



# VANDEMARK & LYNCH, INC.

ENGINEERS • PLANNERS • SURVEYORS

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## MEMORANDUM

Project No. 23425.40

TO: Board of Supervisors, East Marlborough Township

FROM: Jim Hatfield, VanDemark & Lynch, Inc. 

RE: **Plan Review Summary**  
**Douglas C. White, Gale Lane property**  
**Northridge - Final Subdivision Plan**

DATE: September 4, 2018

To assist the Township in its review process, we are providing this summary of our review for the referenced project. All items mentioned in our previous review of the plan have been resolved, provided:

1. Glackin Thomas Panzak confirms that their comments have been addressed and/or resolved. (Comments #3, #7 and #9)
2. The legal documentation relative to Conditions # 19, #22, and #27 are submitted for review and approval, and the Stormwater O&M Agreement is executed and recorded. (Comments #5 and 27)
3. All non-municipal approvals (NPDES and DEP sanitary sewer approvals) are obtained. (Comment #6)
4. Traffic Planning Design confirms that their comments relative to the traffic study have been addressed and/or resolved. (Comment #10.f)
5. Double inlets 9, 9A, and 11A are separated by 10' and connected with storm sewer. (Comment #16)
6. AECOM confirms that their comments relative to sanitary sewer issues have been addressed and/or resolved. (Comments #21 and #31.f)
7. The water distribution construction plan is submitted when available. (Comment 22)
8. A general note is added to sheet 1 stating the requirement to submit signed and sealed plans for the retaining wall prior to the execution of the development agreements for the construction phase that includes the wall. (Comment 30)

Memorandum to Board of Supervisors, East Marlborough Township  
**RE: Plan Review Summary for Douglas C. White, Gale Lane property**  
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9. The PennDOT detail for the inlet boxes is made legible. (Comment 31.c)
10. Street addresses are added to the Final Plan. (Comment #33)
11. The grate elevation for inlet #35 is lowered. (Comment #35)
12. Construction specifications for the child proof trash rack are added to the plan. (Comment #36)
13. A note is added to the typical trench detail stating it is to be used for both sanitary and storm sewer. (Comment #40)
14. Seed specifications and maintenance notes are provided for the meadow landscape restoration areas. (Comment #42)

Our complete review letter is attached. If you have any questions, please call.

Attachment

cc: Planning Commission  
Ross Unruh, Esq.  
Lisa Thomas, R.L.A., Glackin Thomas Panzak  
Ed Strauss, PE, URS  
Gerald Baker, Traffic Planning and Design  
Doug White  
James Fritsch, P.E., Regester Associates, Inc.



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Project No. 23425.40

Board of Supervisors  
**EAST MARLBOROUGH TOWNSHIP**  
721 Unionville Road  
Kennett Square, PA 19348

Attn: Laurie C. Prysock, Township Manager

**RE: Douglas C. White, Gale Lane property  
Northridge - Final Subdivision Plan Review**

As requested, we have reviewed the following documents submitted in support of the referenced project:

- The Final Subdivision and Land Development Plan, consisting of 24 sheets prepared by Register Associates, Inc. (RAI), dated March 23, 2018, last revised August 20, 2018;
- A Post Construction Stormwater Management Report prepared by RAI, dated March 23, 2018, last revised July 27, 2018;
- Five (5) response letters from RAI, each dated August 20, 2018, responding to comments from Township consultants (V&L, GTP AECOM, and TPD) and from Jeff Simpson;
- A pavement analysis report from McMahon Associates, dated June 8, 2018, revised August 17, 2018; and,
- A copy of the CCCD approval letter dated August 3, 2018.

The documents were received in our office on August 23, 2018.

The purpose of the application is to consolidate four (4) parcels (61-5-209, -209.2, -209.3, and -209.4), and resubdivide the acreage to allow for the development of part of the property with 54 two-family dwelling units. The existing industrial use will continue on the remainder of the property. The development is located in the Limited Industrial (LI) district, and the proposed use requires Conditional Use approval, pursuant to section 1002.B.2 of the Zoning Ordinance, which was granted on May 1, 2017, and amended on February 5, 2018.

