MEMPHIS AND SHELBY COUNTY OFFICE OF PLANNING AND DEVELOPMENT

STAFF REPORT # 1

CASE NUMBER: S 14-004 CC **L.U.C.B. MEETING:** October 9, 2014

DEVELOPMENT NAME:	East Ridge Subdivision (working title)
LOCATION:	North side of Raleigh LaGrange., +/- 1,800' west of Pisgah Road
COMISSION DISTRICT:	District 2 (George Chism)
APPLICANT:	Michael A. Lightman, Steven L. Black
REPRESENTATIVE:	Land Development Solutions (Robert Reaves)
REQUEST:	Fourteen lots for Single Family Detached Homes
AREA:	41.81 Acres
EXISTING LAND USE & ZONING:	Vacant land in the Conservation Agriculture (CA) District

OFFICE OF PLANNING AND DEVELOPMENT RECOMMENDATION:
Hold 30 DAYS

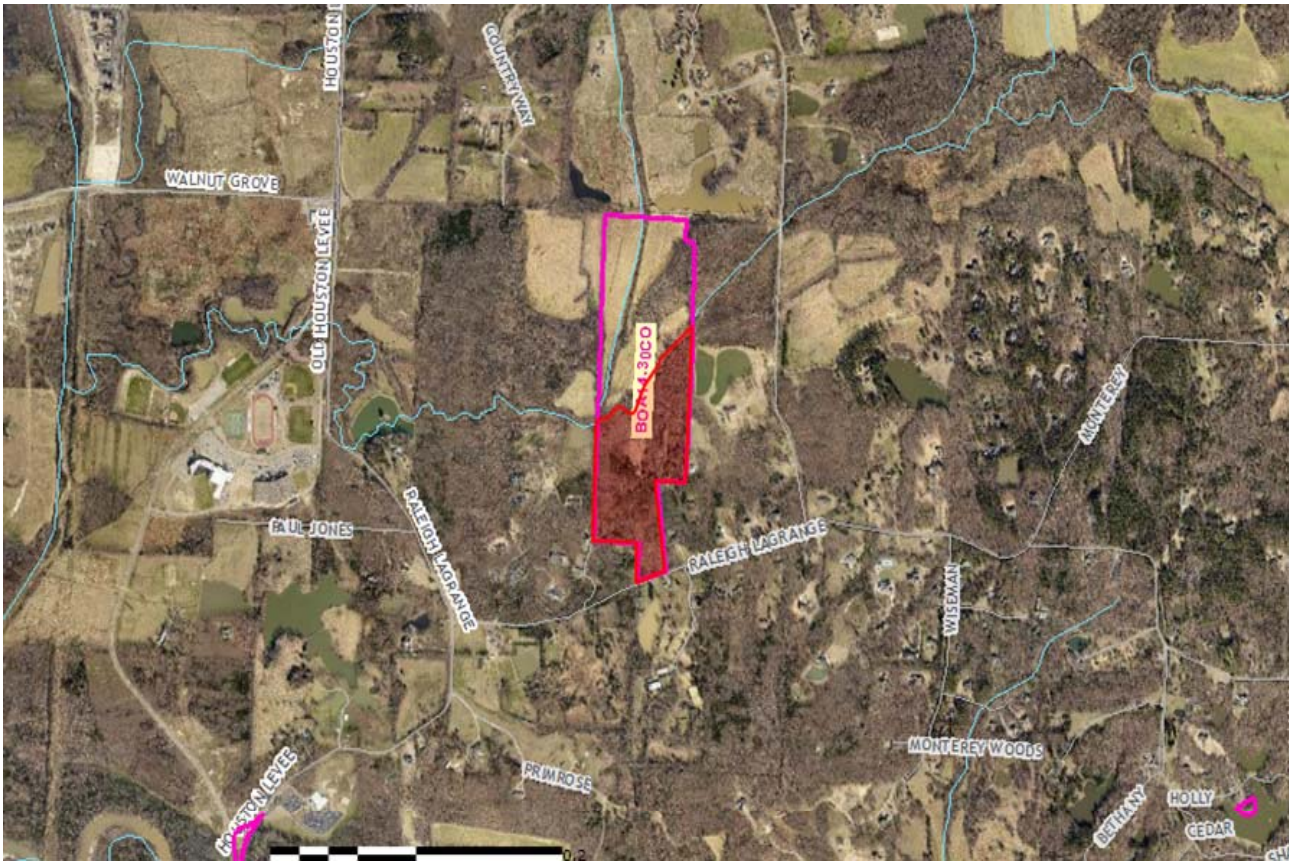
Staff: Don Jones **E-mail: john.jones@memphistn.gov**

CONCLUSIONS:

The applicant is continuing to work with the Health Department and the Shelby County Engineers Office to revise this site plan to meet the conditions for the development of single family residential lots with private sewer located within the 100 year flood plain.

