All property owners, tenants, and neighborhood associations within 300 feet of this rezoning have been notified per UDO Sec. 2.2.11 Public Notification.

## BACKGROUND INFORMATION:

Location: $\quad 2813$ \& 2817 US 64 Highway West

Applicant/Agent: Matthew Carpenter, Parker Poe/ Tucker Ennis, Lennar Carolinas, LLC. , Owner: Yellowbridge Capital, LLC.

## PROJECT DESCRIPTION:

## Acreage:

PINs:
Current Zoning:
Proposed Zoning:
Current 2045 Land Use Map: Medium Density Residential
If rezoned as proposed, the $\mathbf{2 0 4 5}$ Land Use Map Designation will change to: Medium Density
Residential and Commercial Services
Town Limits: ETJ

## Adjacent Zoning \& Land Uses:

|  | Zoning | Land Use |
| :--- | :---: | :---: |
| North: | Wake County Highway District (HD); <br> Planned Unit Development-Conditional <br> Zoning (PUD-CZ \#18CZ31) | Commercial; US 64 Highway West; Single- <br> family Residential (Westford subdivision) |
| South: | Planned Unit Development-Conditional <br> Use (PUD-CU \#04CU15) | Single-family Residential (Stratford at <br> Abbington subdivision) |
| East: | Rural Residential (RR); Medium Density <br> Residential (MD) | Vacant; Single-family Residential <br> (Abbington subdivision) |
| West: | Rural Residential (RR) | Vacant |

## EXISTING CONDITIONS:

The properties are situated on the south side of US 64 Highway West, adjacent to Chanticlair Drive. The properties are north of Stratford at Abbington, west of Abbington, and east of Sweetwater subdivisions. The property located on 2817 US 64 Highway West is vacant with existing vegetation and a stream that bisects the property from west to east; and the property located on 2813 US 64 Highway West contains residential structures.

## NEIGHBORHOOD MEETING:

The applicant conducted two neighborhood meetings on February 23, 2022 and June 8, 2022. The neighborhood meeting reports are attached.

## WCPSS Coordination:

A Letter of Impact from Wake County Public School System (WCPSS) was received for this rezoning and is included in the staff report packet. WCPSS indicates that elementary and high schools within the current assignment area for this rezoning/development are anticipated to have insufficient capacity for future students; transportation to schools outside of the current assignment area should be anticipated. School

CAR
expansion or construction within the next five years may address concerns at the elementary and high school grade level.

## 2045 LAND USE MAP:

The 2045 Land Use Map designates the subject properties as Medium Density Residential. The residential portion of the proposed rezoning to Planned Unit Development-Conditional Zoning (PUD-CZ) is consistent with that Land Use Map designation. The proposed rezoning also includes commercial uses in an area adjacent to US 64 Highway West. If the properties are rezoned as proposed, the 2045 Land Use Map will automatically be amended to Medium Density Residential and Commercial Services per NCGS 160D605(a).

## PLANNED UNIT DEVELOPMENT PLAN:

The applicant is proposing a Planned Unit Development Plan with uses and development standards as follows:

## Permitted Uses:

The development will include office, retail and residential uses. The Rezoned Lands may be used for, and only for, the uses listed below. The permitted uses are subject to the limitation and regulations stated in the UDO and any additional limitation or regulations stated below. For convenience, some relevant sections of the UDO may be referenced; such references do not imply that other sections of the UDO do not apply.

## Residential Uses

- Single-family
- Townhouse
- Accessory apartment*
*Homeowners Association covenants shall not restrict the construction of accessory dwelling units.


## Recreational Uses

- Park, active
- Greenway
- Park, passive


## Non-Residential

- Restaurant, general
- Restaurant, drive-through
- Medical or dental office or clinic
- Medical or dental laboratory
- Office, business or professional
- Publishing office
- Artisan Studio
- Barber and beauty shop
- Book store
- Convenience store
- Dry cleaners and laundry service
- Farmer's market
- Financial institution
- Recreation facility, private
- Utility, minor
- Floral shop
- Gas and fuel, retail
- Greenhouse or nursery, retail
- Utility, minor
- Upholstery shop
- Pet services
- Day care facility
- Veterinary clinic or hospital


## Proposed Design Controls:

## Residential:

Proposed Land Area: 44.93 acres
Maximum Number of units: 160 units
Maximum Density: 3.6 units per acre
Maximum Building Height: 45 feet, 3 stories
Maximum Built-Upon Area: 70\%
Front Loaded Townhouse Minimum Lot Width: 18'
Rear Loaded Townhouse Minimum Lot Width: 18'
Single-family Minimum Lot Width: 50'*
Single-family Minimum Lot Size: 6,000 sf
*Single-family detached homes adjacent to the Property's southernmost property line adjacent to the Abbington neighborhood from the northwestern corner of PIN 0722645333 to the northeastern corner of PIN 0722748868 shall have a minimum lot width of 60 feet.

## Non-Residential:

Proposed Land Area: 3.5 acres
Maximum Building Square Feet: 25,000 sf
Maximum Building Height: 50'
Maximum Built-Upon Area: 70\%

## Setbacks

|  | Proposed Minimum Setbacks |  |
| :---: | :---: | :---: |
| Front Loaded | Front | $10^{\prime}$ |
| Townhouse | Side | $0^{\prime}$ (5' for end units) |
|  | Rear | 5 ' |
|  | Corner Side | 8 |
|  | Minimum Building Separation | 10' |
|  | Minimum Buffer/RCA | 10' for buildings; $5^{\prime}$ for parking areas |
| Rear Loaded | Front | 5' |
| Townhouse | Side | $0^{\prime}$ (5' for end units) |
|  | Rear | 5 ' |
|  | Corner | 8 |
|  | Minimum Building Separation | 10' |
| Single-Family | Front | 20' |
| Detached | Side | $6^{\prime}$ |
|  | Rear | $15^{\prime}$ |
|  | Corner | 8' |
|  | Minimum Buffer/RCA | $10^{\prime}$ for buildings; $5^{\prime}$ for parking areas |


| Non-Residential | Front (US-64) | Proposed Minimum Setbacks |
| :--- | :--- | :--- | :--- |
|  | Side | $10^{\prime}$ |
|  | Rear | $10^{\prime}$ |
|  | Corner Side | $10^{\prime}$ |
|  | From Buffer/RCA | $10^{\prime}$ for buildings; $5^{\prime}$ for parking areas |

## Proposed RCA \& Buffers

The proposed Yellowbridge PUD is located west of the Highway 540 Corridor and is required to provide a minimum $30 \%$ of RCA for the residential district and $25 \%$ RCA for the commercial district.

Residential and Non-Residential Buffers:

| Perimeter Buffers: | UDO Required | Proposed |
| :---: | :---: | :---: |
| Along the Property's shared property line with PIN 0722762014 | 20' Type A | 30' Type A |
| Along the Property's US-64 <br> Highway West frontage east of PIN $0722762014$ | $100^{\prime}$ Type A/50' Type A (UDO Section 8.2.6.B.5.f.ii.c) | 50' Type A* |
| Along the Property's US-64 <br> Highway West frontage west of PIN $0722762014$ | 100' Type A | 100' Type E |
| Along the Property's westernmost boundary | 20' Type B (Land Use Class 2 or 3); 10' Type B (Land Use Class 1) | 20' Type B |
| Along the north and south side of Chanticlair Drive west of the Singlefamily Detached homes to the north of Chanticlair Drive | 10' Type A (Land Use Class 2 or 3); 10' Type D (Alley-loaded homes facing a major collector) | 10' Type D |
| Along the north side of Chanticlair Drive adjacent to the Single-family Detached homes north of Chanticlair Drive | Within residential developments, no street front buffer is required on minor collectors or residential streets | 10' Type D |
| Along the Property's easternmost boundary adjacent to PIN $0722850629$ | 10' Type B (Land Use Class 2 or 3); <br> 20' Type A (Land Use Class 4 or 5) | 10' Type B |
| Along the gas easement | 20' Type B | $10^{\prime}$ Type A along both sides of gas easement ( $20^{\prime}$ total) |
| Along the Property's southern property line from the northwest corner of PIN 0722645333 to the northeast corner of PIN 0722741431** | 20' Type B (Land Use Class 2 or 3 ) | 50' Type A** $^{* *}$ with a minimum of 6 ft . tall opaque privacy fence along the north edge of the buffer |
| Along the Property's southern property line from the northeast corner of PIN 0722741431 to the northwest corner of PIN 0722748868*** | 20' Type B (Land Use Class 2 or 3) | $50^{\prime}$ Type A*** with a minimum of 6 ft . tall opaque privacy fence along the north edge of the buffer |

* The Development shall meet requirements (i) through (iii) in UDO Section 8.2.6(B)(5)(f)(ii)(c) to reduce the buffer width along US-64 Highway West to 50 feet.
** This portion of the perimeter buffer shall remain undisturbed and supplemented with Type A buffer plantings.
*** This portion of the perimeter buffer shall be cleared, graded, include a minimum 3-foot berm, and be replanted to a Type A buffer standard.


## ZONING CONDITIONS

The following conditions shall also apply:

1. Homeowners Association covenants shall not restrict the construction of accessory dwelling units.
2. All heavy duty construction traffic shall enter and exit the site via US-64 Highway West. Heavy duty construction traffic shall not use Chanticlair Drive, Rothwood Way, or Lyndenbury Drive. "No Construction Traffic" signage shall be posted along Chanticlair Drive and Rothwood Way.
3. All dwelling units shall be pre-configured with conduit for a solar energy system.
4. The project shall install at least one (1) sign per SCM discouraging the use of fertilizer and to reduce pet waste near SCM drainage areas. The sign(s) shall be installed in locations that are publicly accessible, such as adjacent to, but outside of public property and/or public easement(s), amenity centers, sidewalks, greenways, or side paths.
5. The project shall install a minimum of two (2) pet waste stations.
6. The project shall plant drought resistant warm season grasses throughout the development to minimize irrigation and chemical use.
7. Stormwater control devices shall be designed and constructed so that post development peak runoff does not exceed pre-development peak runoff conditions for the 24 -hour, 1 year, 10 year, and 25 year storm events.
8. Landscaping shall include at least four (4) native hardwood tree species throughout the Development.
9. No clearing or land disturbance shall be permitted within the riparian buffer, except the minimum necessary to install required road and utility infrastructure and SCM outlets. The SCM water storage and treatment shall not be permitted within the riparian buffer. Sewer infrastructure shall be designed to minimize impacts to riparian buffers.
10. Any outdoor lighting installed in the commercial area and on private amenities, signs, landscaping, walls, or fences shall be full cutoff LED fixtures with a maximum color temperature of 3000k. This condition shall not apply to lighting on single-family homes, townhouses, accessory buildings, or street lighting.
11. At least $75 \%$ of plants shall be native species. Landscaping will be coordinated with and approved by the Planning Department at site or subdivision review.
12. The Development shall include a minimum of two (2) residential restricted affordable housing townhouse or detached single-family median-income ownership units (the "Affordable Units"). The Affordable Units shall be constructed on-site and sold (includes unit price and lot price) at a mutually agreeable maximum affordable housing median-income ownership initial sales price (the "Initial Sales Price"). The Affordable Units shall be occupied by low or median-income households earning no more than one-hundred percent (100\%) of the Raleigh NC Metropolitan Statistical Area (MSA), Area Median Income (AMI), adjusted for family size as most recently published by HUD (the "Income Limit"). For purposes of calculating the Initial Sales Price for the Affordable Units, affordable shall mean a reasonable down payment and monthly housing costs expected during the first calendar year of occupancy, including utilities or utility allowances, mortgage loan principal and interest, mortgage insurance, property taxes, homeowner's insurance, homeowner's association dues, if any, and all other property assessments, dues and fees assessed as a condition of property ownership, which does not exceed thirty percent (30\%) times (x's) one-hundred percent
(100\%) times (x's) the annual median-income limit (100\% AMI Category), based on a family size that is equal to the actual number of bedrooms as the Affordable Units, applicable to the Raleigh, NC MSA as most recently published by the HUD. A restrictive covenant (i.e. resale deed restriction) with a minimum affordability period of fifteen (15) years (the "Affordability Period") shall be recorded in the Wake County Registry against each of the Affordable Units concurrently at the close of escrow upon the sale of the Affordable Units. A restrictive covenant (i.e. affordable housing agreement) between the Town and applicant shall be recorded in the Wake County Registry against each of the lots for the Affordable Units prior to the issuance of a building permit for such lots to memorialize the affordable housing terms and conditions of the approved zoning condition. The Affordable Units may be townhouses or single-family detached houses, at the discretion of the developer, and shall be designated on the Master Subdivision Final Plat, which may be amended from time to time. Final Affordable Housing Unit floor plan selection which includes the unit size and bedroom size will be at the discretion of the developer. The Affordable Units may be provided in multiple phases or in one single phase. Developer will work with the Town to identify qualifying buyers for the first sale of the Affordable Units (the "First Sale"). Following the First Sale of the Affordable Units, Developer shall not be responsible for managing the Affordable Units or performing marketing, applicant screening, and selection related to future sales of the Affordable Units. Town staff will assist with the administrative duties of the Affordable Units during the Affordable Period.

## Architectural Standards

The proposed development offers the following architectural controls to ensure a consistency of character throughout the development, while allowing for enough variety to create interest and avoid monotony. Changes to the exterior materials, roof, windows, doors, process, trim, etc. are allowable with administrative approval at the staff level. Further details shall be provided at the time of development plan submittal. The following conditions shall apply:

## RESIDENTIAL DISTRICT DESIGN GUIDELINES

Single-Family Detached:

1. Vinyl siding is not permitted; however, vinyl windows, decorative elements and trim are permitted.
2. The roof shall be pitched at $5: 12$ or greater for $75 \%$ of the building designs.
3. Eaves shall project at least 12 inches from the wall of the structure.
4. Garage doors shall have windows, decorative details or carriage-style adornments on them.
5. The garage shall not protrude more than 1 foot out from the front façade and front porch.
6. Garages on the front façade of a home that faces the street shall not exceed $30 \%$ of the total width of the house and garage together.
7. The visible side of a home on a corner lot facing the public street shall contain at least 3 decorative elements such as, but not limited to, the following elements:

- Windows
- Bay window
- Recessed window
- Decorative window
- Trim around the windows
- Wrap around porch or side porch
- Two or more building materials
- Decorative brick/stone
- Decorative trim
- Decorative shake
- Decorative air vents on gable
- Decorative gable
- Decorative cornice
- Column
- Portico
- Balcony
- Dormer

8. A varied color palette shall be utilized on homes throughout the subdivision to include a minimum of three color families for siding and shall include varied trim, shutter, and accent colors complementing the siding color.
9. House entrances for units with front-facing single-car garages shall have a prominent covered porch/stoop area leading to the front door.
10. The rear and side elevations of the units that can be seen from the right-of-way shall have trim around the windows.
11. Front porches shall be a minimum of 5 feet deep.
12. No more than $25 \%$ of lots may be accessed with J-driveways. There shall be no more than 3 such homes in a row on any single block. Any lots eligible for a J-driveway home shall be identified on the Final Plat.

Townhouses (front and alley loaded):

1. Vinyl siding is not permitted; however, vinyl windows, decorative elements and trim are permitted.
2. The roofline cannot be a single mass; it must be broken up horizontally and vertically between every unit.
3. Garage doors must have windows, decorative details or carriage-style adornments on them.
4. House entrances for units with front-facing single-car garages shall have a covered porch/stoop area leading to the front door.
5. The garage cannot protrude more than 1 foot out from the front façade or front porch.
6. The visible side of a townhome on a corner lot facing the public street shall contain at least 3 decorative elements such as, but not limited to, the following elements:

- Windows
- Bay window
- Recessed window
- Decorative window
- Trim around the windows
- Wrap around porch or side porch
- Two or more building materials
- Decorative brick/stone
- Decorative trim
- Decorative shake
- Decorative air vents on gable
- Decorative gable
- Decorative cornice
- Column
- Portico
- Balcony
- Dormer

7. Building facades shall have horizontal relief achieved by staggering the units.
8. A varied color palette shall be utilized on homes throughout the subdivision to include a minimum of three color families for siding and shall include varied trim, shutter, and accent colors complementing the siding color.
9. The rear and side elevations of the units with right-of-way frontage shall have trim around the windows.

## COMMERCIAL DISTRICT DESIGN GUIDELINES

1. Architectural treatments such as varying roof forms, façade articulation, breaks in roof, walls with texture materials and ornamental details shall be incorporated to add visual interest.
2. Large expanses of blank walls greater than 25 feet in length or height shall be broken up with windows or other architectural features to reduce visual impacts.
3. Roof features may include flat roofs with parapet, hip roofs or awnings with metal or canvas material.

## STAFF REPORT

## COMMERCIAL DISTRICT MATERIALS

Non-residential exteriors shall incorporate variation in materials. The front façade and other facades located along a public right-of-way may include:

1. Brick and/or stone masonry
2. Decorative concrete block (integral color or textured)
3. Stone accents
4. Aluminum storefronts with anodized or pre-finished colors
5. EIFS cornices, and parapet trim
6. EIFS or synthetic stucco shall not be used in the first four feet above grade and shall be limited to only $25 \%$ of each building façade
7. Precast concrete
8. Soffit and fascia materials to be considered include EIFS with crown trim elements
9. Cementitious siding

Rear elevations of non-residential buildings facing opaque landscape buffers or not visible from vehicular use areas or public rights-of-way may incorporate decorative concrete masonry, metal coping, or EIFS trim.

## NATURAL RESOURCE AND ENVIRONMENTAL DATA

The Property is within the Beaver Creek Basin, Jordan Lake Watershed, and Primary Watershed Protection Overlay District as shown on the Town of Apex Watershed Protection Overlay Map 2019. The project site does not sit within a designated current or future 100-year floodplain as shown on the Town of Apex Watershed \& FEMA Map dated April 2015. FIRM Panel 3720072200J dated May 2, 2006 does not include a floodplain within the property boundary.

## PARKING

Parking for the development shall meet the requirements of UDO Section 8.3.

## PUBLIC FACILITIES:

The proposed PUD shall be designed to comply with the Town's Sewer and Water Master Plan and Standards and Specifications. The development will be served water and sewer by the Town of Apex.

## STORMWATER MANAGEMENT:

The PUD stormwater control devices shall be designed and constructed to exceed UDO standards so that the post development peak runoff does not exceed pre-development peak runoff conditions for the 24hour, 1 year, 10 year, and 25 year storm events. The development shall meet all stormwater management requirements for quality and quantity treatment in accordance with UDO Section 6.1.

## APEX TRANSPORTATION PLAN/ACCESS and CIRCULATION:

The proposed PUD is consistent with the Apex Transportation Plan and Bicycle Pedestrian System Plan.

- All proposed driveway access and improvements on state-maintained roadways are subject to both Apex and NCDOT review and approval.
- A maximum of one (1) access point shall be proposed on US 64, to be constructed as a left-in/right-in/right-out public street access at the existing median break with a stop-controlled northbound approach with one lane of ingress and one lane of egress and an exclusive eastbound right turn lane with a minimum 100 feet of storage and appropriate deceleration length and taper on US Hwy 64.

Improve the median break and construct physical separation between turn lanes to accommodate trucks and prevent both improper left turns and vehicular turning-movement conflicts.

- Construct an exclusive eastbound U-turn median break on US Hwy 64, approximately halfway between the site access at the existing median break and Kellyridge Drive including a U-turn lane with a minimum of 100 feet of storage and appropriate deceleration length and taper. If the eastbound U turn lane is removed from the existing median break location to the west, extend the storage to 150 feet at this location.
- Consistent with the Transportation Plan Thoroughfare and Collector Street Map, Chanticlair Drive shall be extended westward as a Major Collector Street with a minimum 60-foot right-of-way, consistent with Town Standards.
- No residential driveways shall be permitted on existing or future Major Collector Street(s).
- Rothwood Way shall be extended north and stubbed to the southernmost property line of PIN 0722850629 . Homes located on Rothwood Way shall take driveway access from Rothwood Way.
- The extension of Chanticlair Drive shall be constructed concurrently with the project but shall remain closed to traffic between Yellowbridge and Abbington subdivisions until such time that the $50^{\text {th }} \mathrm{CO}$ is approved for Yellowbridge. The form of closure shall be noted on the subdivision plan and subject to Town staff approval.
- Potential Access Points shown on the Conceptual Site Plan and Conceptual Utility Plan (C100) are not shown in exact locations but show required connections. Connections may only be removed from the subdivision connectivity requirements of the PUD if the developer shows to the satisfaction of the Planning Director, in consultation with the Technical Review Committee (TRC), that the construction of the connection would be impractical based on environmental conditions found in the field at the time of Master Subdivision Plan approval.


## ENVIRONMENTAL ADVISORY BOARD:

The Apex Environmental Advisory Board (EAB) held a pre-application meeting for this rezoning on February 17, 2022. The zoning conditions suggested by the EAB are listed below along with the applicant's response to each condition.

| EAB Suggested Condition | Applicant's Response |
| :--- | :--- |
| Solar conduit shall be included in building designs. | Added |
| Pet waste stations shall be installed. | Added |
| Include landscaping that requires less irrigation and chemical use. <br> o Plant warm season grasses for drought-resistance. | Added |
| Increase the number of native hardwood species planted to 3. Added <br> Increase design storm pre- and post-attenuation requirement to include the <br> 25-year storm. Added <br> Install solar PV systems to 50 homes with a minimum 4 kilowatts DC power <br> rating (approximately 12 panels). Not added <br> Install signage near environmental sensitive areas in order to: <br> o Reduce pet waste near SCM drainage areas. <br> o Eliminate fertilizer near SCM drainage areas. Added <br> Increase biodiversity. <br> o Plant pollinator-friendly flora. <br> o Plant native flora (Refer to the Apex Design \& Development Manual <br> for approved native species). Not added |  |


| EAB Suggested Condition | Applicant's Response |
| :--- | :--- |
| Implement green infrastructure. <br> o Provide diverse and abundant pollinator and bird food sources (e.g. <br> nectar, pollen, and berries from blooming plants) that bloom in <br> succession from spring to fall. <br> o Plant warm season grasses to reduce irrigation. | Added |
| Add information signage or other marking at the boundary of lots when they <br> are adjacent to a wooded or natural condition resource conservation area <br> (RCA) indicating that the area beyond the sign is RCA and is not to be <br> disturbed. | Not added |
| Apply for green building certifications, such as LEED, Energy Star, BREEAM, <br> Green Globes, NGBS Green, or Green Guard. | Not added |
| Include International Dark Sky Association compliance standards. <br> o Outdoor lighting shall be shielded in a way that focuses lighting to <br> the ground. <br> o Lighting that minimizes the emission of blue light to reduce glare <br> shall be used. <br> o Lighting with a color temperature of 3000K or less shall be used for <br> outside installations in non-residential use cases. | Added |
| Add a zoning condition which minimizes tree clearing, installation of an SCM, <br> or infrastructure in any zone of the riparian buffer, except as necessary for <br> the installation of Town of Apex utilities. | Added |
| Add a zoning condition that indicates that species native to the eastern US <br> shall be used to meet the landscaping requirements for Section 8.2 of the <br> UDO up to 75-80\%. | Added |

## PARKS, RECREATION, AND CULTURAL RESOURCES ADVISORY COMMISSION:

The Parks, Recreation, and Cultural Resources Advisory Commission reviewed the Yellowbridge PUD project at their April 27, 2022 meeting. The Commission made a recommendation for a fee-in-lieu of dedication for a maximum of 50 single-family detached units and 110 single-family attached units. The recommendation is based on the current 2022 fee rate of single-family detached units for $\$ 3,753.89$ and single-family attached units for $\$ 2,528.25$. The total residential fee in lieu per current unit count is \$465,802.

## PLANNING BOARD RECOMMENDATION:

The Planning Board held a Public Hearing on July 11, 2022 and by a vote of 4-3 recommended approval of the rezoning with the following additional condition offered by the applicant: " 6 ' opaque privacy fence shall be installed by developer along inside of the buffer along southern property line." The reason for the dissenting vote was due to:

1. No clear community entry and exist design from Us 64 . Only existing driveway to be used as construction access which may not hold weight of construction trucks and equipment. Using this driveway goes over the stream as construction access will affect the environment with all construction debris.
2. Scale and proportion of lot widths and sizes of homes are not gradual. There needs to be a transition from Sweetwater community to the west lots are tighter, to Abbington and Stratford community wider lots; bigger homes.
3. Insufficient space in elementary and high schools.
4. Chanticlair Road connection may become "beltway" with traffic holdup from construction trucks in and out on US 64 Highway.
One Planning Board member agreed with \#1-\#3. Another Planning Board member agreed with \#1-\#4; also, the developer should continue to work with neighbors as was done for Morris Tract, but neighbors need to come up with a more cohesive ask.

## PLANNING STAFF RECOMMENDATION:

Planning staff recommends approval of Rezoning \#22CZO6 Yellowbridge PUD as proposed by the applicant.

## ANALYSIS STATEMENT OF THE REASONABLENESS OF THE PROPOSED REZONING:

This Statement will address consistency with the Town's comprehensive and other applicable plans, reasonableness, and effect on public interest:

The 2045 Land Use Map designates the subject properties as Medium Density Residential. The residential portion of the proposed rezoning to Planned Unit Development-Conditional Zoning (PUDCZ) is consistent with that Land Use Map designation. The proposed rezoning also includes a commercial uses in an area adjacent to US 64 Highway West. If the properties are rezoned as proposed, the 2045 Land Use Map will automatically be amended to Medium Density Residential and Commercial Services per NCGS 160D-605(a).

Approval of the proposed rezoning is reasonable and in the public interest because it will provide a transition between higher and lower residential densities, while providing commercial development along US 64 Highway. The proposed rezoning also provides additional environmental conditions and a minimum of two affordable housing units.

## PLANNED UNIT DEVELOPMENT DISTRICT AND CONDITIONAL ZONING STANDARDS: Standards

In return for greater flexibility in site design requirements, Planned Development (PD) Districts are expected to deliver exceptional quality community designs that preserve critical environmental resources; provide high quality community amenities; incorporate creative design in the layout of buildings, Resource Conservation Area and circulation; ensure compatibility with surrounding land uses and neighborhood character; provide high quality architecture; and provide greater efficiency in the layout and provision of roads, utilities, and other infrastructure. The Planned Development (PD) Districts shall not be used as a means of circumventing the Town's adopted land development regulations for routine developments.

## 1. Planned Unit Development (PUD-CZ) District

In approving a Planned Development (PD) Zoning District designation for a PUD-CZ, the Town Council shall find the PUD-CZ district designation and PD Plan for PUD-CZ demonstrates compliance with the following standards:
a) Development parameters
(i) The uses proposed to be developed in the PD Plan for PUD-CZ are those uses permitted in Sec. 4.2.2 Use Table.
(ii) The uses proposed in the PD Plan for PUD-CZ can be entirely residential, entirely nonresidential, or a mix of residential and non-residential uses, provided a minimum percentage of non-residential land area is included in certain mixed use areas as specified
on the 2045 Land Use Map. The location of uses proposed by the PUD-CZ must be shown in the PD Plan with a maximum density for each type of residential use and a maximum square footage for each type of non-residential use.
(iii) The dimensional standards in Sec. 5.1.3 Table of Intensity and Dimensional Standards, Planned Development Districts may be varied in the PD Plan for PUD-CZ. The PUD-CZ shall demonstrate compliance with all other dimensional standards of the UDO, North Carolina Building Code, and North Carolina Fire Code.
(iv) The development proposed in the PD Plan for PUD-CZ encourages cluster and compact development to the greatest extent possible that is interrelated and linked by pedestrian ways, bikeways and other transportation systems. At a minimum, the PD Plan must show sidewalk improvements as required by the Apex Transportation Plan and the Town of Apex Standard Specifications and Standard Details, and greenway improvements as required by the Town of Apex Parks, Recreation, Greenways, and Open Space Plan and the Apex Transportation Plan. In addition, sidewalks shall be provided on both sides of all streets for single-family detached homes.
(v) The design of development in the PD Plan for PUD-CZ results in land use patterns that promote and expand opportunities for walkability, connectivity, public transportation, and an efficient compact network of streets. Cul-de-sacs shall be avoided unless the design of the subdivision and the existing or proposed street system in the surrounding area indicate that a through street is not essential in the location of the proposed cul-desac, or where sensitive environmental areas such as streams, floodplains, and wetlands would be substantially disturbed by making road connections.
(vi) The development proposed in the PD Plan for PUD-CZ is compatible with the character of surrounding land uses and maintains and enhances the value of surrounding properties.
(vii) The development proposed in the PD Plan for PUD-CZ has architectural and design standards that are exceptional and provide higher quality than routine developments. All residential uses proposed in a PD Plan for PUD-CZ shall provide architectural elevations representative of the residential structures to be built to ensure the Standards of this Section are met.
b) Off-street parking and loading. The PD Plan for PUD-CZ shall demonstrate compliance with the standards of Sec. 8.3 Off-Street Parking and Loading, except that variations from these standards may be permitted if a comprehensive parking and loading plan for the PUD-CZ is submitted as part of the PD Plan that is determined to be suitable for the PUD-CZ, and generally consistent with the intent and purpose of the off-street parking and loading standards.
c) RCA. The PD Plan for PUD-CZ shall demonstrate compliance with Sec. 8.1.2 Resource Conservation Area, except that the percentage of RCA required under Sec. 8.1.2 may be reduced by the Town Council by no more than $10 \%$ provided that the PD Plan for PUD-CZ includes one or more of the following:
(i) A non-residential component;
(ii) An overall density of 7 residential units per acre or more; or
(iii) Environmental measures including but not limited to the following:
a. The installation of a solar photovoltaic (PV) system on a certain number or percentage of single-family or townhouse lots or on certain number or percentage of multifamily, mixed-use, or nonresidential buildings. All required solar installation shall be completed or under construction prior to $90 \%$ of the building permits being issued for the approved number of lots or buildings. For single-family or townhouse

CAR
installations, the lots on which these homes are located shall be identified on the Master Subdivision Plat, which may be amended;
b. The installation of a geothermal system for a certain number or percentage of units within the development; or
c. Energy efficiency standards that exceed minimum Building Code requirements (i.e. SEER rating for HVAC).
d) Landscaping. The PD Plan for PUD-CZ shall demonstrate compliance with the standards of Sec. 8.2 Landscaping, Buffering and Screening, except that variations from these standards may be permitted where it is demonstrated that the proposed landscaping sufficiently buffers uses from each other, ensures compatibility with land uses on surrounding properties, creates attractive streetscapes and parking areas and is consistent with the character of the area. In no case shall a buffer be less than one half of the width required by Sec. 8.2 or 10 feet in width, whichever is greater.
e) Signs. Signage in the PD Plan for PUD-CZ shall demonstrate compliance with Sec. 8.7 Signs, except that the standards can be varied if a master signage plan is submitted for review and approval concurrent with the PD plan and is determined by the Town Council to be suitable for the PUD-CZ and generally consistent with the intent and purpose of the sign standards of the UDO. The master signage plan shall have design standards that are exceptional and provide for higher quality signs than those in routine developments and shall comply with Sec. 8.7.2 Prohibited Signs.
f) Public facilities. The improvements standards and guarantees applicable to the public facilities that will serve the site shall comply with Article 7: Subdivision and Article 14: Parks, Recreation, Greenways, and Open Space.
(i) The PD Plan for PUD-CZ demonstrates a safe and adequate on-site transportation circulation system. The on-site transportation circulation system shall be integrated with the off-site transportation circulation system of the Town. The PD Plan for PUD-CZ shall be consistent with the Apex Transportation Plan and the Town of Apex Standard Specifications and Standard Details and show required right-of-way widths and road sections. A Traffic Impact Analysis (TIA) shall be required per Sec. 13.19.
(ii) The PD Plan for PUD-CZ demonstrates a safe and adequate on-site system of potable water and wastewater lines that can accommodate the proposed development, and are efficiently integrated into off-site potable water and wastewater public improvement plans. The PD Plan shall include a proposed water and wastewater plan.
(iii) Adequate off-site facilities for potable water supply, sewage disposal, solid waste disposal, electrical supply, fire protection and roads shall be planned and programmed for the development proposed in the PD Plan for PUD-CZ, and the development is conveniently located in relation to schools and police protection services.
(iv) The PD Plan shall demonstrate compliance with the parks and recreation requirements of Sec. Article 14: Parks, Recreation, Greenways, and Open Space and Sec. 7.3.1 Privatelyowned Play Lawns if there is a residential component in the PUD-CZ.
g) Natural resource and environmental protection. The PD Plan for PUD-CZ demonstrates compliance with the current regulatory standards of this Ordinance related to natural resource and environmental protection in Sec. 6.1 Watershed Protection Overlay District, Sec. 6.2 Flood Damage Prevention Overlay District, and Sec. 8.1 Resource Conservation.
h) Storm water management. The PD Plan shall demonstrate that the post-development rate of on-site storm water discharge from the entire site shall not exceed pre-development levels in accordance with Sec. 6.1.7 of the UDO.
i) Phasing. The PD Plan for PUD-CZ shall include a phasing plan for the development. If development of the PUD-CZ is proposed to occur in more than one phase, then guarantees shall be provided that project improvements and amenities that are necessary and desirable for residents of the project, or that are of benefit to the Town, are constructed with the first phase of the project, or, if this is not possible, then as early in the project as is technically feasible.
j) Consistency with 2045 Land Use Map. The PD Plan for PUD-CZ demonstrates consistency with the goals and policies established in the Town's 2045 Land Use.
k) Complies with the UDO. The PD Plan for PUD-CZ demonstrates compliance with all other relevant portions of the UDO.

## CONDITIONAL ZONING STANDARDS:

The Town Council shall find the PUD-CZ designation demonstrates compliance with the following standards. 2.3.3.F:

## Legislative Considerations

The applicant shall propose site-specific standards and conditions that take into account the following considerations, which are considerations that are relevant to the legislative determination of whether or not the proposed conditional zoning district rezoning request is in the public interest. These considerations do not exclude the legislative consideration of any other factor that is relevant to the public interest.

1) Consistency with 2045 Land Use Map. The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and consistency with the purposes, goals, objectives, and policies of the 2045 Land Use Map.
2) Compatibility. The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and compatibility with the character of surrounding land uses.
3) Zoning district supplemental standards. The proposed Conditional Zoning (CZ) District use's compliance with Sec 4.4 Supplemental Standards, if applicable.
4) Design minimizes adverse impact. The design of the proposed Conditional Zoning (CZ) District use's minimization of adverse effects, including visual impact of the proposed use on adjacent lands; and avoidance of significant adverse impacts on surrounding lands regarding trash, traffic, service delivery, parking and loading, odors, noise, glare, and vibration and not create a nuisance.
5) Design minimizes environmental impact. The proposed Conditional Zoning District use's minimization of environmental impacts and protection from significant deterioration of water and air resources, wildlife habitat, scenic resources, and other natural resources.
6) Impact on public facilities. The proposed Conditional Zoning (CZ) District use's avoidance of having adverse impacts on public facilities and services, including roads, potable water and wastewater facilities, parks, schools, police, fire and EMS facilities.
7) Health, safety, and welfare. The proposed Conditional Zoning (CZ) District use's effect on the health, safety, or welfare of the residents of the Town or its ETJ.
8) Detrimental to adjacent properties. Whether the proposed Conditional Zoning (CZ) District use is substantially detrimental to adjacent properties.
9) Not constitute nuisance or hazard. Whether the proposed Conditional Zoning (CZ) District use constitutes a nuisance or hazard due to traffic impact or noise, or because of the number of persons who will be using the Conditional Zoning (CZ) District use.
10) Other relevant standards of this Ordinance. Whether the proposed Conditional Zoning (CZ) District use complies with all standards imposed on it by all other applicable provisions of this Ordinance for use, layout, and general development characteristics.


## Planned Unit Development Application

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.
Application \#:
Fee Paid
$\$$
Submittal Date:
March 1, 2022; Revised June 10, 2022

PETITION TO AMEND THE OFFICIAL ZONING DISTRICT MAP

| Project Name: <br> Address(es): | Yellowbridge |  |  |
| :---: | :---: | :---: | :---: |
|  | 2813 and 2817 US 64 Hwy W |  |  |
| $\operatorname{PIN}(\mathrm{s}) \quad 0722743789$ and 0722752304 |  |  |  |
|  |  | Acreage: 48.24 acres |  |
| Current Zoning | Rural Residential (RR) | ${ }^{\text {Planned Unit Development- Conditional Zoning (PUD-CZ) }}$ |  |
| Current 2045 LUM Designation: Medium Density Residential |  |  |  |
| Is the proposed | zoning consistent with the 2045 LUM Classification(s)? | $\square$ | (Due exclusively to the commercial use along US-64) |

If any portion of the project is shown as mixed use (3 or more stripes on the 2045 Land Use Map) provide the following:

Area classified as mixed use:
Area proposed as non-residential development:
Percent of mixed use area proposed as non-residential:

Acreage:
Acreage:
Percent:
$\frac{\text { N/A }}{\frac{N}{N / A}}$

## Applicant Information

Name: Lennar Carolinas, LLC c/o Matthew Carpenter
Address: 301 Fayetteville Street, Suite 1400


## Owner Information

Name: Yellowbridge Capital, LLC
Address: 113 Mill Point Road
City: Kitty Hawk State: NC $\quad$ 27949-4082

Phone: $\qquad$ E-mail: $\qquad$
Agent Information
Name: Lennar Carolinas, LLC attn. Tucker Ennis
Address: 1100 Perimeter Park Drive, Suite 112

| City: | Morrisville | State: | NC | Zip | 27560 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | (919) 835-4032 | mair |  |  |  |

Other contacts:

## PLANNED UNIT DEVELOPMENT DISTRICT STANDARDS:

In return for greater flexibility in site design requirements, Planned Development (PD) Districts are expected to deliver exceptional quality community designs that preserve critical environmental resources; provide high quality community amenities; incorporate creative design in the layout of buildings, Resource Conservation Area and circulation; ensure compatibility with surrounding land uses and neighborhood character; provide high quality architecture; and provide greater efficiency in the layout and provision of roads, utilities, and other infrastructure. The Planned Development (PD) Districts shall not be used as a means of circumventing the Town's adopted land development regulations for routine developments. The PD text and plan should demonstrate how the standards of Sec. 2.3.4.F are met be the proposed rezoning.

## LEGISLATIVE CONSIDERATIONS - CONDITIONAL ZONING

The applicant shall propose site-specific standards and conditions that take into account the following considerations, which are considerations that are relevant to the legislative determination of whether or not the proposed conditional zoning district rezoning request is in the public interest. These considerations do not exclude the legislative consideration of any other factor that is relevant to the public interest. Use additional pages as needed.

