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Date: November 30, 2020

To: Steve Norcini, PE Township Engineer

From: Roger Phillips, PE

cc: Kevin W. Kochanski, RLA, CZO – Director of Community Development
Mary Eberle, Esq. – Grim, Biehn, and Thatcher
Damon Drummond, PE – Gilmore & Associates, Inc.
Patricia Sherwin – Radnor Township Engineering Department

RE: Hamilton Eagle Road Subdivision – Preliminary Land Development

Date Accepted: 10/06/2020
90 Day Review: 01/04/2021 extended to 01/31/2021

Gannett Fleming, Inc. has completed a review of the Preliminary Land Development Plans for compliance with the Radnor Township Code. The Plans were also reviewed for conformance with Subdivision and Land Development, Zoning and other applicable codes of the Township of Radnor.

The applicant is proposing to subdivide the property into nine lots and construct nine single-family homes. This project is located within the R-4 zoning district of the Township.

Eagle Road Subdivision

Plans Prepared By: Site Engineering Concepts, LLC
Dated: 08/27/2020 and revised 11/20/2020

Sewage Facilities Planning

1. Final plan approval will not be granted until Planning Approval or a Planning Exemption notification is received from the PA DEP.

Zoning

1. A breakdown of how the building coverage and impervious coverages were calculated in the zoning table must be provided. The impervious coverage in the zoning summary and impervious summary are inconsistent for Lot 2. This must be revised.

Gannett Fleming, Inc.

2. §280-105.E. – All outside lighting, including sign lighting, shall be directed in such a way as not to create a nuisance in any agricultural, institutional or residential district, and in every district all such lighting shall be arranged as to protect the street or highway and adjoining property from direct glare or hazardous interference of any kind. Any luminary shall be equipped with some type of glare shielding device approved by the Township Engineer. The applicant has indicated that this will be revised in the final plan submission.

Subdivision and Land Development

1. §255-20-B(1)(e)[5] – The site plan must show the size of the units (in bedrooms), if known. This information will be provided prior to final plan approval.
2. §255-20-B(1)(n) – Existing principal buildings (and their respective uses) and driveways on the adjacent peripheral strip. Sewer lines, storm drains, culverts, bridges, utility easements, quarries, railroads and other significant man-made features within 500 feet of and within the site (this includes properties across streets) must be shown on the plans. The applicant has indicated that this will be provided on the final plan submission.
3. §255.27.C(4) – When a subdivision abuts or contains an existing street of inadequate right-of-way width, the Board of Commissioners may require the reservation or dedication of rights-of-way to conform with the required standards. Eagle Road is a Major Collector. The right-of-way requirement is by code is 80 feet and the cartway width is 48 feet. The applicant has indicated on the plans that they are providing an additional 10 feet of right of way on their frontage which would be the equivalent of a 60 foot right of way.
4. §255.27.H(6) – Minimum curb radii at street intersections shall be 25 feet for local streets; 30 feet for collectors; 35 feet for arterials; and 10 feet for driveways. This must be shown on the plans.
5. §255-40.C(2) – Access and circulation for fire-fighting and other emergency equipment, moving vans, fuel trucks, garbage collection, deliveries and snow removal shall be planned for efficient operation and convenience.
6. §255-43.1.B(1) – For all residential subdivisions or land developments involving a total of four or more lots and/or dwelling units, a minimum of 1,440 square feet or suitable park and recreation land shall be provided per dwelling unit within such subdivision/land development, unless the developer agrees to a fee in lieu of \$3,307 per dwelling unit (existing or proposed).
7. §255-54.B – The central water system should be designed with adequate capacity and appropriately spaced fire hydrants for fire-fighting purposes pursuant to the specification

of the National Fire Protection Association. Review and approval by the Township Engineer and the Township Fire Marshall shall be required in order to ensure that adequate fire protection is provided.