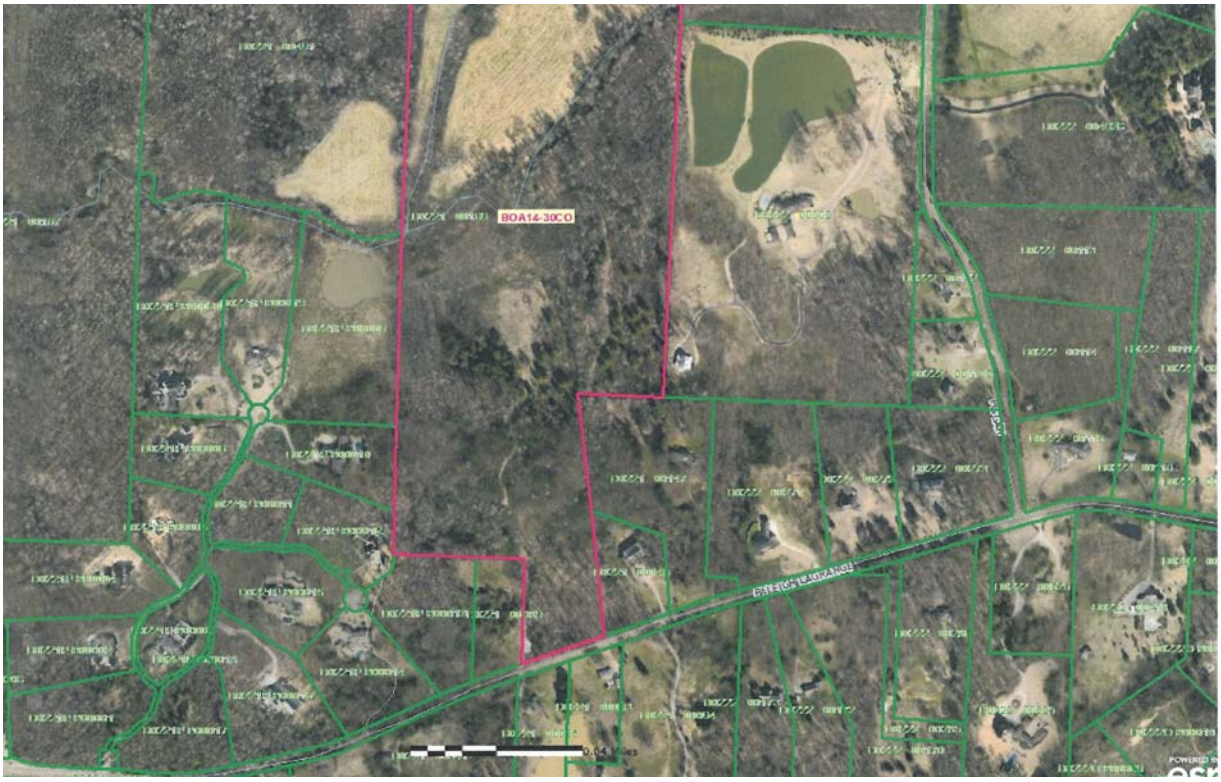
Staff Writer: Chip Saliba *E-Mail: chip.saliba@memphistn.gov*

General Location



Subject tract is a +/- 41 acre tract on the nortside of Raleigh LaGrange. This is the lower half of the tract that was presented to the BOA for a variance at the July 23, 2014 Hearing.

