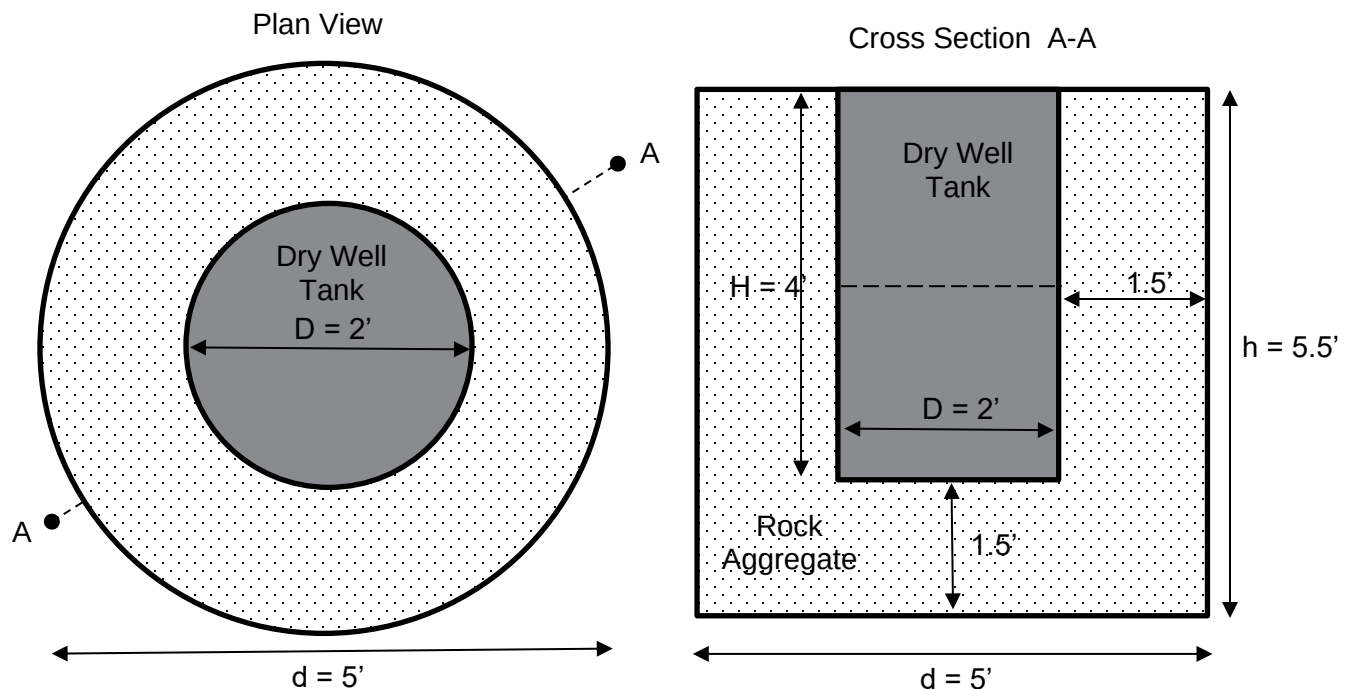
$$TV = 3.14 * \left(\frac{D}{2}\right)^2 * H$$

$$TV = 3.14 * \left(\frac{2\text{ ft}}{2}\right)^2 * 4\text{ ft} = 12.5\text{ cf}$$

D = diameter of tank = 2ft

H = tank height = 4ft

The tank described above is installed in a cylindrical pit. The minimum rock thickness around the tank for a dry well installation is 1 ft for both sides and bottom of the tank. In this example, the rock thickness is 1.5 ft for sides and bottom of the tank, to provide adequate volume. The pit has overall dimensions of 5' diameter (d) x 5.5' height (h) from the bottom, as shown in the schematic below.



On the following page, the rock aggregate volume (RV) provided by the design will be calculated to determine if provided volume meets the required minimum volume required to treat the drainage area.

Rock aggregate volume is calculated as the volume of the pit excavated for the dry well minus the volume of the tank, since no rock will be present where the tank is located. The total rock aggregate volume is calculated below.

$$RV = V_{pit} - TV$$

$$RV = \pi * \left(\frac{d}{2}\right)^2 * h - TV$$

d = pit diameter = 5 ft

h = pit height = 5.5 ft

TV = tank volume = 12.5 ft³

$$RV = \pi * \left(\frac{5ft}{2}\right)^2 * 5.5ft - 12.5ft^3$$

$$RV = 95 \text{ cf}$$

The total volume provided by the design can be determined from the previously calculated tank volume and rock aggregate volume. The porosity is determined by the type of rock aggregate used in the design. In this example, 0.4 is used as a typical value of rock aggregate porosity.

$$\text{Volume provided [cf]} = TV \text{ [cf]} + (RV)(P)[cf]$$

$$\text{Volume provided [cf]} = 12.5 \text{ [cf]} + (95)(0.4)[cf]$$

$$\text{Volume provided [cf]} = 50.5 \text{ [cf]}$$

The volume provided by the dry well installation described above is 50.5 cf, which is greater than the required volume of 50 cf per dry well. The site design of four dry well installations (one dry well installed at each corner of the house receiving equal amounts of stormwater) will provide a total volume of 202 cf, which is greater than required 200 cf volume, so the design meets the drainage area requirements.

The final design is four dry wells, one at each corner of the house, each consisting of a 2' D x 4' H dry well tank placed in a cylindrical rock aggregate pit that is 5' d x 5.5' h. Volume provided is greater than volume required so the design is acceptable.

1.5.2.2 Scenario 2: Cylindrical Tank and Rectangular Pit Excavation

In this example, the design will use stackable, round dry well tanks with a 2 ft diameter (D) and a height (H) of 2 ft. Two dry well tanks (each 2' D x 2' H) will be stacked on top of each other to create a 2' D x 4' H dry well tank. This is the same tank used previously in Scenario 1. The tank volume is calculated using the formula for the volume of a cylinder, as follows:

$$TV = 3.14 * \left(\frac{D}{2}\right)^2 * H$$

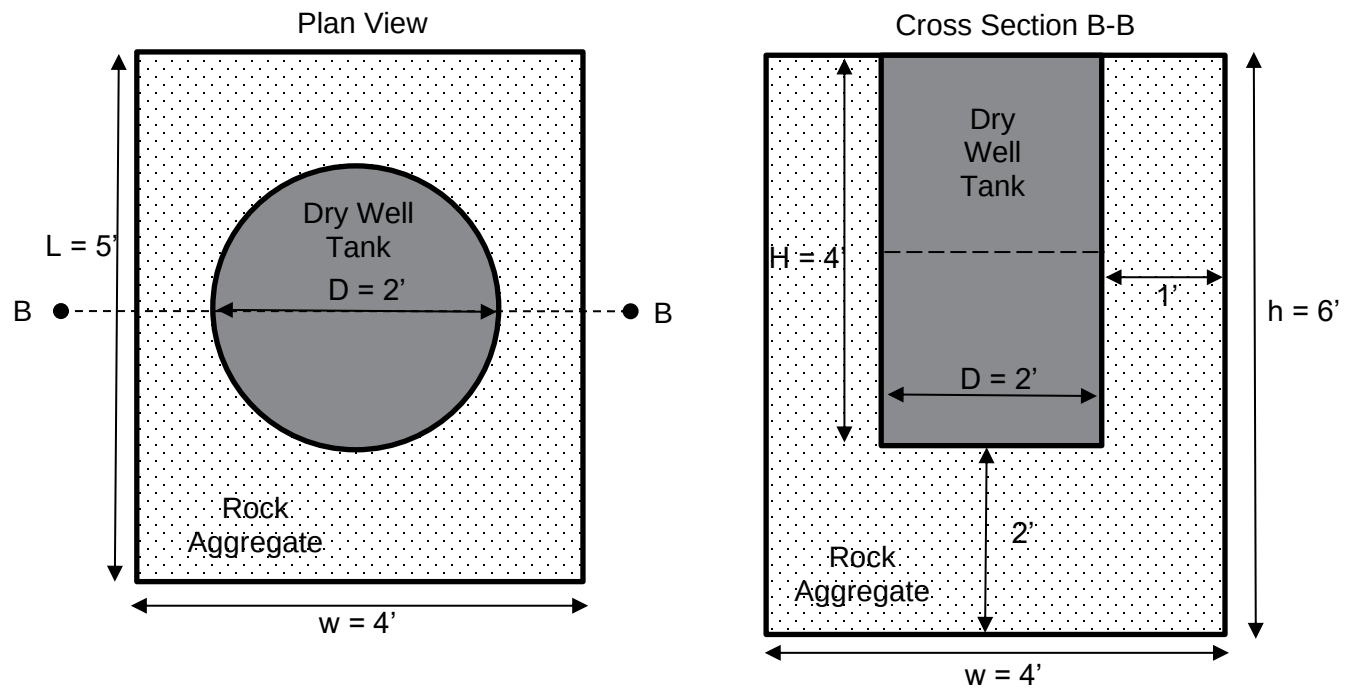
$$TV = 3.14 * \left(\frac{2\text{ ft}}{2}\right)^2 * 4\text{ ft} = 12.5\text{ cf}$$

D = diameter of tank = 2ft

H = tank height = 4ft

The tank described above is installed in a cylindrical pit. The minimum rock thickness around the tank for a dry well installation is 1 ft for both sides and bottom of the tank. In this example, the rock thickness is 1.5 ft for sides and bottom of the tank, to provide adequate volume. The pit has overall dimensions of 5' diameter (d) x 5.5' height (h) from the bottom, as shown in the schematic below.

The tank described above is installed in a rectangular pit. The minimum rock thickness around the tank is 1 ft for both sides and bottom of the tank. In this example, the rock thickness varies between 1 ft and 1.5 ft on sides and is 2 ft on the bottom of the tank, to provide adequate volume. The pit has dimensions of 4' width (w) x 5' length (L) x 6' height (h) from the bottom, as shown in the schematic below.



On the following page, the rock aggregate volume (RV) provided by the design will be calculated to determine if provided volume meets the required minimum volume required to treat the drainage area.

Rock aggregate volume is calculated as the volume of the pit excavated for the dry well minus the volume of the tank, since no rock will be present where the tank is located. The total rock aggregate volume is calculated below.

$$RV = V_{pit} - TV$$

$$RV = w * L * h - TV$$

$$RV = 4ft * 5ft * 6ft - 12.5ft^3$$

$$RV = 107 cf$$

w = pit width = 4ft

L = pit length = 5ft

h = pit height from bottom = 6ft

TV = tank volume = 12.5 ft³

The total volume provided by the design can be determined from the previously calculated tank volume and rock aggregate volume. The porosity is determined by the type of rock aggregate used in the design. In this example, 0.4 is used as a typical value of rock aggregate porosity.

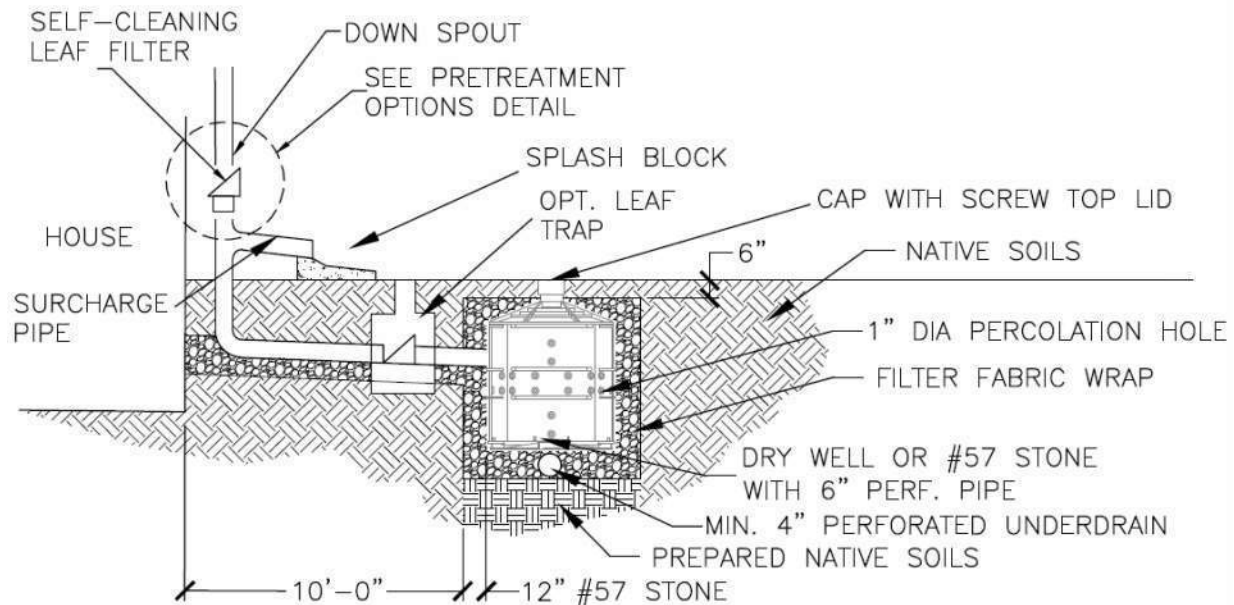
$$Volume\ provided\ [cf] = TV\ [cf] + (RV)(P)[cf]$$

$$Volume\ provided\ [cf] = 12.5\ [cf] + (107)(0.4)[cf]$$

$$Volume\ provided\ [cf] = 55\ cf$$

The volume provided by the dry well installation described above is 55 cf, which is greater than the required volume of 50 cf per dry well. The site design of four dry well installations (one dry well installed at each corner of the house receiving equal amounts of stormwater) will provide a total volume of 220 cf, which is greater than required 200 cf volume, so the design meets the drainage area requirements.

