

DETENTION BASIN CALCULATIONS
(REVISED FOR SCS METHOD)

EQUATIONS:
 $Q = \frac{(P - I_a)^2}{(P - I_a) + S}$ $I_a = 0.2S$ $S = \frac{1000}{CN} - 10$
 $Q = \text{RUNOFF, in}$ $CN = \text{CURVE NUMBER}$
 $P = \text{PRECIPITATION, 4.5 in (FOR 100 YR STORM)}$
 $VOL = \text{LAND AREA} \times Q$ $\text{LAND AREA} = 9.3 \text{ ac.}$

	CN	Q (in)	VOL (ac-ft)
EXISTING	73	1.90	1.47
PROPOSED	83	2.73	2.11

VOLUME REQUIRED = $VOL_p - VOL_x = 2.11 - 1.47 = 0.64 \text{ ac-ft}$
VOLUME PROVIDED = 0.70 ac-ft (AT 100 YR STORAGE ELEV.)
APPROXIMATELY 10% ADDITIONAL STORAGE VOLUME PROVIDED

Basin Volume Calculations

Elev (ac)	Area (ac)	Inc. Vol (ac ft)	Total Vol (ac ft)
453	0		
454	0.08	0.027	0.03
456	0.12	0.199	0.23
458	0.17	0.289	0.51
459	0.20	0.185	0.70
460	0.23	0.215	0.91



DETENTION BASIN CALCULATIONS
(ORIGINAL)

$X = \Delta CRA / 12$
 $\Delta C = 0.50 - 0.35 = 0.15$
 $A = 10.0 \text{ ACRES}$
 $R = 2.8 \text{ INCHES}$
 $X = (0.15)(10.00)(2.8)/12 = .35 \text{ AC.-FT.}$
REQUIRED $X = 15,246 \text{ CU.FT.}$
PROVIDED $\text{BASIN} = 8,060 \text{ SQ.FT.}$
TOTAL = 8,059 SQ.FT. @ APPROX. 2 FT. DEPTH
= 16,117 CU.FT. > 15,246 CU.FT.

PHASING AND SEQUENCING

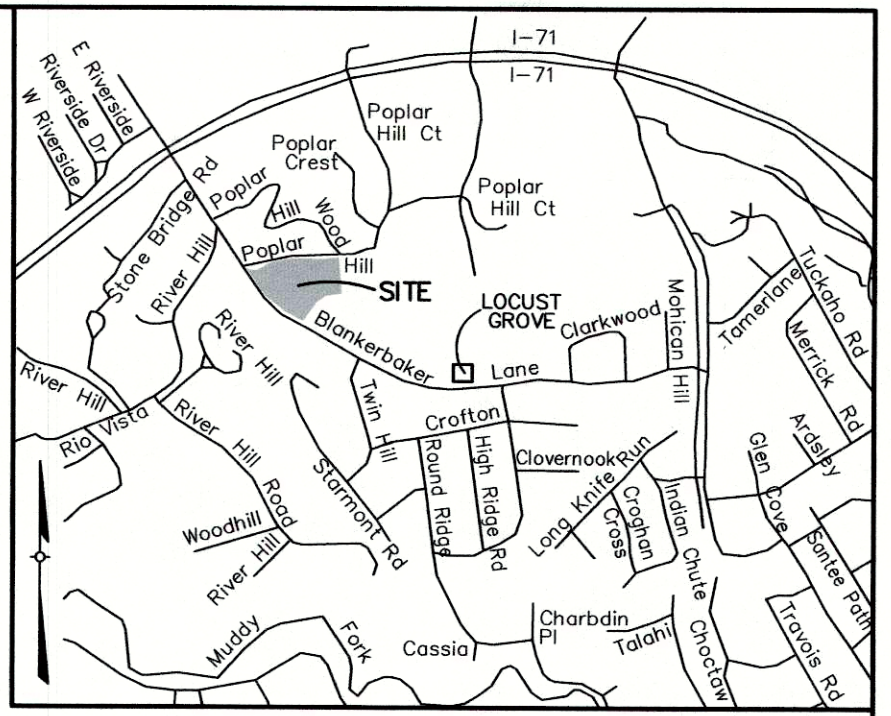
1. Install Construction Entrance
2. Install Basin Bypass Piping to Divert Cleaner from existing Roadside swales to existing dual pipes under Blankenbaker Lane.
3. Install headwall inlet protection at upstream ends of bypass piping.
4. Install temporary sediment basin and outlet structure.
5. Install temporary diversion ditches to direct sediment laden runoff to sediment basin.
6. Consult Geotechnical Engineer and/or report for site specific construction requirements and/or recommendations.
7. Proceed with site construction.
8. Install erosion control blankets on all disturbed steep sloped areas to protect against excess erosion.
9. Adhere to general EPSC notes throughout the remainder of construction.

