

# SUBDIVISION REPORT - CONCEPT

▶ <b>FILE #:</b>	<b>7-SB-21-C</b>	<b>AGENDA ITEM #:</b>	<b>25</b>
POSTPONEMENT(S):	7/8/2021	<b>AGENDA DATE:</b>	<b>8/12/2021</b>
▶ <b>SUBDIVISION:</b>	<b>CAPITAL DRIVE</b>		
▶ <b>APPLICANT/DEVELOPER:</b>	<b>PATRICK SCHAAD TRUSTEE</b>		
OWNER(S):	Schaad Residential Real Estate		
<hr/>			
TAX IDENTIFICATION:	131 122 & 122.24 (PART OF)	<a href="#"><u>View map on KGIS</u></a>	
JURISDICTION:	County Commission District 3		
STREET ADDRESS:	9933 & 0 Kingston Pk.		
▶ <b>LOCATION:</b>	<b>North side of Kingston Pike at Capital Drive</b>		
SECTOR PLAN:	Southwest County		
GROWTH POLICY PLAN:	Urban Growth Area		
WATERSHED:	Sinking Creek		
▶ <b>APPROXIMATE ACREAGE:</b>	<b>2.153 acres</b>		
<hr/>			
▶ <b>ZONING:</b>	<b>CB (Business and Manufacturing)</b>		
▶ <b>EXISTING LAND USE:</b>	<b>Retail store, vacant land</b>		
▶ <b>PROPOSED USE:</b>	<b>Commercial subdivision</b>		
SURROUNDING LAND USE AND ZONING:	North: Vacant land -- CB (Business and Manufacturing) South: Kingston Pike -- OP (Office Park) and PC (Planned Commercial) East: Church -- C-H-1 (Highway Commercial) West: Retail and vacant land -- I-G (General Industrial) and C-H-2 (Highway Commercial)		
<hr/>			
▶ <b>NUMBER OF LOTS:</b>	<b>4</b>		
SURVEYOR/ENGINEER:	David Harbin / Batson, Himes, Norvell & Poe		
ACCESSIBILITY:	Access is via Kingston Pike, a major arterial street with 4 travel lanes and a continuous middle turn lane within 87ft of right-of-way.		
▶ <b>SUBDIVISION VARIANCES REQUIRED:</b>	<b>VARIANCES:</b>  1) REDUCE THE MINIMUM RIGHT-OF-WAY DEDICATION FROM THE CENTERLINE OF KINGSTON PIKE FROM 50-FT TO 44-FT. 2) REDUCE THE MINIMUM INTERSECTION CURB RADIUS OF KINGSTON PIKE AND COMMERCIAL DRIVE FROM 75-FT TO 35-FT.  <b>ALTERNATIVE DESIGN STANDARDS REQUIRING APPROVAL BY KNOX COUNTY ENGINEERING AND PUBLIC WORKS:</b>  1) REDUCE THE MINIMUM INTERSECTION PROPERTY LINE RADIUS OF KINGSTON PIKE AND COMMERCIAL DRIVE FROM 75-FT TO 50-FT.		

**STAFF RECOMMENDATION:**

► **Postpone the Concept Plan application until the September 9, 2021, Planning Commission meeting as recommended by staff for the reasons listed below.**

Staff is recommending postponement to allow the applicant time to provide additional details on the concept plan as outlined below:

- 1) Show all major recommendations of the Capital Drive-Kingston Pike Retail Development Traffic Impact Study (CDM Smith, revised June 21, 2021) on the concept plan (see Exhibit A), including the reconfiguration of the northbound approach on Capital Drive.
- 2) Provide a preliminary detention pond plan for Lot #4 to demonstrate that the parking lot for the existing retail store (GemStore) can remain in compliance with the zoning standards.