Stormwater

1. The stormwater report narrative claims 19 subsurface infiltration beds are proposed but the plans indicate 18. Please revise this inconsistency. The applicant has indicated that this will be addressed prior to final plan approval.
2. The plans propose infiltration beds of various sizes but the Infiltration Bed Volumes-POI A table in the stormwater report appears to indicate a standard infiltration bed size for each front lot and rear lot system. Please provide dimensional data for each infiltration bed that is consistent with the plans.
 - a. Please update the infiltration volumes provided in the 2 Year Storm Volume Calculation-POI A, as necessary.
The applicant has indicated that this will be addressed prior to final plan approval.
3. Please revise the hydrograph report to include the summaries of the proposed infiltration beds so the dimensional and elevation data used in the stormwater design can be reviewed. The applicant has indicated that this will be addressed prior to final plan approval.
4. The post-developed flow rates found in the Rate Table-POI A are inconsistent with those found in the hydrographs. Please revise the calculations to correct these inconsistencies. The post-developed flow should be modeled by routing the design storms through the stormwater systems. The applicant has indicated that this will be addressed prior to final plan approval.
5. The drainage areas used in the hydrograph report are inconsistent with those found on the Post-Developed Drainage Area Plan. The hydrograph report appears to utilize 2 post-developed drainage areas but the drainage area plans delineate 18 drainage areas of varying sizes. Please revise these inconsistencies. The stormwater calculations should reflect what is proposed. The applicant has indicated that this will be addressed prior to final plan approval.
6. Please revise the drainage area maps in the stormwater report to include scales. The applicant has indicated that this will be addressed prior to final plan approval.
7. It appears that some of the proposed drainage areas indicate runoff to be captured that will actually bypass a given system. Please revise the Post-Developed Drainage Area Plan to

accurately reflect the runoff that will be collected by each proposed stormwater BMP. The applicant has indicated that this will be addressed prior to final plan approval.

8. Please update the plans to show dimensional data for each proposed infiltration bed including bottom of bed elevations and outlet invert elevations. The applicant has indicated that this will be addressed prior to final plan approval.
9. It appears that infiltration beds 1B and 2B are proposed in locations that had failed infiltration tests. Please revise the design so infiltration is not proposed in locations of failed infiltration tests. The applicant has indicated that this will be addressed prior to final plan approval.
10. §245-22.A(1)(c) – Please provide calculations to show that all stormwater BMPs proposing infiltration can fully infiltrate the retention volume in 96 hours. The applicant has indicated that this will be addressed prior to final plan approval.
11. Please provide calculations to show how the §245-23 Water Quality requirements are met. The applicant has indicated that this will be addressed prior to final plan approval.
12. Please provide calculations to show how the §245-27.F requirements are met. The applicant has indicated that this will be addressed prior to final plan approval.
13. Please provide stormwater piping profiles including all crossing utilities. The applicant has indicated that this will be addressed prior to final plan approval.
14. Please provide an overflow outlet structure for the proposed stormwater systems. The applicant has indicated that this will be addressed prior to final plan approval.
15. Please revise the stormwater report to include a soil inventory report of the project site that details the soil types and boundaries. The applicant has indicated that this will be addressed prior to final plan approval.
16. Final approval of the stormwater management plan will be required as part of the Grading Permit process. Any revisions to the size or location of the individual structures or other features will be addressed at this time.

Sanitary Sewer

1. The sanitary sewer easement for the existing sewer must be shown on the drawings. The applicant is verifying this information and will provide prior to final plan approval.
2. There shall be no plantings in the existing or proposed sanitary sewer easements. The applicant has indicated that this will be revised prior to final plan approval.
3. All utilities crossing the sanitary sewer must be shown on the profile.
4. A minimum 10-foot horizontal and 18-inch vertical separation must be maintained between the sanitary sewer and the water and storm sewer lines
5. Depressed curbing is required where the sewer line leaves the street to provide access to the easement for the sanitary sewer line.
6. If the road is not to be dedicated to the Township, a sanitary sewer easement for Road A must be provided.

General

1. It must be noted who the owner of the cul-de-sac will be (Public or Private). Who will be the owner of the property along the easterly side of the cul-de-sac? It also must be noted who the owner of the open space along the easterly side of the cul-de-sac will be.
2. The applicant must appear before the Shade Tree Commission and gain approval prior to this plan being presented to the Board or Commissioners.

If you have any questions or require any additional information, please contact me.

Very truly yours,

GANNETT FLEMING, INC.



Roger A. Phillips, P.E.
Senior Project Manager