



AGENDA

Thursday, September 22, 2022: 6:00 PM
Planning Board
Douglass Community Center: 1185 W. Pennsylvania Ave

1. CALL TO ORDER

2. APPROVAL OF MINUTES

3. PUBLIC FORUM

- a. PD-11-22 Planned Development Preliminary Development Plan**
The Knollwood Tract Multi-Family

4. PUBLIC HEARING

- a. OA-03-22 Text Amendments to the Unified Development Ordinance**
UDO Sec. 4.2.1(B), (F) and G) and Sec. 4.14.3(A)(3)

5. UNFINISHED BUSINESS

6. NEW BUSINESS

7. ADJOURNMENT

Agenda Item

To: Planning Board

From: Pamela Graham, Principal Planner

Subject: PD-11-22: A Planned Development District - Preliminary Development Plan for Knollwood Multi-Family; Applicant: Hawthorne Residential Partners, Philip Payonk; Bob Koontz of KoontzJones Design PLLC, Authorized Agent; Owners: Knollwood Partners, LLC, Mid-Pines Development Group, LLC, and Kaveri Investment Management Co, LLC

Date: September 22, 2022

I. SUMMARY OF APPLICATION REQUEST:

Mr. Bob Koontz has submitted an application on behalf of Hawthorne Residential Partners for a Planned Development - Preliminary Development Plan in association with the Knollwood Conceptual Development Plan approved in 2017. The application for this phase of the Knollwood Tract CDP proposes 236 multi-family residential units on +/- 19.57 acres. The approved CDP calls for the following:

- Project total acreage = +/- 558.04;
- A wide range of allowable uses over the CDP site that include public institutional (elementary school), single-family and multi-family residential, retirement housing, hotel, personal services, manufacturing and wholesale trade, health and human services, arts, entertainment and recreation uses, religious institutions, and office (most, but not all, non-residential uses are restricted to MUA-1, which is the proposed location for the current PDP proposal);
- Total open space acreage = 111.6 (55.8 usable open space);
- Four types of project edge standards;
- Interconnective circulation for vehicular and non-vehicular travel;
- A prohibition of new wells within the development;
- Appropriate measures to mitigate noise and lighting impacts, to be included with each PDP application submittal.

II. PROJECT INFORMATION:

A. Property Owners(s)

1. PIN 858211667500 (PARID 00039300701)
Owned by Knollwood Partners, LLC
1010 Midland Road
Southern Pines, NC 28387

2. PIN 858210471209 (PARID 00037785)
Owned by Mid-Pines Development Group, LLC
PO Box 88
Southern Pines, NC 28388
3. PIN 858207694691 (PARID 00031176)
Owned by Kaveri Investment Management Company, LLC
3515 Collins Avenue, #4B
Miami Beach, Florida 33140

B. Applicant(s)

Hawthorne Residential Partners c/o Philip M. Payonk
806 Green Valley Road, Suite 311
Greensboro, NC 27408

C. Authorized Agent

Bob Koontz
Koontz Jones Design
150 South Page Street
Southern Pines, NC 28387

D. Property Information:

1. Street Address:

The subject property is currently unaddressed. Addresses will be assigned by Moore County following approval of the PDP.

2. Size of Property:

Total acreage in approved CDP:	+/-558.04
Area being developed in current PDP:	+/-19.57

3. Subject Property Description:

The subject project is located within the MUA-1 (“mixed-use area”) of the approved CDP and is described as being positioned north and east of the Midland Road/US-1 interchange. Based on rough measurements from GIS, MUA-1 includes +/- .6 mile of frontage along the north side of US-1 and is bordered by floodplain and wetlands associated with McDeed’s Creek along its northern boundary. PD-11-22 proposes to develop the southern portion of a connector road that will ultimately make connection with existing roads in the northern portion of MUA-2, providing a link between US-1 and Camp Easter Road. This southern portion of the roadway (described as “Boulevard” on development plans), will connect with US-1 across from the access to Air Tool Drive, and is currently shown terminating just short of the farthest edge of the project boundary, before the crossing of McDeed’s Creek.

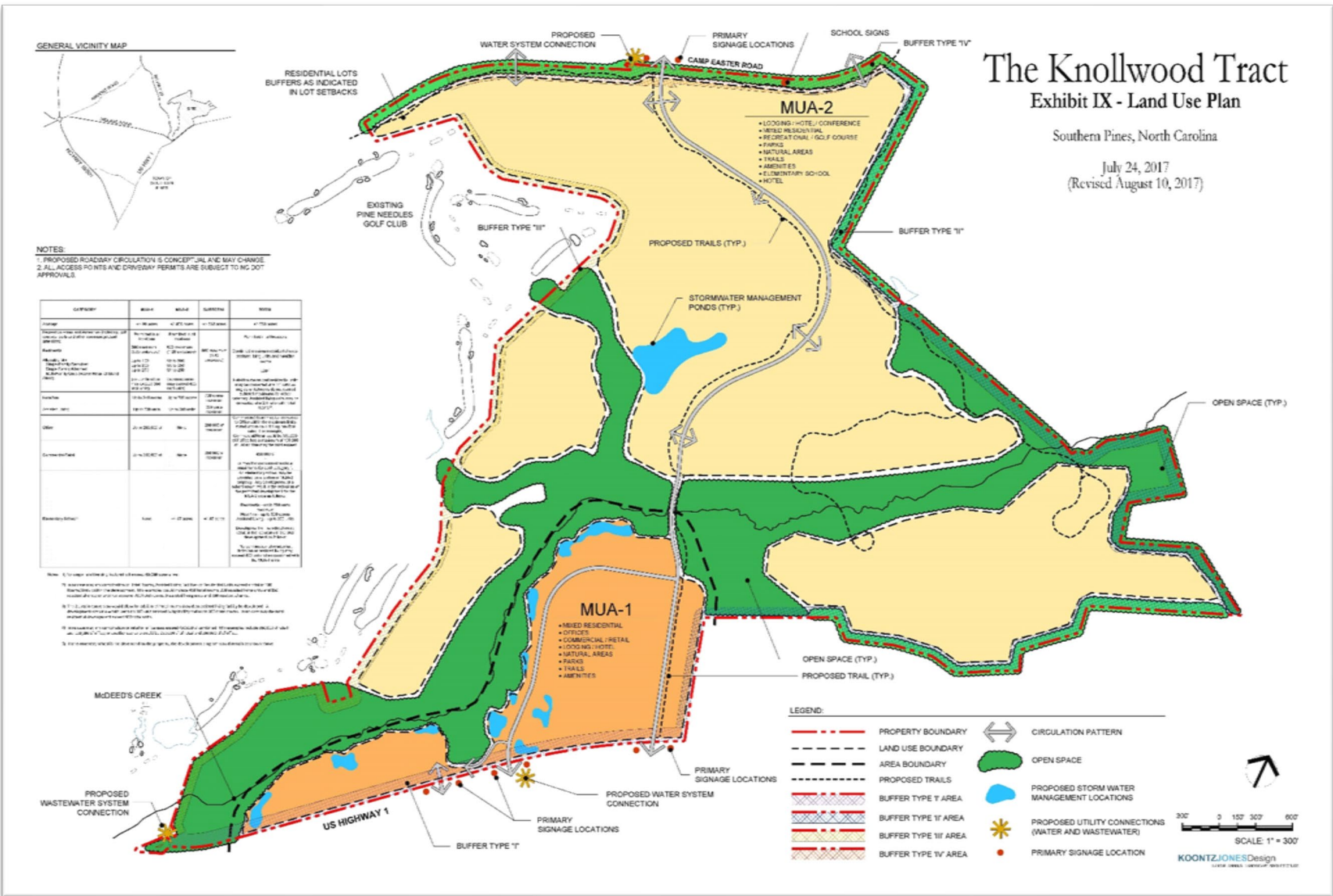
Figure 1: Aerial image taken over the site, looking north along sewer easement, with McDeed's Creek Elementary School near the top center of image



Figure 2: Aerial image taken over the site, with the existing Air Tool Drive access to US-1 in lower right



Figure 3: Knollwood CDP Conceptual Land Use Plan (2017)



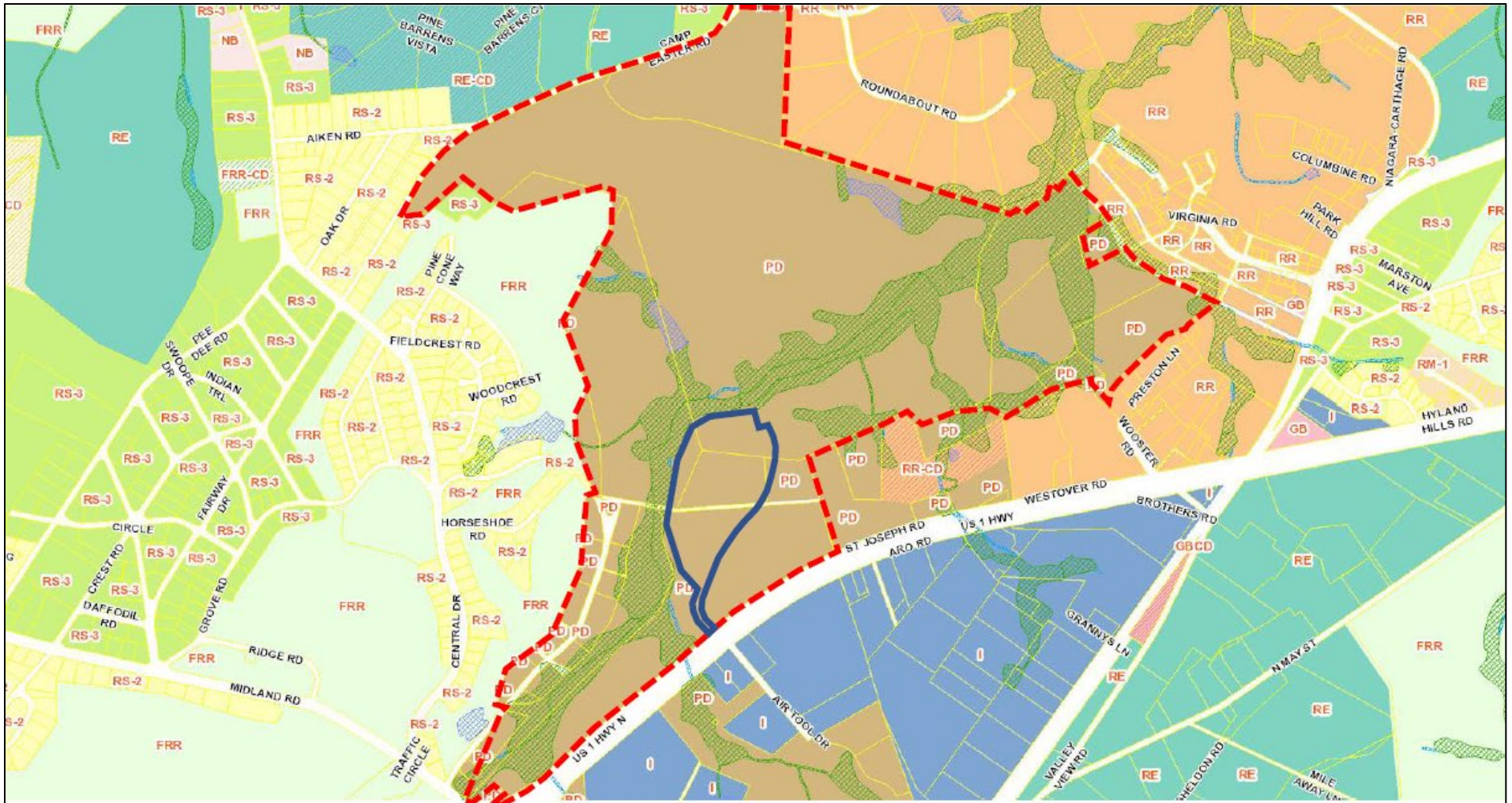
4. Jurisdiction

The subject property is currently located partially within Southern Pines' corporate boundary and partially in Southern Pines' ETJ. Per the CDP, each phase of development requires annexation prior to site plan approval. Site plan review will occur subsequent to the PDP approval.

5. Property Zoning Classification:

The zoning of the subject property is PD-Planned Development (See Figure 4: Zoning Vicinity Map below). The area within 400' of the edge of the US-1 right-of-way is designated as an Urban Transition Highway Corridor Overlay District. Only the proposed roadway lies within this zone. A Conceptual Development Plan (CDP) for the Knollwood Tract was approved by the Town of Southern Pines Town Council on August 24, 2017 as file PD-01-17. PD-02-17, approved in October of that same year, consisted of two phases, one for the McDeed's Creek Elementary School and the second for 100 detached single-family residential lots. Both of these phases were included as a portion of MUA-2, located in the northern portion of the property accessed from Camp Easter Road. The current and all future Preliminary Development Plan (PDP) applications must be consistent with the approved CDP or must request and be granted deviations from the CDP as part of the PDP review and approval process.

**Figure 4: Current Zoning Vicinity Map (Overall CDP outlined in Red, current PDP area roughly outlined in blue).
Planned Development zoning is shown in brown.**



III. STAFF REVIEW:

I. Review Process:

Applications for a Planned Development District (PD) are reviewed in accordance with UDO §2.18. Creating a Planned Development District is a three-step process including Conceptual Development Plan (CDP), Preliminary Development Plan (PDP), and Final Development Plan (FDP). The second step, PDP, is when a project or phase of a project are reviewed for compliance with the unique zoning standards established in the CDP. An application for approval of a Preliminary Development Plan (PDP) follows the procedure for quasi-judicial decisions by the Town Council. Prior to the Council's decision, the Planning Board may hold a Preliminary Forum to review the project.

II. Summary of Procedural Requirements:

- PDP Application Submitted: August 8, 2022
- PDP Application Complete: August 19, 2022
- Notice of September 22, 2022 Planning Board Preliminary Forum:
 - Posted On-site: September 1, 2022
 - Mailed: September 1, 2022
 - Internet: August 30, 2022
 - Newspaper: September 7, 2022 and September 14, 2022
- Planning Board Preliminary Forum: September 22, 2022

III. Applicable Criteria for Review:

The criteria for review and approval of a PDP are found in Chapter 2, §2.18.5(H), of the Town of Southern Pines Unified Development Ordinance. Staff analysis of how the application addresses these criteria begins on the following page of this document.

Preliminary Development Plan:

1. *The application demonstrates that it will achieve the purposes of the Planned Development District (PDD) and this section of the UDO.*
2. *The Preliminary Development Plan is consistent with the Conceptual Development Plan and conforms to all applicable provisions of this UDO;*
3. *The proposed Development is located in an area of the Town that is appropriate; and*
4. *The proposed Development will not cause the need for inefficient extensions and expansions of public facilities, utilities and services.*

IV. Town Staff Review and Comments:

○ Consultation with Technical Review Committee

The proposed development received a pre-application review in July of this year. A formal site plan review for this phase will occur following approval of the PDP by Town Council.

○ Consistency with Criteria for a Preliminary Development Plan:

The criteria against which a PDP shall be reviewed are found in UDO §2.18.5(H). The applicants have provided a Narrative addressing the criteria for a PDP as required by the UDO, which is enclosed with this report. Staff analysis of the application's ability to meet the criteria is as follows.

1. *The application demonstrates that it will achieve the purposes of the Planned Development District (PDD) and this section of the UDO.*

The purpose, intent, and general requirements for the Planned Development (PD) District are found in Chapter 3, §3.5.14, and are included in the paragraphs that follow.

The stated purpose for the District is “*to accommodate mixed land uses, such as office, residential, service, commercial, public or private recreational Development, and where consistent with the future land use map, light manufacturing and assembly uses that comply with the employment center Development Patterns in section 6.5*”.

The future land use map indicates Traditional Mixed Use for the subject project area, as well as the CDP area. This land use category is described in the Comprehensive Long-Range Plan as being appropriate to the Morganton Road area with expectations that the area will be built to urban levels, will incorporate a variety of uses and will have a street network accommodating modes of travel beyond the automobile.

The stated intent for the District is “*to allow mixed-use Developments in areas where sufficient public water and sewer service is available (or can readily be extended) and where the street system is adequate (or can be readily improved) to handle the projected traffic volumes generated by the Development.*”

An existing public water line transects the site, entering the site at the proposed road access point from US-1 and running north to the elementary school site. A force sewer main follows this same course, and runs along US-1 to the interchange with Midland Road. Mr. James Michel, Town Engineer, provided the following information regarding public utilities:

“Water and Sewer Comments:

1. The applicant has not yet provided a request for specific water and sewer capacity for staff to review. If the development uses the typical flow rates provided by the Department of Environmental Quality, then I do not foresee any issues with water and sewer capacity. This will be revisited upon receipt of a specific request.
2. There are a number of retaining walls which appear to encroach into the Town’s existing water and sewer easement. No such structures will be allowed within the easement.
3. The Town’s long term plan for the sewer system is to eliminate as many lift stations as possible due to their increased maintenance cost and risk of failure. The sewer for this project should be designed such that a future extension could eliminate the ARO lift station located on the opposite side of US1. In accordance with

UDO 4.15.6. Utilities to Be Consistent with Internal and External Development, an extension of the onsite sewer shall be designed to the edge of the property and additional sewer easement provided for future construction. The sewer shall also be designed for a future extension to the southwestern portion of the CDP area.”

This phase of the CDP will be accessed directly from US-1 and St. Joseph Road, which is a service road running parallel to US 1’s north side for +/- 2,500’, terminating at the proposed development access point. The proposed road to the development is currently shown terminating just short of the project boundary’s far edge (north end), before reaching McDeed’s Creek and associated wetlands. The plan indicates a “Future R/W” will make the crossing and provide connection to northern portions of the CDP area. A traffic impact analysis (TIA) was prepared and reviewed by Mr. Michel, who was awaiting responses to questions of the traffic engineer at the time of this writing. Based on currently known information, Mr. Michel has offered the following comments regarding the TIA:

“TIA Comments

1. In accordance with UDO 4.11.7. Street Connections Required, the construction of the spine road shall extend to the edge of the remaining undeveloped portion of a single Tract.
2. The Traffic Engineer has recommended that the spine be able to expand to a 4 lane cross section in the future. A cross section showing how this can be achieved while maintaining the required medians, landscaping, and trails should be prepared. Additional ROW should be provided if the current proposal does not provide adequate area for the future expansion.
3. The spine road shall be designed with curb and gutter unless otherwise approved by Town Council. To provide a maintainable ditch cross section, all vegetation would have to be removed from the roadside ditches and median creating a roadway that does not match the look or feel shown in the CDP documents.
4. Due to the location of the northern site drive in the curve of the road, turning movements shall be limited to right in, right out, and left in. The driveway and median crossing shall be designed to prevent left turn movements out of the driveway.
5. All site drives shall include a southbound turn lane with 100’ of storage in addition to the northbound turns lanes recommended in the TIA.”

The UDO’s stated intent of the regulations for the District is included as a list on the following page. The applicant has responded to each item in their written Narrative, included as an attachment to this report.

- a. *Encourage planned, large-tract Development, including service, office, commercial, residential, public or private recreational Development or light industrial uses;*
 - b. *Exclude heavy commercial and heavy industrial land uses;*
 - c. *Encourage Development in areas located on major thoroughfares and collector streets;*
 - d. *Encourage vehicular access from service drive and other local streets;*
 - e. *Provide performance standards to help ensure compatible land uses;*
 - f. *Encourage common or shared parking;*
 - g. *Promote creativity and innovation in the design that leads to more appropriate relationships between land uses and features;*
 - h. *Facilitate clustering of Development thereby increasing the amount of saved land;*
 - i. *Foster Development of a network of open space to serve a variety of recreational and environmental purposes designed and located with respect to existing unique natural features and environmentally sensitive areas;*
 - j. *Improve connectivity within and between Developments to promote mobility and enhance walkability;*
 - k. *Integrate public spaces and amenities to promote community gatherings and activities;*
 - l. *Establish coordinated land plan and consistent treatment of common design elements;*
 - m. *Provide the flexibility to respond to market conditions over longer projected Development periods due to the scale of such Developments; and*
 - n. *If residential land uses are proposed, provide a variety of Lot sizes and Dwelling types to expand the spectrum of housing choices for households of various type, size, income and age.*
2. *The Preliminary Development Plan is consistent with the Conceptual Development Plan and conforms to all applicable provisions of the UDO.*

The UDO sets the expectation for uniqueness in the design and development of Planned Developments in §3.5.14, allowing for a significant degree of deviation from the UDO. In §3.5.14(F)(3), the UDO specifically allows for alternative standards as long as the proposal:

- Meets or exceeds the general intent of the UDO standards for the base districts;
- Is appropriate given the specific mix of uses and character of the development; and
- Achieves a more efficient, safe, or economical land use without detracting from the quality of the development or the community as a whole.

The CDP for the Knollwood Tract was originally approved in 2017, with the PDP for the first phase approved that same year. The current proposal constitutes the second phase. The CDP's development program for "MUA-1", the area that includes this phase, allows for up to 250 multi-family residential units, as well as the possibility for the following uses:

- Up to 100 single-family detached residential units;
- Up to 200 single-family attached residential units;
- Up to 240 hotel/inn units;
- Up to 300 assisted living units;
- Up to 200,000 square feet of office space; and
- Up to 350,000 square feet of commercial/retail space (with no single retail building footprint to exceed 60,000 square feet);
- The total square footage for retail and office uses combined may not exceed 450,000 square feet.

It should be noted that, per the CDP, total residential units may not exceed 300 in the MUA-1 area, and with the current proposal for 236 units, additional residential development in MUA-1 will be limited. Additionally, total residential units, including assisted living units, over the entirety of the CDP area are limited to 900. If the 236 units currently being proposed are approved, the developer will have a balance of 664 units remaining for future development.

In comparing the PDP proposal with the approved CDP, staff analyzed the following CDP provisions that are relevant to this phase, as indicated below.

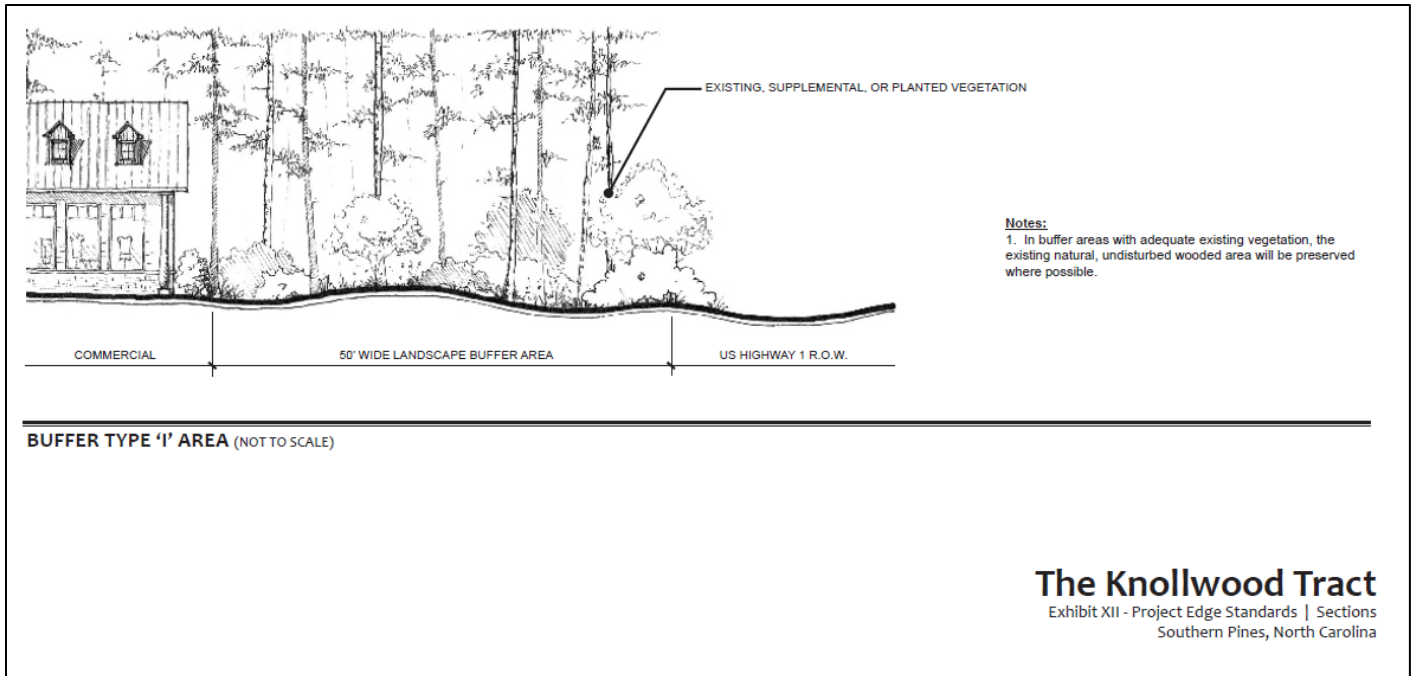
a. Proposed Uses.