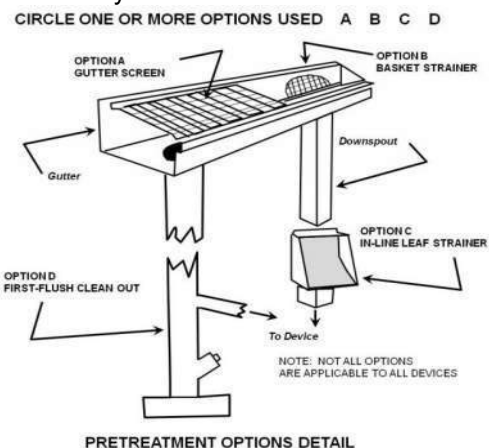
The final design is four dry wells, one at each corner of the house, each consisting of a 2' D x 4' H dry well tank placed in a rectangular rock aggregate pit that is 4' w x 5' L x 6' h. Volume provided is greater than volume required so the design is acceptable.



**TYPICAL COMPONENTS OF SEEPAGE TANK DRY WELL
(ATTACH MANUFACTURER'S SPECIFICATIONS)**

CONSTRUCTION STEPS:

1. Review potential dry well areas and layout. Dry wells should not be located: (1) beneath an impervious (paved) surface; (2) above an area with a water table or bedrock less than two feet below the trench bottom; (3) over other utility lines; (4) uphill from or within 20 feet of a septic drain field; or, (5) within 10 feet of building foundations.
2. Measure the area draining to the dry well and determine required volume on chart on the next page.
3. Design dry well tank and rock volume and demonstrate required volume is provided (attach if necessary).
4. Infiltration rate testing is not necessary when using the required perforated underdrain. If an underdrain is infeasible, see Appendix A for soil infiltration rate testing and requirements.
5. If the infiltration rate is greater than or equal to 1.0 in/hr, the contributing drainage area (square feet) may be decreased 10% for every 0.5 in/hr infiltration rate in excess of the required 0.5 in/hr. See Appendix A for soil infiltration testing and requirements.
6. Measure elevations and dig the hole to the required dimensions. Scarify the bottom soil surface 3" minimum.
7. Place and secure geotextile filter fabric on bottom and down sides of the excavation leaving enough to fold over the top below the soil and turf.
8. Place a minimum of 12" of #57 washed stone in bottom. Pea gravel can be substituted for leveling purposes in the upper three inch layer below the tank.
9. Place tank and install piping. Bond top of tank in place.
10. Cut and route downspouts or other rainwater delivery components including leaf screen option(s) chosen (**circle selected options in Pretreatment Options Detail figure**). Strap and support as needed.
11. Create a safe overflow at least 10 feet from any building foundations and ensure it is protected from erosion.
12. Test connections with water flow.
13. Fill with gravel jacket around tank and ensure filter fabric is installed between gravel and soil.
14. Backfill with soil/sod or pea gravel.
15. Consider aesthetics as appropriate and erosion control for overflow.



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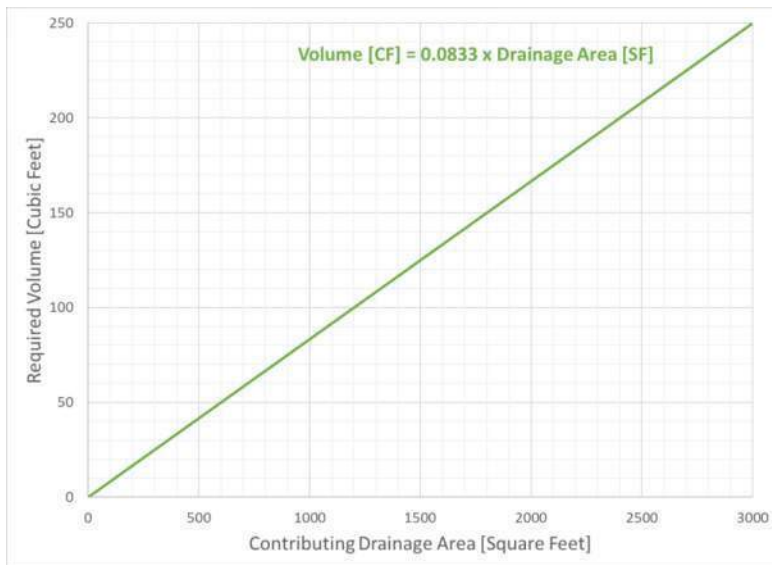
DRY WELL SPECIFICATIONS
PAGE 1 OF 2

SKETCH LAYOUT

PROVIDE PLAN AND ELEVATION VIEWS OF DRY WELL AND HOUSE SHOWING ROOF AREA DIRECTED TO DRY WELL AND KEY DIMENSIONS, CONNECTIONS AND OVERFLOW RELATIVE TO PROPERTY LINE. ATTACH ADDITIONAL PAGES IF NECESSARY.

VOLUME REQUIRED:

CONTRIBUTING DRAINAGE AREA= _____ SQ FT



VOLUME REQUIRED = _____ CU FT (FROM CHART)

VOLUME PROVIDED:

CALCULATE VOLUME PROVIDED, MUST BE GREATER THAN OR EQUAL TO REQUIRED VOLUME FROM CHART/EQUATION ON LEFT.

DRY WELL TANK VOLUME= (TV)* CU FT
ROCK AGGREGATE VOLUME= (RV) CU FT
ROCK AGGREGATE POROSITY= (P)**
*IF USING STANDPIPE-STONE PIT DRY WELL, TV = 0 (NO TANK PRESENT)
**USE P = 0.4 OR PROVIDE JUSTIFICATION

VOLUME PROVIDED = (TV) + (RV)(P)
= _____ + (____)(____) CU FT

VOLUME PROVIDED = _____ CU FT

IS VOLUME PROVIDED $\geq$ VOLUME REQUIRED? _____ (YES/NO)

MAINTENANCE:

1. INSPECT GUTTERS AND DOWNSPOUTS REMOVING ACCUMULATED LEAVES AND DEBRIS, CLEANING LEAF REMOVAL SYSTEM(S).
2. IF APPLICABLE, INSPECT PRETREATMENT DEVICES FOR SEDIMENT ACCUMULATION. REMOVE ACCUMULATED TRASH AND DEBRIS.
3. INSPECT DRY WELL FOLLOWING A LARGE RAINFALL EVENT TO ENSURE OVERFLOW IS OPERATING AND FLOW IS NOT CAUSING EROSION OR OTHER PROBLEMS.

CITY OF GREENVILLE
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ATTACH THIS TWO-PAGE
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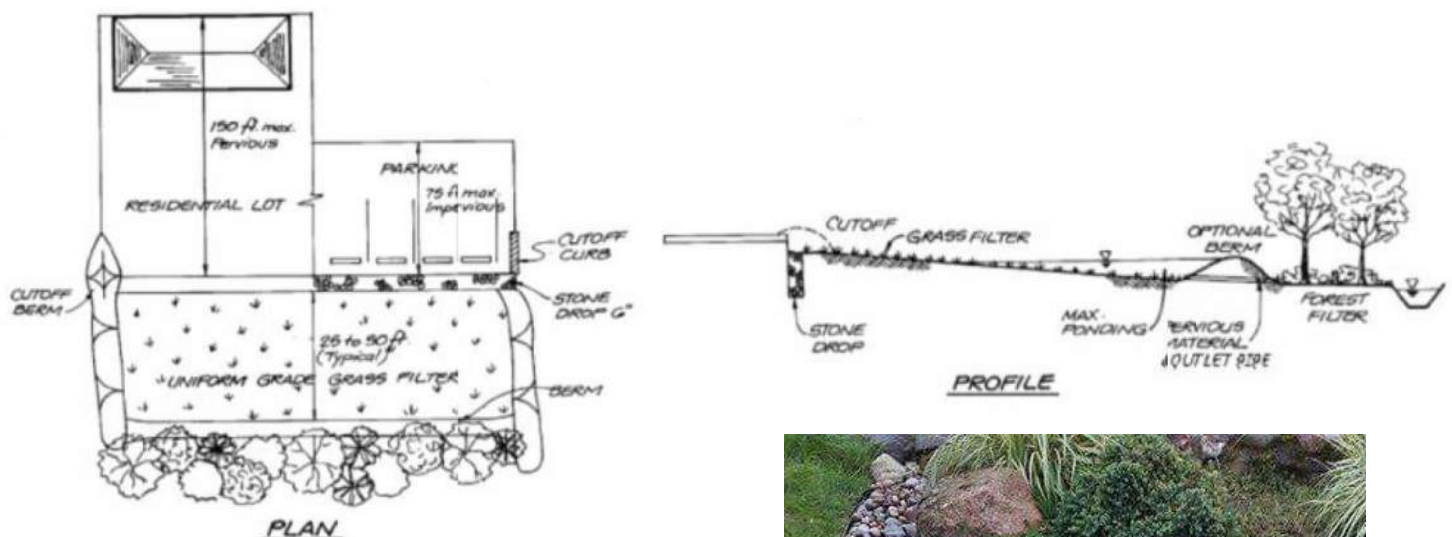
DRY WELL SPECIFICATIONS
PAGE 2 OF 2

Greenville Technical Specification for: LID-02 VEGETATED FILTER STRIP

1.0 Vegetated Filter Strip

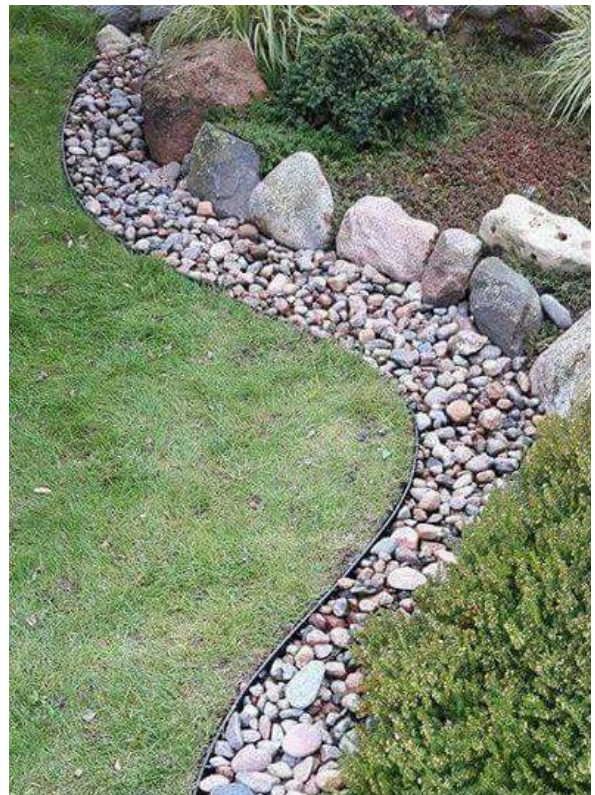
1.1 Description

A vegetated filter strip can be an attractive and functional addition to your landscape. Vegetated filter strips (also known as grass filters) are uniformly graded, vegetated areas of land designed to receive rainwater as sheet flow and slow and filter stormwater runoff from roof downspouts or parking areas. When properly sized, installed, and maintained, vegetated filter strips may provide reductions in stormwater runoff and pollutant loads. Typical plan and profile schematics are shown below.



