Z-13-06-002

Planning & Community Development
Zoning Staff Report and Plan Amendment Evaluation

Zoning Commission Hearing Date: June 10, 2013

GENERAL INFORMATION

APPLICANT	Alan Duncan, Chairman for Guilford County Board of Education
HEARING TYPE	Original Zoning
REQUEST	**County AG** (Conditional Use-Agriculture) and **County RS-40** (Residential Single-family) to **City CD-PI** (Conditional District-Public Institutional)
CONDITIONS	1. Uses limited to elementary and secondary schools
LOCATION	**3511 East Lee Street**, generally described as the east side of East Lee Street and south of Sharpe Road.
PARCEL ID NUMBER(S)	**7883555862**
PUBLIC NOTIFICATION	The notification area for this public hearing was 600 feet (Chapter 30-4-1.4 of the Land Development Ordinance requires notification of the owner of that parcel of land and the owners of all parcels of land adjoining and contiguous to that parcel of land as shown on the County tax listing). **67** notices were mailed to those property owners in the mailing area.
TRACT SIZE	~29.614 Acres
TOPOGRAPHY	Undulating
VEGETATION	Wooded

SITE DATA

Existing Use Single-family

	Adjacent Zoning	**Adjacent Land Uses**
N	County AG (Agriculture)	Single-family dwelling
E	County AG (Agriculture)	Single-family dwelling
W	County RS-40 (Residential Single-family) and LB (Limited Business)	Single-family dwelling and curb market store

S County RS-40 (Residential Single-family) Single-family dwellings and County AG (Agriculture)

Zoning History

Case #	Date	Request Summary
N/A	N/A	Currently outside the City limits

ZONING DISTRICT STANDARDS

District Summary *

Zoning District Designation:	Existing **(County RS-40 and AG)**	Requested **(City CD-PI)**
Max. Density:		
Typical Uses	Agricultural District is primarily intended to accommodate uses of an agricultural nature including farm residences and farm tenant housing. It also accommodates scattered nonfarm residences on large tracts of land. It is not intended for major residential subdivisions. The RS-40 residential single-family District is primarily intended to accommodate single-family detached dwellings on large lots.	Primarily intended to accommodate mid- and large-sized public, quasi-public, and institutional uses which have a substantial land use impact or traffic generation potential. It is not intended for smaller public and institutional uses customarily found with-in residential areas

***These regulations may not reflect all requirements for all situations; see the City of Greensboro Development Ordinance for all applicable regulations for site requirements for this zoning district.*

SPECIAL INFORMATION

Overlay District Ordinance/Historic Preservation

N/A

Environmental/Soils

Water Supply Watershed Site drains to Lake MacIntosh Watersupply Watershed WSIV

Floodplains >2000ft

Streams Stream onsite, Intermittent streams require a 50ft buffer measured from top of bank. - Zone 1first 30ft undisturbed, Zone 2 next 20ft vegetated zone. Perennial streams for High Density development require 100ft stream buffer, measured from top of bank - Zone 1first 30ft undisturbed, Zone 2 next 20ft vegetated zone, Zone 3 50ft No BUA allowed. Any stream buffer disturbance requires a Buffer Authorization Certificate. A letter of 'No Practical Alternative' must be submitted to Stormwater for Buffer Authorization.

Other: Site must meet current Watersupply Watershed requirements. All Built Upon Area (BUA) must be treated by a State approved BMP. Any disturbance within the FEMA Floodplain requires a Floodplain Development Permit.

Utilities

Potable Water Water and sewer will need to be extended to serve this site to COG/NCDENR standards per feasibility request. Contact Kenny Treadway #336-373-2897 with questions. Pending sewer extension capacity appears to be in line with request. Water capacity also appears to be available; however, the applicant is not interested in extending water at this time.

Waste Water

Airport Noise Cone

The subject property is not located in the Airport Noise Cone.