WAIVER REQUESTED

1. A Waiver is requested to eliminate the requirement for sidewalks along Blankenbaker Lane and Poplar Hill Road.

PROJECT DATA

SITE AREA = 10.0± ACRES
EXISTING ZONING = R-4
FORM DISTRICT = NEIGHBORHOOD
TOTAL # RESIDENTIAL LOTS = 12
TOTAL # OPEN SPACE LOTS = 2
TOTAL AREA OF R/W = 1.6± AC.
NET AREA = 8.4± AC.
GROSS DENSITY = 1.2 DU/AC.
NET DENSITY = 1.4 DU/AC.
OPEN SPACE PROVIDED = 0.9± AC.
YARD SETBACKS
FRONTYARD = 30'
SIDEYARD = 5' (10' COMBINED)
REARYARD = 25'



LOCATION MAP
NOT TO SCALE

NOTES

- GENERAL**
1. No lots shown herein may be subdivided or resubdivided resulting in the creation of a greater number of lots than originally approved by the planning commission.
 2. This development is located in the Harrods Creek Fire Protection District and approval shall be obtained prior to construction approval.
 3. Construction fencing shall be erected prior to any grading or construction activities preventing compaction of root systems of trees to be preserved. The fencing shall enclose the area beneath the dripline of the tree canopy and shall remain in place until all construction is completed. No parking, material storage, or construction activities shall be permitted within the fenced area.
 4. A soil erosion and sedimentation control plan shall be developed and implemented in accordance with the Metropolitan Sewer District and USDA Soil Conservation Service recommendations.
 5. All open space lots are non-buildable and will be recorded as open space and utility easements.
 6. There shall be no access to any lot within proposed subdivision from Blankenbaker Lane
 7. Benchmark and topographical information shown herein were derived from Lofc data. Boundary information was taken from deeds.
 8. Compatible on-site utilities, (electric, phone, cable) shall be placed in a common trench unless otherwise required by appropriate agencies.
 9. Mitigation measures for dust control shall be in place during construction to prevent fugitive emissions reaching existing roads and neighborhoods.
- SEWER & DRAINAGE**
10. Runoff from this development must be conveyed to an adequate public outlet. On-site detention will be provided, if required.
 11. No portion of the site is located in a floodplain per FIRM map 21111 C 0015 E dated December 5, 2006.
 12. Sewers by L. E. and subject to all applicable fees.
 13. Extension of MSD storm water boundaries may be required.
 14. A "Request for Sanitary Sewer Capacity" has been approved by MSD. Sanitary Sewer Service to be provided at Morris Forman W.W.T.P.
 15. All proposed sewer and drain easements shall be 15' unless otherwise indicated.
 16. House foundations shall be cut in by the site contractor due to steepness of slopes.
 17. Existing drainage pipes under Blankenbaker Lane to be analyzed for post-developed capacity and upsized if necessary.
 18. The Proposed Detention Basin will function as a temporary sediment basin during construction.
 19. The existing roadside drainage along Poplar Hill Road will be diverted away from the detention basin by a pipe system.
 20. Temporary diversion ditches will be installed to direct runoff from disturbed areas to the sediment basin.
 21. Downspouts from Lots 2-7 and 9-12 shall be connected to the pipe system shown behind the building pads.
- STREETS & SIDEWALKS**
22. All roads within the development shall have curb and gutters. Street "A" and Court "A" shall be 20 feet in width with a 35 foot radius at intersections.
 23. Street grades shall not be less than 1% min. or 10% max.
 24. Street trees are required along Blankenbaker Lane. In the event that the trees are not allowed to be placed in mentioned streets and Right-of-Ways the trees shall be placed elsewhere on the property.
 25. A Bond & Encroachment Permit is required by Metro Public Works for all work within the Blankenbaker Lane and Poplar Hill Road Right-Of-Way, and for roadway approaches on all surrounding access roads to the subdivision site due to damages caused by construction traffic.
 26. All streets, intersections, loop roads, cul-de-sacs, bulbs, traffic circles and rights-of-way shall be in accordance with the Development Code and Metro Public Works' standards and approved at the time of construction.
 27. All street name signs shall conform with the MUTOD requirements and shall be installed prior to the recording of the applicable subdivision plat or prior to obtaining the first certificate of occupancy and shall be in place at time of bond release.
 28. The location and type of plantings within the street right-of-way will be evaluated for roadway safety and sight distance requirements by Metro Public Works which reserves the right to remove them without the property owner's approval.
 29. Should any existing drainage structures and/or utilities located within offsite rights-of-way become necessary to be altered, extended or relocated, such shall be at the owner's/developer's expense.
 30. All roadway intersections shall meet the requirements for landing areas as set by Metro Public Works.
 31. The developer will be responsible for utility relocations, final surface overlay, and striping associated with required road improvements.
 32. Right of way dedication for Blankenbaker Lane and radii dedication at its intersection w/ Poplar Hill Road shall be recorded as part of the required record plat.
 33. A Karst Survey has been performed on this site in accordance with Chapter 4, Part 9 of the Louisville Land Development Code. No visible or historical evidence has been found that indicates Karst geological features exist on-site. Surveyed by: Chip Wilkinson P.E. - 01/11/10
 34. A Geotech Foundation Certification shall be required for lots 2 thru 11 excluding lot 8.

