



June 17, 2021

Jon Altshul, Township Manager
Westtown Township
1039 Wilmington Pike
West Chester, PA 19382

RE: Stokes Estate
Conditional Use Review
Westtown Township
WTT-21-228

Dear Mr. Altshul,

As requested, CEDARVILLE Engineering Group, LLC (CEG) has completed a review of the Conditional Use Application for Stokes Estate. The site (UPI#67-02-0023) comprising of roughly 64.956 acres, is located on the southwest side of S. Concord Road in the R-1 Residential Zoning District of Westtown Township. The project includes: the demolition of existing structures, the construction of a Residential Subdivision consisting of 68 single family homes, a roadway, public sewer, drainage systems and infiltration BMPs to manage the increased impervious coverage.

The following information was received by our office on May 25, 2021:

- A. Aqua Service Territory Correspondence, dated April 28, 2021, stating a main extension is needed for the proposed development.
- B. Westtown Township Conditional Use Application dated May 21, 2021.
- C. Stokes Estate Residential Project Traffic Impact Study prepared by Transportation Resource Group, Inc., dated May 2021.
- D. Crash Analysis Supplement, prepared by Transportation Resource Group, Inc., dated April 2021.
- E. Preliminary Stormwater Management Report, prepared by D.L. Howell and Associates, Inc., dated April 29, 2021.
- F. 30"x42" Plan titled "Existing Resources Plan" Sheet 1 of 2, prepared by D.L. Howell and Associates, Inc., dated April 30, 2021.
- G. 30"x42" Plan titled "Potential Development Area Concept Map" Sheet 2 of 2, prepared by D.L. Howell and Associates, Inc., dated April 30, 2021.
- H. Recorded Deed for the property.
- I. Draft Declaration of Planned Community of Somerford at Stoner Farm dated 12/23/2020 for Lancaster County.
- J. 30"x42" Plan titled "Conditional Use" sheets 1 through 23 of 23, prepared by D.L. Howell and Associates, Inc., dated April 30, 2021.

CEG has reviewed the above referenced items as it pertains to the Conditional Use Application only. This review shall not be considered a Subdivision/Land Development review. Subdivision and Land Development review shall be completed upon Westtown Township's receipt of a complete Subdivision and Land Development Application packet.



The referenced documents have been reviewed for compliance with Chapter 170 – Zoning Ordinance and Chapter 149 – Subdivision and Land Development Ordinance, as applicable to the Conditional Use Application.

The following comments are offered for your consideration:

ZONING COMMENTS (WESTTOWN TOWNSHIP CODE, CHAPTER 170, ZONING):

1. *Section 170-402.D.(3).(f) - If the total of all area(s) of precautionary slopes on a lot exceed 25% of the total area of a lot, then no more than 50% of the precautionary slopes on that lot shall be disturbed, graded or modified.*

The applicant shall provide supporting information for the following Lots, in tabular form, demonstrating compliance with the above referenced criteria:

- Lot 19
- Lots 43-45
- Lot 47
- Lot 49

2. *Section 170-403.E - Where wetlands exist and disturbance permits and/or mitigation activities are required, final plan approval or granting of applicable permits from the Township shall be contingent upon the applicant receiving all necessary permits from the PADEP.*

Permits associated with the proposed wetland crossing (Road B) shall be obtained prior to Final Land Development Plan approval.

3. *Section 170-405.A - In any use or development of a tract where permanent open space is to be created and/or retained, the landowner or applicant shall, whenever possible and in conjunction with other applicable ordinances, include in such open space those agriculturally suited soils whose acreage, configuration, and location offer future opportunity for agricultural use.*

Section 170-405.B - In the siting of individual structures on lots, areas of agriculturally suited soils should be left free of structures or paving whenever possible, to allow opportunities for gardens and other agricultural uses.

Agriculturally suited soils, as defined by Natural Resource Conservation Service mapping, shall be shown on the Plan to demonstrate compliance with the above referenced Ordinance section.