Landscaping Requirements

E. Lee St. - Street Yard – minimum width 10'; 2 canopy trees per 100', 17 shrubs per 100'

Adjoining Single Family Homes: Type B Yard – average width 25'; 3 canopy trees per 100', 5 understory trees per 100', 25 shrubs per 100'

Parking Lot Landscaping

Requiring landscaping within parking areas is intended to shade and improve the attractiveness of large areas of pavement.

Required Landscaping

Parking lot planting yards must include at least one canopy tree for every 12 parking spaces.

Required canopy tree areas must be located within the parking lot. They may be located in landscape islands, landscape divider medians between rows of parking, or in driveway medians.

Islands or other planting areas for canopy trees must have a minimum area of 200 square feet with a minimum dimension of 7 feet, measured in any direction. Islands or planting areas of less than 200 square feet may not be counted toward satisfying parking lot landscaping requirements.

The landowner may provide required landscape islands or planting areas using one or more of the planting area sizes below. Each parking space must be entirely within the designated distance of a parking lot planting area as specified below:

Table 10–4: Location of Parking Lot Planting Areas		
Size of Parking Lot Planting Area (sq. ft.)	**Number of Trees In Planting Area**	**Max. Distance from Parking Space (feet)**
200-499	1	100 (1)
500-899	3	130
(1) Canopy trees installed as part of a required planting yard that abuts the parking lot may be used for up to 50% of the required distance		

Grouping canopy trees within the same landscape island or planting area is strongly encouraged, even if this would decrease the number of islands within the parking lot.

When a parking lot or other vehicular use area abuts a vacant site or a site with the same land use classification as the subject site, a planting yard with a minimum width of 5 feet must be provided between the parking lot/vehicular use area and the abutting (interior) property line. This required planting area must be landscaped with at least 2 understory trees and 18 evergreen shrubs per 100 linear feet.

Trees used to satisfy the planting requirements for parking lot areas may not be counted toward the planting requirements for other required plantings on the site.

Tree Preservation Requirements

Acreage	**Requirements**
21.164 ac.	10% of lot size.

Transportation

Street Classification: East Lee Street – Major Thoroughfare.
Causey Lake Road – Major Thoroughfare.
Sharpe Road – Minor Thoroughfare.

Site Access: All access must be designed and constructed to the City of Greensboro standards.

Traffic Counts: East Lee Street ADT – 4,300 (NCDOT, 2011).
Sharpe Road ADT – 3,800 (NCDOT, 2011).

Trip Generation: 24 Hour = 1,043, AM Peak Hour = 684, PM Peak Hour = 270.

Sidewalks:	Sidewalks are a requirement of the Development Ordinance. 5' sidewalk with a 5' grass strip is required along both sides of thoroughfares. 5' sidewalk with a 3' grass strip is required along one side (at a minimum, collectors may require sidewalk on both sides) of all other street types. Sidewalk does not exist along the frontage of this property.
Transit in Vicinity:	No.
Traffic Impact Study: (TIS)	Yes, required per TIS Ordinance. Please see the end of this staff report for the Executive Summary of the TIS.
Street Connectivity:	N/A.
Other:	NCDOT to install traffic signal at East Lee Street and Sharpe Road - Fall of 2013.

IMPACT ANALYSIS

Land Use Compatibility
The proposed **CD-PI (Conditional District-Public and Institutional)** zoning would allow land uses that are compatible with the general character of the area.

Connections 2025 Comprehensive Plan Policies
The Generalized Future Land Use Map (G-FLUM) designates this location as **Low Residential**. The requested **CD-PI (Conditional District-Public and Institutional)** zoning district, as conditioned, is generally consistent with this GFLUM designation. The Growth Strategy Map designates the subject site as being within **Growth Tier 2, Intermediate Growth Area (2013 – 2019)**.

Connections 2025 Written Policies

Land Use Goal 4.3 – Growth at the Fringe: Provide a development framework for the fringe that guides sound, sustainable patterns of land use, limits sprawl, protects rural character, evidences sound stewardship of the environment, and provides for efficient provision of public services and facilities as the City expands. Development will increase density and mix land uses at a pedestrian scale with sidewalks, bikeways, and where possible, public transit.