**COMMENTS:**

This proposal is for a 4-lot commercial subdivision and a new 3-lane public road, located on the north side of Kingston Pike at the Capital Drive intersection. The new road (Commercial Drive) is currently proposed to be approximately 400-ft long, however, it is anticipated that it will be extended further to the north in the future and potentially connect to Parkside Drive. The subject property and the new road are located in Knox County (outside the City limits), the right-of-ways for Kingston Pike and Capital Drive are within the City of Knoxville, and Kingston Pike is a U.S. route maintained by the Tennessee Department of Transportation (TDOT). The new road must meet the standards for Knox County but the Kingston Pike and Capital Drive intersection improvements must meet the requirements of the City of Knoxville and TDOT.

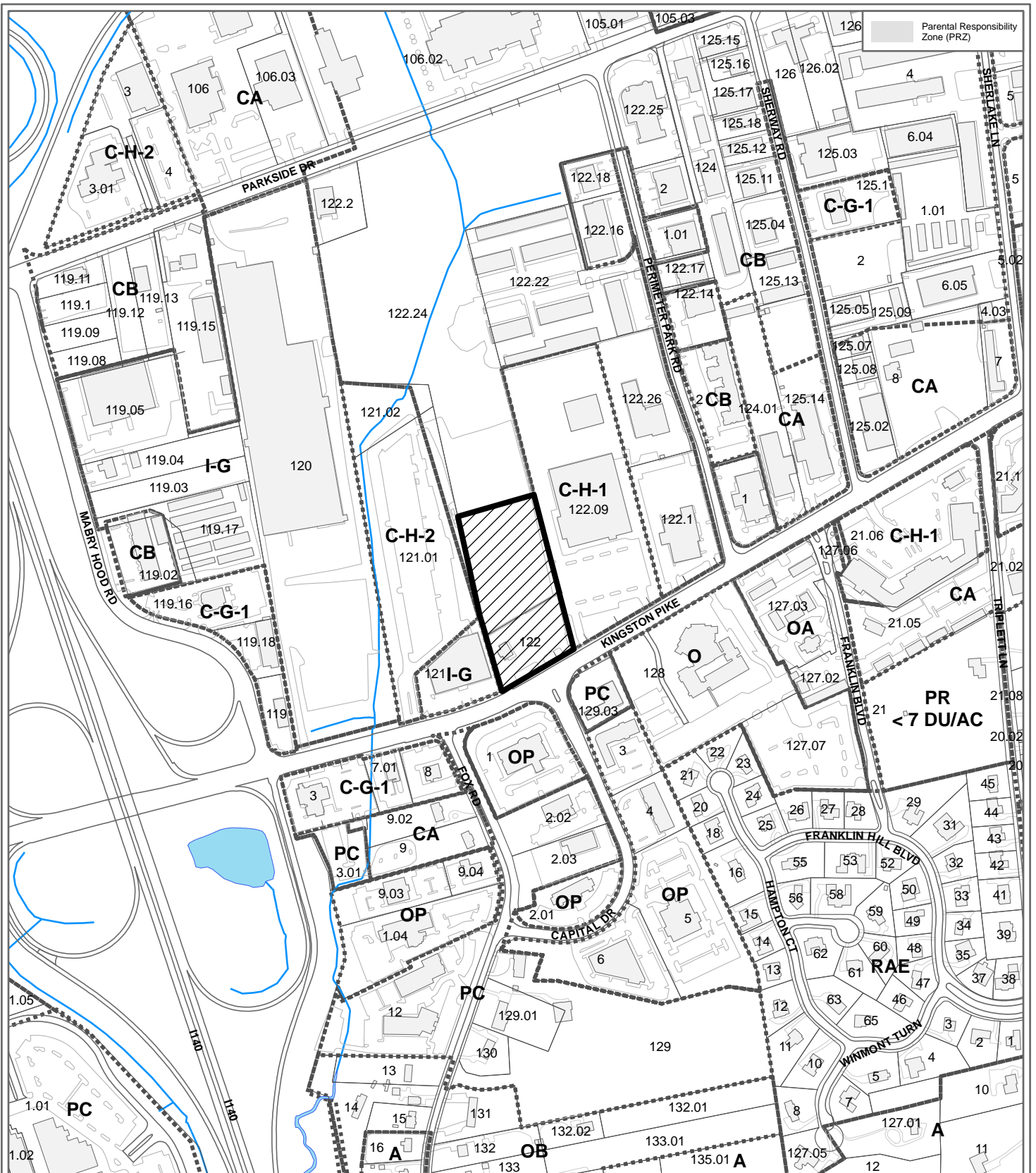
The traffic signal at this Kingston Pike intersection must be modified to accommodate the new road and the Capital Drive intersection on the south side of this intersection needs to be reconfigured to function properly with the addition of the new road. When Capital Drive was constructed, it was in Knox County and was subsequently annexed into the City of Knoxville. There is a landscape island with a directory sign for the office development in the middle of Capital Drive at the Kingston Pike intersection. It is unknown when this sign was installed but it and the landscape island are in the public right-of-way and must be removed as part of the intersection improvements to create a dedicated left-turn lane.