1) Consistency with 2045 Land Use Map. The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and consistency with the purposes, goals, objectives, and policies of the 2045 Land Use Map.

The property is designated as Medium Density Residential on the Land Use Map ("LUM") which contemplates both single-family detached homes and townhomes with densities up to 6 units an acre. Medium Density Residential developments are intended to provide a transition from more urbanized areas of Apex to lower density neighborhoods. The PUD contemplates a mix of single-family detached homes and townhomes at an overall density of approximately 3.2 units/acre, well within the LUM's suggested density. Additionally, the denser townhomes will provide a density transition between US-64, future commercial uses fronting 64, and lower density single-family detached homes to the south. Accordingly, the proposed PUD is consitent with the LUM designation and the Town of Apex Comprehensive Plan (the "Comp Plan") as a whole.
2) Compatibility. The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and compatibility with the character of surrounding land uses.

The overall density proposed by the PUD is consistent with existing residential development in this area. Lot types have been strategically located (single-family detached homes on large lots located adjacent to the Abbington neighborhood) to ensure compatibility with the existing Abbington neighborhood to the south and east. A 50-foot planted buffer has also been provided along the southern property line to maintain a level of privacy for homeowners adjacent to the south. Further, architectural conditions in the PUD text will help ensure high quality construction adn compatibility with the character of the surrounding area.
3) Zoning district supplemental standards. The proposed Conditional Zoning (CZ) District use's compliance with Sec 4.4 Supplemental Standards, if applicable.

The PUD will comply with Supplemental Standards in UDO Section 4.4, to the extent they are applicable.
4) Design minimizes adverse impact. The design of the proposed Conditional Zoning (CZ) District use's minimization of adverse effects, including visual impact of the proposed use on adjacent lands; and avoidance of significant adverse impacts on surrounding lands regarding trash, traffic, service delivery, parking and loading, odors, noise, glare, and vibration and not create a nuisance.

As shown on the Concept Plan, the proposed development will include several transportation improvements that will improve connectivity including the extension of Chanticlair Drive which currently stubs to the edge of the Abbington neighborhood, and a direct US-64 access point that will serve the proposed development and the Abbington Neighborhood. As stated above, the project has been designed to ensure compatibility of land uses and includes several buffers to help minimize adverse impacts.
5) Design minimizes environmental impact. The proposed Conditional Zoning District use's minimization of environmental impacts and protection from significant deterioration of water and air resources, wildlife habitat, scenic resources, and other natural resources.

The property is located within the Beaver Creek Drainage Basin and is thus within the Primary Watershed Protection Overlay District as shown on the Town of Apex Watershed Protection Map. This PUD will comply with all built upon area, vegetated conveyances, structural SCMs and riparian stream buffer requirements of UDO Section 6.1.7. The PUD will provide at least $30 \%$ Resource Conservation Area ("RCA") as required by the UDO. The PUD text also offers environmental commitments which include planting of drought resistant warm grasses, planting of at least four native hardwood tree species, and implementation of stormwater control devices that exceed UDO requirements.
6) Impact on public facilities. The proposed Conditional Zoning (CZ) District use's avoidance of having adverse impacts on public facilities and services, including roads, potable water and wastewater facilities, parks, schools, police, fire and EMS facilities.

As discussed above, the proposed development will include several traffic improvements. Water and sewer services are available to the site and the proposed development will not have adverse impacts on potable water and wastewater facilities, parks, schools, police, fie, or EMS facilities.
7) Health, safety, and welfare. The proposed Conditional Zoning (CZ) District use's effect on the health, safety, or welfare of the residents of the Town or its ETJ.

The proposed PUD will improve the public health, safety, and welfare by providing a mix of housing types in a location convenient to existing restaurants, retail, and Town services.
8) Detrimental to adjacent properties. Whether the proposed Conditional Zoning (CZ) District use is substantially detrimental to adjacent properties.

The proposed residential use is consistent with existing residential development in the area. As discussed above, the Concept Plan has been designed to mitigate adverse effects on adjacent properties.
9) Not constitute nuisance or hazard. Whether the proposed Conditional Zoning (CZ) District use constitutes a nuisance or hazard due to traffic impact or noise, or because of the number of persons who will be using the Conditional Zoning (CZ) District use.
The proposed residential use is consistent with existing residential development in the area. As discussed above, the Concept Plan has been designed to mitigate adverse effects on adjacent properties.
10) Other relevant standards of this Ordinance. Whether the proposed Conditional Zoning (CZ) District use complies with all standards imposed on it by all other applicable provisions of this Ordinance for use, layout, and general development characteristics.

The PUD will be governed by the regulations contained in the attached PUD Text and Concept Plan. The PUD will comply with all other regulations of the UDO to the extent they do not conflict with the PUD regulations.

## Application \#:

## Proposed Subdivision/Development Information

Description of location: 2813 and 2817 US 64 Hwy W
Nearest intersecting roads: US 64 Hwy W and Kellyridge Dr.
Wake County PIN(s): 0722743789 and 0722752304
Township: White Oak

## Contact Information (as appropriate)

Contact person: $\quad$| Lennar Carolinas, LLC c/o Matthew Carpenter |
| :--- |
| Phone number: $\quad$ Fax number: N/A |
| Address: 301 Fayetteville Street, Suite 1400, Raleigh, NC 27601 |
| E-mail address: $\quad$ matthewcarpenter@parkerpoe.com |

Owner: Yellowbridge Capital, LLC
Phone number: $\qquad$ Fax number: $\qquad$
Address: 113 Mill Point Road, Kitty Hawk, NC, 27949-4082
E-mail address: $\qquad$

Proposed Subdivision/Development Name
$1^{\text {st }}$ Choice: Yellowbridge
$2^{\text {nd }}$ Choice (Optional): $\qquad$

## Town of Apex Staff Approval:

## Town of Apex Planning Department Staff

Date
$\qquad$ Submittal Date:

## Town of Apex

73 Hunter Street

## P.O. Box 250 Apex, NC 27502

919-249-3400
WAKE COUNTY, NORTH CAROLINA CUSTOMER SELECTION AGREEMENT

## 2813 and 2817 US 64 Hwy W

(the "Premises")

The Town of Apex offers to provide you with electric utilities on the terms described in this Offer \& Agreement. If you accept the Town's offer, please fill in the blanks on this form and sign and we will have an Agreement once signed by the Town.

Yellowbridge Capital, LLC , the undersigned customer ("Customer") hereby irrevocably chooses and selects the Town of Apex (the "Town") as the permanent electric supplier for the Premises. Permanent service to the Premises will be preceded by temporary service if needed.

The sale, delivery, and use of electric power by Customer at the Premises shall be subject to, and in accordance with, all the terms and conditions of the Town's service regulations, policies, procedures and the Code of Ordinances of the Town.

Customer understands that the Town, based upon this Agreement, will take action and expend funds to provide the requested service. By signing this Agreement the undersigned signifies that he or she has the authority to select the electric service provider, for both permanent and temporary power, for the Premises identified above.

Any additional terms and conditions to this Agreement are attached as Appendix 1. If no appendix is attached this Agreement constitutes the entire agreement of the parties.

Acceptance of this Agreement by the Town constitutes a binding contract to purchase and sell electric power.
Please note that under North Carolina General Statute §160A-332, you may be entitled to choose another electric supplier for the Premises.

Upon acceptance of this Agreement, the Town of Apex Electric Utilities Division will be pleased to provide electric service to the Premises and looks forward to working with you and the owner(s).

## ACCEPTED:

CUSTOMER: Yellowbridge Capital, LLC
BY: $\frac{\text { Tucker Ennis }}{\text { Authorized Agent }}$
DATE: $\frac{3 / 1 / 2022}{}$

TOWN OF APEX

BY:
Authorized Agent

DATE:
3/1/2022
DATE: $\qquad$

## Agent Authorization Form

Application \#: $\qquad$
Yellowbridge Capital, LLC
application is being submitted:
U Land Use Amendment
Rezoning: For Conditional Zoning and Planned Dèvelopment rezoning applications, this authorization includes express consent to zoning conditions that are agreed to by the Agent which will apply if the application is approved.

- Site Plan
$\square$ Subdivision
ㅁ Variance
Other:
The property address is: $\quad 2813$ and 2817 US 64 Hwy W, Apex, NC, 27523
The agent for this project is: Tucker Ennis
$\square$ I am the owner of the property and will be acting as my own agent
Agent Name:
Tucker Ennis

Address:
1100 Perimeter Park Drive, Suite 112, Morrisville, NC 27560
Telephone Number: (919) 835-4032

E-Mail Address:

## tucker.ennis@lennar.com



Type or print name


Gerald L. Hopnick

Type or print name


Attach additional sheets if there are additional owners.
*Owner of record as shown on the latest equalized assessment rolls of Wake County. An option to purchase does not constitute ownership. If ownership has been recently transferred, a copy of the deed must accompany this authorization.

Pursuant to Article 40 of Chapter 66 of the North Carolina General Statutes (the Uniform Electronic Transactions Act) this application and all documents related hereto containing an electronic or digitized signature are legally binding in the same manner as are hard copy documents executed by hand signature. The parties hereby consent to use electronic or digitized signatures in accordance with the Town's Electronic Signature Policy and intend to be bound by the application and any related documents. If electronic signatures are used the application shall be delivered in an electronic record capable of retention by the recipient at the time of receipt.

## AFIDAVIT OF OWNERSIIP

The undersigned, Tucker Ennis $\qquad$ (the "Affiant") first being duly sworn, hereby swears or affirms as follows:

1. Affiant is over eighteen (18) years of age and authorized to make this Affidavit. The Affiant is the sole owner, or is the authorized agent of all owners, of the property located at 2813 and 2817 US 64 Hwy W and legally described in Exhibit "A" attached hereto and incorporated herein (the "Property").
2. This Affidavit of Ownership is made for the purpose of filing an application for development approval with the Town of Apex.
3. Affiant is the authorized agent of the owner(s) of the Property, Affiant possesses documentation indicating the agency relationship granting the Affiant the authority to apply for development approval on behalf of the owner(s).
4. To Affiant's knowledge, no claim or action has been brought against the owners of the property which questions title or right to possession of the property, nor is any claim or action pending against Affiant or owner(s) in court regarding possession of the Property.

This the $25^{4}$ day of FebrunARy, 2022.


STATE OF NORTH CAROLINA COUNTY OF Levake

1, the undersigned, a Notary Public in and for the county of DuMMM, hereby certify that Tucker Envis Affiant, personally known to me or known to me by said Affiant's presentation of said Affiant's $\qquad$ personally appeared before me this day and acknowledged the due and voluntary execution of the foregoing Affidavit.
[NOTARY SEAL]


Exhibit A
To Owner Affidavit for Yellowbridge Rezoning Legal Description

## PIN\# 0722752304 \& 0722743789

All that certain real property situated in White Oak Township, Wake County, North Carolina, described as follows:

Beginning at a set iron rod on the northern right of way line of Chanticlair Drive, said iron rod marking the southwestern corner of Lot 74 as said lot is shown and so designated on that certain subdivision plat entitled "Windsor at Abbington - Phase 1, Section A, Map 2, Lots 24-27 \& 65-74" recorded in Book of Maps 1998, Page 203, Wake County Registry; thence along the northern right of way line of Chanticlair Drive, South $89^{\circ} 37^{\prime} 45^{\prime \prime}$ West 280.73 feet to a set iron rod; thence South $00^{\circ} 22^{\prime} 15^{\prime \prime}$ East 30.04 feet to a set iron rod at the centerline of the western terminus of Chanticlair Drive and the northeastern corner of the 0.08 acre Reserved Area depicted on that certain subdivision plat entitled "Stratford at Abbington, Phase 1: Lots 1-31, 65-75, Owner: Highway 64, LLC" recorded in Book of Maps 2006, Pages 2638 to 2640, Wake County Registry; thence along the northern and western boundary of said Reserved Area and continuing along the northwestern boundary of said Stratford at Abbington subdivision the following nine courses: (1) South $89^{\circ} 37^{\prime} 45^{\prime \prime}$ West 118.01 feet to a set iron rod; (2) South $05^{\circ} 29^{\prime} 21^{\prime \prime}$ West 40.93 feet to a set iron rod; (3) South $01^{\circ} 54^{\prime} 29^{\prime \prime}$ East 98.00 feet to a set iron rod; (4) South $11^{\circ} 29^{\prime} 28^{\prime \prime}$ East 62.80 feet to a set iron rod; (5) South $22^{\circ} 27^{\prime} 50^{\prime \prime}$ West 118.06 feet to a found iron pipe; (6) South $70^{\circ} 08^{\prime} 38^{\prime \prime}$ West 118.71 feet to a found iron pipe; (7) South $77^{\circ} 30^{\prime} 46^{\prime \prime}$ West 65.05 feet to a found iron pipe; (8) South $73^{\circ} 46^{\prime} 05^{\prime \prime}$ West 40.75 feet to a found iron pipe; and (9) South $73^{\circ} 28^{\prime} 08^{\prime \prime}$ West 311.49 feet to a found iron pipe at an angle point in the northern boundary of Lot 64 as said lot is shown and so designated on that certain subdivision plat entitled "Stratford at Abbington, Phase 2: Lots 32-64, Owner: Highway 64, LLC" recorded in Book of Maps 2008, Pages 33 and 34, Wake County Registry; thence along the northern boundary of said Stratford at Abbington Phase 2 subdivision South $82^{\circ} 16^{\prime} 49^{\prime \prime}$ West 758.57 feet to a found iron pipe with cap at the northwestern corner of Lot 56 of said Stratford at Abbington Phase 2 subdivision, said point also being on the eastern boundary of Lot 2 as said lot is shown and so designated on that certain plat entitled "Recombination Survey for Cecil V. Campfield and Wife Sharon K. Campfield" recorded in Book of Maps 1995, Page 334, Wake County Registry; thence along the eastern boundary of said Campfield plat the following two courses: (1) North $03^{\circ} 08^{\prime} 59$ " East 417.75 feet to a found bent iron pipe; and (2) North $03^{\circ} 12^{\prime} 21^{\prime \prime}$ East 406.54 feet to a found iron pipe with cap at the southeastern corner of Lot ' $A$ ' as said lot is shown and so designated on that certain plat entitled "Recombination for Joel V. Perry" recorded in Book of Maps 1985, Page 522, Wake County Registry; thence along the eastern boundary of said Perry plat North $03^{\circ} 11^{\prime} 42^{\prime \prime}$ East 841.95 feet to a found iron rod with cap on the southern right of way line of U.S. Highway 64; thence along said southern right of way line North $82^{\circ} 54^{\prime} 26^{\prime \prime}$ East 331.57 feet to a set iron rod at the northwestern corner of the parcel depicted on that certain plat entitled "Boundary Survey, Property of Calvin Mills, Prepared for David and Sharon Raymer" recorded in Book of Maps 2004, Page 698, Wake County Registry; thence along the western, southern and eastern boundary of said Mills plat the following three courses: (1) South $07^{\circ} 08^{\prime} 43^{\prime \prime}$ East 189.52 feet to a found iron pipe; (2) North $82^{\circ} 51^{\prime} 17$ " East 420.02 feet to a found iron pipe; and (3) North $07^{\circ} 08^{\prime} 43^{\prime \prime}$ West 189.14 feet to a set iron rod on the southern right of way line of U.S.

Highway 64; thence along said southern right of way line the following two courses: (1) North $82^{\circ} 54^{\prime} 26^{\prime \prime}$ East 265.68 feet to a set iron rod; and (2) North $82^{\circ} 53^{\prime} 08^{\prime \prime}$ East 305.02 feet to a set iron rod at the northwestern corner of Area " B " as shown and so designated on that certain plat entitled "Property of Blakely-Braswell Land Company, LLC" recorded in Book of Maps 1996, Page 634, Wake County Registry; thence along the western boundary of said Area " $\mathrm{B}^{\prime}$ ", South $11^{\circ} 47^{\prime} 52^{\prime \prime}$ West 42.58 feet to a found iron pipe with cap at the northwestern corner of Tract ' $A$ ' as said lot is shown and so designated on that certain plat entitled "Property of Calvin E. Mills, Alta Belle P. Mills, Ted Mills \& Randy Mills By William R. Hoke \& Paul Stam, Jr., Co-trustees" recorded in Book of Maps 1984, Page 404, Wake County Registry; thence along the western and southern boundaries of said Mills plat the following five courses: (1) South $07^{\circ} 43^{\prime} 26^{\prime \prime}$ West 146.44 feet to a found iron pipe with cap; (2) South $03^{\circ} 03^{\prime} 23^{\prime \prime}$ East 318.20 feet to a found iron pipe with cap; (3) South $05^{\circ} 04^{\prime} 48^{\prime \prime}$ West 519.04 feet to a found iron pipe with cap; (4) South $15^{\circ} 45^{\prime} 44^{\prime \prime}$ West 60.82 feet to a found iron pipe with broken cap; and (5) South $89^{\circ} 57^{\prime} 43^{\prime \prime}$ East 359.26 feet to a found iron pipe with cap on the western boundary of Lot 73 of the previously mentioned Windsor at Abbington subdivision plat recorded in Book of Maps 1998, Page 203, Wake County Registry; thence along the western boundary of said Windsor at Abbington subdivision South $02^{\circ} 25^{\prime} 07^{\prime \prime}$ East 148.61 feet to the point of beginning.

Containing 48.2331 acres, more or less, and being all of Lot " B " as said lot is shown and so designated on that certain plat entitled "Subdivision, Property of Gaither Bryant Garner, Jr. and Gerald L. Hornick" recorded in Book of Maps 1984, Page 1516, Wake County Registry, TOGETHER WITH all of Tract 1 as said tract is shown and so designated on that certain plat entitled "Division for Gerald L. Hornick, et ux and G. Bryant Garner, et ux" recorded in Book of Maps 2003, Page 474, Wake County Registry, LESS AND EXCEPT the area dedicated as public right of way for Chanticlair Drive as recorded in Deed Book 11778, Page 1490, Wake County Registry.

$$
\begin{aligned}
& \text { Please complete each } \\
& \text { section of this form and } \\
& \text { submit with your } \\
& \text { application. } \\
& \text { Town of Apex staff will } \\
& \text { enter this information } \\
& \text { into the online WCPSS } \\
& \text { form. } \\
& \text { Please send any questions } \\
& \text { about this form to: } \\
& \text { studentassignment-gis- } \\
& \text { group@wcpss.net }
\end{aligned}
$$


mooגpəg z
moospeg I

| Unit Type | Total \# of Units | N | 응 云 |
| :---: | :---: | :---: | :---: |
| Single Family | 37 |  |  |
| Townhomes | 119 |  |  |
| Condos |  |  |  |
| Apartments |  |  |  |
| Other |  |  |  |

## NOTICE OF ELECTRONIC NEIGHBORHOOD MEETING

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.
February 7, 2022
Date

Dear Neighbor:
You are invited to an electronic neighborhood meeting to review and discuss the development proposal at 2813 and 2817 US 64 Hwy W

## Address(es)

PIN(s)
in accordance with the Town of Apex Electronic Neighborhood Meeting procedures. This meeting is intended to be a way for the applicant to discuss the project and review the proposed plans with adjacent neighbors and neighborhood organizations before the submittal of an application to the Town. This provides neighbors an opportunity to raise questions and discuss any concerns about the impacts of the project before it is officially submitted. If you are unable to attend, you may contact the applicant before or after the meeting is held. Once an application has been submitted to the Town, it may be tracked using the Interactive Development Map or the Apex Development Report located on the Town of Apex website at www.apexnc.org. If at all feasible given emergency declarations, limits on in-person gatherings, and social distancing, an additional in-person Neighborhood Meeting may be scheduled and held prior to a public hearing or staff decision on the application.

An Electronic Neighborhood Meeting is required because this project includes (check all that apply):

| Application Type |  | Approving Authority |
| :--- | :--- | :---: |
| $\boldsymbol{ఠ}$ | Rezoning (including Planned Unit Development) | Town Council |
| $\mathbf{Q}$ | Major Site Plan | Town Council (QJPH*) |
| $\mathbf{O}$ | Special Use Permit | Town Council (QJPH*) |
| $\mathbf{O}$ | Residential Master Subdivision Plan (excludes exempt subdivisions) | Technical Review <br> Committee (staff) |

*Quasi-Judicial Public Hearing: The Town Council cannot discuss the project prior to the public hearing.
The following is a description of the proposal (also see attached map(s) and/or plan sheet(s)):
The applicant is proposing to rezone the property to Planned Unit Development - Conditional Zoning District to facilitate the development of single-family detached homes and townhomes. Additional information will be provided at the meeting.

Estimated submittal date: March 1, 2022

## MEETING INFORMATION:

Property Owner(s) name(s): Yellowbridge Capital, LLC
Applicant(s):
Lennar Carolinas, LLC c/o Matthew Carpenter
Contact information (email/phone): matthewcarpenter@parkerpoe.com; (919) 835-4032
Electronic Meeting invitation/call in
info:
Date of meeting**:
See attached

Time of meeting**:
February 23, 2022

MEETING AGENDA TIMES:
Welcome: 6:00 PM
Project Presentation:
between 6:00-8:00 PM
Question \& Answer:
between 6:00-8:00 PM
**Meetings shall occur between 5:00 p.m.-9:00 p.m. on a Monday through Thursday (excluding Town recognized holidays). If you have questions about the general process for this application, please contact the Planning Department at 919-249-3426. You may also find information about the Apex Planning Department and on-going planning efforts at http://www.apexnc.org/180/Planning.

## February 7, 2022

## Re: Notice of Virtual Neighborhood Meeting

Neighboring Property Owners:
You are invited to attend a neighborhood meeting on February 23, 2022 from 6-8pm. The purpose of the meeting is to discuss an upcoming application to rezone two parcels of land located at 2813 US 64 Hwy W (PIN 0722743789) and 2817 US 64 Hwy W (PIN 0722752304) (collectively, the "Property"). The Property is currently zoned Rural Residential (RR), and is proposed to be rezoned to Planned Unit Development-Conditional Zoning (PUD-CZ).

The applicant is proposing a rezoning to Planned Unit Development Conditional Zoning (PUD-CZ) for the development of single-family detached homes and townhomes. During the meeting, the applicant will describe the nature of this rezoning request and field any questions from the public. Enclosed are: (1) a vicinity map outlining the location of the subject parcel; (2) a zoning map of the subject area; (3) a preliminary concept plan of the Planned Unit Development; (4) a project contact information sheet; and (5) a common construction issues \& who to call information sheet.

The meeting will be held virtually. You can participate online via Zoom or by telephone. To participate in the Zoom online meeting:

Visit:
Enter the following meeting ID:
Enter the following password:
To participate by telephone:
Dial:
Enter the following meeting ID:
Enter the Participant ID:
Enter the Meeting password:
https://zoom.us./join
88982583077
057493

If you have any questions about this rezoning, please contact me at (919) 835-4032 or via email at matthewcarpenter@parkerpoe.com.

> Thank you,

Matthew Carpenter

## PROJECT CONTACT INFORMATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Development Contacts:


Please note that Town staff will not have complete information about a proposed development until the application is submitted for review. If you have a question about Town development standards and how they relate to the proposed development, please contact the appropriate staff person listed below.

## Town of Apex Department Contacts

| Planning Department Main Number <br> (Provide development name or location to be routed to correct planner) | (919) 249-3426 |
| :--- | :--- |
| Parks, Recreation \& Cultural Resources Department <br> Angela Reincke, Parks Planner | (919) 249-7468 |
| Public Works - Transportation <br> Russell Dalton, Senior Transportation Engineer | (919) 249-3358 |
| Water Resources Department <br> Jessica Bolin, Senior Engineer (Stormwater, Sedimentation \& Erosion Control) <br> Stan Fortier, Senior Engineer (Stormwater, Sedimentation \& Erosion Control) <br> James Gregg, Utility Engineer (Water \& Sewer) | (919) 249-3537 <br> (919) 249-1166 <br> (9lectric Utilities Division <br> Rodney Smith, Electric Technical Services Manager |

## electronic neighborhood meeting attendance sheet

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

## Meeting Format: Online via zoom

Time of meeting: 6:00 PM
Please list Electronic Neighborhood Meeting Attendees who provided their name and/or contact information either during the meeting or via phone/email before or after the meeting. SEND PLANS
\& UPDATES

 Applicant(s): Lennar Carolinas Property Owner(s) name(s): Yellowbridge Capital, LLC

NAME/ORGANIZATION
1.

1. See attached attendance list
2. 

3

SS3Y

[^0]
# Yellowbridge PUD <br> Neighborhood Meeting Sign-In Sheet 

February 23, 2022

Walton Norman<br>Tommy and Cheryl Russell<br>Brant Gifford<br>Brian Carlson<br>Gerald Hornick<br>Rhonda Riley<br>Lisa Gerboth<br>Claire Johns<br>Jen Curtis-Maury<br>Suzanne Bailey<br>Steve Ritchie<br>Lauren Colvard<br>Steve Smith<br>David Risk<br>Mark Vermette<br>Teresa Messier<br>Sharon Hershkowitz<br>CJ Bottitta<br>Joe Logan<br>Debra Becker<br>Sharon Putney<br>Bob Zumwalt<br>Scott Fast<br>Jeremy Brewer<br>Kate Macdonnel<br>Chip Allen<br>Alex Richbourg<br>Lisa Nelson<br>Polly Petrino<br>Jason Hornick<br>Katherine Coutros<br>Matt Lauffer<br>Tom Colhoun<br>Sachin Sheth<br>Julie Robertson<br>Kari Hughes<br>Heather Galeotti<br>Jim Logsdon<br>Melanie Schuller<br>Kara Fleshman<br>Carolyn Bentley<br>Mike Hershk<br>Bob Gibbons<br>Kathryn Finnan

Matt Bond
Jay Vora
Adam Orentlicher
Albert Paz
Stephanie White
Joe Schmidtke
Michele Hemric
Robert Kovarik
Brett Fleshman
Bob Atkinson
*Contact information was received but has been redacted for filing

## SUMMARY OF DISCUSSION FROM THE ELECTRONIC NEIGHBORHOOD MEETING

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Property Owner(s) name(s): Yellowbridge Capital, LLC
Applicant(s): Lennar Carolinas
Contact information (email/phone):
Meeting Format: Online via zoom
Date of meeting: February 23, 2022 Time of meeting: 6:00 PM
Please summarize the questions/comments and your response from the Electronic Neighborhood Meeting in the spaces below (attach additional sheets, if necessary). Please state if/how the project has been modified in response to any concerns. The response should not be "Noted" or "No Response". There has to be documentation of what consideration the neighbor's concern was given and justification for why no change was deemed warranted.

Question/Concern \#1: General questions/concerns about the ponds

Applicant's Response: The plan is to drain both of the ponds. The ponds are both old farm ponds and the dam of one of the ponds is unreliable due to tree growth. Although we do not think the ponds are jurisdictional, we are waiting on a final determination from the Army Corps of engineers as to whether the ponds are jurisdictional. If they are jurisdictional, we will have to reevaluate our current plans.

Question/Concern \#2: Several questions/concerns related to the single family detached homes facing Rothwood Way. Could you move these homes to another area on the site? Could you increase the buffer between the homes and the gas easement?

Applicant's Response: We are looking at the possibility of moving the homes slightly to the west to enlarge the buffer between the homes and the gas easement. The goal of placing larger lot single-family homes in this location was to ensure compatibility with Abbington.

Question/Concern \#3: Where will the neighborhood signs be located? Will there be a neighborhood entrance sign near Rothwood Way?

Applicant's Response: Lennar typically has a monument sign at the entrance of the subdivision. Although the final location of signs will be determined at site plan, we anticipate there to only be one monument sign located at the US-64 entrance to the development.

Question/Concern \#4: General traffic concerns and other specific traffic questions. Concerns related to residents of the proposed development cutting through Abbington to get to Beaver Creek

[^1]\[

$$
\begin{aligned}
& \begin{array}{l}
\text { RALEIGH NC 27614-8837 } \\
\text { RALEIGH NC 27603-1669 }
\end{array} \\
& \stackrel{\circ}{\stackrel{\circ}{4}}
\end{aligned}
$$
\]







## AFFIDAVIT OF CONDUCTING AN ELECTRONIC NEIGHBORHOOD MEETING AND ISSUES/RESPONSES SUBMITTAL

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

I, Matthew J. Carpenter $\qquad$ , do hereby declare as follows:
Print Name

1. I have conducted an Electronic Neighborhood Meeting for the proposed Rezoning, Major Site Plan, Residential Master Subdivision Plan, or Special Use Permit in accordance with UDO Sec. 2.2.7 Neighborhood Meeting.
2. The meeting invitations were mailed to the Apex Planning Department, all property owners within 300 feet of the subject property and any neighborhood association that represents citizens in the area via first class mail a minimum of 10 days in advance of the Electronic Neighborhood Meeting.
3. The meeting was conducted via Online via zoom (indicate format of meeting) on February 23, 2022 ___ (date) from 6:00 PM ___ (start time) to 8:00 PM (end time).
4. I have included the mailing list, meeting invitation, attendance sheet issue/response summary, and zoning map/reduced plans with the application.
5. I have prepared these materials in good faith and to the best of my ability.


STATE OF NORTH CAROLINA
COUNTY OF WAKE
Sworn and subscribed before me, Gindy Wielayed_, a Notary Public for the above State and County, on this the $1^{5} T$ day of heireln , 2022.


My Commission Expires: $2-2-2 \cdot 26$

## NOTICE OF ELECTRONIC NEIGHBORHOOD MEETING

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.
May 25, 2022
Date

Dear Neighbor:
You are invited to an electronic neighborhood meeting to review and discuss the development proposal at 2813 and 2817 US 64 Hwy W 0722743789 and 0722752304

## Address(es)

PIN(s)
in accordance with the Town of Apex Electronic Neighborhood Meeting procedures. This meeting is intended to be a way for the applicant to discuss the project and review the proposed plans with adjacent neighbors and neighborhood organizations before the submittal of an application to the Town. This provides neighbors an opportunity to raise questions and discuss any concerns about the impacts of the project before it is officially submitted. If you are unable to attend, you may contact the applicant before or after the meeting is held. Once an application has been submitted to the Town, it may be tracked using the Interactive Development Map or the Apex Development Report located on the Town of Apex website at www.apexnc.org. If at all feasible given emergency declarations, limits on in-person gatherings, and social distancing, an additional in-person Neighborhood Meeting may be scheduled and held prior to a public hearing or staff decision on the application.

An Electronic Neighborhood Meeting is required because this project includes (check all that apply):

| Application Type |  | Approving Authority |
| :--- | :--- | :---: |
| $\boldsymbol{\varnothing}$ | Rezoning (including Planned Unit Development) | Town Council |
| $\mathbf{Q}$ | Major Site Plan | Town Council (QJPH*) |
| $\mathbf{O}$ | Special Use Permit | Town Council (QJPH*) |
| $\mathbf{Q}$ | Residential Master Subdivision Plan (excludes exempt subdivisions) | Technical Review <br> Committee (staff) |

*Quasi-Judicial Public Hearing: The Town Council cannot discuss the project prior to the public hearing.
The following is a description of the proposal (also see attached map(s) and/or plan sheet(s)):
The applicant is proposing to rezone the property to Planned Unit Development - Conditional Zoning District to
facilitate the development of a mixed-use project with single-family detached homes, townhomes, and commercial uses. Additional information
and updates since the first neighborhood meeting will provided during the meeting.
Estimated submittal date: June 10, 2022 (resubmittal)

## MEETING INFORMATION:

Property Owner(s) name(s): Yellowbridge Capital, LLC
Applicant(s):
Contact information (email/phone):
Lennar Carolinas, LLC c/o Matthew Carpenter
matthewcarpenter@parkerpoe.com; (919) 835-4032
Electronic Meeting invitation/call in
info:
Date of meeting**:
Time of meeting**:

## MEETING AGENDA TIMES:

Welcome: 6:00 PM
Project Presentation:
between 6:00-8:00 PM
Question \& Answer: between 6:00-8:00 PM
**Meetings shall occur between 5:00 p.m.-9:00 p.m. on a Monday through Thursday (excluding Town recognized holidays). If you have questions about the general process for this application, please contact the Planning Department at 919-249-3426. You may also find information about the Apex Planning Department and on-going planning efforts at http://www.apexnc.org/180/Planning.

## May 25, 2022

## Re: Notice of Second Virtual Neighborhood Meeting

Neighboring Property Owners:
You are invited to attend a second neighborhood meeting on June 8, 2022 from 6-8pm to discuss the rezoning of two parcels of land located at 2813 US 64 Hwy W (PIN 0722743789) and 2817 US 64 Hwy W (PIN 0722752304) (collectively, the "Property"). The Property is currently zoned Rural Residential (RR), and is proposed to be rezoned to Planned Unit Development-Conditional Zoning (PUD-CZ). The requested rezoning is to facilitate the development of a mixed-use project featuring single-family detached homes, townhomes, and commercial uses fronting US64.

You may have attended the first neighborhood meeting for this case on February 23. Since the first meeting, we have filed the rezoning application and have made several changes to the plans. During the June 8 meeting, we will describe the nature of the rezoning request, provide updates since the first neighborhood meeting, and answer any questions. Enclosed are: (1) a vicinity map outlining the location of the subject parcel; (2) a zoning map of the subject area; (3) a revised preliminary concept plan of the Planned Unit Development; (4) a project contact information sheet; and (5) a common construction issues \& who to call information sheet.

The meeting will be held virtually. You can participate online via Zoom or by telephone. To participate in the Zoom online meeting:

Visit:
Enter the following meeting ID:
Enter the following password:
To participate by telephone:
Dial:
Enter the following meeting ID: Enter the Participant ID:
Enter the Meeting password:
https://zoom.us./join
89130545916
810545

19292056099
8913054 5916 \#
\#
810545 \#

If you have any questions about this rezoning, please contact me at (919) 835-4032 or via email at matthewcarpenter@parkerpoe.com.

Thank you,<br>Matthew Carpenter



Rezoning of:
2813 and 2817 US 64 Hwy W

$\underbrace{0}_{1 \text { inch equals } 800 \text { feet }}$


## Rezoning of:

## 2813 and 2817 US 64 Hwy W

Zoning Map


Disclaimer
iMaps makes every effort to produce and publish the most current and accurate information possible. However, the maps are produced for information purposes, and are NOT surveys. No warranties, expressed or implied are provided for the data therein, its use,or its interpretation.


## PROJECT CONTACT INFORMATION

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Development Contacts:


## electronic neighborhood meeting attendance sheet

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

## Meeting Format: Online via zoom

Date of meeting: June 8, 2022 Time of meeting: 6:00 PM
Property Owner(s) name(s): Yellowbridge Capital, LLC
Applicant(s): Lennar Carolinas
Please list Electronic Neighborhood Meeting Attendees who provided their name and/or contact information either during the meeting or via phone/email before or after the meeting.


Yellowbridge PUD Neighborhood Meeting Sign-In Sheet June 8, 2022

David Risk<br>Gerald Hornick<br>Bill Zerman<br>Kathy Coutros<br>Jen Curtis-Maury<br>Thomas Ainsley<br>Jay Vora<br>Steve Ritchie<br>Ed Knight<br>Alex Richbourg<br>Kari Hughes<br>Brant Gifford<br>Chip Allen<br>Jonathan Lamb<br>Polly Petrino<br>Cheryl Russell<br>Tommy Russell<br>Jim Logsdon<br>Brett Fleshman<br>Suzanne Bailey<br>Kari Hughes<br>M Bond<br>Rebecca Waite<br>Kate Macdonell<br>Scott Patrick<br>Paige Polito<br>Julie Robertson<br>Janarthan Kirupananthan<br>Penny Grieci<br>Sharon Hershkowitz<br>Joe Logan<br>Emily Dilday<br>Conne Bridenbaugh<br>Mary Kay Fast<br>Chris Sawyer<br>Conor Brockett<br>Heather Galeotti<br>Jonathan Polito<br>Veronika Schmidtke

*Contact information was received but has been redacted for filing

## SUMMARY OF DISCUSSION FROM THE ELECTRONIC NEIGHBORHOOD MEETING

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.

Property Owner(s) name(s): Yellowbridge Capital, LLC
Applicant(s): Lennar Carolinas
Contact information (email/phone):
Meeting Format: Online via zoom
Date of meeting: June 8, 2022 Time of meeting: 6:00 PM
Please summarize the questions/comments and your response from the Electronic Neighborhood Meeting in the spaces below (attach additional sheets, if necessary). Please state if/how the project has been modified in response to any concerns. The response should not be "Noted" or "No Response". There has to be documentation of what consideration the neighbor's concern was given and justification for why no change was deemed warranted.
*Please see attached chat log for a full list of questions. All questions were answered orally by the applicant team

Question/Concern \#1: What is the plan for the four homes on Chanticlair? We would like these homes removed from the plan.

Applicant's Response:
Although we can't agree to remove these homes from the project, we have taken steps to ensure they will be more compatible with the Abbington neighborhood. In the PUD Text, we've agreed to extend Rothwood Way so that these lots will take driveway access from Rothwood, akin to Stratford at Abbington homes. We've also widened the buffer adjacent to the gas easement to a 20-foot type A buffer and will be planting a 10-foot buffer along Chanticlair Drive.
Question/Concern \#2: Will you limit the types of allowed uses in the Commercial District?

Applicant's Response: Yes, the PUD Text includes a list of Permitted Use for the Commercial District. These uses will be the only permitted uses in that area. We are working with staff on appropriate uses and have already agreed to remove certain uses that would be permitted by the UDO.

Question/Concern \#3: What is the overall residential density of the project?

Applicant's Response: The PUD limits maximum residential density to 160 units which equates to approximately 3.5 units/acre.

Question/Concern \#4: What are the red stars on the Concept Plan?