1.2 Using Vegetated Filter Strips

- Take note of the drainage patterns to determine the best location for a vegetated filter strip. Assess the drainage area flow paths on your property and the slope of the drainage area. Ideal locations are places where there is a gentle slope away from the structure or paved area, the area is relatively flat, and where the flow can be evenly disbursed along the top of the filter area.
- The ideal slope of the vegetated filter strip is between 1% and 5%. Greater slopes would encourage the formation of concentrated flow within the filter strip, while lesser slopes would encourage unplanned ponding.
- Placing a filter strip over utilities is acceptable except where the amended soil option is used. In that case, ensure utility locations are noted and



care is taken in soil amendment actions. Amended or bermed filter strips should not be placed uphill from or within 20 feet of a septic field.

- The length of the vegetated filter strip should be no less than 25 feet. If there is a permeable berm at the lower end, the length of the vegetated filter strip should be no less than 15 feet. Natural forested areas on site can be counted in the filter strip length total.
- The surface impervious area to any one discharge location cannot exceed 5,000 square feet.

1.3 Construction

- Measure the rooftop and any other area that is going to be directed to the filter strip. See sizing table on the specifications sheet. From the site layout drainage area, select the size and type of filter strip from the table.
- There are three types of filter strips: conventional, amended soil, and berm. The use of amended soil or a berm reduces the required size of the filter strip, as shown in the sizing table.
- For example, a 1,000 square foot rooftop with a conventional filter strip would require at least 2,000 square feet of area with a minimum flow length of 25 feet. The use of amended soil reduces the required area to 670 square feet, still with a minimum flow length of 25 feet. If built with a berm, it can have a surface area of 500 square feet and have a minimum flow length of 15 feet.



1.3.1 Amended Soil Design Option

- Required filter area can be reduced by amending the soil within the filter strip by tilling the existing soil 12" deep and mixing 4" of compost. This increases infiltration within the filter strip.

1.3.2 Berm Design Option

- Filter area can be further reduced through the use of a permeable berm at the bottom end of the filter strip. The permeable berm is used to temporarily store stormwater runoff within the filter strip, which increases the infiltration and reduces the required width of the filter strip.
- Permeable berms should be constructed of well drained soils (sand, gravels, and sandy loams) that support plant growth and should be no more than 12" high.
- Appropriately sized outlets should be provided within permeable berms to ensure that vegetated filter strips will drain within 24 hours following the end of a rainfall event.
- A stone-protected overflow area through the berm may be used to manage the stormwater runoff generated by large storm events. The overflow point must be at least 20 feet from the property line if flow is onto adjoining property. Erosion protection is critical.

1.3.3 Level Spreader

- All vegetated filter strips require a level spreader to be used at the upstream end of the filter strip to evenly distribute stormwater runoff into the filter strip. The level spreader must be located at least 10 feet from building foundations.
- The standard level spreader for this application is a small stone trench filled with river rock, pea gravel, or #8 stone installed along a level contour. This stone trench should be 6" to 12" wide and 6" to 12" deep. Larger diameter stone may be required to stabilize entry points for larger contributing impervious areas.
- When applicable, the level spreader may be connected to the downspout through a T-connection to perforated pipes embedded in the stone trench.
- Alternatively, a level spreader may be constructed using manufactured landscape or playground borders/barriers (plastic or recycled material only; no lumber ties or railroad ties). This installation requires a 2" drop on the downstream side to ensure positive flow (see detail on specifications sheet).
- Ensure level spreader overflow points are protected from erosion and not blocked by vegetation.
- If the impervious drainage area to any one entry point (e.g. a downspout) is less than or equal to 300 square feet, requirement for a level spreader **may** be waived if flow will flow as a sheet through the vegetated filter strip area. In this case splash blocks or downspout protection pads can be used to introduce flow into vegetated filter strip areas instead of a level spreader. Drainage areas greater than 300 square feet require construction of the level spreader. Vegetation requirements (below) for the vegetated filter strip are the same regardless of use of level spreader or other energy dissipation.



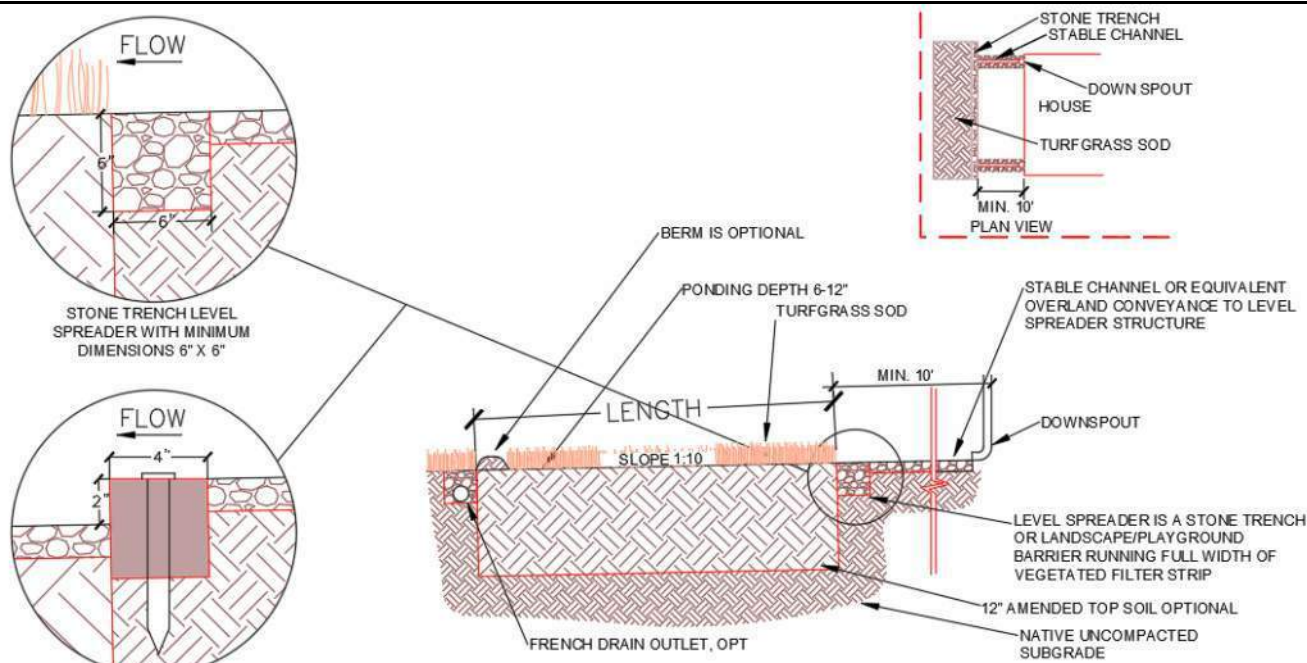
1.3.4 Vegetation

- Vegetation commonly planted on vegetated filter strips includes turf and other herbaceous vegetation.
- Choose grasses and other vegetation that will be able to tolerate the stormwater runoff rates and volumes that will pass through the vegetated filter strip.
- Vegetation used in filter strips should be able to tolerate both wet and dry conditions.
- Vegetated filter strip areas must be sodded as a part of the project if they drain to an LID practice.
- Do not use Bermuda grass. Use Zoysia or Fescue.

1.4 Maintenance

Maintain the vegetated filter strip so that it will continue to provide measurable stormwater management benefits over time.

- Water as needed to promote plant growth and survival, especially in the first two seasons.
- Provide normal turf or garden maintenance - mow, prune, and trim as needed.
- Inspect the vegetated filter strip following rainfall events. Fix erosion issues immediately.
- Remove accumulated trash, sediment, and debris.



TYPICAL COMPONENTS

CONSTRUCTION STEPS:

1. Review potential filter strip areas and layout. Filter strips should slope between 1% and 5% away from the home or other structures.
2. Amended or bermed filter strips should not be located uphill from or within 20 feet of a septic field. If there is a concentrated overflow, ensure it is at least 10 feet from building foundations and 20 feet from adjacent property lines.
3. Placing a filter strip over utilities is acceptable except where the amended soil option is used. In that case ensure utility locations are noted and care is taken in soil amendment actions.
4. Measure the area draining to the filter strip and determine required surface area and minimum length from the table on the next page. Determine the desired filter strip and level spreader options. **All runoff entering the filter strip must be sheet flow.**
5. Lay out and mark filter strip area as well as level spreader location.
6. Construct level spreader by filling trench with appropriate stone and noting overflow points.
7. Construct filter strip option. Install berm or prepare amended soil if applicable.
8. Construct erosion control at the flow entrance and exit points as applicable.
9. Plant dense vegetation according to plan, or sod/seed. Ensure an irrigation plan is in place.
10. Ensure temporary erosion control is in place as needed until vegetation establishment.

CITY OF GREENVILLE STORMWATER DIVISION	NAME/ADDRESS:	VEGETATED FILTER STRIP SPECIFICATIONS PAGE 1 OF 2
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SKETCH LAYOUT

PROVIDE PLAN AND ELEVATION VIEWS OF VEGETATED FILTER STRIP AND HOUSE SHOWING ROOF AREA DIRECTED TO FILTER STRIP AND KEY DIMENSIONS, CONNECTIONS AND OVERFLOW RELATIVE TO PROPERTY LINE. ATTACH ADDITIONAL PAGES IF NECESSARY.

SIZING CALCULATION:

Contributing Drainage Area (square feet)	Filter Strip Type		
	Conventional	Amended Soil	Berm
	Filter Strip Area (sq ft)		
100	200	70	50
500	1000	350	250
1000	2000	670	500
2000	4000	1400	1000
3000	6000	2700	1500
4000	8000	5400	2000
5000	10000	6700	2500

MEASURE CONTRIBUTING DRAINAGE AREA AND READ FILTER STRIP AREA FOR GIVEN FILTER STRIP TYPE. FOR SPECIFIC DRAINAGE AREAS NOT LISTED ON TABLE, INTERPOLATE BETWEEN THE CLOSEST VALUES LISTED.

CONTRIBUTING DRAINAGE AREA= _____ SQ FT
FILTER STRIP AREA= _____ SQ FT
CONVENTIONAL – 25' MINIMUM LENGTH
BERM OPTION – 15' MINIMUM LENGTH

MAINTENANCE:

1. INSPECT GUTTERS AND DOWNSPOUTS REMOVING ACCUMULATED LEAVES AND DEBRIS, CLEANING LEAF REMOVAL SYSTEM(S).
2. IF APPLICABLE, INSPECT PRETREATMENT DEVICES FOR SEDIMENT ACCUMULATION. REMOVE ACCUMULATED TRASH AND DEBRIS.
3. WATER AS NEEDED TO PROMOTE PLANT GROWTH AND SURVIVAL ESPECIALLY IN THE FIRST TWO SEASONS.
4. PROVIDE NORMAL TURF OR GARDEN MAINTENANCE - MOW, PRUNE, AND TRIM AS NEEDED.
5. INSPECT THE VEGETATED FILTER STRIP FOLLOWING RAINFALL EVENTS. FIX EROSION ISSUES IMMEDIATELY.

CITY OF GREENVILLE
STORMWATER
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ATTACH THIS TWO-PAGE
SPECIFICATION TO HOUSE PLAN
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VEGETATED FILTER STRIP
SPECIFICATIONS
PAGE 2 OF 2

Technical Specification for:

LID-03 MODIFIED FRENCH DRAIN

1.0 Modified French Drain

1.1 Description

Modified French Drains (MFD) are shallow trench excavations filled with stone that are designed to intercept and temporarily store stormwater runoff until it infiltrates into the soil. When properly sized, installed, and maintained, MFDs may provide reductions in stormwater runoff and pollutant loads. They are particularly well suited to receive rooftop runoff but can also be used to receive stormwater runoff from other small impervious areas. The use of MFDs for compliance with City stormwater ordinance requirements are only allowed to address ordinance requirements for single-family residential projects. The perforated pipe is daylighted at its end allowing for overflow of larger storms and a failsafe mechanism should infiltration not be as anticipated.