4. *Section 170-601.C.(1) - Residential development in accordance with the provisions of the flexible development procedure as set forth in Article IX of this chapter.*

The following shall be addressed:

- A. *Section 170-901.D - Comprehensive and detailed plans which include not only streets, utilities, lots or building sites, and the like, but also site plans, site analyses, floor plans and elevations for all buildings as intended to be located, constructed, used and related to each other, detailed plans for other uses and improvements on the land as related to the buildings, lighting, landscaping; and*

Section 170-901.E - A program for provision, operation and maintenance of such areas, improvements, and facilities as will be for common use by some or all of the occupants of the



development, but will not be provided, operated or maintained at general public expense unless acceptable to or found necessary by the Board of Supervisors.

The applicant shall provide the following to demonstrate compliance with the above referenced Ordinance section.

- A plan showing typical elevations and floor plans of the buildings proposed.
- The Open Space Plan shall be revised to clearly show improvements associated with active recreation areas, along with maintenance responsibilities associated with proposed passive open space areas.

B. *Section 170-904.A.(2).(a) - For every 5% of the gross area of the tract that is permanently preserved as common open space above the minimum established under § 170-904C below and meeting the criteria of § 170-904A(3), the maximum density may be increased by 0.075 dwelling units per acre. For example, if 50% of the gross area of a tract in the R-1 District proposed to be developed for single-family detached dwellings is provided as common open space, representing an addition of two increments of 5% each (40 + 5 + 5), then the maximum density may be increased to 1.25 dwelling units per acre (1.1 + 0.075 + 0.075).*

Section 170-904.A.(3).(a).[2] - All open space used incrementally toward calculation of bonus density as provided in § 170-904A(2)(a) shall, in addition to full compliance with all other applicable standards herein, fully exclude from calculation of open space area any existing or proposed impervious surfaces, stormwater management facilities, wetlands, water bodies, watercourses, prohibitive slope (including created slopes exceeding 25%), and any lands subject to floodplain regulations.

Section 170-904.C.(2) - R-1 Rural-Suburban Residential District, where single-family detached dwellings are provided: 40%.

The applicant shall revise the Open Space Tabulation, Sheet 1, to exclude the following areas from Qualifying Open Space:

- Impervious surfaces, including but not limited to:
 - Coverage proposed for the development of active recreation areas.
 - The proposed pump station and associated driveway.
 - Retaining wall at the end of Road D.
- Areas associated with proposed stormwater management facilities.
- Wetlands.
- Prohibitive steep slopes.
- Areas located within the Zone AE Floodplain.

Bonus density shall be recalculated based upon the resultant revised Qualifying Open Space Area.

C. *Section 170-904.A.(3).(c).[2] - Collectively, in addition to compliance with the design criteria for stormwater management set forth in Chapter 149 of the Code of the Township of Westtown, the design of stormwater management facilities across the tract subject to flexible development shall result in groundwater infiltration of stormwater equal in volume to the incremental increase of the two-year storm, predevelopment to postdevelopment. For purposes of calculating the predevelopment volume of the two-year storm, predevelopment land cover conditions shall be*



assumed to be woodland-good for any area predominantly under cover of trees and meadow-good for any other area, regardless of actual cover conditions. The applicant shall be required to submit soil percolation test results and other credible evidence including a maintenance program satisfactory to demonstrate long-term feasibility of required groundwater infiltration. Where groundwater infiltration of the full incremental volume of the two-year storm is not practicable, the Township may require employment of other means to mitigate potential groundwater impacts.

Section 170-905.A.(3) - Stormwater management: The applicant shall submit a proposed stormwater management plan, to be approved by the Township Engineer in accordance with Chapter 149, Subdivision and Land Development. In addition, the Board may require the submission of a study of the off-site and overall groundwater impacts of the proposed stormwater management system.

The following information shall be provided in accordance with the criteria set forth in Section 170-904.A.(3).(c).[2]:

- Infiltration testing locations shall be shown on the Plan.
- Dewatering calculations shall be provided.

The following Stormwater Management comments shall be addressed in accordance with Chapter 149 of the Code, as specified above:

- I. *Section 149-803.B.(1).(g) - Notation of ownership and responsibility for maintenance of stormwater management structures.*

The following shall be provided:

- Operation and Maintenance notes shall be added to the Plan for each proposed BMP.
- The entity responsible for operation and maintenance of the proposed BMPs shall be clearly shown.

- II. *Section 149-803.B.(2).(d) - Basins shall be designed to pass a storm of one-hundred-year frequency through the outlet structure without failure of the basin embankment.*

Details shall be provided for the proposed BMPs to demonstrate compliance and consistency with the Pond Reports contained within the provided Report.