The City of Knoxville requires sidewalks to be installed along road frontages when a property is developed or redeveloped, so a sidewalk along the Kingston Pike frontage is required. The developer can make a formal request to the City of Knoxville Director of Engineering for a waiver to this requirement, however, this has not been requested as of the publication of this staff report and there is no guarantee this waiver will be approved. The existing detention ponds on lots 1 and 4 will be modified with the installation of the new road, however, the concept plan does not show a preliminary design for these modifications. The primary concern is how the pond on Lot 4 will impact the parking lot design for the existing business.

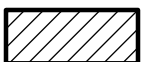
**ESTIMATED TRAFFIC IMPACT:** A traffic impact study was prepared by the applicant. The findings of that study were used in formulating the recommendations of this staff report.

**ESTIMATED STUDENT YIELD:** Not applicable.

Knoxville-Knox County Planning Commission's approval or denial of this request is final, unless the action is appealed to Knox County Chancery Court. The date of the Knox County Chancery Court appeal hearing will depend on when the appeal application is filed.



**7-SB-21-C  
CONCEPT PLAN**



Commercial subdivision in CB (Business and Manufacturing)

Original Print Date: 6/9/2021  
Knoxville - Knox County Planning Commission \* City / County Building \* Knoxville, TN 37902

Revised:

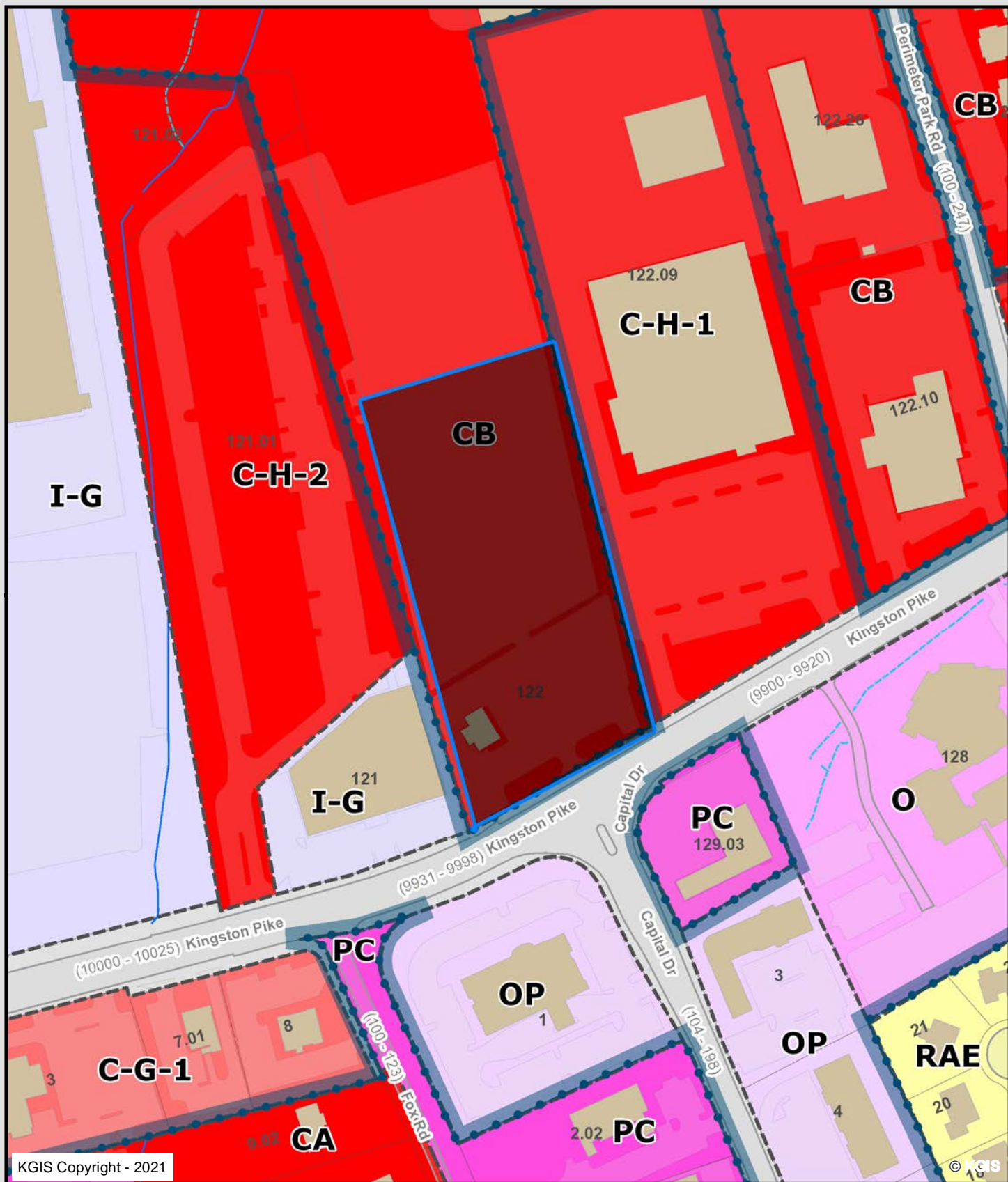
Petitioner: Schaad Trustee, Patrick

Map No: 131

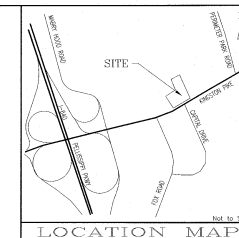
Jurisdiction: County

0 500  
Feet









- NOTES:
1. ALL DIMENSIONS ARE SCALED AND SUBJECT TO CHANGE ON THE FINAL PLAT.
  2. A 10' DRAINAGE, UTILITY AND CONSTRUCTION EASEMENT EXISTS INSIDE ALL EXTERIOR LOT LINES AND ROAD LINES, 5' EACH SIDE OF INTERIOR ROAD LINES.
  3. A 15' UTILITY EASEMENT EXISTS 7.5' EACH SIDE OF CENTERLINE OF SANITARY SEWER AS INSTALLED.
  4. THIS SUBDIVISION CONTAINS 4 COMMERCIAL LOTS OF 2.153 ACRES.
  5. THIS PROPERTY IS ZONED C6.
  6. CONTOURS PROVIDED BY BINAP FIELD SURVEY. ROAD PROFILES ARE BASED ON BINAP FIELD SURVEY.
  7. UTILITIES:
    - WATER: FIRST UTILITY DISTRICT
    - SEWER: FIRST UTILITY DISTRICT
    - ELECTRIC: KNOX CITY UTILITY BOARD
    - TELEPHONE: BELLSOUTH
  8. ALL ROADWAYS WILL BE PUBLIC.
  9. WAIVERS APPROVED BY KNOXVILLE CITY ENGINEERING AND KNOX COUNTY ENGINEERING ARE AS FOLLOWS:
    - (a) REDUCE THE RIGHT-OF-WAY DEDICATION ALONG KINGSTON PIKE FROM 50' TO 44' FROM CENTERLINE.
    - (b) REDUCE THE RADIIUS AT INTERSECTING PROPERTY LINES OF KINGSTON PIKE AND ROAD "A" FROM 75' TO 50'.
  10. COMPLETION TESTING PURSUANT TO THE REQUIREMENTS OF THE KNOX COUNTY DEPT. OF ENGINEERING & PUBLIC WORKS WILL BE REQUIRED FOR ALL FILL AREAS.
  11. BOUNDARY SURVEY BY BINAP.
  12. VEHICULAR ACCESS FOR ALL LOTS IS LIMITED TO INTERIOR ROAD SYSTEM ONLY.
  13. THE TWO EXISTING DETENTION BASINS ARE IMPROVED BY CONSTRUCTION OF ROAD "A". THE NEW POND WILL HAVE THE SAME VOLUME AS THE EXISTING POND. THE IMPERVIOUS AREA WILL BE LESS AFTER REDEVELOPMENT.