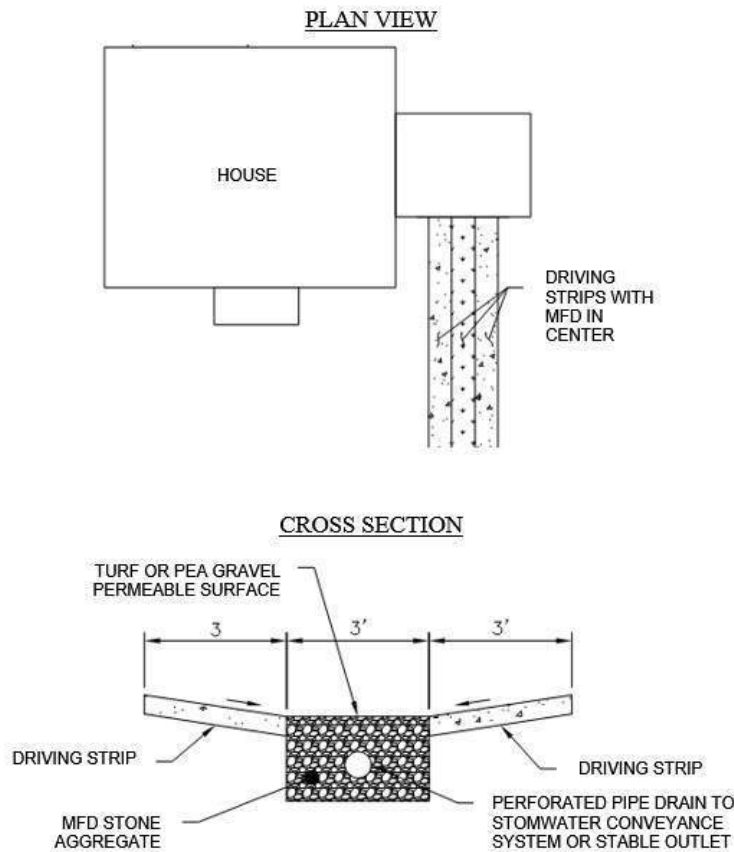
MFDs are an infiltration-based LID practice which must reliably drain to function as designed. Many of the native soils in the City of Greenville do not allow for adequate infiltration, therefore the perforated pipe drain of the MFD is required and critical to ensure the function of the MFD. The perforated pipe drain must flow to a stable outlet that daylights (emerges from the ground and is open to the air) or tie into a stormwater conveyance system. **If daylighting the perforated pipe drain is infeasible, infiltration testing must be performed (see Appendix A) to demonstrate an infiltration rate of 0.5 in/hr in order to use a MFD.** If the infiltration rate is inadequate and daylighting the perforated pipe drain is infeasible, use other LID practices. If it is infeasible to slope the MFD away from structures on site, use other LID practices.

1.2 Using Modified French Drains

- MFD trenches should be located at least 10 feet from building foundations and 20 feet from property lines. Downspout connections within 10 feet of the building that direct flow to the MFD should be constructed of non-perforated pipe to direct flow away from the structure.
- MFDs must slope away from the structures. The slope of the MFD pipe should be between 0.5% and 6%. It can be serpentine or multi-pronged in construction if sufficient slope is available.
- To reduce the chance of clogging, MFDs should drain only impervious areas, and runoff should be pretreated to remove leaves, debris, and other larger particles.
- MFD gravel trench depth and width should each be at least 18 inches and no more than 36 inches.
- MFDs should be located in a lawn or other pervious (unpaved) area and should be designed so that the top of the MFD is located as close to the surface as possible to reduce excavation.
- MFDs should not be located: (1) beneath an impervious (paved) surface; (2) above an area with a water table or bedrock less than two feet below the trench bottom; (3) over other utility lines; or, (4) uphill from or within 20 feet of a septic field. Always call 811 to locate utility lines before you dig.



- The downstream end of the pipe must daylight for overflows more than ten feet from the property line.
- If you elect to measure infiltration rate (see Appendix A) and find it is greater than or equal to 1.0 in/hr, the MFD size can be reduced. For every 0.5 in/hr increase in measured infiltration rate above the required 0.5 in/hr, subtract ten percent of the required MFD size, as measured in contributing area captured (square feet) which determines the dimensions of the MFD.
- MFDs may be used in a variety of locations based on site constraints. One application is to install the MFD adjacent to a driveway or in the center of a split track driveway, such that the driveway is sloped to drain into the MFD. The split track driveway application is shown below:



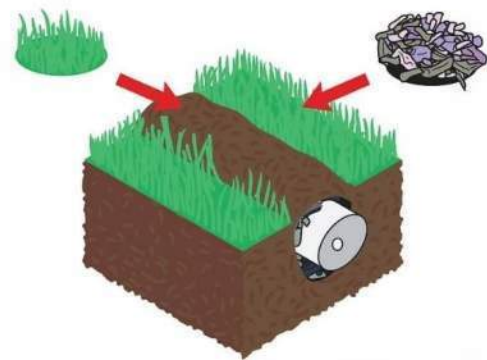
1.3 Construction

- As a rule-of-thumb there should be 21 cubic feet of stone for every 100 square feet of rooftop (0.21 cubic feet per square foot of rooftop). See specifications sheet for MFD design guidance.
- Actual installed width and depth of MFD may vary between 18 and 36 inches and should match cross section shown on specification sheet.
- The sides of the excavation should be trimmed of all large roots that will hamper the installation of the permeable drainage fabric used part way down the sides and above the gravel layer on top of the MFD.
- The native soils along the bottom of the MFD should be scarified or tilled to a depth of 3 to 4 inches.
- Install geotextile filter fabric between native soils and the washed #57 stone and perforated pipe.
- Fill the MFD with clean, washed #57 stone embedding a 6-inch diameter perforated pipe in the top of the stone such that the stone covers the top of the pipe. #57 stone averages ½ inch to 1-½ inches.
- The pipe should have 3/8-inch perforations, spaced 6 inches on center, and have a minimum slope of 0.5% and a maximum slope of 6%.

- The perforated pipe must daylight at the downstream end of the trench or adequate infiltration must be demonstrated through testing (see Section 1.1).
- A pop-up emitter at the end of the perforated pipe is a recommended addition to disperse flow.
- An overflow, such as a vegetated filter strip or grass channel, should be designed to convey the stormwater runoff generated by larger storm events safely out of the downstream end of the MFD.
- Place permeable geotextile filter fabric over gravel to keep soil or pea gravel from migrating into the gravel and filling the pore spaces and leave four to six inches above the pipe to the ground surface.
- Cover with topsoil and sod or with pea gravel.
- For rooftop runoff, install one or more leaf screen options prior to entering the MFD to prevent leaves and other large debris from clogging the MFD. For driveway or parking runoff a screened inlet grate over a sump or pea gravel pit can be used to settle out material prior to entering the pipe.

1.3.1 Vegetation

- MFDs are normally covered with topsoil and managed turf or other herbaceous vegetation.
- As an alternative, the area above the surface of the MFD may be covered with pea gravel (or larger depending on the inflow rates) to allow for incidental lateral inflow along the edge of ground level impervious surfaces.
- The downstream end of the pipe must be stabilized and can be landscaped for aesthetics.

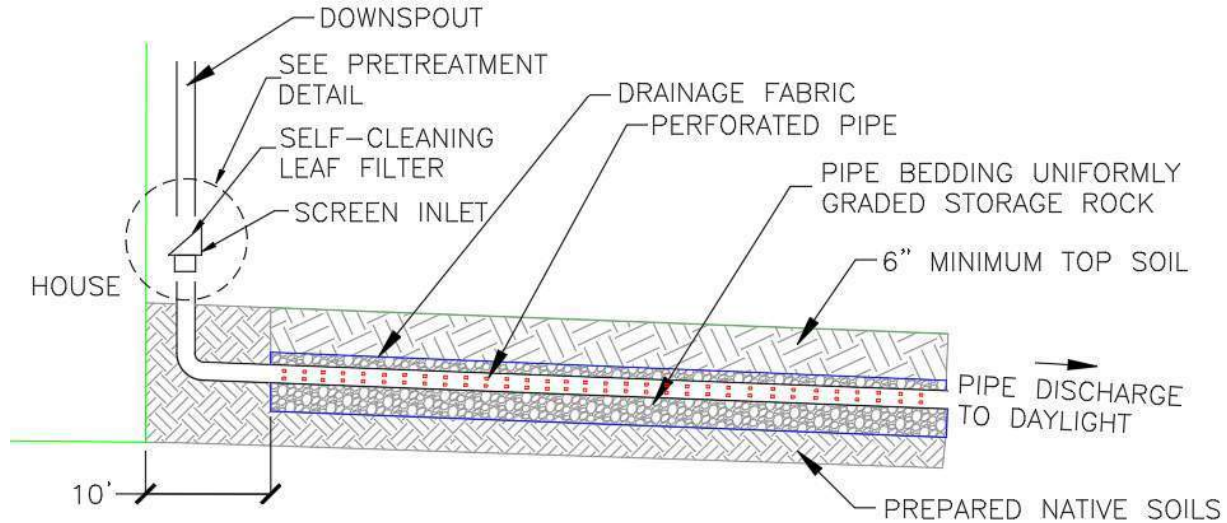


1.4 Maintenance

Annual maintenance is important for MFDs.

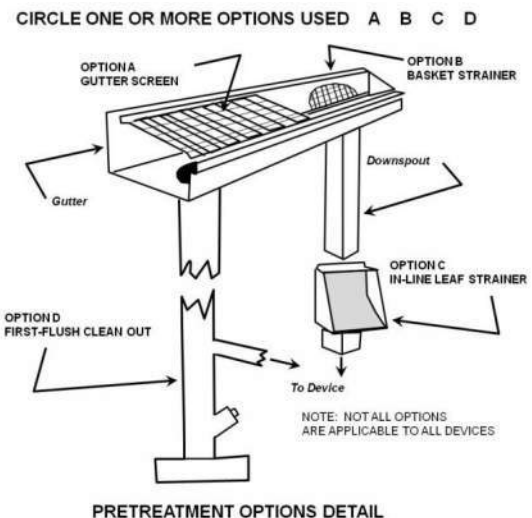
- Inspect gutters/downspouts removing accumulated leaves and debris, cleaning leaf removal system(s).
- Inspect any pretreatment devices for sediment accumulation. Remove accumulated trash and debris.
- Inspect MFD following a large rainfall event to ensure overflow is operating and flow is not causing problems.

TYPICAL COMPONENTS (ATTACH MANUFACTURER'S SPECIFICATIONS)



CONSTRUCTION STEPS:

1. Review potential MFD areas and layout. MFDs should slope between 0.5% and 6% away from the structure and should not be located: (1) beneath an impervious (paved) surface; (2) above an area with a water table or bedrock less than two feet below the trench bottom; (3) over other utility lines; or, (4) uphill from or within 20 feet of a septic drain field. Ensure outlet daylights at least 20 feet from property line.
2. Measure the area draining to the MFD and calculate the required volume of stone on the next page.
3. Determine the required length, width, and gravel depth to provide the required volume of stone aggregate. Consider routing of flows, excavation depth, and space constraints on the site.
4. Infiltration rate testing is not necessary when using the required perforated pipe drain with a stable outlet that daylight. See specification Section 1.1 for detailed underdrain and infiltration requirements.
5. A pop-up emitter at the end of the perforated pipe is a recommended addition to disperse flow.
6. If a perforated pipe drain with positive slope/flow is infeasible, MFDs cannot be used.
7. If the infiltration rate is greater than or equal to 1.0 in/hr, the contributing drainage area (square feet) may be decreased 10% for every 0.5 in/hr infiltration rate in excess of the required 0.5 in/hr. See Appendix A for soil infiltration testing and requirements.
8. Measure elevations and lay out the MFD to the required dimensions, marking the route and required excavation depths. Often a level line (torpedo level) is used.
9. Remove sod using a sod cutter if appropriate. Excavate ditch to the depth of the gravel plus six inches for topsoil/pea gravel. Be careful not to compact soils in the bottom. Level the bottom laterally as much as possible to maximize infiltration area. Roughen bottom to a depth of at least three inches and trim roots.
10. Place and secure geotextile filter fabric on bottom and down sides of the excavation leaving enough to fold over the top below the soil and turf.
11. Place gravel in ditch to planned depth placing the pipe three inches deep in the upper portion of the gravel. Then place gravel until it covers the pipe.
12. Fold drainage fabric over top of pipe and stone.
13. Place topsoil and sod or pea gravel.
14. Cut and route downspouts or other rainwater delivery components, leaf screen option(s) chosen (**circle selected options in Pretreatment Options Detail figure**). Strap and support as needed.
15. Create a safe overflow at least 20 feet from your property edge and ensure it is protected from erosion.