Zoom In if needed

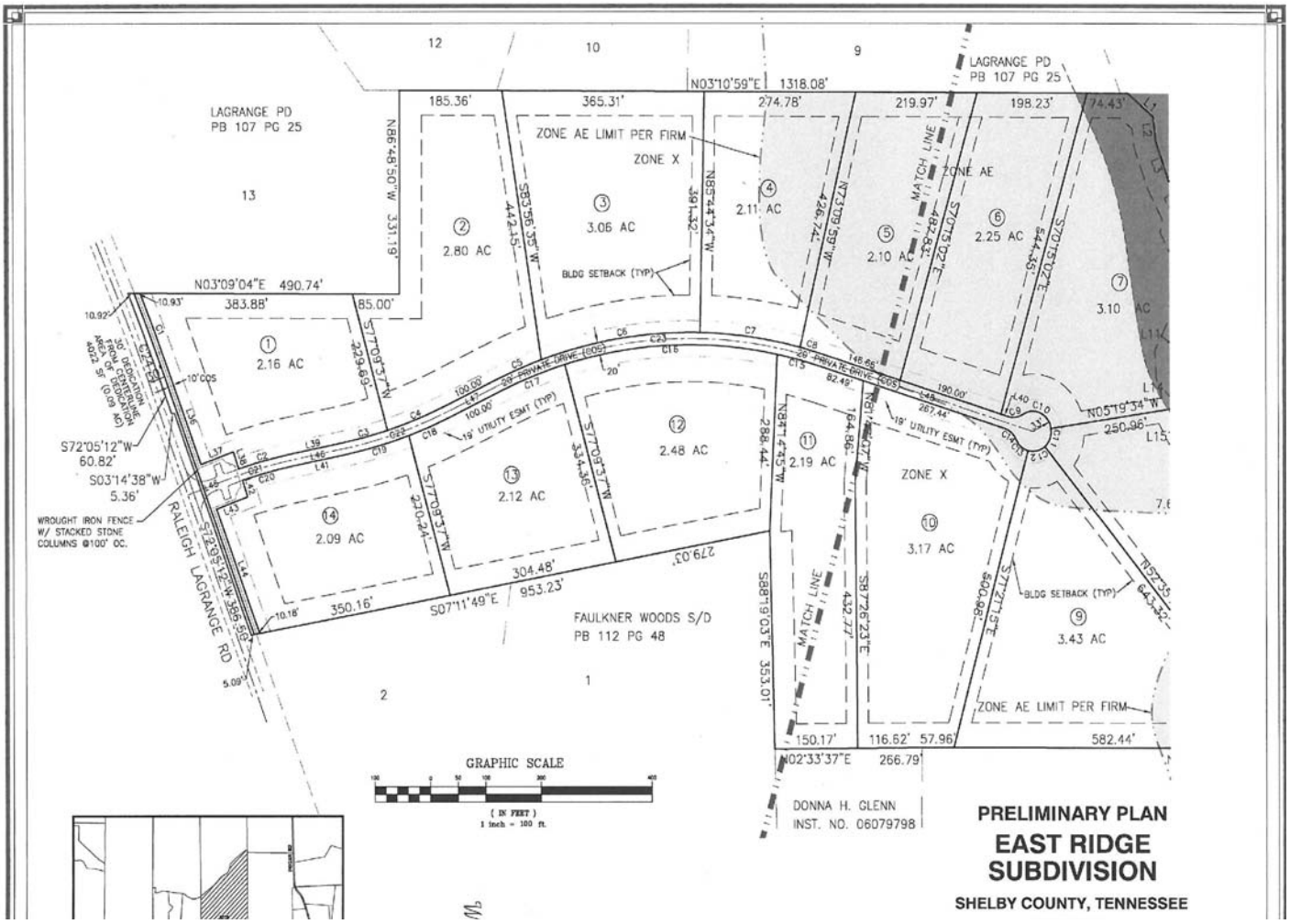


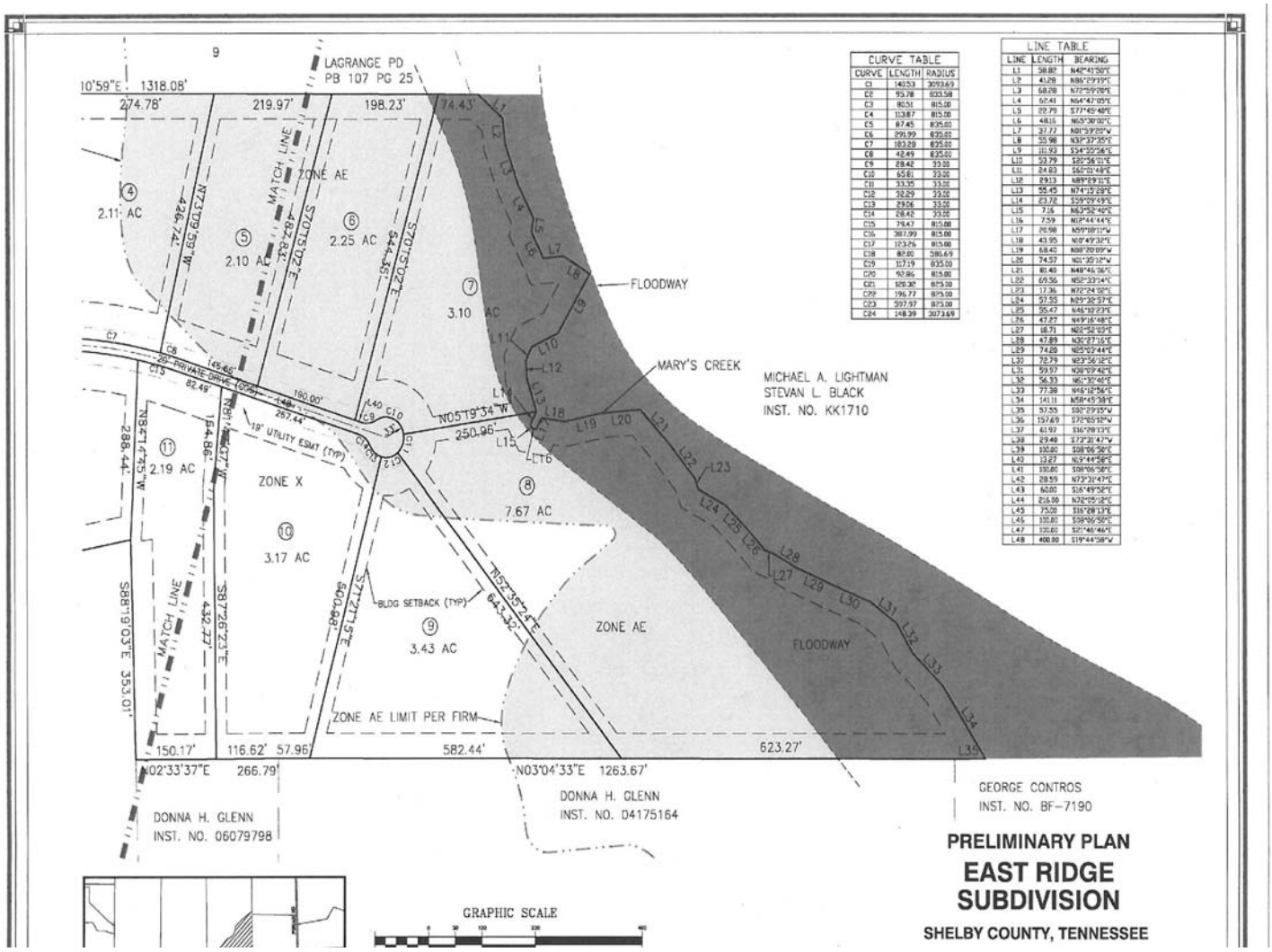
Subject tract includes approximately 386 feet of frontage on Raleigh LaGrange. Subject site extends north from Raleigh Lagrange Road to the centerline of Mary's Creek

Abutting the subject on the west is the LaGrange PD, 18 residential lots, average lot size 3.8 acres.

On the east are two lots in the Faulkner Woods Subdivision.