Multi-family residential uses are permitted by the CDP, with a maximum allowable number of units being 250. The proposal includes 236 units.

b. Project Edge Standards.

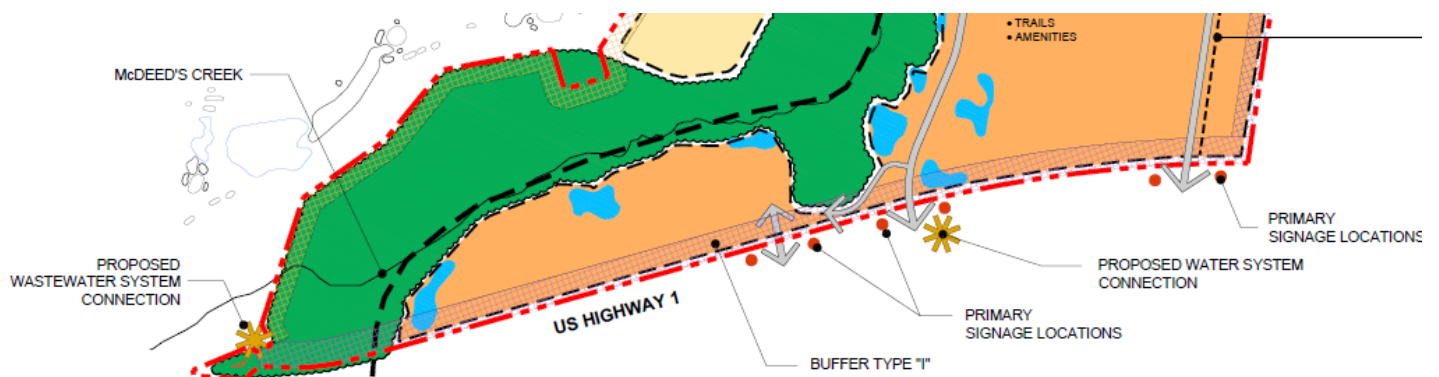
The CDP provided for a range of project edge standards, assigned to different perimeter areas of the development. For the current proposal, Type 1 Project Edge would be applied to the US-1 frontage for an area measuring fifty feet from the right-of-way. Type 1 calls for the following:

"Existing vegetation may be utilized and enhanced with landscaping and hardscape features. Utilities and project monument signage may be installed within Project Edge at drive entries. Primary signage may be installed at three drive entries as demonstrated on the Land Use Plan and Conceptual Master Plan. Community greenway trail may be installed in Project Edge."



c. *US-1 Access*

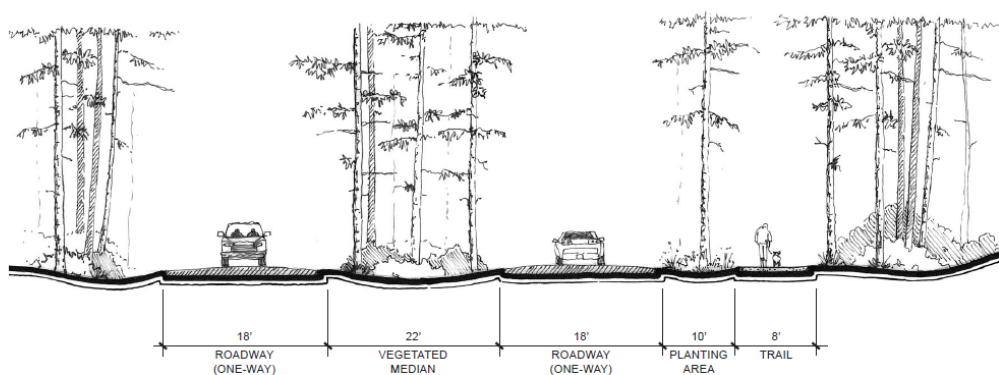
The images below show conceptual-level expectations for US-1 access points at the time of the CDP approval. The current phase proposes one access point; if conditions on the property make two additional accesses feasible for future phases, the CDP will allow for them.





- d. *Street standards included in the CDP include a seventy-four foot wide cross-section for the “Connector Road” that is meant to access this project.*

Staff discussions are currently underway regarding specifics of the cross-section included in the CDP. The design does not include curb and gutter and presents a depressed median that is not a preferred design by the Town’s Public Works Department due to difficulties with maintenance. However, the proposed design is consistent with the CDP approval, and provides an 8’ trail on one side of the Connector Road. Staff are also discussing the sight distance conflicts presented by a planted median on a road with significant curvature near the access points of the development. The CDP cross-section, shown below, is subject to change before final approval of the PDP.



Connector Road (NOT TO SCALE)

- e. *The CDP provided for a minimum of 20% (111.6 acres) of open space throughout the community, with 55.8 acres, or 10% of the total project acreage, being usable. It also calls for a minimum 5' wide sidewalk in residential areas on at least one side of the roadway unless street design does not have curb and gutter.*

Sheet L-1.2 of the submitted plans for the PDP indicate that the current phase provides +/- 10.98 acres, or 56.1%, of open space, with +/- 9.92 acres being usable. The plans include a running tabulation of open space, as shown below.

OPEN SPACE SUMMARY (PER SECTION 5.0 OF CONCEPTUAL DEVELOPMENT PLAN):

OPEN SPACE SUMMARY				
PHASE	OVERALL OPEN SPACE (PROVIDED)		USEABLE OPEN SPACE (PROVIDED)	
1A & 1B	44.20	acres	41.17	acres
2C / 2D	10.98	acres	9.92	acres
TOTAL PROVIDED	55.18	acres	51.09	acres
REQUIRED OPEN SPACE (20%/10%)	111.6	acres	55.80	acres
TOTAL REMAINING TO PROVIDE	56.42	acres	4.71	acres

- f. *Section 5.5.10 of the CDP states that ninety acres of the Town's high-density allotment of watershed credits shall be allocated to the MUA-1 area, with the current phase utilizing 11.10 acres of the ninety acre allocation.*

Staff has located no record of an application or a Watershed Protection Permit for this allotment. If the allotment has not yet been granted, an application will be required and Town Council may choose to allocate the acreage concurrent with PDP approval for this phase.

3. *The proposed Development is located in an area of the Town that is appropriate.*

The PDP is proposed for an area with access to a major highway that provides access to downtown Southern Pines as well as nearby shopping and medical facilities. Existing water and sewer lines are available to the development; however, the project site is located in a protected watershed and contains significant environmentally-sensitive features including wetlands and floodplain associated with McDeed's Creek, as well as an identified wildlife corridor and adjacent red cockaded woodpecker foraging area. While the proposed uses throughout the CDP area, with this phase being one component, are supported by the property's designation as Traditional Mixed Use in the CLRP, it will be critical for the development to respect the need to protect sensitive areas to the highest reasonable degree.

4. *The proposed Development will not cause the need for inefficient extensions and expansions of public facilities, utilities and services.*

Public water and sewer are available to serve the proposed development. Extension of town services such as police and fire protection will require extension to the area after annexation; however, the lands immediately adjacent to the west and south are within the Town's corporate boundary. The extension of these services to this site constitutes an efficient expansion of coverage.

○ **Requested Deviations from the Approved CDP and/or UDO:**

1. For the current phase, the following deviation from the UDO is noted:

The applicant addresses parking for this phase as follows:

Parking Areas		
Parking for the Project's multi-family residential buildings will be provided through surface parking. UDO Section 4.5 sets forth the following parking standards:		
Land Use	Minimum Vehicle Parking Spaces	Minimum Bicycle Parking Spaces
Multi-Family		
0-1 bedrooms	1 space per Dwelling Unit	
2-3 bedrooms	2 spaces per Dwelling Unit	1 space per 10 Dwelling Units
Visitor Parking	1 space per 5 units	
Based on these standards, the Project will require a minimum of 439 parking spaces (1.86 spaces per unit). Proposed parking for the Project is as follows:		
Parking Proposed	- 422 (1.78 spaces per unit)	

2. The CDP states that appropriate measures to mitigate noise and lighting impacts are to be included with each PDP application submittal. Staff has been unable to locate any reference to this in the current application, and has requested additional information from the applicant.

○ **Noteworthy Project Elements for Planning Board and Town Council Consideration**

- Approval of the Knollwood Multi-Family PDP will allow 236 multi-family residential units with a clubhouse, associated parking, and other amenities such as a swimming pool, all arranged in the manner depicted in Preliminary Development Plan Sheet L1.1. Following approval, the proposal may proceed to engineering plan (site plan) review with town staff and architectural review with the Town Council.

IV. Cooperating Agency Review and Comments:

A request for comments from agencies was emailed to representatives of the Town of Southern Pines Engineering, Streets, Utilities, Fire and Recreation & Parks Departments as well as representatives of the North Carolina Department of Transportation, Sandhills Community College, Moore County Airport Authority, U.S. Fish and Wildlife Service and the Regional Land Use Advisory Commission on August 24, 2022.

- Dago Juarez Pozos, NCDOT District Engineer, responded on August 31, 2022 that they have no comments at this time, that they have worked with the applicant on the access, and will handle requirements under the NCDOT driveway permit.
- RLUAC has provided an in-depth review of the project, which is attached. In summary, the agency pointed out the following:
 - The site is adjacent to a red cockaded woodpecker active foraging area, which is designated as Critical to Protect in the Fort Bragg Compatible Use Rating System. The report encourages the applicant to preserve as many mature pine trees and as much contiguous undisturbed forested land on the site as possible. It also points out that the applicant has committed to following required protocols and permits related to preserving this endangered species.
 - The site is located within a Wildlife Habitat Connector, also designated as Critical to Protect in the Use Rating System. The same recommendation is repeated here: a strong recommendation of the preservation of contiguous stands of mature pines on the site to help maintain the viability of the wildlife connector.
 - Lastly, the report encourages the Town and the applicant to take measures to limit the impact of stormwater runoff due to the location being within the Mill Creek High Quality Waters Management Area.

V. ATTACHMENTS:

The following materials are provided as attachments to this staff memorandum:

1. Knollwood Multi-Family PDP Application
2. Knollwood Multi-Family Existing Conditions Plan
3. Knollwood Multi-Family Overall Site Plan
4. Knollwood Multi-Family Site Plan Enlargement
5. Knollwood Multi-Family Conceptual Utilities and Drainage Plan
6. Applicant's PDP Narrative
7. Applicant's Justification Document
8. Knollwood Multi-Family TIA Addendum
9. NCDOT Comments
10. RLUAC Comments

VI. PLANNING BOARD ACTION:

Pursuant to North Carolina General Statute §160D-301(b)(6) and Unified Development Ordinance §2.5.2, the Planning Board may hold a Preliminary Forum on a matter requiring

a quasi-judicial decision by the Town Council. However, no part of the forum or any recommendation may be used as a basis for the deciding board.

Therefore, the Planning Board may wish to use the following motion to identify issues to bring to the attention of the Town Council at the evidentiary hearing.

I move to adopt the following for transmission to the Town Council as a result of the August 18, 2022 Preliminary Forum on application PD-11-22, Knollwood Multi-Family Project PDP:

The information presented at the forum indicated that the following issues be considered in applying the criteria for a PDP to application PD-11-22:

- 1.

In addition, the following concerns were raised during the forum, but do not seem to apply in determining whether the PDP criteria are satisfied:

- 1.



Planned Development District Preliminary Development Plan Application

Fee: \$ _____ Date Received: _____ Case No.: PD- _____

Project Information:

Project Name: Knollwood Multi-Family

Physical Address: US Highway 1 Across f/ Air Tool Dr.

PIN: 858211667500; 858207694691;
858208786370; 858300709512; 858200882301

Parcel ID: 00039300701; 00031176; 00037579701;
00037581; 20080332

Site Size: ±19.57 AC

Zoning: PD

Applicant:

Name(s): Hawthorne Residential Partners C/O Philip M Payonk

Email: ppayonk@hrpliving.com Phone: 336-553-1700

Mailing Address: 806 Green Valley Road, Suite 311 Greensboro, NC 27408

Authorized Agent, if different from Applicant:

Name(s): Koontz Jones Design C/O Bob Koontz

Email: bkoontz@koontzjones.com Phone: 910-684-8487

Mailing Address: 150 S Page St Southern Pines, NC 28387

Legal Property Owner(s), if different from Applicant:

Name(s): Knollwood Partners, LLC; Kaveri Investment Management

Email: kelly.miller@rossresorts.com Phone: 910-692-5372

Mailing Address: 1010 Midland Rd Southern Pines, NC 28387;
C/O Pine Needles & Mid Pines, PO Box 88 Southern Pines, NC 28388

1/12/22

TO THE TOWN OF SOUTHERN PINES PLANNING BOARD AND TOWN COUNCIL:

I, the undersigned, do hereby make application to and petition the Planning Board and Town Council for approval of a Planned Development District – Preliminary Development Plan as required by the Town of Southern Pines Zoning Ordinance. The following information is submitted in support of this application:

The property which is the subject of this application is located on the North side of US Hwy 1 (St./Ave.), between Midland Rd (St./Ave.) and St Joseph Rd (St./Ave.). The property has a frontage of 1500 feet and a depth of 1685 feet.

The request is based upon **Section 2.18.5** of the **Town of Southern Pines Unified Development Ordinance**. The proposed use of the property is as follows:

Multi-Family Residential Development

Date: 8/2/2022

DocuSigned by:

Phil Payork

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Applicant

PLANNING DEPARTMENT
TOWN OF SOUTHERN PINES
801 SE Service Road, Southern Pines, NC 28387
plan@southernpines.net (910) 692-4003 www.southernpines.net

1/12/22

APPOINTMENT OF AGENT

The undersigned owner(s), Hawthorne Residential Partners, hereby appoint(s) Koontz Jones Design as the exclusive agent for the purpose of making an application to the Town of Southern Pines for the approval of the Planned Development District – Preliminary Development Plan described in the attached application. The owner(s) hereby agree(s) that this agent has the authority to act for and on behalf of the owner(s) as follows:

1. to submit an application and required supplemental materials;
2. to appear at public meetings and give representation and comments on behalf of the owner(s);
3. to accept conditions or recommendations made by the Town of Southern Pines Town Council for the approval of a Planned Development District – Preliminary Development Plan; and
4. to act on behalf of the property owner(s) without limitations with regard to any and all things directly or indirectly connected with or arising out of any application for a Planned Development District -Preliminary Development Plan under the Southern Pines Unified Development Ordinance.

This Appointment of Agent shall remain in effect until final resolution of the attached application.

Signed this _____ day of 8/2/2022, _____.

DocuSigned by:

Phil Payonk

800EEF98600042F

Property Owner/ Applicant

Property Owner


Agent

1/12/22

APPOINTMENT OF AGENT

The undersigned owner(s), Knollwood Partners, LLC, hereby appoint(s) Koontz Jones Design as the exclusive agent for the purpose of making an application to the Town of Southern Pines for the approval of the Planned Development District – Preliminary Development Plan described in the attached application. The owner(s) hereby agree(s) that this agent has the authority to act for and on behalf of the owner(s) as follows:

1. to submit an application and required supplemental materials;
2. to appear at public meetings and give representation and comments on behalf of the owner(s);
3. to accept conditions or recommendations made by the Town of Southern Pines Town Council for the approval of a Planned Development District – Preliminary Development Plan; and
4. to act on behalf of the property owner(s) without limitations with regard to any and all things directly or indirectly connected with or arising out of any application for a Planned Development District -Preliminary Development Plan under the Southern Pines Unified Development Ordinance.

This Appointment of Agent shall remain in effect until final resolution of the attached application.

Signed this 2nd day of August, 2022.

Kelly B Miller
Property Owner

Kelly B Miller
Property Owner

D. R. W.
Agent

1/12/22

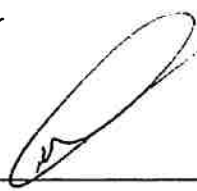
APPOINTMENT OF AGENT

The undersigned owner(s), Kaveri Investment Management, hereby appoint(s) Koontz Jones Design as the exclusive agent for the purpose of making an application to the Town of Southern Pines for the approval of the Planned Development District – Preliminary Development Plan described in the attached application. The owner(s) hereby agree(s) that this agent has the authority to act for and on behalf of the owner(s) as follows:

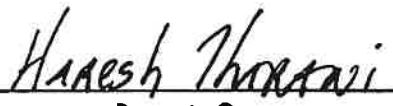
1. to submit an application and required supplemental materials;
2. to appear at public meetings and give representation and comments on behalf of the owner(s);
3. to accept conditions or recommendations made by the Town of Southern Pines Town Council for the approval of a Planned Development District – Preliminary Development Plan; and
4. to act on behalf of the property owner(s) without limitations with regard to any and all things directly or indirectly connected with or arising out of any application for a Planned Development District -Preliminary Development Plan under the Southern Pines Unified Development Ordinance.

This Appointment of Agent shall remain in effect until final resolution of the attached application.

Signed this 2nd day of August, 2022.



Property Owner



Property Owner



Agent

1/12/22

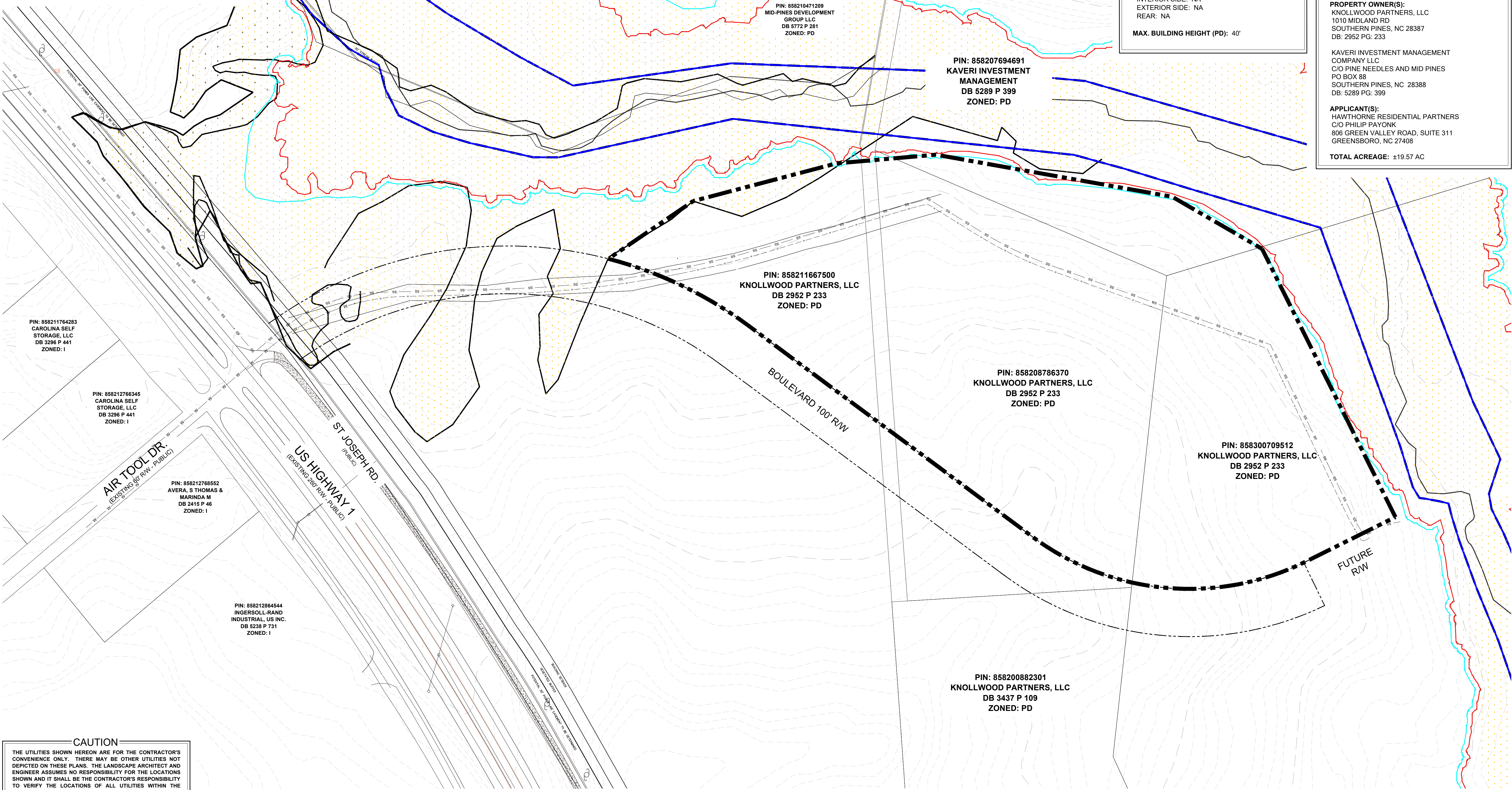
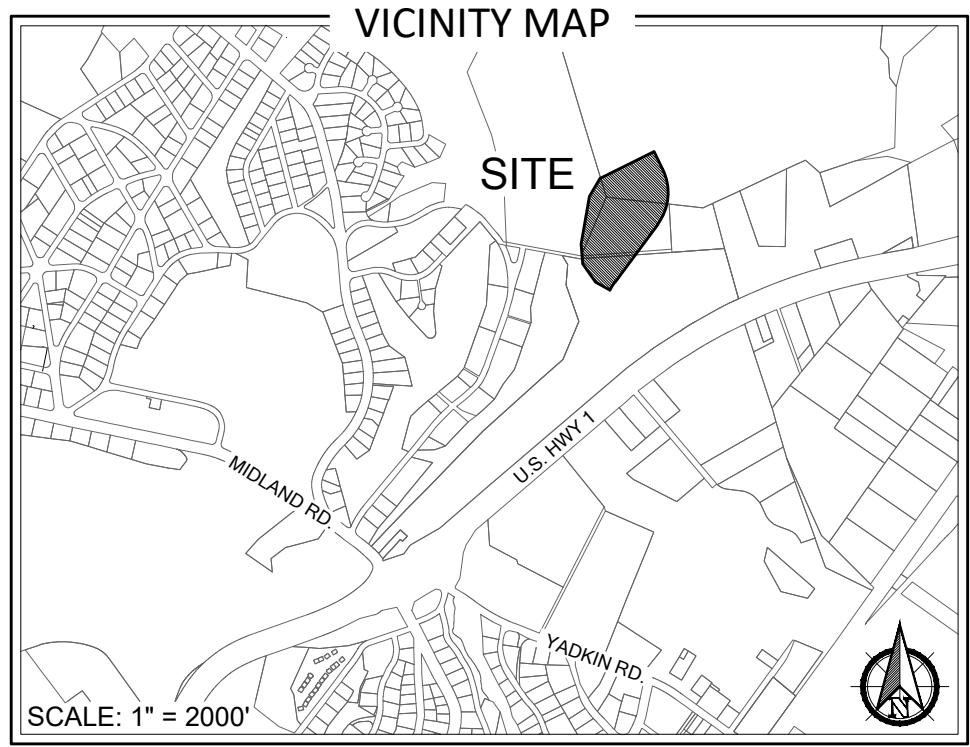
UDO §2.18 Planned Development

§2.18.5(H) Preliminary Development Plan Criteria

- (1) The application demonstrates that it will achieve the purposes of the PDD and this section;
- (2) The Preliminary Development Plan is consistent with the Conceptual Development Plan and conforms to all applicable provisions of this UDO;
- (3) The proposed Development is located in an area of the Town that is appropriate; and
- (4) The proposed Development will not cause the need for inefficient extensions and expansions of public facilities, utilities and services.