[^2]電

 TNNUNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNZNNNNNNONNSNNNNNN


ALLEN, CHESTER W IV ALLEN, ELEN N
BAILEY, JAMES EDWARD BAILEY, SUZANNE C
BANKS, WAYNE BANKS, DEOGRATIAS A
BECKER, SHANNON V BECKER, DEBRA LYNN
BECKER, SHANNON V BECKER, DEBRA LYNN
BISI, JOHN EMERSON TRUSTEE JOHN EMERSON BREWER, JEREMY JOE TRUSTEE BREWER, PAULA M
BRIDENBAUGH, DAVID N BRIDENBAUGH, CONNE L BURLESON, RYAN W L BURLESON, BETSY L
CARTWRIGHT, TIMOTHY J CARTWRIGHT, MELISSA S CHIADO, DYLAN CHIADO, HALEY
COOLING, KEVIN TRUSTEE COOLING, JOANNE TRUSTEE COOLING, KEVIN TRUSTEE COOLING, JOANNE TRUSTEE
CURTIS-MAURY, MATTHEW F CURTIS-MAURY, JENNIFER
DECOURCY, JRUSS DECOURCY DONNA M ECKERSBERG, JOHN J II ECKERSBERG, AMANDA J FAST, SCOTT H TRUSTEE FAST, MARY KATHERINE TRUSTEE
FLESHMAN, JAMES BRETT FLESHMAN, KARA N
FLESHMAN, JAMES BRETT FLESHMAN, KARA N
GANNON, TRAVIS GANNON, DANIELE
GARRETT, PATRICK JAMES GARRETT, MELISSA BETH
GARRY, ADAM T
GREEN, BRYAN GREEN, ERIN
HERSHKOWITZ, MICHAEL THOMAS HERSHKOWITZ, SHARON MARIE HIBDON-ROBERTSON, JULIA LYNN
HOBART, BARRY /TR HOBART, DEBORAH LYNN /TR JOHNS, ROBERT A JOHNS, CLAIRE A
ABER, PATRICK LABER, DIANE LAUFFER, MATTHEW S LAUFFER, LISA C
LOGSDON, JAMES M LOGSDON, KIMBERLY D
LOYD, FRANK ROYAL LOYD, AMY S
MACDONELL, JAMES T MACDONELL, KATHARINE G
MACDONELL, JAMES T MACDONELL, KATHARINE G MARY L WALKIEWICZ TRUST
MATTHEWS, JOSEPH T MATTHEWS, PHILOMINA
MATTHEWS, JOSEPH T MATTHEWS, PHILOMINA J PARKER, WILLIAM P II PARKER, SUSAN R
PEPE, RICHARD L PEPE, CHRISTINE
PEPE, RICHARD L PEPE, CHRISTINE
PETERSON, KIRK PETERSON, CINDI


 11 W JONES ST



 13 MILL POINT RD



| PIN NUM | OWNER |
| :---: | :---: |
| 0722731969 | ABBINGTON COMMUNITY ASSN INC |
| 0722841609 | ABERNATHY, JOHN |
| 0722649347 | ALLEN, CHESTER W IV ALLEN, ELENI N |
| 0722652622 | ANS TRUST THE |
| 0722741431 | BAILEY, JAMES EDWARD BAILEY, SUZANNE C |
| 0722853496 | BANKS, WAYNE BANKS, DEOGRATIAS A |
| 0722742422 | BECKER, SHANNON V BECKER, DEBRA LYNN |
| 0722852554 | BISI, JOHN EMERSON TRUSTEE JOHN EMERSON BISI FAMILY LIVING TRUST |
| 0722645333 | BREWER, JEREMY JOE TRUSTEE BREWER, PAULA MARIE TRUSTEE |
| 0722842758 | BRIDENBAUGH, DAVID N BRIDENBAUGH, CONNE L |
| 0722840599 | BURLESON, RYAN W L BURLESON, BETSY L |
| 0722742283 | CARTWRIGHT, TIMOTHY J CARTWRIGHT, MELISSA S |
| 0722855248 | CHIADO, DYLAN CHIADO, HALEY |
| 0722840570 | COOLING, KEVIN TRUSTEE COOLING, JOANNE TRUSTEE |
| 0722646334 | CURTIS-MAURY, MATTHEW F CURTIS-MAURY, JENNIFER |
| 0722854199 | DECOURCY, J RUSS DECOURCY, DONNA M |
| 0722748778 | ECKERSBERG, JOHN J II ECKERSBERG, AMANDA J |
| 0722852274 | FAST, SCOTT H TRUSTEE FAST, MARY KATHERINE TRUSTEE |
| 0722746502 | FLESHMAN, JAMES BRETT FLESHMAN, KARA N |
| 0722842868 | FOULKES, MICHAEL J FOULKES, ELIZABETH H |
| 0722844846 | GANNON, TRAVIS GANNON, DANIELE |
| 0722649161 | GARRETT, PATRICK JAMES GARRETT, MELISSA BETH |
| 0722842679 | GARRY, ADAM T |
| 0722648203 | GREEN, BRYAN GREEN, ERIN |
| 0722747405 | HARRIS, SHARITA A |
| 0722841709 | HERSHKOWITZ, MICHAEL THOMAS HERSHKOWITZ, SHARON MARIE |
| 0722740440 | HIBDON-ROBERTSON, JULIA LYNN |
| 0722744407 | HOBART, BARRY /TR HOBART, DEBORAH LYNN /TR |
| 0722747554 | JOHNS, ROBERT A JOHNS, CLAIRE A |
| 0722748601 | KISER, JEFFERSON B III KISER, DENISE C |
| 0722749453 | LABER, PATRICK LABER, DIANE |
| 0722855042 | LAMB, KIMBERLY S LAMB, JONATHAN E |
| 0722852790 | LAUFFER, MATTHEW S LAUFFER, LISA C |
| 0722852045 | LOGSDON, JAMES M LOGSDON, KIMBERLY D |
| 0722643165 | LOYD, FRANK ROYAL LOYD, AMY S |
| 0722645123 | MACDONELL, JAMES T MACDONELL, KATHARINE G |
| 0722746321 | MACNAUGHTON, IAN R MACNAUGHTON, AMANDA M |
| 0722643056 | MARY L WALKIEWICZ TRUST |
| 0722743285 | MATHEWS, JAMES C MATHEWS, HOLLY |
| 0722850629 | MATTHEWS, JOSEPH T MATTHEWS, PHILOMINA |
| 0722861231 | MATTHEWS, JOSEPH T MATTHEWS, PHILOMINA J |
| 0722646134 | MITCHELL, JENNIFER D |
| 0722852843 | PARKER, WILLIAM P II PARKER, SUSAN R |
| 0722749305 | PEPE, RICHARD L PEPE, CHRISTINE |
| 0722647017 | PETERSON, KIRK PETERSON, CINDI |
| 0722852155 | PETERSON, THAREN WAYNE PETERSON, RACHEL LOVE |
| 0722648353 | PETRINO, RAYMOND J PETRINO, POLLY M |
| 0722854046 | POPKO, BRIAN J LEVEDAKOU, ELENI N |
| 0722841808 | RITCHIE, STEVEN H RITCHIE, CHRISTA VENO |
| 0722743414 | ROZET, TIMOTHY DANIEL ROZET, KATHLEEN SCANDURA |
| 0722744288 | SAMBORSKI, CHRISTOPHER WILLIAM TRUSTEE SAMBORSKI, KARELYN JO TRUSTEE |
| 0722647323 | SCHMIDTKE, JOSEPH A SCHMIDTKE, VERONIKA |
| 0722746202 | SIVON, AMIE CAROL SIVON, JASON MICHEAL |
| 0722844765 | SMITH, JEFFREY D SMITH, AMY N |
| 0722644046 | SWEETWATER PROPERTY OWNERS ASSOCIATION, INC |
| 0722862012 | TASTET, LANCE J TASTET, SYLVIA B |
| 0722761436 | TAYLOR MORRISON OF CAROLINAS INC |
| 0722740129 | VANZANTEN, JOHN HOLLIS JR VANZANTEN, HEIDI JILL RAFFK |
| 0722744590 | VERMETTE, MARK E VERMETTE, ELIZABETH S |
| 0722748868 | VORA, JAY VORA, ALYSSA K |
| 0722667310 | WESTFORD APARTMENTS WEH LP |
| 0722667508 | WESTFORD MASTER OWNERS ASSC INC |
| 0722852327 | WHITE, ALAN WHITE, STEPHANIE A |
| 0722752304 | YELLOWBRIDGE CAPITAL LLC |
| 0722748669 | ZUMWALT, ROBERT ZUMWALT, SUSAN |
|  | TOWN OF APEX |
|  | Current Tenant |
|  | Current Tenant |
|  | Current Tenant |
|  | Current Tenant |

## AFFIDAVIT OF CONDUCTING A NEIGHBORHOOD MEETING, SIGN-IN SHEET AND ISSUES/RESPONSES SUBMITTAL

This document is a public record under the North Carolina Public Records Act and may be published on the Town's website or disclosed to third parties.


1. I have conducted a Neighborhood Meeting for the proposed Rezoning, Major Site Plan, Residential Master Subdivision Plan, or Special Use Permit in accordance with UDO Sec. 2.2.7 Neighborhood Meeting.
2. The meeting invitations were mailed to the Apex Department of Planning and Community Development, all property owners and tenants abutting and within 300 feet of the subject property and any neighborhood association that represents citizens in the notification area via first class mail a minimum of 14 days in advance of the Neighborhood Meeting.
3. The meeting was conducted at Online in Zlom (location/address) on_Mune 8 (date) from 6:00 0M (start time) to B:002m (end time).
4. I have included the mailing list, meeting invitation, sign-in sheet, issue/response summary, and zoning map/reduced plans with the application.
5. I have prepared these materials in good faith and to the best of my ability.


STATE OF NORTH CAROLINA
COUNTY OF WAKE
Sworn and subscribed before me, Cindy Wielcad_, a Notary Public for the above State and County, on this the 277 day of Jwhe. 2022 .


My Commission Expires: $2-22-26$

# YELLOWBRIDGE NEIGHBORHOOD MEETING <br> June 8, 2022 <br> Chat Box Questions/Comments 

Contact information: Jeff Roach with Peak Engineering \& Design (iroach@peakengineering.com)
From Penny Grieci to Everyone 06:13 PM
Do you have a drawing with the specific types of homes?
From polly petrino to Everyone 06:15 PM
when will you begin draining the ponds? can you notify us a few days in advance?
From Jay Vora to Everyone 06:15 PM
Do the red stars still represent "play areas" or open spaces?
From Chip Allen to Everyone 06:15 PM
What is the percentage of homes per usage acreage as much of the land is not buildable resulting in large number of homes in small space?

From Jen Curtis-Maury to Everyone 06:15 PM
Any what precautions do you take to prevent our adjacent lots from flooding during the draining and then potential natural refilling?

From Jim Logsdon to Everyone 06:15 PM
What's the game plan for the 4 homes on Chanticlair now
From Scott Fast to Everyone 06:16 PM
Now it appears the location closest to US 64 is now proposed as commercial - probably a good idea - but will you limit the TYPE of business (gas station yes/no, 24 hour stop \& rob, medical only, etc.)?

From Brant Gifford to Everyone 06:16 PM
Does Lennar plan to develop the Commercial property themselves, or partner? Do you have example of Commercial development?

From polly petrino to Everyone 06:16 PM
how long will road construction take; what is that timeframe likely to be?
From David Risk to Everyone 06:16 PM
Matthew we saw a plan that takes out single family homes and replaces with townhomes behind the 4 homes closest to our neighborhood. Why that possible change? the orangish area on the east of the street to 64

From Thomas Ainsley to Everyone 06:16 PM

Can you please go into additional detail about the location, and quantity, and percentage of the overall project, of proposed townhomes within the development, understanding that your plans may not be final?

From Cheryl \& Tommy Russell to Everyone 06:17 PM
the area in yellow off chanticlair, I'm assuming it's the 4 homes in plan. Please consider removing those as they don't fit and appear to be part of abbingtion. I know we've asked for them to be removed - any updates on those?

From Julie Robertson to Everyone 06:17 PM
Is there anything that can be done for the wildlife that life in the pond to relocate them to a new location?

## From Chip Allen to Everyone 06:19 PM

Where will the pond water go? Will it be sucked up into and in your experience are snakes going into impacted adjacent land like our homes and pools an issue?

From PPAB Land Use to Everyone 06:20 PM
All meeting participants please enter your name, physical address, email address, and phone numbers in the chat.

From Jim Logsdon to Everyone 06:20 PM
If you turn the houses sideways will the 2 that back to the pipeline assume the pipeline for their backyards?

From Julie Robertson to Everyone 06:20 PM
Will the ponds be left open for a period of time to know if it is wetlands or not? How long is that period?
From Cheryl \& Tommy Russell to Everyone 06:20 PM
to clarify our concern -The concern about the 4 homes is not about the way the face, it was about having those 4 homes there. They appear to be in abbington.

From Jim Logsdon to Everyone 06:21 PM
And if that's the case I won't get any 50 ft buffer, their backyard will touch my fence
From Julie Robertson to Everyone 06:21 PM
Julie Robertson

2611 Bryant Pond Lane

From polly petrino to Everyone 06:22 PM
12 months of our houses shaking from road construction

From Brant Gifford to Everyone 06:22 PM
If you're willing to partner for the commercial development, then why wouldn't Lennar partner with a custom builder for the 4 houses to better align to homes in Abbington?

From Cheryl \& Tommy Russell to Everyone 06:23 PM
Chervland Tommv Russell_323 Chanticlair Drive

From Scott Fast to Everyone 06:23 PM
ASK - Please, for the commercial, please consider professional / light 'commercial' use, not a gas station, not another bar / outdoor seating restaurant, there is just no need for that in Apex nor behind our community.

From Chip Allen to Everyone 06:23 PM
Eleni \& Chip Allen, 2617 Bryant Pond Lane.
From Julie Robertson to Everyone 06:23 PM
Is there anything we can do to limit the construction on the weekends and have certain hours during the week so that we can still enjoy our yards?

From polly petrino to Everyone 06:24 PM
Polly \& Ray Petrino, 2623 Bryant Pond Ln,
From Chip Allen to Everyone 06:24 PM
Will your neighborhood have a fence that runs along the Abbington side?
From Penny Grieci to Everyone 06:24 PM
If you are going to put townhomes to the east of the street then can you move the park area to next to the 4 homes on Chanticlair?

From Janarthan Kirupananthan to Everyone 06:24 PM
Janarthan Kirupananthan 2537 Bryant Pond Ln
From Jay Vora to Everyone 06:24 PM
Jay Vora - 1100 Rothwood Way;
From Emily Dilday to Everyone 06:24 PM
Mark and Emily Dilday 1167
From Scott Fast to Everyone 06:25 PM
Inquiry - Have you approached purchasing the land that is directly NORTH of the YELLOW single family homes nearest Abbington? the land with the pond DUE EAST of the three ponds you show in BLUE. Is Lennar interested in buying that land and developing???

Scott Fast, 100 Timberlea Court, Apex, NC 27502
From Mary Kay Fast to Everyone 06:25 PM
Mary Kay Fast, 100 Timberlea Court, Apex, NC 27502,
From Scott Patrick to Everyone 06:26 PM
Scott Patrick 202 Lyndenbury Drive
From Jen Curtis-Maury to Everyone 06:28 PM
what about the snakes part of Chips question. He asked about your experience with snakes invading our backyards after ponds are drained I think.

From Kate Macdonell to Everyone 06:28 PM
Can you talk about the buffer between the 4 houses and Chanticlair Drive?
From Janarthan Kirupananthan to Everyone 06:28 PM
Can the proposed location of the 4 homes be turned into another open/play space since Lennar has rejected removal of the houses.

From Jonathan Lamb to Everyone 06:28 PM
I agree with removing the 4 houses at the intersection of Rothwood and Chanticlair. I did not understand the reason given to keep those as part of the plan. Eric Lamb 404 Chanticlair Dr.

From Rebecca Waite to Everyone 06:28 PM
Agree with the concerns regarding the wildlife being displaced as well as the four homes along Chanticlair Dr. Having them turned will still look awkward, but having them there makes them look like they are in Abbington.
Rebecca Waite

## Duncroft Ct.



## From Chip Allen to Everyone 06:30 PM

Please define the growing season as that was not answered and is very important for us to know. How does Lennar define this for your planning purposes for this project?

From Scott Fast to Everyone 06:31 PM
Thank you.
From Emily Dilday to Everyone 06:32 PM
We also agree with the concerns that the 4 homes on Chanticlair/Rothwood, regardless of which way they are facing, will look out of place.

From Scott Patrick to Everyone 06:32 PM
LeNelle \& Scott Patrick, 202 Lyndenbury Dr. Apex, NC 27502

From Steve Ritchie to Everyone 06:32 PM
Steve \& Christa Ritchie 1101 Rothwood Way
From Chip Allen to Everyone 06:33 PM
Why will Lennar not widen the lots adjacent to Abbington?
From Suzanne Bailey to Everyone 06:33 PM
Suzanne \& Jim Bailey 2605 Bryant Pond Lane
From Steve Ritchie to Everyone 06:34 PM
After the extension of Rothwood Way, what will be the size of those 4 lots relative to the other Abbington homes on Rothwood Way?

From Paige Polito to Everyone 06:34 PM
On Goliath Ln the builder Exeter took just several lots to build on; most of the lots on that street were developed by Loyd Builders. It seems that a custom builder may consider building just a few homes on a street so this may be something Lennar could at least consider for Chanticlair.

From Jen Curtis-Maury to Everyone 06:34 PM
Jen Curtis-Maury 2666 Timken Forest Drive. I would like to officially request on the record again to remove the 4 Chanticlair homes and to further widen the lots adjacent to Abbington (beyond 60 ft ., our lots are about 90 ft .). Also, I would like to be updated on any plan changes.

From Kari Hughes to Everyone 06:35 PM
Rob and Kari Hughes, 101 Duncroft Court, Apex, NC 27502,
From Kate Macdonell to Everyone 06:35 PM
Abbington lots are about 90 feet wide. Your plan shows the south lots as 60 feet wide. Can you please widen those single family detached lots?

From Scott Patrick to Everyone 06:36 PM
LeNelle \& Scott Patrick, 202 Lyndenbury Dr. Apex, NC 27502

From Cheryl \& Tommy Russell to Everyone 06:40 PM
Are there any proposed play / open areas in your plan? If so - can you consider putting the 4 homes there and make the 4 home proposal a play area. It would blend the two neighborhoods together vs. 4 homes in that area.

From Jim Logsdon to Everyone 06:40 PM
How large will those 4 lots be off Chanticlair now that you're turning them sideways and you have to extend Rothwood way and they will have a 20 ft plus 50 ft pipeline easement

From Chip Allen to Everyone 06:41 PM
Chip and Eleni Allen 2617 Bryant Pond Ln. We are officially requesting on the record again to remove the 4 Chanticlair homes and to further widen the lots adjacent to Abbington (beyond 60 ft ., our lots are about 90 ft .). We also express extreme concern about the ponds being drained as it will result in land erosion and wildlife destruction. The density of your proposed neighborhood is outrageous for the amount of usable land. The homes are not comparable to those in Abbington. Please ensure the commercial space is conducive to its residential location with no bars or late night openings and no large delivery trucks that will make loud noises. Also Chanticlair must be finished to meet up with Sweetwater. Very concerned about traffic going to schools and shops running on Bryant Pond. Please update us on all plan changes.

From Julie Robertson to Everyone 06:41 PM
I would like to go on record and voice my concerns about the 4 Chanticlair homes and I think they still need to be removed and that space used as green space. And I would like wider lots for those houses that are backing up to Abbington. I have concerns about the number of townhomes that are being added as part of the plan. I feel like we are not able to negotiate because of the price of land being purchased is so high and the buildable land is so poor. You have 80 ft lot plans why can we not go up to that lot size to help match the Abbington homes. I am also concerned about what these smaller lots and homes that will now back up to my home, the draining and clear cutting of the land behind my house will cause my home values to go down.

From Kate Macdonell to Everyone 06:42 PM
Since this is being recorded and submitted, I want to go on record saying I agree with removing the 4 houses on Chanticlair and widening the southern lots.

From Jen Curtis-Maury to Everyone 06:42 PM
The lots were 60 feet on your first submission. Less housing units means fewer neighbors bordering each yard. That is the exact point of widening the lots and is what we are asking for.

From Paige Polito to Everyone 06:44 PM
I am going on record concurring with other residents to agree with removing the 4 houses on Chanticlair and widening the southern lots.

From Chip Allen to Everyone 06:44 PM
Will AirBnB and other type of very short term rentals be permitted in the Leanna's HOA?
From Jen Curtis-Maury to Everyone 06:45 PM
Please read Cheryl
From Kate Macdonell to Everyone 06:45 PM
Can you explain what a type E buffer looks like? Landscape easement
From Jay Vora to Everyone 06:45 PM

As the homeowner right on the corner of Rothwood and Chanticlair, the 4 houses on chanticlair will probably impact my home more than most. I might be the only one in the neighborhood, but I think the turned lots will actually blend in well with Abbington and is a good decision. Even though they technically aren't in our neighborhood, I think continuity matters to the look and feel of our neighborhood.

From Cheryl \& Tommy Russell to Everyone 06:46 PM
We would like to go on record and request the 4 homes are removed from Chanticlair Abbington connection and widening the lots directly behind Abbington.

From Scott Fast to Everyone 06:46 PM
On the Apex town interactive development map, the filing for Yellowbridge on 03/31 was noted as "nonresidential" - is that the 'proposed use' or 'the current status' ????

From Suzanne Bailey to Everyone 06:46 PM
I would like to officially request on the record to remove the 4 Chanticlair homes and to further widen the lots adjacent to Abbington (beyond 60 ft ., our lots are about 90 ft .).

From Janarthan Kirupananthan to Everyone 06:47 PM
Is there a dust mitigation plan during the many months of construction?
From Scott Fast to Everyone 06:48 PM
Okay, thank you.
From Kate Macdonell to Everyone 06:50 PM
The additional 5 ft landscape easement is within private property lines, right? So it's 10 feet, you can not count the 5 feet on someone's property. Just want to clarify that.

From Chip Allen to Everyone 06:51 PM
Because the ponds are being drained in June ish the spring growing season will be omitted. How is this being factored in? Decision by the army corps needs to take this into account.

## From Bill Zerman to Everyone 06:52 PM

Can you describe what the traffic flow pattern from yellowbridg to 64
From Kate Macdonell to Everyone 06:52 PM
Can you tell us how you summarize this meeting for the Town Council? Do they see this chat or do you write it up for them?

From Julie Robertson to Everyone 06:53 PM
How will we receive further updates?
From Chip Allen to Everyone 06:53 PM
Please repeat the timelines are that was reviewed very quickly

From Jen Curtis-Maury to Everyone 06:54 PM
There is a graphic from the town's traffic department
From Cheryl \& Tommy Russell to Everyone 06:54 PM
We have a difficult time leaving our neighborhood onto 64 now - what have the traffic studies shown?
From polly petrino to Everyone 06:55 PM
I agree with Julie Robertson's comments above, The density will cause home values to decline from their current status. Quality of life during construction is also being glossed over here. There will be significant noise pollution and we have already had to contend with Sweetwater for several years. In addition, this is just adding to our general infrastructure issues, particularly our enrollment capped schools in this area. There needs to be more proactive collaboration from builders on this point.

From Chip Allen to Everyone 06:55 PM
Please submit entire chat as the official transcript as we were not able to ask verbal questions
From Penny Grieci to Everyone 06:56 PM
Will you provide us with a copy of your notes that you submit to the town?
From Scott Fast to Everyone 07:00 PM
Can you share documented commentary or guidelines or mandates from the town of Apex, county of Wake, or state of NC about your submittals? Written communications, as to land use, density, US 64 access, changes and charges Lennar will incur for ANY changes to town roads (access, signage), county roads or state highway access? I would appreciate to read what they may be communicating, if open to the public...??

## https://experience.arcgis.com/experience/41bf89a7c97d43a2934b0e823c8bfa45

https://www.apexnc.org/Search?searchPhrase=interactive
easier link... :)
The proposed 'unit' or dwelling capacity is what now? How many Detached, how many attached, I guess no villas or condos now? Then min of 2.3 to 3.2 persons per HH , that means how many total persons?

From Rebecca Waite to Everyone 07:01 PM
I am also concerned about the traffic. It is already very difficult to turn left (and even right at times) out of the Kellyridge entrance.

From Scott Patrick to Everyone 07:01 PM
I reiterate severely limiting what type of commercial development goes on Rt 64. Believe we could quickly come up with a quick list of absolute non-starters with a gas station being at the top of this list for me.

From Scott Fast to Everyone 07:01 PM
we agree w/Rebecca White ... just today was terrible

From Cheryl \& Tommy Russell to Everyone 07:02 PM
Agreed, I couldn't turn right
From Scott Fast to Everyone 07:03 PM
The planner is whom? Loren? please write in chat :) Thx
From polly petrino to Everyone 07:04 PM
Lauren Staudenmaier lauren.staudenmaier@apexnc.org
From Kate Macdonell to Everyone 07:04 PM
Do you anticipate staff asking you to make further changes to the plan?
From Scott Fast to Everyone 07:04 PM
Max $=160$ units, SFD, townhomes, rough count $120+/-$ today $\ldots 120 * 3=360,120 * 5=600 \ldots$ lots of cars, buses...

From Scott Patrick to Everyone 07:06 PM
40 detached is a very small number and I would consider this an absolute floor. should be higher than $40 / 120$. when is this finalized and committed?

From Julie Robertson to Everyone 07:07 PM
Since you are adding in the commercial why does the count have to stay at 160 ?
From Scott Patrick to Everyone 07:08 PM
did the mix of attached / detached change then?
From Scott Fast to Everyone 07:10 PM
I recall we discussed stop signs on Chanticlair, whether at Rothwood or within Yellowbridge, it will be a mix of vehicle and foot traffic between those intersections... any thoughts?

From Chip Allen to Everyone 07:11 PM
Thank you for your time.
From Scott Fast to Everyone 07:11 PM
we will have a 3-way at Rothwood and then a 3-way inside Yellowbridge...Please show map again to address stop signs ... so all can see.

From Kate Macdonell to Everyone 07:11 PM
Will there be neighborhood signage delineating Abbington from Yellowbridge where the neighborhoods transition?

From Scott Fast to Everyone 07:12 PM

Yes! just west of Rothwood. yes.
From Cheryl \& Tommy Russell to Everyone 07:14 PM
What are the red stars on this map?
From Jim Logsdon to Everyone 07:14 PM
Those 4 lots are going to be postage stamp size now that Rothwood will be extending and they will still have a 20 ft and 50 ft pipeline easement....I call BS

From Cheryl \& Tommy Russell to Everyone 07:14 PM
ok, I had asked earlier - could the 4 homes be moved to one of those?
From Jim Logsdon to Everyone 07:14 PM
Sorry, bad message
From Julie Robertson to Everyone 07:15 PM
What about the land you need that Abbington owns?
From Kate Macdonell to Everyone 07:15 PM
A red star where those 4 houses on Chanticalire are right now would be great! :-)
From Chip Allen to Everyone 07:18 PM
Requires 2/3 vote for Abbignton to sell that land
From Jonathan Polito to Everyone 07:18 PM
How is this proposal helping Apex or the neighboring properties in Abbington? It will NOT increase or help the values of the homes in Abbington and as we've seen recently with the Wake County tax increase vote DEVELOPMENT DOES NOT PAY FOR ITSELF! But rather taxes existing residents more.

## From Scott Fast to Everyone 07:19 PM

Have to be honest...I am getting an itchy feeling that you MAY know more about the Matthew's intentions and status of action, not saying you DO, but if you do, can you please share? I live directly to the right of the pond on their property and don't want to look at a bank, gas station, townhomes or condos... If not you, can I speak to someone in Apex as to their intentions? Thank you.

From Chip Allen to Everyone 07:19 PM
Again entering into chat since not read. The sell of the Abbington land to Lennar requires a $2 / 3$ vote from Abbington residents.

From Scott Fast to Everyone 07:20 PM
I have a doctor on speed dial and a cocktail... all good.
From Brant Gifford to Everyone 07:21 PM

Speaking of Chanticlair, we had heard the extension to Sweetwater through the Atkinson property was looked at, and not accepted to be extended at this time. Does Lennar or Jeff have any indication from the town how they propose to complete this collector, or a timeline for completion?

From Julie Robertson to Everyone 07:21 PM
When does that negotiation on the land needed happen? Does it happen when the zoning request goes in or when the subdivision plan is put together.

From Scott Fast to Everyone 07:21 PM
Joe Matthews... he owns that land above/north of the '4 yellow homes'. Towards US 64. FYI.
https://www.apexnc.org/Search?searchPhrase=interactive
From Kate Macdonell to Everyone 07:21 PM
Just FYI to all thinking about future development around us, buffers and lot sizes/widths matter and set precedents for the future.

From Jen Curtis-Maury to Everyone 07:24 PM
You said what the HOA Covenants say right now? What does that mean?
From Kate Macdonell to Everyone 07:26 PM
We definitely appreciate the 50 ft buffer. Can you also widen the southern lots? So that precedent can be set when the next 2 parcels sell?

From Chip Allen to Everyone 07:26 PM
Goliath Lane are custom homes comparable to Abbington home. This should be noted for the record.
From Jen Curtis-Maury to Everyone 07:27 PM
Agree with Kate and Chip's comments
From Conne Bridenbaugh to Everyone 07:28 PM
Agree with removal of the four homes at the intersection of Rothwood and Chanticlair and widen the lots adjacent to Abbington. The developers of Sweetwater made it work with Abbington. Lennar can as well. Turning them is not the desired solution. David and Conne Bridenbaugh. 503 Lyndenbury Dr.

# YELLOWBRIDGE 

Planned Unit Development
Apex, North Carolina

## Submittal Dates

First Submittal: March 1, 2022
Second Submittal: April 8, 2022
Third Submittal: May 13, 2022
Fourth Submittal: June 10, 2022
Fifth Submittal: June 28, 2022

## Developer

Lennar Corporation
Raleigh Division
1100 Perimeter Park Drive, Suite 112
Morrisville, NC 27560
Civil Engineer
Peak Engineering \& Design
1125 Apex Peakway
Apex, NC 27502

## Land Use Attorneys

Parker Poe Adams \& Bernstein LLP
301 Fayetteville Street, Suite 1400
Raleigh, NC 27602


## TABLE OF CONTENTS

VICINITY MAP ..... 3
PROJECT DATA ..... 4
PURPOSE STATEMENT ..... 5
PERMITTED USES ..... 8
AFFORDABLE HOUSING ..... 10
DESIGN CONTROLS ..... 11
ARCHITECTURAL STANDARDS ..... 14
PARKING AND LOADING ..... 20
SIGNAGE ..... 20
CONSTRUCTION TRAFFIC ..... 20
NATURAL RESOURCES AND ENVIRONMENTAL DATA ..... 20
STORMWATER MANAGEMENT ..... 21
PARKS AND RECREATION ..... 22
PUBLIC FACILITIES ..... 22
PHASING ..... 23
CONSISTENCY WITH LAND USE PLAN ..... 24
COMPLIANCE WITH UDO ..... 24

## VICINITY MAP



## PROJECT DATA

| Name of Project: | Yellowbridge PUD |
| :---: | :---: |
| Property Owner: | Yellowbridge Capital, LLC 113 Mill Point Road Kitty Hawk, NC 27949 |
| Developer: | Lennar Corporation <br> Raleigh Division <br> 1100 Perimeter Park Drive, Suite 112 <br> Morrisville, NC 27560 |
| Prepared by: | Parker Poe Adams \& Bernstein LLP 301 Fayetteville Street, Suite 1400 Raleigh, NC 27601 <br> Peak Engineering \& Design <br> 1125 Apex Peakway <br> Apex, NC 27502 |
| Current Zoning: | Rural Residential (RR) |
| Proposed Zoning: | Planned Unit Development Conditional Zoning (PUD-CZ) |
| Current 2045 Land Use Map Designation: | Medium Density Residential |
| Proposed 2045 Land Use Map | Residential Area: Medium Density Residential Commercial Area: Commercial Services |
| Designation |  |
| Site Address: | 2817 US 64 Highway W Apex NC 27523 2813 US 64 Highway W Apex NC 27523 |
| Property Identification Number: | $\begin{aligned} & 0722752304 \\ & 0722743789 \text { (the "Property") } \end{aligned}$ |
| Total Acreage: | 48.43 acres |
| Area Designated as Mixed Use on LUM | None |
| Area Proposed as Non- Residential: | 3.5 acres |

## PURPOSE STATEMENT

This document and the accompanying exhibits submitted herewith (collectively, the "PUD") are provided pursuant to the Town of Apex Unified Development Ordinance ("UDO") Planned Unit Development provisions. This PUD addresses the development of approximately 48.43 acres along US 64 Highway W, less than one mile from the 540/US-64 interchange. The Property is undeveloped and within the Town's Extra Territorial Planning jurisdiction. Yellowbridge PUD will be a mixed-use community with two districts, the Residential District and the Commercial District.

Yellowbridge PUD will feature a mix of single-family detached homes, alley loaded townhouses, front loaded townhouses, and commercial uses with walking paths and open space (the "Development"). The mix of housing types will serve residents with varying budgets, backgrounds, and family needs. The community will be conveniently located to existing amenities and have easy access to highways. The neighborhood style commercial uses fronting US-64 Highway West will create a transition in development intensity from the highway south through the Development. The PUD is intended to create flexibility in design and land uses to deliver a high quality residential development that fits the context of existing development in the area. The Residential District is consistent with the Property's Medium Density Land Use Map ("LUM") designation; and generally, with the Apex Comprehensive Plan's ("Peak Plan") goal of accommodating a mix of housing types to serve the Town's growing and increasingly diverse population. Although the LUM does not specifically designate the Property for commercial uses, the portion of the Property fronting US64 Highway West is appropriate for the neighborhood serving commercial uses permitted by this PUD. The Commercial District is located directly across US-64 Highway West from the Westford PUD which permits a variety of residential, office, and commercial uses along the road. Additionally, the Commercial District is located adjacent to the Local Bar and is separated from the Residential District by a stream and wetlands that will act as a natural buffer between future commercial uses and residential neighborhoods to the south.

## CONSISTENCY WITH PLANNED UNIT DEVELOPMENT STANDARDS

(i) The uses proposed to be developed in the PD plan for PUD-CZ are those uses permitted in Sec. 4.2.2 Use Table

RESPONSE: The uses permitted within The Yellowbridge PUD are permitted within this designation in UDO Section 4.2.2 Use Table.
(ii) The uses proposed in the PD Plan for PUD-CZ can be entirely residential, entirely nonresidential, or a mix of residential and non-residential uses, provided a minimum percentage of non-residential land area is included in certain mixed use areas as specified on the 2045 Land Use Map. The location of uses proposed by the PUD-CZ must be shown in the PD Plan with a maximum density for each type of residential use and a maximum square footage for each type of non-residential use.

RESPONSE: The Yellowbridge PUD is a mixed use community with a mix of housing types and commercial uses outlined in this PUD.
(iii) The dimensional standards in Sec. 5.1.3 Table of Intensity and Dimensional Standards, Planned Development Districts may be varied in the PD Plan for PUD-CZ. The PUD-CZ shall demonstrate compliance with all other dimensional standards of the UDO, North Carolina Building Code, and North Carolina Fire Code.

RESPONSE: This PUD specifies intensity and dimensional standards for the project. The PUD's standards are consistent with the UDO's vision for Planned Unit Developments - to provide site specific, high-quality neighborhoods that preserve natural features and exhibit compatibility with, and connectivity to, surrounding land uses. Except as specifically stated in this PUD, Yellowbridge will comply with all other requirements of the UDO and will comply with all applicable requirements of the North Carolina Building Code and the North Carolina Fire Code.
(iv) The development proposed in the PD Plan for PUD-CZ encourages cluster and compact development to the greatest extent possible that is interrelated and linked by pedestrian ways, bikeways and other transportation systems. At a minimum, the PD Plan must show sidewalk improvements as required by the Advance Apex: The 2045 Transportation Plan and the Town of Apex Standard Specifications and Standard Details, and greenway improvements as required by the Town of Apex Parks, Recreation, Greenways, and Open Space Plan and the Advance Apex: The 2045 Transportation Plan. In addition, sidewalks shall be provided on both sides of all streets for single-family detached homes.

RESPONSE: Yellowbridge PUD will feature sidewalks throughout. Sidewalks will connect the project and the adjacent Abbington neighborhood, improving pedestrian connectivity. The PUD also commits to significant right of way dedication and roadway improvements called for by the Transportation Plan.
(v) The design of development in the PD Plan for PUD-CZ results in land use patterns that promote and expand opportunities for walkability, connectivity, public transportation, and an efficient compact network of streets. Cul-de-sacs shall be avoided unless the design of the subdivision and the existing or proposed street system in the surrounding area indicate that a through street is not essential in the location of the proposed cul-desac, or where sensitive environmental areas such as streams, floodplains, and wetlands would be substantially disturbed by making road connections.

RESPONSE: The proposed street layout has been designed to enhance pedestrian and vehicular connectivity while protecting sensitive environmental features and being mindful of existing residential development. The development will facilitate the vision of the Transportation Plan by extending the existing Chanticlair Drive stub street across the site to the west. Additionally, the project will extend a public street to the north to US-64 Highway West which will increase connectivity and provide Abbington residents an additional route to US-64 Highway West.
(vi) The development proposed in the PD Plan for PUD-CZ is compatible with the character of surrounding land uses and maintains and enhances the value of surrounding properties.

RESPONSE: The proposed development is compatible with the character of the existing and planned uses in the surrounding area. This area of the Town's ETJ is at the intersection between growing sections of northwest Apex and historically rural, western Wake County. Adjacent properties are largely residential subdivisions with some commercial uses nearby. Nearby residential developments include the Villages at Westford Apartments, the Townes at Westford, the Stratford at Abbington, the Abbington Community, and the Sweetwater Community and Town Center. The Villages at Westford Apartments are directly across US 64 Highway West and consist of 296 apartments with a clubhouse and pool that were constructed in 2019 as part of the Westford PUD. The Stratford at Abbington and the Abbington Community are both single-family detached subdivisions. The Sweetwater Community and Town Center is a residential and commercial site with townhomes, single family homes and various commercial uses.

Yellowbridge PUD will provide a mix of housing types and neighborhood serving commercial uses that offer a transition between US 64 Highway West and the lower intensity Abbington community to the south. Density will transition from more dense townhomes to larger lot single-family detached homes as the site moves north to south. Additionally, this PUD contains buffer commitments and design standards that will ensure compatibility with neighboring uses.
(vii) The development proposed in the PD Plan for PUD-CZ has architectural and design standards that are exceptional and provide higher quality than routine developments. All residential uses proposed in a PD Plan for PUD-CZ shall provide architectural elevations representative of the residential structures to be built to ensure the Standards of this Section are met.

RESPONSE: Yellowbridge PUD will feature high quality and thoughtful design. Architectural standards, design controls, and conceptual elevations are included in this PUD.

## CONSISTENCY WITH CONDITIONAL ZONING STANDARDS

Yellowbridge PUD is consistent with the conditional zoning standards set forth in UDO Section 2.3.3.F.1-10. Please see the accompanying PUD-CZ Application for the statements of consistency addressing each standard.

## PERMITTED USES

The Property may be used for the uses listed below. The permitted uses are subject to the limitations and regulations stated in the UDO and any additional limitations or regulations stated below. For convenience, some relevant sections of the UDO may be referenced; such references do not imply that other sections of the UDO do not apply. Homeowners Association covenants shall not restrict the construction of accessory dwelling units.