GENERAL EPSC NOTES

1. Install stone bag inlet protection and filter fabric inlet protection as soon as possible after drainage structures have been installed. Stone bag curb inlet protection to be installed after curb is poured.
2. Install reinforced silt fence behind curb after curb is poured.
3. Slopes to be roughened by method of tracking once topsoil has been removed.
4. Topsoil stockpile shall be seeded and strawed for stabilization with silt fence downstream of stockpile.
5. Contractor to remove sediment from temporary sediment basin when sediment reaches marked elevation of the clean out stake at 456.0.
6. All other structures are to be cleaned once deposited sediment reaches 1/3 the height of the structure.
7. Contractor is responsible for removal of dirt from vehicles leaving the site.
8. Erosion and Sediment Controls are to be inspected every seven calendar days and after every storm event that equals or exceeds 1/2 inch of precipitation.
9. All areas are to be flushed once site has been stabilized.
10. After final stabilization, all erosion and sediment control measures are to be removed.

EROSION PREVENTION AND SEDIMENT CONTROL NOTES:

1. The approved Erosion Prevention and Sediment Control (EPSC) plan shall be implemented prior to any land-disturbing activity on the construction site. Any modifications to the approved EPSC plan must be reviewed and approved by MSD's private development review office. EPSC bmp's shall be installed per the plan and MSD standard.
2. Detention basins, if applicable, shall be constructed first and shall perform as sediment basins during construction until the contributing drainage areas are seeded and stabilized.
3. Actions must be taken to minimize the tracking of mud and soil from construction areas onto public roadways.
4. Soil tracked onto the roadway shall be removed daily. Soil stockpiles shall be located away from streams, ponds, swales and catch basins. Stockpiles shall be seeded, mulched, and adequately contained through use of Silt Fence.
5. All stream crossings must utilize low-water crossing structures per MSD standard drawing ER-02.
6. Where construction or land disturbance activity will or has temporarily ceased on any portion of a site, Temporary site stabilization measures shall be required as soon as practicable, but no later than 14 calendar days after the activity has ceased.
7. Sediment-Laden groundwater encountered during trenching, boring or other excavation activities shall be pumped to a sediment trapping device prior to being discharged into a stream, pond, swale or catch basin.