1/12/22

ADJACENT PROPERTY OWNERS									
PIN	PARID	NAME	NAME2	ADDRESS	CITY	STATE	ZIP	DEED_BOOK	DEED_PAGE
858200550063	00992004	MOORE COUNTY		PO BOX 905	CARTHAGE	NC	28327-090:403		881
858200882301	20080332	KNOLLWOOD PARTNERS, LLC		1005 MIDLAND RD	SOUTHERN PINES	NC	28387	3437	109
858200984373	00038965	SMITH, EMERY III		120 ST JOSEPH RD	SOUTHERN PINES	NC	28387	1759	81
858207674895	00041315	MID-PINES DEVELOPMENT GROUP LLC		PO BOX 88	SOUTHERN PINES	NC	28388	5772	281
858207694691	00031176	KAVERI INVESTMENT MANAGEMENT	COMPANY LLC	C/O PINE NEEDLES AND MID PINES	SOUTHERN PINES	NC	28388	5289	399
858208786370	00037581	KNOLLWOOD PARTNERS, LLC		1010 MIDLAND RD	SOUTHERN PINES	NC	28387	2952	233
858208889487	00032241	CHANDLER, DACIA A		54 TORERO TRL	NEWMAN	GA	30263	4114	490
858208989858	00036505	MCNAIR, OLLIE (HRS)	C/O SHIRLEY ALLEN	170 COX ST	SOUTHERN PINES	NC	28387	75	589
858210457187	00041312	MID-PINES DEVELOPMENT GROUP LLC		PO BOX 88	SOUTHERN PINES	NC	28388	5772	281
858210458371	00041263	MID-PINES DEVELOPMENT GROUP LLC		PO BOX 88	SOUTHERN PINES	NC	28388	5772	281
858210459473	00041336	MID-PINES DEVELOPMENT GROUP LLC		PO BOX 88	SOUTHERN PINES	NC	28388	5772	281
858210471209	00037785	MID-PINES DEVELOPMENT GROUP LLC		PO BOX 88	SOUTHERN PINES	NC	28388	5772	281
858210471209	00037785	MID-PINES DEVELOPMENT GROUP LLC		PO BOX 88	SOUTHERN PINES	NC	28388	5772	281
858211552746	00041308	MID-PINES DEVELOPMENT GROUP LLC		PO BOX 88	SOUTHERN PINES	NC	28388	5772	281
858211564056	00992137	MID-PINES DEVELOPMENT GROUP LLC		PO BOX 88	SOUTHERN PINES	NC	28388	5772	281
858211567333	00041314	MID-PINES DEVELOPMENT GROUP LLC		PO BOX 88	SOUTHERN PINES	NC	28388	5772	281
858211661887	00041333	MID-PINES DEVELOPMENT GROUP LLC		PO BOX 88	SOUTHERN PINES	NC	28388	5772	281
858211667500	00039300701	KNOLLWOOD PARTNERS, LLC		1010 MIDLAND RD	SOUTHERN PINES	NC	28387	2952	233
858211667500	00039300702	KNOLLWOOD PARTNERS, LLC		1010 MIDLAND RD	SOUTHERN PINES	NC	28387	2952	233
858213147933	00037975	MID-PINES DEVELOPMENT GROUP		1010 MIDLAND RD	SOUTHERN PINES	NC	28387	990	369
858300405678	00034538	WHITEHEAD, LAURA J		220 PINE CONE WAY	SOUTHERN PINES	NC	28387	4441	99
858300426454	00032274	KIKER, ADAM		140 AQUA SHED CT	ABERDEEN	NC	28315	5410	72
858300709512	00037579701	KNOLLWOOD PARTNERS, LLC		1010 MIDLAND RD	SOUTHERN PINES	NC	28387	2952	233
858300709512	00037579702	KNOLLWOOD PARTNERS, LLC		1010 MIDLAND RD	SOUTHERN PINES	NC	28387	2952	233
858300724449	00991753	COUNTY OF MOORE		PO BOX 905	CARTHAGE	NC	28327	5144	593
858315523635	20010648	CURREY, JAMES E & FRANCES D		141 PINE BARRENS CT	SOUTHERN PINES	NC	28387	4920	400
858315538280	00038409	BURBIDGE, MICHAEL F BISHOP OF	ROMAN CATHOLIC DIOCESE RALEIGH	7200 STONEHENGE DR	RALEIGH	NC	27613-162:4034		345
858315635197	10001608	GOSSMAN, F JOSEPH	BISHOP ROMAN CATHOLIC DIOCESE	7200 STONEHENGE DR	RALEIGH	NC	27613	1958	523
858315635655	00991755	GOSSMAN, F JOSEPH	BISHOP ROMAN CATHOLIC DIOCESE	7200 STONEHENGE DR	RALEIGH	NC	27613	1958	519
858318319032	00034638	DUBY, TOBIN M	DUBY, DEANNA J	670 FAIRWAY DR	SOUTHERN PINES	NC	28387	5132	372
858318401812	00032762	DASH, MICHAEL E		665 FAIRWAY DRIVE	SOUTHERN PINES	NC	28387	4644	165
858318401995	00039716	DAWSON, HILDA JONES TRUSTEE		675 FAIRWAY DRIVE	SOUTHERN PINES	NC	28387	5731	69
858318410115	00032856	GEORGE, DAVID MATTHEW		690 FAIRWAY DRIVE	SOUTHERN PINES	NC	28387	5084	163
858318410297	00038143	BROWN, LAWRENCE D		710 FAIRWAY DR	SOUTHERN PINES	NC	28387	822	554
858318411470	00035951	MARKEY, BERNARD F (HRS)		720 FAIRWAY DR	SOUTHERN PINES	NC	28387-220:V 108		1714
858318412552	00035324	RODRIGUEZ, ANDRES F VERA	ARANGO, DRIANA	726 FAIRWAY DR	SOUTHERN PINES	NC	28387	5503	290
858318413633	00036511	MCNEIL, JOE NATHAN	MCNEIL, JANET	730 FAIRWAY DR	SOUTHERN PINES	NC	28387-220:511		554
858318414713	00035121	LYCANS, JASON M	LYCANS, HEATHER G	33 PINE LAKE DRIVE	CARTHAGE	NC	28327	5546	117
858318414836	00034996	ELIAS, DUSTIN LEE &	MAUREEN MICHELE	3148 COBB HILL LN	OAKTON	VA	22124-230:5570		422
858318416829	00035387	CHRIST CHURCH ANGLICAN		750 FAIRWAY DRIVE	SOUTHERN PINES	NC	28387	5570	427
858320818917	00036259	QUICK, PATRICK E JR	QUICK, PATRILLA	430 ROUNDABOUT RD	CARTHAGE	NC	28327	1467	298
858320824372	00036258	GENT, STEPHEN F		420 ROUNDABOUT RD	CARTHAGE	NC	28327	1370	91
858320913803	00035397	MEDLIN, JEFFREY T	MEDLIN, ANGELA R	440 ROUNDABOUT RD	CARTHAGE	NC	28327	2124	256
858320917732	00032719	DANA, RICHARD & SANDRA		PO BOX 283	SOUTHERN PINES	NC	28388-028:495		132
859205097877	00037582	KNOLLWOOD PARTNERS, LLC		1010 MIDLAND RD	SOUTHERN PINES	NC	28387	2952	233
859317006758	00036982	KNOLLWOOD PARTNERS, LLC		1010 MIDLAND RD	SOUTHERN PINES	NC	28387	2952	233
859317011631	00036257	DANA, RICHARD L & SANDRA O		PO BOX 283	SOUTHERN PINES	NC	28388	1413	199
859317015699	00034658	VAMVAKIAS, PRAXITALIS N		490 ROUNDABOUT RD	CARTHAGE	NC	28327	5328	464
PIN	PARID	NAME	NAME2	ADDRESS	CITY	STATE	ZIP	DEED_BOOK	DEED_PAGE



FLOODPLAIN DATA

THIS PROPERTY IS LOCATED IN FLOOD ZONE 'X' (AREAS OF MINIMAL FLOODING)

THE LOCATION OF THE 100-YEAR FLOODPLAIN PER NFIP FIRM COMMUNITY PANEL(S) NO: 8582 MAP(S): 3710858200J DATE: OCTOBER 17, 2006

ZONING INFORMATION

ZONING CLASSIFICATION(S):
(PD) PLANNED DEVELOPMENT
W/ APPROVED CDP - PD-01-17 APPROVED AUGUST 24, 2017

EXISTING SETBACKS (PD):
FRONT: NA
INTERIOR SIDE: NA
EXTERIOR SIDE: NA
REAR: NA

MAX. BUILDING HEIGHT (PD): 40'

LEGEND

- = PROJECT BOUNDARY
- - - = EXISTING MINOR CONTOUR
- - - = EXISTING MAJOR CONTOUR
- SS SS = EXISTING SEWER LINE
- = EXISTING WATER LINE
- = EXISTING STREAM
- = EXISTING FLOOD WAY
- - - = 100 YEAR FLOOD PLAIN
- - - = 500 YEAR FLOOD PLAIN
- - - = EXISTING WETLAND

PROPERTY INFORMATION

PROPERTY OWNER(S):
KNOLLWOOD PARTNERS, LLC
1010 MIDLAND RD
SOUTHERN PINES, NC 28387
DB: 2952 PG: 233

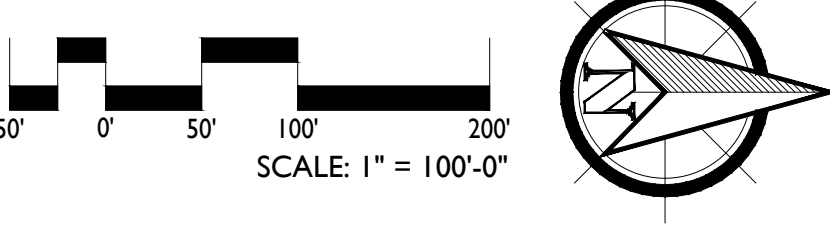
KAVERI INVESTMENT MANAGEMENT COMPANY LLC
C/O PINE NEEDLES AND MID PINES
PO BOX 88
SOUTHERN PINES, NC 28388
DB: 5289 PG: 399

APPLICANT(S):
HAWTHORNE RESIDENTIAL PARTNERS
C/O PHILIP PAYONK
806 GREEN VALLEY ROAD, SUITE 311
GREENSBORO, NC 27408

TOTAL ACREAGE: ±19.57 AC

CAUTION

THE UTILITIES SHOWN HEREON ARE FOR THE CONTRACTOR'S CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT DEPICTED ON THESE PLANS. THE LANDSCAPE ARCHITECT AND 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 PROJECT LIMITS. ALL DAMAGE MADE TO THE EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY BY THE CONTRACTOR.



PRELIMINARY PLANS - NOT RELEASED FOR CONSTRUCTION (FOR REVIEW ONLY)

KOONTZJONESDesign
LAND PLANNING | LANDSCAPE ARCHITECTURE

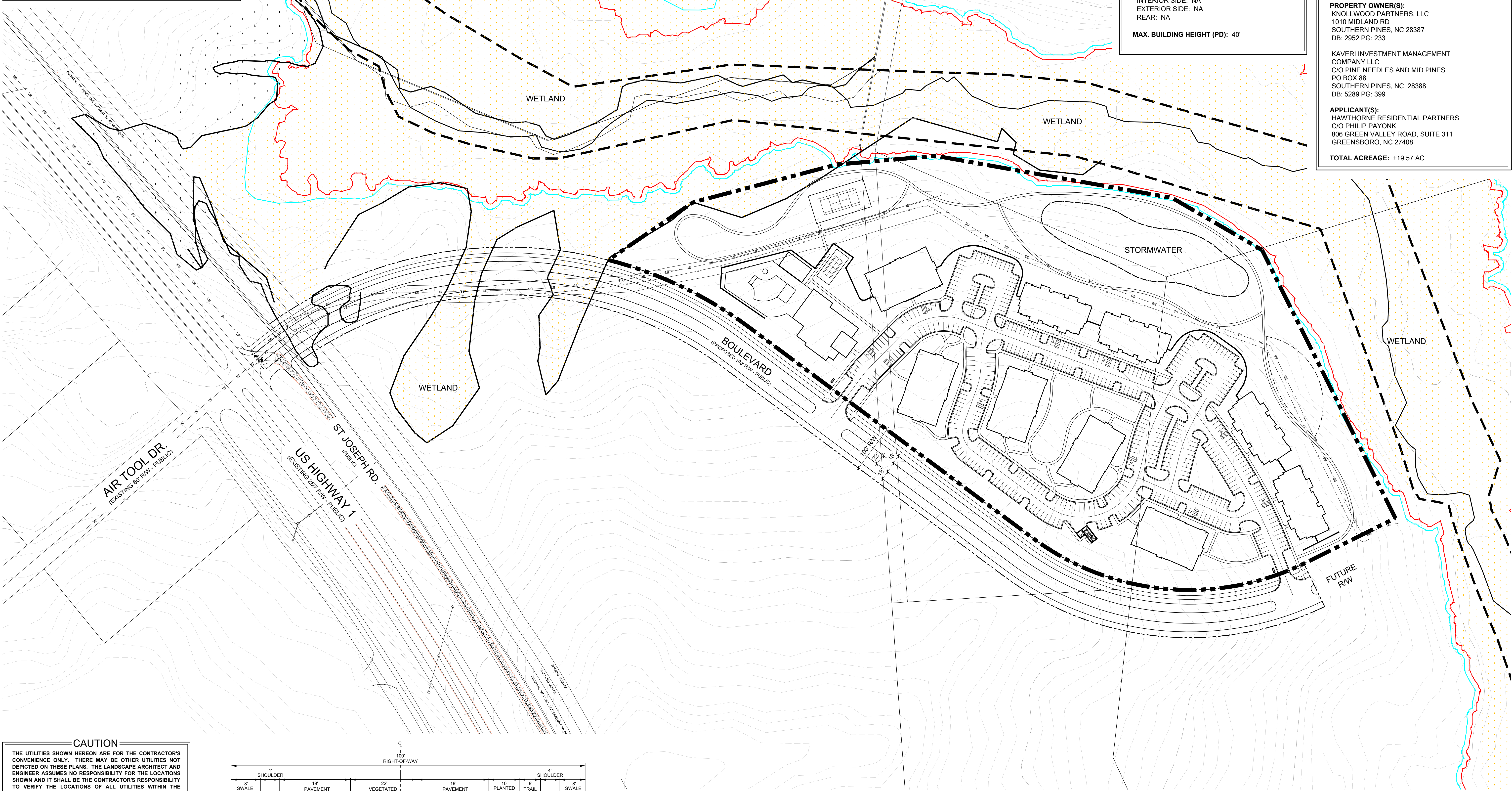
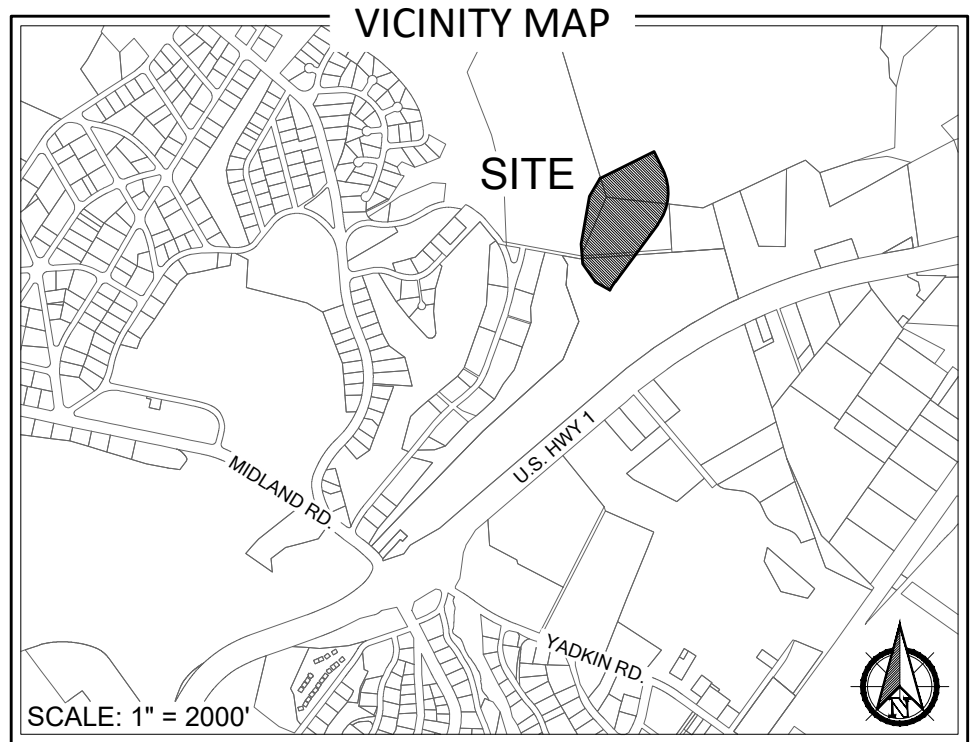
150 S PAGE STREET
SOUTHERN PINES, NC 28387
P: (910) 684-9467
W: www.koontzjonesdesign.com

REVISIONS:

REVISIONS:

KNOLLWOOD MULTI-FAMILY PROJECT
PRELIMINARY DEVELOPMENT PLAN
SOUTHERN PINES, NORTH CAROLINA
EXISTING CONDITIONS

DATE: 08-08-2022
DESIGNED BY: REK
DRAWN BY: PJS
CHECKED BY: REK
SCALE: 1" = 100'-0"
PROJECT #: KID21028
SHEET NUMBER:
L-1.0



FLOODPLAIN DATA

THIS PROPERTY IS LOCATED IN FLOOD ZONE 'X' (AREAS OF MINIMAL FLOODING)

THE LOCATION OF THE 100-YEAR FLOODPLAIN PER NFIP FIRM COMMUNITY PANEL(S) NO: 8582 MAP(S): 3710858200J DATE: OCTOBER 17, 2006

ZONING INFORMATION

ZONING CLASSIFICATION(S):
(PD) PLANNED DEVELOPMENT
W/ APPROVED CDP - PD-01-17 APPROVED AUGUST 24, 2017

EXISTING SETBACKS (PD):
FRONT: NA
INTERIOR SIDE: NA
EXTERIOR SIDE: NA
REAR: NA

MAX. BUILDING HEIGHT (PD): 40'

LEGEND

- = PROJECT BOUNDARY
- - - - = EXISTING MINOR CONTOUR
- - - - = EXISTING MAJOR CONTOUR
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- - - - = EXISTING WATER LINE
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- - - - = 100 YEAR FLOOD PLAIN
- - - - = 500 YEAR FLOOD PLAIN
- - - - = EXISTING WETLAND

PROPERTY INFORMATION

PROPERTY OWNER(S):
KNOLLWOOD PARTNERS, LLC
1010 MIDLAND RD
SOUTHERN PINES, NC 28387
DB: 2952 PG: 233

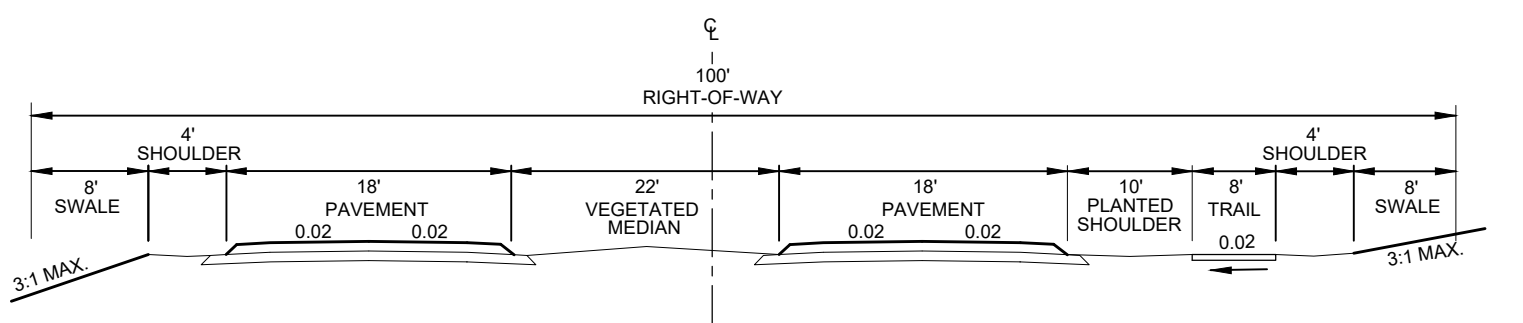
KAVERI INVESTMENT MANAGEMENT COMPANY LLC
C/O PINE NEEDLES AND MID PINES
PO BOX 88
SOUTHERN PINES, NC 28388
DB: 5289 PG: 399

APPLICANT(S):
HAWTHORNE RESIDENTIAL PARTNERS
C/O PHILIP PAYONK
806 GREEN VALLEY ROAD, SUITE 311
GREENSBORO, NC 27408

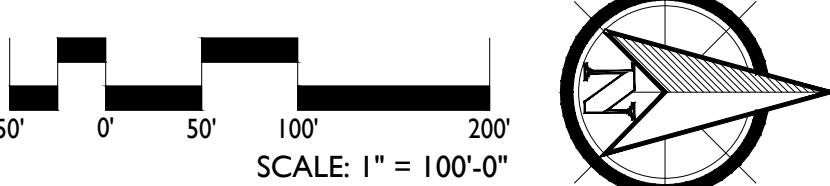
TOTAL ACREAGE: ±19.57 AC

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100' RIGHT-OF-WAY (BOULEVARD)
SECTION (EXCEEDS CONCEPTUAL DEVELOPMENT PLAN)
NTS



PRELIMINARY PLANS - NOT RELEASED FOR CONSTRUCTION (FOR REVIEW ONLY)

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150 S PAGE STREET
SOUTHERN PINES, NC 28387
P: (910) 684-9467
W: www.koontzjonesdesign.com

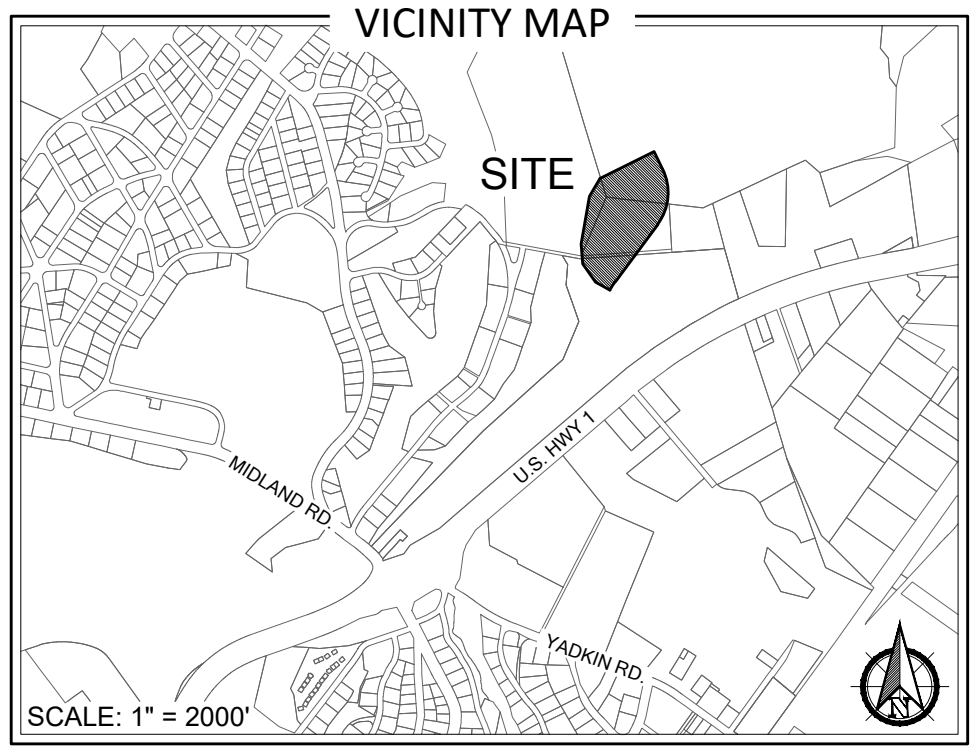
REVISIONS:

REVISIONS:

KNOLLWOOD MULTI-FAMILY PROJECT
PRELIMINARY DEVELOPMENT PLAN
SOUTHERN PINES, NORTH CAROLINA
SITE PLAN - OVERALL

DATE: 08-08-2022
DESIGNED BY: REK
DRAWN BY: PJS
CHECKED BY: REK
SCALE: 1" = 100'-0"
PROJECT #: KID21028
SHEET NUMBER: **L-1.1**





ZONING INFORMATION

ZONING CLASSIFICATION(S):
(PD) PLANNED DEVELOPMENT
W/ APPROVED CDP - PD-01-17 APPROVED
AUGUST 24, 2017

EXISTING SETBACKS (PD):
FRONT: NA
INTERIOR SIDE: NA
EXTERIOR SIDE: NA
REAR: NA

MAX. BUILDING HEIGHT (PD): 40'

LEGEND

- = PROJECT BOUNDARY
- - - = EXISTING MINOR CONTOUR
- - - = EXISTING MAJOR CONTOUR
- SS SS = EXISTING SEWER LINE
- = EXISTING WATER LINE
- = EXISTING STREAM
- = EXISTING FLOOD WAY
- = 100 YEAR FLOOD PLAIN
- = 500 YEAR FLOOD PLAIN
- - - = EXISTING WETLAND
- = OPEN SPACE
- = USEABLE OPEN SPACE

PROPERTY INFORMATION

PROPERTY OWNER(S):
KNOLLWOOD PARTNERS, LLC
1010 MIDLAND RD
SOUTHERN PINES, NC 28387
DB: 2952 PG: 233

KAVERI INVESTMENT MANAGEMENT COMPANY LLC
C/O PINE NEEDLES AND MID PINES
PO BOX 88
SOUTHERN PINES, NC 28388
DB: 5289 PG: 399

APPLICANT(S):
HAWTHORNE RESIDENTIAL PARTNERS
C/O PHILIP PAYONK
806 GREEN VALLEY ROAD, SUITE 311
GREENSBORO, NC 27408

TOTAL ACREAGE: ±19.57 AC

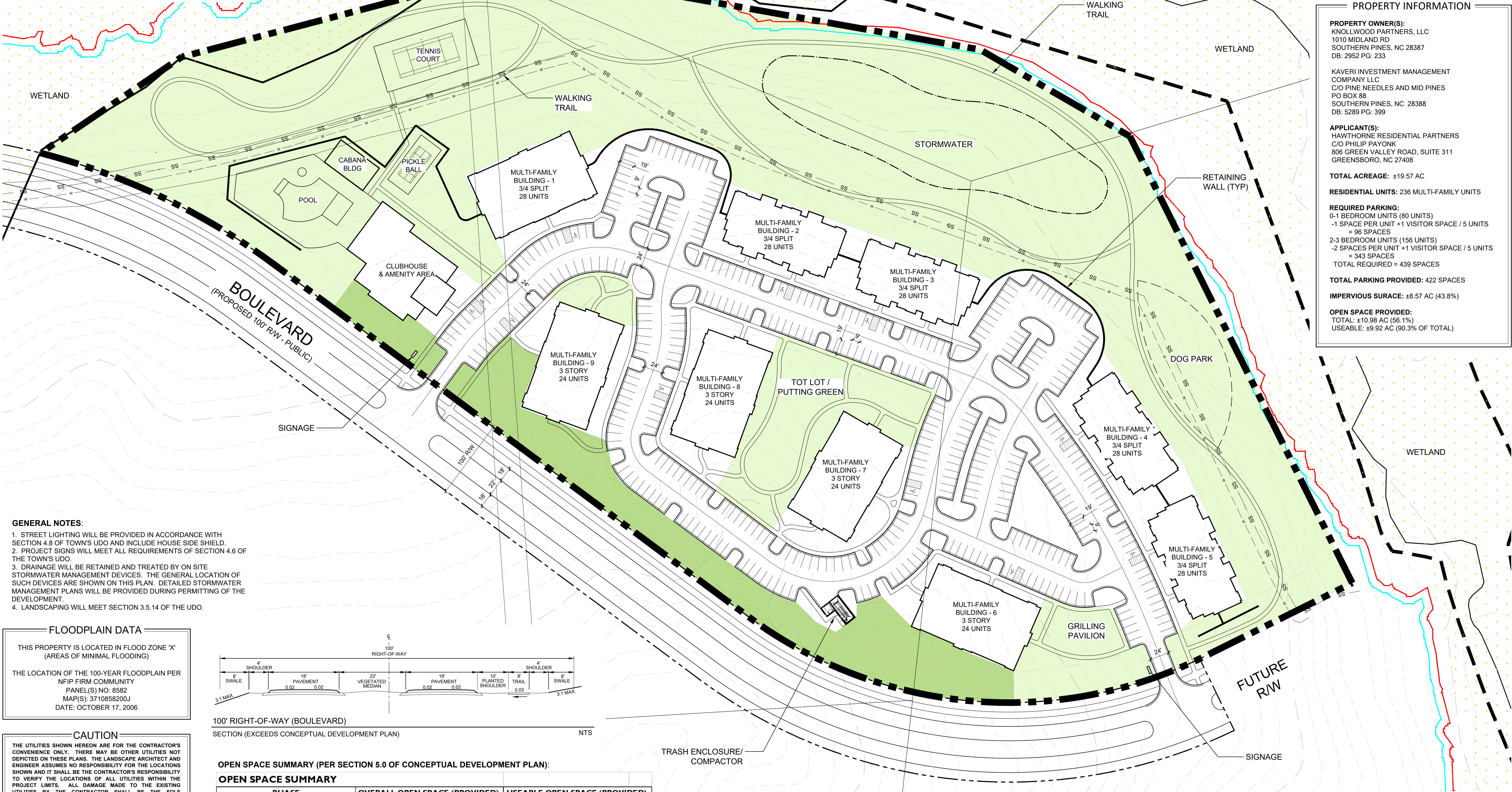
RESIDENTIAL UNITS: 236 MULTI-FAMILY UNITS

REQUIRED PARKING:
0-1 BEDROOM UNITS (80 UNITS)
-1 SPACE PER UNIT +1 VISITOR SPACE / 5 UNITS
= 96 SPACES
2-3 BEDROOM UNITS (156 UNITS)
-2 SPACES PER UNIT +1 VISITOR SPACE / 5 UNITS
= 343 SPACES
TOTAL REQUIRED = 439 SPACES

TOTAL PARKING PROVIDED: 422 SPACES

IMPERVIOUS SURFACE: ±8.57 AC (43.8%)

OPEN SPACE PROVIDED:
TOTAL: ±10.98 AC (56.1%)
USEABLE: ±9.92 AC (90.3% OF TOTAL)



GENERAL NOTES:

1. STREET LIGHTING WILL BE PROVIDED IN ACCORDANCE WITH SECTION 4.8 OF TOWN'S UDO AND INCLUDE HOUSE SIDE SHIELD.
2. PROJECT SIGNS WILL MEET ALL REQUIREMENTS OF SECTION 4.6 OF THE TOWN'S UDO.
3. DRAINAGE WILL BE RETAINED AND TREATED BY ON SITE STORMWATER MANAGEMENT DEVICES. THE GENERAL LOCATION OF SUCH DEVICES ARE SHOWN ON THIS PLAN. DETAILED STORMWATER MANAGEMENT PLANS WILL BE PROVIDED DURING PERMITTING OF THE DEVELOPMENT.
4. LANDSCAPING WILL MEET SECTION 3.5.14 OF THE UDO.

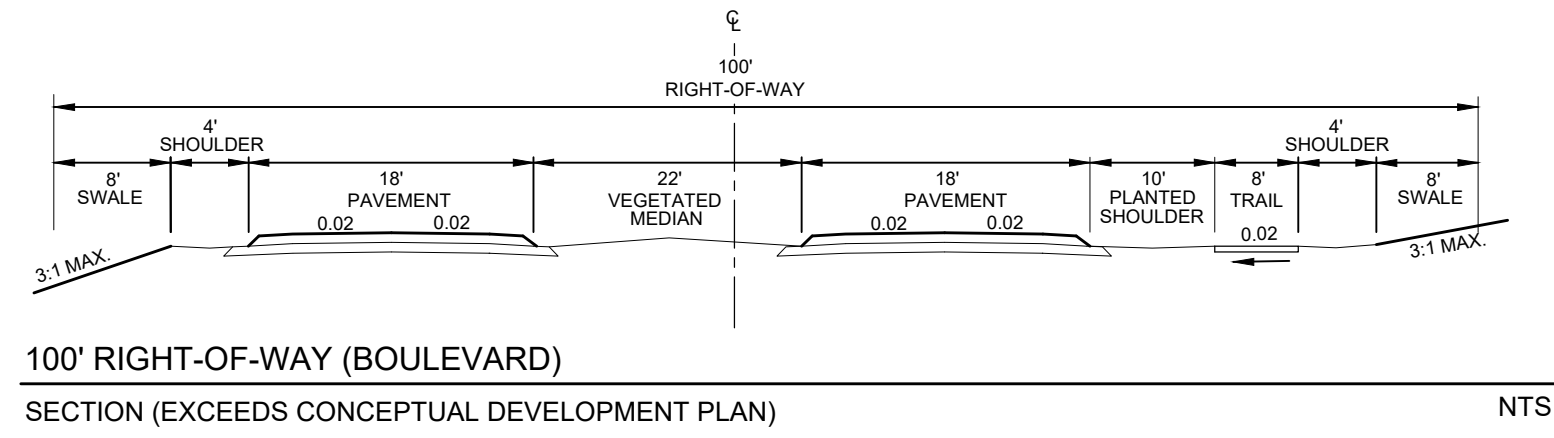
FLOODPLAIN DATA

THIS PROPERTY IS LOCATED IN FLOOD ZONE 'X' (AREAS OF MINIMAL FLOODING)

THE LOCATION OF THE 100-YEAR FLOODPLAIN PER NFIP FIRM COMMUNITY PANEL(S) NO: 8582 MAP(S): 3710858200J DATE: OCTOBER 17, 2006

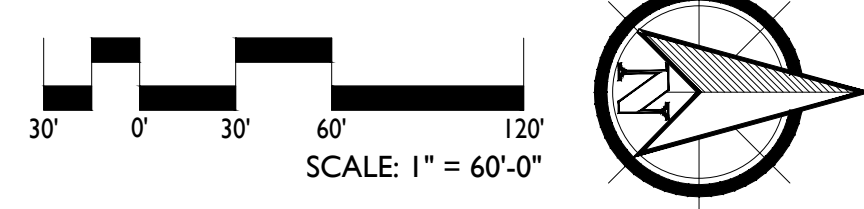
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OPEN SPACE SUMMARY (PER SECTION 5.0 OF CONCEPTUAL DEVELOPMENT PLAN):

PHASE	OVERALL OPEN SPACE (PROVIDED)	USEABLE OPEN SPACE (PROVIDED)
1A & 1B	44.20 acres	41.17 acres
2C / 2D	10.98 acres	9.92 acres
TOTAL PROVIDED	55.18 acres	51.09 acres
REQUIRED OPEN SPACE (20%/10%)	111.6 acres	55.80 acres
TOTAL REMAINING TO PROVIDE	56.42 acres	4.71 acres



PRELIMINARY PLANS - NOT RELEASED FOR CONSTRUCTION (FOR REVIEW ONLY)

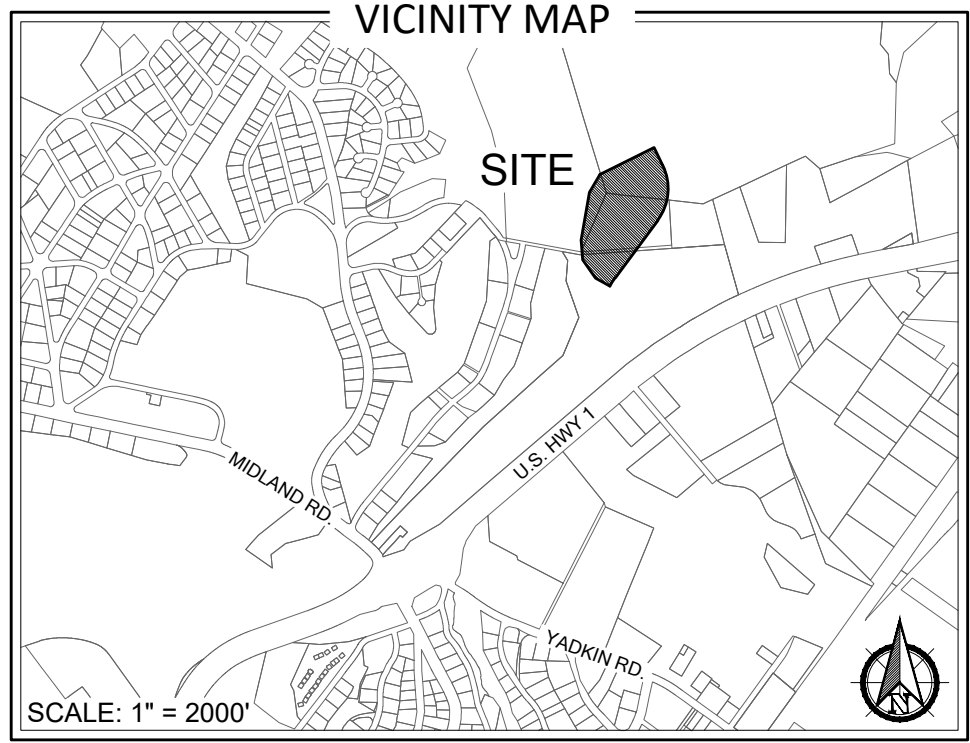
REVISIONS:

KOONTZJONESDesign
LAND PLANNING | LANDSCAPE ARCHITECTURE

150 S PAGE STREET
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KNOLLWOOD MULTI-FAMILY PROJECT
PRELIMINARY DEVELOPMENT PLAN
SOUTHERN PINES, NORTH CAROLINA
SITE PLAN - ENLARGEMENT

DATE: 08-08-2022
DESIGNED BY: REK
DRAWN BY: PJS
CHECKED BY: REK
SCALE: 1" = 60'-0"
PROJECT #: KID21028
SHEET NUMBER: L-1.2



LEGEND

- = PROJECT BOUNDARY
- - - = EXISTING MINOR CONTOUR
- - - = EXISTING MAJOR CONTOUR
- - - = EXISTING SEWER LINE
- - - = EXISTING WATER LINE
- - - = EXISTING STREAM
- = EXISTING FLOOD WAY
- = 100 YEAR FLOOD PLAIN
- = 500 YEAR FLOOD PLAIN
- - - = EXISTING WETLAND
- = PROPOSED WATER LINE
- = PROPOSED SEWER LINE
- > = PROPOSED DRAINAGE FLOW

DRAINAGE NOTES:

1. STORMWATER MANAGEMENT DEVICES WILL FOLLOW THE TOWN OF SOUTHERN PINES STANDARDS AND BE APPROVED BY THE TOWN ENGINEER.

2. DRAINAGE WILL BE RETAINED BY A STORMWATER MANAGEMENT POND WITHIN THE THE DEVELOPMENT. THE GENERAL LOCATION OF WHICH IS SHOWN ON THIS PLAN. DETAILED STORMWATER MANAGEMENT PLANS AND CALCULATIONS WILL BE PROVIDED DURING PERMITTING OF THE DEVELOPMENT.

FLOODPLAIN DATA

THIS PROPERTY IS LOCATED IN FLOOD ZONE 'X' (AREAS OF MINIMAL FLOODING)

THE LOCATION OF THE 100-YEAR FLOODPLAIN PER NFIP FIRM COMMUNITY

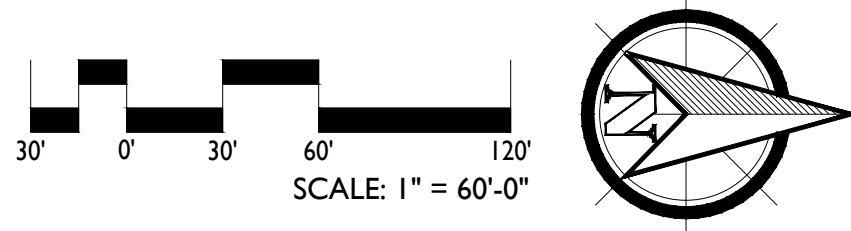
PANEL(S) NO: 8582

MAP(S): 3710858200J

DATE: OCTOBER 17, 2006

CAUTION

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PRELIMINARY PLANS - NOT RELEASED FOR CONSTRUCTION (FOR REVIEW ONLY)

KOONTZJONESDesign

LAND PLANNING | LANDSCAPE ARCHITECTURE

150 S PAGE STREET
SOUTHERN PINES, NC 28387
P: (910) 684-9467
W: www.koontzjonesdesign.com

REVISIONS:

KNOLLWOOD MULTI-FAMILY PROJECT

PRELIMINARY DEVELOPMENT PLAN

SOUTHERN PINES, NORTH CAROLINA

CONCEPTUAL UTILITIES & DRAINAGE PLAN

DATE: 08-08-2022
DESIGNED BY: REK
DRAWN BY: PJS
CHECKED BY: REK
SCALE: 1" = 60'-0"
PROJECT #: KID21028
SHEET NUMBER:
L-1.3

KNOLLWOOD MULTI-FAMILY PROJECT PRELIMINARY DEVELOPMENT PLAN NARRATIVE

The purpose of this Planned Development district Preliminary Development Plan (“PDP”) application is to describe the Knollwood Multi-Family Project (the “Project”), the next phase of development proposed under the Knollwood Tract Conceptual Development Plan (“CDP”) approved on August 24, 2017 (PD-01-17). As stated in Section 2.18.5(A) of the Town of Southern Pines Unified Development Ordinance (“UDO”), the PDP is intended to show how the development’s “proposed land use mix and intensity are consistent with the Comprehensive Plan, the purposes of the PDD and the approved Conceptual Development Plan”. Accordingly, the following narrative will demonstrate that the Project meets the criteria set forth in UDO Section 2.18.5(A) because it is consistent with the PD zoning district, the CDP, and the Town’s Comprehensive Plan (which designates the Knollwood Tract as Traditional Mixed Use).

The Project will include 236 multi-family residential units. The CDP permits up to 250 multi-family units within the MUA-1 area. The Project conforms with the Development Program in Section 5.0 – Table 1.0 of the CDP, the multi-family design standards approved as part of the CDP, and all other standards set forth in the CDP. Sheet L-1.2 of the submission documents provides a tabulation showing conformance with the CDP’s development program and open space requirements. What follows is a summary of the Project’s individual phase and overall design elements as set forth in the PDP.

Walkability

Walkability is an important component of the Project. Concrete sidewalks throughout the Project will provide convenient access to the residential buildings. An interconnected network of walkways and sidewalks will provide access throughout the Project. All residential units are connected through pedestrian pathways to the park, clubhouse and amenity areas. A pedestrian spine has been developed within the Project to connect all units through the courtyard open spaces to the clubhouse and other on-site amenities.

Amenities

Amenities will be provided throughout the Project. Amenities may include a community clubhouse, fitness center, business center, pool, pool house, tennis court, pickleball court, putting green or an outdoor grilling pavilion, as well as other community rooms, a dog park, children’s playground, car wash area and other passive recreation spaces.



Parking Areas

Parking for the Project's multi-family residential buildings will be provided through surface parking. UDO Section 4.5 sets forth the following parking standards:

Land Use	Minimum Vehicle Parking Spaces	Minimum Bicycle Parking Spaces
Multi-Family		
0-1 bedrooms	1 space per Dwelling Unit	
2-3 bedrooms	2 spaces per Dwelling Unit	1 space per 10 Dwelling Units
Visitor Parking	1 space per 5 units	

Based on these standards, the Project will require a minimum of 439 parking spaces (1.86 spaces per unit). Proposed parking for the Project is as follows:

Parking Proposed - 422 (1.78 spaces per unit)

Stormwater Management

Stormwater management for the property will be provided in accordance with CDP Section 5.5.10. Stormwater management facilities to serve the Project are located in the general areas designated on the site plan as shown on sheet L-1.1 & L-1.2. Appropriate state and local stormwater and erosion control permits will be obtained prior to any land-disturbing activity.

Open Space

The CDP requires that at least 20% of the Knollwood Tract be comprised of open space. Open space is not required on each individual parcel within the Knollwood Tract; however, the Project will provide 56.1% (10.98 acres) of open space, of which 90.3% (9.92 acres) will be useable open space. Open space locations are indicated on the site plan included on Sheet L-1.2.

Sheet L.1.2 provides a 'running' tabulation of open space for the overall Knollwood Tract, including the McDeed's Creek elementary school and the residential units along Camp Easter Road.

Lighting

All lighting on the property will meet the standards set in CDP Section 5.5.6 and UDO Section 4.8. Lighting levels in parking areas and throughout the community will meet the UDO's safety standards. All light will be projected downward to limit any light spilling onto adjacent properties.

Signage

Signage will comply with CDP Section 5.5.8. A single subdivision sign for the Project will be placed along the entry drive at its main entrance. Any additional directional or on-site signage for parking areas, parks or amenities will comply with the standards for size, materials, and height set forth in UDO Section 4.6.

Environmental and Endangered Species

The Project is located within a high-quality watershed but is outside of the 100-year floodplain areas. Under CDP Section 5.5.10, 90 acres of the property within the MUA-1 area were designated for high density development with up to 70% impervious surface. The Project will use 11.10 acres of the 90 acres allotted for high density development.

The Project will comply with the standards contained in the Woodpecker Survey Report – Exhibit XIV prepared by Dr. Jay Carter III & Associates, which was submitted with the CDP. All federal, state and local environmental standards will be met, and any permits or authorization required will be obtained prior to construction.

Utilities

This PDP complies with the criteria described in CDP Section 5.5.5. Water and sewer utilities are available to serve the Project and will be connected to this site during construction. The water utility that will serve the Project will be located within the right-of-way of the US 1 connection. Sewer will be provided through a connection to the current Southern Pines lift station located along McDeed's Creek, which was installed for the with the McDeed's Creek Elementary School and intended to serve this property. Extension of off-site public utilities will be necessary to connect this property to the Town's water and sewer infrastructure. All costs for these public utility extensions will be borne by the developer and, once constructed and certified, the extensions will be dedicated to the Town. All utility extensions will be permitted by the applicable state and local agencies as required by the Town and the CDP.

Vehicular Circulation

Vehicular circulation and access will be constructed in accordance with CDP Section 5.5.1. This project will be accessed from the first section of the "spine road" which will be constructed at the existing US 1 median break at the current intersection of US 1 and Air Tool Drive. A Traffic Impact Assessment (TIA) has been prepared showing the roadway improvements that the NCDOT will require for the Project.

In summary, the PDP for the Project is consistent with the Town's Comprehensive Plan and promotes its objectives. The Comprehensive Plan designates the property as Traditional Mixed-Use. The Project is a 236-unit multi-family residential community as permitted in the CDP. The Project's design meets all CDP standards. The Project is consistent with the vision described in CDP Section 2.2 and will create new residential housing, adjacent to future commercial and office zoned properties, within a large mixed-use development as prescribed in the CDP.

EXHIBIT A

Knollwood Multi-Family Project Preliminary Development Plan Justification

Below are listed the four (4) criteria required to approve a Preliminary Development Plan (PDP) application as described in Section 2.18.5(H) of the Town of Southern Pines Unified Development Ordinance (UDO). Following the individual criteria is an explanation, indicated in red, of how the Project complies with each of these criteria.

A Preliminary Development Plan is permitted if the Applicant demonstrates that:

- (1) The application demonstrates that it will achieve the purposes of the PDD and this section;

The PDP conforms to all standards set forth in the Conceptual Development Plan (CDP) and the UDO. The documents included with the CDP demonstrate the Project's overall compliance with the UDO, and this PDP is consistent with the CDP's standards. The UDO provisions governing PD districts, the Comprehensive Plan, and the CDP all encourage mixed-use development that reflects the standards of the surrounding area and its existing features. The PDP satisfies these goals.