## RESIDENTIAL DISTRICT

The following uses shall be permitted in the Residential District:

| Residential |  |
| :--- | :--- |
| Single-family | Permitted |
| Townhouse | Permitted |
| Accessory apartment* | Permitted |
| Recreational Uses | Permitted |
| Park, active | Permitted |
| Greenway | Permitted |
| Park, passive | Permitted |
| Recreation facility, private | Permitted |
| Utility, minor |  |

* Homeowners Association covenants shall not restrict the construction of accessory dwelling units.


## COMMERCIAL DISTRICT

The following uses shall be permitted in the Commercial District:

| Restaurant, general | Permitted |
| :--- | :--- |
| Restaurant, drive-through | Permitted |
| Medical or dental office or <br> clinic | Permitted |
| Medical or dental laboratory | Permitted |
| Office, business or <br> professional | Permitted |
| Publishing office | Permitted |
| Artisan Studio | Permitted |
| Barber and beauty shop | Permitted |
| Book store | Permitted |
| Convenience store | Permitted |
| Dry cleaners and laundry <br> service |  |


| Farmer's market | Permitted |
| :--- | :--- |
| Financial institution | Permitted |
| Floral shop | Permitted |
| Gas and fuel, retail | Permitted |
| Greenhouse or nursery, retail | Permitted |
| Grocery, general | Permitted |
| Grocery, specialty | Permitted |
| Health/fitness center or spa | Permitted |
| Kennel | Permitted |
| Newsstand or gift shop | Permitted |
| Personal service | Permitted |
| Pharmacy | Permitted |
| Printing and copying service | Permitted |
| Real estate sales | Permitted |
| Repair services, limited | Permitted |
| Retail sales, general | Permitted |
| Studio for art | Permitted |
| Tailor shop | Permitted |
| Upholstery shop | Permitted |
| Pet services | Permitted |
| Day care facility | Permitted |
| Veterinary clinic or hospital | Permitted |
| Utility, minor | Permitted |

## AFFORDABLE HOUSING

The Development shall include a minimum of two (2) residential restricted affordable housing townhouse or detached single-family median-income ownership units (the "Affordable Units"). The Affordable Units shall be constructed on-site and sold (includes unit price and lot price) at a mutually agreeable maximum affordable housing median-income ownership initial sales price (the "Initial Sales Price"). The Affordable Units shall be occupied by low or median-income households earning no more than one-hundred percent (100\%) of the Raleigh NC Metropolitan Statistical Area (MSA), Area Median Income (AMI), adjusted for family size as most recently published by HUD (the "Income Limit")(. For purposes of calculating the Initial Sales Price for the Affordable Units, affordable shall mean a reasonable down payment and monthly housing costs expected during the first calendar year of occupancy, including utilities or utility allowances, mortgage loan principal and interest, mortgage insurance, property taxes, homeowner's insurance, homeowner's association dues, if any, and all other property assessments, dues and fees assessed as a condition of property ownership, which does not exceed thirty percent ( $30 \%$ ) times (x's) one-hundred percent ( $100 \%$ ) times ( $x$ 's) the annual median-income limit ( $100 \%$ AMI Category), based on a family size that is equal to the actual number of bedrooms as the Affordable Units, applicable to the Raleigh, NC MSA as most recently published by the HUD. A restrictive covenant (i.e. resale deed restriction) with a minimum affordability period of fifteen (15) years (the "Affordability Period") shall be recorded in the Wake County Registry against each of the Affordable Units concurrently at the close of escrow upon the sale of the Affordable Units. A restrictive covenant (i.e. affordable housing agreement) between the Town and applicant shall be recorded in the Wake County Registry against each of the lots for the Affordable Units prior to the issuance of a building permit for such lots to memorialize the affordable housing terms and conditions of the approved zoning condition. The Affordable Units may be townhouses or single-family detached houses, at the discretion of the developer, and shall be designated on the Master Subdivision Final Plat, which may be amended from time to time. Final Affordable Housing Unit floor plan selection which includes the unit size and bedroom size will be at the discretion of the developer. The Affordable Units may be provided in multiple phases or in one single phase. Developer will work with the Town to identify qualifying buyers for the first sale of the Affordable Units (the "First Sale"). Following the First Sale of the Affordable Units, Developer shall not be responsible for managing the Affordable Units or performing marketing, applicant screening, and selection related to future sales of the Affordable Units. Town staff will assist with the administrative duties of the Affordable Units during the Affordable Period.

## DESIGN CONTROLS

Development shall comply with the following minimum design controls.

## UNIVERSAL DESIGN CONTROLS

| Total Project Area | 48.43 acres |
| :--- | :---: |
| Maximum Built-Upon Area | 70\% of gross site acreage |

RESIDENTIAL DISTRICT DESIGN CONTROLS

| Maximum Residential Density | 160 units |
| :---: | :---: |
| Maximum Residential Density | 3.6 units/acre |
| Proposed Land Area | 44.93 acres |
| Front Loaded Townhouses |  |
| Minimum Lot Size | None |
| Minimum Lot Width | 18 ft . |
| Minimum Setbacks |  |
| Front | 10 ft . |
| Side | 0 ft . ( 5 ft . for end units) |
| Rear | 5 ft . |
| Corner Side | 8 ft . |
| Maximum Building Height | 3 stories; 45 ft . |
| Minimum Building Separation | 10 ft . |
| Minimum Buffer/RCA Setbacks | 10 ft . for buildings <br> 5 ft . for parking areas |
| Rear Loaded Townhouses |  |
| Minimum Lot Size | None |
| Minimum Lot Width | 18 ft . |
| Minimum Setbacks |  |
| Front | 5 ft . |
| Side | 0 ft . ( 5 ft . for end units) |
| Rear | 5 ft . |
| Corner Side | 8 ft . |
| Maximum Building Height | 3 stories; 45 ft . |
| Minimum Building Separation | 10 ft . |
| Single-Family Detached |  |
| Minimum Lot Size | 6,000 square feet |
| Minimum Lot Width* | 50 ft . |
| Minimum Setbacks |  |
| Front | 20 ft . |
| Side | 6 ft . |


| Rear | 15 ft. |
| :--- | :---: |
| Corner Side | 8 ft. |
| Maximum Building Height | 3 stories; 45 ft. |
| Minimum Buffer/RCA Setbacks | 10 ft. for buildings <br> 5 feet for parking areas |
| Minimum Resource Conservation <br> Area | $30 \%$ of gross site acreage |

*Single-family detached homes adjacent to the Property's southernmost property line adjacent to the Abbington neighborhood from the northwestern corner of PIN 0722645333 to the northeastern corner of PIN 0722748868 shall have a minimum lot width of 60 feet.

## COMMERCIAL DISTRICT DESIGN CONTROLS

| Proposed Land Area | 3.5 acres |
| :--- | :---: |
| Maximum Building Square Footage | $25,000 \mathrm{SF}$ |
| Minimum Setbacks | 10 ft. |
| Front (US-64) | 10 ft. |
| Side | 10 ft. |
| Rear | 10 ft. |
| Corner Side | 50 ft. |
| Maximum Building Height | 10 ft. for buildings <br> Minimum Buffer/RCA Setbacks |
| Minimum Resource Conservation Area | $25 \%$ of gross site acreage |

## LANDSCAPING, BUFFERING, AND SCREENING

Perimeter buffers shall be built and planted to the following lot width and planting standards:

| Along the Property's shared property line with <br> PIN 0722762014 | 30 ft . Type A |
| :--- | :---: |
| Along the Property's US-64 Highway West <br> frontage east of PIN 0722762014 | 50 ft . Type A* |
| Along the Property's US-64 Highway West <br> frontage west of PIN 0722762014 | $100 \mathrm{ft}$. Type E |


| Along the Property's westernmost boundary | 20 ft . Type B |
| :---: | :---: |
| Along the north and south side of Chanticlair Drive west of the Single Family Detached homes to the north of Chanticlair Drive | 10 ft . Type D |
| Along the north side of Chanticlair Drive adjacent to the Single Family Detached homes north of Chanticlair Drive | 10 ft . Type D |
| Along the Property's easternmost boundary adjacent to PIN 0722850629 | 10 ft . Type B |
| Along the gas easement | 10 ft . Type A |
| Along the Property's southern property line from the northwest corner of PIN 0722645333 to the northeast corner of PIN 0722741431** | 50 ft . Type $\mathrm{A}^{* *}$ with a minimum 6 ft . tall opaque privacy fence along the north edge of the buffer |
| Along the Property's southern property line from the northeast corner of PIN 0722741431 to the northwest corner of PIN 0722748868*** | 50 ft . Type $\mathrm{A}^{* * *}$ with a minimum 6 ft . tall opaque privacy fence along the north edge of the buffer |

* The Development shall meet requirements (i) through (iii) in UDO Section 8.2.6(B)(5)(f)(ii)(c) to reduce the buffer width along US-64 Highway West to 50 feet.
** This portion of the perimeter buffer shall remain undisturbed and supplemented with Type A buffer plantings.
*** This portion of the perimeter buffer shall be cleared, graded, include a minimum 3-foot berm, and be replanted to a Type A buffer standard.


## ARCHITECTURAL STANDARDS

Yellowbridge PUD offers the following architectural controls to ensure a consistency of character throughout the development, while allowing for enough variety to create interest and avoid monotony. Elevations included are conceptual examples. Final elevations must comply with these architectural standards but may vary from the conceptual elevations. Further details may be provided at the time of Residential Master Subdivision Plan submittal.

## RESIDENTIAL DISTRICT DESIGN GUIDELINES

Single-Family Detached:

1. Vinyl siding is not permitted; however, vinyl windows, decorative elements and trim are permitted.
2. The roof shall be pitched at $5: 12$ or greater for $75 \%$ of the building designs.
3. Eaves shall project at least 12 inches from the wall of the structure.
4. Garage doors shall have windows, decorative details or carriage-style adornments on them.
5. The garage shall not protrude more than 1 foot out from the front façade and front porch.
6. Garages on the front façade of a home that faces the street shall not exceed $30 \%$ of the total width of the house and garage together.
7. The visible side of a home on a corner lot facing the public street shall contain at least 3 decorative elements such as, but not limited to, the following elements:

- Windows
- Bay window
- Recessed window
- Decorative window
- Trim around the windows
- Wrap around porch or side porch
- Two or more building materials
- Decorative brick/stone
- Decorative trim
- Decorative shake
- Decorative air vents on gable
- Decorative gable
- Decorative cornice
- Column
- Portico
- Balcony
- Dormer

8. A varied color palette shall be utilized on homes throughout the subdivision to include a minimum of three color families for siding and shall include varied trim, shutter, and accent colors complementing the siding color.
9. House entrances for units with front-facing single-car garages shall have a prominent covered porch/stoop area leading to the front door.
10. The rear and side elevations of the units that can be seen from the right-of-way shall have trim around the windows.
11. Front porches shall be a minimum of 5 feet deep.
12. No more than $25 \%$ of lots may be accessed with J-driveways. There shall be no more than 3 such homes in a row on any single block. Any lots eligible for a J-driveway home shall be identified on the Final Plat.

Townhouses (front and alley loaded):

1. Vinyl siding is not permitted; however, vinyl windows, decorative elements and trim are permitted.
2. The roofline cannot be a single mass; it must be broken up horizontally and vertically between every unit.
3. Garage doors must have windows, decorative details or carriage-style adornments on them.
4. House entrances for units with front-facing single-car garages shall have a covered porch/stoop area leading to the front door.
5. The garage cannot protrude more than 1 foot out from the front façade or front porch.
6. The visible side of a townhome on a corner lot facing the public street shall contain at least 3 decorative elements such as, but not limited to, the following elements:

- Windows
- Bay window
- Recessed window
- Decorative window
- Trim around the windows
- Wrap around porch or side porch
- Two or more building materials
- Decorative brick/stone
- Decorative trim
- Decorative shake
- Decorative air vents on gable
- Decorative gable
- Decorative cornice
- Column
- Portico
- Balcony
- Dormer

7. Building facades shall have horizontal relief achieved by staggering the units.
8. A varied color palette shall be utilized on homes throughout the subdivision to include a minimum of three color families for siding and shall include varied trim, shutter, and accent colors complementing the siding color.
9. The rear and side elevations of the units with right-of-way frontage shall have trim around the windows.

CONCEPTUAL RESIDENTIAL DISTRICT BUILDING ELEVATIONS



## COMMERCIAL DISTRICT DESIGN GUIDELINES

1. Architectural treatments such as varying roof forms, façade articulation, breaks in roof, walls with texture materials and ornamental details shall be incorporated to add visual interest.
2. Large expanses of blank walls greater than 25 feet in length or height shall be broken up with windows or other architectural features to reduce visual impacts.
3. Roof features may include flat roofs with parapet, hip roofs or awnings with metal or canvas material.

## COMMERCIAL DISTRICT MATERIALS

Non-residential exteriors shall incorporate variation in materials. The front façade and other facades located along a public right-of-way may include:

1. Brick and/or stone masonry
2. Decorative concrete block (integral color or textured)
3. Stone accents
4. Aluminum storefronts with anodized or pre-finished colors
5. EIFS cornices, and parapet trim
6. EIFS or synthetic stucco shall not be used in the first four feet above grade and shall be limited to only $25 \%$ of each building façade
7. Precast concrete
8. Soffit and fascia materials to be considered include EIFS with crown trim elements
9. Cementitious siding

Rear elevations of non-residential buildings facing opaque landscape buffers or not visible from vehicular use areas or public rights-of-way may incorporate decorative concrete masonry, metal coping, or EIFS trim.

REPRESENTATIVE COMMERCIAL DISTRICT BUILDING ELEVATIONS


## PARKING AND LOADING

Parking shall comply with minimum parking standards set forth in UDO Section 8.3.

## SIGNAGE

Signage shall comply with UDO Section 8.7.

In addition, the project shall install at least one (1) sign per SCM discouraging the use of fertilizer and to reduce pet waster near SCM drainage areas. The sign(s) shall be installed in locations that are publicly accessible, such as adjacent to, but outside of public property and/or public easement(s), amenity centers, sidewalks, greenways, or side paths.

## CONSTRUCTION TRAFFIC

All heavy duty construction traffic shall enter and exit the site via US-64 Highway West. Heavy duty construction traffic shall not use Chanticlair Drive, Rothwood Way, or Lyndenbury Drive. "No Construction Traffic" signage shall be posted along Chanticlair Drive and Rothwood Way.

## NATURAL RESOURCES AND ENVIRONMENTAL DATA

## RIVER BASINS AND WATERSHED PROTECTION OVERLAY DISTRICTS

The Property is within the Beaver Creek Basin, Jordan Lake Watershed, and Primary Watershed Protection Overlay District as shown on the Town of Apex Watershed Protection Overlay Map 2019. This PUD will comply with all built upon area, vegetated conveyances, structural SCMs and riparian stream buffer requirements of UDO Section 6.1.8.

## Resource Conservation Areas (RCA)

The Development will meet or exceed the minimum Resource Conservation Area ("RCA") requirements in UDO Section 8.1.2 and 2.3.4. The Property is located west of 540 and is therefore required to preserve a minimum of 30\% RCA for the Residential District and 25\% RCA for the Commercial District. Designated RCA areas will be consistent with UDO Section 8.1.2(B). Preserved streams, wetlands, and associated riparian buffers provide the primary RCAs throughout the Property. Additional RCAs may include stormwater management areas, multiuse paths, and perimeter buffers.

## Floodplain

The project site does not sit within a designated current or future 100-year floodplain as shown on the Town of Apex Watershed \& FEMA Map dated April 2015. FIRM Panel 3720072200J dated May 2, 2006 does not include a floodplain within the property boundary.

## Historic Structures

There are no known historic structures present on the Property.

## Environmental Commitments Summary

The following environmental conditions shall apply to the Development:

- All dwelling units shall be pre-configured with conduit for a solar energy system.
- The project shall install at least one (1) sign per SCM discouraging the use of fertilizer and to reduce pet waste near SCM drainage areas. The sign(s) shall be installed in locations that are publicly accessible, such as adjacent to, but outside of public property and/or public easement(s), amenity centers, sidewalks, greenways, or side paths.
- The project shall install a minimum of two (2) pet waste stations.
- The project shall plant drought resistant warm season grasses throughout the development to minimize irrigation and chemical use.
- Stormwater control devices shall be designed and constructed so that post development peak runoff does not exceed pre-development peak runoff conditions for the 24-hour, 1 year, 10 year, and 25 year storm events.
- Landscaping shall include at least four (4) native hardwood tree species throughout the Development.
- No clearing or land disturbance shall be permitted within the riparian buffer, except the minimum necessary to install required road and utility infrastructure and SCM outlets. The SCM water storage and treatment shall not be permitted within the riparian buffer. Sewer infrastructure shall be designed to minimize impacts to riparian buffers.
- Any outdoor lighting installed in the commercial area and on private amenities, signs, landscaping, walls, or fences shall be full cutoff LED fixtures with a maximum color temperature of 3000 k . This condition shall not apply to lighting on single-family homes, townhouses, accessory buildings, or street lighting.
- At least $75 \%$ of plants shall be native species. Landscaping will be coordinated with and approved by the Planning Department at site or subdivision review.


## STORMWATER MANAGEMENT

Stormwater control devices shall be designed and constructed to exceed UDO standards so that post development peak runoff does not exceed pre-development peak runoff conditions for the 24 -hour, 1 year, 10 year, and 25 year storm events. Otherwise, the Development shall meet all stormwater management requirements for quality and quantity treatment in accordance with Section 6.1 of the UDO.

Acceptable stormwater structures shall include detention ponds, constructed wetlands, bioretention areas, or other approved devices consistent with the NC DEQ Stormwater Design Manual and the Town of Apex UDO.

## PARKS AND RECREATION

This project was reviewed by the Parks, Recreation, and Cultural Resources Advisory Commission on April 27, 2022 and a fee-in-lieu of dedication was recommended.

| Single-family detached Units: | $\$ 3,753.89 \times 50=$ | $\$ 187,694.50$ |
| :--- | :--- | :--- |
| Single-family attached Units: | $\$ 2,528.25 \times 110=$ | $\$ 278,107.50$ |
| Total residential fee in lieu per current unit count: |  | $\$ \mathbf{4 6 5 , 8 0 2}$ |

The final unit count and total fee-in-lieu will be calculated at Master Subdivision Plan and Construction Document review.

## PUBLIC FACILITIES

The proposed PUD shall meet all Public Facilities requirements as set forth in UDO Section 2.3.4(F)(1)(f) and be designed to comply with the Town's Sewer and Water Master Plan and Standards and Specifications. Road and utility infrastructure shall be as follows:

## GENERAL ROADWAY INFRASTRUCTURE

Except as set forth herein, all proposed roadway infrastructure and right-of-way dedications will be consistent with the Town of Apex Comprehensive Transportation Plan and Bicycle and Pedestrian System Plan in effect as of the submission date of this rezoning.

## TRANSPORTATION IMPROVEMENTS

The following conditions regarding transportation improvements apply and shall be phased consistent with the Traffic Impact Analysis that has been performed for this rezoning, which is on file with the Town of Apex.

- All proposed driveway access and improvements on state-maintained roadways are subject to both Apex and NCDOT review and approval.
- A maximum of one (1) access point shall be proposed on US 64, to be constructed as a left-in/right-in/right-out public street access at the existing median break with a stopcontrolled northbound approach with one lane of ingress and one lane of egress and an exclusive eastbound right turn lane with a minimum 100 feet of storage and appropriate deceleration length and taper on US Hwy 64. Improve the median break and construct physical separation between turn lanes to accommodate trucks and prevent both improper left turns and vehicular turning-movement conflicts.
- Construct an exclusive eastbound U-turn median break on US Hwy 64, approximately halfway between the site access at the existing median break and Kellyridge Drive including a U-turn lane with a minimum of 100 feet of storage and appropriate deceleration length and taper. If the eastbound U-turn lane is removed from the existing median break location to the west, extend the storage to 150 feet at this location.
- Consistent with the Transportation Plan Thoroughfare and Collector Street Map, Chanticlair Drive shall be extended westward as a Major Collector Street with a minimum 60-foot right-of-way, consistent with Town Standards.
- No residential driveways shall be permitted on existing or future Major Collector Street(s).
- Rothwood Way shall be extended north and stubbed to the southernmost property line of PIN 0722850629 . Homes located on Rothwood Way shall take driveway access from Rothwood Way.
- The extension of Chanticlair Drive shall be constructed concurrently with the project but shall remain closed to traffic between Yellowbridge and Abbington subdivisions until such time that the $50^{\text {th }} \mathrm{CO}$ is approved for Yellowbridge. The form of closure shall be noted on the subdivision plan and subject to Town staff approval.
- Potential Access Points shown on the Conceptual Site Plan and Conceptual Utility Plan (C100) are not shown in exact locations but show required connections. Connections may only be removed from the subdivision connectivity requirements of the PUD if the developer shows to the satisfaction of the Planning Director, in consultation with the Technical Review Committee (TRC), that the construction of the connection would be impractical based on environmental conditions found in the field at the time of Master Subdivision Plan approval.


## PEDESTRIAN AND BICYCLE IMPROVEMENTS

Per UDO requirements, sidewalks shall be provided along both sides of all streets.

## WATER AND SANITARY SEWER

All lots within the Development will be served by Town of Apex water and sanitary sewer. The utility design will be finalized at the time of Master Subdivision Plan or Site Plan approval and be based on available facilities adjacent to the site at that time. The design will meet the current Town of Apex master plans for water and sewer. A conceptual utility plan is included in the PUD Concept Plan for reference.

## OTHER UTILITIES

Electricity will be provided by Apex Electric. Phone, cable, and gas will be provided by the Developer and shall meet Town of Apex standards as outlined in the UDO.

## PHASING

The Development will be completed in phases. Final locations of phases will be determined at the time of Master Subdivision Review and Approval.

## CONSISTENCY WITH LAND USE PLAN

The proposed Development is generally consistent with Advance Apex 2045: The Apex Comprehensive Plan, adopted in February 2019. The Land Use Map designates the Property as Medium Density Residential which allows a PUD zoning district and contemplates the housing types and densities proposed in the Residential District. This PUD updates the LUM designation of the Commercial District to Commercial Services. Although the LUM does not specifically designate the Property for commercial uses, the portion of the Property fronting US-64 Highway West is appropriate for the neighborhood serving commercial uses permitted by this PUD. The Commercial District is located directly across US-64 Highway West from the Westford PUD which permits a variety of residential, office, and commercial uses along the road. Additionally, the Commercial District is located adjacent to the Local Bar and is separated from the Residential District by a stream and wetlands that will act as a natural buffer between future commercial uses and residential neighborhoods to the south.

## COMPLIANCE WITH UDO

The development standards adopted for this PUD are in compliance with those set forth in the current version of the Town's Unified Development Ordinance (UDO). This PUD shall be the primary governing document for the development of Yellowbridge. All standards and regulations in this PUD shall control over general standards of the UDO. Provided, however, that if a specific regulation is not addressed in this PUD, UDO regulations shall control.

# YELLOWBRIDGE PLANNED UNIT DEVELOPMENT 

## EXHIBIT A Legal Description <br> The Property

## PIN\# 0722752304 \& 0722743789

All that certain real property situated in White Oak Township, Wake County, North Carolina, described as follows:

Beginning at a set iron rod on the northern right of way line of Chanticlair Drive, said iron rod marking the southwestern corner of Lot 74 as said lot is shown and so designated on that certain subdivision plat entitled "Windsor at Abbington - Phase 1, Section A, Map 2, Lots 24-27 \& 6574 " recorded in Book of Maps 1998, Page 203, Wake County Registry; thence along the northern right of way line of Chanticlair Drive, South $89^{\circ} 37^{\prime} 45^{\prime \prime}$ West 280.73 feet to a set iron rod; thence South $00^{\circ} 22^{\prime} 15^{\prime \prime}$ East 30.04 feet to a set iron rod at the centerline of the western terminus of Chanticlair Drive and the northeastern corner of the 0.08 acre Reserved Area depicted on that certain subdivision plat entitled "Stratford at Abbington, Phase 1: Lots 1-31, 6575, Owner: Highway 64, LLC" recorded in Book of Maps 2006, Pages 2638 to 2640, Wake County Registry; thence along the northern and western boundary of said Reserved Area and continuing along the northwestern boundary of said Stratford at Abbington subdivision the following nine courses: (1) South $89^{\circ} 37^{\prime} 45^{\prime \prime}$ West 118.01 feet to a set iron rod; (2) South $05^{\circ} 29^{\prime} 21^{\prime \prime}$ West 40.93 feet to a set iron rod; (3) South $01^{\circ} 54^{\prime} 29$ " East 98.00 feet to a set iron rod; (4) South $11^{\circ} 29^{\prime} 28^{\prime \prime}$ East 62.80 feet to a set iron rod; (5) South $22^{\circ} 27^{\prime} 50$ " West 118.06 feet to a found iron pipe; (6) South $70^{\circ} 08^{\prime} 38^{\prime \prime}$ West 118.71 feet to a found iron pipe; (7) South $77^{\circ} 30^{\prime} 46^{\prime \prime}$ West 65.05 feet to a found iron pipe; (8) South $73^{\circ} 46^{\prime} 05^{\prime \prime}$ West 40.75 feet to a found iron pipe; and (9) South $73^{\circ} 28^{\prime} 08^{\prime \prime}$ West 311.49 feet to a found iron pipe at an angle point in the northern boundary of Lot 64 as said lot is shown and so designated on that certain subdivision plat entitled "Stratford at Abbington, Phase 2: Lots 32-64, Owner: Highway 64, LLC" recorded in Book of Maps 2008, Pages 33 and 34, Wake County Registry; thence along the northern boundary of said Stratford at Abbington Phase 2 subdivision South $82^{\circ} 16^{\prime} 49^{\prime \prime}$ West 758.57 feet to a found iron pipe with cap at the northwestern corner of Lot 56 of said Stratford at Abbington Phase 2 subdivision, said point also being on the eastern boundary of Lot 2 as said lot is shown and so designated on that certain plat entitled "Recombination Survey for Cecil V. Campfield and Wife Sharon K. Campfield" recorded in Book of Maps 1995, Page 334, Wake County Registry; thence along the eastern boundary of said Campfield plat the following two courses: (1) North $03^{\circ} 08^{\prime} 59$ " East 417.75 feet to a found bent iron pipe; and (2) North $03^{\circ} 12^{\prime} 21^{\prime \prime}$ East 406.54 feet to a found iron pipe with cap at the southeastern corner of Lot 'A' as said lot is shown and so designated on that certain plat entitled "Recombination for Joel V. Perry" recorded in Book of Maps 1985, Page 522, Wake County Registry; thence along the eastern boundary of said Perry plat North $03^{\circ} 11^{\prime} 42^{\prime \prime}$ East 841.95 feet to a found iron rod with cap on the southern right of way line of U.S. Highway 64; thence along said southern right of way line North $82^{\circ} 54^{\prime} 26^{\prime \prime}$ East 331.57 feet to a set iron rod at the northwestern corner of the parcel depicted on that certain plat entitled "Boundary Survey, Property of Calvin Mills, Prepared for David and Sharon Raymer" recorded in Book of Maps 2004, Page 698, Wake County Registry; thence along the western, southern and eastern boundary of said Mills plat the following three courses: (1) South $07^{\circ} 08^{\prime} 433^{\prime \prime}$ East 189.52 feet to a found iron pipe; (2) North $82^{\circ} 51^{\prime} 17{ }^{\prime \prime}$ East 420.02 feet to a found iron pipe; and (3) North $07^{\circ} 08^{\prime} 43^{\prime \prime}$ West 189.14 feet to a set iron rod on the southern right of way line of
U.S. Highway 64; thence along said southern right of way line the following two courses: (1) North $82^{\circ} 54^{\prime} 26^{\prime \prime}$ East 265.68 feet to a set iron rod; and (2) North $82^{\circ} 53^{\prime} 08^{\prime \prime}$ East 305.02 feet to a set iron rod at the northwestern corner of Area " B " as shown and so designated on that certain plat entitled "Property of Blakely-Braswell Land Company, LLC" recorded in Book of Maps 1996, Page 634, Wake County Registry; thence along the western boundary of said Area "B", South $11^{\circ} 47^{\prime} 52^{\prime \prime}$ West 42.58 feet to a found iron pipe with cap at the northwestern corner of Tract 'A' as said lot is shown and so designated on that certain plat entitled "Property of Calvin E. Mills, Alta Belle P. Mills, Ted Mills \& Randy Mills By William R. Hoke \& Paul Stam, Jr., Co-trustees" recorded in Book of Maps 1984, Page 404, Wake County Registry; thence along the western and southern boundaries of said Mills plat the following five courses: (1) South $07^{\circ} 43^{\prime} 26^{\prime \prime}$ West 146.44 feet to a found iron pipe with cap; (2) South $03^{\circ} 03^{\prime} 23^{\prime \prime}$ East 318.20 feet to a found iron pipe with cap; (3) South $05^{\circ} 04^{\prime} 48^{\prime \prime}$ West 519.04 feet to a found iron pipe with cap; (4) South $15^{\circ} 45^{\prime} 44^{\prime \prime}$ West 60.82 feet to a found iron pipe with broken cap; and (5) South $89^{\circ} 57^{\prime} 43$ " East 359.26 feet to a found iron pipe with cap on the western boundary of Lot 73 of the previously mentioned Windsor at Abbington subdivision plat recorded in Book of Maps 1998, Page 203, Wake County Registry; thence along the western boundary of said Windsor at Abbington subdivision South $02^{\circ} 25^{\prime} 07{ }^{\prime \prime}$ East 148.61 feet to the point of beginning.

Containing 48.2331 acres, more or less, and being all of Lot " B " as said lot is shown and so designated on that certain plat entitled "Subdivision, Property of Gaither Bryant Garner, Jr. and Gerald L. Hornick" recorded in Book of Maps 1984, Page 1516, Wake County Registry, TOGETHER WITH all of Tract 1 as said tract is shown and so designated on that certain plat entitled "Division for Gerald L. Hornick, et ux and G. Bryant Garner, et ux" recorded in Book of Maps 2003, Page 474, Wake County Registry, LESS AND EXCEPT the area dedicated as public right of way for Chanticlair Drive as recorded in Deed Book 11778, Page 1490, Wake County Registry.

## <REZONING> <br> YELLOWBRIDGE PUD

## 2817 US 64 HWY W

OWNER
YELLOWBRIDGE CAPITOL, LIC
13 MILL POND ROAD
KITT HAWK, NC ROAD 294 -4082
Contact: TOM COHOO
COLHOUNEAL ESTATE

ENGINEER/LAND PLANNER
PEAK ENGINEERING \& DESIGN, PLIC
JEFF ROACH. P.E.
5448 APEX PEAKW


ENVIRONMENTAL CONSULTANT SOIL \& ENVIRONMENTAL CONSUITANTS, PA


P: (1919) $846-5900$


VICINITY MAP ${ }_{\text {NO SCALE }}$


APPLICAN
EnNAR CORPORATION - RALEIGH DIVIIION

MORRIV ILLE. NC 27.
P: $(919) 2249922$
SURVEYOR
JMT (JOHNSON, MIRMIRAN \& THOMPSON, INC.)



TRAFFIC ENGINEER RAMEY KEMP \& ASSOCIATES, INC YNAL ITEPHENSON, P.E.
SBOO FARNGODON PLACE, SUTE 100


APEX, NORTH CAROLINA 27502
PROJECT NUMBER: 210701
DATE March 1, 2022


INDEX OF DRAWINGS
coo2 Exsting conditions
cioo conceptual stie plan/conceptual uturt p pan

REZONING CASE \# 22CZO6 (SUBMITTED ON 3/1/2022)
$\xlongequal{\text { NC License } \# \text { P. } 0673}$



## RAMEY KEMP ASSOCIATES

## TOGETHER WE ARE LIMITLESS



Yellow Bridge Residential<br>Traffic Impact Analysis<br>Apex, North Carolina

# TRAFFIC IMPACT ANALYSIS 

FOR

## YELLOW BRIDGE RESIDENTIAL

## LOCATED

## IN

## APEX, NORTH CAROLINA

Prepared For:<br>Lennar Corporation - Raleigh Division 1100 Perimeter Park Drive, Suite 112 Morrisville, NC 27560<br>Prepared By:<br>Ramey Kemp \& Associates, Inc.<br>5808 Faringdon Place, Suite 100<br>Raleigh, NC 27609<br>License \#C-0910

FEBRUARY 2022


Prepared By: TF

# TRAFFIC IMPACT ANALYSIS <br> YELLOW BRIDGE APEX, NORTH CAROLINA 

## EXECUTIVE SUMMARY

## 1. Development Overview

A Traffic Impact Analysis (TIA) was conducted for the proposed Yellow Bridge Residential development in accordance with the Town of Apex (Town) Unified Development Ordinance (UDO) and North Carolina Department of Transportation (NCDOT) capacity analysis guidelines. The proposed development is to be located south of US 64 and west of the Abbington subdivision in Apex, North Carolina. The proposed development is expected to consist of 59 single-family homes, 83 townhomes, and 25,000 square feet (sq. ft.) of retail space to be built out in 2026. Site access is proposed via one (1) left-over driveway along US 64 at the existing median break, and one (1) internal connection to Chanticlair Drive.

## 2. Existing Traffic Conditions

The study area for the TIA was determined through coordination with the Town and NCDOT and consists of the following existing intersections:

- US 64 and Median Break

Existing peak hour traffic volumes were determined based on a combination of previously collected traffic counts at the intersection of US 64 and Jenks Road / Richardson Road, and new turning movement counts conducted at the existing median break. Previously conducted traffic counts at the intersection of US 64 and Jenks Road / Richardson Road were collected in October 2021 during typical weekday AM (7:00 AM - 9:00 AM) and PM (4:00 PM - 6:00 PM) peak periods, while schools were in session for in person learning. These previously conducted counts were utilized to determine through volume traffic at the median break. Turning movement volumes at the median break were determined based on traffic counts conducted at the existing median break, in January 2022, during a typical weekday AM (7:00 AM - 9:00 AM) and PM (4:00 PM 6:00 PM) peak periods, while schools were in session for in person learning. Weekday AM and PM traffic volumes were balanced between study intersections, where appropriate.

## 3. Site Trip Generation

The proposed development is assumed to consist of a maximum of 59 single-family homes, 83 townhomes, and 25,000 square feet (sq. ft.) of retail space. Average weekday daily, AM peak hour, and PM peak hour trips for the proposed development were estimated using methodology contained within the ITE Trip Generation Manual, $10^{\text {th }}$ Edition. Table E-1 provides a summary of the trip generation potential for the site.

Table E-1: Site Trip Generation

| Land Use (ITE Code) | Intensity | Daily Traffic (vpd) | Weekday AM Peak Hour Trips (vph) |  | Weekday PM Peak Hour Trips (vph) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Enter | Exit | Enter | Exit |
| Single-Family Homes (210) | 59 DU | 640 | 12 | 35 | 38 | 23 |
| Multi-Family Homes (Low-Rise) <br> (220) | 83 DU | 588 | 9 | 31 | 31 | 19 |
| Shopping Center (820) | 25 KSF | 944 | 15 | 9 | 45 | 50 |
| Total Trips |  | 2,172 | 36 | 75 | 114 | 92 |
| $\begin{gathered} \text { Internal Capture } \\ (2 \% \text { AM \& } 1 \% \text { PM })^{*} \\ \hline \end{gathered}$ |  |  | 0 | -2 | -11 | -12 |
| Total External Trips |  |  | 36 | 73 | 103 | 80 |
| Pass-By Trips: Shopping Center (34\% PM) |  |  | - | - | -14 | -14 |
| Total Primary Trips |  |  | 36 | 73 | 89 | 66 |

*Utilizing methodology contained in the NCHRP Report 684.

## 4. Future Traffic Conditions

Through coordination with the Town and NCDOT, it was determined that an annual growth rate of 3\% would be used to generate 2026 projected weekday AM and PM peak hour traffic volumes. The following adjacent developments were identified to be considered under future conditions:

- Westford Residential (currently 75\% built-out)
- Legacy PUD (US 64 Residential)
- Sweetwater Development

The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- 2022 Existing Traffic Conditions
- 2026 No-Build Traffic Conditions
- 2026 Build Traffic Conditions


## 5. Capacity Analysis Summary

The analysis considered weekday AM and PM peak hour traffic for 2018 existing, 2022 no-build, and 2022 build conditions. Refer to Section 7 of the TIA for the capacity analysis summary performed at each study intersection.

## 6. Recommendations

Based on the findings of this study, specific geometric and traffic control improvements have been identified at study intersections. The improvements are summarized below and are illustrated in Figure E-1.

## Recommended Improvements by Developer

## US 64 and Median Break / Site Access

- Construct the northbound approach (Site Access) with one ingress and one egress lane striped as an exclusive right-turn lane.
- Provide stop-control for the northbound approach (Site Access). The proposed intersection will be configured as a left-over.
- Construct an exclusive eastbound (US 64) right-turn lane with a minimum of 100 feet of storage and appropriate decel and taper.
- Restripe the existing westbound (US 64) u-turn lane to provide for a westbound left-turn movement.