#### LOT 4 PARKING REQUIREMENTS:

TOTAL FLOOR AREA-2,139 S.F.

PARKING REQUIREMENTS-RETAIL STORE:

1 PARKING STALL PER 100 S.F. OF FLOOR AREA.  
22 SPACES REQUIRED 25 SPACES PROVIDED INCLUDING 3 ADA SPACES.

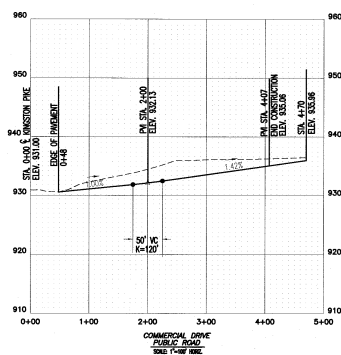


CERTIFICATION OF CONCEPT PLAN BY REGISTERED ENGINEER:  
I HEREBY CERTIFY THAT I AM A REGISTERED ENGINEER, LICENSED TO PRACTICE ENGINEERING UNDER THE LAWS OF THE STATE OF TENNESSEE. I HAVE EXAMINED THIS PLAN AND ALL ACCOMPANYING DRAWINGS, DOCUMENTS AND EXHIBITS CONFORM TO THE BEST OF MY KNOWLEDGE, TO ALL APPLICABLE PROVISIONS OF THE KNOXVILLE LANDS COUNTY SUBDIVISION REGULATIONS EXCEPT FOR THE 30% FILLING AND DISCLOSED IN A REVISIONS SHEET TO THE CONCEPT PLAN.

David B. Harkin  
PROFESSIONAL ENGINEER  
TENNESSEE LICENSE NO. 10135 DATE: 8/5/2021

OWNER  
PATRICK J. SCHAAD TRUSTEE  
LOUIS E. SCHAAD JR. TRUSTEE  
150 MAJOR BRYNMAWYR PL.  
KNOXVILLE, TN 37919  
PHONE: (865)

7-SB-21-C  
Revised: 8/5/2021



TYPICAL ROAD SECTION  
THRU 60' ROAD  
"PUBLIC ROAD"



7-SB-21-C

<b>BATSON, HIMES, NORVELL &amp; POE</b> REGISTERED ENGINEERS & LAND SURVEYORS 4334 PAPERMILL DRIVE KNOXVILLE, TENNESSEE 37909 PHONE: (865) 588-6472 FAX: (865) 588-6473 email:bmnp@bnp.com	DESIGNED: DBH DRAWN: SEW CHECKED: DBH DATE: 8/4/21 DATE: 7/21/21 DATE: 6/16/21	REVISION NO. DATE REVISION BY	SCALE HORIZONTAL: 1"= 40' VERTICAL: 2"= 10' DATE: 05/21/21	DEED REFERENCES: INSTR.#201409050013870 	CONCEPT PLAN FOR ALL ELEVEN GENERAL PARTNERSHIP KINGSTON PIKE & COMMERCIAL DRIVE CLT MAP 131 PARCEL 122 & PART OF PARCEL 122.24 DISTRICT 6, KNOX COUNTY, TENNESSEE	22440-C-S-P SHEET 1 OF 1 SHEET Q:\22440\CONCEPT\22440-C-S-P.DWG
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***CAPITAL DRIVE-KINGSTON PIKE  
RETAIL DEVELOPMENT  
KNOX COUNTY, TENNESSEE***