POPLAR HILL PLACE
PRELIMINARY SUBDIVISION PLAN

SITE ADDRESSES:
609 BLANKENBAKER LANE
LOUISVILLE, KY 40207
TAX BLOCK 220, LOT 22
D.B. 744, PG. 242
10 POPLAR HILL ROAD
LOUISVILLE, KY 40207
TAX BLOC: 220, LOT 6
D.B. 557, PG. 806

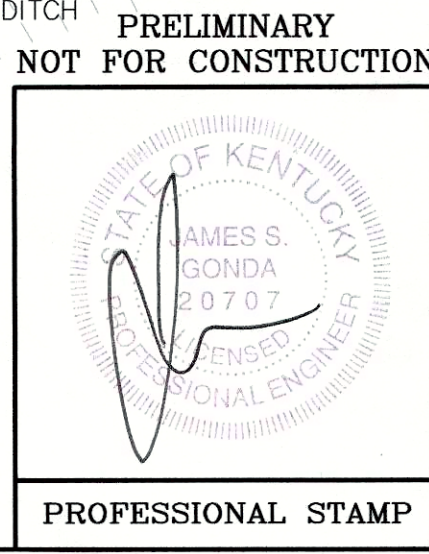
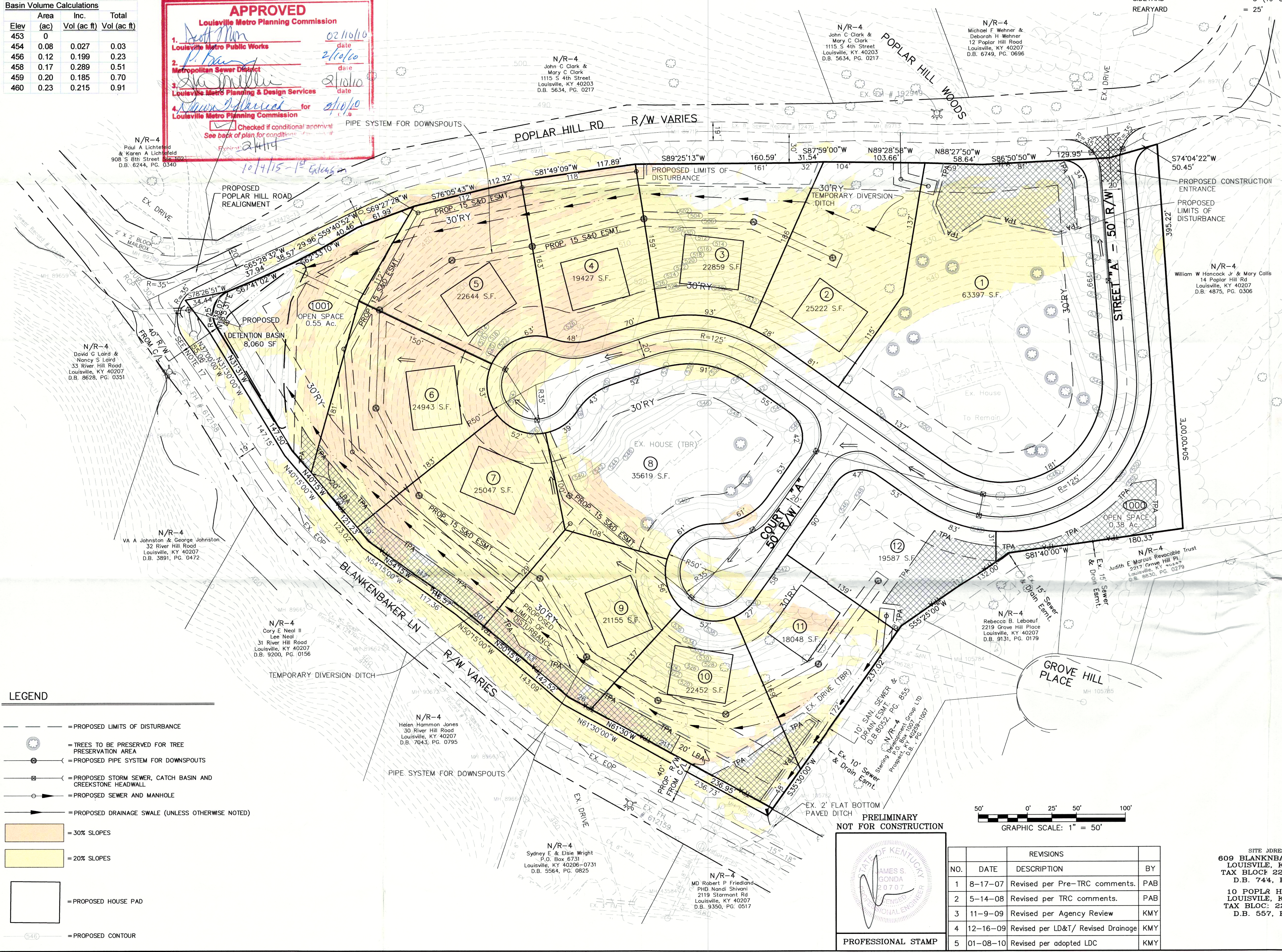
DEVELOPER:
TURNER-STOLL PROPERTY
440 SOUTH SEVENTH ST
SUITE 300
Louisville, KY 40203
OWNERS:
MURRAY G. & JANET TURNER
10 POPLAR HILL ROAD
Louisville, KY 40207