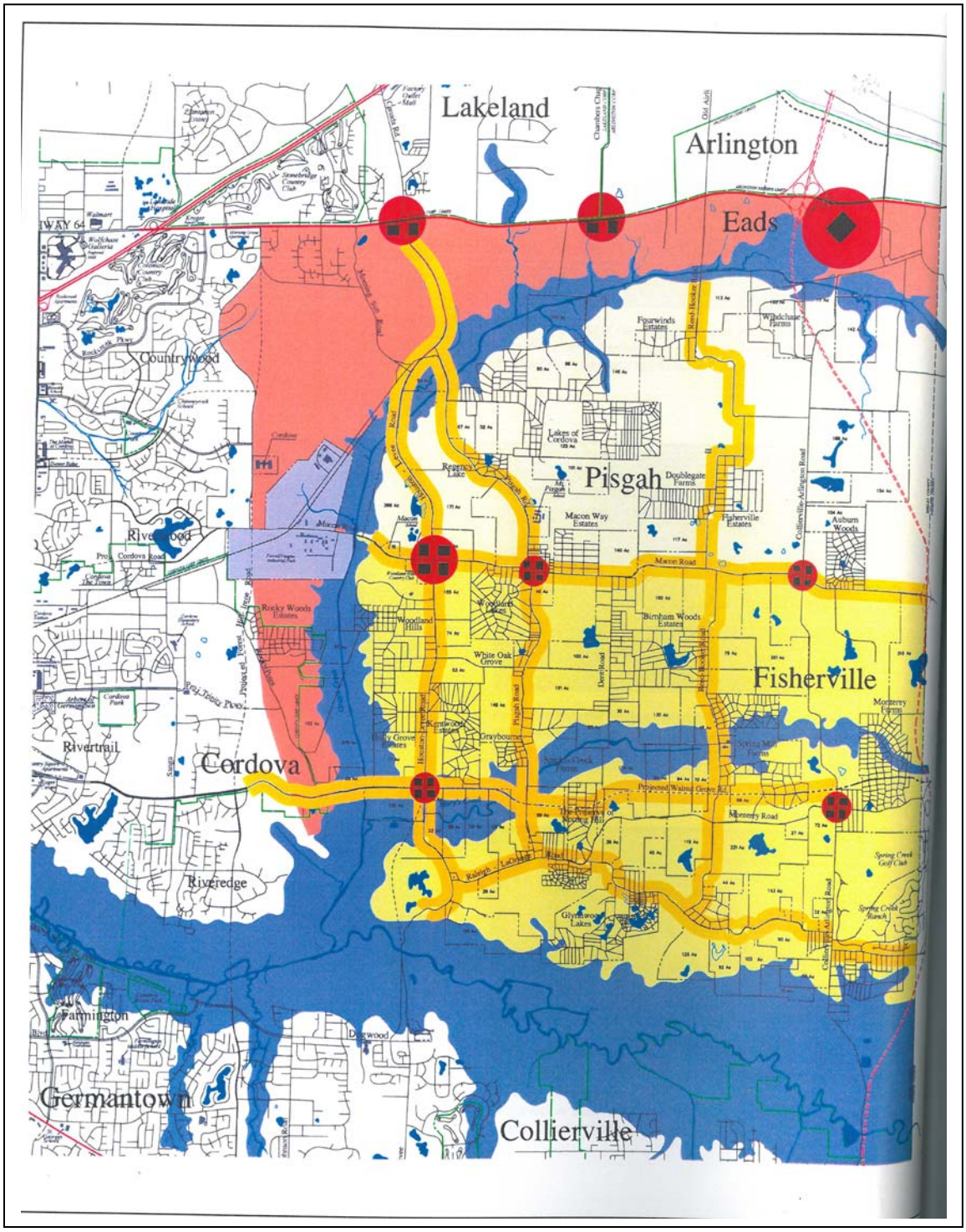
Plat (2 pages)


LAGRANGE PD
PB 107 PG 25
ZONE AE LIMIT PER FIRM
ZONE X
ZONE AE
2.16 AC
2.80 AC
3.06 AC
2.11 AC
2.10 AC
2.25 AC
3.10 AC
2.48 AC
2.19 AC
2.12 AC
2.09 AC
3.17 AC
3.43 AC
BLDG SETBACK (TYP)
19' UTILITY ESMT (TYP)
20' PRIVATE DRIVE (ROS)
RALEIGH LAGRANGE RD
FAULKNER WOODS S/D
PB 112 PG 48
MATCH LINE
GRAPHIC SCALE
(IN FEET)
1 inch = 100 ft.
DONNA H. GLENN
INST. NO. 06079798
PRELIMINARY PLAN
EAST RIDGE
SUBDIVISION
SHELBY COUNTY, TENNESSEE


LAGRANGE PD
PB 107 PG 25
FLOODWAY
MARY'S CREEK
MICHAEL A. LIGHTMAN
STEVAN L. BLACK
INST. NO. KK1710
ZONE AE
ZONE X
2.11 AC
2.25 AC
2.10 AC
3.10 AC
2.19 AC
3.17 AC
7.67 AC
3.43 AC
MATCH LINE
BLDG SETBACK (TYP)
ZONE AE LIMIT PER FIRM
19' UTILITY ESMT (TYP)
DONNA H. GLENN
INST. NO. 06079798
DONNA H. GLENN
INST. NO. D4175164
GEORGE CONTROS
INST. NO. BF-7190
GRAPHIC SCALE
PRELIMINARY PLAN
EAST RIDGE
SUBDIVISION
SHELBY COUNTY, TENNESSEE

STAFF ANALYSIS
Grays Creek Area Plan

Grays Creek Plan:



Subject property lies in the area colored yellow generally between Macon Road on the north and Wolf

River on the south, Grays Creek on the west and the County line on the east. This area is recommended to develop at with lot sizes of 2 acres and larger.

Alternative Plan: Overview

Key Features:

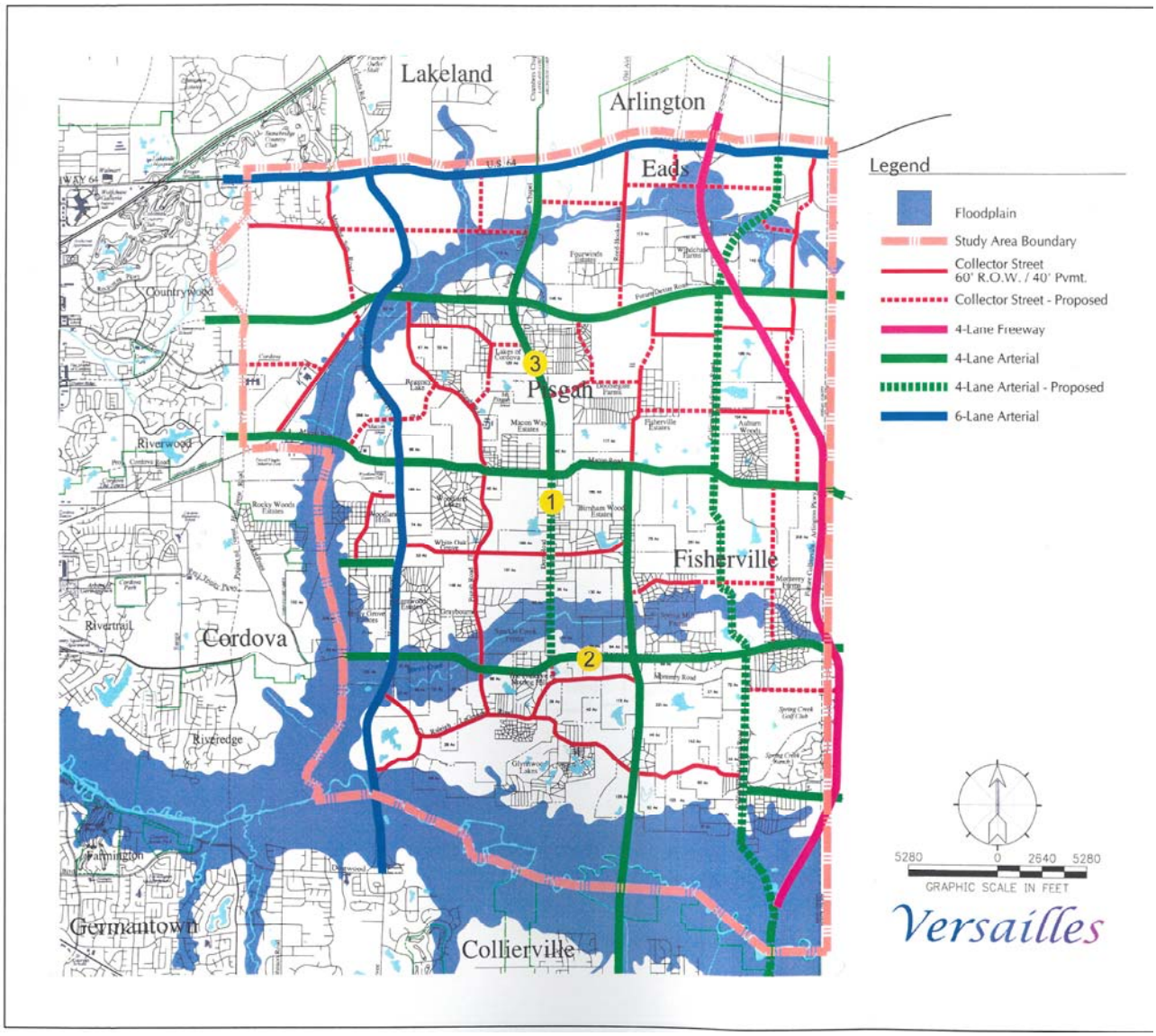
Discourage isolated pods, encourage connectivity, preserve important environmental features, promote effective road, pedestrian, and open space networks.

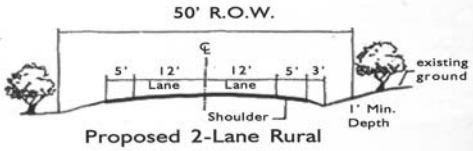
Infrastructure: Do not extend sewers.

Environmental Features: A 26 mile, interconnected greenway is recommended along Study Area's waterways. (No current pathway in the Mary's Creek Floodway. P 11, Lots should not be less than 4 acres in environmentally sensitive areas such as floodplains or wetlands and where sewers do not and are not planned. Areas with significant topography should be considered for lower density development.

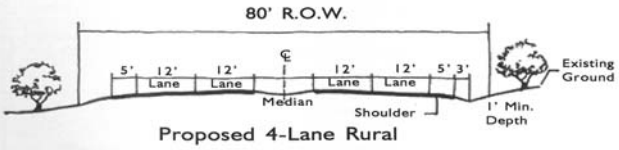
Circulation Plan and Alternative Design –Rural Collector

Circulation Plan below calls for Raleigh LaGrange to be developed as a typical collector street with 60' R-O-W and 40' pavement. Alternative plan is a Proposed 2-lane Rural Road with 50' R-O-W and a 12' wide moving lanes, 5' shoulder, and 3' wide drainage swales on each side.





Proposed 2-Lane Rural



Proposed 4-Lane Rural

Compare with City/County Comment and policies

UDC

Public Water or Private Well? If well, lot sizes are insufficient.

Streetscapes 4.3 – Raleigh Lagrange – show detail for entry treatment. Streetscape Treatment required (Suggest S-12 or equivalent)

Streetscape along Private Drive (Suggest S-14) - also consider Tree Ordinance Requirement

Landscaping and screening 4.6.7 Fences and walls, C. D. E(5) – Height, location, materials, length of continuous, unbroken or uninterrupted fence or wall plane.

4.9.7 Signs E. Complex signs – show details

Article 5

5.2.4 Connectivity, A-D,

5.2.5 Blocks, A(4) Exemptions applies here.

5.2.7 - See discussion above about design for the Raleigh LaGrange rural right-of-way design, see also plat for LaGrange PD – required dedication varied from 50’ to 30’. See also Plat for Faulkner Woods S/D.

5.2.17 Private Streets, recognized – compare to Grays Creek Plan. There is an opportunity to tie a public street to the east.

If allowed, Final Plat shall include the instrument number for the Master Deed which addresses the ownership and maintenance of the common open space including road. Private Drive will be identified as a Common Open Space Lot with an alpha numeric designation.

5.3 Utilities –
5.3.3C – Septic Systems - revise preliminary plan to show primary and secondary well fields per approval of Health Dept and Co. Eng.

6.1 Tree Removal –Tree Ordinance – show conformance with Equivalent Alternative, Matrix, or Tree Bank, per OPD Downtown. See also, 6.1.6, SFR-2

6.2 Open Space 6.2.1 requirement to provide 0.6 percent Formal Open Space. See also 6.22

6.3 Steep Slope – demonstrate conformance or that the section does not apply.- Need topographic survey

6.4 Stream Buffers - Demonstrate compliance or that the section does not apply

8.8 Floodplain - Demonstrate compliance, see also comments from City/Co Eng.

DEPARTMENTAL COMMENTS

The following comments were provided by agencies to which this application was referred:

Shelby County Engineering:

1. Septic tank drip fields and replacement drip fields are to be shown on the preliminary plat before the LUCB meeting.

2. Location of the floodplain compensating storage for filling in the floodplain as required by the Memphis ad Shelby County drainage manual must be identified before plant approval.