- (2) The Preliminary Development Plan is consistent with the Conceptual Development Plan and conforms to all applicable provisions of this UDO;

The PDP is consistent with and meets all standards and requirements set forth in the CDP. The PDP also conforms to the applicable UDO standards that are not described in the CDP. All uses are consistent with the proposed development program and allowable uses in CDP Section 5.1 – Table 1.0. The development of a 236-unit multi-family residential community is consistent with the vision described in CDP Section 2.2, as well as the CDP's Project Narrative and Design Standards. The multi-family residential units are consistent with the applicable UDO standards.

- (3) The proposed Development is located in an area of the Town that is appropriate; and

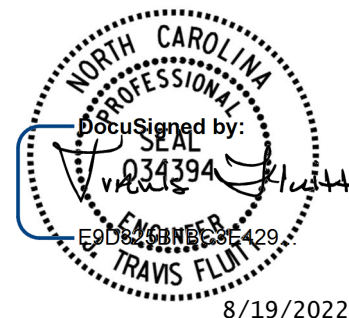
The PDP is compatible with the CDP, the surrounding community, and the other aspects of the Knollwood Tract mixed-use development described in the CDP (which includes mixed-use, office, residential, retail and restaurant uses). The Comprehensive Plan, which takes into account surrounding land uses, designates the Knollwood Tract as traditional mixed-use. The continued development of the Knollwood Tract, as described in the PDP, therefore is compatible with the surrounding land uses and appropriate for this area. The development standards set forth in the UDO and the CDP will ensure that the PDP will be compatible with the surrounding neighborhoods and land uses.

- (4) The proposed Development will not cause the need for inefficient extensions and expansions of public facilities, utilities and services

Water and sewer utilities are available to serve the Project and will be connected during its construction. The water utility that will serve the Project will be located within the right-of-way of the US 1 connection. Sewer will be provided through a connection to the current Southern Pines lift station located along McDeed's Creek, which was installed for the with the McDeed's Creek Elementary School and intended to serve this property. Extension of off-site public utilities will be necessary to connect the Project to the Town's water and sewer infrastructure. All costs for these public utility extensions will be borne by the developer, and once constructed and certified, the extensions will be dedicated to the Town. All utility extensions will be permitted by the applicable state and local agencies as required by the Town and the CDP. Stormwater management facilities serving the Project also will be designed and permitted by the applicable federal, state and local agencies.

MEMORANDUM

To: James Michel, PE, Town of Southern Pines
From: Travis Fluitt, PE, Kimley-Horn and Associates
Date: August 19, 2022
Subject: **Knollwood Apartments – Southern Pines, NC – Spine Road Analysis Addendum**



The *Knollwood Apartments TIA* (Kimley-Horn, April 2022) assessed the anticipated traffic impact of a 240 low-rise multifamily unit development located west of US 1 south of the intersection with St. Joseph Road in Southern Pines, North Carolina. In that study, site access was assumed to be provided via a connection to the spine road that will eventually extend from US 1 to Camp Easter Road. The spine road was not planned to extend beyond the apartment driveway at build-out of the apartment development.

The Knollwood Apartments development has been subsequently relocated within the Knollwood Tract site. As part of the relocation, the spine road will be constructed for approximately ½ mile from US 1 through the apartment site frontage. Site access is planned to be provided via two full movement driveways along the spine road. As the access to US 1 is unchanged from the April 2022 TIA, the analysis presented in that report is still valid.

The purpose of this analysis is to assess the laneage requirements of the spine road based on the anticipated traffic demands generated by the proposed apartments as well as the overall Knollwood master plan development (2032 only). Consistent with The Town of Southern Pines Unified Development Ordinance (UDO), this report presents traffic analyses for the projected (2024) build-out and projected (2032) 10-year traffic conditions.

Volume Development

Trip generation for the proposed apartments and the master plan development were obtained from the *Knollwood Apartments TIA*.

The site-generated trips were assigned to the spine road according to the distributions and percent assignments shown in **Figures 1–5**. The peak hour and daily traffic volumes for the projected (2024) build-out condition are shown on **Figure 6**, and the peak hour and daily traffic volumes for the projected (2032) 10-year condition are shown on **Figure 7**.

Detailed trip generation calculations, trip assignment, and traffic volume calculations are attached to this memorandum. It should be noted that the volume estimates presented herein do not include any non-site or background traffic that may use the spine road to travel between US 1 and Camp Easter Road instead of using NC 22 and Fairway Drive. Based on the *Knollwood School TIA* (Kimley-Horn, September 2017), the projected 2032 background traffic volume on Camp Easter Road was 5,500 vehicles per day. While the amount of background traffic that will use the spine road is unknown and will depend on a range of factors such as the design of the road, the number of driveways, and the number of conflicting bicycles and pedestrians, it is reasonable to assume that some of this traffic will use it. Therefore, the daily traffic volumes reported herein could be low by a few thousand vehicles per day.

Laneage Analysis

To determine the required laneage on the spine road, the projected daily traffic volumes were compared to the minor thoroughfare thresholds provided in the NCDOT Transportation Research Board's "Level of Service D Standards for Systems Level Planning" document dated October 14, 2011. As shown on the attached excerpt from this document, a 35-mph two-lane minor thoroughfare in the Piedmont region has the capacity to handle approximately 10,200 vehicles per day without a center two-way left-turn lane and approximately 12,700 vehicles per day with a center two-way left-turn lane.

At project build-out, the Knollwood Apartments development has the potential to generate approximately 1,758 daily trips. As shown on Figure 7, the 2024 daily volumes along the spine road are projected to fall well below the LOS D thresholds. Therefore, a two-lane roadway should be sufficient to handle the projected traffic demand for the proposed apartments.

In the 10-year scenario, assuming full build-out of the Knollwood master plan development and the extension of the spine road to Camp Easter Road, the daily traffic volumes on the spine road are expected to range from approximately 6,000 vpd north of the apartments to 10,000 vehicles per day between the apartments and US 1. While these volumes can be accommodated by a 2-lane roadway with left-turn lanes, as noted previously this does not account for any background traffic.

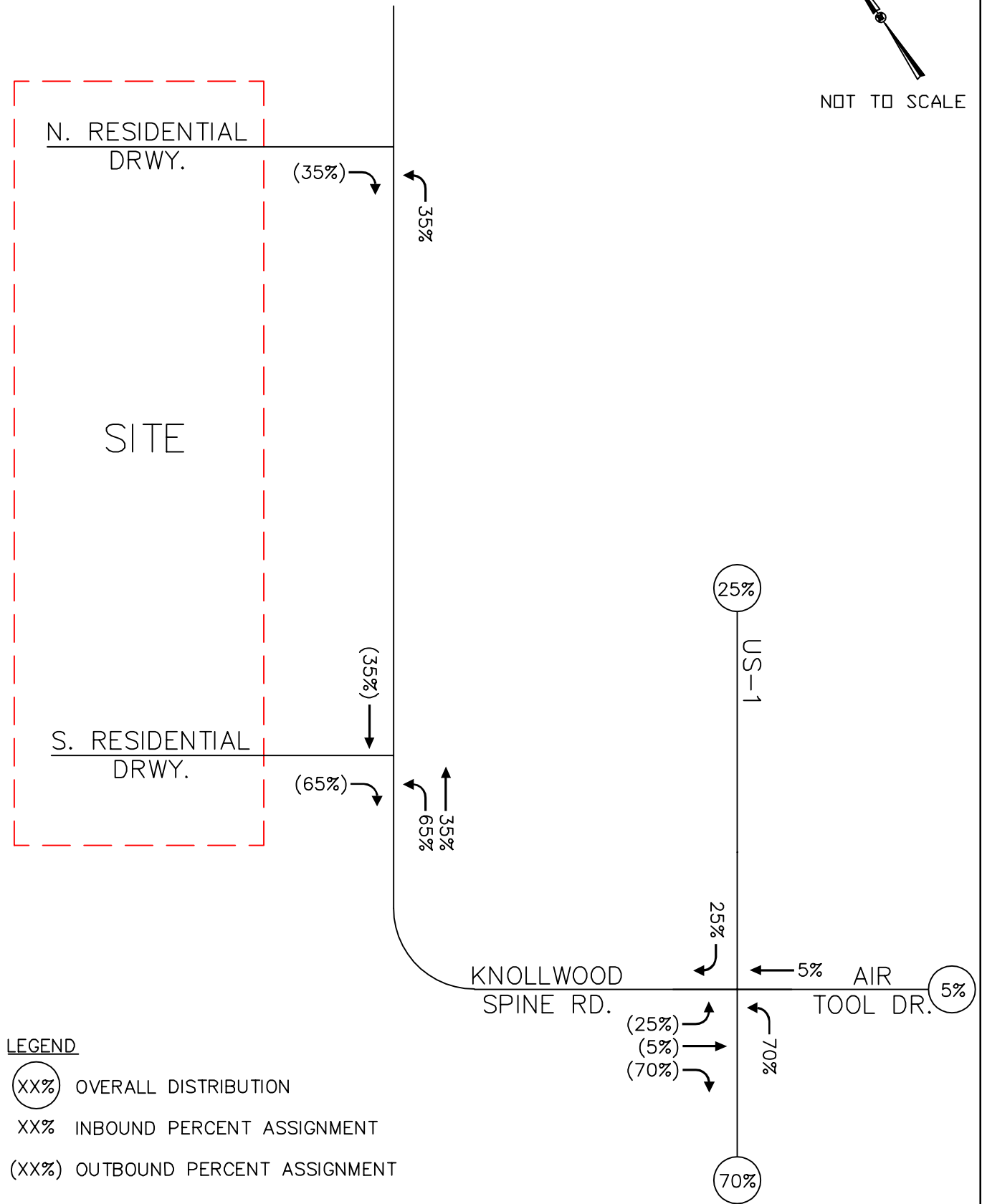
Recommendations

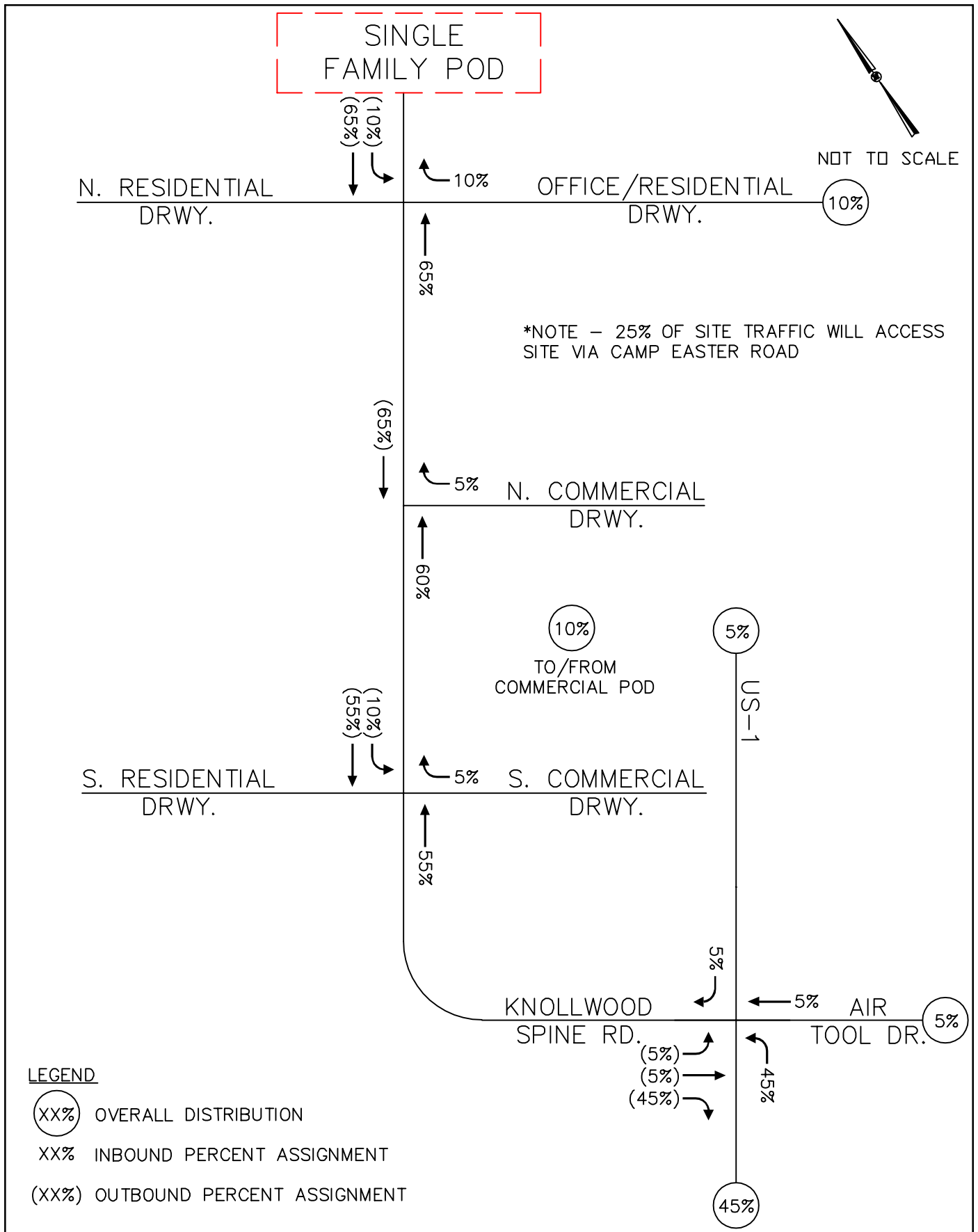
Based on the analysis presented herein, it is recommended that the spine road be constructed as a two-lane roadway on a 4-lane right-of-way to allow for future widening in the event that the capacity of the two-lane section is exceeded. It is also recommended that northbound left-turn lanes with 100 feet of storage be provided on the spine road at both apartment driveways. **Figure 8** shows the recommended roadway spine road laneage to accommodate build-out of the Knollwood Apartments development.

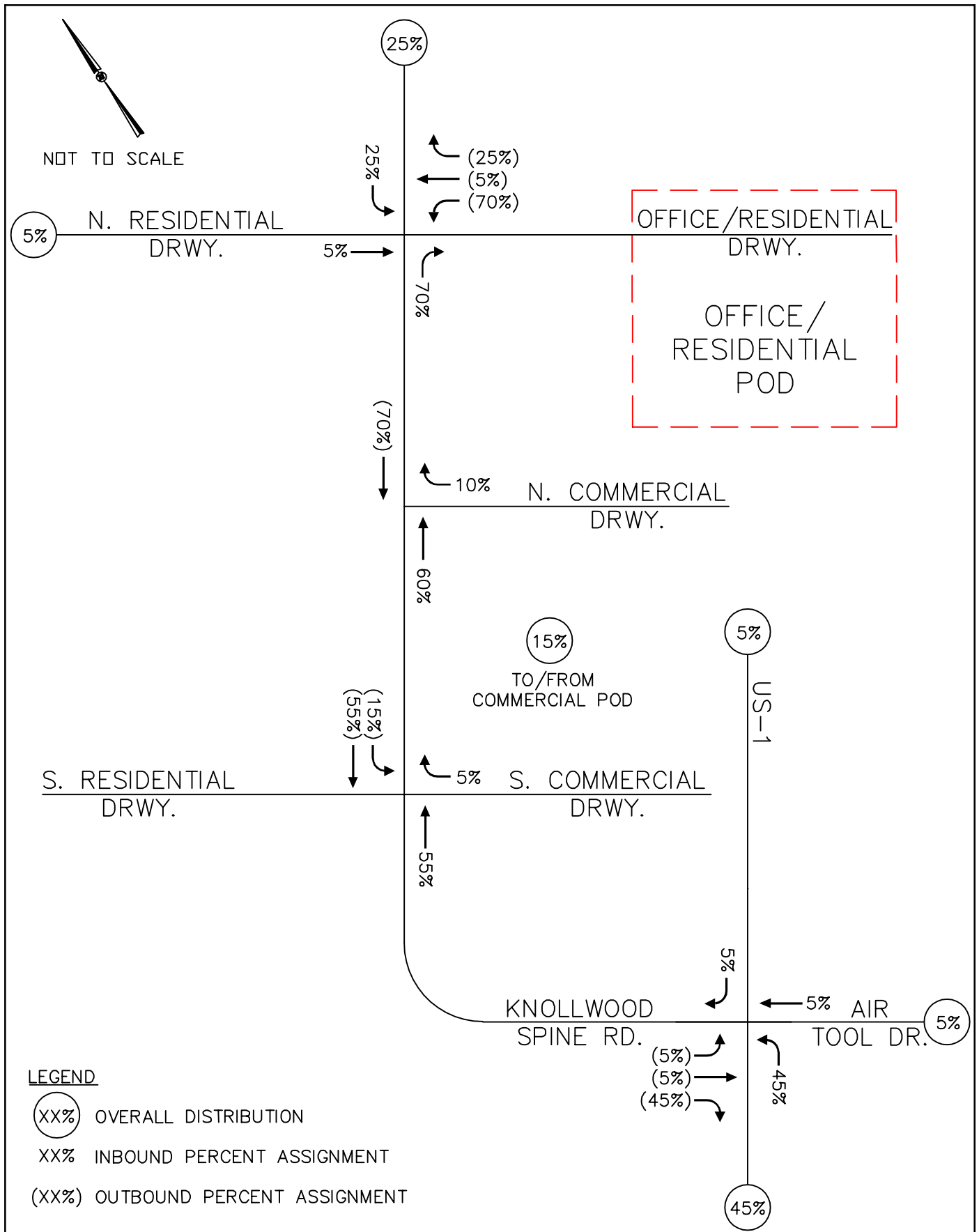
Should you have any questions or comments, please do not hesitate to contact me at (919) 653-2948 or travis.fluitt@kimley-horn.com.