PREPARED BY:
LAND DESIGN & DEVELOPMENT, INC.
503 WASHINGTON AVENUE, SUITE 101
LOUISVILLE, KENTUCKY 40222
PHONE: (502) 426-9374
FAX: (502) 426-9375

COUNCIL DISTRICT - 16
FIRE PROTECTION DISTRICT - HARRODS CREEK
JAN 19 2010
JOB: 06175
WM# 9675
DATE: 5/18/07
PLANNING & DESIGN SERVICES CASE NO.: 9243

LEGEND

- PROPOSED LIMITS OF DISTURBANCE
- TREES TO BE PRESERVED FOR TREE PRESERVATION AREA
- PROPOSED PIPE SYSTEM FOR DOWNSPOUTS
- PROPOSED STORM SEWER, CATCH BASIN AND CREEKSTONE HEADWALL
- PROPOSED SEWER AND MANHOLE
- PROPOSED DRAINAGE SWALE (UNLESS OTHERWISE NOTED)
- 30% SLOPES
- 20% SLOPES
- PROPOSED HOUSE PAD
- PROPOSED CONTOUR



REVISIONS			
NO.	DATE	DESCRIPTION	BY
1	8-17-07	Revised per Pre-TRC comments.	PAB
2	5-14-08	Revised per TRC comments.	PAB
3	11-9-09	Revised per Agency Review	KMY
4	12-16-09	Revised per LD&T/ Revised Drainage	KMY
5	01-08-10	Revised per adopted LDC	KMY

