



SUBDIVISION REPORT - CONCEPT

▶ **FILE #:** 10-SA-23-C **AGENDA ITEM #:** 12
 POSTPONEMENT(S): 10/5/2023 **AGENDA DATE:** 11/9/2023
 ▶ **SUBDIVISION:** MIDDLEBROOK GROVE
 ▶ **APPLICANT/DEVELOPER:** HUBER PROPERTIES LLC
 OWNER(S): Schubert Family Limited Partnership

TAX IDENTIFICATION: 106 C A 02301, 00401, 004, 001 [View map on KGIS](#)
 JURISDICTION: City Council District 3
 STREET ADDRESS: 1817 FRANCIS RD (0 Helmbolt Rd & 0 Old Amherst Rd)
 ▶ **LOCATION:** **East side of Helmbolt Rd, north side of Francis Rd, west of Old Amherst Rd**
 SECTOR PLAN: Northwest County
 GROWTH POLICY PLAN: N/A (Within City Limits)
 WATERSHED: Ten Mile Creek
 ▶ **APPROXIMATE ACREAGE:** 16.82 acres

▶ **ZONING:** RN-2 (Single-Family Residential Neighborhood)
 ▶ **EXISTING LAND USE:** Single Family Residential
 ▶ **PROPOSED USE:** Detached residential subdivision
 SURROUNDING LAND USE AND ZONING: North: Single family residential, rural residential - RN-1 (Single-Family Residential Neighborhood)
 South: Single family residential, multi-family - AG (General Agricultural), RN-1 (Single-Family Residential Neighborhood), RN-3 (General Residential Neighborhood)
 East: Single family residential, rural residential - AG (General Agricultural), RN-1 (Single-Family Residential Neighborhood)
 West: Single family residential - RN-1 (Single-Family Residential Neighborhood)

▶ **NUMBER OF LOTS:** 66
 SURVEYOR/ENGINEER: Aaron Gray Ardurra
 ACCESSIBILITY: Access is via Helmbolt Rd, a minor arterial with 20 ft of pavement width within 50-56 ft of right-of-way; and via Francis Rd, a local street with 18 ft of pavement width within 40-45 ft of right-of-way.

▶ **SUBDIVISION VARIANCES REQUIRED:** **VARIANCES**
 1) Reduce the minimum broken back curve tangent from 150-ft to 62.06-ft for Road 'B' from STA 3+66.43 to 4+28.49.
 2) Reduce the minimum intersection spacing along Helmbolt Road, between the centerlines of Road 'A' and Creekhead Drive, from 400-ft to 190-ft.

ALTERNATIVE DESIGN STANDARDS REQUIRING KNOXVILLE DEPARTMENT OF ENGINEERING APPROVAL

STAFF RECOMMENDATION:

- ▶ **Approve the requested variance to reduce the minimum broken back curve tangent from 150-ft to 62.06-ft for Road 'B' from STA 3+66.43 to 4+28.49 based on the following evidence of hardship.**
 - a. **The reduction in tangent length for the broken-back curve is due to the shape and topography of the existing property.**
 - b. **The unique condition to be considered includes the proposed road following the shape of the property, which allows for internal connectivity for residents as well as emergency vehicles**
 - c. **The purpose of the variation is not based exclusively upon a desire for financial gain.**
 - d. **The granting of the variation will not be detrimental to public safety, health or welfare, or injurious to other property or improvements in the neighborhood in which the property is located.**

Approve the requested variance to reduce the minimum intersection spacing along Helmbolt Road, between the centerlines of Road 'A' and Creekhead Drive, from 400-ft to 190-ft, based on the following evidence of hardship.

- a. **The request for a reduction in intersection spacing is due to the horizontal and vertical road alignment along Helmbolt Road.**
- b. **The unique conditions to be considered are the existing road alignment of Helmbolt Road and the proposed new road location being the only viable location to provide appropriate sight distance.**
- c. **The purpose of the variation is not based exclusively upon a desire for financial gain.**
- d. **The granting of the variation will not be detrimental to public safety, health or welfare, or injurious to other property or improvements in the neighborhood in which the property is located.**

Approve the concept plan subject to 13 conditions.