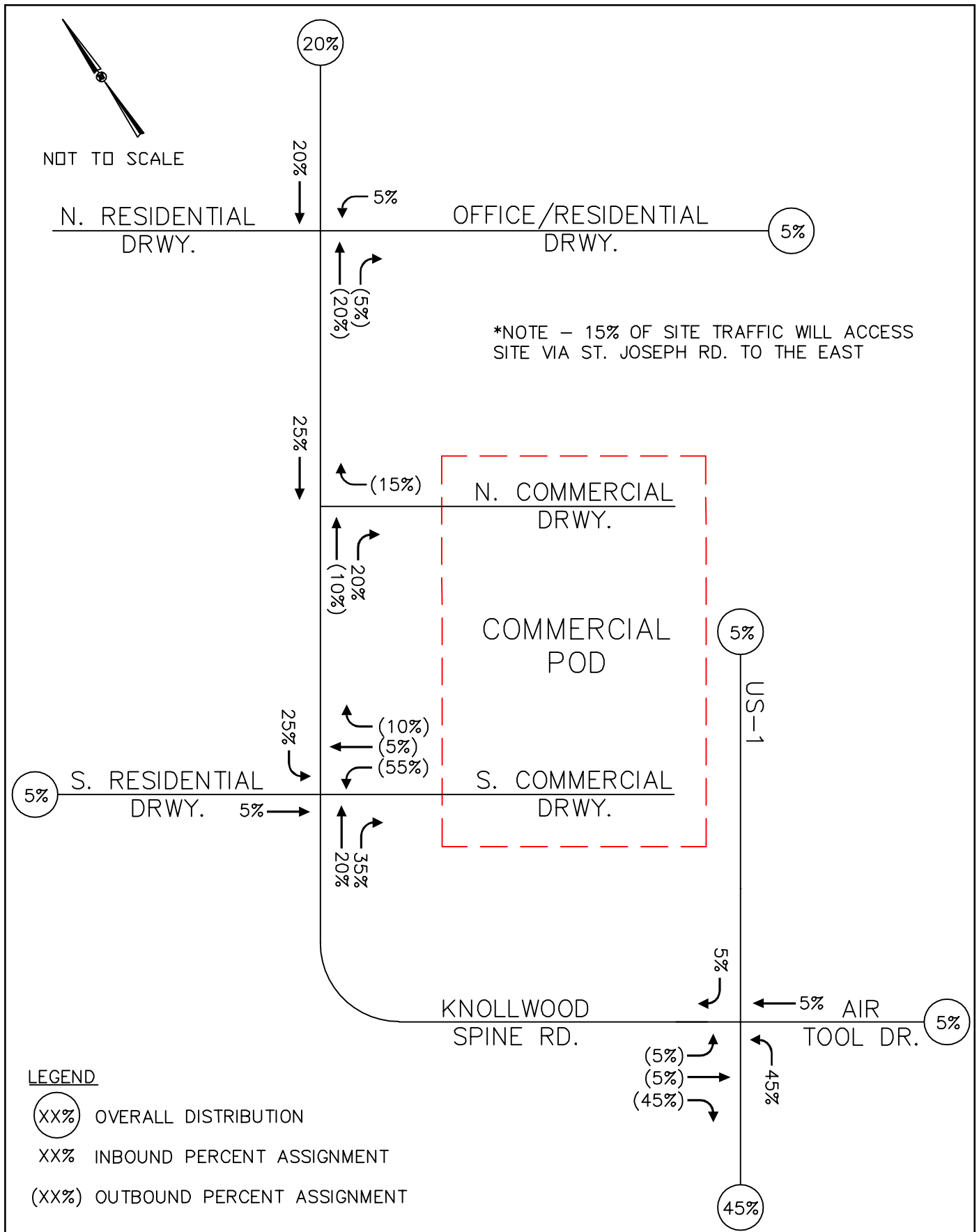


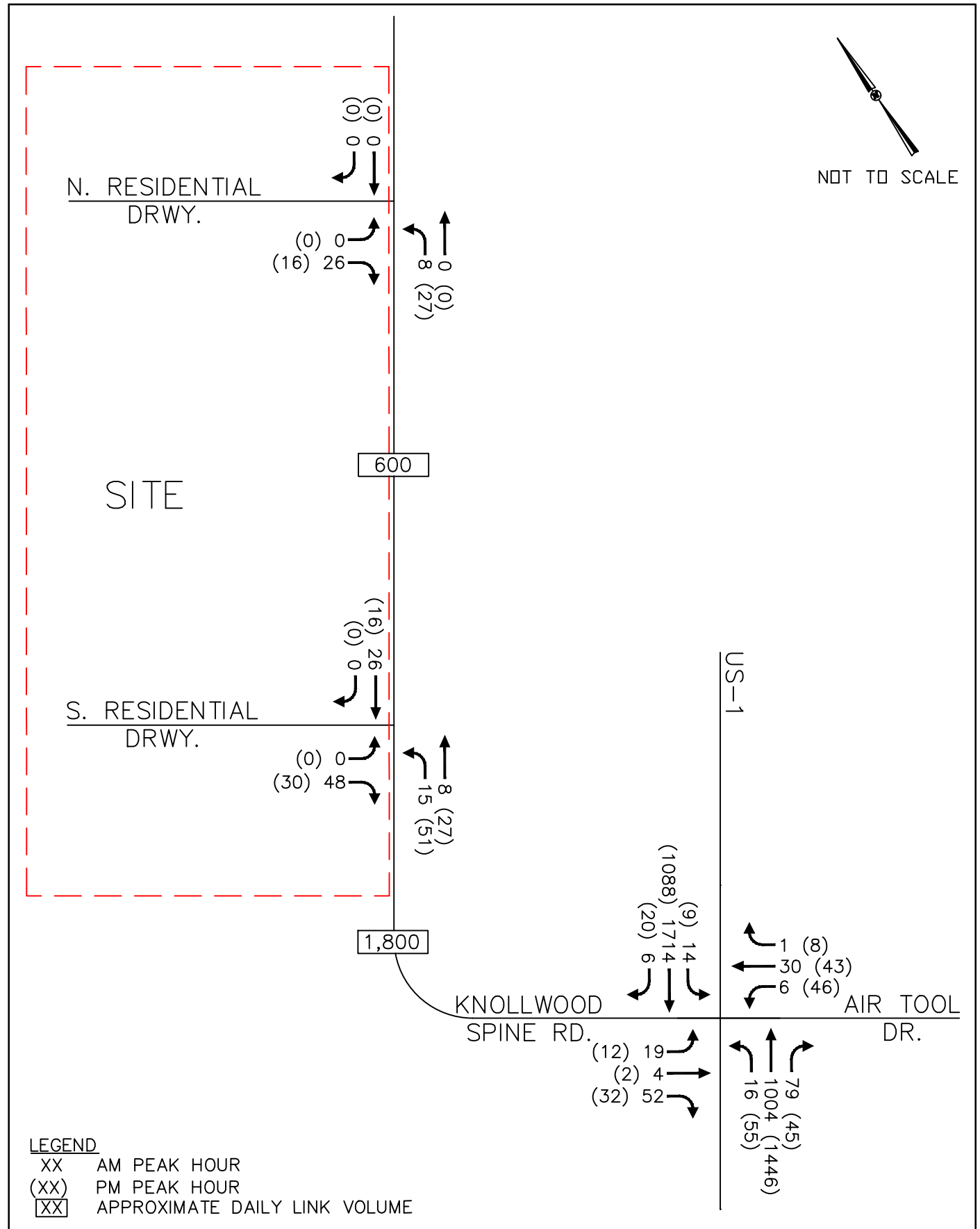
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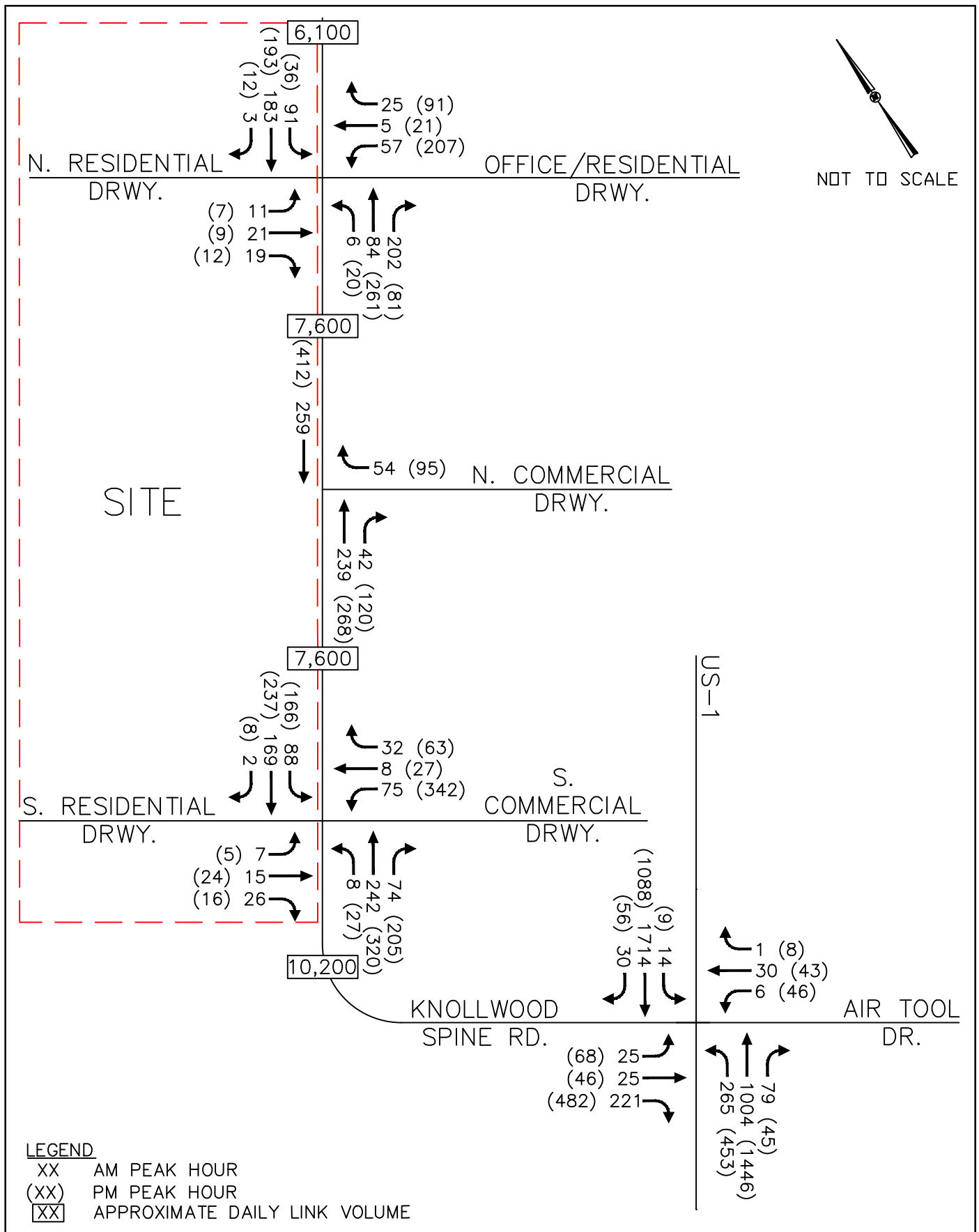






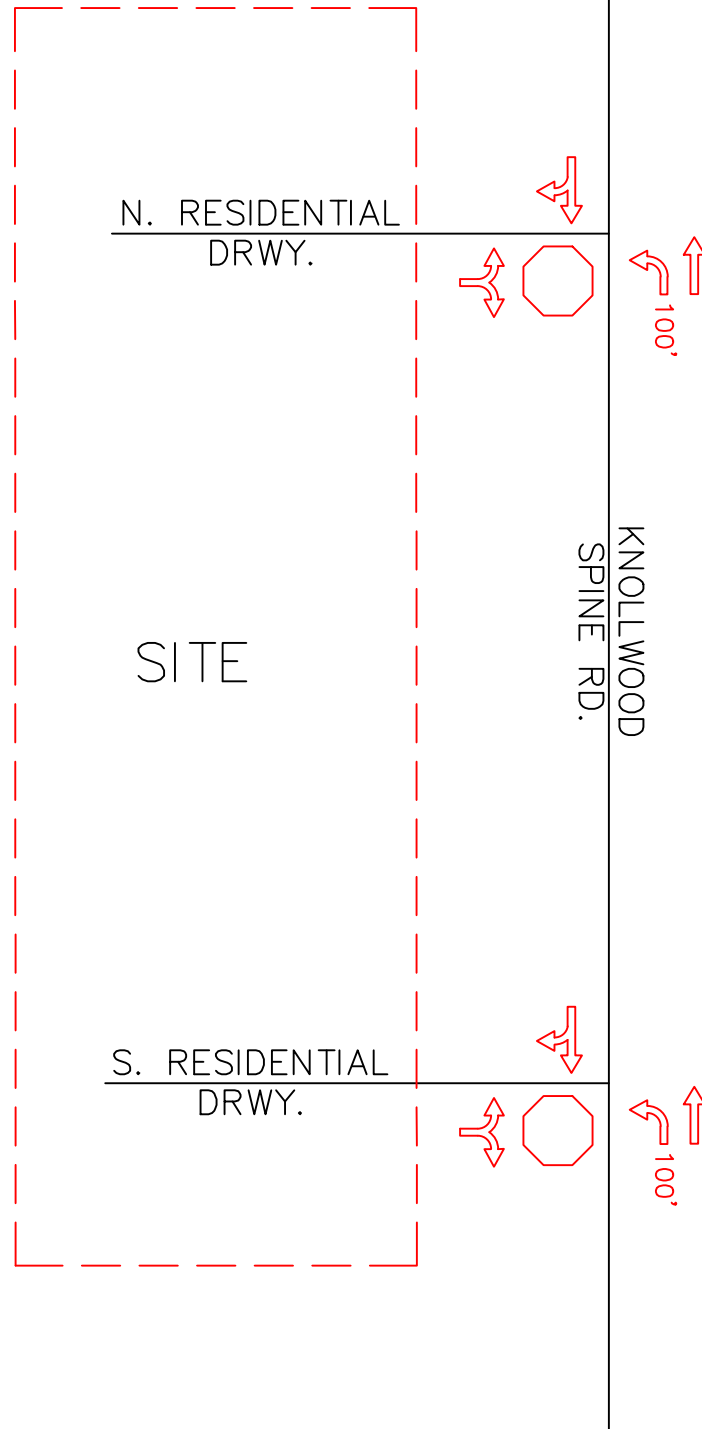








NOT TO SCALE



LEGEND

- XX' STORAGE LENGTH
- RECOMMENDED STOP SIGN
- RECOMMENDED LANE



KNOLLWOOD APARTMENTS
SOUTHERN PINES, NC
TRAFFIC ANALYSIS ADDENDUM

RECOMMENDED
SPINE ROAD LANEAGE

FIGURE
8

Knollwood Apartments

Table 1 - Trip Generation: Apartments

Land Use	Intensity	Daily			AM Peak Hour			PM Peak Hour		
		Total	In	Out	Total	In	Out	Total	In	Out
220 Multifamily Housing (Low-Rise)	240 d.u.	1,758	879	879	97	23	74	124	78	46

K:\RAL_TPTO_Traffic\014412000 Knollwood Residential\T4 - Analysis\July 2022 Addendum Analysis\[Knollwood Residential - 2024 - TIA Data Sheet.xls]Trip Gen - Apartments Pod

8/19/22

Knollwood Apartments

Table 2 - Trip Generation: Knollwood Master Plan - Single Family Pod

Land Use	Intensity	Daily			AM Peak Hour			PM Peak Hour		
		Total	In	Out	Total	In	Out	Total	In	Out
210 Single Family Detached Housing	400 d.u.	3,612	1,806	1,806	263	68	195	366	231	135
215 Single Family Attached Housing	65 d.u.	446	223	223	28	9	19	35	20	15
Total Net New External Trips		4,058	2,029	2,029	291	77	214	401	251	150

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8/19/22

Knollwood Apartments

Table 3 - Trip Generation: Knollwood Master Plan - Office Pod

Land Use	Intensity	Daily			AM Peak Hour			PM Peak Hour		
		Total	In	Out	Total	In	Out	Total	In	Out
210 Single Family Detached Housing	50 d.u.	534	267	267	40	10	30	52	33	19
710 General Office Building	200,000 s.f.	2,122	1,061	1,061	304	268	36	295	50	245
Total Net New External Trips		2,656	1,328	1,328	344	278	66	347	83	264

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8/19/22

Knollwood Apartments

Table 4 - Trip Generation: Knollwood Master Plan - Commercial Pod

Land Use	Intensity	Daily			AM Peak Hour			PM Peak Hour		
		Total	In	Out	Total	In	Out	Total	In	Out
310 Hotel	150 rooms	1,202	601	601	68	38	30	83	42	41
820 Shopping Center	250,000 s.f.	12,392	6,196	6,196	281	174	107	1,092	524	568
Subtotal		13,594	6,797	6,797	349	212	137	1,175	566	609
<i>Pass-By Traffic (ITE)</i>	<u>AM</u> <u>PM</u>									
820 Shopping Center	0% 29%	3,121	1,560	1,561	0	0	0	275	130	145
Total Net New External Trips		10,473	5,237	5,236	349	212	137	900	436	464

INTERSECTION ANALYSIS SHEET

Project:	Knollwood Apartments
Location:	Southern Pines, NC
Scenario:	2024 Build-out Year
Ct. Date	
N/S Street:	Knollwood Spine Road
E/W Street:	South Residential Dwy/South Commercial Dwy

<u>ANALYSIS SHEET</u>	AM In	AM Out	PM In	PM Out
Apartment Trips:	23	74	78	46
Single Family Pod Trips:	0	0	0	0
Office/Residential Pod Trips:	0	0	0	0
Commercial Pod Primary Trips:	0	0	0	0
Commercial Pod Pass-By Trips:	0	0	0	0

Annual Growth Rate:	3.0%	Existing Year:	2022
Growth Factor:	0.0609	Buildout Year:	2024

AM PEAK HOUR AM PHF =

Description	South Residential Driveway <u>Eastbound</u>			South Commercial Driveway <u>Westbound</u>			Knollwood Spine Road <u>Northbound</u>			Knollwood Spine Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Apartment Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	65%	35%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	15	8	0	0	0	0
Percent Assignment Outbound	0%	0%	65%	0%	0%	0%	0%	0%	0%	0%	35%	0%
Outbound Project Traffic	0	0	48	0	0	0	0	0	0	0	26	0
Total Project Traffic	0	0	48	0	0	0	15	8	0	0	26	0
2024 Buildout Total	0	0	48	0	0	0	15	8	0	0	26	0

PM PEAK HOUR PM PHF =

Description	South Residential Driveway <u>Eastbound</u>			South Commercial Driveway <u>Westbound</u>			Knollwood Spine Road <u>Northbound</u>			Knollwood Spine Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Apartment Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	65%	35%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	51	27	0	0	0	0
Percent Assignment Outbound	0%	0%	65%	0%	0%	0%	0%	0%	0%	0%	35%	0%
Outbound Project Traffic	0	0	30	0	0	0	0	0	0	0	16	0
Total Project Traffic	0	0	30	0	0	0	51	27	0	0	16	0
2024 Buildout Total	0	0	30	0	0	0	51	27	0	0	16	0

INTERSECTION ANALYSIS SHEET

Project: Knollwood Apartments
Location: Southern Pines, NC
Scenario: 2024 Build-out Year
Ct. Date
N/S Street: Knollwood Spine Road
E/W Street: North Commercial Driveway

	AM In	AM Out	PM In	PM Out
Apartment Trips:	23	74	78	46
Single Family Pod Trips:	0	0	0	0
Office/Residential Pod Trips:	0	0	0	0
Commercial Pod Primary Trips:	0	0	0	0
Commercial Pod Pass-By Trips:	0	0	0	0

Annual Growth Rate:	3.0%	Existing Year:	2022
Growth Factor:	0.0609	Buildout Year:	2024

AM PEAK HOUR
AM PHF =

Description	<u>Eastbound</u>			North Commercial Driveway <u>Westbound</u>			Knollwood Spine Road <u>Northbound</u>			Knollwood Spine Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Apartment Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	35%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	8	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	35%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	0	26	0
Total Project Traffic	0	0	0	0	0	0	0	8	0	0	26	0
2024 Buildout Total	0	0	0	0	0	0	0	8	0	0	26	0

PM PEAK HOUR
PM PHF =

Description	<u>Eastbound</u>			North Commercial Driveway <u>Westbound</u>			Knollwood Spine Road <u>Northbound</u>			Knollwood Spine Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Apartment Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	35%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	27	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	35%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	0	16	0
Total Project Traffic	0	0	0	0	0	0	0	27	0	0	16	0
2024 Buildout Total	0	0	0	0	0	0	0	27	0	0	16	0

INTERSECTION ANALYSIS SHEET

Project:	Knollwood Apartments
Location:	Southern Pines, NC
Scenario:	2024 Build-out Year
Ct. Date	
N/S Street:	Knollwood Spine Road
E/W Street:	North Residential Driveway/Office Driveway

<u>ANALYSIS SHEET</u>	AM In	AM Out	PM In	PM Out
Apartment Trips:	23	74	78	46
Single Family Pod Trips:	0	0	0	0
Office/Residential Pod Trips:	0	0	0	0
Commercial Pod Primary Trips:	0	0	0	0
Commercial Pod Pass-By Trips:	0	0	0	0

Annual Growth Rate:	3.0%	Existing Year:	2022
Growth Factor:	0.0609	Buildout Year:	2024

AM PEAK HOUR
AM PHF =

Description	North Residential Driveway <u>Eastbound</u>			Office/Residential Driveway <u>Westbound</u>			Knollwood Spine Road <u>Northbound</u>			Knollwood Spine Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Apartment Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	35%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	8	0	0	0	0	0
Percent Assignment Outbound	0%	0%	35%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	26	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	26	0	0	0	8	0	0	0	0	0
2024 Buildout Total	0	0	26	0	0	0	8	0	0	0	0	0

PM PEAK HOUR
PM PHF =

Description	North Residential Driveway <u>Eastbound</u>			Office/Residential Driveway <u>Westbound</u>			Knollwood Spine Road <u>Northbound</u>			Knollwood Spine Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Apartment Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	35%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	27	0	0	0	0	0
Percent Assignment Outbound	0%	0%	35%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	16	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	16	0	0	0	27	0	0	0	0	0
2024 Buildout Total	0	0	16	0	0	0	27	0	0	0	0	0

INTERSECTION ANALYSIS SHEET

Project:	Knollwood Residential
Location:	Southern Pines, NC
Scenario:	2024 Daily Traffic
Ct. Date	
N/S Street:	Knollwood Spine Road
E/W Street:	South Residential Dwy/South Commercial Dwy

	Daily In	Daily Out
Apartment Trips:	879	879
Single Family Pod Trips:	0	0
Office/Residential Pod Trips:	0	0
Commercial Pod Primary Trips:	0	0
Commercial Pod Pass-By Trips:	0	0

Annual Growth Rate:	3.0%
Growth Factor:	0.0609

Existing Year:	2022
Buildout Year:	2024

DAILY TRAFFIC

Description	South Residential Driveway <u>Eastbound</u>			South Commercial Driveway <u>Westbound</u>			Knollwood Spine Road <u>Northbound</u>			Knollwood Spine Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Apartment Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	65%	35%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	571	308	0	0	0	0
Percent Assignment Outbound	0%	0%	65%	0%	0%	0%	0%	0%	0%	0%	35%	0%
Outbound Project Traffic	0	0	571	0	0	0	0	0	0	0	308	0
Total Project Traffic	0	0	571	0	0	0	571	308	0	0	308	0
2024 Buildout Total	0	0	571	0	0	0	571	308	0	0	308	0
2-Way Volume		2284			0			1758			616	

Overall Percent Impact (vs. Buildout) 100.0%

INTERSECTION ANALYSIS SHEET

Project:	Knollwood Residential
Location:	Southern Pines, NC
Scenario:	2024 Daily Traffic
Ct. Date	
N/S Street:	Knollwood Spine Road
E/W Street:	South Residential Dwy/South Commercial Dwy

	Daily In	Daily Out
Apartment Trips:	879	879
Single Family Pod Trips:	0	0
Office/Residential Pod Trips:	0	0
Commercial Pod Primary Trips:	0	0
Commercial Pod Pass-By Trips:	0	0

Annual Growth Rate:	3.0%	Existing Year:	2022
Growth Factor:	0.0609	Buildout Year:	2024

DAILY TRAFFIC

Description	<u>Eastbound</u>			South Residential Dwy/South <u>Westbound</u>			Knollwood Spine Road <u>Northbound</u>			Knollwood Spine Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Apartment Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	35%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	308	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	35%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	0	308	0
Total Project Traffic	0	0	0	0	0	0	0	308	0	0	308	0
2024 Buildout Total	0	0	0	0	0	0	0	308	0	0	308	0
2-Way Volume		0			0			616			616	

Overall Percent Impact (vs. Buildout) 100.0%

INTERSECTION ANALYSIS SHEET

Project:	Knollwood Residential
Location:	Southern Pines, NC
Scenario:	2024 Daily Traffic
Ct. Date	
N/S Street:	Knollwood Spine Road
E/W Street:	South Residential Dwy/South Commercial Dwy

	Daily In	Daily Out
Apartment Trips:	879	879
Single Family Pod Trips:	0	0
Office/Residential Pod Trips:	0	0
Commercial Pod Primary Trips:	0	0
Commercial Pod Pass-By Trips:	0	0

Annual Growth Rate:	3.0%	Existing Year:	2022
Growth Factor:	0.0609	Buildout Year:	2024

DAILY TRAFFIC

Description	North Residential Driveway <u>Eastbound</u>			Office/Residential Driveway <u>Westbound</u>			Knollwood Spine Road <u>Northbound</u>			Knollwood Spine Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Apartment Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	35%	0%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	0	308	0	0	0	0	0
Percent Assignment Outbound	0%	0%	35%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	308	0	0	0	0	0	0	0	0	0
Total Project Traffic	0	0	308	0	0	0	308	0	0	0	0	0
2024 Buildout Total	0	0	308	0	0	0	308	0	0	0	0	0
2-Way Volume		1232			0			616			0	

Overall Percent Impact (vs. Buildout) 100.0%

INTERSECTION ANALYSIS SHEET

Project:	Knollwood Apartments
Location:	Southern Pines, NC
Scenario:	2032 Build-out Year
Ct. Date	
N/S Street:	Knollwood Spine Road
E/W Street:	South Residential Dwy/South Commercial Dwy

ANALYSIS SHEET		AM In	AM Out	PM In	PM Out
Apartment Trips:		23	74	78	46
Single Family Pod Trips:		77	214	251	150
Office/Residential Pod Trips:		278	66	83	264
Commercial Pod Primary Trips:		212	137	436	464
Commercial Pod Pass-By Trips:		0	0	130	145

Annual Growth Rate:	3.0%
Growth Factor:	0.343916

Existing Year:	2022
Buildout Year:	2032

AM PEAK HOUR
AM PHF =

Description	South Residential Driveway Eastbound			South Commercial Driveway Westbound			Knollwood Spine Road Northbound			Knollwood Spine Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Apartment Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	5%	0%	35%	20%	0%	0%	0%	10%
Inbound Project Traffic	0	0	0	0	1	0	8	5	0	0	0	2
Percent Assignment Outbound	10%	5%	35%	0%	0%	0%	0%	0%	0%	5%	20%	0%
Outbound Project Traffic	7	4	26	0	0	0	0	0	0	4	15	0
Single Family Pod Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	5%	0%	55%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	4	0	42	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	55%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	21	118	0
Office/Residential Pod Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	5%	0%	55%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	14	0	153	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	15%	55%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	10	36	0
Commercial Pod Traffic												
Percent Assignment Inbound	0%	5%	0%	0%	0%	0%	0%	20%	35%	25%	0%	0%
Inbound Project Traffic	0	11	0	0	0	0	0	42	74	53	0	0
Percent Assignment Outbound	0%	0%	0%	55%	5%	10%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	75	7	14	0	0	0	0	0	0
2032 Buildout Total	7	15	26	75	8	32	8	242	74	88	169	2

PM PEAK HOUR
PM PHF =

Description	South Residential Driveway Eastbound			South Commercial Driveway Westbound			Knollwood Spine Road Northbound			Knollwood Spine Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Apartment Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	5%	0%	35%	20%	0%	0%	0%	10%
Inbound Project Traffic	0	0	0	0	4	0	27	16	0	0	0	8
Percent Assignment Outbound	10%	5%	35%	0%	0%	0%	0%	0%	0%	5%	20%	0%
Outbound Project Traffic	5	2	16	0	0	0	0	0	0	2	9	0
Single Family Pod Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	5%	0%	55%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	13	0	138	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	55%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	15	83	0
Office/Residential Pod Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	5%	0%	55%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	4	0	46	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	15%	55%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	40	145	0
Commercial Pod Traffic												
Percent Assignment Inbound	0%	5%	0%	0%	0%	0%	0%	20%	35%	25%	0%	0%
Inbound Project Traffic	0	22	0	0	0	0	0	87	153	109	0	0
Percent Assignment Outbound	0%	0%	0%	55%	5%	10%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	255	23	46	0	0	0	0	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	87	0	0	0	33	52	0	0	0
Total Pass-By Traffic	0	0	0	87	0	0	0	33	52	0	0	0
Total Project Traffic	5	24	16	342	27	63	27	320	205	166	237	8
2032 Buildout Total	5	24	16	342	27	63	27	320	205	166	237	8

INTERSECTION ANALYSIS SHEET

Project:	Knollwood Apartments
Location:	Southern Pines, NC
Scenario:	2032 Build-out Year
Ct. Date	
N/S Street:	Knollwood Spine Road
E/W Street:	North Commercial Driveway

ANALYSIS SHEET		AM In	AM Out	PM In	PM Out
Apartment Trips:		23	74	78	46
Single Family Pod Trips:		77	214	251	150
Office/Residential Pod Trips:		278	66	83	264
Commercial Pod Primary Trips:		212	137	436	464
Commercial Pod Pass-By Trips:		0	0	130	145

Annual Growth Rate:	3.0%	Existing Year:	2022
Growth Factor:	0.343916	Buildout Year:	2032

AM PEAK HOUR
AM PHF =

Description	Eastbound			North Commercial Driveway Westbound			Knollwood Spine Road Northbound			Knollwood Spine Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Apartment Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	5%	0%	20%	0%	0%	10%	0%
Inbound Project Traffic	0	0	0	0	0	1	0	5	0	0	2	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	25%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	7	0	0	19	0
Single Family Pod Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	5%	0%	60%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	4	0	46	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	65%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	0	139	0
Office/Residential Pod Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	10%	0%	60%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	28	0	167	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	70%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	0	46	0
Commercial Pod Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	25%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	42	0	53	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	15%	0%	10%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	21	0	14	0	0	0	0
Total Project Traffic	0	0	0	0	0	54	0	239	42	0	259	0
2032 Buildout Total	0	0	0	0	0	54	0	239	42	0	259	0