Policy 4F - Initiate a fringe area growth management framework comprising the following elements:

- A Fringe Area Land Use Plan;
- A "tiered" approach that designates growth areas for staged development, annexation, and extension of public facilities;
- Specific criteria for water and sewer extensions and annexations;
- Designation of the fringe as Greensboro's extraterritorial jurisdiction; and
- A proactive plan to provide infrastructure in advance of development, consistent with the growth "tiers" and Fringe Area Land Use Plan.

Community Character Goal 5.2 – Man-Made Environment: Preserve and enhance the character and visual quality of Greensboro's built environment, including historic resources, private developments, and public landscapes.

Policy 5E – Improve the aesthetic quality of publicly owned and maintained landscapes.

Transportation, Goal 8: Develop and maintain a safe, efficient, and environmentally sound transportation system that provides convenient choices for accessing destinations throughout Greensboro and the Triad, including a range of well-integrated transit, pedestrian, and bicycle linkages.

Policy 8A - Maintain a roadway network that safely and efficiently accommodates vehicular traffic while supporting other community objectives defined in the Comprehensive Plan.

Community Facilities, Services, and Infrastructure, Goal 9: Provide community facilities, services, and infrastructure in a cost-effective manner to meet citizens' needs, contribute to quality of life, and support desired land use patterns.

Policy 9A - Proactively target infrastructure (water/sewer) extensions to support desired land use patterns.

Connections 2025 Map Policies

Low Residential (3-5 d.u./acre): This category includes the City's predominantly single-family neighborhoods as well as other compatible housing types that can be accommodated within this density range. Although there are some existing residential areas in the City developed on lots greater than 1/3 acre, future residential developments and "conventional" subdivisions should generally maintain a gross density of no less than three dwellings per acre, except where environmental constraints (e.g., the Watershed Critical Area) prevent such densities from being achieved. Compact developments that include clustered, small lots with substantial retained open space are encouraged.

Growth Tier 2, Intermediate Growth Area (2013 – 2019): Where growth, annexation, and the extension of public facilities is anticipated in 6 to 12 years, and where premature, fragmented, leapfrog, or inefficient development shall be discouraged by the City and County. Annexations will be discouraged until the full complement of City services can be efficiently provided, which is currently projected beyond the 6-year horizon.

CONFORMITY WITH OTHER PLANS

City Plans

Consolidated Plan 2010-2014: Plan for a Resilient Community

Principle 1 – Provide More Transportation Choices:

- **Goal A:** Promote transportation and development patterns and types that contribute to decreased household transportation costs.
- **Goal B:** Improve access to destinations, especially via alternate modes (public transit, walking, and bicycling); including the critical first and last miles of journeys.
- **Goal C:** Improve the safety of transportation systems and facilities, especially for vulnerable transportation users (children, seniors, handicapped adults, pedestrians, bicyclists).
- **Goal G:** Improve the quality, convenience, and reliability of transportation systems and facilities, especially for alternate modes.

Principle 6 – Value Communities and Neighborhoods:

- **Goal A:** Promote coordinated transportation and land use decisions for broader livability throughout Greensboro.
- **Goal C:** Promote Healthy Lifestyles and Complete, Livable Neighborhoods.

Principle 7 – Recognize The Environment as a Critical Element of Community Sustainability:

- **Goal A:** Promote more efficient land development patterns.
- **Goal D:** Address the issue of environmental justice in the location of new facilities, new residential development, etc.

Other Plans

n/a

Staff/Agency Comments

Community Development

Applicant is strongly encouraged to discuss the proposed annexation, original zoning, and development with owners of surrounding properties.

Provision of secure, accessible bicycle parking facilities on the subject site, and development of safe, appealing, convenient walking and bicycling routes to, and within, the subject site would greatly enhance the long-term transportation efficiency and safety of the proposed development, and may also yield behavioral and academic benefits.

Planning

This original zoning request is accompanied by a voluntary annexation petition signed by the property owner. The 29.614 acre parcel is partially developed with a single-family dwelling and is intended for development as a future elementary school.