3. A driveway culver table is required on the plat of all lots..

4. Plat must show the required finish floor elevations at least 2 feet above the 100 year base flood elevations shown on the FEMA flood map.

5. Plat must show the homeowners association is set up before the plat is recorded.

6. The private road must be built to county standards.

7. An appropriate stream buffer restricting any earthwork needs to be show on the plat.

8. The floodway needs a note stating “no fill allowed in this area”

9. A FEMA LOMR-F (letter of map revision) is to be applied for and approve by FEMA case number and the new 100 year floodplain boundary is to be shown on the plat..

10. A note on the plat is required stating that all maintenance of Mary Creek to keep it flowing properly is the responsibility of the property owners abutting the creek.

City Engineer:

1. This proposal sits on an 85 acre parcel of land bisected by Mary’s Creek. This site plan will use half of the site south of the creek. The north half of the site will then be legally land locked with no road frontage at all. The SCRO purports that Walnut Grove Road runs along the north property line but the “right-of-way” is in actuality a series of well head stations owned by MLGW and no right of way for Walnut Grove Road exists.

2. The Sharpe property immediately west of this site (north side of Mary's Creek is already land locked.

3. This site is located in the Memphis Reserve Area.

4. No City sewers are currently available to serve this site.

5. The Memphis and Shelby County Health Department shall approve private septic tanks for each lot.

Roads:

6. Dedicate 30 feet from feet from centerline of Raleigh LaGrange Road in accordance the requirements of the Unified Development Code.

Private Drives:

7. Private drive cul-de-sac turn-arounds shall have a minimum paved diameter of 66 feet. If the cul-de-sac exceeds 300 feet in length, the turn-around shall have a minimum paved diameter of 80 feet or shall be posted as a "Fire Lane" (Reference Section 602.6.7 of City Fire Code).

8. All private drives/rear service drives shall be constructed to meet pavement requirements of the Unified Development Code, applicable City Standards, and provide a minimum width of twenty feet (20').

Curb Cuts/Access:

9. The County Engineer shall approve the design, number and location of curb cuts.

Drainage:

10. Drainage improvements, including possible on-site detention, shall be provided under a Standard Subdivision contract in accordance with Unified Development Code and the City of Memphis Drainage Design Manual.

11. The developer should be aware of his obligation under 40 CFR 122.26(b)(14) and TCA 69-3-101 et. seq. to submit a Notice of Intent (NOI) to the Tennessee Division of Water Pollution Control to address the discharge of storm water associated with the clearing and grading activity on this site.

12. If the State will not issue an ARAP Permit for the concrete channel lining of the major drainage way, a drainage easement - unbuildable area - common open space along the major drainage way must be provided consistent with drainage plans approved by the City/County Engineer and an A.R.A.P. Permit. The easement width may be equal to as much as 2.5 times the top of bank width, measured from either side of the stream centerline, in order to protect buildings and accessory structures from bank caving and stream meandering.

13. The preliminary/outline plan shall reflect a minimum 25-foot rear yard, exclusive of the easement along the natural drainage way, as well as a buildable area and front yard setback on each buildable lot.

14. Part of this site is located within the 100-Year floodplain of Mary's Creek according to the FEMA maps. Appropriate flood protection measures must be taken to prevent flood damage. The 100 year floodplain boundary line and elevation shall be reflected on the final plat and engineering plans.

15. Part of this site is within the FLOODWAY of Mary's Creek according to the FEMA maps. No filling or construction shall be permitted within the Floodway. The Floodway boundary shall be reflected on the final plat and engineering plans.

Site Plan Notes:

16. Adequate queuing spaces in accordance with the current ordinance shall be provided between the street right-of-way line and any proposed gate/guardhouse/card reader.

17. Adequate maneuvering room shall be provided between the right-of-way and the gate/guardhouse/card reader for vehicles to exit by forward motion.

18. All commons, open areas, lakes, drainage detention facilities, private streets, private sewers and private drainage systems shall be owned and maintained by a Property Owner's Association. A statement to this effect shall appear on the final plat.

19. Required landscaping shall not be placed on sewer or drainage easements.

Memphis and Shelby County Health Department"

East Ridge Subdivision
OPD Case Number - S 14-004 CC

1. Conventional subsurface sewage disposal statutory criteria T.C.A. 68-221-403 (c) which requires either a high intensity soils evaluation by a soil scientist certified by the State of Tennessee or a percolation test must be performed to verify that the soil is sufficiently permeable to allow proper absorption of the sewage into the soil. The soil mapping or percolation test must be performed as outlined in the Rules and Regulations to Govern Subsurface Sewage Disposal Systems Chapter 1200-1-6-.02 (3).
2. For proposed subdivisions and Planned Unit Developments a plat with results of a soil evaluation performed by a soil scientist certified by the Department must be submitted in order to assure that the soil is suitable for subsurface sewage disposal systems for the proposed development.
3. If a subsurface sewage system cannot be sited using the above two requirements, then any alternative system approved by the Tennessee Department of Environment and Conservation pursuant to Title 68, Chapter 221, Part 4 Subsurface Sewage Disposal

Systems as of the date of septic system permit application receipt at the Memphis and Shelby County Health Department could be permitted by the Department as outlined in the Rules and Regulations to Govern Subsurface Sewage Disposal Systems Chapter 1200-1-6-.14.

4. As outlined in Rules and Regulations to Govern Subsurface Sewage Disposal Systems Chapter 1200-1-6-.03, areas consisting of fill material shall be excluded from the area considered for the installation of the disposal field unless soil conditions provide for adequate filtration and will prevent outcropping of sewage effluent.
5. Subsurface sewage disposal systems or field lines cannot be installed within the designated boundaries of the one hundred (100) year floodplain or flood zone.
6. Abandoned wells of any type at the site must be properly filled as outlined in the Shelby County Well Construction Code, Sections 6 and 9.
7. The minimal lot size must be two acres excluding lakes, ponds, utility easements or similar usage.
8. Each lot must show the proposed location of the house in order to properly assess the lot so that both an original as well as a duplicate disposal field bed area can be sited for each proposed home for all lots in the subdivision.