1. Connection to sanitary sewer and meeting any other relevant utility provider requirements.
2. Provision of a street name consistent with the Uniform Street Naming and Addressing System within the City of Knoxville (City Ord. 0-280-90).
3. Certifying that the required sight distance is available along Helmbolt Road and Francis Road, in both directions, with documentation provided to the Knoxville Department of Engineering during the design plan phase.
4. Confirm that the road design complies with AASHTO standards for the proposed design speed during the design plan phase, with review and approval by the Knoxville Department of Engineering.
5. Road 'A' must meet the design requirements of the Knoxville Department of Engineering and Fire Department, including but not limited to the travel lane and median widths of the boulevard and the design of the traffic circle.
6. The permissible location of all driveways within sight distance easements or lots with frontage on the traffic circle must be approved by the Knoxville Department of Engineering during the design plan phase and shown on the final plat.
7. Obtaining approval from the Knoxville Department of Engineering during the design plan phase to increase the maximum intersection grade from 1 percent to 3 percent for the Road 'B' intersection with Road 'A'.
8. Meeting all applicable requirements of the City of Knoxville Zoning Ordinance, including but not limited to the dimensional standards of the RN-2 (Single-Family Residential Neighborhood) zoning district and the rules of measurement for lots in Article 2.4.
9. Revising the shared permanent access easement (SPAЕ) that crosses and/or provides access to lots 29-34 to comply with the SPAЕ standards in Section 3.03.D. of the Subdivision Regulations so that no more than 5 lots are served by the SPAЕ, including any lot that the SPAЕ crosses that has frontage on a road (lot 29). This SPAЕ currently serves 6 lots.
10. If the City of Knoxville Board of Zoning Appeals approves the setback variance requests proposed on the "BZA Concept Plan" (sheet C1A), Planning and Knoxville Department of Engineering staff may approve the lot layout and shared permanent access easement (SPAЕ) design, consistent with the approved variances and the standards of the City of Knoxville Zoning Ordinance and the Subdivision Regulations. The subdivision shall not exceed 67 lots for single-family dwellings.
11. Identifying the location of the WOW! fiber optic line during the design plan phase and show all applicable easements on the final plat.
12. Meeting all applicable requirements of the Knoxville Department of Engineering.
13. Before certification of the final plat for the subdivision, establish a property owners association or other legal entity responsible for maintaining common facilities, such as common areas, amenities, and/or stormwater drainage systems.

COMMENTS:

This proposal is for a 66-lot detached residential subdivision on this 16.82-acre property. The applicant submitted an alternative lot design on plan sheet C1A, called BZA Concept Plan, which has 67 lots. Additional details regarding this alternative plan are below. The RN-2 zone requires a minimum lot size of 5,000 sqft and lot width of 50 ft. The proposed lot sizes range from 5,078 to 15,411 sqft, with most lots being between 5,500 to 8,000 sqft. The property was rezoned from AG (General Agricultural) to RN-2 (Single-Family Residential Neighborhood) in March 2023 (10-R-21-RZ).

ACCESS

Helmbolt Road -- The main access to the site is from Helmbolt Road, a two-lane minor arterial street. The location of the access will require a variance to reduce the intersection separation requirement to Creekhead Drive (additional details below). The entrance road has a boulevard design and a small traffic circle at the first intersection with Road 'B'. This road design is proposed because the property does not have feasible secondary access. The City of Knoxville fire code requires two access points once a development, or road segment within a development, exceeds 30 dwelling units. This applies to houses, duplexes, and attached houses (townhouses). The Knoxville Fire Department agreed to the boulevard design and traffic circle as a method of separating the travel lanes to increase access for emergency vehicles. Alternative access designs to accommodate the fire code are considered on a case-by-case basis by the Knoxville Fire Department.