The subject site is adjoined on the north, south, and east by County AG zoning, developed as large agricultural lots, containing single family dwellings. To the west the development remains primarily residential in nature; however, the 40,000 square feet single family lots are zoned County RS-40 (allowing a maximum density of 1.0 unit per acre). Also located west of

the subject property is a pocket of County LB, identified as a curb market store.

Approving this request will help meet the needs of present and future Greensboro citizens by way of providing community facilities, services, and infrastructure in a cost-effective manner to meet citizens' needs, contribute to quality of life, and support desired land use patterns. It will also provide a development framework for the fringe that will guide sound, sustainable patterns of land use, limit sprawl and provide for efficient provision of public services and facilities as the City expands.

Staff has determined this request is consistent with the intent and purpose of the zoning code and the Comprehensive Plan (Connections 2025). Staff has also determined that the request is compatible with the existing development and trend in the surrounding area.

STAFF RECOMMENDATION

Staff recommends **approval** of the requested **City CD-PI** (Conditional District-Public Institutional) original zoning district.

ADDITIONAL INFORMATION

George C. Simkins Jr. Elementary School - Transportation Impact Analysis
Prepared for Guilford County Schools
May 10, 2013

Executive Summary

Guilford County Schools plans to build a new elementary school which will be located on East Lee Street in Greensboro, North Carolina. As currently planned, the elementary school will be designed for 800 students. The school could have up to 90 staff members (with a population of approximately 800 students) and could be served by up to 8 buses with this total population.

This elementary school expects to attract students from areas of population in eastern Greensboro and Guilford County. Parent and Staff access to the site will be provided by two (2) accesses on East Lee Street: an entry only access and an exit only access. A third connection will be made for bus access via Chamberlain Drive at Chippendale Trail in the Kings Berry Estate Subdivision (see Figure 1 - Site Plan).

DAVENPORT was retained to determine the potential traffic impacts of this development and to identify transportation improvements that may be required to accommodate the impacts of both background traffic and new development traffic. The following existing and proposed intersections were included in the study:

- East Lee Street at Sharpe Road (unsignalized)
- East Lee Street at Causey Lake Road (unsignalized)
- East Lee Street at North Site Access (exit only)
- East Lee Street at Castleton Road (unsignalized)
- East Lee Street at South Site Access (entry only)
- Chamberlain Drive at Chippendale Trail and Proposed School Bus Access

Additionally, during the scoping of this development, the North Carolina Department of Transportation (NCDOT) and the Greensboro Department of Transportation (GDOT) requested that an internal circulation review should be carried out to ensure that on-site stacking issues are addressed for the proposed school. DAVENPORT has developed recommendations based on our findings to address the on-site stacking.

The above intersections along with the two proposed accesses were analyzed at arrival and dismissal peaks under the following conditions:

- 2012 Existing Conditions
- 2014 Future No-Build Conditions
- 2014 Future Build-Out Conditions
- 2014 Future Build-Out Conditions with Improvements

The anticipated opening day for the school is August 2014. Traffic conditions were analyzed for both the Arrival and Dismissal peaks. School officials have indicated arrival time would be from 7:30 to 8:00 am and dismissal times would be from 2:30 to 3:00 pm. The NCDOT and GDOT were contacted to obtain background information and to ascertain the elements to be covered in this Transportation Impact Analysis (TIA). Information regarding the property was provided by Guilford County Schools.

Discussion of Results

The results of the study are discussed by intersection below:

East Lee Street at Sharpe Road

This unsignalized intersection is expected to operate at LOS C during both the existing Arrival and Dismissal peaks. In 2014 future no build conditions and with the committed improvements in place, this intersection is expected to operate at LOS B during the Arrival peak and LOS A during the Dismissal peak. With the addition of school site traffic, LOS B is expected during the Arrival and Dismissal peak. The committed improvements will be adequate at this intersection.

East Lee Street at North Site Access

This proposed exit only access is expected to operate at LOS E in the Arrival peak and LOS B in the Dismissal peak. This LOS E condition is typical for stop-controlled approaches onto major thoroughfares such as East Lee Street, and delays are expected to be short-lived. The separate left and right turn exit lanes as shown on the site plan will be adequate. Additionally, we recommend installing appropriate signage to indicate exit only access.