PM PEAK HOUR
PM PHF =

Description	Eastbound			North Commercial Driveway Westbound			Knollwood Spine Road Northbound			Knollwood Spine Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Apartment Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	5%	0%	20%	0%	0%	10%	0%
Inbound Project Traffic	0	0	0	0	0	4	0	16	0	0	8	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	25%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	5	0	0	12	0
Single Family Pod Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	5%	0%	60%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	13	0	151	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	65%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	0	98	0
Office/Residential Pod Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	10%	0%	60%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	8	0	50	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	70%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	0	185	0
Commercial Pod Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	25%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	87	0	109	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	15%	0%	10%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	70	0	46	0	0	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	33	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	33	0	0	0
Total Project Traffic	0	0	0	0	0	95	0	268	120	0	412	0
2032 Buildout Total	0	0	0	0	0	95	0	268	120	0	412	0

INTERSECTION ANALYSIS SHEET

Project:	Knollwood Apartments
Location:	Southern Pines, NC
Scenario:	2032 Build-out Year
Ct. Date	
N/S Street:	Knollwood Spine Road
E/W Street:	North Residential Driveway/Office Driveway

ANALYSIS SHEET		AM In	AM Out	PM In	PM Out
Apartment Trips:		23	74	78	46
Single Family Pod Trips:		77	214	251	150
Office/Residential Pod Trips:		278	66	83	264
Commercial Pod Primary Trips:		212	137	436	464
Commercial Pod Pass-By Trips:		0	0	130	145

Annual Growth Rate:	3.0%
Growth Factor:	0.343916

Existing Year:	2022
Buildout Year:	2032

AM PEAK HOUR
AM PHF =

Description	North Residential Driveway Eastbound			Office/Residential Driveway Westbound			Knollwood Spine Road Northbound			Knollwood Spine Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Apartment Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	10%	0%	25%	0%	0%	0%	10%	15%
Inbound Project Traffic	0	0	0	0	2	0	6	0	0	0	2	3
Percent Assignment Outbound	15%	10%	25%	0%	0%	0%	0%	10%	0%	0%	0%	0%
Outbound Project Traffic	11	7	19	0	0	0	0	7	0	0	0	0
Single Family Pod Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	10%	0%	65%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	8	0	50	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	65%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	21	139	0
Office/Residential Pod Traffic												
Percent Assignment Inbound	0%	5%	0%	0%	0%	0%	0%	0%	70%	25%	0%	0%
Inbound Project Traffic	0	14	0	0	0	0	0	0	195	70	0	0
Percent Assignment Outbound	0%	0%	0%	70%	5%	25%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	46	3	17	0	0	0	0	0	0
Commercial Pod Traffic												
Percent Assignment Inbound	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	20%	0%
Inbound Project Traffic	0	0	0	11	0	0	0	0	0	0	42	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	20%	5%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	27	7	0	0	0
Total Project Traffic	11	21	19	57	5	25	6	84	202	91	183	3
2032 Buildout Total	11	21	19	57	5	25	6	84	202	91	183	3

PM PEAK HOUR
PM PHF =

Description	North Residential Driveway Eastbound			Office/Residential Driveway Westbound			Knollwood Spine Road Northbound			Knollwood Spine Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Apartment Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	10%	0%	25%	0%	0%	0%	10%	15%
Inbound Project Traffic	0	0	0	0	8	0	20	0	0	0	8	12
Percent Assignment Outbound	15%	10%	25%	0%	0%	0%	0%	10%	0%	0%	0%	0%
Outbound Project Traffic	7	5	12	0	0	0	0	5	0	0	0	0
Single Family Pod Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	10%	0%	65%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	25	0	163	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	65%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	15	98	0
Office/Residential Pod Traffic												
Percent Assignment Inbound	0%	5%	0%	0%	0%	0%	0%	0%	70%	25%	0%	0%
Inbound Project Traffic	0	4	0	0	0	0	0	0	58	21	0	0
Percent Assignment Outbound	0%	0%	0%	70%	5%	25%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	185	13	66	0	0	0	0	0	0
Commercial Pod Traffic												
Percent Assignment Inbound	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	20%	0%
Inbound Project Traffic	0	0	0	22	0	0	0	0	0	0	87	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	20%	5%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	93	23	0	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	7	9	12	207	21	91	20	261	81	36	193	12
2032 Buildout Total	7	9	12	207	21	91	20	261	81	36	193	12

INTERSECTION ANALYSIS SHEET

Project: Knollwood Apartments
Location: Southern Pines, NC
Scenario: 2032 Daily Traffic
Ct. Date
N/S Street: Knollwood Spine Road
E/W Street: South Residential Drwy/South Commercial Drwy

	Daily In	Daily Out
Apartment Trips:	879	879
Single Family Pod Trips:	2029	2029
Office/Residential Pod Trips:	1328	1328
Commercial Pod Primary Trips:	5000	5000
Commercial Pod Pass-By Trips:	1797	1797

Annual Growth Rate: 3.0%
Growth Factor: 0.3439164

Existing Year: 2022
Buildout Year: 2032

DAILY VOLUME

Description	South Residential Driveway <u>Eastbound</u>			South Commercial Driveway <u>Westbound</u>			Knollwood Spine Road <u>Northbound</u>			Knollwood Spine Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Apartment Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	5%	0%	35%	20%	0%	0%	0%	10%
Inbound Project Traffic	0	0	0	0	44	0	308	176	0	0	0	88
Percent Assignment Outbound	10%	5%	35%	0%	0%	0%	0%	0%	0%	5%	20%	0%
Outbound Project Traffic	88	44	308	0	0	0	0	0	0	44	176	0
Single Family Pod Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	5%	0%	55%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	101	0	1116	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	55%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	203	1116	0
Office/Residential Pod Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	5%	0%	55%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	66	0	730	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	15%	55%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	199	730	0
Commercial Pod Traffic												
Percent Assignment Inbound	0%	5%	0%	0%	0%	0%	0%	20%	35%	25%	0%	0%
Inbound Project Traffic	0	250	0	0	0	0	0	1000	1750	1250	0	0
Percent Assignment Outbound	0%	0%	0%	55%	5%	10%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	2750	250	500	0	0	0	0	0	0
Total External Site Traffic	0	250	0	2750	250	500	0	1000	1750	1250	0	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	1078	0	0	0	449	719	0	0	0
Total Pass-By Traffic	0	0	0	1078	0	0	0	449	719	0	0	0
Total Project Traffic	88	294	308	2750	294	667	308	3022	1750	1696	2022	88
2032 Buildout Total	88	294	308	2750	294	667	308	3022	1750	1696	2022	88
2-Way Volume		1380			7451			10160			7583	

INTERSECTION ANALYSIS SHEET

Project: Knollwood Apartments
Location: Southern Pines, NC
Scenario: 2032 Daily Traffic
Ct. Date
N/S Street: Knollwood Spine Road
E/W Street: North Commercial Driveway

	Daily In	Daily Out
Apartment Trips:	879	879
Single Family Pod Trips:	2029	2029
Office/Residential Pod Trips:	1328	1328
Commercial Pod Primary Trips:	5000	5000
Commercial Pod Pass-By Trips:	1797	1797

Annual Growth Rate: 3.0%
Growth Factor: 0.3439164

Existing Year: 2022
Buildout Year: 2032

DAILY VOLUME

Description	Eastbound			North Commercial Driveway Westbound			Knollwood Spine Road Northbound			Knollwood Spine Road Southbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Apartment Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	5%	0%	20%	0%	0%	10%	0%
Inbound Project Traffic	0	0	0	0	0	44	0	176	0	0	88	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	25%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	88	0	0	220	0
Single Family Pod Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	5%	0%	60%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	101	0	1217	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	65%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	0	1319	0
Office/Residential Pod Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	10%	0%	60%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	133	0	797	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	70%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	0	930	0
Commercial Pod Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	0%	0%	0%	20%	0%	25%	0%
Inbound Project Traffic	0	0	0	0	0	0	0	0	1000	0	1250	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	15%	0%	10%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	750	0	500	0	0	0	0
Total External Site Traffic	0	0	0	0	0	750	0	500	1000	0	1250	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	449	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	449	0	0	0
Total Project Traffic	0	0	0	0	0	1028	0	2778	1000	0	3807	0
2032 Buildout Total	0	0	0	0	0	1028	0	2778	1000	0	3807	0
2-Way Volume	0					2028			7585			7613

INTERSECTION ANALYSIS SHEET

Project: **Knollwood Apartments**
Location: **Southern Pines, NC**
Scenario: **2032 Daily Traffic**
Ct. Date:
N/S Street: **Knollwood Spine Road**
E/W Street: **North Residential Driveway/Office Driveway**

	Daily In	Daily Out
Apartment Trips:	879	879
Single Family Pod Trips:	2029	2029
Office/Residential Pod Trips:	1328	1328
Commercial Pod Primary Trips:	5000	5000
Commercial Pod Pass-By Trips:	1797	1797

Annual Growth Rate: 3.0%
Growth Factor: 0.3439164

Existing Year: 2022
Buildout Year: 2032

AM PEAK HOUR

Description	North Residential Driveway <u>Eastbound</u>			Office/Residential Driveway <u>Westbound</u>			Knollwood Spine Road <u>Northbound</u>			Knollwood Spine Road <u>Southbound</u>		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Apartment Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	10%	0%	25%	0%	0%	0%	10%	15%
Inbound Project Traffic	0	0	0	0	88	0	220	0	0	0	88	132
Percent Assignment Outbound	15%	10%	25%	0%	0%	0%	0%	10%	0%	0%	0%	0%
Outbound Project Traffic	132	88	220	0	0	0	0	88	0	0	0	0
Single Family Pod Traffic												
Percent Assignment Inbound	0%	0%	0%	0%	0%	10%	0%	65%	0%	0%	0%	0%
Inbound Project Traffic	0	0	0	0	0	203	0	1319	0	0	0	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	65%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	0	0	203	1319	0
Office/Residential Pod Traffic												
Percent Assignment Inbound	0%	5%	0%	0%	0%	0%	0%	0%	70%	25%	0%	0%
Inbound Project Traffic	0	66	0	0	0	0	0	0	930	332	0	0
Percent Assignment Outbound	0%	0%	0%	70%	5%	25%	0%	0%	0%	0%	0%	0%
Outbound Project Traffic	0	0	0	930	66	332	0	0	0	0	0	0
Commercial Pod Traffic												
Percent Assignment Inbound	0%	0%	0%	5%	0%	0%	0%	0%	0%	0%	20%	0%
Inbound Project Traffic	0	0	0	250	0	0	0	0	0	0	1000	0
Percent Assignment Outbound	0%	0%	0%	0%	0%	0%	0%	20%	5%	0%	0%	0%
Outbound Project Traffic	0	0	0	0	0	0	0	1000	250	0	0	0
Total External Site Traffic	0	0	0	250	0	0	0	1000	250	0	1000	0
Pass-By Capture Reduction	0	0	0	0	0	0	0	0	0	0	0	0
Pass-By Capture Assignment	0	0	0	0	0	0	0	0	0	0	0	0
Total Pass-By Traffic	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Traffic	132	154	220	1180	154	535	220	2407	1180	535	2407	132
2032 Buildout Total	132	154	220	1180	154	535	220	2407	1180	535	2407	132
2-Way Volume	1012			3738			7614			6148		



Level of Service D Standards for Systems Level Planning

Piedmont Level of Service D Standards for Minor Thoroughfares *

55 MPH	1 Lane Per Direction				1 Lane Per Direction WCLTL		
	Urban	Suburban	Rural		Urban	Suburban	Rural
12 foot lanes	12900	14600	15100		14200	15900	16500
11 foot lanes	12500	14100	14600		13700	15400	16000
10 foot lanes	12000	13600	14100		13300	14800	15400
9 foot lanes	11600	13100	13600		12800	14300	14900

45 MPH	1 Lane Per Direction				1 Lane Per Direction WCLTL		
	Urban	Suburban	Rural		Urban	Suburban	Rural
12 foot lanes	11700	12200	14600		13100	13200	16000
11 foot lanes	11300	11800	14100		12700	12800	15500
10 foot lanes	10900	11400	13600		12200	12300	14900
9 foot lanes	10500	11000	13100		11800	11900	14400

35 MPH	1 Lane Per Direction				1 Lane Per Direction WCLTL		
	Urban	Suburban	Rural		Urban	Suburban	Rural
12 foot lanes	10200	10200			11700	12700	
11 foot lanes	9900	9900			11300	12300	
10 foot lanes	9500	9500			10900	11900	
9 foot lanes	9200	9200			10500	11400	

25 MPH	1 Lane Per Direction				1 Lane Per Direction WCLTL		
	Urban	Suburban	Rural		Urban	Suburban	Rural
12 foot lanes	10000				11300		
11 foot lanes	9700				10900		
10 foot lanes	9300				10500		
9 foot lanes	9000				10200		

Uses "Principal Arterials" and "Minor Arterials" Facility Types in NCLOS

* Decrease in Lane Width Capacity calculated via 2000 Highway Capacity Manual
lane-width adjustment factor for saturation flow rate

See Appendix E1 for HCM 2000 Urban Arterial Equations

Use Appendix E3: Piedmont Minor Thoroughfare Inputs for adjustments

NOTE: Lane Width is adjusted downward by 3.33% per less foot of pavement

From: [JuarezPozos, Dagoberto](#)
To: [Cindy Williams](#)
Subject: RE: [External] PD-11-22 The Knollwood Tract PDP
Date: Wednesday, August 31, 2022 4:18:31 PM
Attachments: [image001.png](#)
[PD-11-22 PB PHN - Agency Comments.pdf](#)

Cindy,

No comments on this one at this time. They submitted a TIA and my supervisor has worked with them on the access. We will handle our requirements under the driveway permit.

Dago

Dagoberto Pozos, P.E.

Assistant District Engineer
Division 8 District 2

910-944-7621 Office
djuarezpozos@ncdot.gov

902 North Sandhills Blvd.
Aberdeen, NC 28315



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From: Cindy Williams <CWilliams@southernpines.net>
Sent: Wednesday, August 24, 2022 4:45 PM
To: Archie Daniel <adaniel@southernpines.net>; Cindi King <CKing@southernpines.net>; Cory Albers <calbers@southernpines.net>; David Byrd <DByrd@southernpines.net>; Director <director@rluac.com>; Michel, James <JMichel@southernpines.net>; Ken Skipper <KSkipper@southernpines.net>; Maurice Holland <mbholland63@gmail.com>; JuarezPozos, Dagoberto <djuarezpozos@ncdot.gov>; ncsandhillsrcw@fws.gov; ISTRE, RONALD <ristre@southernpines.net>; Ron Maness <rmaness@moorecountyairport.com>
Cc: Pam Graham <PGraham@southernpines.net>; Cindy Williams <CWilliams@southernpines.net>
Subject: [External] PD-11-22 The Knollwood Tract PDP

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to [Report Spam](#).

Good afternoon,

Please review the attached information and respond with any questions or comments you may have.

Thank you.

Cindy Williams

Planning Department
Town of Southern Pines
801 SE Service Road
Southern Pines, NC 28387
(910) 692-4003

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TOWN OF SOUTHERN PINES COURTESY REVIEW

Case: PD-11-22 – Knollwood Tract PDP

Location: North side of US 1 between Midland Rd. and St. Joseph Rd.

PIN#: 858211667500, 858300709512701, 858208786370, and 858200882301

September 9, 2022

Following a review of the above referenced application by the RLUAC staff and Board of Directors, it has been determined that:

- The site is adjacent to a red cockaded woodpecker active foraging area, which is designated as Critical to Protect in the Fort Bragg Compatible Use Rating System.
- The site is located within a Wildlife Habitat Connector, which is designated as Critical to Protect in the Fort Bragg Compatible Use Rating System.
- The site is designated as Important to Protect in the Fort Bragg Compatible Use Rating system due to its location within a designated High Quality Waters drainage area (Mill Creek HQW Management Area).

Active red-cockaded woodpecker foraging areas are designated as Critical to Protect because the loss of their habitat in the region, regardless of specific location, has the potential to impact Fort Bragg's military mission. If the cumulative loss of habitat outside of the installation causes a significant impact to the viability of the species in the region, the use of critical training land on Fort Bragg may be restricted to ensure that the installation fulfills its environmental protection obligations. This would occur as the result of an increased requirement to preserve habitat for this federally designated endangered species, which, in the past, has severely limited certain types of training activity on Fort Bragg. Constrained training capabilities, in turn, can have a significant impact on military readiness and the sustainment of Fort Bragg's mission.

With the proximity of known red-cockaded woodpecker clusters, RLUAC was encouraged to see that the applicant has already secured the services of a consultant, prepared a report on the status of red-cockaded woodpeckers on the site, and has committed to follow all required protocols and permits related to preserving this endangered species. Due to the proximity to the active forging area, RLUAC recommends that the applicant preserve as

many mature pines and as much contiguous undisturbed forested land on the site as possible.

As a designated wildlife connector, the properties in this area help to facilitate the transit of red cockaded woodpeckers between Fort Bragg and the Sandhills Gamelands. The preservation of lands conducive to facilitating their transit between these two major habitat areas will benefit the species, and, therefore assist Fort Bragg in accomplishing its environmental mission. Like the previous recommendation, RLUAC strongly recommends the preservation of contiguous stands of mature pines on the site to help maintain the viability of this area as a wildlife connector.

RLUAC also encourages the Town of Southern Pines and the applicant / developer to take such measures as are feasible to limit the impact of stormwater runoff from the future development of the site on the watercourses that comprise the Mill Creek High Quality Waters Management Area. Maintaining the integrity of important environmental assets contributes to the overall compatibility of our region with Fort Bragg's environmental protection mission, which goes hand-in-hand with its military training and operational missions. Beyond the potential environmental impact of the proposed development, the nature of the use proposed for the site does not present any additional compatibility concerns with regard to military training or operations.

While RLUAC's findings and recommendations are non-binding on the Town of Southern Pines, their consideration and incorporation into your review of this case will help to improve compatibility outcomes for our region as a whole by protecting Fort Bragg's military training and operational missions.

Thank you for allowing RLUAC to review this case.

Jeff Sanborn, Chairman

Vagn K. Hansen II, AICP, Executive Director

Agenda Item

To: Planning Board

From: BJ Grieve, Planning Director

Subject: OA-03-22: Text Amendments to the Unified Development Ordinance (UDO); Petitioner: Town of Southern Pines Town Council

Date: September 22, 2022

I. SUMMARY OF AMENDMENT REQUEST:

The Town of Southern Pines Town Council is proposing to amend the Unified Development Ordinance (UDO) and is requesting Planning Board review and recommendation per UDO §2.17.3 and §2.17.7. The proposed amendments will return the text of UDO §4.2.1(B), (F) and (G) to the text as it was adopted on October 8, 2013 restricting buildings in CB-Central Business, GB-General Business and PD-Planned Development districts to a maximum of three stories with the ceiling of the top story not to exceed 38' in height and restricting buildings in I districts to a maximum of four stories.

Planning staff is also including a request from the Town Engineer amend UDO §4.14.3(A)(3) to exempt single-family residential lots that are developed in accordance with the WPO-Watershed Protection Overlay from also meeting pre-development/post-development stormwater management requirements.

The specific text of each proposed amendment may be found in the attachments to this staff report.

II. APPLICATION REVIEW:

A. Review Process:

Applications for text amendments are reviewed pursuant to UDO §2.17.

B. Criteria for Review:

When reviewing an application for a UDO text amendment, the hearing bodies (Planning Board and Town Council) shall consider and be guided by the following criteria, as set forth in UDO §2.17.10:

2.17.10. Criteria for UDO Text Amendments

In its review of an application for a UDO text amendment, the Hearing Bodies shall consider the following criteria. No single factor is controlling; instead, each must be weighed in relation to the other standards.

(A) Consistency. *The text amendment shall be consistent with the adopted Comprehensive Plan.*

(B) Health, Safety, and Welfare. *The amending ordinance must bear a substantial relationship to the public health, safety, or general welfare, or protect and preserve historical cultural places and areas.*

(C) Public Policy. *Certain public policies in favor of the text amendment may be considered. Examples include a need for affordable housing, economic development, mixed-use development, or sustainable environmental features, which are consistent with the Town, area, neighborhood, or specific plans.*

(D) Other Factors. *The Hearing Body may consider any other factors relevant to a text amendment application under state law.*

(E) Impacts. *The Hearing Bodies shall not regard as controlling any advantages or disadvantages to the individual requesting the change, but shall consider the impact of the proposed amendment on the public at large.*

C. Staff Comments:

The Town Council's proposed amendments to UDO §4.2.1(B), (F) and (G) are the result of a discussion that took place at the July 25, 2022 Town Council Work Session. Anyone seeking information on the origin and context of the proposed text amendment is encouraged to review the YouTube video¹ of that meeting. The history of the text of UDO §4.2.1(B), from the pre-2013 UDO through various revisions in 2015 and 2022, was presented at the Work Session by planning staff. Planning staff also presented research about how the number of stories in a building, and the desirable use of the building resulting from floor to ceiling heights, may impact the character of the built environment of the community. The discussion concludes with a request from the Town Council for planning staff to process a text amendment to return the text of UDO §4.2.1(B), (F) and (G) to the version as adopted on October 8, 2013.

The other proposed text amendment is unrelated to the amendments described above. An amendment to UDO §4.14.3(A)(3) is to clarify stormwater requirements for single-family residential construction on existing lots. The current language in

¹ <https://www.youtube.com/watch?v=z0dIcdjnFrw>, discussion begins at 37:22.

UDO §4.14.3 states that “All developments” shall meet the requirements in section (A), subsections (1) through (3). Development is defined in the UDO as:

“Development: Any of the following:

- a. The construction, erection, alteration, enlargement, renovation, substantial repair, movement to another site, or demolition of any structure.
- b. The excavation, grading, filling, clearing, or alteration of land.
- c. The subdivision of land as defined in G.S. 160D-802.
- d. The initiation or substantial change in the use of land or the intensity of use of land.”

Based on this definition of “development,” and the wording of UDO §4.14.3, then a new single family house being constructed on an existing lot would be required to install engineered stormwater controls so that the post-development rate of runoff did not exceed the pre-development rate. Stormwater controls to meet this type of requirement typically take the form of a retention basin or pond, or an infiltration system. Many existing residential lots were not sized to accommodate stormwater controls. This amendment is intended to apply the same stormwater rules that apply to the WPO-Watershed Protection Overlay. This means that if a proposed single-family residential house on an existing lot is deemed to be compliant with the WPO-Watershed Protection Overlay standards, then no additional stormwater controls would be required.

D. Outside Agency Comments:

A request for comment was emailed to representatives from the Regional Land Use Advisory Commission (RLUAC), North Carolina Department of Transportation (NCDOT), U.S. Fish and Wildlife Service, and representatives of the Town of Southern Pines on August 30, 2022.

- As of the completion of the staff report on September 13, 2022, responses were received from NCDOT and RLUAC stating that there were no comments.

III. ATTACHMENTS:

1. Draft Planning Board Resolution to Adopt a Written Recommendation
2. Current sections of the UDO, showing edits in red text.
3. It’s the Ceiling Heights, for One Thing. SPUR: The Infill Issue, May 2004.

IV. PLANNING BOARD ACTION:

The Planning Board shall consider the criteria for text amendments found in UDO §2.17.10, including consistency with the Comprehensive Long Range Plan. Per North Carolina General Statute 160D-604(d), prior to consideration of the proposed text amendments by the Town Council, the Planning Board shall advise and comment on whether the proposed amendments are consistent with the Comprehensive Long Range Plan. The Planning Board shall provide a written recommendation to the Town Council that addresses plan consistency and other matters as deemed appropriate by the Planning Board, but a comment by the Planning Board that a proposed amendment is inconsistent with the comprehensive plan shall not preclude consideration or approval of the proposed amendments by the Town Council.