We have reviewed the plan for compliance with the conditions listed in the Conditional Use Order, as well as Zoning, Subdivision, and Stormwater Management Ordinances. Listed below are the comments from our April 26, 2018 and June 25, 2018 letters, followed by a response in **bold face type**, indicating what action has been taken to resolve the comment.

### **Conditional Use Order (CUO):**

1. This comment was previously resolved.

2. The subdivision does not appear to provide at least 3 acres for recreational facilities. (05-01-17 Condition #6)

06-25-18: The engineer's response states refers to Note #47 on sheet 1 of the plan, which states a "total of 12.791 acres of recreational open space is provided for this subdivision." The acreage is all of the open area outside of stormwater basins, dwelling footprints, street rights-of-way, and driveways. The only physical improvement within this "recreational open space" acreage is approximately 250 linear feet of trail from Devon Lane to a 10' access easement on the adjacent Longwood Preserve subdivision.

Please note that both the Longwood Preserve Plan and the Northridge Plan do not indicate any trail construction with the 10' wide easement provided on the Longwood Preserve property. We recommend the Northridge plans be revised to include the trail construction within the 10' easement.

**Response: The revised plan shows the extension of the trail construction through the 10' easement. Based on discussion at a previous Board meeting, we understand that this satisfies the application's provision for recreational facilities. This item is resolved.**

3. Glackin Thomas Panzak (GTP) should confirm the plans have addressed Condition #9 of the 05-01-17 CUO.

06-25-18: The engineer's cover letter indicates that the Landscape Plan has been revised to address this item. A letter dated June 21, 2018 from GTP indicates there are unresolved issues related to the resolution of this item.

**Response: GTP should confirm their remaining comments have been addressed on the revised plans.**

4. This comment was previously resolved.
5. The applicant should submit the legal documentation to demonstrate compliance with Condition #19 regarding deed restrictions for the maintenance of landscaping, Condition #22 regarding the disclosure of farming operations on adjacent properties in the public offering statement, and Condition #27 regarding the declaration of covenants, conditions, and restrictions for the proposed community.

**06-25-18 and current response: The engineer's cover letter indicates that the legal documentation will be provided for review and approval prior to plan recordation.**

6. The applicant must obtain non-municipal approvals from the Chester County Conservation District and PADEP. (05-01-17 Condition #23)

06-25-18: The engineer's cover letter indicates that the non-municipal approvals will be provided to the Township when received.

**Response: The project has received an adequacy letter (approval) from the CCCD. The project still needs to obtain an Act 537 approval/permit prior to the CCCD issuing the NPDES permit.**

7. The applicant should provide documentation with respect to their communication with the Township Historic Commission and the plans compliance with Condition #6 in the 02-05-18 CUO.

06-25-18: The engineer's cover letter states that a landscape buffer has been provided to screen the existing historic structure as if it were a Class 1 Historic Resource. This item is resolved, subject to any comments from Glackin Thomas Panzak regarding the adequacy of screening provided.

**Response: The outstanding comments in the GTP review letter dated 08-20-18 need to be resolved.**

8. This comment was previously resolved.

**Zoning Ordinance (ZO):**

9. Landscaping and screening are required. (ZO § 1005.C and 1005.D) Glackin Thomas Panzak should confirm the plan meets the requirements listed in Sections 1812.C and 1812.D of the ZO.

**06-25-18 and current response: The outstanding comments in the GTP review letter dated 08-20-18 need to be resolved.**

**Subdivision and Land Development Ordinance (SLDO):**

10. A note on sheet 1 lists six (6) waivers that are being requested, as follows:
  - a. From § 502.C.13- which requires a shadow analysis;
  - b. From § 502.G.5- which requires a traffic impact study;
  - c. From § 503.C.3- which requires building setback lines for each lot;
  - d. From § 503.E- which requires a plan for street lighting, if required;
  - e. From § 604.A- which specifies a minimum diameters for the right-of-way and pavement at cul-de-sacs; and,
  - f. From § 611- which requires a traffic impact study for more than 15 dwelling unit.