East Lee Street at Causey Lake Road

This unsignalized intersection is expected to operate at LOS B during both the existing Arrival and Dismissal peaks. During the 2014 future no build analysis year, this intersection is projected to remain at LOS B during the Arrival and Dismissal peaks. With the addition of school site traffic, the intersection is projected to operate at LOS C during the Arrival peak and remain at a LOS B during the Dismissal peak. No improvements are recommended at this intersection.

East Lee Street at South Site Access

This proposed entry only access is expected to operate at LOS B during the opening year (2014) Arrival peak and at a LOS A during the Dismissal peak. The need for an auxiliary left turn lane was determined based on the figure titled "Warrant for Left and Right Turn Lanes" on page 80 of the NCDOT "Policy on Street and Driveway Access to North Carolina Highways". Based on the projected traffic volumes, a left turn lane is warranted at this access. The need for a right turn lane was reviewed using page 24 of the 2004 GDOT Driveway Manual, and indicates that based on projected traffic volumes, no right turn lane is warranted. We recommend the following improvements:

- Provide southbound left turn lane on East Lee Street with 250 feet of storage and appropriate taper
- Install appropriate signage to indicate entry only access
- Per discussion with NCDOT, we recommend a wide radius at this access point

East Lee Street at Castleton Road

This unsignalized intersection currently operates at LOS B during the Arrival peak and LOS A during the Dismissal peak. During the 2014 future no build analysis year, this intersection is projected to remain at LOS B during the Arrival peak and LOS A during the Dismissal peak. With the addition of school site traffic, the intersection is projected to operate at LOS B during Arrival and Dismissal peaks. We have recommended the following improvements in order to accommodate bus traffic:

- Widen pavement on Castleton Road to provide a 50 foot minimum turning radius
- Widen Castleton Road to 22 feet width at a minimum and restripe double yellow centerline

Level of Service Summary

Table A presents the summary of the level of service analysis for all study intersections:

Table A - Level of Service Summary

Arrival Peak	2012 Existing	2014 Future No Build	2014 Future Build	2014 Future Build with Improvements
East Lee Street at Sharpe Road	C (22.1) EB Approach	B (12.7) Signalized	B (17.4)	
East Lee Street at North Site Access (exit only)			E (40.2) WB Approach	
East Lee Street at Causey Lake Road	B (11.3) EB Approach	B (11.6) EB Approach	C (19.7) EB Approach	
East Lee Street at South Site Access (entry only)			B (11.4) SB Approach	A (9.6) SB Approach
East Lee Street at Castleton Road	B (10.2) WB Approach	B (10.3) WB Approach	B (13.4) WB Approach	
Dismissal Peak	**2012 Existing**	**2014 Future No Build**	**2014 Future Build**	**2014 Future Build with Improvements**
East Lee Street at Sharpe Road	C (18.5) EB Approach	A (10.0) Signalized	B (12.6)	
East Lee Street at North Site Access (exit only)			B (12.4) WB Approach	
East Lee Street at Causey Lake Road	B (10.3) EB Approach	B (10.5) EB Approach	B (12.7) EB Approach	
East Lee Street at South Site Access (entry only)			A (3.8) SB Approach	A (3.3) SB Approach
East Lee Street at Castleton Road	A (9.2) WB Approach	A (9.2) WB Approach	B (10.0) WB Approach	

LOS (delay in seconds per vehicle)
Note for unsignalized conditions, LOS and delay indicates only minor street approach with longest delay

Internal Circulation Summary

The proposed George C. Simkins Jr. Elementary School has capacity for a total student population of 800. While school buses will provide transportation to and from school, many students will arrive by private (parent) vehicle transportation. The NCDOT Division of Mobility and Safety has compiled a database for school operation in North Carolina based on numerous studies conducted by the MSTA Unit. Projections from the MSTA school traffic generator indicate **that with a student population of 800, the school should require a queue storage length of 1,650 feet.**

The traffic circulation pattern as indicated on the site plan provides approximately **2,600 feet** of stacking distance from the drop-off / pick-up loading zone upstream to East Lee Street. **This satisfies the MSTA queue storage requirement.** Additionally, a Sim Traffic simulation was carried out based on typical MSTA criteria, which showed that projected queues will be contained on site.