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MFD SPECIFICATIONS
PAGE 1 OF 2

SKETCH LAYOUT

PROVIDE PLAN AND ELEVATION VIEWS OF MFD AND HOUSE SHOWING ROOF AREA DIRECTED TO MFD AND KEY DIMENSIONS, CONNECTIONS AND OVERFLOW RELATIVE TO PROPERTY LINE. ATTACH ADDITIONAL PAGES IF NECESSARY.

VOLUME REQUIRED:

0.21 CU FT OF STONE AGGREGATE TRENCH
PER SQ FT OF CONTRIBUTING ROOF
DRAINAGE AREA (21 CU FT PER 100 SF OF
ROOF AREA)

_____ SQ FT ROOF AREA X 0.21 = _____ FT³

DIMENSIONS OF MFD:

DEPTH OF STONE MEDIA= _____ FT
(1.5 TO 3.0 FT)

WIDTH OF MFD TRENCH= _____ FT
(1.5 TO 3.0 FT)

TOTAL LENGTH OF MFD= _____ FT
(SITE SPECIFIC)

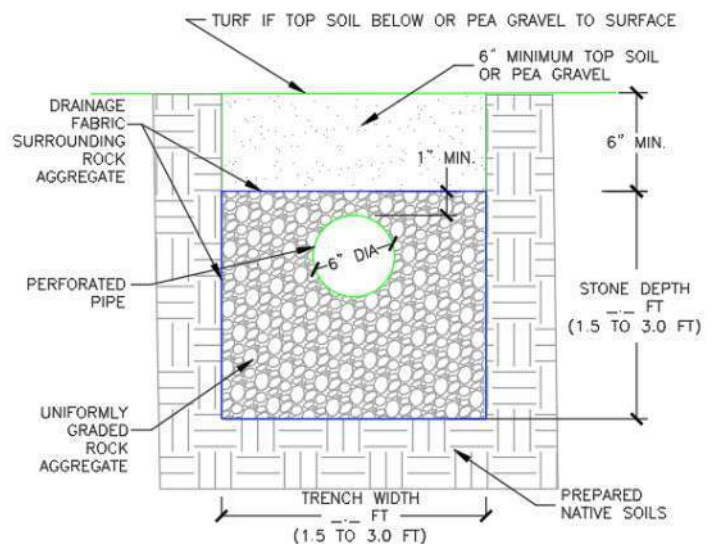
VOLUME PROVIDED:

_____ FT X _____ FT X _____ FT = _____ FT³

IS VOLUME PROVIDED ≥ VOLUME REQUIRED?

_____ (YES/NO)

MFD CROSS SECTION: LABEL TRENCH WIDTH AND STONE DEPTH DIMENSIONS BELOW.



MAINTENANCE:

1. INSPECT GUTTERS AND DOWNSPOUTS REMOVING ACCUMULATED LEAVES AND DEBRIS, CLEANING LEAF REMOVAL SYSTEM(S).
2. IF APPLICABLE, INSPECT PRETREATMENT DEVICES FOR SEDIMENT ACCUMULATION. REMOVE ACCUMULATED TRASH AND DEBRIS.
3. INSPECT MFD FOLLOWING A LARGE RAINFALL EVENT TO ENSURE OVERFLOW IS OPERATING AND FLOW IS NOT CAUSING EROSION OR FLOODING PROBLEMS.

CITY OF GREENVILLE
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ATTACH THIS TWO-PAGE
SPECIFICATION TO HOUSE
PLAN SUBMITTAL

MFD SPECIFICATIONS
PAGE 2 OF 2

Technical Specification for: LID-04 PERMEABLE PAVERS

1.0 Permeable Pavers

1.1 Description

Permeable pavers are an alternative to traditional paving surfaces that can decrease stormwater runoff. They are well suited for use when constructing sidewalks, parking areas, patios, and driveways. Permeable pavers

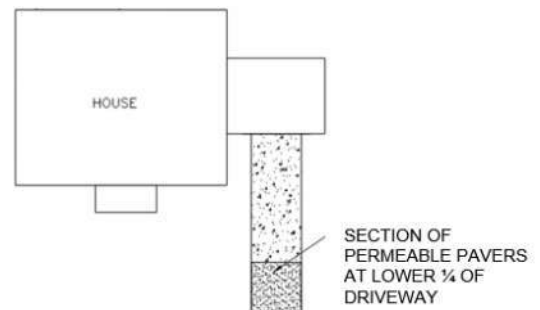


consist of permeable interlocking or grid concrete pavers underlain by a drainage layer. A permeable paver system allows stormwater runoff to pass in between the paver surface and into an underlying stone reservoir, where it is temporarily stored and allowed to infiltrate into the underlying soils. When properly sized, installed, and maintained, permeable pavers may provide reductions in stormwater runoff and pollutant loads.

Permeable pavers are an infiltration-based LID practice which must reliably drain to function as designed. Many of the native soils in the City of Greenville do not allow for adequate infiltration, therefore a perforated underdrain is required. The perforated underdrain must flow to a stable outlet that daylights (emerges from the ground and is open to the air) or tie into a stormwater conveyance system. **If installation of an underdrain that daylights is infeasible, infiltration testing must be performed (see Appendix A) to demonstrate an infiltration rate of 0.5 in/hr in order to use permeable pavers.** If the infiltration rate is inadequate and an underdrain that daylights is infeasible, use other LID practices.

1.2 Using Permeable Pavers

- Permeable pavers should not be located: (1) above an area with a water table or bedrock less than two feet below the gravel bottom; (2) over other utility lines; or, (3) uphill from or within 20 feet of a septic field. Always call 811 to locate utility lines before you dig.
- Permeable pavers should drain only impervious areas. Drainage from other areas onto the pavers will eventually clog them.
- Permeable paver systems should be installed on slopes less than 6% to help ensure even distribution of runoff over the infiltration surface and should slope away from structures.
- Permeable pavement may be used for a portion of a driveway or parking area, ensuring it is downgradient from impervious areas that are to be treated. For example, the lower $\frac{1}{4}$ of a driveway could be permeable pavement that treats the upper $\frac{3}{4}$ of the driveway. See example at right.
- Long driveways may be treated with multiple strips or sections of permeable pavers, located downgradient from impervious areas that are to be treated.



1.3 Construction

- Permeable pavers are sized based on the volume of stone needed in the stone aggregate base course layer to provide treatment. As a rule-of-thumb there should be 21 cubic feet of stone for every 100

square feet of drainage area (0.21 cubic feet per square foot of drainage area). See specifications sheet for design calculation guidance.

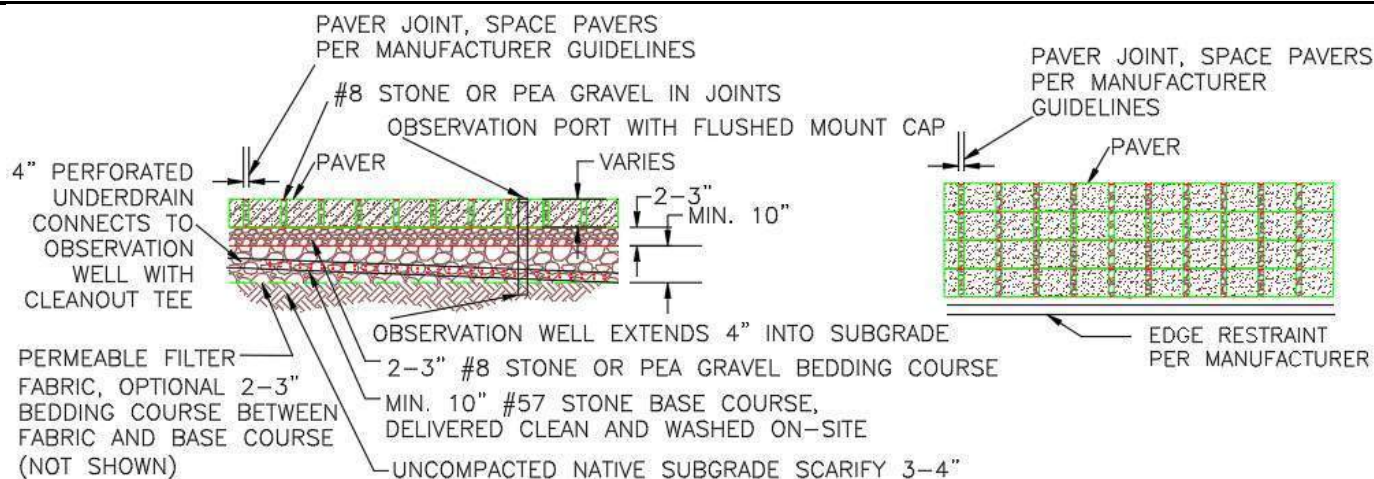
- Actual installed dimensions of the permeable pavement system and stone aggregate base course layer may vary and should be as described on the specification sheet and shown on the site layout sketch.
- The drainage area to the permeable pavement practice must be stabilized prior to installation.
- Permeable paver systems require multiple layers. Typical layers of an installed system are listed below, from top to bottom of the system. When available, manufacturer's instructions should be followed in lieu of these typical guidelines.
 - The top course consists of the pavers and a crushed aggregate material swept between the paver joints, such as #8 stone or 1/8" to 3/8" pea gravel. The thickness of this layer varies depending upon the depth of the paver.
 - The bedding course consists of 2 to 3 inches of #8 stone or 1/8" to 3/8" pea gravel. The bedding course provides a level bed for setting the pavers evenly.
 - The stone aggregate base course consists of washed #57 stone installed with a minimum depth of 10 inches. The aggregate base course acts as a reservoir to provide stormwater storage capacity.
 - An optional bedding course of 2 to 3 inches of #8 stone or 1/8" to 3/8" pea gravel may be installed between the base course and filter fabric.
 - A permeable drainage filter fabric should be used to separate the stone layers and the subgrade, following any applicable manufacturer's specifications.
 - The subgrade layer is the layer of native soils below the stone layers and the permeable drainage filter fabric. The subgrade soil layer should be prepared by scarifying or tilling to a depth of 3 to 4 inches. The subgrade should be level to encourage infiltration across the entire paver area.
- Installation of the system should include a horizontal 4" perforated underdrain and a vertical observation well that extends 4" into subgrade, connects to the underdrain with cleanout tee, and ends at paver surface with a flushed mount cap to allow access.
- In all cases the above should be the minimum specifications for the pervious paver system. Manufacturer's specifications may require larger depths or alternate materials. These systems are permitted as long as an infiltration rate of 6 in/hr is maintained and the system can drain in 72 hours.
- If you elect to measure infiltration rate (see Appendix A) and find it is greater than or equal to 1.0 in/hr, the required stone aggregate base course volume of the permeable paver system can be reduced. For every 0.5 in/hr increase in measured infiltration rate above the required 0.5 in/hr, subtract ten percent of the required stone aggregate base course volume.

1.4 Maintenance

Maintenance is very important for permeable pavers systems, particularly in terms of ensuring that they continue to provide measurable stormwater management benefits over time.

- Remove accumulated sediment and debris from joint space monthly.
- Observe the permeable paver system for excessive ponding during storm events and repair as needed.
- Vacuum, sweep, or blow permeable paver surface quarterly to keep the surface free of sediment. New #8 stone may need to be swept into the space between stones as needed.
- Inspect permeable paver surface for deterioration annually. Repair or replace any damaged areas as needed.