## US 64 and Eastern U-Turn Location

- Construct an exclusive eastbound (US 64) u-turn lane with a minimum of 100 feet of storage and appropriate decel and taper to be located east of the existing median break and proposed site driveway location.

| LEGEND |  |
| :---: | :--- |
| $\bigcirc$ | Unsignalized Intersection |
| $\boldsymbol{\sigma}$ | Signalized Intersection |
| $\mathrm{x}^{\prime}$ | Existing Lane |
| $\rightarrow$ | Storage (In Feet) |
| $\rightarrow$ | Improvement by Developer |


*Note: Roadway included for informational purposes only

|  | Yellow Bridge Residential <br> Apex, NC | Recommended Lane <br> Configurations |
| :---: | :---: | :---: |
|  | Scale: Not to Scale Figure E-1 |  |

## TABLE OF CONTENTS

1. INTRODUCTION ..... 1
1.1. Site Location and Study Area ..... 1
1.2. Proposed Land Use and Site Access ..... 2
1.3. Adjacent Land Uses ..... 2
1.4. Existing Roadways ..... 2
2. 2022 EXISTING PEAK HOUR CONDITIONS ..... 6
2.1. 2022 Existing Peak Hour Traffic Volumes ..... 6
2.2. Analysis of 2022 Existing Peak Hour Traffic Conditions ..... 6
3. 2026 NO-BUILD PEAK HOUR CONDITIONS ..... 8
3.1. Ambient Traffic Growth ..... 8
3.2. Adjacent Development Traffic ..... 8
3.3. Future Roadway Improvements ..... 9
3.4. 2026 No-Build Peak Hour Traffic Volumes ..... 10
3.5. Analysis of 2026 No-Build Peak Hour Traffic Conditions ..... 10
4. SITE TRIP GENERATION AND DISTRIBUTION ..... 14
4.1. Trip Generation ..... 14
4.2. Site Trip Distribution and Assignment ..... 15
5. 2026 BUILD TRAFFIC CONDITIONS ..... 24
5.1. 2026 Build Peak Hour Traffic Volumes ..... 24
5.2. Analysis of 2026 Build Peak Hour Traffic Conditions ..... 24
6. TRAFFIC ANALYSIS PROCEDURE ..... 26
6.1. Adjustments to Analysis Guidelines ..... 27
7. CAPACITY ANALYSIS ..... 28
7.1. US 64 and Median Break / Site Access ..... 28
7.2. US 64 and Future Eastern U-Turn Location ..... 30
8. CONCLUSIONS ..... 31
9. RECOMMENDATIONS ..... 33

## LIST OF FIGURES

Figure 1 - Site Location Map ..... 3
Figure 2 - Preliminary Site Plan ..... 4
Figure 3 - Existing Lane Configurations ..... 5
Figure 4 - 2022 Existing Peak Hour Traffic ..... 7
Figure 5 - 2026 Projected Peak Hour Traffic ..... 11
Figure 6 - Adjacent Development Trips ..... 12
Figure 7 - 2026 No-Build Peak Hour Traffic ..... 13
Figure 8A - Residential Site Trip Distribution ..... 17
Figure 8B - Commercial Site Trip Distribution ..... 18
Figure 9A - Residential Site Trip Assignment ..... 19
Figure 9B - Commercial Site Trip Assignment ..... 20
Figure 10 - Pass-By Site Trip Distribution ..... 21
Figure 11 - Pass-by Site Trip Assignment ..... 22
Figure 12 - Total Site Trip Assignment ..... 23
Figure 13-2026 Build Peak Hour Traffic ..... 25
Figure 14 - Recommended Lane Configurations ..... 34
LIST OF TABLES
Table 1: Existing Roadway Inventory ..... 2
Table 2: Adjacent Development Information ..... 9
Table 3: Trip Generation Summary ..... 14
Table 4: Highway Capacity Manual - Levels-of-Service and Delay ..... 26
Table 5: Analysis Summary of US 64 and Median Break / Site Access ..... 28
Table 6: Analysis Summary of US 64 and Future Eastern U-Turn Location 30

## TECHNICAL APPENDIX

## Appendix A: Scoping Documentation

Appendix B: Traffic Counts
Appendix C: Adjacent Development Information
Appendix D: Capacity Calculations - US 64 \& Median Break
Appendix E: Capacity Calculations - US 64 \& Future Eastern U-Turn Location

Appendix F: SimTraffic Queueing \& Performance Results
Appendix G: ITRE 95th Percentile Queue Length Calculations
Appendix H: Turn Lane Warrants
Appendix I: Trip Generation Comparison

# TRAFFIC IMPACT ANALYSIS <br> YELLOW BRIDGE RESIDENTIAL APEX, NORTH CAROLINA 

## 1. INTRODUCTION

The contents of this report present the findings of the Traffic Impact Analysis (TIA) conducted for the proposed Yellow Bridge Residential development located south of US 64 and west of the Abbington subdivision in Apex, North Carolina. The purpose of this study is to determine the potential impacts to the surrounding transportation system created by traffic generated by the proposed development, as well as recommend improvements to mitigate the impacts.

The proposed development, anticipated to be completed in 2026, is assumed to consist of the following uses:

- 59 single-family homes
- 83 townhomes
- 25,000 square feet (sq. ft.) retail space

The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- 2022 Existing Traffic Conditions
- 2026 No-Build Traffic Conditions
- 2026 Build Traffic Conditions


### 1.1. Site Location and Study Area

The proposed development is located south of US 64 and west of the Abbington subdivision in Apex, North Carolina. Refer to Figure 1 for the site location map.

The study area for the TIA was determined through coordination with the North Carolina Department of Transportation (NCDOT) and the Town of Apex (Town) and consists of the following existing intersections:

- US 64 and Median Break

Refer to Appendix A for the approved scoping documentation.

### 1.2. Proposed Land Use and Site Access

The site is located south of US 64 and west of the Abbington subdivision. The proposed development, anticipated to be completed in 2026, is assumed to consist of the following uses:

- 59 single-family homes
- 83 townhomes
- 25,000 square feet (sq. ft.) retail space

Site access is proposed via one (1) left-over driveway along US 64 at the existing median break, and one (1) internal connection to Chanticlair Drive. Refer to Figure 2 for a copy of the preliminary site plan.

### 1.3. Adjacent Land Uses

The proposed development is located in an area consisting primarily of commercial and residential development.

### 1.4. Existing Roadways

Existing lane configurations (number of traffic lanes on each intersection approach), lane widths, storage capacities, and other intersection and roadway information within the study area are shown in Figure 3. Table 1 provides a summary of this information, as well.

Table 1: Existing Roadway Inventory

| Road Name | Route <br> Number | Typical <br> Cross <br> Section | Speed Limit | Maintained <br> By | 2019 AADT <br> (vpd) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| US 64 |  | 4 -lane <br> divided | 55 mph | NCDOT | 27,000 |




|  | LEGEND |
| :---: | :---: |
| $\bigcirc$ | Unsignalized Intersection |
| $\rightarrow$ | Existing Lane |
| X' | Storage (In Feet) |
|  | Posted Speed Limit |



|  | Yellow Bridge Residential <br> Apex, NC | 2022 Existing <br> Lane Configurations |
| :---: | :---: | :---: | :---: |
|  | Leale: Not to Scale | Figure 3 |

## 2. 2022 EXISTING PEAK HOUR CONDITIONS

### 2.1. 2022 Existing Peak Hour Traffic Volumes

Existing peak hour traffic volumes were determined based on a combination of previously collected traffic counts at the intersection of US 64 and Jenks Road / Richardson Road, and new turning movement counts conducted at the existing median break. Previously conducted traffic counts at the intersection of US 64 and Jenks Road / Richardson Road were collected in October 2021 during typical weekday AM (7:00 AM - 9:00 AM) and PM (4:00 PM - 6:00 PM) peak periods, while schools were in session for in person learning. These previously conducted counts were utilized to determine through volume traffic at the median break. Turning movement volumes at the median break were determined based on traffic counts conducted at the existing median break, in January 2022, during a typical weekday AM (7:00 AM - 9:00 AM) and PM (4:00 PM - 6:00 PM) peak periods, while schools were in session for in person learning. Weekday AM and PM traffic volumes were balanced between study intersections, where appropriate. Refer to Figure 4 for 2022 existing weekday AM and PM peak hour traffic volumes. A copy of the count data is located in Appendix B of this report.

### 2.2. Analysis of $\mathbf{2 0 2 2}$ Existing Peak Hour Traffic Conditions

The 2022 existing weekday AM and PM peak hour traffic volumes were analyzed to determine the current levels of service at the study intersections under existing roadway conditions. The results of the analysis are presented in Section 7 of this report.

| $\mathrm{X} / \mathrm{Y} \rightarrow$ | LEGEND |
| :--- | :--- |
| $\quad$Unsignalized Intersection <br> Weekday AM / PM Peak <br> Hour Traffic |  |

$\leftarrow 1277 / 1622$
$\boldsymbol{\leftrightarrows} 2 / 3$

8/16
$1650 / 1596 \rightarrow$

|  | Yellow Bridge Residential <br> Apex, NC | 2022 Existing <br> Pamey Kemp associates Hour Traffic |  |
| :---: | :---: | :---: | :---: |
|  |  | Scale: Not to Scale | Figure 4 |

## 3. 2026 NO-BUILD PEAK HOUR CONDITIONS

In order to account for growth of traffic and subsequent traffic conditions at a future year, no-build traffic projections are needed. No-build traffic is the component of traffic due to the growth of the community and surrounding area that is anticipated to occur regardless of whether or not the proposed development is constructed. No-build traffic is comprised of existing traffic growth within the study area and additional traffic created as a result of adjacent approved developments.

### 3.1. Ambient Traffic Growth

Through coordination with the Town and NCDOT, it was determined that an annual growth rate of $3 \%$ would be used to generate 2026 projected weekday AM and PM peak hour traffic volumes. Refer to Figure 5 for 2026 projected peak hour traffic.

### 3.2. Adjacent Development Traffic

Through coordination with the Town and NCDOT, the following adjacent developments were identified to be included as an approved adjacent development in this study:

- Westford Residential (currently 75\% built-out)
- Legacy PUD (US 64 Residential)
- Sweetwater Development - Commercial

Table 2, on the following page, provides a summary of the adjacent developments.

Table 2: Adjacent Development Information

| Development Name | Location | Build-Out Year | Land Use / Intensity | TIA Performed |
| :---: | :---: | :---: | :---: | :---: |
| Westford Residential | North of US 64 and east of Jenks Road | 2019* | 90 single-family homes 300 apartments 225 townhomes | December 2016 by Kimley-Horn |
| Legacy PUD <br> (US 64 <br> Residential) | South of US 64, west of the former Tee-to-Green site | 2026 | 75 single-family homes 400 apartments $11,000 \mathrm{sq}$. ft. Day Care 3,500 sq. ft. FF Restaurant | July 2021 by Kimley-Horn (Phase 2 TIA Addendum) |
| Sweetwater Development | South of the US 64 and Jenks Road / Richardson Road intersection | 2019** | 375 single-family homes 60 condominiums $50,000 \mathrm{sq}$. ft. office space 200,000 sq. ft. retail space 7,000 sq. ft. HTSD 1,490 sq. ft. FF w/ DT 4-lane Drive-In Bank | December 2014 by RKA |

*Assumed currently 75\% built-out.
**Residential portion is assumed fully built-out.
Based on coordination with the Town and NCDOT, it was assumed that the Westford Residential development is currently approximately $75 \%$ built-out at the time of scoping and therefore a portion of development site traffic is captured in the existing traffic counts. Similarly, it was assumed that the residential portion of the Sweetwater development was constructed at the time of data collection and therefore the associated trips were not considered in the calculation of adjacent development traffic.

It should be noted that the adjacent developments were approved, during scoping, by the Town and NCDOT. Adjacent development trips are shown in Figure 6. Adjacent development information can be found in Appendix C.

### 3.3. Future Roadway Improvements

Based on coordination with the NCDOT and the Town, it was determined there were no future roadway improvements to consider with this study.

### 3.4. 2026 No-Build Peak Hour Traffic Volumes

The 2026 no-build traffic volumes were determined by projecting the 2022 existing peak hour traffic to the year 2026, and adding the adjacent development trips. Refer to Figure 7 for an illustration of the 2026 no-build peak hour traffic volumes at the study intersections.

### 3.5. Analysis of 2026 No-Build Peak Hour Traffic Conditions

The 2026 no-build AM and PM peak hour traffic volumes at the study intersections were analyzed with future geometric roadway conditions and traffic control. The analysis results are presented in Section 7 of this report.

| $\mathrm{X} / \mathrm{Y} \rightarrow$ | LEGEND |
| :--- | :--- |
| Unsignalized Intersection |  |
| Weekday AM / PM Peak |  |
| Hour Traffic |  |

<1480/1880
$\boldsymbol{\leftrightarrows} 2 / 3$

9/19
1913/1850 $\rightarrow$

| RAMEY KEMP ASSOCIATES | Yellow Bridge Residential Apex, NC | 2026 Projected Peak Hour Traffic |  |
| :---: | :---: | :---: | :---: |
|  |  | Scale: Not to Scale | Figure 5 |


| LEGEND |
| :---: | :---: |
| Unsignalized Intersection |
| U/ Y $\rightarrow$Weekday AM / PM Peak Hour <br> Adjacent Development Trips |



|  | Yellow Bridge Residential <br> Apex, NC | Peak Hour Adjacent <br> Development Trips |  |
| :---: | :---: | :---: | :--- |
|  | Scale: Not to Scale | Figure 6 |  |


| $\mathrm{X} / \mathrm{Y}$ | LEGEND <br> Unsignalized Intersection <br> Weekday AM / PM Peak <br> Hour Traffic |
| :--- | :--- |

$\leftarrow 1807 / 2223$
$\leftrightarrows 2 / 3$

$2231 / 2258 \rightarrow$

|  | Yellow Bridge Residential <br> Apex, NC | 2026 No-Build <br> Peak Hour Traffic  | Scale: Not to Scale |
| :---: | :---: | :---: | :---: |

## 4. SITE TRIP GENERATION AND DISTRIBUTION

### 4.1. Trip Generation

The proposed development is assumed to consist of 59 single-family homes, 86 townhomes, and 25,000 sq. ft. of retail space. Average weekday daily, AM peak hour, and PM peak hour trips for the proposed development were estimated using methodology contained within the ITE Trip Generation Manual, 10th Edition. Table 3 provides a summary of the trip generation potential for the site. It should be noted that several trip generation scenarios were considered and that the most conservative scenario was considered in the analysis. Refer to Appendix I for a summary of the proposed densities considered and a comparison of the expected trip generations.

Table 3: Trip Generation Summary

| Land Use (ITE Code) | Intensity | Daily Traffic (vpd) | Weekday AM Peak Hour Trips (vph) |  | Weekday PM Peak Hour Trips (vph) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Enter | Exit | Enter | Exit |
| Single-Family Homes (210) | 59 DU | 640 | 12 | 35 | 38 | 23 |
| Multi-Family Homes (Low-Rise) (220) | 83 DU | 588 | 9 | 31 | 31 | 19 |
| Shopping Center (820) | 25 KSF | 944 | 15 | 9 | 45 | 50 |
| Total Trips |  | 2,172 | 36 | 75 | 114 | 92 |
| $\begin{gathered} \text { Internal Capture } \\ (2 \% ~ A M \mathcal{E} 1 \% P M)^{*} \\ \hline \end{gathered}$ |  |  | 0 | -2 | -11 | -12 |
| Total External Trips |  |  | 36 | 73 | 103 | 80 |
| Pass-By Trips: Shopping Center (34\% PM) |  |  | - | - | -14 | -14 |
| Total Primary Trips |  |  | 36 | 73 | 89 | 66 |

*Utilizing methodology contained in the NCHRP Report 684.

It is estimated that the proposed development will generate approximately 2,172 total site trips on the roadway network during a typical 24 -hour weekday period. Of the daily traffic volume, it is anticipated that 111 trips ( 36 entering and 75 exiting) will occur during the
weekday AM peak hour and 206 trips (114 entering and 92 exiting) will occur during the weekday PM peak hour.

Internal capture of trips between the residential and retail uses was considered in this study. Internal capture is the consideration for trips that will be made within the site between different land uses, so the vehicle technically never leaves the internal site but can still be considered as a trip to that specific land use. Internal capture typically only considers trips between residential, office, and retail/restaurant land uses. Based on NCHRP Report 684 methodology, a weekday AM peak hour internal capture of $2 \%$ and a weekday PM peak hour internal capture rate of $11 \%$ was applied to the total trips. The internal capture reductions are expected to account for approximately 2 trips ( 0 entering and 2 exiting) during the weekday AM peak hour and 23 trips (11 entering and 12 exiting) during the weekday PM peak hour.

Pass-by trips were also taken into consideration in this study. Pass-by trips are made by the traffic already using the adjacent roadway, entering the site as an intermediate stop on their way to another destination. Pass-by percentages are applied to site trips after adjustments for internal capture. Pass-by trips are expected to account for approximately 28 trips (14 entering and 14 exiting) during the weekday PM peak hour. It should be noted that the pass-by trips were balanced, as it is likely that these trips would enter and exit in the same hour.

The total primary site trips are the calculated site trips after the reduction for internal capture and pass-by trips. Primary site trips are expected to generate approximately 109 trips ( 33 entering and 73 exiting) during the weekday AM peak hour and 155 trips (89 entering and 66 exiting) during the weekday PM peak hour.

### 4.2. Site Trip Distribution and Assignment

Trip distribution percentages used in assigning site traffic for this development were estimated based on a combination of existing traffic patterns, population centers adjacent to the study area, and engineering judgment.

It is estimated that the residential site trips will be regionally distributed as follows:

- $75 \%$ to/ from the east via US 64
- $20 \%$ to/from the west via US 64
- $5 \%$ to/from the east via Chanticlair Drive

It is estimated that the commercial site trips will be regionally distributed as follows:

- $65 \%$ to / from the east via US 64
- $30 \%$ to/from the west via US 64
- $5 \%$ to/from the east via Chanticlair Drive

The residential site trip distribution is shown in Figure 8A, the commercial site trip distribution is shown in Figure 8B. Refer to Figure 9A and Figure 9B for the residential and commercial site trip assignment, respectively.

The pass-by site trips were distributed based on existing traffic patterns with consideration given to the proposed driveway access and site layout. Refer to Figure 10 for the pass-by site trip distribution. Pass-by site trips are shown in Figure 11.

The total site trips were determined by adding the primary site trips and the pass-by site trips. Refer to Figure 12 for the total peak hour site trips at the study intersections.

| LEGEND |  |  |  |
| :---: | :--- | :---: | :---: |
| Unsignalized Intersection |  |  |  |
|  | Left-Over Intersection |  |  |
| $\mathrm{X} \%$ | $\rightarrow$ |  |  |
| Entering Trip Distribution |  |  |  |
| $(\mathrm{Y} \%)$ | $\rightarrow$ |  |  |
| Exiting Trip Distribution |  |  |  |
| $\mathrm{XX} \mathrm{\%}$ | Regional Trip Distribution |  |  |


*Note: Roadway included for informational purposes only

|  | Yellow Bridge Residential <br> Apex, NC | Residential Site Trip <br> Distribution |
| :---: | :---: | :---: | :---: |
|  | Rede: Not to Scale | Figure 8A |


|  | LEGEND |
| :---: | :---: |
| $\bigcirc$ | Unsignalized Intersection |
|  | Left-Over Intersection |
| $\mathrm{X} \% \rightarrow$ | Entering Trip Distribution |
| $(\mathrm{Y} \%) \rightarrow$ | Exiting Trip Distribution |
| XX\% | Regional Trip Distribution |


*Note: Roadway included for informational purposes only

|  | Yellow Bridge Residential <br> Apex, NC | Commercial Site Trip <br> DAStribution |
| :---: | :---: | :---: | :---: |
|  | Scale: Not to Scale Figure 8B |  |



*Note: Roadway included for informational purposes only

|  | Yellow Bridge Residential <br> Apex, NC | Residential Site Trip <br> Assignment |
| :---: | :---: | :---: | :---: |
|  | Ramey |  |


| LEGEND <br> Unsignalized Intersection <br> Left-Over Intersection <br> $\mathrm{X} / \mathrm{Y} \rightarrow$ <br> Weekday AM / PM Peak <br> Hour Site Trips |
| :---: | :--- |


*Note: Roadway included for informational purposes only

|  | Yellow Bridge Residential <br> Apex, NC | Commercial Site Trip <br> Assignment |
| :---: | :---: | :---: | :---: |
|  | Scale: Not to Scale Figure 9B |  |


| LEGEND <br> Unsignalized Intersection <br>  <br> Left-Over Intersection <br> $x \%$$\rightarrow$Weekday PM Pass-By <br> Trip Distribution |
| :---: | :--- |


*Note: Roadway included for informational purposes only

|  | Yellow Bridge Residential <br> Apex, NC | Pass-By Site <br> Trip Distribution  <br>   | Scale: Not to Scale |
| :---: | :---: | :---: | :---: |


| LEGEND |  |
| :--- | :--- |
| Unsignalized Intersection |  |
| Left-Over Intersection |  |
| $x \rightarrow$ | Weekday PM Peak |
| Hour Pass-By Trips |  |


*Note: Roadway included for informational purposes only

|  | Yellow Bridge Residential <br> Apamey kemp associates NC | Pass-By Site <br> Trip Assignment |  |
| :---: | :---: | :---: | :---: |
|  |  | Scale: Not to Scale | Figure 11 |


| LEGEND <br> Unsignalized Intersection |
| :---: | :--- |
| Left-Over Intersection |
| $\mathrm{X} / \mathrm{Y} \rightarrow$Weekday AM / PM Peak <br> Hour Site Trips |


*Note: Roadway included for informational purposes only

|  | Yellow Bridge Residential <br> Apex, NC | Total Site Trip <br> Assignment |  |
| :---: | :---: | :---: | :---: |
|  | Scale: Not to Scale | Figure 12 |  |

## 5. 2026 BUILD TRAFFIC CONDITIONS

### 5.1. 2026 Build Peak Hour Traffic Volumes

To estimate traffic conditions with the site fully built-out, the total site trips were added to the 2026 no-build traffic volumes to determine the 2026 build traffic volumes. Refer to Figure 13 for an illustration of the 2026 build peak hour traffic volumes with the proposed site fully developed.

### 5.2. Analysis of 2026 Build Peak Hour Traffic Conditions

Study intersections were analyzed with the 2026 build traffic volumes using the same methodology previously discussed for existing and no-build traffic conditions. Intersections were analyzed with improvements necessary to accommodate future traffic volumes. The results of the capacity analysis for each intersection are presented in Section 7 of this report.


*Note: Roadway included for informational purposes only

| RAMEY KEMP ASSOCIATES | Yellow Bridge Residential Apex, NC | $2026 \text { Build }$ <br> Peak Hour Traffic |  |
| :---: | :---: | :---: | :---: |
|  |  | Scale: Not to Scale | Figure 13 |

## 6. TRAFFIC ANALYSIS PROCEDURE

Study intersections were analyzed using the methodology outlined in the Highway Capacity Manual (HCM), $6^{\text {th }}$ Edition published by the Transportation Research Board. Capacity and level of service are the design criteria for this traffic study. A computer software package, Synchro (Version 10.3), was used to complete the analyses for most of the study area intersections. Please note that the unsignalized capacity analysis does not provide an overall level of service for an intersection; only delay for an approach with a conflicting movement.

The HCM defines capacity as "the maximum hourly rate at which persons or vehicles can reasonably be expected to traverse a point or uniform section of a lane or roadway during a given time period under prevailing roadway, traffic, and control conditions." Level of service (LOS) is a term used to represent different driving conditions, and is defined as a "qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers." Level of service varies from Level "A" representing free flow, to Level " F " where breakdown conditions are evident. Refer to Table 4 for HCM levels of service and related average control delay per vehicle for both signalized and unsignalized intersections. Control delay as defined by the HCM includes "initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay". An average control delay of 50 seconds at a signalized intersection results in LOS "D" operation at the intersection.

Table 4: Highway Capacity Manual - Levels-of-Service and Delay

| UNSIGNALIZED INTERSECTION |  | SIGNALIZED INTERSECTION |  |
| :---: | :---: | :---: | :---: |
| LEVEL <br> OF <br> SERVICE | AVERAGE CONTROL <br> DELAY PER <br> VEHICLE | LEVEL OF <br> SERVICE | AVERAGE CONTROL <br> DELAY PER <br> VEHICLE <br> (SECONDS) |
| A | $0-10$ | A | $0-10$ |
| B | $10-15$ | B | $10-20$ |
| C | $15-25$ | C | $20-35$ |
| D | $25-35$ | D | $35-55$ |
| E | $35-50$ | E | $55-80$ |
| F | $>50$ | F | $>80$ |

### 6.1. Adjustments to Analysis Guidelines

Capacity analysis at all study intersections was completed according to the NCDOT Congestion Management Guidelines.

## 7. CAPACITY ANALYSIS

### 7.1. US 64 and Median Break / Site Access

The existing unsignalized median break along US 64 was analyzed under 2022 existing, 2026 no-build, and 2026 build traffic conditions with the lane configurations and traffic control shown in Table 5. Refer to Table 5 for a summary of the analysis results. Refer to Appendix D for the Synchro capacity analysis reports. Copies of the SimTraffic Queueing and Performance Reports can be found in Appendix F.

Table 5: Analysis Summary of US 64 and Median Break / Site Access

| ANALYSIS SCENARIO | $\begin{aligned} & \hline \mathbf{A} \\ & \mathbf{P} \\ & \mathbf{P} \\ & \mathbf{R} \\ & \mathbf{O} \\ & \mathbf{A} \\ & \mathbf{C} \\ & \mathbf{H} \\ & \hline \end{aligned}$ | LANE CONFIGURATIONS | WEEKDAY AM PEAK HOUR LEVEL OF SERVICE |  | WEEKDAY PM PEAK HOUR LEVEL OF SERVICE |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Approach | Overall (seconds) | Approach | $\begin{aligned} & \text { Overall } \\ & \text { (seconds) } \end{aligned}$ |
| 2022 Existing | $\begin{gathered} \hline \mathrm{EB}^{*} \\ \mathrm{WB}^{* *} \end{gathered}$ | $\begin{aligned} & \hline 1 \mathrm{UT}, 2 \mathrm{TH} \\ & 1 \mathrm{UT}, 2 \mathrm{TH} \end{aligned}$ | $\begin{aligned} & \mathrm{C}^{1} \\ & \mathrm{C}^{1} \end{aligned}$ | N/A | $\begin{aligned} & \hline \mathrm{C}^{1} \\ & \mathrm{C}^{1} \end{aligned}$ | N/A |
| 2026 No-Build | $\begin{array}{\|c} \hline \mathrm{EB}^{*} \\ \mathrm{WB}^{* *} \\ \hline \end{array}$ | 1 UT, 2 TH <br> 1 UT, 2 TH | $\begin{aligned} & \mathrm{C}^{1} \\ & \mathrm{D}^{1} \\ & \hline \end{aligned}$ | N/A | $\begin{aligned} & \mathrm{D}^{1} \\ & \mathrm{D}^{1} \\ & \hline \end{aligned}$ | N/A |
| 2026 Build | $\begin{gathered} \mathrm{EB}^{*} \\ \mathrm{WB}^{* *} \\ \text { NB } \\ \hline \end{gathered}$ | $\begin{gathered} 1 \text { UT, } 2 \text { TH, } 1 \text { RT } \\ 1 \text { UT-LT, } 2 \text { TH } \\ \text { 1 RT } \end{gathered}$ | $\begin{aligned} & \mathrm{C}^{1} \\ & \mathrm{~F}^{1} \\ & \mathrm{E}^{2} \end{aligned}$ | N/A | $\begin{aligned} & \mathrm{D}^{1} \\ & \mathrm{~F}^{1} \\ & \mathrm{E}^{2} \end{aligned}$ | N/A |

*Synchro analyzed the EBU as NBL movements due to the nature of the median break and synchro limitations. **Synchro analyzed the WBU as SBL movements due to the nature of the median break and synchro limitations. Improvements to lane configurations by the developer shown in bold.

1. Level of service for major-street u-turn/left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis of 2022 existing and 2026 no-build traffic conditions indicates that the major-street u-turn movements are expected to operate at LOS D or better during both the weekday AM and PM peak hours.

Upon buildout of the proposed development, the site driveway is proposed to connect as the $3^{\text {rd }}$ leg at the existing median break. Under 2026 build traffic conditions the westbound major-street left-turn/u-turn movement is expected to operate at LOS F during both the weekday AM and PM peak hours. The eastbound u-turn movement is expected to operate at LOS D or better during the weekday AM and PM peak hours. The minor-street approach is expected to operate at LOS E during both the weekday AM and PM peak hours. These
levels of service are not uncommon for stop-controlled minor-street approaches (and majorstreet left-turn/u-turn movements) with heavy mainline traffic volumes. According to SimTraffic Performance Reports which report delays for each movement based on simulation modeling of the entire study network, the minor-street approach is expected to experience delays of less than 35 seconds during the weekday AM and PM peak hours under 2026 build traffic conditions.

Due to the poor levels-of-service expected at this intersection, a traffic signal was considered under 2026 build traffic conditions to achieve acceptable levels-of-service. Weekday AM and PM peak hour traffic volumes were utilized in evaluating the potential need for signalization based on the guidelines contained within the Guidelines for Signalization of Intersections with Two or Three Approaches Final Report, published by the Institute for Transportation Research and Education (ITRE). Based on a review of the expected queue lengths at this intersection it is reported that the minor-street approach is expected to exceed capacity during both the weekday AM and PM peak hours. However, due to the primarily residential nature of the site and the expected acceptable operation of the westbound leftturn movement into the site, a traffic signal is not recommended due to the additional delay that installation of a signal would add on the mainline corridor (US 64). Refer to Appendix G for the ITRE $95^{\text {th }}$ percentile queue length calculations.

A right-turn lane was considered based on the NCDOT Policy on Street and Driveway Access to North Carolina Highways (Driveway Manual) and an exclusive right-turn lane with 100 feet of storage is recommended on the eastbound approach (US 64). The existing storage for the westbound left-turn lane is expected to provide sufficient storage upon buildout of the development based on the NCDOT Driveway Manual and SimTraffic simulations under 2026 build traffic conditions. Refer to Appendix H for a copy of the turn-lane warrants.

### 7.2. US 64 and Future Eastern U-Turn Location

The proposed eastern u-turn location along US 64 was analyzed under 2026 build traffic conditions with the lane configurations and traffic control shown in Table 6. Refer to Table 6 for a summary of the analysis results. Refer to Appendix E for the Synchro capacity analysis reports. Copies of the SimTraffic Queueing and Performance Reports can be found in Appendix F.

Table 6: Analysis Summary of US 64 and Future Eastern U-Turn Location

| ANALYSIS SCENARIO | $\begin{aligned} & \mathbf{A} \\ & \mathbf{P} \\ & \mathbf{P} \\ & \mathbf{R} \\ & \mathbf{O} \\ & \mathbf{A} \\ & \mathbf{C} \\ & \mathbf{H} \end{aligned}$ | LANE CONFIGURATIONS | WEEKDAY AM PEAK HOUR LEVEL OF SERVICE |  | WEEKDAY PM PEAK HOUR LEVEL OF SERVICE |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Approach | Overall (seconds) | Approach | Overall (seconds) |
| 2026 Build | $\begin{aligned} & \mathrm{EB}^{*} \\ & \mathrm{WB} \end{aligned}$ | $\begin{gathered} \hline 1 \mathrm{UT}, 2 \mathrm{TH} \\ 2 \mathrm{TH} \\ \hline \end{gathered}$ | $\overline{\mathrm{C}^{1}}$ | N/A | D1 | N/A |

*Synchro analyzed the EBU as NBL movements due to the nature of the median break and synchro limitations. Improvements to lane configurations by the developer shown in bold.

1. Level of service for major-street u-turn movement.

Upon buildout of the proposed development, a new u-turn location is expected to be constructed to facilitate site traffic exiting the development heading westbound on US 64. Capacity analysis of 2026 build traffic conditions indicates that the major-street u-turn movement is expected to operate at LOS D or better during the weekday AM and PM peak hours.

The eastbound u-turn movement was modeled with a combined storage of 200 feet in synchro due to limitations with superstreet modeling. Based on a review of SimTraffic simulations under 2026 build traffic conditions, queues for this movement are not expected to exceed 76 feet (approximately 3 vehicles) during the weekday AM and PM peak hours. Therefore, an eastbound (US 64) u-turn lane with 100 feet of storage is recommended at this location.

## 8. CONCLUSIONS

This Traffic Impact Analysis was conducted to determine the potential traffic impacts of the proposed Yellow Bridge Residential development, located south of US 64 and west of the Abbington subdivision in Apex, North Carolina. The proposed development, anticipated to be completed in 2026, is expected to consist of 59 single-family homes, 83 townhomes, and $25,000 \mathrm{sq} . \mathrm{ft}$. of retail space. Site access to the proposed development is expected to be provided via one (1) left-over driveway along US 64 at the existing median break, and one (1) internal connection to Chanticlair Drive.

The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- 2022 Existing Traffic Conditions
- 2026 No-Build Traffic Conditions
- 2026 Build Traffic Conditions


## Trip Generation

It is estimated that the proposed development will generate approximately 109 primary trips ( 33 entering and 73 exiting) during the weekday AM peak hour and 155 primary trips (89 entering and 66 exiting) during the weekday PM peak hour.

## Adjustments to Analysis Guidelines

Capacity analysis at all study intersections was completed according to NCDOT Congestion Management Guidelines. Refer to section 6.1 of this report for a detailed description of any adjustments to these guidelines made throughout the analysis.

## Intersection Capacity Analysis Summary

All the study area intersections (including the proposed site driveways) are expected to operate at acceptable levels-of-service under existing and future year conditions with the exception of the intersections listed below. A summary of the study area intersections that are expected to need improvements are as follows:

## US 64 and Median Break / Site Access 1

Under 2026 build traffic conditions the westbound major-street left-turn/u-turn movement is expected to operate at LOS F during both the weekday AM and PM peak hours. The minor-street approach is expected to operate at LOS E during both the weekday AM and PM peak hours. These levels of service are not uncommon for stop-controlled minor-street approaches (and major-street left-turn/u-turn movements) with heavy mainline traffic volumes. According to SimTraffic Performance Reports which report delays for each movement based on simulation modeling of the entire study network, the minor-street approach is expected to experience delays of less than 35 seconds during the weekday AM and PM peak hours under 2026 build traffic conditions.

Due to the poor levels-of-service expected at this intersection, a traffic signal was considered under 2026 build traffic conditions to achieve acceptable levels-of-service. Weekday AM and PM peak hour traffic volumes were utilized in evaluating the potential need for signalization based on the guidelines contained within the Guidelines for Signalization of Intersections with Two or Three Approaches Final Report, published by ITRE. Based on a review of the expected queue lengths at this intersection it is reported that the minor-street approach is expected to exceed capacity during both the weekday AM and PM peak hours. However, due to the primarily residential nature of the site and the expected acceptable operation of the westbound left-turn movement, a traffic signal is not recommended due to the additional delay that installation of a signal would add on the mainline corridor (US 64).

A right-turn lane was considered based on the NCDOT Policy on Street and Driveway Access to North Carolina Highways (Driveway Manual) and an exclusive right-turn lane with 100 feet of storage is recommended on the eastbound approach (US 64). The existing storage for the westbound left-turn lane is expected to provide sufficient storage upon buildout of the development based on the NCDOT Driveway Manual and SimTraffic simulations under 2026 build traffic conditions.

## 9. RECOMMENDATIONS

Based on the findings of this study, specific geometric improvements have been identified and are recommended to accommodate future traffic conditions. See a more detailed description of the recommended improvements below. Refer to Figure 14 for an illustration of the recommended lane configuration for the proposed development.

## Recommended Improvements by Developer

## US 64 and Median Break / Site Access

- Construct the northbound approach (Site Access) with one ingress and one egress lane striped as an exclusive right-turn lane.
- Provide stop-control for the northbound approach (Site Access). The proposed intersection will be configured as a left-over.
- Construct an exclusive eastbound (US 64) right-turn lane with a minimum of 100 feet of storage and appropriate decel and taper.
- Restripe the existing westbound (US 64) u-turn lane to provide for a westbound left-turn movement.


## US 64 and Eastern U-Turn Location

- Construct an exclusive eastbound (US 64) u-turn lane with a minimum of 100 feet of storage and appropriate decel and taper to be located east of the existing median break and proposed site driveway location.

|  | LEGEND |
| :--- | :--- |
|  | Unsignalized Intersection |
| $\rightarrow$ | Signalized Intersection |
| $\rightarrow$ | Existing Lane |
| $\mathrm{X}^{\prime}$ | Storage (In Feet) |
| $\rightarrow$ | Improvement by Developer |


*Note: Roadway included for informational purposes only

|  | Yellow Bridge Residential <br> Apex, NC | Recommended Lane <br> Configurations |  |
| :---: | :---: | :---: | :--- |
|  | Scale: Not to Scale | Figure 14 |  |

## TECHNICAL APPENDIX

## APPENDIX A

## SCOPING DOCUMENTATION

Russell Dalton, PE

Town of Apex
73 Hunter Street
Apex, NC 27502
P: 919-249-3358
E: russell.dalton@apexnc.org
[Sent via Email]

Reference: Yellow Bridge Residential Apex, North Carolina

Subject: Memorandum of Understanding for TIA Report

Dear Mr. Dalton:

The following is a Memorandum of Understanding (MOU) outlining the proposed scope of work and assumptions related to the Traffic Impact Analysis (TIA) for the proposed Yellow Bridge Residential development in Apex, North Carolina. The proposed development is located south of US 64 and west of the Abbington subdivision. The development is expected to consist of 59 single-family homes, 83 townhomes, and 25,000 square feet (sq. ft.) of retail space. This MOU reflects the assumptions outlined during initial coordination between Ramey Kemp Associates (RKA), the Town of Apex (Town), and the North Carolina Department of Transportation (NCDOT). Refer to the attached site location map. Site access to the proposed development is expected to be provided via one (1) left-over driveway along US 64 at the existing median break, and one (1) internal connection to Chanticlair Drive.

The proposed development, anticipated to be completed in 2026, is expected to consist of the following land uses:

- 59 single-family homes
- 83 townhomes
- 25,000 sq. ft. retail space


## Study Area

Based on a coordination with NCDOT and Town staff, the study area is proposed to consist of the following intersections:

- US 64 and Median Break (unsignalized)
- US 64 and Future Eastern U-Turn Location


## Existing Traffic Volumes

Existing peak hour traffic volumes will be determined based on a combination of previously conducted traffic counts at the intersection US 64 and Jenks Road / Richardson Road, and new turning movement counts conducted at the existing median break. Previously conducted traffic counts at the intersection of US 64 and Jenks Road / Richardson Road were collected in October 2022 during typical weekday AM (7:00 AM - 9:00 AM) and PM (4:00-6:00 PM) peak periods, while schools were in session for in person learning. These previously conducted counts will be utilized to determine through volume traffic at the existing median break. Turning movement volumes will be determined based on traffic counts conducted at the existing median break, in January 2022 during a typical weekday AM (7:00 AM - 9:00 AM) and PM (4:00-6:00 PM) peak periods, while schools are in session for in person learning.

## Background Traffic Volumes

Based on coordination with NCDOT and the Town, background traffic volumes will be determined by projecting 2022 existing traffic volumes to the year 2026 using a $3 \%$ annual growth rate. Additionally, it was determined that the following adjacent developments are to be included in this study:

- Westford (currently 75\% build-out)
- Legacy PUD (US 64 Residential)


## Future Roadway Improvements

Based on coordination with the Town and NCDOT, it was determined that there were no future roadway improvements to consider with this study.

## Trip Generation

Average weekday daily, AM peak hour, and PM peak hour trips for the proposed development were estimated using methodology contained within the ITE Trip Generation Manual, $10^{\text {th }}$ Edition. Refer to Table 1, on the following page, for a summary of the proposed site trip generation for full buildout of the proposed development.