***TRANSPORTATION IMPACT ANALYSIS***



***Prepared for:  
ALL ELEVEN GENERAL PARTNERSHIP***

***Prepared by:***

**CDM  
Smith**

7-SB-21-C  
Revised: 6/21/2021

**JUNE 2021**

**CAPITAL DRIVE-KINGSTON PIKE  
RETAIL DEVELOPMENT  
KNOX COUNTY, TENNESSEE  
TRANSPORTATION IMPACT ANALYSIS**

**Prepared for**

**All Eleven General Partnership  
150 Major Reynolds Place  
Knoxville, Tennessee 37919**



**May 2021  
Revised June 2021**

**Prepared by**

**CDM Smith  
1100 Marion Street, Suite 300  
Knoxville, Tennessee 37921**

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## EXECUTIVE SUMMARY

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CDM Smith is pleased to submit this report to address the transportation impact analysis and access requirements of the proposed retail developments at the intersection of Kingston Pike (S.R. 1) and Capital Drive, in Knox County, TN. The basis of this study required the collection of traffic data, generation of anticipated traffic volumes for the proposed site and development of projected traffic volumes for normal growth and from the potential site. Analyses of the resulting traffic projections were conducted to determine the capacity and levels of service for the intersection of Capital Drive and Kingston Pike.

This transportation impact analysis follows guidelines and procedures as recommended by the Institute of Transportation Engineers (ITE), Knoxville-Knox County Planning (formerly MPC), Knox County Engineering and Public Works (EPW), the City of Knoxville Traffic Engineering Department, and the Tennessee Department of Transportation (TDOT). The study of this development required the collection of traffic data, development of future traffic volumes, generation of anticipated traffic volumes to and from the proposed development, analysis of the resulting traffic conditions, and the development of necessary recommendations to mitigate any resulting traffic impacts.

This study evaluated existing and projected traffic conditions with and without the proposed site. Background traffic was determined using a 1.0-percent compounded annual growth rate until the horizon buildout year of 2026. Trip generation for the proposed buildout of a 2,500 square foot (SF) coffee/donut shop with a drive-through window and two-10,000 SF retail developments was determined using the ITE Trip Generation, 10<sup>th</sup> Edition. Capacity and level of service (LOS) analysis for the projected turning movements were conducted using Synchro, version 10, and the Highway Capacity Manual 6<sup>th</sup> Edition methodologies.

Analysis results of existing conditions for 2021 found that the study intersection currently operates at acceptable levels of service during the AM peak hour but declines to failing conditions during the PM peak hour, likely due to the high volumes of northbound left-turning vehicles from Capital Drive. Analysis of 2026 projected conditions provided results that indicates acceptable operation of the study intersection can be attained through mitigation measures of exclusive turn lanes, phasing modification, and signal split optimization.



## RECOMMENDATIONS

The analyses conducted identifies the following recommendations:

- Construct approximately 400 feet of a three-lane roadway north of Kingston Pike (S.R. 1) to provide access to the existing GemStore jewelry store, proposed coffee/donut shop, and two proposed retail developments.
- Provide 100-foot storage for a left-turn lane on the new connector stub road at the southbound approach to Kingston Pike as shown in **Figure 9**.
  - Ensure there are no driveway openings to the GemStore and proposed retail developments within this storage length.
- Reconfigure the northbound approach on Capital Drive to provide a 300-foot storage left-turn lane, a separate through lane, and a separate right-turn lane as shown in **Figure 9**.
  - This will require the removal of the landscaped median and relocation of the monument sign in the median. If the removal and relocation are unfeasible, the northbound approach can maintain its existing configuration and provide a split-phased operation for the northbound and southbound approaches.
  - The northbound and southbound approaches can also operate with split-phased operation with a three-lane configuration (NBL, NBL-T, NBR). Though there is slight improvement to delays and v/c ratios, this configuration worsens queueing conditions for the northbound approach. Also, if lane distributions vary more evenly than our assumptions, additional queueing may occur.
  - Maintain existing Do Not Block Driveway sign (R10-7 mod) at the existing access to the Broadway Carpets business on Capital Drive. Provide STOP bar striping across all northbound lanes to support sign.
  - Provide adequate distance between the turning path of the proposed northbound left-turn lane and the STOP bar locations of the eastbound travel lanes.
- Provide a 50-foot storage westbound right-turn lane on Kingston Pike via appropriate striping as shown in **Figure 9**.
- City of Knoxville staff have indicated that sidewalks will likely be required both internally along the new connector stub of Capital Drive and along the Kingston Pike road frontage. This will require the construction of sidewalk and ADA-compliant curb ramps along the proposed Kingston Pike westbound right-turn lane to Capital Drive, around the radii of the new connector stub road, and any connecting corners of the study intersection.
- Provide crosswalk striping from the northwest to northeast to southeast corners of the study intersection as shown in **Figure 9**.
- Post STOP signs (R1-1) for exiting traffic from the GemStore, proposed coffee/donut shop, and proposed retail strip development driveways located along the new connector road north of Kingston Pike.
- Modify signal operations of existing span-wire system to include appropriate signal parameters to facilitate the proposed connector stub road, recommended turn lanes, and pedestrian accommodations, which include:
  - Provide protected-permissive phasing for eastbound left-turn with additional signal heads and phasing and timing updates.

- Provide protected-permissive phasing for northbound left-turn with additional signal heads and phasing and timing updates.
- Should the northbound and southbound approaches utilize split-phased operation, provide the appropriate signal heads and phasing and timing updates.
- Provide countdown pedestrian signal heads with audible ADA-compliant pushbuttons, and pedestrian signs. Signal phasing and timing updates should be provided for this pedestrian crossing maneuver.
- Minimize landscaping, using low growing vegetation, and signing at the proposed street access to insure that safe sight distance is maintained.
- Intersection and roadway design should conform to the recommended standards and practices of TDOT, AASHTO, ITE, the City of Knoxville Traffic Engineering Department, and Knox County EPW.

# RECOMMENDED INTERSECTION GEOMETRY FOR PROPOSED DEVELOPMENT

Capital Drive Retail  
Development  
Knoxville, TN



## NOTES:

- A. Tightening intersection layout requires additional striping and landscaping and some striping removal. Likely to include utility and drainage impacts.
- B. ADA-compliant curb ramps required, including detectable warning surface and turning space behind ramp. Likely to include utility and drainage impacts.
- C. Striping of turn lane assumes shoulder is full depth.
- D. Crosswalk preferred along eastside to avoid high volume northbound left turns.
- E. Maintain business access by providing STOP bars across proposed lanes.
- F. Stub road construction will require modification of access and parking at GemStore jewelry store.



Figure 9

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## CONCLUSION

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The study addressed the transportation impact analysis and access requirements of an existing GemStore jewelry store and a proposed coffee/donut shop and two retail store developments within a Capital Drive retail development via an approximately 400-foot long proposed Capital Drive stub road constructed to Knox County standards from centerline of Kingston Pike (S.R. 1). Traffic signal system parameters were maintained throughout the study except when phasing modification and split optimization are required. Peak hour factors were consistent between all PM peak hour analysis periods to provide a conservative queue length and operational analysis. Adjustments were made to peak hour factors at the proposed stub road during the AM peak hour with the proposed development to account for new trips. Existing traffic for the signalized intersection was found to be operating at LOS A and LOS F for the AM and PM peak hours. Background traffic was determined using a 1.0-percent compounded growth rate until the horizon year 2026. The analysis does not include development of the undeveloped 25-acre tract north of the proposed site as there are no known development plans. Without the proposed development, the study intersection will maintain its LOS A in the AM peak hour and LOS F during the PM peak hour. Traffic associated with the proposed development was generated for a 2,500 SF coffee/donut shop with drive-through window and two 10,000 SF retail stores. The site will generate 4,060 daily trips, and after consideration of pass-by traffic, approximately 2,840 primary trips will be generated. Trips were assigned to the study intersection projected conditions and analyzed for capacity and level of service. Analyses found that acceptable levels of service can be achieved for the study intersection with improvements of added turn lanes, phasing modifications, and split optimizations. Driveways should be located to the most extreme property limits to minimize the number of events where queues block access during the peak hours. Acceptable sight distances for the site driveways should be provided. With the recommendations of this report, the impact of this proposed site can be minimized and manageable.