To assist the Planning Board in performing this task, Town staff has prepared the following draft motions for the Planning Board's consideration, possible modification as necessary, and adoption:

I move that after reviewing the proposed text amendments to the UDO and considering the criteria for approval of text amendments to the UDO found in UDO §2.17.10:

1. The proposed amendments are consistent with the Comprehensive Long Range Plan for the reasons set forth in Attachment A of staff report OA-03-22;
2. The proposed amendments are consistent with the Comprehensive Long Range Plan for the reasons set forth in Attachment A of staff report OA-03-22 and as revised by the Planning Board as follows;
3. The proposed amendments are inconsistent with the Comprehensive Long Range Plan for the reasons set forth in Attachment A of staff report OA-03-22 as revised by the Planning Board as follows;

I further move that the following other matters were considered by the Planning Board and shall be added to Attachment A by Town staff as part of the Planning Board's written recommendation to the Town Council:

- 1.

And, therefore, I move to:

1. Recommend approval of OA-03-22 to the Town Council.
2. Recommend denial of OA-03-22 to the Town Council.



ATTACHMENT A

PLANNING BOARD RESOLUTION TO ADOPT A WRITTEN RECOMMENDATION FOR ORDINANCE AMENDMENT APPLICATION OA-02-22

WHEREAS, Section 160D-701 of the North Carolina General Statutes specifies that zoning regulations shall be made in accordance with a comprehensive plan and shall be designed to protect the public health, safety and general welfare; and

WHEREAS, Section 160D-604 of the North Carolina General Statutes specifies that the Planning Board shall, with any ordinance amendment or zoning map amendment, advise and comment on whether the proposed action is consistent with the adopted Comprehensive Plan and on other matters as deemed appropriate by the Planning Board, and that the Planning Board shall provide this in the form of a written recommendation to the Town Council; and

WHEREAS, the Planning Board conducted a duly-noticed public hearing during a meeting held on September 22, 2022 to listen to public comments, ask questions of the Town's Planning staff and to consider ordinance amendment application OA-03-22.

NOW, THEREFORE BE IT RESOLVED that the Planning Board finds and recommends to the Town Council that the revisions to the Unified Development Ordinance (UDO) that have been prepared by town staff at the request of the Town Council and the Town Engineer are reasonable, in the public interest and are generally consistent with the Town of Southern Pines Comprehensive Long-Range Plan (CLRP). The amendments will require that buildings in CB, GB and PD districts have a maximum of three stories, with the ceiling of the top story not to exceed 38' in height and will require buildings in I districts to have a maximum of four stories. These amendments are necessary based on recent experiences by the town with proposed development that maximized the number of stories inside of a building which may have had a deleterious impact related to parking, traffic, and the character of surrounding blocks. The amendment will protect the character of Southern Pines by preventing an intensity and form of building development that the Planning Board finds undesirable and inconsistent at this time with Goal 3 and Policies P-1 and P-2 in the CLRP. The amendment from the Town Engineer will exempt single-family development that is subject to, and compliant with, the Watershed Protection Overlay from additional pre-development/post-development stormwater management requirements for which most existing lots were not adequately designed. Both of the proposed revisions implement Goal G-14 and Policy P-20 by involving the community in public decision making. Therefore, the proposed text amendments are reasonable and in the public interest and consistent with the CLRP.

ADOPTED this the 22nd day of September, 2022.

Gary Carroll, Chairman

ATTEST:

Cindy Williams
Secretary to the Planning Board

Chapter 4. Development and Design Standards

Chapter 4 Contents

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4.15. Utilities 4-108

4.1. GENERALLY

The standards in this section are intended to be minimum standards for Development of buildings, sites and infrastructure. Stricter standards or relief from standards may be established through the procedures in chapter 2, the zoning district standards in chapter 3, the specific use standards in chapter 5 or the Development Patterns in chapter 6.

4.2. LOT DEVELOPMENT STANDARDS

Lot Development standards are summarized in Exhibit 4-1. Guidance for applying these is included in sections 4.2.1 (height), 4.2.2 (setbacks), and 4.2.3 (lot size, density and width).

4.2.1. Height

- (A) Subject to the provisions of this section, buildings and structures shall not exceed the maximum Heights established in Exhibit 4-1.
- (B) ~~Except as specifically provided in this section, the~~ Height of a building is the vertical distance measured from the mean elevation of finished grade at the front of the building to the highest point of the building.
(Ord. #1959)
- (C) A Story includes any Floor above the mean elevation of finished grade at the front of the building. Where Floor levels are staggered, the number of Stories is the number of Floors counting vertically from the point of the mean elevation of finished grade at the Building Front.
- (D) The base of any access door to a roof shall not be higher than six (6) inches above the lowest point of any parapet wall or six (6) inches above the lowest point of a roof's surface, whichever is greater. The top of a roof access point shall not be greater than nine (9) feet above the base of the door.
- (E) Roofs with slopes greater than seventy-five (75) percent are regarded as walls.
- (F) In the CB, GB and PD Districts, ~~buildings are limited to a maximum of three (3) stories with~~ the ceiling of the top story ~~shall not to exceed forty-fivethirty-eight (4538)~~ feet in Height. Buildings must have pitched or mansard roofs, or provide a parapet along any side facing a street.
(Ord. # 1716; Ord. #1959)

- (G) In the I districts, buildings are limited to a maximum of four (4) stories. Buildings ~~M~~ must have pitched or mansard roofs, or provide a parapet along any side facing a street. Buildings that are taller than thirty-five (35) feet shall not be located within two-hundred (200) feet of a residential zoning district.

(Ord. #1959)

- (H) The following buildings, where authorized by Exhibit 3-15, may be constructed to a Height of fifty (50) feet provided a sprinkler system and fire-resistant stairway enclosures shall be provided as required in the North Carolina State Building Code:

- (1) Government Offices;
 - (2) Schools;
 - (3) Religious Institutions;
 - (4) Libraries, Museums, Art Galleries, Art Centers and Similar Uses;
 - (5) Golf Course Club House, provided that the building shall be located no closer than 500 feet to any property line or public right-of-way; that there shall be no occupied Floor height above 28 feet; that the building shall not be more than three (3) stories; and that no Living Quarters shall be in the golf course club house;
 - (6) Hospitals, Clinics and Other Medical Facilities in Excess of 10,000 square feet of Floor area; and
 - (7) Post Offices.
- (I) Chimneys, church spires, water tanks, elevator shafts, scenery lofts and similar structural appendages not intended as places of occupancy are exempt from the height limitation set forth in this section, provided that not more than one-third (1/3) of the roof area is covered by such structures.
- (J) Heating and air conditioning equipment, solar collectors and similar equipment, fixtures and devices are exempt from the height limitation

set forth in this section, provided that they are set back from the edge of the roof a minimum distance of one (1) foot for every foot the feature extends above the roof surface. Screen or parapet walls shall be constructed to the height of any fixture taller than three (3) feet in height that would be visible from a street or residential property abutting the property.

- (K) Towers and antennas are allowed in all zoning districts to the extent authorized in Exhibit 3-15 (table of authorized land uses), and subject to the provisions of section 5.23.

- (L) Light standard heights shall not exceed the limits established in section 4.7(G).

- (M) Flagpoles and similar devices shall be limited to thirty-five (35) feet in Height.

4.2.2. Setbacks

- (A) **Setbacks Required.** Except as specifically provided in this section, authorized as part of a Variance, PDD or Certificate of Appropriateness approval, or allowed for a Development Pattern authorized in a specific zoning district, no portion of any building, excluding eaves, decks, patios, steps and uncovered porches may be located on any Lot closer to any Lot line or to the street right-of-way line or centerline than is authorized in Exhibit 4-1. All setbacks are expressed in feet and are minimum setbacks unless otherwise noted. Additional setbacks may be required to meet parking, landscaping, buffers or other standards specified in this chapter, the specific use standards of chapter 5 or the Development Pattern standards in chapter 6 of this UDO.
- (B) **Allowed Setback Encroachments.** A step, stoop, open porch, awnings or other appurtenances may extend up to five (5) feet into the front setback, provided such features do not impede pedestrian circulation or extend more than twenty-five (25) percent into the minimum setback.

4.14. DRAINAGE, EROSION CONTROL, STORM WATER MANAGEMENT

4.14.1. Natural Drainage System Utilized to Extent Feasible:

- (A) To the extent practicable, all Development shall conform to the natural contours of the land and natural and pre-existing man-made drainage ways shall remain undisturbed.
- (B) To the extent practicable, Lot boundaries shall be made to coincide with natural and preexisting man-made drainage ways within subdivisions to avoid the creation of Lots that can be built upon only by altering such drainage ways.

4.14.2. Developments Must Drain Properly

- (A) All Developments shall be provided with a drainage system that is adequate to prevent the undue retention of surface water on the Development site. Surface water shall not be regarded as unduly retained if:
 - (1) The retention results from a technique, practice or device deliberately installed as part of an approved sedimentation or storm water runoff control plan; or
 - (2) The retention is not substantially different in location or degree than that experienced by the Development site in its pre-Development stage, unless such retention presents a danger to health or safety.
- (B) No surface water may be channeled or directed into a sanitary sewer.
- (C) Whenever practicable, the drainage system of a Development shall coordinate with and connect to the drainage systems or drainage ways on surrounding properties or streets.
- (D) Use of drainage swales rather than curb and gutter and storm sewers in subdivisions is provided for in section 4.11.10. Private Streets and

access ways shall provide adequate drainage if the grade of such roads or access ways is too steep to provide drainage in another manner or if other sufficient reasons exist to require such construction.

- (E) Construction specifications for drainage swales, curbs and gutters and storm drains are contained in Appendix B.

(Ord. #1890, 1-6-21)

4.14.3. Storm Water Management

- (A) All Developments shall be constructed and maintained so that adjacent properties are not unreasonably burdened with surface waters as a result of such Developments. More specifically:
 - (1) No Development may be constructed or maintained so that such Development unreasonably impedes the natural flow of water from higher adjacent properties across such Development, thereby unreasonably causing substantial damage to such higher adjacent properties;
 - (2) No Development may be constructed or maintained so that surface waters from such Development are unreasonably collected and channeled onto lower adjacent properties at such locations or at such volumes as to cause substantial damage to such lower adjacent properties; and
 - (3) The post-Development runoff rate shall be equal to or less than the pre-Development rate from the design storm or a ten (10) year storm event.
- (a) [Exemption: Existing single family residential lots built in accordance with the Watershed Protection Overlay requirements.](#)
- (B) All Developments shall contain an adequate drainage system for the proper drainage of all surface water. No new construction and no substantial improvements of a structure may take place unless the

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Why Can't New Buildings be as Nice as Old Buildings? It's the Ceiling Heights, for One Thing

By David Baker, FAIA

One of the main things people like about older San Francisco buildings is the taller ceiling heights, both at the ground floor and the upper stories.

At the ground floor, ceiling heights are a critical part of what makes a retail space inviting and what makes a building feel comfortable for pedestrians on the sidewalk next to it. Many people have fond memories of old-fashioned retail establishments



with high ceilings and generous natural light here in San Francisco. Typically, the older ground-floor retail spaces were a story and a half tall. And indeed, many of these places still exist and contribute to our beloved older neighborhood commercial streets.

Low ceilings make uninviting spaces that rent for less, feel cramped, are less visible from the street, and don't allow commercial uses to easily flourish. For just these reasons, in new suburban malls and shopping centers, retailers consider ceiling heights of 16 to 24 feet essential to the success of the stores. And that is exactly what they build.

Of course, taller ceiling heights are also required for light industrial uses to be located on the ground floor of a building.

Tall ceiling heights are just as important on the

upper floors of a residential building. Pre-World War II apartments in San Francisco have a well-deserved reputation for feeling spacious and being filled with light. High ceilings are the design element most often mentioned when people talk about what is special about San Francisco's historic apartments. These rooms often have ceilings as high as twelve feet, compared with standard ceiling heights on new construction today of eight feet. Instead of "gracious," an adjective we hear more often describing these spaces is "mean."

The squashed ceiling heights, found at both ground floors and upper floors of newer buildings, make it very hard to achieve the feelings of space and grace appreciated so much in traditional buildings. Whether people are consciously aware of this fact or not, it has a profound impact on the comfort one feels in them.

These issues don't come up in the suburbs, where all buildings are more or less single story and where working, shopping, and living are separated into "zones" that people drive between. In a city, where activities are mixed vertically in the same building, it is critical to livability that multistory buildings be designed to feel comfortable.

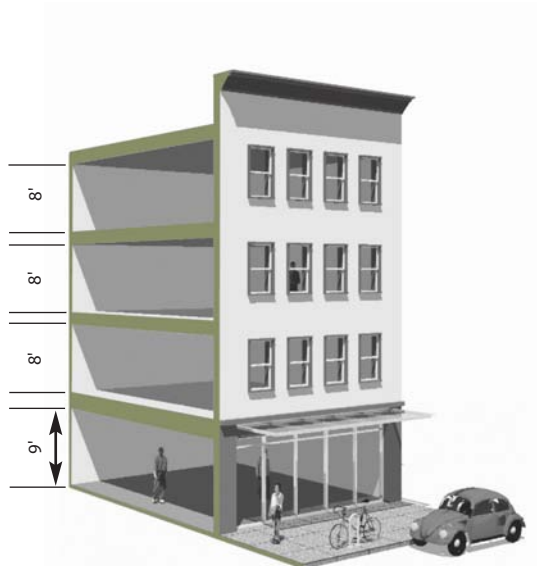
Why can't we design new buildings with the higher floor-to-ceiling heights that we find on most older buildings? Both the answer and the solution lie in the relationship between the Planning Code and the Building Code.

GOVERNMENT CODES AFFECT BUILT FORM IN UNINTENDED, AND SOMETIMES NEGATIVE, WAYS

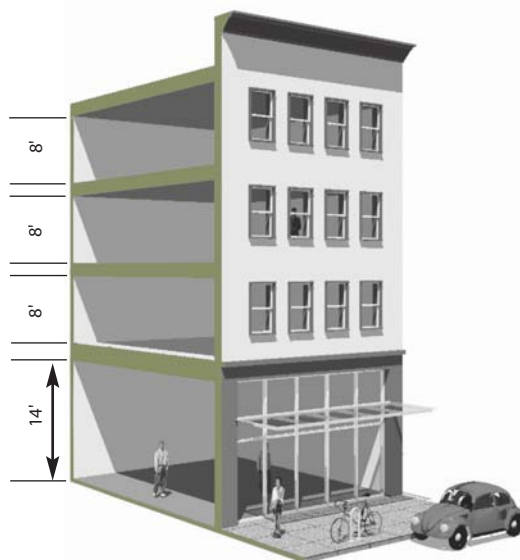
The design of new buildings in San Francisco is influenced by two sets of overlapping rules: first, the local San Francisco Planning Code, written and administered by the San Francisco Planning Department; and second, the national Uniform Building Code (UBC), administered by the San Francisco Building Department but written by the International Congress of Building Officials. Not surprisingly, these two codes have been written in isolation from each other. The interaction between these codes unintentionally pushes buildings into a format of low ceiling heights at both the ground floor and upper floors, even when this is not desired

CASE STUDY 1

40 FOOT EXISTING ZONING



40 feet



45 feet

Retail street in multi-family use zones (does not apply to RH-1 or RH-2 residential districts)

Typical uses: 3-story residential apartments or condos over ground floor retail

Construction Type: 4 stories of wood frame

Most residential neighborhoods in San Francisco are zoned in the Planning Code for a 40-foot height limit. This discussion does not apply to single or two-family residential districts, but to those retail streets that are zoned for multi-family residential yet still have a 40-foot height limit.

The minimum allowable floor-to-ceiling height in the Building Code is generally 8 feet, to which floor thicknesses of one to two feet must be added. In such districts, it is possible to construct a maximum of 4 stories. Assuming 3 upper stories with the minimum ceiling heights, and some additional cornice or parapet at the roof level, there is enough height within the zoning limit for a ground floor with approximately a 9-foot high ceiling.

If the Planning Code were changed so that these 40-foot height limit zones became instead 45-foot height-limit zones, and the number of stories were restricted in the Planning Code to 4, this could result in a 14-foot high ground floor—what many of our nice old buildings have—although still with low 8-foot high ceilings in the upper stories. These upper stories would still feel too cramped to be gracious, but at least the part of the building that touches the sidewalk would feel comfortable, and tend to attract the wonderful service uses—neighborhood shops and restaurants and cafes—we want to patronize. Alternatively, some forms of light manufacturing can be accommodated in a ground floor of 14 feet that simply is not possible in a 9-foot ceiling height.

Few neighbors in multifamily districts would be able to recognize the difference between 40 feet and 45 feet, and in fact, older buildings already exceed 40 feet in many cases. But the difference in the quality of space both within the building and in the public realm outside the building is dramatic. Instead of concentrating on this “magical” 40-foot limit, the public interest would be better served by increasing this height a modest 5 feet to create the conditions that would result in better ground-floor spaces.

by neighbors, city planners, developers, architects, or the future residents of the building.

Presented here are case studies analyzing the effects of 40-foot, 50-foot, and 65-foot Planning Code height limits on urban form, given the Building Code strictures which also must be met. In each case, the question is asked, what simple adjustments can be made to the Planning Code to achieve the “highest and best” interior building

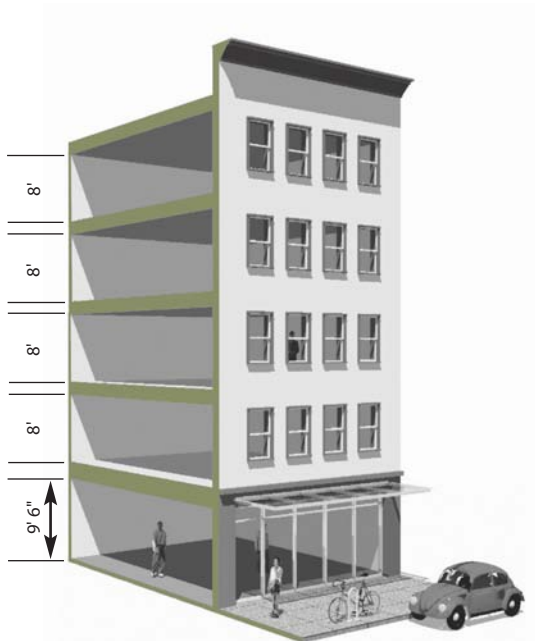
spaces and exterior pedestrian realm? This article proposes aligning the requirements of the Planning Code with those of the Building Code in order to increase the quality of the environment both within new buildings and in the public realm around them.

Such a change would require no change in the Building Code but would instead calibrate the Planning Code to the Building Code.

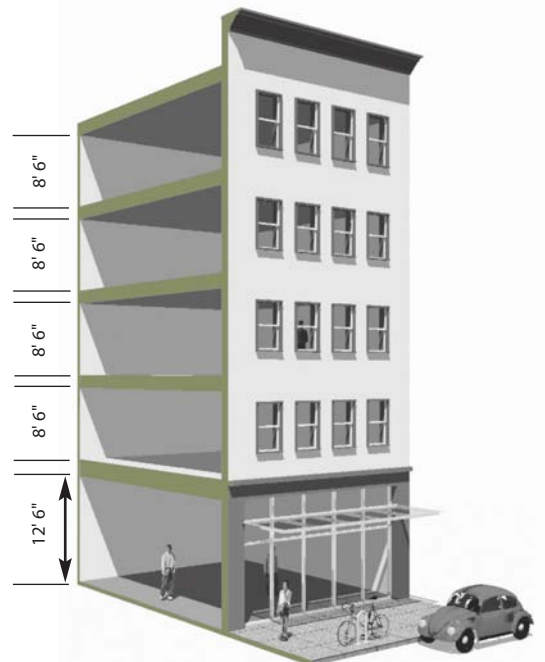
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CASE STUDY 2

50 FOOT EXISTING ZONING



50 feet



55 feet

Uses: 4 story residential over ground floor retail

Construction Type: 4 stories of wood frame over concrete slab between the ground floor and upper floors

In some slightly denser neighborhoods, parts of the Mission District, and along some retail streets such as Geary in parts of the Western Addition, as well as some other areas, height limits are 50 feet. With four stories of 8-foot ceiling heights on the upper levels, a 50-foot tall building can now have a 10-foot high ceiling height on the ground floor and still remain within the 50-foot limit. However, for buildings over 50 feet in height, the Building Code requires the structure between the ground floor and the upper floors to be concrete. Raising the overall height modestly—as in the previous 40-foot example—is more difficult because adding height under the Planning Code means that under the Building Code a whole different, more-expensive construction type is required (such as light-steel construction for the entire building). The solution is to either revert to 4 stories in 45 feet (see previous example, p. 9) or up-zone to 5 stories in 55 feet, acknowledging that the construction costs will be higher. If the former alternative is chosen, the developer and the city lose the benefit of an extra story of desperately needed housing. If the latter alternative is chosen, the developer (and ultimately the resident of the housing), pays a small premium for a more expensive but superior construction method.

RECOMMENDATIONS

All the great cities of the world achieve walkable, vital street life and convenience in daily life by mixing different uses in the same building. The vast majority of the new development that takes place in San Francisco is going to have multiple stories. To make that development comfortable from the street, we would do best to build extra-tall ground floor spaces, whether they are for shopping or for doing other work. And to make the upper

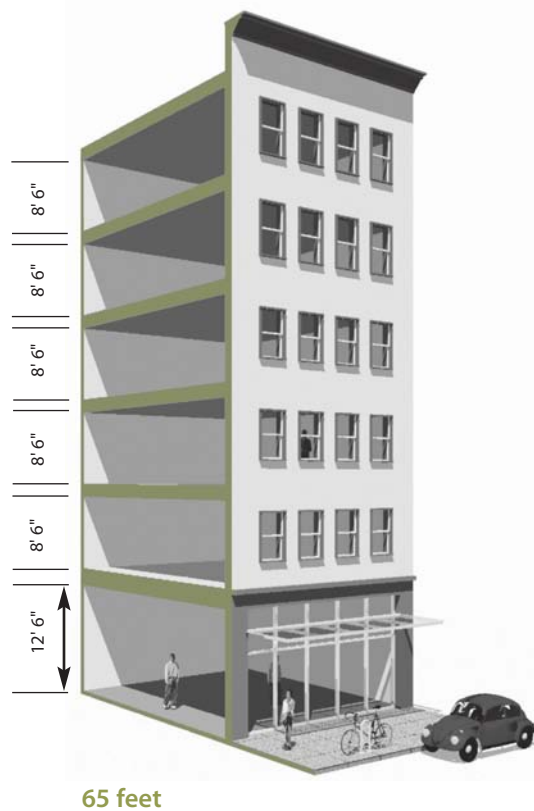
stories gracious and comfortable, we would do best building taller ceiling heights as well.

In order to do this, the Planning Code needs to regulate not just the total height of the buildings, but the allowable number of floors as well, either by requiring minimum ceiling heights that are taller than the Building Code currently requires or simply setting a maximum number of floors that can be built within a given building height.

If we reduce the number of floors that can be

CASE STUDY 3

65 FOOT EXISTING ZONING



Uses: 5 story residential over ground floor retail

Construction Type: 6 stories of concrete or light steel, or 5 stories of “special wood framing” over one story of concrete

Some older areas of the city, such as the Tenderloin and parts of Polk Gulch, as well as others, are zoned at a 65-foot height limit. A 65-foot height limit allows an additional floor of residential and a greater ground-level height than does the 50-foot height limit. The lower level can then become a generous height for retail or light industrial uses. In addition, since the ceiling structure of that floor is concrete, it provides excellent sound and fire safety isolation for residences above. A 65-foot height limit allows both the apartment ceiling heights in the upper stories to be greater than the minimum and also have graciously scaled retail below. Note that the Tenderloin is precisely one of those older neighborhoods that has both active street level activity and gracious apartments above, the combination of which have earned the Tenderloin the sobriquet “our Parisian district.”

This is a case where the Planning Code height limit allows a high ground floor without losing an upper story.

built within each of the current height districts, one side effect would be the reduction of the total density of new buildings—thereby restricting housing supply and forcing development “somewhere else,” meaning the periphery of the region. The better answer is to slightly bump up the height limits, while allowing the same number of stories we allow today.

If nothing else, it is in the public interest to set a minimum ceiling height on the ground level,

which has the most direct impact on the quality of the public realm, as experienced by pedestrians. ✨

David Baker, FALA, is an architect experienced in creation of mixed-use and residential projects throughout California. He is a member of the SPUR Board of Directors and the SPUR Housing Committee.