Conditions of Approval

1. The development shall be in accordance with the approved Residential Development Preliminary Plan. No further subdivision of the land into a greater number of lots than originally approved will occur without approval of the Planning Commission.
2. The applicant shall submit a plan for approval by Planning Commission staff showing trees/tree masses to be preserved prior to beginning any construction procedure (i.e. clearing, grading, demolition). Adjustments to the tree preservation plan which are requested by the applicant may be approved by Planning Commission staff if the revisions are in keeping with the intent of the approved tree preservation plan. The plan shall exhibit the following information:
 - a. Proposed site plan (showing buildings, edges of pavement, property/lot lines, easements, existing topography, and other significant site features (LOJIC topographic information is acceptable).
 - b. Preliminary drainage considerations (retention/detention, ditches/large swales, etc.).
 - c. Location of all existing trees/tree masses existing on the site as shown by aerial photo or LOJIC maps.
 - d. Location of construction fencing for each tree/tree mass designated to be preserved.
3. An original stamped copy of the approved Tree Preservation Plan shall be present on site during all clearing, grading, and construction activity and shall be made available to any DPDS inspector or enforcement officer upon request.
4. A note shall be placed on the preliminary plan, construction plan and the record plat that states, "Construction fencing shall be erected prior to any grading or construction activities – preventing compaction of root systems of trees to be preserved. The fencing shall enclose the area beneath the drip line of the tree canopy and shall remain in place until all construction is completed. No parking, material storage, or construction activities shall be permitted within the fenced area."
5. All street signs shall be installed by the Developer, and shall conform to the Manual on Uniform Traffic Control Devices (MUTCD) requirements. Street signs shall be installed prior to the recording of the subdivision record plat or occupancy of the first residence on the street, and shall be in place at the time of any required bond release. The address number shall be displayed on a structure prior to requesting a certificate of occupancy for that structure.
6. The applicant shall install signs, approved by the Metro Public Works Dept., which indicate the future extension of the public right of way for Street A and Street C. Such signs shall be installed prior to release of bonds for the installation of the street infrastructure.
7. Open space lots shall not be further subdivided or developed for any other use and shall remain as open space in perpetuity. A note to this effect shall be placed on the record plat.
8. The developer shall be responsible for maintenance of all drainage facilities and undeveloped lots ensuring prevention of mosquito breeding, until such time as the drainage bond is released.
9. Prior to the recording of the record plat, copies of the recorded documents listed below shall be filed with the Planning Commission.
 - a. Articles of Incorporation in a form approved by Counsel for the Planning Commission and the Certificate of Incorporation of the Homeowners Association.
 - b. A deed of restriction in a form approved by counsel of the Commission outlining responsibilities for the maintenance of open space.
 - c. Bylaws of the Homeowners' Association in a form approved by Counsel for the Planning Commission.

12. At the time the developer turns control of the homeowners association over to the homeowners, the developer shall provide sufficient funds to ensure there is no less than \$3,000 cash in the homeowners association account. The subdivision performance bond may be required by the planning Commission to fulfill this funding requirement.
13. When limits of disturbance are shown on the plan, a note shall be placed on the preliminary plan, construction plan and the record plat that states, "Construction fencing shall be erected at the edge of the limits of disturbance area, prior to any grading or construction activities. The fencing shall remain in place until all construction is completed. No parking, material storage, or construction activities shall be permitted within the fenced area."
14. A geotechnical report shall be conducted for the site and the results shall be submitted to the Planning Commission, Public Works, and MSD for review prior to construction plan approval. A plan shall be submitted to said agencies specifying how the mitigation measures and construction practices, including construction supervision, necessary to assure the stability of buildings and foundations to be constructed on the site as recommended in the geotechnical report will be implemented.
15. During earthwork operations the geotechnical engineer shall provide field inspection for the following:
 - a. Topsoil stripping
 - b. Compaction of fill for roadway and outlet grading
 - c. Proof-rolling roadway subgrade
 - d. Underdrains under pavement where necessary
16. Site preparation, clearing, grading and road construction shall be carried out in accordance with the recommendations of the "Preliminary Geotechnical Engineering Report" prepared by WEI dated March 2007.
17. The applicant shall obtain approval of a detailed landscape plan for the 20-buffer area along Blankenbaker Lane. The landscape plan shall be submitted for review and approval by DPDS staff prior to record plat approval. The applicant shall provide the landscape materials on the site as specified on the approved Landscape Plan prior to issuance of Certificates of Occupancy for the site.
18. A deed of consolidation or minor plat creating the proposed subdivision boundary will need to be recorded prior to recording of the record plat.