# Development Request

## DEVELOPMENT

- ☐ Development Plan  
☐ Planned Development  
☐ Use on Review / Special Use  
☐ Hillside Protection COA

## SUBDIVISION

- ☒ Concept Plan  
☐ Final Plat

## ZONING

- ☐ Plan Amendment  
☐ SP ☐ OYP  
☐ Rezoning

PATRICK SCHAAD TRUSTEE

Applicant Name

Affiliation

5/24/21

Date Filed

7/8/21

Meeting Date (if applicable)

File Number(s)

7-SB-21-C

## CORRESPONDENCE

All correspondence related to this application should be directed to the approved contact listed below.

- ☐ Applicant ☐ Owner ☐ Option Holder ☐ Project Surveyor ☒ Engineer ☐ Architect/Landscape Architect

DAVID HARBIN

Name

BATSON, HIMES, NORVELL & POE

Company

4334 PAPER MILL DR

Address

KNOXVILLE

City

TN

State

37909

ZIP

865-588-6472

Phone

harbin@bhn-p.com

Email

## CURRENT PROPERTY INFO

Schaad Residential Real Estate

Owner Name (if different)

150 MAJOR REYNOLDS PL

Owner Address 37919

Owner Phone

9933 KINGSTON PIKE

Property Address

map 131 parcel 122 & part of parcel

Parcel ID

122.24

FUD

Sewer Provider

FUD

Water Provider

N

Septic (Y/N)

## STAFF USE ONLY

North side of Kingston Pike @ Capital Dr

General Location

2.153 ac.

Tract Size

☐ City ☒ County

3rd  
District

CB  
Zoning District

CO, AgForVac  
Existing Land Use

Southwest County  
Planning Sector

MU-SD  
Sector Plan Land Use Classification

Urban Growth  
Growth Policy Plan Designation

**DEVELOPMENT REQUEST**☐ Development Plan ☐ Use on Review / Special Use ☐ Hillside Protection COA☐ Residential ☐ Non-Residential

Home Occupation (specify) \_\_\_\_\_

Other (specify) \_\_\_\_\_

Related City Permit Number(s) \_\_\_\_\_

**SUBDIVISION REQUEST**

Proposed Subdivision Name \_\_\_\_\_

☐ Combine Parcels ☐ Divide Parcel

Unit / Phase Number \_\_\_\_\_

Total Number of Lots Created \_\_\_\_\_

☒ Other (specify) **4 COMMERCIAL LOTS OF 2.153 AC**☐ Attachments / Additional Requirements \_\_\_\_\_

Related Rezoning File Number \_\_\_\_\_

**ZONING REQUEST**☐ Zoning Change

Proposed Zoning \_\_\_\_\_

☐ Plan Amendment Change

Proposed Plan Designation(s) \_\_\_\_\_

Pending Plat File Number \_\_\_\_\_

Proposed Density (units/acre) \_\_\_\_\_

Previous Rezoning Requests \_\_\_\_\_

☐ Other (specify) \_\_\_\_\_**STAFF USE ONLY****PLAT TYPE**☐ Staff Review ☐ Planning Commission**ATTACHMENTS**☐ Property Owners / Option Holders ☐ Variance Request**ADDITIONAL REQUIREMENTS**☐ Design Plan Certification (Final Plat)☐ Use on Review / Special Use (Concept Plan)☒ Traffic Impact Study☐ COA Checklist (Hillside Protection)

Fee 1

Total

0107

500.00

Fee 2

Fee 3

500.00

**AUTHORIZATION**

By signing below, I certify I am the property owner, applicant or the owners authorized representative.



Applicant Signature



Please Print

**5/24/2021**

Date

**805-588-4472**

Phone Number

**harbin@bhn-p.com**

Email

**Marc Payne**

Please Print

**5/25/2021**

Date

  
Stan