- III. *Section 149-803.B.(2).(e) - The entire contributory drainage area shall be taken into account in basin design.*

Drainage Area Plans shall be provided for review and included within the Report.

- IV. *Section 149-803.B.(6) - Inground retention basins/recharge systems shall be required for all subdivisions and land developments and shall be designed to recharge the increased volume of runoff from all additional impervious areas for a two-year storm event. The systems shall be designed in accordance with the following criteria:*

In ground recharge shall be incorporated into the design of the proposed stormwater management facilities.



- D. *Section 170-905.B.(1) - Streets: Streets within a flexible development shall be related to land use and to adjacent street systems and shall be designated as secondary traffic street (arterial), collector street, or local street depending upon its function. Streets shall be designed in accordance with the terms of Chapter 149, Subdivision and Land Development; provision for the maintenance of such streets shall be an essential part of the plan for the development.*

The following shall be addressed:

- I. *Section 149-901.F - The length of a cul-de-sac shall be a minimum of 350 feet and a maximum of 1,500 feet. Any proposed cul-de-sac longer than 1,500 feet must be approved by the Board upon recommendation of the Township Engineer. In no case shall any cul-de-sac street serve more than 25 dwelling units. Cul-de-sac length shall be measured from the radius of the cul-de-sac turnaround to the edge of paving/curbline of the closest through street.*

The cul-de-sac length for Road C shall be increased to a minimum of 350 feet.

- II. *Section 149-903.A - The right-of-way and cartway widths of all new or proposed public and/or private streets shall be determined by the Board of Supervisors and shall be classified as follows.*

CEG defers comments relating to the proposed street classifications to the Township Traffic Engineer.

- III. *Section 149-903.A.(4) - Cul-de-sac street. A cul-de-sac is a minor street. Turnaround shall have a right-of-way radius of 60 feet. Turnaround cartway paving width shall have a radius of 50 feet. See Notes 1 and 2.*

The proposed cul-de-sacs shall be revised to provide a minimum paving width radius of 50 feet and a right-of-way radius of 60 feet as required by the above referenced section of the Ordinance and shall be dimensioned on the plans.

- IV. *Section 149-905.B.(1) - Minor streets: 150 feet*

Horizontal geometry shall be provided to demonstrate compliance with the above referenced minimum centerline radii requirement.

- V. *Section 149-906.A - Minor streets: 200 feet*

Sight distances for all vertical curves shall be provided on the Profile Plans to demonstrate compliance with the above referenced criteria.

- VI. *Section 149-908.A - A minimum clear sight triangle of 75 feet (as measured from the centerline intersections of two streets) shall be provided at all intersections. The minimum clear sight triangle shall be increased to 100 feet if either street is a collector street and to 150 feet if either street is an arterial highway. There shall be no physical obstruction, planting, berm or grade above the height of 18 inches within the right-of-way section of this triangle or above the height of 2 1/2 feet elsewhere in this triangle.*



Section 149-908.B - Wherever a portion of the line of such triangle occurs behind (i.e., from the street) the building setback line, such portion shall be shown on the final plan of the development and shall be considered a building setback line.

Sight triangles shall be shown on the Plans at all street intersections. These sight triangles shall be considered building setback lines in every instance where they occur behind a building setback line for all lots located at a street intersection.

- E. *Section 170-905.E - Lighting: As required by § 170-1514. In particular, adequate lighting must be provided to the outdoor areas used by residents after dark. Appropriate lighting fixtures must be provided for walkways and to identify streets, steps, ramps, directional changes, and signs. Lighting shall be located to avoid shining directly into habitable room windows of dwelling units within the development, or into private yard areas associated with dwelling units. The requirements for lighting may be waived by the Board where density of development may not justify its use.*

A Lighting Plans shall be provided to demonstrate compliance with the referenced Ordinance section.