Shelby County Fire Division

The following maximum length's of dead-end water supply to fire Hydrants shall not exceed:
6 inch- 380 feet
8 inch- 1550 feet
10 inch- 4600 feet
12 inch- 11,150 feet

1. The location and number of hydrants shall be designated by the Fire Official, but in no case shall distances between installed fire hydrants Exceed 500 feet.

2. Maximum distance from the nearest fire hydrant to the most remote Exterior point of any building shall be 500 feet. The distance shall Be measured on a roadway surface meeting the fire department access Equipment.

3. **D103.1 Access road width with a hydrant**. Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet (7925 mm). See Figure D103.1.

4. **D103.4 Dead ends.** Dead-end fire apparatus access roads in excess of 150 feet (45 720 mm) shall be provided with width

and turnaround provisions in accordance with Table D103.4.

TABLE D103.4
REQUIREMENTS FOR DEAD-END FIRE APPARATUS ACCESS ROADS

LENGTH (feet)	WIDTH (feet)	TURNAROUNDS REQUIRED
0–150	20	None required
151–500	20	120-foot Hammerhead, 60-foot "Y" or 96-foot-diameter cul-de-sac in accordance with Figure D103.1
501–750	26	120-foot Hammerhead, 60-foot "Y" or 96-foot-diameter cul-de-sac in accordance with Figure D103.1
Over 750	Special approval required	

For SI: 1 foot = 304.8 mm.

5. **D103.5 Fire apparatus access road gates.** Gates securing the fire apparatus access roads shall comply with all of the following criteria:
   1. The minimum gate width shall be 20 feet (6096 mm).
   2. Gates shall be of the swinging or sliding type.
   3. Construction of gates shall be of materials that allow manual operation by one person.
   4. Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.
   5. Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening devices shall be approved by the fire code official.
   6. Manual opening gates shall not be locked with a padlock or chain and padlock unless they are capable of being opened by means of forcible entry tools.
   7. Locking device specifications shall be submitted for approval by the fire code official.

SECTION D105

6. **AERIAL FIRE APPARATUS ACCESS ROADS**

D105.1 Where required. Buildings or portions of buildings or facilities exceeding 30 feet (9144 mm) in height above the lowest level of fire department vehicle access shall be provided with approved fire apparatus access roads capable of accommodating Fire Department aerial apparatus. Overhead utility and power lines shall not be located within the aerial fire apparatus access roadway

7. **D105.2Width.** Fire apparatus access roads shall have a minimum unobstructed width of 26 feet (7925 mm) in the immediate vicinity of any building or portion of building more than 30 feet (9144 mm) in height.

8. **D105.3 Proximity to building.** At least one of the required access routes meeting this condition shall be located within a minimum of 15 feet (4572 mm) and a maximum of 30 feet (9144 mm) from the building, and shall be positioned parallel to one entire side of the building.

9. **SECTION D106**

MULTIPLE-FAMILY RESIDENTIAL DEVELOPMENTS

D106.1 Projects having more than 100 dwelling units. Multiple-family residential projects having more than 100 dwelling units shall be equipped throughout with two separate and approved fire apparatus access roads.

Exception: Projects having up to 200 dwelling units may have a single approved fire apparatus access road when all buildings, including nonresidential occupancies, are equipped throughout with approved automatic sprinkler systems installed in accordance with Section 903.3.1.1 or 903.3.1.2 of the *International Fire Code*.

10. **D106.2 Projects having more than 200 dwelling units.** Multiple-apparatus access roads regardless of whether they are equipped with an approved automatic sprinkler system family residential projects having more than 200 dwelling units shall be provided with two separate and approved fire .

11. **SECTION D107**

ONE- OR TWO-FAMILY RESIDENTIAL DEVELOPMENTS

D107.1 One- or two-family dwelling residential developments. Developments of one- or two-family dwellings where the number of dwelling units exceeds 30 shall be provided with separate and approved fire apparatus access roads, and shall meet the requirements of Section D104.3.

Exceptions:

1. Where there are 30 or fewer dwelling units on a single public or private access way and all dwelling units are protected by approved residential sprinkler systems, access from two directions shall not be required.
2. The number of dwelling units on a single fire apparatus access road shall not be increased unless fire apparatus access roads will connect with future development, as determined by the fire code official.

12. **FIRE-FLOW REQUIREMENTS FOR BUILDINGS**

B105.1 One- and two-family dwellings. The minimum fire-flow requirements for one- and two-family dwellings having a fire-flow calculation area which does not exceed 3,600 square feet (344.5 m2) shall be 1,000 gallons per minute (3785.4 L/min). Fire flow and flow duration for dwellings having a fire-flow calculation area in excess of 3,600 square feet (344.5m2) shall not be less than that specified in Table B105.1.

Exception: A reduction in required fire flow of 50 percent, as approved, is allowed when the building is provided with an approved automatic sprinkler system.

13. **B105.2 Buildings other than one- and two-family dwellings.** The minimum fire flow and flow duration for buildings other than one- and two-family dwellings shall be as specified in Table B105.1.

Exception: A reduction in required fire flow of up to 50 percent, as approved, is allowed when the building is provided with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 of the *International Fire Code*. Where buildings are also of Type I or

II construction and are a light-hazard occupancy as defined by NFPA 13, the reduction may be up to 75 percent. The resulting fire flow shall not be less than 1,500 gallons per minute (5678 l/min) for the prescribed duration as specified in Table B 105.1.