Table 1: Trip Generation Summary

| Land Use (ITE Code) | Intensity | Daily <br> Traffic (vpd) | Weekday AM Peak Hour Trips (vph) |  |  | Weekday PM Peak Hour Trips (vph) |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Enter | Exit | Total | Enter | Exit | Total |
| Single-Family Home (210) | 59 DU | 640 | 12 | 35 | 47 | 38 | 23 | 61 |
| Multi-Family Home (Low-Rise) (220) | 95 DU | 588 | 9 | 31 | 40 | 31 | 19 | 50 |
| Shopping Center (820) | 25 KSF | 944 | 15 | 9 | 24 | 45 | 50 | 95 |
| Total Trips |  | 2,172 | 36 | 75 | 111 | 114 | 92 | 206 |
| Internal Capture ( $2 \%$ AM, $11 \%$ PM) |  |  | 0 | -2 | -2 | -11 | -12 | -23 |
| Total External Trips |  |  | 36 | 73 | 109 | 103 | 80 | 183 |
| Pass-By Trips (Shopping Center: 34\% PM): |  |  | - | - | - | -14 | -14 | -28 |
| Total Primary Trips |  |  | 33 | 73 | 109 | 89 | 66 | 155 |

It is estimated that the proposed development will generate approximately 2,172 site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 109 primary trips ( 33 entering and 73 exiting) will occur during the weekday AM peak hour and 155 primary trips ( 89 entering and 66 exiting) will occur during the weekday PM peak hour.

## Trip Distribution and Assignment

Site trips are distributed based on the locations of existing traffic patterns, population centers adjacent to the study area, and engineering judgment. A summary of the overall distributions is below.

Residential:

- $75 \%$ to/from the east via US 64
- $20 \%$ to/from the west via US 64
- $5 \%$ to/from the east via Chanticlair Drive


## Commercial:

- $65 \%$ to/from the east via US 64
- $30 \%$ to/from the west via US 64
- $5 \%$ to/from the east via Chanticlair Drive

Refer to the attached site trip distribution figures.

## Analysis Scenarios

All capacity analyses will be performed utilizing Synchro (Version 10.3). All study intersections will be analyzed during the weekday AM and PM peak hours under the following proposed traffic scenarios:

- 2022 Existing Traffic Conditions
- 2026 No-Build Traffic Conditions
- 2026 Build Traffic Conditions


## Report

The TIA report will be prepared based on the Town and NCDOT requirements.
If you find this memorandum of understanding acceptable, please let me know so that we may include it in the TIA report. If you have any questions or concerns, please do not hesitate to contact me.

Sincerely,
Ramey Kemp Associates,


Nate Bouquin P.E., PTOE
Traffic Engineering Project Manager
Attachments: Site Location Map
Site Plan
Proposed Site Trip Distribution Figures
NCHRP Internal Capture Reports



|  | LEGEND |
| :---: | :---: |
| $\bigcirc$ | Unsignalized Intersection |
| $\nabla$ | Left-Over Intersection |
| $\mathrm{X} \% \rightarrow$ | Entering Trip Distribution |
| $(\mathrm{Y} \%) \rightarrow$ | Exiting Trip Distribution |
| XX\% | Regional Trip Distribution |



|  | Yellow Bridge Residential <br> Apex, NC | Proposed Residential <br> Site Trip Distribution |
| :---: | :---: | :---: | :---: |
|  | Scale: Not to Scale |  |


|  | LEGEND |
| :---: | :---: |
| $\bigcirc$ | Unsignalized Intersection |
| $\nabla$ | Left-Over Intersection |
| $\mathrm{X} \% \rightarrow$ | Entering Trip Distribution |
| $(\mathrm{Y} \%) \rightarrow$ | Exiting Trip Distribution |
| XX\% | Regional Trip Distribution |



|  | Yellow Bridge Residential <br> Apex, NC | Proposed Commercial <br> Samey Kemp associates Trip Distribution |
| :---: | :---: | :--- | :--- |
|  |  | Scale: Not to Scale |


| NCHRP 684 Internal Trip Capture Estimation Tool |  |  |  |
| ---: | :---: | ---: | ---: |
| Project Name: | Yellow Bridge Residential |  | Organization: |
| Project Location: | Apex, NC | RKA |  |
| Scenario Description: | Full-Build | Performed By: | TF |
| Analysis Year: | 2026 | Date: | $1 / 12 / 2022$ |
| Analysis Period: | AM Street Peak Hour | Checked By: |  |
|  |  | Date: |  |


| Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Land Use | Development Data (For Information Only) |  |  | Estimated Vehicle-Trips ${ }^{3}$ |  |  |
|  | ITE LUCs ${ }^{1}$ | Quantity | Units | Total | Entering | Exiting |
| Office |  |  |  |  |  |  |
| Retail | 820 | 25 | KSF |  | 15 | 9 |
| Restaurant |  |  |  |  |  |  |
| Cinema/Entertainment |  |  |  |  |  |  |
| Residential | 210, 220 | 59, 83 | DU |  | 21 | 66 |
| Hotel |  |  |  |  |  |  |
| All Other Land Uses ${ }^{2}$ |  |  |  |  |  |  |
|  |  |  |  | 0 | 36 | 75 |


| Table 2-A: Mode Split and Vehicle Occupancy Estimates |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Land Use | Entering Trips |  |  | Exiting Trips |  |  |
|  | Veh. Occ. ${ }^{4}$ | \% Transit | \% Non-Motorized | Veh. Occ. ${ }^{4}$ | \% Transit | \% Non-Motorized |
| Office | 1.10 | 0\% | 0\% | 1.10 | 0\% | 0\% |
| Retail | 1.10 | 0\% | 0\% | 1.10 | 0\% | 0\% |
| Restaurant | 1.10 | 0\% | 0\% | 1.10 | 0\% | 0\% |
| Cinema/Entertainment | 1.10 | 0\% | 0\% | 1.10 | 0\% | 0\% |
| Residential | 1.10 | 0\% | 0\% | 1.10 | 0\% | 0\% |
| Hotel | 1.10 | 0\% | 0\% | 1.10 | 0\% | 0\% |
| All Other Land Uses ${ }^{2}$ | 1.10 | 0\% | 0\% | 1.10 | 0\% | 0\% |


| Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Destination (To) |  |  |  |  |  |
|  | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office |  |  |  |  |  |  |
| Retail |  |  |  |  |  |  |
| Restaurant |  |  |  |  |  |  |
| Cinema/Entertainment |  |  |  |  |  |  |
| Residential |  |  |  |  |  |  |
| Hotel |  |  |  |  |  |  |


| Table 4-A: Internal Person-Trip Origin-Destination Matrix* |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin (From) |  | Destination (To) |  |  |  |  |  |  |
|  | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |  |  |
| Office |  | 0 | 0 | 0 | 0 | 0 |  |  |
| Retail | 0 |  | 0 | 0 | 0 | 0 |  |  |
| Restaurant | 0 | 0 |  | 0 | 0 | 0 |  |  |
| Cinema/Entertainment | 0 | 0 | 0 |  | 0 | 0 |  |  |
| Residential | 0 | 1 | 0 | 0 | 0 | 0 |  |  |
| Hotel | 0 | 0 | 0 | 0 | 0 | 0 |  |  |


| Table 5-A: Computations Summary |  |  |  |
| :--- | :---: | :---: | :---: |
|  | Total | Entering | Exiting |
| All Person-Trips | 123 | 40 | 83 |
| Internal Capture Percentage | $2 \%$ | $3 \%$ | $1 \%$ |
|  |  |  |  |
| External Vehicle-Trips ${ }^{5}$ | 110 | 36 | 74 |
| External Transit-Trips $^{6}$ | 0 | 0 | 0 |
| External Non-Motorized Trips $^{6}$ | 0 | 0 | 0 |


| Table 6-A: Internal Trip Capture Percentages by Land Use |  |  |
| :--- | :---: | :---: |
| Land Use | Entering Trips | Exiting Trips |
| Office | N/A | N/A |
| Retail | $6 \%$ | $0 \%$ |
| Restaurant | N/A | N/A |
| Cinema/Entertainment | N/A | N/A |
| Residential | $0 \%$ | $1 \%$ |
| Hotel | N/A | N/A |

[^3]| Project Name: | Yellow Bridge Residential |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Analysis Period: | AM Street Peak Hour |  |  |  |  |  |
| Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends |  |  |  |  |  |  |
| Land Use | Table 7-A (D): Entering Trips |  |  | Table 7-A (0): Exiting Trips |  |  |
|  | Veh. Occ. | Vehicle-Trips | Person-Trips* | Veh. Occ. | Vehicle-Trips | Person-Trips* |
| Office | 1.10 | 0 | 0 | 1.10 | 0 | 0 |
| Retail | 1.10 | 15 | 17 | 1.10 | 9 | 10 |
| Restaurant | 1.10 | 0 | 0 | 1.10 | 0 | 0 |
| Cinema/Entertainment | 1.10 | 0 | 0 | 1.10 | 0 | 0 |
| Residential | 1.10 | 21 | 23 | 1.10 | 66 | 73 |
| Hotel | 1.10 | 0 | 0 | 1.10 | 0 | 0 |


| Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin) |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin (From) |  | Destination (To) |  |  |  |  |
|  | Office | Retail | Restaurant | Cinema/Entertainment | Residential |  |
| Office |  | 0 | 0 | 0 | 0 | Hotel |
| Retail | 3 |  | 1 | 0 | 1 |  |
| Restaurant | 0 | 0 |  | 0 | 0 |  |
| Cinema/Entertainment | 0 | 0 | 0 |  | 0 |  |
| Residential | 1 | 1 | 15 | 0 | 0 |  |
| Hotel | 0 | 0 | 0 | 0 | 0 |  |


| Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination) |  |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin (From) |  | Destination (To) |  |  |  |  |  |  |
|  | Office | Retail | Restaurant | Cinema/Entertainment | Residential |  |  |  |
| Office |  | 5 | 0 | 0 | 0 | 0 |  |  |
| Retail | 0 |  | 0 | 0 | 0 |  |  |  |
| Restaurant | 0 | 1 |  | 0 | 0 |  |  |  |
| Cinema/Entertainment | 0 | 0 | 0 |  | 0 |  |  |  |
| Residential | 0 | 3 | 0 | 0 | 0 | 0 |  |  |
| Hotel | 0 | 1 | 0 | 0 | 0 |  |  |  |


| Table 9-A (D): Internal and External Trips Summary (Entering Trips) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Destination Land Use | Person-Trip Estimates |  |  | External Trips by Mode* |  |  |
|  | Internal | External | Total | Vehicles ${ }^{1}$ | Transit ${ }^{2}$ | Non-Motorized ${ }^{2}$ |
| Office | 0 | 0 | 0 | 0 | 0 | 0 |
| Retail | 1 | 16 | 17 | 15 | 0 | 0 |
| Restaurant | 0 | 0 | 0 | 0 | 0 | 0 |
| Cinema/Entertainment | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential | 0 | 23 | 23 | 21 | 0 | 0 |
| Hotel | 0 | 0 | 0 | 0 | 0 | 0 |
| All Other Land Uses ${ }^{3}$ | 0 | 0 | 0 | 0 | 0 | 0 |


| Table 9-A (0): Internal and External Trips Summary (Exiting Trips) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin Land Use | Person-Trip Estimates |  |  | External Trips by Mode* |  |  |
|  | Internal | External | Total | Vehicles ${ }^{1}$ | Transit ${ }^{2}$ | Non-Motorized ${ }^{2}$ |
| Office | 0 | 0 | 0 | 0 | 0 | 0 |
| Retail | 0 | 10 | 10 | 9 | 0 | 0 |
| Restaurant | 0 | 0 | 0 | 0 | 0 | 0 |
| Cinema/Entertainment | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential | 1 | 72 | 73 | 65 | 0 | 0 |
| Hotel | 0 | 0 | 0 | 0 | 0 | 0 |
| All Other Land Uses ${ }^{3}$ | 0 | 0 | 0 | 0 | 0 | 0 |

[^4]| NCHRP 684 Internal Trip Capture Estimation Tool |  |  |  |  |
| ---: | :---: | ---: | ---: | ---: |
| Project Name: | Yellow Bridge Residential |  | Organization: | RKA |
| Project Location: | Apex, NC | Performed By: | TF |  |
| Scenario Description: | Full-Build | Date: | $1 / 12 / 2022$ |  |
| Analysis Year: | 2026 | Checked By: |  |  |
| Analysis Period: | PM Street Peak Hour | Date: |  |  |
|  |  |  |  |  |


| Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Land Use | Development Data (For Information Only) |  |  | Estimated Vehicle-Trips ${ }^{3}$ |  |  |
|  | ITE LUCs ${ }^{1}$ | Quantity | Units | Total | Entering | Exiting |
| Office |  |  |  |  |  |  |
| Retail | 820 | 25 | KSF |  | 45 | 50 |
| Restaurant |  |  |  |  |  |  |
| Cinema/Entertainment |  |  |  |  |  |  |
| Residential | 210, 220 | 59, 83 | DU |  | 69 | 42 |
| Hotel |  |  |  |  |  |  |
| All Other Land Uses ${ }^{2}$ |  |  |  |  |  |  |
|  |  |  |  | 0 | 114 | 92 |


| Table 2-P: Mode Split and Vehicle Occupancy Estimates |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Land Use | Entering Trips |  |  | Exiting Trips |  |  |
|  | Veh. Occ. ${ }^{4}$ | \% Transit | \% Non-Motorized | Veh. Occ. ${ }^{4}$ | \% Transit | \% Non-Motorized |
| Office | 1.10 | 0\% | 0\% | 1.10 | 0\% | 0\% |
| Retail | 1.10 | 0\% | 0\% | 1.10 | 0\% | 0\% |
| Restaurant | 1.10 | 0\% | 0\% | 1.10 | 0\% | 0\% |
| Cinema/Entertainment | 1.10 | 0\% | 0\% | 1.10 | 0\% | 0\% |
| Residential | 1.10 | 0\% | 0\% | 1.10 | 0\% | 0\% |
| Hotel | 1.10 | 0\% | 0\% | 1.10 | 0\% | 0\% |
| All Other Land Uses ${ }^{2}$ | 1.10 | 0\% | 0\% | 1.10 | 0\% | 0\% |


| Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin (From) | Destination (To) |  |  |  |  |  |
|  | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office |  |  |  |  |  |  |
| Retail |  |  |  |  | 2500 |  |
| Restaurant |  |  |  |  |  |  |
| Cinema/Entertainment |  |  |  |  |  |  |
| Residential |  |  |  |  |  |  |
| Hotel |  |  |  |  |  |  |


| Table 4-P: Internal Person-Trip Origin-Destination Matrix* |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin (From) |  | Destination (To) |  |  |  |  |  |
|  | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |  |
| Office |  | 0 | 0 | 0 | 0 | 0 |  |
| Retail | 0 |  | 0 | 0 | 7 | 0 |  |
| Restaurant | 0 | 0 |  | 0 | 0 | 0 |  |
| Cinema/Entertainment | 0 | 0 | 0 |  | 0 | 0 |  |
| Residential | 0 | 5 | 0 | 0 | 0 | 0 |  |
| Hotel | 0 | 0 | 0 | 0 | 0 | 0 |  |


| Table 5-P: Computations Summary |  |  |  |
| :--- | :---: | :---: | :---: |
|  | Total | Entering | Exiting |
| All Person-Trips | 227 | 126 | 101 |
| Internal Capture Percentage | $11 \%$ | $10 \%$ | $12 \%$ |
|  |  |  |  |
| External Vehicle-Trips ${ }^{5}$ | 185 | 104 | 81 |
| External Transit-Trips $^{6}$ | 0 | 0 | 0 |
| External Non-Motorized Trips ${ }^{6}$ | 0 | 0 | 0 |


| Table 6-P: Internal Trip Capture Percentages by Land Use |  |  |
| :--- | :---: | :---: |
| Land Use | Entering Trips | Exiting Trips |
| Office | N/A | N/A |
| Retail | $10 \%$ | $13 \%$ |
| Restaurant | N/A | N/A |
| Cinema/Entertainment | N/A | N/A |
| Residential | $9 \%$ | $11 \%$ |
| Hotel | N/A | N/A |

${ }^{1}$ Land Use Codes (LUCs) from Trip Generation Manual , published by the Institute of Transportation Engineers.
${ }^{2}$ Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.
${ }^{3}$ Enter trips assuming no transit or non-motorized trips (as assumed in ITE Trip Generation Manual )
${ }^{4}$ Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be
${ }^{5}$ Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.
${ }^{6}$ Person-Trips
${ }^{\star}$ Indicates computation that has been rounded to the nearest whole number.
Estimation Tool Developed by the Texas A\&M Transportation Institute - Version 2013.1

| Project Name: | Yellow Bridge Residential |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Analysis Period: | PM Street Peak Hour |  |  |  |  |  |
| Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends |  |  |  |  |  |  |
| Land Use | Table 7-P (D): Entering Trips |  |  | Table 7-P (0): Exiting Trips |  |  |
|  | Veh. Occ. | Vehicle-Trips | Person-Trips* | Veh. Occ. | Vehicle-Trips | Person-Trips* |
| Office | 1.10 | 0 | 0 | 1.10 | 0 | 0 |
| Retail | 1.10 | 45 | 50 | 1.10 | 50 | 55 |
| Restaurant | 1.10 | 0 | 0 | 1.10 | 0 | 0 |
| Cinema/Entertainment | 1.10 | 0 | 0 | 1.10 | 0 | 0 |
| Residential | 1.10 | 69 | 76 | 1.10 | 42 | 46 |
| Hotel | 1.10 | 0 | 0 | 1.10 | 0 | 0 |


| Table 8-P (0): Internal Person-Trip Origin-Destination Matrix (Computed at Origin) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin (From) | Destination (To) |  |  |  |  |  |
|  | Office | Retail | Restaurant | Cinema/Entertainment | Residential | Hotel |
| Office |  | 0 | 0 | 0 | 0 | 0 |
| Retail | 1 |  | 16 | 2 | 7 | 3 |
| Restaurant | 0 | 0 |  | 0 | 0 | 0 |
| Cinema/Entertainment | 0 | 0 | 0 |  | 0 | 0 |
| Residential | 2 | 19 | 10 | 0 |  | 1 |
| Hotel | 0 | 0 | 0 | 0 | 0 |  |


| Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination) |  |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin (From) |  | Destination (To) |  |  |  |  |  |
|  | Office | Retail | Restaurant | Cinema/Entertainment | Residential |  |  |
| Office |  | 4 | 0 | 0 | 3 |  |  |
| Retail | 0 |  | 0 | 0 | 35 |  |  |
| Restaurant | 0 | 25 |  | 0 | 12 |  |  |
| Cinema/Entertainment | 0 | 2 | 0 |  | 0 |  |  |
| Residential | 0 | 5 | 0 | 0 | 3 |  |  |
| Hotel | 0 | 1 | 0 | 0 | 0 |  |  |


| Table 9-P (D): Internal and External Trips Summary (Entering Trips) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Destination Land Use | Person-Trip Estimates |  |  | External Trips by Mode* |  |  |
|  | Internal | External | Total | Vehicles ${ }^{1}$ | Transit ${ }^{2}$ | Non-Motorized ${ }^{2}$ |
| Office | 0 | 0 | 0 | 0 | 0 | 0 |
| Retail | 5 | 45 | 50 | 41 | 0 | 0 |
| Restaurant | 0 | 0 | 0 | 0 | 0 | 0 |
| Cinema/Entertainment | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential | 7 | 69 | 76 | 63 | 0 | 0 |
| Hotel | 0 | 0 | 0 | 0 | 0 | 0 |
| All Other Land Uses ${ }^{3}$ | 0 | 0 | 0 | 0 | 0 | 0 |


| Table 9-P (0): Internal and External Trips Summary (Exiting Trips) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Origin Land Use | Person-Trip Estimates |  |  | External Trips by Mode* |  |  |
|  | Internal | External | Total | Vehicles ${ }^{1}$ | Transit ${ }^{2}$ | Non-Motorized ${ }^{2}$ |
| Office | 0 | 0 | 0 | 0 | 0 | 0 |
| Retail | 7 | 48 | 55 | 44 | 0 | 0 |
| Restaurant | 0 | 0 | 0 | 0 | 0 | 0 |
| Cinema/Entertainment | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential | 5 | 41 | 46 | 37 | 0 | 0 |
| Hotel | 0 | 0 | 0 | 0 | 0 | 0 |
| All Other Land Uses ${ }^{3}$ | 0 | 0 | 0 | 0 | 0 | 0 |

[^5]
## Tucker Fulle

| From: | Fenner, Edwin F [effenner@ncdot.gov](mailto:effenner@ncdot.gov) |
| :---: | :---: |
| Sent: | Tuesday, January 18, 2022 5:45 PM |
| To: | Nate Bouquin; Serge Grebenschikov; Russell Dalton; Brennan, Sean P |
| Cc: | Tucker Fulle; Bunting, Clarence B; Walker, Braden M; Ishak, Doumit Y |
| Subject: | RE: [External] Yellow Bridge Apex - TIA Scope |
| Attachments: | MOU - Yellow Bridge Residential 01.12.22.pdf |
| Follow Up Flag: | Flag for follow up |
| Flag Status: | Flagged |
| Nate, |  |
| The attached MOU looks good to the District. |  |
| Edwin Fenner, PE |  |
| Assistant District Engineer |  |
| Division 5/District 1 |  |
| Department of Transportation |  |
| 919-733-3213 office |  |
| 919-715-5778 fax |  |
| effenner@ncdot.gov |  |
| 4009 District Drive (Physical Address) |  |
| Raleigh, NC 27607 |  |
| 1575 Mail Service Center (Mailing Address) |  |
| Raleigh, NC 2769 |  |

Nate,
The attached MOU looks good to the District.

## Edwin Fenner, PE

Assistant District Engineer
Division 5/District 1

919-733-3213 office
919-715-5778 fax
effenner@ncdot.gov
4009 District Drive (Physical Address)
Raleigh, NC 27607
1575 Mail Service Center (Mailing Address)
Raleigh, NC 27699-1575

From: Nate Bouquin [nbouquin@rameykemp.com](mailto:nbouquin@rameykemp.com)
Sent: Thursday, January 13, 2022 12:06 AM
To: Serge Grebenschikov [Serge.Grebenschikov@apexnc.org](mailto:Serge.Grebenschikov@apexnc.org); Russell Dalton [Russell.Dalton@apexnc.org](mailto:Russell.Dalton@apexnc.org); Brennan, Sean P [spbrennan@ncdot.gov](mailto:spbrennan@ncdot.gov); Fenner, Edwin F [effenner@ncdot.gov](mailto:effenner@ncdot.gov)
Cc: Tucker Fulle [tfulle@rameykemp.com](mailto:tfulle@rameykemp.com); Bunting, Clarence B [cbunting@ncdot.gov](mailto:cbunting@ncdot.gov); Walker, Braden M [bmwalker1@ncdot.gov](mailto:bmwalker1@ncdot.gov); Ishak, Doumit Y [dishak@ncdot.gov](mailto:dishak@ncdot.gov)
Subject: [External] Yellow Bridge Apex - TIA Scope

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

All -

Attached is the MOU for the Yellow Bridge development in Apex. This MOU is based off of the scoping meetings we had with NCDOT and the Town back in late December.

One small note with this - you will notice the trip generation includes retail. The developer is considering non-residential at the northernmost section of the site, along US 64. This hasn't been solidified yet, but we wanted to go ahead and include it in the TIA as it would be more conservative versus assuming all residential.

Please let us know your thoughts on this MOU.
Thanks!
Nate Bouquin, PE, PTOE
Traffic Engineering Project Manager
D 9199871301 | M 9199614065

- RAMEY KEMP ASSOCIATES
- TOGETHER WE ARE LIMITLESS

Email correspondence to and from this sender is subject to the N.C. Public Records Law and may be disclosed to third parties.

## Tucker Fulle

| From: | Nate Bouquin |
| :--- | :--- |
| Sent: | Thursday, January 13, 2022 10:37 AM |
| To: | Serge Grebenschikov |
| Cc: | Tucker Fulle |
| Subject: | RE: Yellow Bridge Apex - TIA Scope |
| Attachments: | Sweetwater TIA.pdf |
|  |  |
| Follow Up Flag: | Flag for follow up |
| Flag Status: | Flagged |

Thanks serge, we will make sure and include these changes.

## Nate Bouquin, PE, PTOE

Traffic Engineering Project Manager
D 9199871301 | M 9199614065

## rameykemp.com

From: Serge Grebenschikov [Serge.Grebenschikov@apexnc.org](mailto:Serge.Grebenschikov@apexnc.org)
Sent: Thursday, January 13, 2022 10:01 AM
To: Nate Bouquin [nbouquin@rameykemp.com](mailto:nbouquin@rameykemp.com)
Subject: RE: Yellow Bridge Apex - TIA Scope

Hi Nate,
Looking over the MOU I realized that I did not ask you to include Sweetwater Commercial. I think it would be prudent to do so as they are contributing around 200 vph on US 64, and the commercial phases are in construction today. Apologies for that. I have attached the Sweetwater TIA for reference.

Please see my markups in the screenshot below for Background Development Traffic. These are the only comments that I have.

## Background Traffic Volumes

Based on coordination with NCDOT and the Town, background traffic volumes will be determined by projecting 2022 existing traffic volumes to the year 2026 using a $3 \%$ annual growth rate. Additionally, it was determined that the following adjacent developments are to be included in this study: Westford Residential

- Westford (currently $75 \%$ build-eut)
- Legacy PUD (US 64 Residential)

Future Roadway Improvements along US 64

Thanks

Serge Grebenschikov, PE
Traffic Engineer
Public Works \& Transportation - Traffic
73 Hunter Street, $3^{\text {rd }} \mathrm{FI}$
PO Box 250

From: Nate Bouquin [nbouquin@rameykemp.com](mailto:nbouquin@rameykemp.com)
Sent: Thursday, January 13, 2022 12:06 AM
To: Serge Grebenschikov [Serge.Grebenschikov@apexnc.org](mailto:Serge.Grebenschikov@apexnc.org); Russell Dalton [Russell.Dalton@apexnc.org](mailto:Russell.Dalton@apexnc.org); Brennan, Sean P [spbrennan@ncdot.gov](mailto:spbrennan@ncdot.gov); Fenner, Edwin F [effenner@ncdot.gov](mailto:effenner@ncdot.gov)
Cc: Tucker Fulle [tfulle@rameykemp.com](mailto:tfulle@rameykemp.com); Bunting, Clarence B [cbunting@ncdot.gov](mailto:cbunting@ncdot.gov); Walker, Braden M [bmwalker1@ncdot.gov](mailto:bmwalker1@ncdot.gov); Ishak, Doumit Y [dishak@ncdot.gov](mailto:dishak@ncdot.gov)
Subject: Yellow Bridge Apex - TIA Scope

Notice: This message is from an external sender.
Do not click links or open attachments unless you trust the sender, and can verify the content is safe.
All -
Attached is the MOU for the Yellow Bridge development in Apex. This MOU is based off of the scoping meetings we had with NCDOT and the Town back in late December.

One small note with this - you will notice the trip generation includes retail. The developer is considering non-residential at the northernmost section of the site, along US 64. This hasn't been solidified yet, but we wanted to go ahead and include it in the TIA as it would be more conservative versus assuming all residential.

Please let us know your thoughts on this MOU.
Thanks!
Nate Bouquin, PE, PTOE
Traffic Engineering Project Manager
D 9199871301 | M 9199614065

२K^

- TOGETHER WE ARE LIMITLESS


## APPENDIX B

## TRAFFIC COUNTS



## TRAFFIC DATA COLLECTION

File Name : Apex(US 64 and Jenks)AM Peak
Site Code :
Start Date : 10/28/2021
Page No : 1

Groups Printed- Cars + - Trucks

|  | Jenks Road Southbound |  |  |  |  | US 64 <br> Westbound |  |  |  |  | Richardson Road Northbound |  |  |  |  | US 64 Eastbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | UTrn | App. Total | Right | Thru | Left | UTrn | App. Total | Right | Thru | Left | UTrn | App. Total | Right | Thru | Left | UTrn | App. Total | Int. Total |
| 07:00 AM | 19 | 0 | 0 | 0 | 19 | 19 | 225 | 33 | 0 | 277 | 74 | 0 | 0 | 0 | 74 | 4 | 253 | 15 | 0 | 272 | 642 |
| 07:15 AM | 29 | 0 | 0 | 0 | 29 | 21 | 218 | 30 | 0 | 269 | 98 | 0 | 0 | 0 | 98 | 6 | 307 | 26 | 0 | 339 | 735 |
| 07:30 AM | 22 | 0 | 0 | 0 | 22 | 14 | 253 | 36 | 1 | 304 | 106 | 0 | 0 | 0 | 106 | 6 | 341 | 21 | 0 | 368 | 800 |
| 07:45 AM | 24 | 0 | 0 | 0 | 24 | 21 | 239 | 46 | 0 | 306 | 84 | 0 | 0 | 0 | 84 | 8 | 289 | 26 | 0 | 323 | 737 |
| Total | 94 | 0 | 0 | 0 | 94 | 75 | 935 | 145 | 1 | 1156 | 362 | 0 | 0 | 0 | 362 | 24 | 1190 | 88 | 0 | 1302 | 2914 |
| 08:00 AM | 27 | 0 | 0 | 0 | 27 | 26 | 290 | 53 | 0 | 369 | 80 | 0 | 0 | 0 | 80 | 11 | 304 | 18 | 0 | 333 | 809 |
| 08:15 AM | 33 | 0 | 0 | 0 | 33 | 12 | 238 | 47 | 2 | 299 | 71 | 0 | 0 | 0 | 71 | 16 | 276 | 26 | 0 | 318 | 721 |
| 08:30 AM | 30 | 0 | 0 | 0 | 30 | 18 | 246 | 49 | 0 | 313 | 96 | 0 | 0 | 0 | 96 | 8 | 285 | 20 | 0 | 313 | 752 |
| 08:45 AM | 29 | 0 | 0 | 0 | 29 | 18 | 267 | 45 | 0 | 330 | 90 | 0 | 0 | 0 | 90 | 7 | 263 | 16 | 0 | 286 | 735 |
| Total | 119 | 0 | 0 | 0 | 119 | 74 | 1041 | 194 | 2 | 1311 | 337 | 0 | 0 | 0 | 337 | 42 | 1128 | 80 | 0 | 1250 | 3017 |
| Grand Total | 213 | 0 | 0 | 0 | 213 | 149 | 1976 | 339 | 3 | 2467 | 699 | 0 | 0 | 0 | 699 | 66 | 2318 | 168 | 0 | 2552 | 5931 |
| Apprch \% | 100 | 0 | 0 | 0 |  | 6 | 80.1 | 13.7 | 0.1 |  | 100 | 0 | 0 | 0 |  | 2.6 | 90.8 | 6.6 | 0 |  |  |
| Total \% | 3.6 | 0 | 0 | 0 | 3.6 | 2.5 | 33.3 | 5.7 | 0.1 | 41.6 | 11.8 | 0 | 0 | 0 | 11.8 | 1.1 | 39.1 | 2.8 | 0 | 43 |  |
| Cars + | 211 | 0 | 0 | 0 | 211 | 137 | 1890 | 328 | 3 | 2358 | 697 | 0 | 0 | 0 | 697 | 66 | 2225 | 164 | 0 | 2455 | 5721 |
| \% Cars + | 99.1 | 0 | 0 | 0 | 99.1 | 91.9 | 95.6 | 96.8 | 100 | 95.6 | 99.7 | 0 | 0 | 0 | 99.7 | 100 | 96 | 97.6 | 0 | 96.2 | 96.5 |
| Trucks | 2 | 0 | 0 | 0 | 2 | 12 | 86 | 11 | 0 | 109 | 2 | 0 | 0 | 0 | 2 | 0 | 93 | 4 | 0 | 97 | 210 |
| \% Trucks | 0.9 | 0 | 0 | 0 | 0.9 | 8.1 | 4.4 | 3.2 | 0 | 4.4 | 0.3 | 0 | 0 | 0 | 0.3 | 0 | 4 | 2.4 | 0 | 3.8 | 3.5 |



## TRAFFIC DATA COLLECTION

File Name : Apex(US 64 and Jenks)AM Peak
Site Code :
Start Date : 10/28/2021
Page No :2

|  | Jenks Road Southbound |  |  |  |  | US 64 <br> Westbound |  |  |  |  | Richardson Road Northbound |  |  |  |  | US 64 Eastbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | UTrn | App. Total | Right | Thru | Left | UTrn | App. Total | Right | Thru | Left | UTrn | App. Total | Right | Thru | Left | UTrn | App. Total | Int. Total |
| Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Peak Hour for Entire Intersection Begins at 07:15 AM |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 07:15 AM | 29 | 0 | 0 | 0 | 29 | 21 | 218 | 30 | 0 | 269 | 98 | 0 | 0 | 0 | 98 | 6 | 307 | 26 | 0 | 339 | 735 |
| 07:30 AM | 22 | 0 | 0 | 0 | 22 | 14 | 253 | 36 | 1 | 304 | 106 | 0 | 0 | 0 | 106 | 6 | 341 | 21 | 0 | 368 | 800 |
| 07:45 AM | 24 | 0 | 0 | 0 | 24 | 21 | 239 | 46 | 0 | 306 | 84 | 0 | 0 | 0 | 84 | 8 | 289 | 26 | 0 | 323 | 737 |
| 08:00 AM | 27 | 0 | 0 | 0 | 27 | 26 | 290 | 53 | 0 | 369 | 80 | 0 | 0 | 0 | 80 | 11 | 304 | 18 | 0 | 333 | 809 |
| Total Volume | 102 | 0 | 0 | 0 | 102 | 82 | 1000 | 165 | 1 | 1248 | 368 | 0 | 0 | 0 | 368 | 31 | 1241 | 91 | 0 | 1363 | 3081 |
| \% App. Total | 100 | 0 | 0 | 0 |  | 6.6 | 80.1 | 13.2 | 0.1 |  | 100 | 0 | 0 | 0 |  | 2.3 | 91 | 6.7 | 0 |  |  |
| PHF | . 879 | . 000 | . 000 | . 000 | . 879 | . 788 | . 862 | . 778 | . 250 | . 846 | . 868 | . 000 | . 000 | . 000 | . 868 | . 705 | . 910 | . 875 | . 000 | . 926 | . 952 |




## TRAFFIC DATA COLLECTION

File Name : Apex(US 64 and Jenks)PM Peak
Site Code :
Start Date : 10/28/2021
Page No : 1

Groups Printed- Cars + - Trucks

|  | Jenks Road Southbound |  |  |  |  | US 64 <br> Westbound |  |  |  |  | Richardson Road Northbound |  |  |  |  | US 64 Eastbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | UTrn | App. Total | Right | Thru | Left | UTrn | App. Total | Right | Thru | Left | UTrn | App. Total | Right | Thru | Left | UTrn | App. Total | Int. Total |
| 04:00 PM | 35 | 0 | 0 | 0 | 35 | 12 | 302 | 56 | 0 | 370 | 50 | 0 | 0 | 0 | 50 | 6 | 237 | 18 | 0 | 261 | 716 |
| 04:15 PM | 36 | 0 | 0 | 0 | 36 | 18 | 341 | 50 | 0 | 409 | 64 | 0 | 0 | 0 | 64 | 12 | 312 | 17 | 0 | 341 | 850 |
| 04:30 PM | 35 | 0 | 0 | 0 | 35 | 14 | 318 | 62 | 0 | 394 | 75 | 0 | 0 | 0 | 75 | 11 | 292 | 19 | 0 | 322 | 826 |
| 04:45 PM | 41 | 0 | 0 | 0 | 41 | 19 | 295 | 63 | 2 | 379 | 69 | 0 | 0 | 0 | 69 | 17 | 355 | 16 | 0 | 388 | 877 |
| Total | 147 | 0 | 0 | 0 | 147 | 63 | 1256 | 231 | 2 | 1552 | 258 | 0 | 0 | 0 | 258 | 46 | 1196 | 70 | 0 | 1312 | 3269 |
| 05:00 PM | 40 | 0 | 0 | 0 | 40 | 19 | 315 | 58 | 1 | 393 | 90 | 0 | 0 | 0 | 90 | 4 | 316 | 17 | 0 | 337 | 860 |
| 05:15 PM | 36 | 0 | 0 | 0 | 36 | 18 | 346 | 61 | 0 | 425 | 66 | 0 | 0 | 0 | 66 | 11 | 299 | 24 | 0 | 334 | 861 |
| 05:30 PM | 25 | 0 | 0 | 0 | 25 | 20 | 293 | 61 | 2 | 376 | 57 | 0 | 0 | 0 | 57 | 12 | 271 | 15 | 0 | 298 | 756 |
| 05:45 PM | 36 | 0 | 0 | 0 | 36 | 13 | 287 | 55 | 0 | 355 | 61 | 0 | 0 | 0 | 61 | 5 | 281 | 15 | 0 | 301 | 753 |
| Total | 137 | 0 | 0 | 0 | 137 | 70 | 1241 | 235 | 3 | 1549 | 274 | 0 | 0 | 0 | 274 | 32 | 1167 | 71 | 0 | 1270 | 3230 |
| Grand Total | 284 | 0 | 0 | 0 | 284 | 133 | 2497 | 466 | 5 | 3101 | 532 | 0 | 0 | 0 | 532 | 78 | 2363 | 141 | 0 | 2582 | 6499 |
| Apprch \% | 100 | 0 | 0 | 0 |  | 4.3 | 80.5 | 15 | 0.2 |  | 100 | 0 | 0 | 0 |  | 3 | 91.5 | 5.5 | 0 |  |  |
| Total \% | 4.4 | 0 | 0 | 0 | 4.4 | 2 | 38.4 | 7.2 | 0.1 | 47.7 | 8.2 | 0 | 0 | 0 | 8.2 | 1.2 | 36.4 | 2.2 | 0 | 39.7 |  |
| Cars + | 282 | 0 | 0 | 0 | 282 | 132 | 2456 | 465 | 5 | 3058 | 529 | 0 | 0 | 0 | 529 | 78 | 2309 | 141 | 0 | 2528 | 6397 |
| \% Cars + | 99.3 | 0 | 0 | 0 | 99.3 | 99.2 | 98.4 | 99.8 | 100 | 98.6 | 99.4 | 0 | 0 | 0 | 99.4 | 100 | 97.7 | 100 | 0 | 97.9 | 98.4 |
| Trucks | 2 | 0 | 0 | 0 | 2 | 1 | 41 | 1 | 0 | 43 | 3 | 0 | 0 | 0 | 3 | 0 | 54 | 0 | 0 | 54 | 102 |
| \% Trucks | 0.7 | 0 | 0 | 0 | 0.7 | 0.8 | 1.6 | 0.2 | 0 | 1.4 | 0.6 | 0 | 0 | 0 | 0.6 | 0 | 2.3 | 0 | 0 | 2.1 | 1.6 |