We also offer the following recommendations related to the loading zones and traffic circulation:

- We recommend marking the student loading zone approximately 160 feet to accommodate 5 loading bays. The loading zone should be identified by installing 4-inch wide solid white pavement markings. Each bay should be a minimum of 8 feet wide from the edge of the curb, and a length of 30 feet. A minimum of a 10 foot wide sidewalk should be provided in this area to allow adequate width for a vehicle door opening and students to walk safely along the sidewalk.
- We recommend 20 feet of spacing to be provided to allow vehicle maneuvering from the beginning of the loading zone to the first vehicle bay and from the end of the last loading bay to the stop bar back onto the two-lane driveway.
- Implement an organized loading process to expedite drop-off and pick-up process. Use a school resource traffic officer with cones/flags to stop and direct vehicles to the loading zone.
- Place traffic cones during pick up and drop off periods at parking area driveways west of loading zone to reinforce traffic pattern and prevent vehicle conflicts

Summary and Conclusion

This analysis has been conducted based on the scope given by the NCDOT and GDOT. We have identified all areas of deficiency and made recommendations for improvements where necessary.

Our trip generation indicates that based on the current site plan the proposed George C. Simkins Jr. Elementary School at East Lee Street is projected to generate a total of 1,043 trips per day. This is based on a total of 800 students, 90 staff personnel, and 8 school buses.

Table B summarizes the recommended improvements for 2014 future build scenarios. In conclusion, should our recommendations be implemented, this project would not have a serious or detrimental effect on transportation capacity within the study area.

Table B - Recommended Improvement Summary	
East Lee Street at Sharpe Road	• The committed improvements at this intersection by NCDOT will be adequate
East Lee Street at North Site Access (exit only)	• The separate left and right turn exit lanes as shown on the site plan will be adequate • Install appropriate signage to indicate entry only access
East Lee Street at Causey Lake Road	• No improvements are recommended for this intersection.
East Lee Street at South Site Access (entry only)	• Provide a southbound left turn lane on East Lee Street with 250 feet of storage and appropriate taper • Install appropriate signage to indicate entry only access • Per discussion with NCDOT, we recommend a wide radius at this access point
East Lee Street at Castleton Road	• Widen pavement on Castleton Road to provide a 50 foot minimum turning radius • Widen Castleton Road to 22 feet width at a minimum and restripe double yellow centerline
Castleton Road at Chamberlain Drive	• Widen pavement on Chamberlain Drive to provide a 30 foot minimum turning radius • Widen Chamberlain Drive to 22 feet width at a minimum and restripe double yellow centerline
Chamberlain Drive & Chippendale Trail at Proposed School Bus Access	• Construct intersection with 30 foot minimum turning radius • Install stop control on Chippendale Trail
Internal Circulation, Loading Zone and Site Plan	• We recommend marking the student loading zone approximately 160 feet to accommodate 5 loading bays. The loading zone should be identified by installing 4-inch wide solid white pavement markings. Each bay should be a minimum of 8 feet wide from the edge of the curb, and a length of 30 feet. A minimum of a 10 foot wide sidewalk should be provided in this area to allow adequate width for a vehicle door opening and students to walk safely along the sidewalk. • We recommend 20 feet of spacing to be provided to allow vehicle maneuvering from the beginning of the loading zone to the first vehicle bay and from the end of the last loading bay to the stop bar back onto the two-lane driveway. • Implement an organized loading process to expedite drop-off and pick-up process. Use a school resource traffic officer with cones/flags to stop and direct vehicles to the loading zone. • Place traffic cones during pick up and drop off periods at parking area driveways west of loading zone to reinforce traffic pattern and prevent vehicle conflicts