TABLE B105.1
MINIMUM REQUIRED FIRE FLOW AND FLOW DURATION FOR BUILDINGS[a]

FIRE-FLOW CALCULATION AREA (square feet)					FIRE FLOW (gallons per minute)[c]	FLOW DURATION (hours)
Type IA and IB[b]	Type IIA and IIIA[b]	Type IV and V-A[b]	Type IIB and IIIB[b]	Type V-B[b]		
0-22,700	0-12,700	0-8,200	0-5,900	0-3,600	1,500	
22,701-30,200	12,701-17,000	8,201-10,900	5,901-7,900	3,601-4,800	1,750	
30,201-38,700	17,001-21,800	10,901-12,900	7,901-9,800	4,801-6,200	2,000	
38,701-48,300	21,801-24,200	12,901-17,400	9,801-12,600	6,201-7,700	2,250	2
48,301-59,000	24,201-33,200	17,401-21,300	12,601-15,400	7,701-9,400	2,500	
59,001-70,900	33,201-39,700	21,301-25,500	15,401-18,400	9,401-11,300	2,750	
70,901-83,700	39,701-47,100	25,501-30,100	18,401-21,800	11,301-13,400	3,000	
83,701-97,700	47,101-54,900	30,101-35,200	21,801-25,900	13,401-15,600	3,250	3
97,701-112,700	54,901-63,400	35,201-40,600	25,901-29,300	15,601-18,000	3,500	
112,701-128,700	63,401-72,400	40,601-46,400	29,301-33,500	18,001-20,600	3,750	
128,701-145,900	72,401-82,100	46,401-52,500	33,501-37,900	20,601-23,300	4,000	
145,901-164,200	82,101-92,400	52,501-59,100	37,901-42,700	23,301-26,300	4,250	
164,201-183,400	92,401-103,100	59,101-66,000	42,701-47,700	26,301-29,300	4,500	
183,401-203,700	103,101-114,600	66,001-73,300	47,701-53,000	29,301-32,600	4,750	
203,701-225,200	114,601-126,700	73,301-81,100	53,001-58,600	32,601-36,000	5,000	
225,201-247,700	126,701-139,400	81,101-89,200	58,601-65,400	36,001-39,600	5,250	
247,701-271,200	139,401-152,600	89,201-97,700	65,401-70,600	39,601-43,400	5,500	
271,201-295,900	152,601-166,500	97,701-106,500	70,601-77,000	43,401-47,400	5,750	
295,901-Greater	166,501-Greater	106,501-115,800	77,001-83,700	47,401-51,500	6,000	4
—	—	115,801-125,500	83,701-90,600	51,501-55,700	6,250	
—	—	125,501-135,500	90,601-97,900	55,701-60,200	6,500	
—	—	135,501-145,800	97,901-106,800	60,201-64,800	6,750	
—	—	145,801-156,700	106,801-113,200	64,801-69,600	7,000	
—	—	156,701-167,900	113,201-121,300	69,601-74,600	7,250	
—	—	167,901-179,400	121,301-129,600	74,601-79,800	7,500	
—	—	179,401-191,400	129,601-138,300	79,801-85,100	7,750	
—	—	191,401-Greater	138,301-Greater	85,101-Greater	8,000	

For SI: 1 square foot = 0.0929 m^2, 1 gallon per minute = 3.785 L/m, 1 pound per square inch = 6.895 kPa.
a. The minimum required fire flow shall be permitted to be reduced by 25 percent for Use Group R.
b. Types of construction are based on the *International Building Code*.
c. Measured at 20 psi.

City Fire Division:

City Real Estate: .

City/County Health Department:

City Board of Education:

Construction Code Enforcement:

Memphis Light, Gas and Water: .

Bell South:

Memphis Area Transit Authority (MATA): .

OPD-Regional Services:

OPD-Plans Development:

Memphis Park Commission: .

Grays Creek Assoc (preliminary comments)

John,

I reviewed the BOA request for the subject property and upon behalf of the Grays Creek Assoc. we do not have objection to the request as submitted and per the data contained therein.

I / we do have questions/concerns in regards to the general subdivision which we hope will be fully and adequately address and resolved.

1. While it may not be a subdivision standard it would be nice and wise upon the applicants part if they would establish a greater building/improvement setback than the required “minimum” for the two lots/parcels along Ral. LaGrange Rd. An 80-100ft. setback from the ROW would tend to protect the existing rural view corridor along the roadway.

2. It is assumed that the subdivision layout and the configuration and size of each lot/parcel is/was carefully determined based upon a current/valid subsurface soils mapping/study in order to ASSURE that EACH and EVERY lot/parcel will have adequate and proper soils for valid septic systems with required reserve areas. Even areas with valid soils, certain areas may not be valid for designated septic areas dependent upon topography, drainage swales, treed areas, etc. The valid septic areas should be clearly identified and shown on each lot/parcel and there should be valid buildable/improvement areas We appreciate you forwarding the data regarding the BOA request on Raleigh LaGrange Road. I've remaining on each lot/parcel for all improvements proposed; the homes, drives, pools, etc. It should be noted that valid septic areas shall not be disturbed, graded, changed in any way prior to installing the septic systems. The sales/marketing efforts should clearly denote the proposed building areas and the required septic/reserve areas and the requirements regarding the max. size of home/bedroom count allowed for each lot/parcel and that any potential buyer made aware that they must maintain the required septic and reserve areas without disruption to the soils.

3. In regards to item 2 above; lots 5, 6, 7 and the majority of lot 8 are located in the AE flood zone. Not sure of this but can valid septic systems be located in this or within any flood zone? Should an owner desire to fill the lot/parcel they need to be aware that a valid septic area will be deemed invalid with any amount of fill placed over it.

4. It would be good to know what type of entrance feature or element proposed and if gated that there is adequate turn around area within the depth of the entrance to prevent the possible need to back out into the public roadway. The desire would be that any entry design be in keeping with the rural character and not be obtrusive along the roadway. I would assume the developer would assure that clear sight distances are provided both east and west of the new entrance to assure that the entrance does not become a "blind entrance" along the roadway.

5. It would be good to know if there would be any private covenants which would protect the existing major trees on the subject property.

The items above (certainly # 2 and 3) have been known and required by the Shelby Co. Health Dept. since Notting Hill was developed in 1999/2000 and should become standard policy for any development in the area.

Sincerely,

Carson