## TRAFFIC DATA COLLECTION

File Name : Apex(US 64 and Jenks)PM Peak
Site Code :
Start Date : 10/28/2021
Page No : 2

|  | Jenks Road Southbound |  |  |  |  | US 64 <br> Westbound |  |  |  |  | Richardson Road Northbound |  |  |  |  | US 64 <br> Eastbound |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | UTrn | App. Total | Right | Thru | Left | UTrn | App. Total | Right | Thru | Left | UTrn | App. Total | Right | Thru | Left | UTrn | App. Total | Int. Total |
| Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1 Peak Hour for Entire Intersection Begins at 04:30 PM |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 04:30 PM | 35 | 0 | 0 | 0 | 35 | 14 | 318 | 62 | 0 | 394 | 75 | 0 | 0 | 0 | 75 | 11 | 292 | 19 | 0 | 322 | 826 |
| 04:45 PM | 41 | 0 | 0 | 0 | 41 | 19 | 295 | 63 | 2 | 379 | 69 | 0 | 0 | 0 | 69 | 17 | 355 | 16 | 0 | 388 | 877 |
| 05:00 PM | 40 | 0 | 0 | 0 | 40 | 19 | 315 | 58 | 1 | 393 | 90 | 0 | 0 | 0 | 90 | 4 | 316 | 17 | 0 | 337 | 860 |
| 05:15 PM | 36 | 0 | 0 | 0 | 36 | 18 | 346 | 61 | 0 | 425 | 66 | 0 | 0 | 0 | 66 | 11 | 299 | 24 | 0 | 334 | 861 |
| Total Volume | 152 | 0 | 0 | 0 | 152 | 70 | 1274 | 244 | 3 | 1591 | 300 | 0 | 0 | 0 | 300 | 43 | 1262 | 76 | 0 | 1381 | 3424 |
| \% App. Total | 100 | 0 | 0 | 0 |  | 4.4 | 80.1 | 15.3 | 0.2 |  | 100 | 0 | 0 | 0 |  | 3.1 | 91.4 | 5.5 | 0 |  |  |
| PHF | . 927 | . 000 | . 000 | . 000 | . 927 | . 921 | . 921 | . 968 | . 375 | . 936 | . 833 | . 000 | . 000 | . 000 | . 833 | . 632 | . 889 | . 792 | . 000 | . 890 | . 976 |



## RAMEY KEMP ASSOCIATES

5808 Faringdon Place
Suite 100
Raleigh, NC 27609
PH: 919-872-5115
File Name : US 64 and U-Turn Location
Site Code : 00000001
Start Date : 1/11/2022
Page No :1

|  | From North |  |  |  |  | US 64 <br> From East |  |  |  |  | From South |  |  |  |  | US 64 From West |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | U-Turns | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | U-Turns | App. Total | Int. Total |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 5 |
| 07:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 7 | 8 |
| 08:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| 08:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 08:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 |
| 08:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 9 |

*** BREAK ***

| $04: 00 ~ P M ~$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 |
| ---: | ---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $04: 15 ~ P M$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| $04: 30 ~ P M ~$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 6 |
| $04: 45 \mathrm{PM}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 5 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 15 |


| 05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 05:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 6 |
| 05:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 3 |
| 05:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 5 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 13 | 16 |


| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 | 39 | 48 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Apprch \% | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 100 |  | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 100 |  |  |
| Total \% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18.8 | 18.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 81.2 | 81.2 |  |
| Cars | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 34 | 43 |
| \% Cars | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 87.2 | 87.2 | 89.6 |
| TRKS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 5 |
| \% TRKS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12.8 | 12.8 | 10.4 |
| Semis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| \% Semis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## RAMEY KEMP ASSOCIATES

5808 Faringdon Place
Suite 100
Raleigh, NC 27609
PH: 919-872-5115
File Name : US 64 and U-Turn Location
Site Code : 00000001
Start Date : 1/11/2022
Page No :2

|  | From North |  |  |  |  | US 64 <br> From East |  |  |  |  | From South |  |  |  |  | US 64 From West |  |  |  |  | Int. Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | U-Turns | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | U-Turns | App. Total |  |
| Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Peak Hour for Entire Intersection Begins at 07:15 AM |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 5 |
| 07:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| 08:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 3 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 8 | 10 |
| \% App. Total | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 100 |  | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 100 |  |  |
| PHF | . 000 | . 000 | . 000 | . 000 | . 000 | . 000 | . 000 | . 000 | . 500 | . 500 | . 000 | . 000 | . 000 | . 000 | . 000 | . 000 | . 000 | . 000 | . 400 | . 400 | . 500 |
| Cars | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 6 |
| \% Cars | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50.0 | 50.0 | 60.0 |
| TRKS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 4 |
| \% TRKS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50.0 | 50.0 | 40.0 |
| Semis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| \% Semis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## RAMEY KEMP ASSOCIATES

5808 Faringdon Place
Suite 100
Raleigh, NC 27609
PH: 919-872-5115
File Name : US 64 and U-Turn Location
Site Code : 00000001
Start Date : 1/11/2022
Page No : 3


## RAMEY KEMP ASSOCIATES

5808 Faringdon Place
Suite 100
Raleigh, NC 27609
PH: 919-872-5115
File Name : US 64 and U-Turn Location
Site Code : 00000001
Start Date : 1/11/2022
Page No : 4

|  | From North |  |  |  |  | US 64 <br> From East |  |  |  |  | From South |  |  |  |  | US 64 From West |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Start Time | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | u-Turns | App. Total | Right | Thru | Left | Peds | App. Total | Right | Thru | Left | U-Turns | App. Total | Int. Total |
| Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Peak Hour for Entire Intersection Begins at 04:30 PM |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 04:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 6 |
| 04:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 5 |
| 05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 |
| 05:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 6 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 16 | 19 |
| \% App. Total | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 100 |  | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 100 |  |  |
| PHF | . 000 | . 000 | . 000 | . 000 | . 000 | . 000 | . 000 | . 000 | . 750 | . 750 | . 000 | . 000 | . 000 | . 000 | . 000 | . 000 | . 000 | . 000 | . 800 | . 800 | . 792 |
| Cars | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 15 | 18 |
| \% Cars | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 100 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 93.8 | 93.8 | 94.7 |
| TRKS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| \% TRKS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6.3 | 6.3 | 5.3 |
| Semis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| \% Semis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



## APPENDIX C

## ADJACENT DEVELOPMENT <br> INFORMATION

Traffic Impact Analysis for Westford

Apex, North Carolina

Prepared for:
The Halle Companies
Apex, North Carolina

Prepared by:
Kimley-Horn and Associates, Inc.
NC License \#F-0102
421 Fayetteville Street Suite 600
Raleigh, NC 27601
(919) 677-2000

December 2016
018995001








## Kimley»Horn

### 7.0 Recommendations

The following roadway improvements are committed to be performed by other developments in the area:

US 64 at Jenks Road:

- Convert existing intersection to a superstreet configuration with left turn crossovers and downstream U-Turns (by Sweetwater Phase 1)
- Monitor crossovers for MUTCD traffic signal warrants and install a traffic signal if warrants are met (by Sweetwater Phase 1)
- Construct a single westbound left-turn lane with 300 feet of storage and a single rightturn lane with 100 feet of storage on US 64 (by Sweetwater Phase 1)
- Construct a single eastbound left-turn lane with 300 feet of storage and a single right-turn lane with 50 feet of storage on US 64 (by Sweetwater Phase 1)
- Extend the westbound left-turn lane on US 64 to provide 500 feet of storage (by Smith Farm prior to platting 300 units)
- Extend the eastbound right-turn lane on US 64 to provide 100 feet of storage (by Smith Farm prior to platting of 360 units)
- Construct an additional northbound right-turn lane on Richardson Road with 300 feet of storage (by Smith Farm prior to platting 360 units)

US 64 at West U-turn:

- Construct a single lane U-turn with 250 feet of storage (by Sweetwater Phase 1)
- Monitor for MUTCD traffic signal warrants and install a traffic signal if warrants are met (by Sweetwater Phase 1)

US 64 at East U-turn:

- Construct a single lane U-turn with 250 feet of storage on US 64 (by Sweetwater Phase 1)
- Monitor for MUTCD traffic signal warrants and install a traffic signal if warrants are met (by Sweetwater Phase 1)
- Extend eastbound U-turn lane on US 64 to provide 400 feet of storage (by Smith Farm Phase 1)

Green Level Church Road at Jenks Road:

- Monitor this intersection for MUTCD traffic signal warrants and install a traffic signal if warrants are met (by The Preserve at White Oak Creek)


## Kimley»Horn

The following roadway improvements are recommended to be performed to accommodate projected Westford site traffic based on the analysis presented herein:

US 64 at Jenks Road:

- If not already done by others, monitor this intersection for MUTCD traffic signal warrants for the eastbound left-turn, the westbound through and right-turn, and the southbound right-turn movements and install a traffic signal if warrants are met

US 64 at West U-Turn:

- If not already done by others, monitor this intersection for MUTCD traffic signal warrants and install a traffic signal if warrants are met


## Jenks Road at Green Level Church Road:

- If not already done by others, monitor this intersection for MUTCD traffic signal warrants and install a traffic signal if warrants are met


## Jenks Road at Wimberly Road / Street B:

- Construct an exclusive westbound left-turn lane with a minimum of 50 feet of storage on Jenks Road
- Construct an exclusive eastbound left-turn lane with a minimum of 50 feet of storage on Jenks Road

US 64 at Street A:

- Construct an exclusive westbound right-turn lane with a minimum of 75 feet of storage on US 64

Jenks Road at Street A:

- Construct an exclusive westbound left-turn lane with a minimum of 50 feet of storage on Jenks Road
- Provide separate left- and right-turn lanes on the northbound approach of Street A

Jenks Road at Street C:

- Construct an exclusive westbound left-turn lane with a minimum of 50 feet of storage on Jenks Road

Analysis indicates that with the committed and recommended improvements in place, all of the study intersections are expected to operate at an acceptable level of service. The recommended lane geometry is shown on Figure 9.


## MEMORANDUM

To: Mr. Serge Grebenschikov, P.E., Town of Apex Mr. Russell Dalton, P.E., Town of Apex
From: Travis Fluitt, P.E., Kimley-Horn and Associates, Inc,
Date: July 9, 2021
Subject: US 64 Residential, Apex, NC - Phase 2 TIA Addendum


Kimley-Horn has prepared this addendum to the US 64 Residential TIA (Kimley-Horn, April 2021) to evaluate the traffic impact of Phase 2 of the proposed development. Per the original TIA, Phase 1 of the development was assumed to include 400 apartment units and to be built-out by 2024. For this analysis, Phase 2 of the development is assumed to include 75 single family homes, a 11,000 square foot (SF) day care center, and a 3,500 SF drive-thru fast-food restaurant. Phase 2 is assumed to be built-out by 2026.

This report presents trip generation, directional distribution, traffic analyses, and recommendations for transportation improvements required to meet anticipated traffic demands in conjunction with build-out of Phase 2 of the proposed development in the 2026 study year.

## Study Area

The study area intersections were obtained from the original TIA and were not modified as part of this analysis. Consistent with the original TIA, two site access scenarios were analyzed:

## With RI/RO Driveway Scenario

- Proposed access road connection to US 64 opposite Flying Hawk Road
- Existing right-in/right-out (RI/RO) driveway on US 64


## Without RI/RO Driveway Scenario

- Proposed access road connection to US 64 opposite Flying Hawk Road


## Background Traffic

The projected (2024) background traffic volumes from the original TIA were grown at a $3 \%$ annual rate up to the 2026 study year to calculate the projected (2026) background traffic volumes.

## Trip Generation and Assignment

Consistent with the original TIA, the trip generation potential of the proposed development was determined using the traffic generation data published in the ITE Trip Generation Handbook (Institute of Transportation Engineers, Tenth Edition, 2017). The trip generation is summarized in Table 1.

| Table 1ITE Traffic Generation (Vehicles) |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Lent |  |  | Daily | AM P | Hour | PM P | Hour |
| Code | Land Use | Inten |  | Total | In | Out | In | Out |
| 210 | Single Family Housing | 75 | d.u. | 798 | 15 | 43 | 49 | 28 |
| 221 | Multifamily Housing (Mid-Rise) | 400 | d.u. | 2,178 | 35 | 98 | 102 | 66 |
| 565 | Day Care Center | 11,000 | s.f. | 524 | 64 | 57 | 57 | 65 |
| 934 | Fast-Food Restaurant | 3,500 | s.f. | 1,648 | 72 | 69 | 59 | 55 |
| Subtotal |  |  |  | 5,148 | 186 | 267 | 267 | 214 |
| Internal Capture Reduction |  |  |  | 462 | 17 | 17 | 18 | 18 |
| Pass-by Capture/Diverted Link Trips |  |  |  | 730 | 28 | 32 | 40 | 39 |
| Total Net New External Trips |  |  |  | 3,956 | 141 | 218 | 209 | 157 |

As shown in Table 1, the development is anticipated to generate approximately 3,956 new external trips on a typical weekday, with 359 new external trips during the AM peak hour and 366 new external trips during the PM peak hour.

Internally captured trips are trips that begin and end on the project site and do not access the external roadway network. ITE Methodology indicates that internal capture between the proposed land uses will represent approximately $7.5 \%$ of site trips in both peak hours.

Pass-by trips are trips already on the network that will make a trip to the site as they pass by on the adjacent street. ITE Methodology indicates that approximately $49 \%$ of the AM peak hour trips and $50 \%$ of the PM peak hour trips associated with the fast-food restaurant will be pass-by trips. ITE Methodology also indicates that up to $50 \%$ of the day care trips in the PM peak hour may be diverted link trips. Consistent with previous studies performed in the Town, a diverted link trip percentage of $25 \%$ was applied to the PM peak hour day care trips to present a conservative analysis.

The proposed site-generated trips were assigned to the surrounding roadway network. Due to the addition of the commercial traffic, the following overall distribution was used for Phase 2:

- $70 \%$ to/from the east on US 64
- $30 \%$ to/from the west on US 64

The proposed pass-by trips were assigned to the roadway network based on the directional distribution of background volumes along US 64.

Full trip generation calculations, site-generated trip assignment, and pass-by trip assignment are shown on the intersection spreadsheets attached to this memorandum.




LEGEND

| $\longrightarrow$ | EXISTING LANE |
| :--- | :--- |
|  | EXISTING STOP SIGN |
| $\longrightarrow$ | PHASE 1 RECOMMENDED LANE (FROM ORIGINAL TIA) |
| $\longrightarrow$ | PHASE 1 RECOMMENDED STOP SIGN (FROM ORIGINAL TIA) |
| $\longrightarrow$ | PHASE 2 RECOMMENDED MONITORING FOR SIGNALIZATION |
|  | STORAGE LENGTH |

US 64 RESIDENTIAL -
PHASE 2
APEX, NC
TRAFFIC IMPACT ANALYSIS


# Traffic Impact Analysis 

For

## Sweetwater Development

Located in<br>Apex, North Carolina

Prepared For:
ExperienceOne Homes, LLC,
P.O. Box 5509

Cary, NC 27512

Prepared By:
Ramey Kemp \& Associates, Inc. 5808 Faringdon Place, Suite 100

Raleigh, NC 27609
NC Corporate License \# C-0910

December 2014




LEGEND

* Site Location

Existing Study Intersection

Jenks Road Development
Site Location Map
Apex, North Carolina
Figure 1



## 9. RECOMMENDATIONS

Based on the findings of this study, specific geometric improvements have been identified and are recommended to accommodate future traffic conditions. Improvements that are necessary and recommended to accommodate a residential phase and full site build out generated traffic are identified below. These are improvements recommended for the development. Refer to Figure 14 and Figure 14a for the recommended improvements.

## Residential:

## US 64 and Jenks Road/Site Access

- Convert the intersection to a superstreet design.
- Convert the southbound approach of Jenks Road to provide a single right turn lane and one inbound lane.
- Construct the Site Access (Jenks Road extension) with one outbound lane and one inbound lane. The outbound lane should be a single right turn lane.
- Install stop signs at the intersections.
- Construct a single westbound left turn lane at the Site Access intersection with a minimum of 275 feet of storage.
- A single eastbound left turn lane is currently provided at the Jenks Road intersection with 250 feet of storage which should be adequate for this phase.
- Construct a U-turn opening on US 64 approximately 800-1,000 feet east of the Site Access. Provide one u-turn lane with a minimum of 150 feet of storage plus appropriate taper.
- Construct a u-turn opening on US 64 approximately 800-1,000 feet west of Jenks Road. Provide one u-turn lane with a minimum of 250 feet of storage and appropriate taper.
- Install a stop sign at the u-turn locations.
- Consider modifying the potential interchange design to accommodate future traffic volumes and require less right-of-way.


## Kelly Road and Wendhurst Court/Beaver Creek Commons Drive

- Provide through movement striping on the westbound leg.


## Full Build Out:

The following recommendations do not consider the residential phase and are intended to be considered independently.

## US 64 and Jenks Road/Site Access

- Convert the intersection to a superstreet design. It is anticipated this will be required with the initial phase of the development
- Convert the southbound approach of Jenks Road to provide dual right turn lanes and one inbound lane.
- Construct the Site Access (Jenks Road extension) with a minimum of two outbound lanes and one inbound lane. The outbound lanes should be dual right turn lanes.
- Install traffic signals at the intersection when warranted
- Construct dual westbound left turn lanes at the Site Access signal with a minimum of 300 feet of storage.
- Construct dual eastbound left turn lanes at the Jenks Road signal with a minimum of 300 feet of storage.
- Construct a u-turn opening on US 64 approximately 800-1,000 feet east of the Site Access. Provide dual u-turn lanes with a minimum of 250 feet of full width storage plus appropriate taper.
- Construct a u-turn opening on US 64 approximately 800-1,000 feet west of Jenks Road. Provide one u-turn lane with a minimum of 250 feet of storage and appropriate taper.
- Install a traffic signal at the u-turn locations when warranted.
- Consider modifying the potential interchange design to accommodate future traffic volumes and require less right-of-way.


X FT $\rightarrow$ Existing Lane with Storage
X FT - Improvement by Developer

|  | Sweetwater Development Apex, North Carolina | Recommended Lanes and Traffic Control Residential |  |
| :---: | :---: | :---: | :---: |
| transportation engineers |  | Scale: Not to Scale | Figure 14 |



## APPENDIX D

## CAPACITY ANALYSIS CALCULATIONS US 64 <br> \& MEDIAN BREAK

| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 0 |  |  |  |  |  |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations |  | 个4 |  |  | a |  |
| Traffic Vol, veh/h | 0 | 1650 | 0 | 0 | 4 | 0 |
| Future Vol, veh/h | 0 | 1650 | 0 | 0 | 4 | 0 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Stop | Stop | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, \# | - | 0 | 16983 | - | 0 | - |
| Grade, \% | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 | 90 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 1833 | 0 | 0 | 4 | 0 |



| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 0 |  |  |  |  |  |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations |  | 4. |  |  | 1 |  |
| Traffic Vol, veh/h | 0 | 2231 | 0 | 0 | 4 | 0 |
| Future Vol, veh/h | 0 | 2231 | 0 | 0 | 4 | 0 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Stop | Stop | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, \# | - | 0 | 16983 | - | 0 | - |
| Grade, \% | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 | 90 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 2479 | 0 | 0 | 4 | 0 |


| Major/Minor | Major1 | Minor2 |  |  |
| :---: | ---: | ---: | ---: | :--- |
| Conflicting Flow All | - | 0 | 1240 | - |
| Stage 1 | - | - | 0 | - |
| Stage 2 | - | - | 1240 | - |
| Critical Hdwy | - | - | 6.84 | - |
| Critical Hdwy Stg 1 | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | 5.84 | - |
| Follow-up Hdwy | - | - | 3.52 | - |
| Pot Cap-1 Maneuver | 0 | - | 167 | 0 |
| Stage 1 | 0 | - | - | 0 |
| Stage 2 | 0 | - | 236 | 0 |
| Platoon blocked, \% |  | - | 167 | - |
| Mov Cap-1 Maneuver | - | - | 167 | - |
| Mov Cap-2 Maneuver | - | - | - | - |
| Stage 1 | - | - | 236 | - |
| Stage 2 | - | - |  |  |


| Approach | EB | SB |
| :--- | ---: | ---: |
| HCM Control Delay, s | 0 | 27.1 |
| HCM LOS | D |  |


| Minor Lane/Major Mvmt | EBT SBLn1 |
| :--- | ---: |
| Capacity (veh/h) | -167 |
| HCM Lane V/C Ratio | -0.027 |
| HCM Control Delay (s) | -27.1 |
| HCM Lane LOS | $-\quad D$ |
| HCM 95th \%tile Q(veh) | -0.1 |




| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 0 |  |  |  |  |  |
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations |  | 个4 |  |  | 1 |  |
| Traffic Vol, veh/h | 0 | 1596 | 0 | 0 | 4 | 0 |
| Future Vol, veh/h | 0 | 1596 | 0 | 0 | 4 | 0 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Stop | Stop | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, \# | - | 0 | 16983 | - | 0 | - |
| Grade, \% | - | 0 | 0 | - | 0 | - |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 | 90 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 1773 | 0 | 0 | 4 | 0 |



| Intersection |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Int Delay, s/veh |  |  |  |  |  |  |  |
| Movement EBL EBT WBT WBR SBL SBR |  |  |  |  |  |  |  |
| Lane Configurations |  | 44 |  |  | \% |  |  |
| Traffic Vol, veh/h | 0 | 2258 | 0 | 0 | 4 | 0 | 0 |
| Future Vol, veh/h | 0 | 2258 | 0 | 0 | 4 | 0 | 0 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Stop | Stop | Stop | Stop |  |
| RT Channelized |  | None | - | None | - | None |  |
| Storage Length |  | - | - | - | 0 |  | - |
| Veh in Median Storage, \# |  | 0 | 16983 | - | 0 |  | - |
| Grade, \% |  | 0 | 0 | - | 0 |  | - |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 | 90 |  |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 2509 | 0 | 0 | 4 | 0 | 0 |


| Major/Minor | Major1 | Minor2 |  |  |
| :---: | ---: | ---: | ---: | :--- |
| Conflicting Flow All | - | 0 | 1255 | - |
| Stage 1 | - | - | 0 | - |
| Stage 2 | - | - | 1255 | - |
| Critical Hdwy | - | - | 6.84 | - |
| Critical Hdwy Stg 1 | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | 5.84 | - |
| Follow-up Hdwy | - | - | 3.52 | - |
| Pot Cap-1 Maneuver | 0 | - | 164 | 0 |
| Stage 1 | 0 | - | - | 0 |
| Stage 2 | 0 | - | 232 | 0 |
| Platoon blocked, \% |  | - | 164 | - |
| Mov Cap-1 Maneuver | - | - | 164 | - |
| Mov Cap-2 Maneuver | - | - | - | - |
| Stage 1 | - | - | 232 | - |
| Stage 2 | - | - |  |  |


| Approach | EB | SB |
| :--- | ---: | :---: |
| HCM Control Delay, s | 0 | 27.6 |
| HCM LOS | D |  |


| Minor Lane/Major Mvmt | EBT SBLn1 |
| :--- | ---: |
| Capacity (veh/h) | -164 |
| HCM Lane V/C Ratio | -0.027 |
| HCM Control Delay (s) | -27.6 |
| HCM Lane LOS | $-\quad D$ |
| HCM 95th \%tile Q(veh) | -0.1 |




| Approach | EB | NB | SB |
| :--- | :---: | ---: | :---: |
| HCM Control Delay, s | 0 | 48.2 | $\$ 1186.4$ |
| HCM LOS | E | F |  |


| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR SBLn1 |
| :--- | ---: | ---: | ---: |
| Capacity (veh/h) | 164 | - | -28 |
| HCM Lane V/C Ratio | 0.515 | - | -2.976 |
| HCM Control Delay (s) | 48.2 | - | $\$ 1186.4$ |
| HCM Lane LOS | E | - | - |
| HCM 95th \%tile Q(veh) | 2.5 | - | -10 |

## Notes

~: Volume exceeds capacity $\$$ : Delay exceeds 300s $\quad+$ : Computation Not Defined *: All major volume in platoon

| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 0.1 |  |  |  |  |  |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations |  |  |  | 体 | º |  |
| Traffic Vol, veh/h | 0 | 0 | 0 | 1277 | 8 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 1277 | 8 | 0 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 | 90 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 1419 | 9 | 0 |



| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 0.1 |  |  |  |  |  |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations |  |  |  | 体 | 1 |  |
| Traffic Vol, veh/h | 0 | 0 | 0 | 1807 | 9 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 1807 | 9 | 0 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 | 90 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 2008 | 10 | 0 |



| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 0.1 |  |  |  |  |  |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations |  |  |  | 体 | 1 |  |
| Traffic Vol, veh/h | 0 | 0 | 0 | 1823 | 9 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 1823 | 9 | 0 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 | 90 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 2026 | 10 | 0 |



| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 0.2 |  |  |  |  |  |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations |  |  |  | 赃 | º |  |
| Traffic Vol, veh/h | 0 | 0 | 0 | 1622 | 16 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 1622 | 16 | 0 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 | 90 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 1802 | 18 | 0 |



| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 0.2 |  |  |  |  |  |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations |  |  |  | 个4 | 1 |  |
| Traffic Vol, veh/h | 0 | 0 | 0 | 2223 | 19 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 2223 | 19 | 0 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 | 90 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 2470 | 21 | 0 |



| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 0.3 |  |  |  |  |  |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations |  |  |  | 个4 | 1 |  |
| Traffic Vol, veh/h | 0 | 0 | 0 | 2239 | 19 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 2239 | 19 | 0 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 | 90 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 2488 | 21 | 0 |



## APPENDIX E

## CAPACITY ANALYSIS CALCULATIONS US 64 <br> \&

FUTURE EASTERN U-TURN LOCATION

| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 0.2 |  |  |  |  |  |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations |  |  |  | 个4 | 1 |  |
| Traffic Vol, veh/h | 0 | 0 | 0 | 1834 | 16 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 1834 | 16 | 0 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 | 90 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 2038 | 18 | 0 |



| Intersection |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Int Delay, s/veh | 0.3 |  |  |  |  |  |
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
| Lane Configurations |  |  |  | 个4 | T |  |
| Traffic Vol, veh/h | 0 | 0 | 0 | 2290 | 23 | 0 |
| Future Vol, veh/h | 0 | 0 | 0 | 2290 | 23 | 0 |
| Conflicting Peds, \#/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, \# | 0 | - | - | 0 | 0 | - |
| Grade, \% | 0 | - | - | 0 | 0 | - |
| Peak Hour Factor | 90 | 90 | 90 | 90 | 90 | 90 |
| Heavy Vehicles, \% | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 0 | 0 | 2544 | 26 | 0 |



## APPENDIX F

## SIMTRAFFIC QUEUEING \& PERFORMANCE RESULTS

4: US 64 EB \& Median Break Performance by movement

| Movement | EBL | EBT | All |
| :--- | :---: | ---: | ---: |
| Denied Del/Veh (s) | 1.6 | 0.3 | 0.3 |
| Total Del/Veh (s) | 2.6 | 0.8 | 0.8 |

## 5: US 64 EB \& Median Break Performance by movement

| Movement | EBT | SBL | All |
| :--- | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 0.1 | 18.4 | 0.1 |

6: Median Break \& US 64 WB Performance by movement

| Movement | WBL | WBT | All |
| :--- | ---: | ---: | ---: |
| Denied Del/Veh (s) | 2.7 | 0.2 | 0.2 |
| Total Del/Veh (s) | 2.4 | 1.1 | 1.1 |

7: Median Break \& US 64 WB Performance by movement

| Movement | WBT | NBL | All |
| :--- | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 0.1 | 9.6 | 0.1 |

Total Network Performance

| Denied Del/Veh (s) | 0.3 |
| :--- | :--- |
| Total Del/Veh (s) | 2.3 |

Intersection: 4: US 64 EB \& Median Break

| Movement |
| :--- |
| Directions Served |
| Maximum Queue (ft) |
| Average Queue (ft) |
| 95th Queue (ft) |
| Link Distance (ft) |
| Upstream Blk Time (\%) |
| Queuing Penalty (veh) |
| Storage Bay Dist (ft) |
| Storage Blk Time (\%) |
| Queuing Penalty (veh) |

Intersection: 5: US 64 EB \& Median Break

| Movement | SB |
| :--- | ---: |
| Directions Served | L |
| Maximum Queue (ft) | 28 |
| Average Queue (ft) | 4 |
| 95th Queue (ft) | 21 |
| Link Distance (ft) | 59 |
| Upstream Blk Time (\%) |  |
| Queuing Penalty (veh) |  |
| Storage Bay Dist (ft) |  |
| Storage Blk Time (\%) |  |
| Queuing Penalty (veh) |  |

Intersection: 6: Median Break \& US 64 WB

## Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream BIk Time (\%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage BIk Time (\%)
Queuing Penalty (veh)

Intersection: 7: Median Break \& US 64 WB

| Movement | NB |
| :--- | ---: |
| Directions Served | L |
| Maximum Queue (ft) | 28 |
| Average Queue (ft) | 6 |
| 95th Queue (ft) | 24 |
| Link Distance (ft) | 59 |
| Upstream Blk Time (\%) |  |
| Queuing Penalty (veh) |  |
| Storage Bay Dist (ft) |  |
| Storage Blk Time (\%) |  |
| Queuing Penalty (veh) |  |

## Network Summary

Network wide Queuing Penalty: 0

4: US 64 EB \& Median Break Performance by movement

| Movement | EBL | EBT | All |
| :--- | :---: | :---: | :---: |
| Denied DelVeh (s) | 1.8 | 0.6 | 0.6 |
| Total Del/Veh (s) | 2.9 | 1.2 | 1.2 |

## 5: US 64 EB \& Median Break Performance by movement

| Movement | EBT | SBL | All |
| :--- | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 0.1 | 30.2 | 0.2 |

6: Median Break \& US 64 WB Performance by movement

| Movement | WBL | WBT | All |
| :--- | ---: | ---: | ---: |
| Denied Del/Veh (s) | 2.1 | 0.4 | 0.4 |
| Total Del/Veh (s) | 3.2 | 1.5 | 1.5 |

7: Median Break \& US 64 WB Performance by movement

| Movement | WBT | NBL | All |
| :--- | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 |
| Total DelVeh (s) | 0.1 | 22.4 | 0.2 |

## Total Network Performance

| Denied Del/Veh (s) | 0.5 |
| :--- | :--- |
| Total Del/Veh (s) | 3.2 |

Intersection: 4: US 64 EB \& Median Break

| Movement |
| :--- |
| Directions Served |
| Maximum Queue (ft) |
| Average Queue (ft) |
| 95th Queue (ft) |
| Link Distance (ft) |
| Upstream Blk Time (\%) |
| Queuing Penalty (veh) |
| Storage Bay Dist (ft) |
| Storage Blk Time (\%) |
| Queuing Penalty (veh) |

Intersection: 5: US 64 EB \& Median Break

| Movement | SB |
| :--- | ---: |
| Directions Served | L |
| Maximum Queue (ft) | 28 |
| Average Queue (ft) | 5 |
| 95th Queue (ft) | 21 |
| Link Distance (ft) | 59 |
| Upstream Blk Time (\%) |  |
| Queuing Penalty (veh) |  |
| Storage Bay Dist (ft) |  |
| Storage Blk Time (\%) |  |
| Queuing Penalty (veh) |  |

## Intersection: 6: Median Break \& US 64 WB

## Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream BIk Time (\%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (\%)
Queuing Penalty (veh)

Intersection: 7: Median Break \& US 64 WB

| Movement | NB |
| :--- | ---: |
| Directions Served | L |
| Maximum Queue (ft) | 43 |
| Average Queue (ft) | 8 |
| 95th Queue (ft) | 31 |
| Link Distance (ft) | 59 |
| Upstream Blk Time (\%) | 0 |
| Queuing Penalty (veh) | 0 |
| Storage Bay Dist (ft) |  |
| Storage Blk Time (\%) |  |
| Queuing Penalty (veh) |  |

Network Summary
Network wide Queuing Penalty: 0

4: US 64 EB \& Median Break Performance by movement

| Movement | EBL | EBT | All |
| :--- | ---: | ---: | ---: |
| Denied Del/Veh (s) | 1.9 | 0.6 | 0.6 |
| Total Del/Veh (s) | 3.2 | 1.7 | 1.7 |

5: Site Access/Median Break \& US 64 EB Performance by movement

| Movement |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| EBT | EBR | NBR | SBL | SBT | All |  |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.1 | 0.0 | 1.6 | 0.0 |
| Total Del/Veh (s) | 0.2 | 0.0 | 28.5 | 59.0 | 43.3 | 1.7 |

6: Median Break \& US 64 WB Performance by movement

| Movement | WBL | WBT | All |
| :--- | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 4.3 | 1.1 | 1.1 |

7: Median Break \& US 64 WB Performance by movement

| Movement | WBT | NBL | All |
| :--- | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 0.1 | 21.6 | 0.2 |

## 8: US 64 EB \& Eastern U-Turn Location Performance by movement

| Movement | EBL | EBT | All |
| :--- | ---: | ---: | ---: |
| Denied Del/Veh $(\mathrm{s})$ | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 3.9 | 1.6 | 1.6 |

## 9: Eastern U-Turn Location \& US 64 WB Performance by movement

| Movement | WBT | NBL | All |
| :--- | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.3 | 0.0 | 0.3 |
| Total Del/Veh (s) | 1.1 | 20.0 | 1.2 |

## Total Network Performance

| Denied Del/Veh (s) | 0.5 |
| :--- | :--- |
| Total Del/Veh (s) | 5.2 |

Intersection: 4: US 64 EB \& Median Break

| Movement |
| :--- |
| Directions Served |
| Maximum Queue (ft) |
| Average Queue (ft) |
| 95th Queue (ft) |
| Link Distance (ft) |
| Upstream Blk Time (\%) |
| Queuing Penalty (veh) |
| Storage Bay Dist (ft) |
| Storage Blk Time (\%) |
| Queuing Penalty (veh) |

Intersection: 5: Site Access/Median Break \& US 64 EB

| Movement | EB | EB | NB | SB |
| :--- | ---: | ---: | ---: | ---: |
| Directions Served | T | T | R | LT |
| Maximum Queue (ft) | 4 | 4 | 92 | 80 |
| Average Queue (ft) | 0 | 0 | 36 | 26 |
| 95th Queue (ft) | 3 | 3 | 71 | 64 |
| Link Distance (ft) | 66 | 66 | 1062 | 60 |
| Upstream Blk Time (\%) |  |  |  | 2 |
| Queuing Penalty (veh) |  |  |  | 1 |
| Storage Bay Dist (ft) |  |  |  |  |
| Storage Blk Time (\%) |  |  |  |  |

Intersection: 6: Median Break \& US 64 WB

| Movement | WB |
| :--- | ---: |
| Directions Served | L |
| Maximum Queue (ft) | 6 |
| Average Queue (ft) | 0 |
| 95th Queue (ft) | 4 |
| Link Distance (ft) |  |
| Upstream Blk Time (\%) |  |
| Queuing Penalty (veh) |  |
| Storage Bay Dist (ft) | 225 |
| Storage Blk Time (\%) |  |
| Queuing Penalty (veh) |  |

Intersection: 7: Median Break \& US 64 WB

| Movement | NB |
| :--- | ---: |
| Directions Served | L |
| Maximum Queue (ft) | 38 |
| Average Queue (ft) | 7 |
| 95th Queue (ft) | 28 |
| Link Distance (ft) | 59 |
| Upstream Blk Time (\%) | 0 |
| Queuing Penalty (veh) | 0 |
| Storage Bay Dist (ft) |  |
| Storage Blk Time (\%) |  |
| Queuing Penalty (veh) |  |

Intersection: 8: US 64 EB \& Eastern U-Turn Location

| Movement |
| :--- |
| Directions Served |
| Maximum Queue (ft) |
| Average Queue (ft) |
| 95th Queue (ft) |
| Link Distance (ft) |
| Upstream BIk Time (\%) |
| Queuing Penalty (veh) |
| Storage Bay Dist (ft) |
| Storage Blk Time (\%) |
| Queuing Penalty (veh) |
| Intersection: 9: Eastern U-Turn Location \& US 64 WB |


| Movement | NB |
| :--- | :---: |
| Directions Served | L |
| Maximum Queue (ft) | 48 |
| Average Queue (ft) | 13 |
| 95th Queue (ft) | 38 |
| Link Distance (ft) | 60 |
| Upstream Blk Time (\%) | 0 |
| Queuing Penalty (veh) | 0 |
| Storage Bay Dist (ft) |  |
| Storage Blk Time (\%) |  |
| Queuing Penalty (veh) |  |
|  |  |
| Network Summary |  |

Network wide Queuing Penalty: 1

4: US 64 EB \& Median Break Performance by movement

| Movement | EBL | EBT | All |
| :--- | :---: | :---: | :---: |
| Denied Del/Veh $(\mathrm{s})$ | 2.1 | 0.3 | 0.3 |
| Total Del/Veh $(\mathrm{s})$ | 2.7 | 0.8 | 0.9 |

## 5: US 64 EB \& Median Break Performance by movement

| Movement | EBT | SBL | All |
| :--- | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 0.1 | 12.0 | 0.1 |

6: Median Break \& US 64 WB Performance by movement

| Movement | WBL | WBT | All |
| :--- | ---: | ---: | ---: |
| Denied Del/Veh (s) | 1.7 | 0.3 | 0.3 |
| Total Del/Veh (s) | 2.7 | 1.3 | 1.3 |

7: Median Break \& US 64 WB Performance by movement

| Movement | WBT | NBL | All |
| :--- | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 0.1 | 17.4 | 0.3 |

Total Network Performance

| Denied Del/Veh (s) | 0.3 |
| :--- | :--- |
| Total Del/Veh (s) | 2.5 |

Intersection: 4: US 64 EB \& Median Break

| Movement |
| :--- |
| Directions Served |
| Maximum Queue (ft) |
| Average Queue (ft) |
| 95th Queue (ft) |
| Link Distance (ft) |
| Upstream Blk Time (\%) |
| Queuing Penalty (veh) |
| Storage Bay Dist (ft) |
| Storage Blk Time (\%) |
| Queuing Penalty (veh) |

Intersection: 5: US 64 EB \& Median Break

| Movement | SB |
| :--- | ---: |
| Directions Served | L |
| Maximum Queue (ft) | 28 |
| Average Queue (ft) | 4 |
| 95th Queue (ft) | 20 |
| Link Distance (ft) | 59 |
| Upstream Blk Time (\%) |  |
| Queuing Penalty (veh) |  |
| Storage Bay Dist (ft) |  |
| Storage Blk Time (\%) |  |
| Queuing Penalty (veh) |  |

Intersection: 6: Median Break \& US 64 WB

## Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (\%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage BIk Time (\%)
Queuing Penalty (veh)