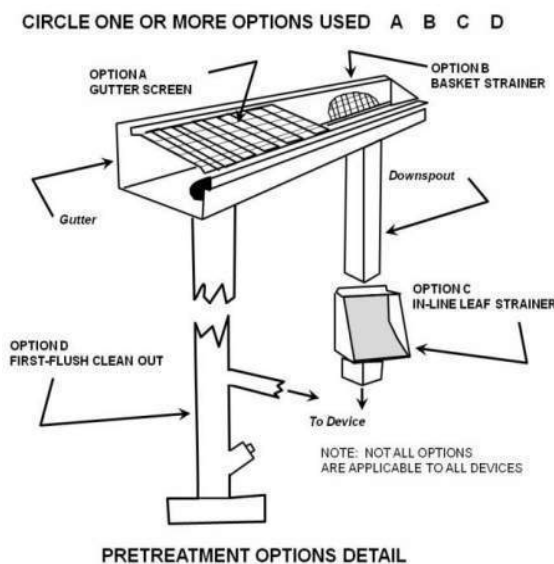




TYPICAL COMPONENTS (ATTACH MANUFACTURER'S SPECIFICATIONS)

CONSTRUCTION STEPS:

1. Review potential paver areas and layout. Pavers should slope less than 6% away from the structure and should not be located: (1) above an area with a water table or bedrock less than two feet below the trench bottom; (2) over utility lines; or, (3) uphill from or within 20 feet of a septic field.
2. Measure the area draining to the pavers and determine required paver dimensions from the calculation on the next page based on the depth of the base course stone aggregate storage layer.
3. Infiltration rate testing is not necessary when using the required perforated underdrain. If an underdrain is infeasible, see Appendix A for soil infiltration rate testing and requirements.
4. If the infiltration rate is greater than or equal to 1.0 in/hr, the required stone aggregate base course volume (cubic feet) may be decreased 10% for every 0.5 in/hr infiltration rate in excess of the required 0.5 in/hr. See Appendix A for soil infiltration testing and requirements.
5. Excavate area to appropriate depth with level subgrade (not to exceed 2% in any direction) and scarify soil to 3-4".
6. Place and secure geotextile filter fabric (Mirafi #140 N or equivalent) on bottom and down sides of the excavation.
7. Install 4" perforated underdrain and observation well. Observation well extends 4" into subgrade, connects to underdrain with cleanout tee, and ends at paver surface with flushed mount cap to allow access.
8. If desired, optional 2-3" bedding course layer of #8 stone or pea gravel may be installed under base course.
9. Place and level washed #57 stone aggregate for base course storage layer to planned depth. (10" min.)
10. Place and level 2-3" #8 stone or pea gravel bedding layer for level paver surface installation.
11. Lay paving stone one at a time or using mechanical placement as applicable. Cut stone at edges to fit.
12. Install edge restraints per manufacturer's specifications.
13. Sweep more #8 stone or pea gravel into stone joints until filled and even.
14. If applicable, cut and route downspouts or other rainwater delivery components, and indicate leaf screen option(s) chosen (**circle selected options in Pretreatment Options Detail**). Strap and support as needed.
15. In all cases the above should be the minimum specifications for the pervious paver system. Manufacturer's specifications may require larger depths or alternate materials. These systems are permitted as long as an infiltration rate of 6 in/hr is maintained and the system can drain in 72 hours.



PRETREATMENT OPTIONS DETAIL

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SKETCH LAYOUT

PROVIDE PLAN AND ELEVATION VIEWS OF PERVIOUS PAVER AND HOUSE SHOWING ROOF AREA DIRECTED TO PAVERS AND KEY DIMENSIONS, CONNECTIONS AND ANY APPLICABLE OVERFLOW RELATIVE TO PROPERTY LINE. ATTACH ADDITIONAL PAGES IF NECESSARY.

PROVIDE ADEQUATE VOLUME OF WASHED STONE AGGREGATE IN THE BASE COURSE LAYER (MIN. DEPTH 10")

VOLUME REQUIRED:

0.21 CU FT OF STONE AGGREGATE BASE COURSE PER SQ FT OF CONTRIBUTING DRAINAGE AREA (21 CU FT PER 100 SF)

_____ SQ FT DRAINAGE AREA X 0.21 =
_____ FT³ REQUIRED

DIMENSIONS OF BASE COURSE LAYER:

DEPTH OF STONE= _____ FT

(MIN. DEPTH = 10" = 0.83')

WIDTH OF PAVER AREA= _____ FT

LENGTH OF PAVER AREA= _____ FT

VOLUME PROVIDED:

_____ FT X _____ FT X _____ FT =
_____ FT³ PROVIDED

IS VOLUME PROVIDED ≥ VOLUME
REQUIRED? _____ (YES/NO)

MAINTENANCE:

1. REMOVE ACCUMULATED SEDIMENT AND DEBRIS FROM JOINT SPACE MONTHLY. REMOVE WEEDS BY SPRAYING OR PULLING BY HAND.
2. INSPECT PERMEABLE PAVER SURFACE FOR DETERIORATION ANNUALLY. REPAIR OR REPLACE ANY DAMAGED AREAS AS NEEDED.
3. OBSERVE THE PERMEABLE PAVER SYSTEM FOR EXCESSIVE PONDING DURING STORM EVENTS AND REPAIR AS NEEDED.
4. VACUUM, SWEEP, OR BLOW PERMEABLE PAVER SURFACE QUARTERLY TO KEEP THE SURFACE FREE OF SEDIMENT. DO NOT PRESSURE WASH.
5. NEW STONE MAY NEED TO BE SWEEPED INTO THE JOINTS AS NEEDED.
6. DO NOT APPLY SAND DURING WINTER.
7. DO NOT WASH VEHICLES OR STOCKPILE MATERIALS/CHEMICALS ON PAVER SURFACE.
8. BAG GRASS CLIPPINGS OR DIRECT THEM AWAY FROM PAVERS TO PREVENT CLOGGING.

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PERMEABLE PAVER
SPECIFICATIONS
PAGE 2 OF 2

Technical Specification for: LID-05 RAIN GARDENS

1.0 Rain Gardens

1.1 Description

Rain gardens are small, landscaped depressions that are filled with a mix of native soil and compost and are planted with trees, shrubs and other garden-like vegetation. They are designed to temporarily store stormwater runoff from rooftops, driveways, patios and other areas around your home while reducing runoff rates and pollutant loads in your local watershed. A rain garden can be a beautiful and functional addition to a landscape plan. When properly sized, installed, and maintained, rain gardens may provide reductions in stormwater runoff and pollutant loads.



Rain gardens are an infiltration-based LID practice which must reliably drain to function as designed. Many of the native soils in City of Greenville do not allow for adequate infiltration, therefore a perforated underdrain is required. The perforated underdrain must flow to a stable outlet that daylights (emerges from the ground and is open to the air) or tie into a stormwater conveyance system. **If installation of an underdrain that daylights is infeasible, infiltration testing must be performed (see Appendix A) to demonstrate an infiltration rate of 0.5 in/hr in order to use a rain garden.** If the infiltration rate is inadequate and an underdrain that daylights is infeasible, use other LID practices.

1.2 Using Rain Gardens

- Rain gardens should be located to receive the maximum amount of stormwater runoff from impervious surfaces, and where downspouts or driveway runoff can enter garden flowing away from the home.
- Swales, berms, or downspout extensions may be helpful to route runoff to the rain garden.
- Locate at least 10 feet from building foundations, not within the public right of way, away from utility lines, not uphill from or within 20 feet of septic fields, and not near a steep bluff edge. Call 811 before you dig to locate the utility lines on your property.
- Rain gardens on steep slopes (>10%) may require an alternative design with terracing.

1.3 Construction

- The size of the rain garden will vary depending on the impervious surface draining to it and the depth of the filter media. See sizing table on specification sheet.
- A maximum ponding depth of 6 inches is allowed within rain gardens. On average, rain gardens drain within a day which will not create a mosquito problem.
- Design rain garden entrance to immediately intercept inflow and reduce its velocity with stones, dense hardy vegetation or by other means.
- If sides are to be mowed rain gardens should be designed with side slopes of 3:1 (H:V) or flatter.

- For best results, it is suggested to test your soil characteristics as you would for a garden, or contact the Clemson Home & Garden Information Center for help <https://hgic.clemson.edu/factsheet/soil-testing/>.
- See Appendix B for filter media recommendations and local suppliers.
- A mulch layer consisting of 2-3 inches of non-floatable organic mulch (fine shredded hardwood mulch, pine straw, or leaf compost) should be included on the surface of the rain garden. Pine bark and wood chips should not be used.
- Often rain gardens have a better appearance and can be more easily maintained if they have defined edges, similar to a normal garden.
- The overflow from the rain garden should be non-eroding and can consist of a small berm or even an inlet grate set at the proper elevation in the garden. The grate should be set at a slant or be domed to allow clogging debris to fall off.
- If you elect to measure infiltration rate (see Appendix A) and find it is greater than or equal to 1.0 in/hr, the rain garden size can be reduced. For every 0.5 in/hr increase in measured infiltration rate above the required 0.5 in/hr, subtract ten percent of the required rain garden area (square feet).

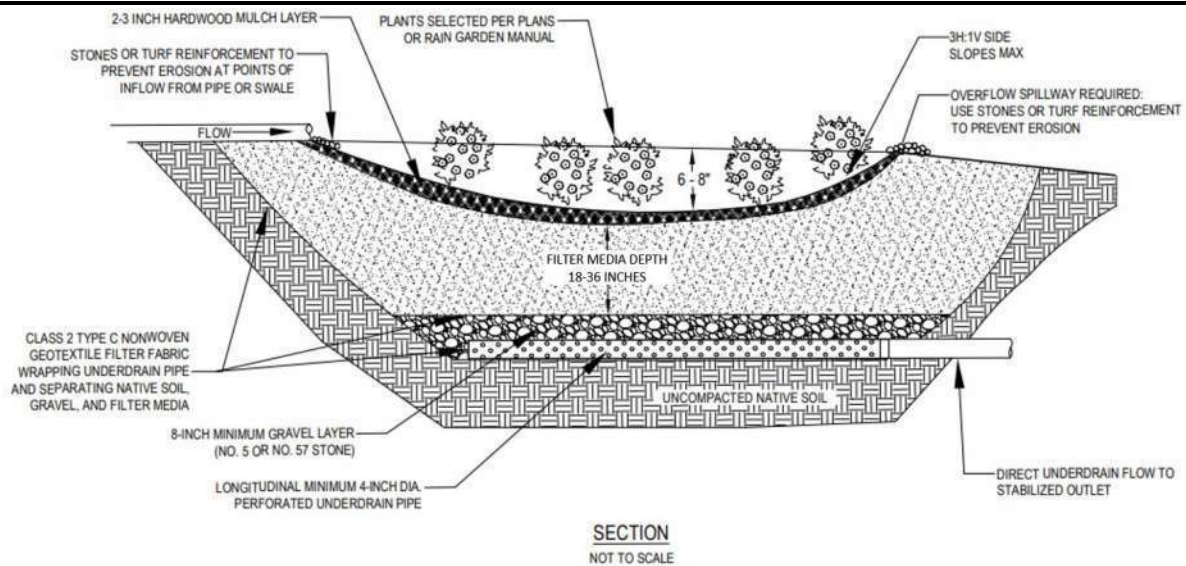
1.3.1 Vegetation

- Vegetation commonly planted in rain gardens includes native trees, shrubs and other herbaceous vegetation. When developing a landscaping plan, you should choose vegetation that will be able to stabilize soils and tolerate the stormwater runoff rates and volumes that will pass through the rain garden.
- Vegetation used in rain gardens should also be able to tolerate both wet and dry conditions. See The Carolina Yards Plant Database (<https://www.clemson.edu/extension/carolinayards/plant-database/index.html>) and The South Carolina Waterways Fact Sheet Series (<https://hgic.clemson.edu/category/water/>) for more information on grasses and other plants that are appropriate for use in rain gardens. Links are provided to assist with finding information but may change. If the specific link does not work, search Clemson University extension online publications for rain garden planting information.
- As with any garden in the first season the vegetation may require irrigation to become well established. It may be appropriate to plant more densely than a normal garden to obtain the benefit of plant soil stabilization and evapotranspiration as soon as possible.



1.4 Maintenance

Routine garden maintenance should include weeding, deadheading, replacing dead plants, and replenishing mulch when depleted. Catching areas of erosion is also important as is correcting standing water problems. If standing water persists it may be necessary to place a perforated underdrain in the garden daylighting downstream.