- F. *Section 170-907.A.(2) - Within the required acreage of open space, or elsewhere on the tract, an area equivalent to at least 10% of the net tract acreage shall be suitable and available to serve the particular recreational needs of the residents of the development. The Board may require that all, or a portion of, this recreational area be suitable for active recreation, and may further require that such area be prepared and developed for such purposes.*

Section 170-907.A.(3) - Where applicable or deemed appropriate or contained in the Township's Comprehensive Plan or Parks, Recreation and Open Space Plan, provision for pedestrian trails for public and/or private use shall be provided. This provision need not be in addition to the 10% requirement of Subsection A(2) above unless the Board determines that the entire 10% minimum must be designated for active recreation

The following shall be provided:

- Area suitable for the recreational needs of the development shall be clearly shown on the Plan. The applicant will need to demonstrate that this area is suitable for active recreation, and shall be;
 - Centrally located and accessible by the majority of the development.
 - Exclusive of steep slopes, wetlands, stormwater management facilities, including all facilities to be excluded from Qualifying Open Space as referenced above.
 - The Planning Commission and Board of Supervisors shall determine facilities to be developed as part of the active open space area, if deemed appropriate.
- G. *Section 170-907.A.(5) - The plan shall designate the use of common open space, the type of maintenance to be provided, and a planting plan or schedule.*

Section 170-907.A.(5)(e) - Areas used for subsurface infiltration or land application (irrigation of stormwater and/or treated wastewater. Open storage or settling ponds may be included where accessory to infiltration facilities. All of the stormwater management facilities may be physically located in open space areas but shall be excluded from measurement of the minimum required open space.



- The following shall be addressed: The Open Space Plan shall be revised to include the designations as referenced in the above Ordinance section.
- Area associated with the proposed stormwater basins must be excluded from the measurement of required open space and shall be shown as being excluded in the Open Space Tabulation, Sheet 1.

H. *Section 170-907.A.(7).(a) - Not less than 75 feet in width at any point and not less than 1/2 acre of contiguous area.*

The following areas, exclusive of the area shown as Non-Qualifying Open Space, shall be confirmed and excluded from Open Space as required:

- The unshaded area associated with O.S.2, shall be computed and shown. If this area is less than 0.5 acres, it shall be excluded from Qualifying Open Space Area.
- The unshaded area to the rear of Lot 46, located within O.S. 1 shall be computed and shown. If this area is less than 0.5 acres, it shall be excluded from the Qualifying Open Space Area.

I. *Section 170-907.B.(1) - Ownership of a portion of the open space may be retained by the developer and/or the original owner of the development tract, provided that the open space and recreational needs of the residents are adequately met by that portion not retained. The developer and/or original owner of the tract shall make this determination; however, the Board, at its discretion, may require that the developer and/or original owner of the tract put aside more open space for the use of the residents if, in its opinion, the amount set aside by the developer and/or original landowner is not sufficient.*

The following information shall be provided on the Open Space Plan:

- Proposed ownership of the open space.
- Maintenance responsibilities for each designation of open space.

J. *Section 170-908 – Special Requirements for Homeowner’s Associations*

The provided draft declaration for the Homeowner’s Association is subject to review and approval of the Township Solicitor.

13. *Section 170-2400.F.(4) Review and comment on subdivision or land development applications which contain historic resources, or are within 300 feet of an historic resource, in accordance with the requirements and procedures of the Township.*

The subject property is highlighted on the Westtown Township – Historic Resources Map as 2 – Of local historic value. The applicant shall confirm whether structures associated with this property are to remain or to be removed.

SUBDIVISION AND LAND DEVELOPMENT COMMENTS (WESTTOWN TOWNSHIP CODE, CHAPTER 149, SUBDIVISION OF LAND):

14. *Section 149-201 - Definitions*



LOT AREA – The acreage contained within the property lines of a lot, as defined in the deed or as shown on approved subdivision plan. Such acreage shall be exclusive of the following:

C. Any area within a permanent drainage easement.

Drainage easements (20' wide) shall be required for the following conveyance facilities and shall be deducted from the applicable Lot areas:

- Storm sewer and inlet between Lots 60 and 61
- Storm sewer between Lots 47 and 48
- Storm sewer run along the rear of Lots 26-29
- Swale and wall along the rear of Lots 2-10
- Swale to the rear of Lots 26-4
- Swale to the rear of Lots 20-25
- Swale to the rear of Lots 48-51
- Swale to the rear of Lots 52-62

Please be advised that future plan submission may warrant additional plan comments. Please do not hesitate to contact me with any questions.

Best Regards,
CEDARVILLE Engineering Group, LLC

Robert E. Flinchbaugh, P.E.
Senior Municipal Engineer

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