Old Amherst Road -- The property has driveway access to the terminus of Old Amherst Road, but does not have enough frontage for improved access because of the railroad right-of-way.

Francis Road -- The Francis Road frontage has limited sight distance and is not ideal as a secondary road access for the subdivision. This proposal includes access for 2 to 4 lots, depending on whether a shared permanent access easement (SPAЕ) is utilized to provide access to two lots behind the lots with Francis Road frontage.

SHARED PERMANENT ACCESS EASEMENT (SPAЕ)

An SPAЕ allows access for up to 5 lots, but this includes any lot with frontage on a public or private road that the SPAЕ crosses. Also, the frontage lot must also obtain access from the SPAЕ, unless the Knoxville Department of Engineering approves direct access to the street. Regardless, the lot with frontage counts toward the 5 allowed lots. The proposed SPAЕ that crosses lot 29 and provides access to lots 30 – 34 has 6 lots, including lot 29. One lot must be removed from this SPAЕ.

LOT LAYOUT ON A SPAЕ

The City of Knoxville Zoning Ordinance defines 4 types of lots: interior, corner, through (double frontage), and flag (Article 2.4.I.). The lots proposed on the SPAЕs are most closely related to flag lots, because they located behind other lots. The front yard and setback of a flag lot is measured from the rear lot line of the lot that separates the flag portion of the lot from the street. The street could be a public or private street, but an access easement, such as an SPAЕ, is not a street. So, lots on an SPAЕ have to conform to the flag lot standards, where it is located behind a lot with frontage on the street and to the rear of that lot it is behind. The flag lot standards orient the front and rear setbacks toward the public or private street, not the SPAЕ.

BZA (BOARD OF ZONING APPEALS) CONCEPT PLAN

The setback variances the applicant has applied for are to reduce the front and rear setbacks to 5 ft so they function as side setbacks. The houses can be oriented toward the SPAЕ, regardless of whether BZA approves the variances. However, fewer houses can fit in these narrow portions of the development the setback variances are denied.

VARIANCES

- 1) A broken back tangent is the straight road segment between two horizontal curves that curve in the same direction. The road design standards in the Subdivision Regulations are intended for a 30 mph speed limit. The road design speed for this subdivision is proposed to be 15 mph. The roads will be designed to restrict speeds to 15 mph with either the physical design of the roadway, or other means, such as traffic calming.
- 2) The required intersection separation along an arterial road is 400 ft from the centerline of the intersections. Under normal circumstances, the preferred intersection location is immediately across from an existing intersection, such as Creekhead Drive. However, in this case, the Creekhead Drive location has inadequate sight distance in both directions, so aligning Road 'A' at this intersection is not preferred. The minimum sight distance can be obtained in both directions at the proposed Road 'A' access point and it is located far enough away from Creekhead Drive that the vehicle queue for left turn movements from Helmbolt Road to either of those roads should not back up into either intersection.

ESTIMATED TRAFFIC IMPACT: 688 (average daily vehicle trips)

Average Daily Vehicle Trips are computed using national average trip rates reported in the latest edition of "Trip Generation," published by the Institute of Transportation Engineers. Average Daily Vehicle Trips represent the total number of trips that a particular land use can be expected to generate during a 24-hour day (Monday through Friday), with a "trip" counted each time a vehicle enters or exits a proposed development.

ESTIMATED STUDENT YIELD: 27 (public school children, grades K-12)

Schools affected by this proposal: West Hills Elementary, Bearden Middle, and Bearden High.

- Potential new school population is estimated using locally-derived data on public school student yield generated by new housing.
- Students are assigned to schools based on current attendance zones as determined by Knox County Schools. Students may request transfers to different zones, and zone boundaries are subject to change.
- Estimates presume full build-out of the proposed development. Build-out is subject to market forces, and timing varies widely from proposal to proposal.
- Student yields from new development do not reflect a net addition of children in schools. Additions occur incrementally over the build-out period. New students may replace current population that ages through the system or moves from the attendance zone.

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.