TYPICAL COMPONENTS

CONSTRUCTION STEPS:

1. Locate rain garden(s) where downspouts or driveway runoff can enter garden flowing away from the home. Locate at least 10 feet from building foundations, away from utility lines, not uphill from or within 20 feet of septic fields, and not near a steep bluff edge.
2. Measure the area draining to the planned garden and determine required rain garden surface area from the table on the next page and your planned excavation depth.
3. Infiltration rate testing is not necessary when using the required perforated underdrain. If an underdrain is infeasible, see Appendix A for soil infiltration rate testing and requirements.
4. If the infiltration rate is greater than or equal to 1.0 in/hr, the area of rain garden (square feet) may be decreased 10% for every 0.5 in/hr infiltration rate in excess of the required 0.5 in/hr. See Appendix A for soil infiltration testing and requirements.
5. Measure elevations and stake out the garden to the required dimensions ensuring positive flow into garden, the overflow elevation allows for six inches of ponding, and the perimeter of the garden is higher than the overflow point. If the garden is on a gentle slope a berm at least two feet wide can be constructed on the downhill side and/or the garden can be dug into the hillside taking greater care for erosion control at the garden inlet(s).
6. Remove turf or other vegetation in the area of the rain garden. Excavate garden being careful not to compact soils in the bottom of the garden. Level bottom of garden to maximize infiltration area.
7. See Appendix B for description of the recommended filter media and local suppliers.
8. Fill rain garden with the required filter media, leaving the surface eight inches below your highest surrounding surface. Eight inches allows for 6 inches ponding and 2" of mulch. The surface of the rain garden should be as close to level as possible.
9. Build a berm at the downhill edge and sides of the rain garden with the remaining subsoil. The top of the berm needs to be level and set at the maximum ponding elevation.
10. Plant the rain garden using a selection of plants described previously in specification section 1.3.1.
11. Mulch the surface of the rain garden with two to three inches of non-floating organic mulch. The best choice is finely shredded hardwood mulch.
12. Water all plants thoroughly. As in any new garden or flower bed, regular watering will likely be needed to establish plants during the first growing season.
13. During construction build the inlet feature as a pipe directly connected to a downspout or use a rock lined swale with a gentle slope. Use of an impermeable liner under the rocks at the end of the swale near the house is recommended to keep water from soaking in at that point. Test the drainage of water from the source to the garden prior to finishing.
14. Create an overflow at least 10 feet from building foundations and ensure it is protected from erosion.

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NAME/ADDRESS:

RAIN GARDEN
SPECIFICATIONS
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SKETCH LAYOUT

PROVIDE PLAN VIEWS OF RAIN GARDEN AND HOUSE SHOWING DRAINAGE AREA DIRECTED TO RAIN GARDEN AND KEY DIMENSIONS AND OVERFLOW AREA RELATIVE TO PROPERTY LINE. ATTACH ADDITIONAL PAGES IF NECESSARY.

SIZING CALCULATION:

Contributing Drainage Area (square feet)	Depth of Filter Media (inches)			
	18	24	30	36
	Area of Rain Garden (square feet)			
100	6.6	5.7	5.1	4.6
500	35	30	25	23
1000	65	60	50	45
2000	135	115	100	90
3000	200	170	150	140
4000	260	230	200	185
5000	330	290	255	230

MEASURE CONTRIBUTING DRAINAGE AREA AND READ RAIN GARDEN AREA FOR GIVEN MEDIA DEPTH. FOR SPECIFIC DRAINAGE AREAS NOT LISTED ON TABLE, INTERPOLATE BETWEEN THE CLOSEST VALUES LISTED.

CONTRIBUTING DRAINAGE AREA= _____ SQ FT
 DEPTH OF FILTER MEDIA= _____ INCHES
 AREA OF RAIN GARDEN= _____ SQ FT

MAINTENANCE:

1. IRRIGATE VEGETATION AS NEEDED IN FIRST SEASON
2. REMOVE WEEDS
3. REPLACE UNSUCCESSFUL PLANTINGS
4. REPLENISH MULCH
5. REPAIR ERODED AREAS
6. RAKE CLOGGED SURFACE TO RESTORE INFILTRATION
7. MONITOR RAIN GARDEN FOR APPROPRIATE DRAINAGE TIMES; IF GARDEN DOES NOT DRAIN, UNDERDRAIN MAINTENANCE OR MODIFICATIONS MAY BE NECESSARY

CITY OF GREENVILLE
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RAIN GARDEN
SPECIFICATIONS
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LID-06 VEGETATED BUFFER

1.0 Vegetated Buffer

1.1 Description

A vegetated buffer is an undisturbed natural area along the lot perimeter which filters runoff, encourages infiltration, and functions as a LID practice. Vegetated buffers may also provide protection of waterbodies when they are located along a lake, wetland, creek or stream. Development is restricted or prohibited in the vegetated buffer to prevent impacts to the waterbody or adjacent properties. In addition, the vegetated buffer provides the following:



- Protection to the overall stream or waterbody quality by providing shade for the stream or waterbody (if present),
- Natural habitat for wildlife, and
- A setback from the stream or waterbody, when applicable, to prevent damage to structures or improved property due to flooding or changes in the stream or waterbody.

Ideally, vegetated buffers are natural and undisturbed. When a buffer must be disturbed (or has previously been disturbed), promptly replant a dense cover of strong rooted grasses, native plants, and native trees.

1.2 Using Vegetated Buffers

- The most effective natural undisturbed vegetated buffers are those that consist of undisturbed natural vegetation, including maintaining the original tree line along the stream or channel banks, when applicable.
- The buffer should remain undisturbed to the maximum extent practical. Any area that is temporarily disturbed should be immediately replanted with a dense cover of strong rooted natural grasses, native plants, and native trees.
- Buffers may also be created or enhanced by planting new vegetation of native varieties.
- The ideal slope of the buffer is less than 8% to prevent flows that may cause erosion of the buffer and/or stream bank.
- The length of the buffer should be no less than 25 feet. If there is a permeable berm at the lower end, the length of the buffer should be no less than 15 feet. Note that bermed vegetated buffers should not be located uphill from or within 20 feet of a septic field.

1.3 Construction

- Measure the rooftop and any other area that is going to be directed to the vegetated buffer. See sizing table on specifications sheet. From the site layout drainage area, select the size and type of buffer from the table.
- There are three types of buffers: disturbed, undisturbed, and berm. Undisturbed conditions or a berm reduces the required size of the stream buffer, as shown in the sizing table.
- Undisturbed buffers are likely to be less compacted and more likely to contain dense, well-established, vegetation. For these reasons, undisturbed buffers typically provide better stream protection (when applicable), infiltration, and pollutant removal.
- For example, a 1,000 square foot rooftop with a disturbed buffer would require at least 2,000 square feet of area with a minimum flow length of 25 feet. The use of an undisturbed buffer reduces the required area to 670 square feet, still with a minimum flow length of 25 feet. If a berm is added to undisturbed conditions, it can have a surface area of 500 square feet and have a minimum flow length of 15 feet.



1.3.1 Berm Design Option

- Buffer area can be further reduced through the use of a permeable berm at the bottom end of the buffer. The permeable berm is used to temporarily store stormwater runoff within the buffer, which increases the infiltration and reduces the required width of the buffer.
- Permeable berms should be constructed of well drained soils (sand, gravels, and sandy loams) that support plant growth and should be no more than 12" high.
- Appropriately sized outlets should be provided within permeable berms to ensure that the buffer will drain within 24 hours following the end of a rainfall event.
- A stone-protected overflow area through the berm may be used to manage the stormwater runoff generated by large storm events. The overflow point must be at least 10 feet from building foundations and 20 feet from the property line if flow is onto adjoining property. Erosion protection is critical.
- Bermed vegetated buffers should not be located uphill from or within 20 feet of a septic field.

1.3.2 Level Spreader

- All vegetated buffers require a level spreader to be used at the upstream end of the buffer to evenly distribute stormwater runoff into the vegetated buffer. The level spreader must be located at least 10 feet from building foundations.
- The standard level spreader for this application is a small stone trench filled with river rock, pea gravel, or #8 stone installed along a level contour. This stone trench should be 6" to 12" wide and 6" to 12" deep. Larger diameter stone may be required to stabilize entry points for larger contributing impervious areas.
- When applicable, the level spreader may be connected to a downspout through a T-connection to perforated pipes embedded in the stone trench.

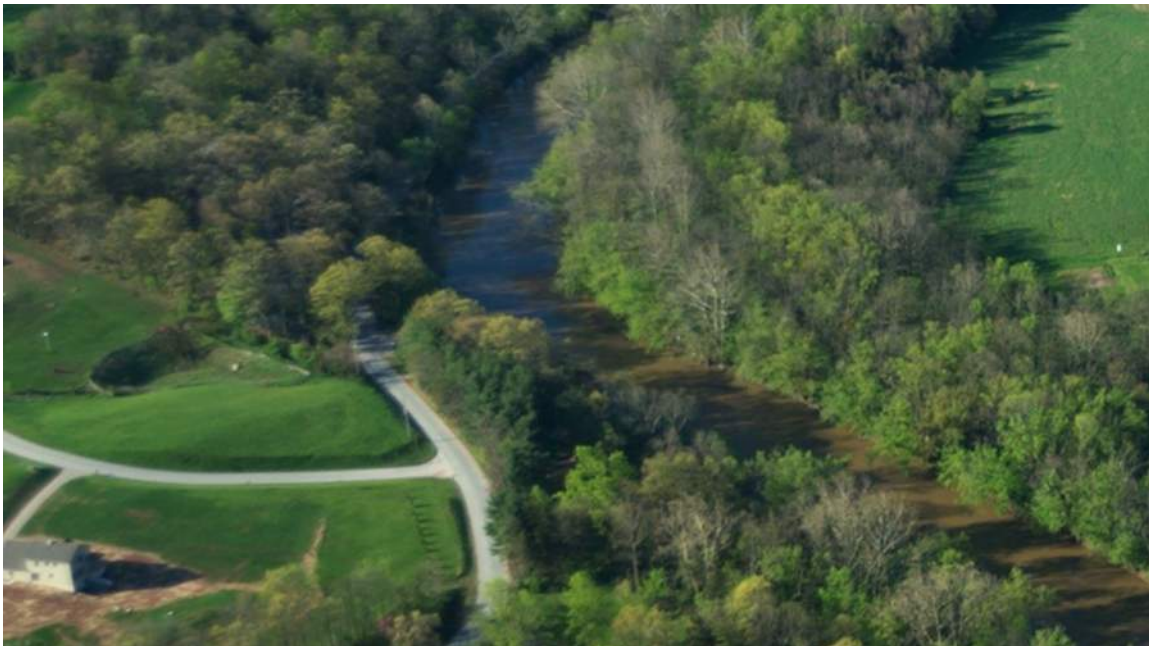
- Alternatively, a level spreader may be constructed using manufactured landscape or playground borders/barriers (plastic or recycled material only; no lumber ties or railroad ties). This installation requires a 2" drop on the downstream side to ensure positive flow (see detail on specifications sheet).
- Ensure level spreader overflow points are protected from erosion and not blocked by vegetation.
- If the impervious drainage area to any one entry point (e.g. a downspout) is less than or equal to 300 square feet, requirement for a level spreader **may** be waived if flow will flow as a sheet through the vegetated buffer area. In this case splash blocks or downspout protection pads can be used to introduce flow into vegetated buffer areas instead of a level spreader. Drainage areas greater than 300 square feet require construction of the level spreader. Vegetation requirements (below) for the vegetated buffer are the same regardless of use of level spreader or other energy dissipation.