Intersection: 7: Median Break \& US 64 WB

| Movement | NB |
| :--- | ---: |
| Directions Served | L |
| Maximum Queue (ft) | 50 |
| Average Queue (ft) | 14 |
| 95th Queue (ft) | 39 |
| Link Distance (ft) | 59 |
| Upstream Blk Time (\%) | 0 |
| Queuing Penalty (veh) | 0 |
| Storage Bay Dist (ft) |  |
| Storage Blk Time (\%) |  |
| Queuing Penalty (veh) |  |

## Network Summary

Network wide Queuing Penalty: 0

4: US 64 EB \& Median Break Performance by movement

| Movement | EBL | EBT | All |
| :--- | :---: | :---: | :---: |
| Denied Del/Veh (s) | 1.7 | 0.6 | 0.6 |
| Total Del/Veh (s) | 3.3 | 1.2 | 1.3 |

## 5: US 64 EB \& Median Break Performance by movement

| Movement | EBT | SBL | All |
| :--- | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 0.1 | 35.2 | 0.2 |

6: Median Break \& US 64 WB Performance by movement

| Movement | WBL | WBT | All |
| :--- | ---: | ---: | ---: |
| Denied Del/Veh (s) | 1.6 | 0.5 | 0.5 |
| Total Del/Veh (s) | 4.1 | 1.9 | 1.9 |

7: Median Break \& US 64 WB Performance by movement

| Movement | WBT | NBL | All |
| :--- | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 |
| Total DelVeh (s) | 0.1 | 40.4 | 0.5 |

## Total Network Performance

| Denied Del/Veh (s) | 0.6 |
| :--- | :--- |
| Total Del/Veh (s) | 3.6 |

Intersection: 4: US 64 EB \& Median Break

```
Movement
Directions Served
Maximum Queue (ft)
Average Queue ( ft )
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (\%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (\%)
Queuing Penalty (veh)
```

Intersection: 5: US 64 EB \& Median Break

| Movement | SB |
| :--- | ---: |
| Directions Served | L |
| Maximum Queue (ft) | 32 |
| Average Queue (ft) | 5 |
| 95th Queue (ft) | 21 |
| Link Distance (ft) | 59 |
| Upstream Blk Time (\%) | 0 |
| Queuing Penalty (veh) | 0 |
| Storage Bay Dist (ft) |  |
| Storage Blk Time (\%) |  |
| Queuing Penalty (veh) |  |

Intersection: 6: Median Break \& US 64 WB

## Movement

Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (\%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (\%)
Queuing Penalty (veh)

Intersection: 7: Median Break \& US 64 WB

| Movement | NB |
| :--- | ---: |
| Directions Served | L |
| Maximum Queue (ft) | 64 |
| Average Queue (ft) | 17 |
| 95th Queue (ft) | 47 |
| Link Distance (ft) | 59 |
| Upstream Blk Time (\%) | 1 |
| Queuing Penalty (veh) | 0 |
| Storage Bay Dist (ft) |  |
| Storage Blk Time (\%) |  |
| Queuing Penalty (veh) |  |

Network Summary
Network wide Queuing Penalty: 0

4: US 64 EB \& Median Break Performance by movement

| Movement | EBL | EBT | All |
| :--- | ---: | ---: | ---: |
| Denied Del/Veh (s) | 1.8 | 0.6 | 0.6 |
| Total Del/Veh (s) | 3.6 | 2.0 | 2.1 |

5: Site Access/Median Break \& US 64 EB Performance by movement

| Movement | EBT | EBR | NBR | SBL | SBT | All |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.1 | 0.0 | 0.5 | 0.0 |
| Total Del/Veh (s) | 0.3 | 0.0 | 35.1 | 83.4 | 85.4 | 4.0 |

6: Median Break \& US 64 WB Performance by movement

| Movement | WBL | WBT | All |
| :--- | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 22.6 | 1.6 | 2.2 |

7: Median Break \& US 64 WB Performance by movement

| Movement | WBT | NBL | All |
| :--- | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 |
| Total DelVeh (s) | 0.2 | 35.9 | 0.4 |

## 8: US 64 EB \& Eastern U-Turn Location Performance by movement

| Movement | EBL | EBT | All |
| :--- | :---: | ---: | ---: |
| Denied Del/Veh (s) | 0.0 | 0.0 | 0.0 |
| Total Del/Veh (s) | 4.2 | 1.7 | 1.7 |

## 9: Eastern U-Turn Location \& US 64 WB Performance by movement

| Movement | WBT | NBL | All |
| :--- | ---: | ---: | ---: |
| Denied Del/Veh (s) | 0.6 | 0.0 | 0.6 |
| Total Del/Veh (s) | 1.6 | 59.8 | 2.2 |

## Total Network Performance

| Denied Del/Veh (s) | 0.6 |
| :--- | :--- |
| Total Del/Veh (s) | 7.6 |

Intersection: 4: US 64 EB \& Median Break

| Movement |
| :--- |
| Directions Served |
| Maximum Queue (ft) |
| Average Queue (ft) |
| 95th Queue (ft) |
| Link Distance (ft) |
| Upstream Blk Time (\%) |
| Queuing Penalty (veh) |
| Storage Bay Dist (ft) |
| Storage Blk Time (\%) |
| Queuing Penalty (veh) |

Intersection: 5: Site Access/Median Break \& US 64 EB

| Movement | EB | NB | SB |
| :--- | ---: | ---: | ---: |
| Directions Served | R | R | LT |
| Maximum Queue (ft) | 17 | 111 | 113 |
| Average Queue (ft) | 1 | 45 | 66 |
| 95th Queue (ft) | 7 | 91 | 118 |
| Link Distance (ft) | 66 | 1062 | 60 |
| Upstream Blk Time (\%) |  |  | 30 |
| Queuing Penalty (veh) |  |  | 22 |
| Storage Bay Dist (ft) |  |  |  |
| Storage Blk Time (\%) |  |  |  |
| Queuing Penalty (veh) |  |  |  |

Intersection: 6: Median Break \& US 64 WB

| Movement | WB | WB |
| :--- | ---: | ---: |
| Directions Served | L | T |
| Maximum Queue (ft) | 77 | 44 |
| Average Queue (ft) | 15 | 3 |
| 95th Queue (ft) | 80 | 43 |
| Link Distance (ft) |  | 990 |
| Upstream Blk Time (\%) |  |  |
| Queuing Penalty (veh) |  |  |
| Storage Bay Dist (ft) | 225 |  |
| Storage Blk Time (\%) |  | 0 |
| Queuing Penalty (veh) |  | 0 |

Intersection: 7: Median Break \& US 64 WB

| Movement | NB |
| :--- | ---: |
| Directions Served | L |
| Maximum Queue (ft) | 59 |
| Average Queue (ft) | 16 |
| 95th Queue (ft) | 43 |
| Link Distance (ft) | 59 |
| Upstream Blk Time (\%) | 1 |
| Queuing Penalty (veh) | 0 |
| Storage Bay Dist (ft) |  |
| Storage Blk Time (\%) |  |
| Queuing Penalty (veh) |  |

Intersection: 8: US 64 EB \& Eastern U-Turn Location

| Movement |
| :--- |
| Directions Served |
| Maximum Queue (ft) |
| Average Queue (ft) |
| 95th Queue (ft) |
| Link Distance (ft) |
| Upstream BIk Time (\%) |
| Queuing Penalty (veh) |
| Storage Bay Dist (ft) |
| Storage Blk Time (\%) |
| Queuing Penalty (veh) |
| Intersection: 9: Eastern U-Turn Location \& US 64 WB |


| Movement | NB |
| :--- | ---: |
| Directions Served | L |
| Maximum Queue (ft) | 76 |
| Average Queue (ft) | 24 |
| 95th Queue (ft) | 57 |
| Link Distance (ft) | 60 |
| Upstream Blk Time (\%) | 3 |
| Queuing Penalty (veh) | 1 |
| Storage Bay Dist (ft) |  |
| Storage Blk Time (\%) |  |
| Queuing Penalty (veh) |  |
|  |  |
| Network Summary |  |

Network wide Queuing Penalty: 23

## APPENDIX G

## ITRE 95 ${ }^{\text {th }}$ PERCENTILE QUEUE LENGTH CALCULATIONS

| AM Peak Hour |  |
| ---: | :--- |
| $\mathrm{t}=$ |  |
| CVAF $=$ | $1.00000 \mathrm{E}+00$ |
| Conflicting $=$ | 2,240 |
| ACV $=$ | 2,240 |
| Turn Vol $=$ | 70 |
| PM Peak Hour |  |
| $\mathrm{t}=$ |  |
| CVAF $=$ | 1 |
| Conflicting $=$ | 2,279 |
| ACV $=$ | 2,279 |
| Turn Vol $=$ | 76 |



Right Turn - 95\% Queue Length


Westbound Left-Turn Movement

| AM Peak Hour |  |
| ---: | ---: |
| $\mathrm{t}=$ | 1 |
| CVAF $=$ | 2240 |
| Conflicting $=$ | 2,240 |
| ACV $=$ | 27 |
| Turn Vol $=$ |  |


| PM Peak Hour |  |
| ---: | ---: |
| $\mathrm{t}=$ |  |
| CVAF $=$ | 1 |
| Conflicting $=$ | 2279 |
| ACV $=$ | 2,279 |
| Turn Vol $=$ | 74 |




## APPENDIX H

## TURN LANE WARRANTS



## APPENDIX I

## TRIP GENERATION COMPARISON

Table 1: Trip Generation Summary - Scenario 1

| Land Use <br> (ITE Code) | Intensity | Daily <br> Traffic <br> (vpd) | Weekday <br> AM Peak <br> Hour Trips <br> (vph) |  | Weekday <br> PM Peak <br> Hour Trips <br> (vph) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Enter | Exit | Enter | Exit |  |
| Single-Family Homes <br> $(210)$ | 53 DU | 580 | 11 | 32 | 35 | 20 |
| Multi-Family Homes (Low-Rise) <br> $(220)$ | 103 DU | 741 | 11 | 38 | 38 | 23 |
| Total Trips | $\mathbf{1 , 3 2 1}$ | $\mathbf{2 2}$ | $\mathbf{7 0}$ | $\mathbf{7 3}$ | $\mathbf{4 3}$ |  |

Table 2: Trip Generation Summary - Scenario 2

| Land Use <br> (ITE Code) | Intensity | Daily <br> Traffic <br> (vpd) | Weekday <br> AM Peak <br> Hour Trips <br> (vph) |  | Weekday <br> PM Peak <br> Hour Trips <br> (vph) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Enter | Exit | Enter | Exit |  |  |
| Single-Family Homes <br> $(210)$ | 44 DU | 489 | 9 | 27 | 29 | 17 |
| Multi-Family Homes (Low-Rise) <br> $(220)$ | 107 DU | 768 | 12 | 39 | 39 | 23 |
| Shopping Center <br> $(820)$ | 25 KSF | 944 | 15 | 9 | 45 | 50 |
| Total Trips | $\mathbf{2 , 2 0 1}$ | $\mathbf{3 6}$ | $\mathbf{7 5}$ | $\mathbf{1 1 3}$ | $\mathbf{9 0}$ |  |

Table 3: Trip Generation Summary - Scenario 3

| Land Use (ITE Code) | Intensity | Daily Traffic (vpd) | Weekday AM Peak Hour Trips (vph) |  | Weekday PM Peak Hour Trips (vph) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Enter | Exit | Enter | Exit |
| Single-Family Homes (210) | 59 DU | 640 | 12 | 35 | 38 | 23 |
| Multi-Family Homes (Low-Rise) <br> (220) | 83 DU | 587 | 9 | 31 | 31 | 19 |
| Shopping Center $(820)$ | 25 KSF | 944 | 15 | 9 | 45 | 50 |
| Total Trips |  | 2,171 | 36 | 75 | 114 | 92 |

Table 4: Trip Generation Summary Comparison

| Scenario | Daily Traffic (vpd) | Weekday AM Peak Hour Trips (vph) |  | Weekday PM Peak Hour Trips (vph) |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Enter | Exit | Enter | Exit |
| Scenario 3 [Analyzed in the TIA] | 2,171 | 36 | 75 | 114 | 92 |
| Scenario 1 Difference (+/-) <br> [Scenario 1 - Scenario 3] | -850 | -14 | -5 | -41 | -49 |
| Scenario 2 Difference (+/-) <br> [Scenario 2 - Scenario 3] | +30 | 0 | 0 | -1 | -2 |

## Planning Board Report to Town Council

Rezoning Case: 22CZ06 Yellowbridge PUD
Planning Board Meeting Date: July 11, 2022


## Report Requirements:

Per NCGS §160D-604(b), all proposed amendments to the zoning ordinance or zoning map shall be submitted to the Planning Board for review and comment. If no written report is received from the Planning Board within 30 days of referral of the amendment to the Planning Board, the Town Council may act on the amendment without the Planning Board report. The Town Council is not bound by the recommendations, if any, of the Planning Board.

Per NCGS §160D-604(d), the Planning Board shall advise and comment on whether the proposed action is consistent with all applicable officially adopted plans, and 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 officially adopted plans shall not preclude consideration or approval of the proposed amendment by the Town Council.

## PROJECT DESCRIPTION:

| Acreage: |  | 48.24 |
| :--- | :--- | :--- |
| PIN(s): |  | $0722743789 \& 0722752304$ |
| Current Zoning: |  | Rural Residential (RR) |
|  | Proposed Zoning: | Planned Unit Development-Conditional Zoning (PUD-CZ) |
| Current 2045 Land Use Map: |  | Medium Density Residential |

If rezoned as proposed, the 2045 Land Use Map Designation will change to: Medium Density Residential and Commercial Services
Town Limits: ETJ

## Applicable Officially Adopted Plans:

The Board must state whether the project is consistent or inconsistent with the following officially adopted plans, if applicable. Applicable plans have a check mark next to them.
( 2045 Land Use Map
( $\checkmark$ Consistent
$\square$ Inconsistent
Reason: If rezoned, the 2045 Land Use
Map will automatically be amended to Medium Density Residential and Commercial Services.
( Apex Transportation Plan
( Consistent
Inconsistent
Reason: $\qquad$
$\checkmark$ Parks, Recreation, Open Space, and Greenways Plan
( ConsistentInconsistent
Reason: $\qquad$
$\qquad$
$\qquad$

## Planning Board Report to Town Council

Rezoning Case: 22CZ06 Yellowbridge PUD
Planning Board Meeting Date: July 11, 2022

## Legislative Considerations:

The applicant shall propose site-specific standards and conditions that take into account the following considerations, which are considerations that are relevant to the legislative determination of whether or not the proposed conditional zoning district rezoning request is in the public interest. These considerations do not exclude the legislative consideration of any other factor that is relevant to the public interest.

1. Consistency with 2045 Land Use Plan. The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and consistency with the purposes, goals, objectives, and policies of the 2045 Land Use Plan.
$\checkmark$ Consistent
Inconsistent
Reason: If rezoned, the 2045 Land Use

Map will automatically be amended to Medium Density Residential and Commercial Services.
2. Compatibility. The proposed Conditional Zoning (CZ) District use's appropriateness for its proposed location and compatibility with the character of surrounding land uses.
$\square$ Consistent
Inconsistent . Reason:
$\qquad$
3. Zoning district supplemental standards. The proposed Conditional Zoning (CZ) District use's compliance with Sec. 4.4 Supplemental Standards, if applicable.
$\square$ Consistent $\square$ Inconsistent
Reason: $\qquad$
4. Design minimizes adverse impact. The design of the proposed Conditional Zoning (CZ) District use's minimization of adverse effects, including visual impact of the proposed use on adjacent lands; and avoidance of significant adverse impacts on surrounding lands regarding trash, traffic, service delivery, parking and loading, odors, noise, glare, and vibration and not create a nuisance.
$\checkmark$ Consistent
Inconsistent
Reason: $\qquad$
5. Design minimizes environmental impact. The proposed Conditional Zoning District use's minimization of environmental impacts and protection from significant deterioration of water and air resources, wildlife habitat, scenic resources, and other natural resources.
$\square$ Consistent $\square$ Inconsistent Reason: $\qquad$
6. Impact on public facilities. The proposed Conditional Zoning (CZ) District use's avoidance of having adverse impacts on public facilities and services, including roads, potable water and wastewater facilities, parks, schools, police, fire and EMS facilities.
$\qquad$
Consistent
Inconsistent
Reason:
7. Health, safety, and welfare. The proposed Conditional Zoning (CZ) District use's effect on the health, safety, or welfare of the residents of the Town or its ETJ.
$\qquad$
$\square$ Consistent
Inconsistent
Reason:
$\qquad$
$\qquad$
8. Detrimental to adjacent properties. Whether the proposed Conditional Zoning (CZ) District use is substantially detrimental to adjacent properties.
$\square$ Consistent
$\square$ Inconsistent
Reason: $\qquad$
9. Not constitute nuisance or hazard. Whether the proposed Conditional Zoning (CZ) District use constitutes a nuisance or hazard due to traffic impact or noise, or because of the number of persons who will be using the Conditional Zoning (CZ) District use.
$\qquad$
Consistent
Inconsistent
Reason:
10. Other relevant standards of this Ordinance. Whether the proposed Conditional Zoning (CZ) District use complies with all standards imposed on it by all other applicable provisions of this Ordinance for use, layout, and general development characteristics.
$\checkmark$ Consistent
Inconsistent
Reason: $\qquad$

## Planning Board Recommendation:

Motion: Io recommend approval as presented with additional condition t
Introduced by Planning Board member:
Keith Braswell
Seconded by Planning Board member: Ryan Akers
$\square$ Approval: the project is consistent with all applicable officially adopted plans and the applicable legislative considerations listed above.
$\checkmark$ Approval with conditions: the project is not consistent with all applicable officially adopted plans and/or the applicable legislative considerations as noted above, so the following conditions are recommended to be included in the project in order to make it fully consistent:

As presented with additional condition:
$6^{\text {6 }}$ opaque privacy fence shall be installed by developer along inside of the buffer along southern property line.
$\qquad$
$\qquad$
$\square$ Denial: the project is not consistent with all applicable officially adopted plans and/or the applicable legislative considerations as noted above.

With 4 Planning Board Members) voting "aye"
With 3 Planning Board Members) voting "no"

Reasons for dissenting votes:
Sarah Soh - 1) no clear community entry, 2) scale and proportion is off, i3) insufficient space in $\qquad$ schools, 4) Chanticlair connection might be beltway (see attached). Mark Steele - agree with 1-3.
Tina Sherman - agree with 1-4; also, developer should contnue to work with neighbors as was done
for Morris Tract, but neighbors need to come up with a more cohesive ask.
This report reflects the recommendation of the Planning Board, this the $\quad 11$ th day of July 2022. Attest:


Reggie Skinner, Planning Board Chair
Dianne Khin, Director of Planning and Community Development

1. No clear community entrylexit design from bet. only Existing driveway to be used as construction access: which may not hold weight of construction trucks o equipment. Using this driveway goes over the stream as construction access will affect the environment with all the construction debris.
2. Scale and proportion of lot widths and sizes of homes are not gradual. There needs to be a transition: sweetwater community to the west lots are tighter, to Abbington and Stratford community wider lots, beg ger homes.
3. Insufficient space in elementary and high schools
4. Chanticlarr connection may become "beltway" with traffic holdup. from construction trucks in o out on 64 .

ENDNote: this is a work in progress from both sides of encourage the conversations with community and Lemur to continue.

TOWN OF APEX
POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

Pursuant to the provisions of North Carolina General Statutes §160D-602 and to the Town of Apex Unified Development Ordinance (UDO) Section 2.2.11, notice is hereby given of public hearings before the Planning Board of the Town of Apex. The purpose of these hearings is to consider the following:

Applicant: Lennar Carolinas, LLC./Matthew Carpenter, Parker Poe
Authorized Agent: Tucker Ennis, Lennar Carolinas, LLC.
Property Addresses: 2813 \& 2817 US 64 Highway
Acreage: $\pm 48.24$ acres
Property Identification Numbers (PINs): 0722743789 \& 0722752304
Current 2045 Land Use Map Designation: Medium Density Residential
If rezoned as proposed, the 2045 Land Use Map Designation will change to: Medium Density Residential \&
Commercial Services
Existing Zoning of Properties: Rural Residential (RR)
Proposed Zoning of Properties: Planned Unit Development-Conditional Zoning (PUD-CZ)
Public Hearing Location: Apex Town Hall
Council Chamber, $2^{\text {nd }}$ Floor
73 Hunter Street, Apex, North Carolina

## Planning Board Public Hearing Date and Time: July 11, 2022 4:30 PM

You may attend the meeting in person or view the meeting through the Town's YouTube livestream at: https://www.youtube.com/c/townofapexgov. Please visit www.apexnc.org on the day of the meeting to confirm whether the meeting will be held in-person or remotely.

If you are unable to attend, you may provide a written statement by email to public.hearing@apexnc.org, or submit it to the clerk of the Planning Board, Jeri Pederson (73 Hunter Street or USPS mail - P.O. Box 250, Apex, NC 27502), at least two business days prior to the Planning Board vote. You must provide your name and address for the record. The written statements will be delivered to the Planning Board prior to their vote. Please include the Public Hearing name in the subject line.

In the event that the Planning Board meeting is held remotely or with at least one member attending virtually, written comments may be submitted up to 24 hours prior to the scheduled time of the meeting per NCGS §166A-19.24 according to the methods specified above. Virtual meetings may be viewed via the Town's YouTube livestream at https://www.youtube.com/c/townofapexgov.

A separate notice of the Town Council public hearing on this project will be mailed and posted in order to comply with State public notice requirements.

Vicinity Map:


Property owners, tenants, and neighborhood associations within 300 feet of the proposed conditional zoning have been sent this notice via first class mail. All interested parties may submit comments with respect to the application by the means specified above. In addition to the above map, the location of the property may be viewed online at https://maps.raleighnc.gov/imaps. The 2045 Land Use Map may be viewed online at www.apexnc.org/DocumentCenter/View/478. You may call 919-249-3426, Department of Planning and Community Development, with questions or for further information. To view the petition and related documents on-line: https://www.apexnc.org/DocumentCenter/View/38520/22CZO6.

Dianne F. Khin, AICP
Director of Planning and Community Development


NOTIFICACIÓN PÚBLICA DE AUDIENCIAS PÚBLICAS
ORDENAMIENTO TERRITORIAL CONDICIONAL \#22CZO6
Yellowbridge PUD (Desarrollo de Unidad Planificada)

De conformidad con las disposiciones de los Estatutos Generales de Carolina del Norte §160D-602 y con la Sección 2.2.11 de la Ordenanza de Desarrollo Unificado (UDO) del ayuntamiento de Apex, por la presente se notifican las audiencias públicas ante el Consejo Municipal del Ayuntamiento de Apex. El propósito de estas audiencias es considerar lo siguiente:

Solicitante: Lennar Carolinas, LLC./Matthew Carpenter, Parker Poe
Agente autorizado: Tucker Ennis, Lennar Carolinas, LLC.
Dirección de las propiedades: 2813 \& 2817 US 64 Highway
Superficie: $\pm 48.24$ acres
Números de identificación de las propiedades: 0722743789 \& 0722752304
Designación actual en el Mapa de Uso Territorial para 2045: Medium Density Residential
Si se aprueba el cambio de zonificación como se propone, el Mapa de Uso Territorial para el 2045 cambiará a:
Medium Density Residential \& Commercial Services
Ordenamiento territorial existente de las propiedades: Residencial Rural (RR)
Ordenamiento territorial propuesto para las propiedades: Desarrollo de Unidad Planificada-Ordenamiento Territorial Condicional (PUD-CZ)

Lugar de la audiencia pública: Ayuntamiento de Apex
Cámara del Consejo, 2ㅇ piso
73 Hunter Street, Apex, Carolina del Norte
Los comentarios recibidos antes de la audiencia pública de la Junta de Planificación no se proporcionarán al Consejo Municipal. Los comentarios para la audiencia pública del Consejo Municipal deben presentarse por separado en el plazo especificado a continuación.

## Fecha y hora de la audiencia pública del Consejo Municipal: 26 de julio de 2022 6:00 P.M.

Puede asistir a la reunión de manera presencial o seguir la transmisión en directo por YouTube a través del siguiente enlace: https://www.youtube.com/c/townofapexgov.

Si no puede asistir, puede enviar una declaración escrita por correo electrónico a public.hearing@apexnc.org, o presentarla a la oficina del Secretario Municipal ( 73 Hunter Street o por correo USPS a P.O. Box 250, Apex, NC 27502), al menos dos días hábiles antes de la votación del Consejo Municipal. Debe proporcionar su nombre y dirección para que conste en el registro. Las declaraciones escritas se entregarán al Consejo Municipal antes de la votación. No olvide incluir el nombre de la audiencia pública en el asunto.

En caso de que la reunión del Consejo Municipal se lleve a cabo remotamente o que por lo menos uno de los miembros asista virtualmente, se permite presentar comentarios por escrito hasta 24 horas antes de la hora programada de la reunión según los estatutos de Carolina del Norte NCGS §166A-19.24 siguiendo los métodos especificados anteriormente. Las reuniones virtuales se pueden seguir en la transmisión en directo por YouTube a través del siguiente enlace: https://www.youtube.com/c/townofapexgov.

Mapa de las inmediaciones:


Los propietarios, inquilinos y asociaciones de vecinos en un radio de 300 pies del Ordenamiento Territorial Condicional propuesto han recibido esta notificación por correo postal de primera clase. Todas las partes interesadas pueden presentar comentarios sobre la solicitud a través de los medios especificados anteriormente. La ubicación de la propiedad también puede verse aquí: https://maps.raleighnc.gov/imaps. Puede ver el Mapa de Uso Territorial para 2045 aquí: www.apexnc.org/DocumentCenter/View/478. Si tiene preguntas o desea obtener más información, puede comunicarse con el Departamento de Planificación y Desarrollo Comunitario al 919-249-3426. Puede ver la solicitud y otros documentos relacionados aquí: https://www.apexnc.org/DocumentCenter/View/38520/22CZO6.

Dianne F. Khin, AICP
Directora de Planificación y Desarrollo Comunitario

## $\equiv$ AGENDA

$2 / 2 \mid-50 \%+\infty$

##     anser iomet






## TOWN OF APEX

POST OFFICE BOX 250
APEX, NORTH CAROLINA 27502
PHONE 919-249-3426

# AFFIDAVIT CERTIFYING <br> Public Notification - Written (Mailed) Notice 

Section 2.2.11
Town of Apex Unified Development Ordinance

| Project Name: | Conditional Zoning \#22CZO6 <br> Yellowbridge PUD |
| :--- | :--- |
| Project Location: | $2813 \& 2817$ US 64 Highway |
| Applicant or Authorized Agent: | Tucker Ennis |
| Firm: | Lennar Carolinas, LLC. |

This is to certify that I , as Director of Planning and Community Development, mailed or caused to have mailed by first class postage for the above mentioned project on June 24, 2022, a notice containing the time and place, location, nature and scope of the application, where additional information may be obtained, and the opportunity for interested parties to be heard, to the property owners and tenants within 300' of the land subject to notification. I further certify that I relied on Wake County Tax Assessor information and the Town of Apex Master Address Repository provided to me by Town of Apex GIS Staff as to accuracy of the list and accuracy of mailing addresses of property owners and tenants within 300' of the land subject to notification.


## STATE OF NORTH CAROLINA COUNTY OF WAKE

Sworn and subscribed before me, Teri Chastain Pederson , a Notary Public for the above day of June , 202 2. day of June , 202 2. day of June , 202 2.
State and County, this the

$$
27
$$



My Commission Expires: 3,1012024

Pursuant to the provisions of North Carolina General Statutes §160D-602 and to the Town of Apex Unified Development Ordinance (UDO) Section 2.2.11, notice is hereby given of public hearings before the Town Council of the Town of Apex. The purpose of these hearings is to consider the following:

Applicant: Lennar Carolinas, LLC/Matthew Carpenter, Parker Poe
Authorized Agent: Tucker Ennis, Lennar Carolinas, LLC
Property Addresses: 2813 \& 2817 US 64 Highway
Acreage: $\pm 48.24$ acres
Property Identification Numbers (PINs): 0722743789 \& 0722752304
Current 2045 Land Use Map Designation: Medium Density Residential
If rezoned as proposed, the 2045 Land Use Map Designation will change to: Medium Density Residential \&
Commercial Services
Existing Zoning of Properties: Rural Residential (RR)
Proposed Zoning of Properties: Planned Unit Development-Conditional Zoning (PUD-CZ)
Public Hearing Location: Apex Town Hall
Council Chamber, $2^{\text {nd }}$ Floor
73 Hunter Street, Apex, North Carolina
Comments received prior to the Planning Board public hearing will not be provided to the Town Council. Separate comments for the Town Council public hearing must be provided by the deadline specified below.
Town Council Public Hearing Date and Time: July 26, 2022 6:00 PM
You may attend the meeting in person or view the meeting through the Town's YouTube livestream at: https://www.youtube.com/c/townofapexgov. Please visit www.apexnc.org on the day of the meeting to confirm whether the meeting will be held in-person or remotely.
If you are unable to attend, you may provide a written statement by email to public.hearing@apexnc.org, or submit it to the Office of the Town Clerk (73 Hunter Street or USPS mail - P.O. Box 250, Apex, NC 27502), at least two business days prior to the Town Council vote. You must provide your name and address for the record. The written statements will be delivered to the Town Council members prior to their vote. Please include the Public Hearing name in the subject line.
In the event that the Town Council meeting is held remotely or with at least one member attending virtually, written comments may be submitted up to 24 hours prior to the scheduled time of the meeting per NCGS §166A-19.24 according to the methods specified above. Virtual meetings may be viewed via the Town's YouTube livestream at https://www.youtube.com/c/townofapexgov.
Vicinity Map:


Property owners, tenants, and neighborhood associations within 300 feet of the proposed conditional zoning have been sent this notice via first class mail. All interested parties may submit comments with respect to the application by the means specified above. In addition to the above map, the location of the property may be viewed online at https://maps.raleighnc.gov/imaps. The 2045 Land Use Map may be viewed online at www.apexnc.org/DocumentCenter/View/478. You may call 919-249-3426, Department of Planning and Community Development, with questions or for further information. To view the petition and related documents on-line: https://www.apexnc.org/DocumentCenter/View/38520/22CZ06.

NOTIFICACIÓN PÚBLICA DE AUDIENCIAS PÚBUICAS ORDENAMIENTO TERRITORLLL CONDICONNAL \#21CZZ31
Yellombridge PUO (Desarrollo de Unidad Planificada]








NOTIFICACIÓN PÚBLICA DE AUDIENCIAS PÚBLICAS
ORDENAMIENTO TERRITORIAL CONDICIONAL \#22CZO6
Yellowbridge PUD (Desarrollo de Unidad Planificada)

De conformidad con las disposiciones de los Estatutos Generales de Carolina del Norte §160D-602 y con la Sección 2.2.11 de la Ordenanza de Desarrollo Unificado (UDO) del ayuntamiento de Apex, por la presente se notifican las audiencias públicas ante el Consejo Municipal del Ayuntamiento de Apex. El propósito de estas audiencias es considerar lo siguiente:

Solicitante: Lennar Carolinas, LLC./Matthew Carpenter, Parker Poe
Agente autorizado: Tucker Ennis, Lennar Carolinas, LLC.
Dirección de las propiedades: 2813 \& 2817 US 64 Highway
Superficie: $\pm 48.24$ acres
Números de identificación de las propiedades: 0722743789 \& 0722752304
Designación actual en el Mapa de Uso Territorial para 2045: Medium Density Residential
Si se aprueba el cambio de zonificación como se propone, el Mapa de Uso Territorial para el 2045 cambiará a:
Medium Density Residential \& Commercial Services
Ordenamiento territorial existente de las propiedades: Residencial Rural (RR)
Ordenamiento territorial propuesto para las propiedades: Desarrollo de Unidad Planificada-Ordenamiento Territorial Condicional (PUD-CZ)

Lugar de la audiencia pública: Ayuntamiento de Apex
Cámara del Consejo, 2ㅇ piso
73 Hunter Street, Apex, Carolina del Norte
Los comentarios recibidos antes de la audiencia pública de la Junta de Planificación no se proporcionarán al Consejo Municipal. Los comentarios para la audiencia pública del Consejo Municipal deben presentarse por separado en el plazo especificado a continuación.

## Fecha y hora de la audiencia pública del Consejo Municipal: 26 de julio de 2022 6:00 P.M.

Puede asistir a la reunión de manera presencial o seguir la transmisión en directo por YouTube a través del siguiente enlace: https://www.youtube.com/c/townofapexgov.

Si no puede asistir, puede enviar una declaración escrita por correo electrónico a public.hearing@apexnc.org, o presentarla a la oficina del Secretario Municipal ( 73 Hunter Street o por correo USPS a P.O. Box 250, Apex, NC 27502), al menos dos días hábiles antes de la votación del Consejo Municipal. Debe proporcionar su nombre y dirección para que conste en el registro. Las declaraciones escritas se entregarán al Consejo Municipal antes de la votación. No olvide incluir el nombre de la audiencia pública en el asunto.

En caso de que la reunión del Consejo Municipal se lleve a cabo remotamente o que por lo menos uno de los miembros asista virtualmente, se permite presentar comentarios por escrito hasta 24 horas antes de la hora programada de la reunión según los estatutos de Carolina del Norte NCGS §166A-19.24 siguiendo los métodos especificados anteriormente. Las reuniones virtuales se pueden seguir en la transmisión en directo por YouTube a través del siguiente enlace: https://www.youtube.com/c/townofapexgov.

Mapa de las inmediaciones:


Los propietarios, inquilinos y asociaciones de vecinos en un radio de 300 pies del Ordenamiento Territorial Condicional propuesto han recibido esta notificación por correo postal de primera clase. Todas las partes interesadas pueden presentar comentarios sobre la solicitud a través de los medios especificados anteriormente. La ubicación de la propiedad también puede verse aquí: https://maps.raleighnc.gov/imaps. Puede ver el Mapa de Uso Territorial para 2045 aquí: www.apexnc.org/DocumentCenter/View/478. Si tiene preguntas o desea obtener más información, puede comunicarse con el Departamento de Planificación y Desarrollo Comunitario al 919-249-3426. Puede ver la solicitud y otros documentos relacionados aquí: https://www.apexnc.org/DocumentCenter/View/38520/22CZO6.

Dianne F. Khin, AICP
Directora de Planificación y Desarrollo Comunitario



## TOWN OF APEX

POST OFFICE BOX 250

# AFFIDAVIT CERTIFYING <br> Public Notification - Written (Mailed) Notice 

Section 2.2.11
Town of Apex Unified Development Ordinance

Project Name:

Project Location:

Applicant or Authorized Agent:

Firm:
Conditional Zoning \#22CZO6
Yellowbridge PUD
2813 \& 2817 US 64 Highway

Tucker Ennis

Sennar Carolinas, LLC

This is to certify that $I$, as Director of Planning and Community Development, mailed or caused to have mailed by first class postage for the above mentioned project on July 1, 2022, a notice containing the time and place, location, nature and scope of the application, where additional information may be obtained, and the opportunity for interested parties to be heard, to the property owners and tenants within 300 of the land subject to notification. I further certify that I relied on information from the Wake County Tax Assessor and the Town of Apex Master Address Repository provided to me by Town of Apex GIS Staff as to accuracy of the list and accuracy of mailing addresses of property owners and tenants within 300' of the land subject to notification.


## STATE OF NORTH CAROLINA COUNTY OF WAKE

sworn and subscribed before me, Jeri Chastain Pederson , a Notary Public for the above State and County, this the $\square$ day of July , 2022 .



## Student Assignment

5625 Dillard Drive
Cary, NC, 27518
Email: studentassignment@wcpss.net
April 13, 2022
Dianne Khin, AICP
Director, Department of Planning and Community Development
Town of Apex
Dianne.Khin@apexnc.org
Dear Dianne,
The Wake County Public School System (WCPSS) Office of School Assignment received information about a proposed rezoning/development within the Town of Apex planning area. We are providing this letter to share information about WCPSS's capacity related to the proposal. The following information about the proposed rezoning/development was provided through the Wake County Residential Development Notification database:

- Date of application: March 1,2022
- Name of development: 22 CZo6 Yellowbridge PUD
- Address of rezoning: 2813 \& 2817 US 64 Hwy W
- Total number of proposed residential units: 170
- Type(s) of residential units proposed: 130 Townhomes, 40 Single-family detached

Based on the information received at the time of application, the Office of School Assignment is providing the following assessment of possible impacts to the Wake County Public School System:Schools at all grade levels within the current assignment area for the proposed rezoning/development are anticipated to have sufficient capacity for future students.
$\square$ Schools at the following grade levels within the current assignment area for the proposed rezoning/development are anticipated to have insufficient capacity for future students; transportation to schools outside of the current assignment area should be anticipated:
$\nabla \quad$ Elementary $\quad \square \quad$ Middle $\quad \nabla \quad$ High
The following mitigation of capacity concerns due to school construction or expansion is anticipated:Not applicable - existing school capacity is anticipated to be sufficient.School expansion or construction within the next five years is not anticipated to address concerns.
$\square$ School expansion or construction within the next five years may address concerns at these grade levels:
$\checkmark \quad$ Elementary $\quad \square \quad$ Middle $\quad \checkmark \quad$ High
Thank you for sharing this information with the Town of Apex Planning Board and Town Council as they consider the proposed rezoning/development.

Sincerely,



[^0]:    Use additional sheets, if necessary.

[^1]:    Applicant's Response:
    We anticipate that most residents will use the US-64 entrance/exit and expect it will also be a benefit for Abbington residents. We are in the process of completing a Traffic Impact Analysis which will take into account existing traffic and new traffic from the proposed development, and recommend road improvements if necessary.

[^2]:    Applicant's Response: These represent conceptual open space and play lawn locations. Specific open space and play lawn locations will be finalized at the subdivision phase, following rezoning, so these locations could change.

[^3]:    ${ }^{1}$ Land Use Codes (LUCs) from Trip Generation Manual , published by the Institute of Transportation Engineers.
    ${ }^{2}$ Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.
    ${ }^{3}$ Enter trips assuming no transit or non-motorized trips (as assumed in ITE Trip Generation Manual).
    ${ }^{4}$ Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.
    ${ }^{5}$ Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.
    ${ }^{6}$ Person-Trips
    *Indicates computation that has been rounded to the nearest whole number.
    Estimation Tool Developed by the Texas A\&M Transportation Institute - Version 2013.1

[^4]:    ${ }^{1}$ Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

    ## ${ }^{2}$ Person-Trips

    ${ }^{3}$ Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator *Indicates computation that has been rounded to the nearest whole number.

[^5]:    ${ }^{1}$ Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P
    ${ }^{2}$ Person-Trips
    ${ }^{3}$ Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator
    *Indicates computation that has been rounded to the nearest whole number.