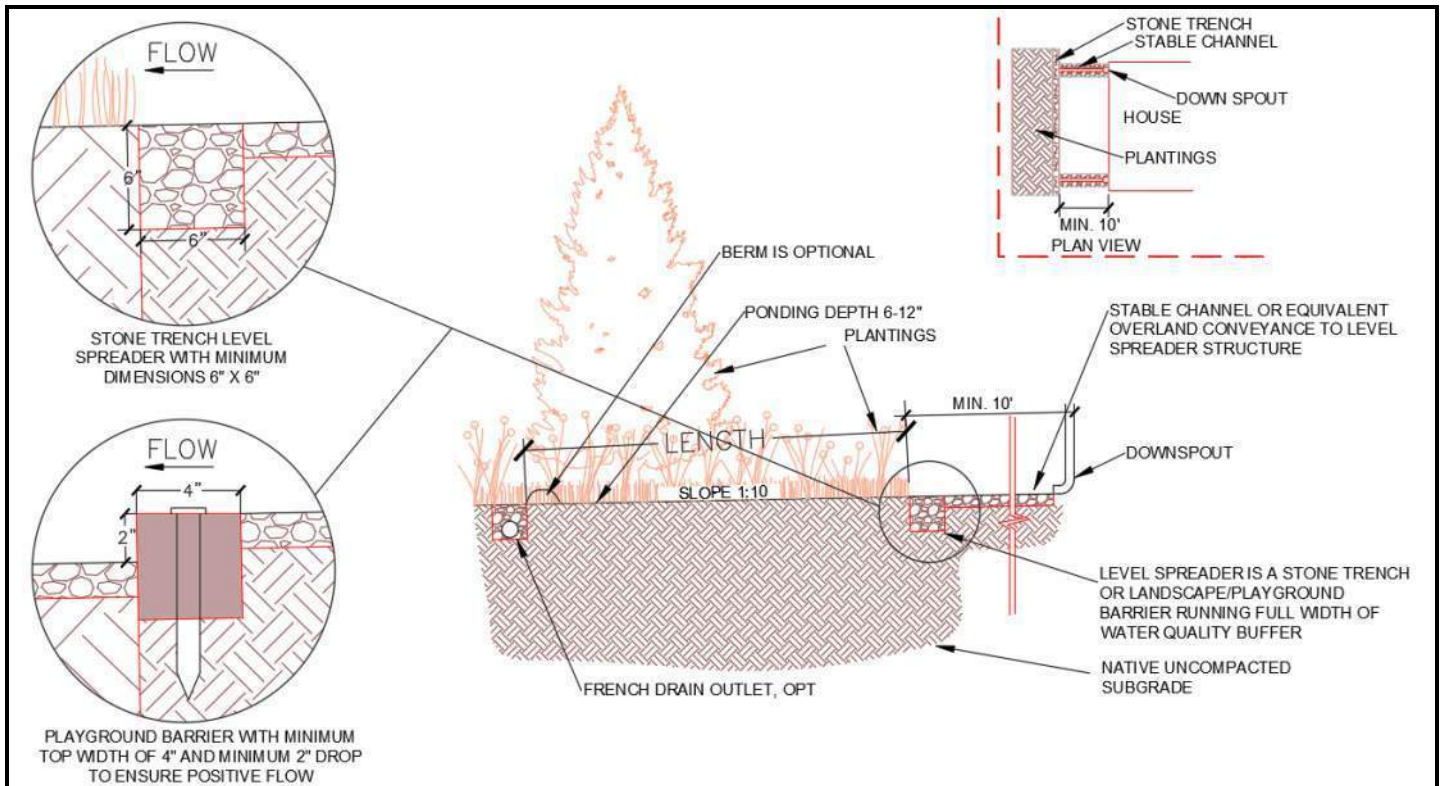
1.3.3 Vegetation

- Vegetation commonly present in vegetated buffers includes turf, trees, shrubs, and other herbaceous vegetation.
- When planting is necessary, choose grasses and other vegetation that will be able to tolerate the stormwater runoff rates and volumes that will pass through the buffer.
- Vegetation used in vegetated buffers should be able to tolerate both wet and dry conditions.

1.4 Maintenance

Clearly mark the buffer extents before construction begins to prevent unnecessary disturbance. After construction, maintain the level spreader and buffer vegetation as needed. Removal of invasive species or diseased plants and planting of new native species is permitted, so long as disturbance from these activities is minimized and the area is replanted.





TYPICAL COMPONENTS

CONSTRUCTION STEPS:

1. Review potential vegetated buffer areas and layout. Vegetated buffer areas should not exceed 8% slope and should direct water away from the home or other structures,
2. Bermed vegetated buffers should not be located uphill from or within 20 feet of a septic field. If there is a concentrated overflow, ensure it is at least 10 feet from building foundations and 20 feet from adjacent property lines.
3. Measure the area draining to the vegetated buffer and determine required surface area and minimum length from the table on the next page. Determine the desired buffer and level spreader options. **All runoff entering the buffer must be sheet flow.**
4. Vegetated buffer should be undisturbed when possible but may be replanted if disturbance is unavoidable.
5. Lay out and mark buffer area to remain undisturbed as well as level spreader location.
6. Construct level spreader by filling trench with appropriate stone and noting overflow points.
7. Construct vegetated buffer option. Install berm if applicable.
8. Construct erosion control at the flow entrance and exit points as applicable.
9. If natural vegetation is sparse in some areas, plant dense vegetation according to plan, or sod/seed. Ensure an irrigation plan is in place if needed.
10. Ensure temporary erosion control is in place as needed until vegetation establishment.

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SKETCH LAYOUT

PROVIDE PLAN AND ELEVATION VIEWS OF VEGETATED BUFFER AND HOUSE SHOWING ROOF AREA DIRECTED TO VEGETATED BUFFER AND KEY DIMENSIONS, CONNECTIONS AND OVERFLOW RELATIVE TO PROPERTY LINE. ATTACH ADDITIONAL PAGES IF NECESSARY.

SIZING CALCULATION:

Contributing Drainage Area (square feet)	WQ Buffer Type		
	Disturbed	Undisturbed	Berm
WQ Buffer Area (sq ft)			
100	200	70	50
500	1000	350	250
1000	2000	670	500
2000	4000	1400	1000
3000	6000	2700	1500
4000	8000	5400	2000
5000	10000	6700	2500

MEASURE CONTRIBUTING DRAINAGE AREA AND READ BUFFER AREA FOR GIVEN BUFFER TYPE. FOR SPECIFIC DRAINAGE AREAS NOT LISTED ON TABLE, INTERPOLATE BETWEEN THE CLOSEST VALUES LISTED.

CONTRIBUTING DRAINAGE AREA= _____ SQ FT
 FILTER STRIP AREA= _____ SQ FT
 CONVENTIONAL – 25' MINIMUM LENGTH
 BERM OPTION – 15' MINIMUM LENGTH

MAINTENANCE:

6. INSPECT GUTTERS AND DOWNSPOUTS REMOVING ACCUMULATED LEAVES AND DEBRIS, CLEANING LEAF REMOVAL SYSTEM(S).
7. IF APPLICABLE, INSPECT PRETREATMENT DEVICES FOR SEDIMENT ACCUMULATION. REMOVE ACCUMULATED TRASH AND DEBRIS.
8. WATER AS NEEDED TO PROMOTE PLANT GROWTH AND SURVIVAL ESPECIALLY IN THE FIRST TWO SEASONS.
9. LEAVE UNDISTURBED AS MUCH AS POSSIBLE BUT PROVIDE VEGETATION MAINTENANCE - MOW, PRUNE, AND TRIM AS NEEDED.
10. INSPECT THE WQ BUFFER FOLLOWING RAINFALL EVENTS. FIX EROSION ISSUES IMMEDIATELY.

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VEGETATED BUFFER
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APPENDIX A: INFILTRATION TESTING

When Do I Need to Do Infiltration Testing?

The following LID practices are infiltration-based features which must reliably drain (into the soil or through an underdrain that daylight to a stable outlet) to function as designed:

- LID-01 Dry Well
- LID-03 Modified French Drain
- LID-04 Permeable Pavers
- LID-05 Rain Gardens

The sizing criteria in the individual specifications are based on a required infiltration rate of 0.5 inches per hour. **Many of the native soils in the City of Greenville do not allow for adequate infiltration, therefore a perforated underdrain is required for these infiltration-based LID practices. No infiltration testing is required when using the required perforated underdrain.**

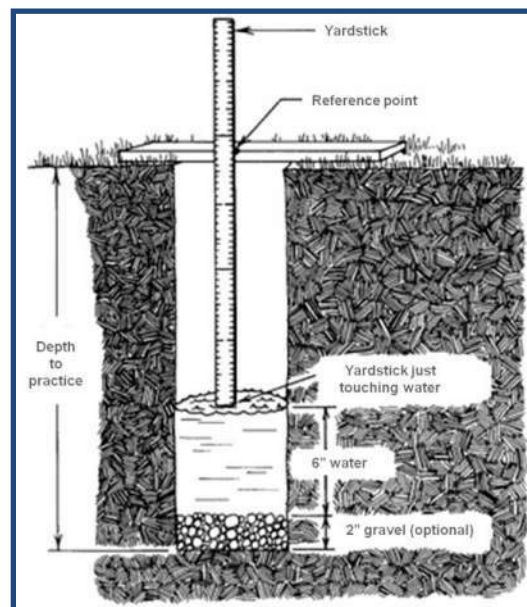
Infiltration testing may be done in either of the following two scenarios:

1. Perforated Underdrain Infeasible: If a functioning perforated underdrain is infeasible due to flat slopes (cannot install an underdrain with positive flow to a stable outlet that daylight) at the location of the infiltration-based LID practice and there are no other possible locations on site, then the following infiltration test may be performed to determine whether an infiltration-based LID practice (listed above) may be installed without a perforated underdrain. The test must return a minimum infiltration rate of 0.5 inches per hour to allow installation without a perforated underdrain. If the test indicates the infiltration rate is less than 0.5 inches per hour and an underdrain is infeasible, then infiltration-based features are not applicable and other LID practices should be used.
2. Verify High Infiltration Rate to Reduce BMP Size: If the site soils have an infiltration rate greater than or equal to 1.0 inch per hour, the size of infiltration-based LID practices (listed above) may be reduced. At the discretion of the property owner, the following infiltration test may be conducted to assess infiltration rate. For every 0.5 inches per hour in excess of the required 0.5 inches per hour, the LID practice size may be reduced by 10% (e.g. an infiltration rate of 1 inch per hour allows a decrease in size by 10%, an infiltration rate of 1.5 inches per hour allows a decrease in size by 20%, etc.) See each individual LID practice specification and detail for the practice-specific size adjustment procedure.

Testing Infiltration: A Simple Approach

When applicable, the following simplified test may be used to determine the infiltration rate of your site's soils.

1. Locate the approximate center of the area where you expect to build your feature.
2. Dig an access pit down to the bottom of the amended soils or gravel layer in the feature.
3. At that elevation dig a narrow test hole at least eight inches deep. You can optionally place 2" of coarse gravel in the bottom. The test hole can be excavated with small excavation equipment or by hand using a spade shovel or post-hole digger.
4. If you run into a hard layer that cannot be penetrated with a shovel or, you come across water in the hole, stop. Infiltration features should not be sited over impenetrable rock surfaces or over high water tables, so your site is inappropriate.
5. Place a flat board across the hole to serve as a measuring point (see figure).



Source: modified from www.ag.ndsu

6. Fill the hole with water to a depth of six inches. Measure from the flat board to the water surface. Record the exact time you stop filling the hole and the height of the water every 10 minutes for fast draining soils for a minimum of one hour or every 30 minutes for slow draining soils for a minimum of two hours.
7. Refill the hole again and repeat step 6 twice more. The third test will give you the best measure of how quickly your soil absorbs water when it is fully saturated.
8. If on the third test the water is dropping at least $\frac{1}{2}$ " per hour, the soil will work for infiltration-based LID practices. If the water is dropping at least 1" hour, you may make be able to reduce the size of the infiltration-based LID practice at that location.



Source: <https://newsstand.clemson.edu>



Source: www.learntogrow.com

APPENDIX B: FILTER MEDIA MIX

Greenville County has developed a filter media mix specification that is utilized for LID-05 Rain Gardens as well as other stormwater practices within the County. For consistency within the Greenville area, the City of Greenville recommends utilizing the Greenville County filter media mix, described below, or latest revision.

What is the recommended filter media mix?

The filter media shall be a uniform mix of sand and organic material meeting the following criteria.

- 80% medium to coarse washed sand
 - Use Masonry Sand
 - River Sand is NOT acceptable
- 20% stable composted material
 - Composted leaf/yard waste and organic/food waste are acceptable
 - Manure-based compost is NOT acceptable
- pH between 5.2 and 8.0 with an optimal range of 6.0 to 7.5
- Minimum infiltration rate of 1 inch per hour with an optimal range of 1 to 6 inches per hour

Receipt from the landscape supplier must be provided before construction of the LID practice to verify compliance with these requirements.

Why was the mix developed?

The filter media mix was developed for the following reasons:

1. Water Quality: To ensure that filter media and LID practices are effective at pollutant removal to improve water quality of stormwater runoff and Greenville County waterbodies.
2. Ease of Implementation: To specify filter media that is composed of locally available materials and can be provided pre-mixed by landscape suppliers without extensive testing.
3. Encourage LID: To streamline the process of acquiring, filter media and encourage the use of for LID practices.

Where is the mix available?

There are landscape suppliers in Greenville County which have confirmed they can pre-mix and provide this filter media to order. A list of potential suppliers is provided below. Contact the landscape suppliers in advance to arrange for timely filter media preparation.

Landscape Supplier	Website	Phone Number
Upstate Materials	http://upstatematerialsandmulch.com/	864-220-5154
Hensons' Inc. Mulch and More	http://hensonsinc.net/	864-963-9330