We have no technical objections to the waiver requests listed above in 10.a and 10.c.

With respect to the waiver requests listed above in 10.b and 10.f, (from submitting a traffic study), we defer to any recommendation from Traffic Planning & Design.

With respect to the waiver request listed above in 10.d, please note that street lighting is required Condition #14 of the 05-01-17 CUO, and per Sections 1005.G and 1812.G of the Zoning Ordinance.

Finally, with respect to the waiver request listed above in 10.e, we have no technical objection to a waiver from a traditional cul-de-sac design, provided the Township Public Works Supervisor does not have any reservations with respect to plowing or other maintenance issues.

**06-25-18 and current response: The Board granted waivers from items 10.a through 10.e at their May 7, 2018 meeting. It is our understanding that the waiver from 10.f, with respect to submitting a traffic study, was determined to be moot because a traffic study had already been submitted. The outstanding comments from the Traffic Planning Design relative to the submitted study must still be resolved. This comment is resolved, subject to TPD confirming their comments have been resolved.**

11. The erosion and sediment control plan and details must be reviewed and approved by the CCCD. (SLDO § 504.B) We have performed a cursory review and have the following comments:
  - a. This comment was previously resolved.
  - b. The sequence of construction seems to indicate that the two infiltration basins will be built in the first phase. The plans do not provide any provisions to ensure the basins will be protected from siltation in subsequent construction phases, which could adversely affect the infiltration properties of the basins.

06-25-18: The plans have been revised to indicate that the bottom of the basins will be set one (1) foot above finished grade elevation when they are acting as sediment traps. Note 2 in the Sequence of Construction should be revised to clarify that the sediment basins must remain in place until all three phases are complete.

**Response: The note has been revised as requested. This item is resolved.**

- c. This comment was previously resolved.
  - d. This comment was previously resolved.
12. This comment was previously resolved.
13. Road C provides access to the Everfast parcel, and can be considered an industrial street, which requires a 60' wide right-of-way and 36' wide cartway. We also recommend a heavier pavement section be specified for an industrial park street. (SLDO § 605.A)

06-25-18: The Board granted a waiver from the industrial street minimum right-of-way and cartway width requirements of SLDO § 605.A at its May 7, 2018 meeting. The engineer forwarded a pavement analysis prepared by McMahon Associates, Inc., dated June 6, 2018 that demonstrates the standard Township paving section (1½" asphalt wearing course on 2" asphalt binder course on 5" asphalt base course on 6" stone subbase) is sufficient for the truck traffic associated with the industrial use. The analysis assumed that the underlying soils are a gravelly-sand. This does not seem to be consistent with the soil testing completed by Evans Mill Environmental, which generally describes the soils as loam, silt, or silty loam. We recommend that McMahon Associates amend their analysis to assume the underlying soils are consistent with the actual testing that has been completed. This item is resolved, subject to the amended pavement analysis demonstrating the proposed pavement section is acceptable.

**Response: The analysis has been amended to consider the existing site soils, and the proposed pavement section is acceptable. This item is resolved.**

14. This comment was previously resolved.
15. On Road B, at station 0+12, the change in vertical grade exceeds 1%. A vertical curve should be provided. On Road B at station 3+00, the vertical curve length does not provide the required 200' sight distance. (SLDO § 608.C)

06-25-18: A vertical curve has been provided at Station 0+12 and is acceptable. At Station 3+00, the engineer's response letter states "*the 200 foot sight distance should not be an issue since this is a sag curve [and] not a crest curve.*" This response has not considered that sag curve sight distance is controlled by headlight illumination during night time. The design as submitted only provides 160' of sight distance. The design should be revised.

**Response: The profile has been revised and is acceptable. This item is resolved.**

16. On Road A, at station 0+12, the change in vertical grade exceeds 1%, and a vertical curve is required per Section 608.C. We would consider a request for a waiver from this section of the ordinance at this location, provided the drainage design is modified to demonstrate that inlet numbers 9 and 11 will capture 100% of the runoff in the 10-year storm event.

06-25-18: The Board granted a waiver from the vertical curve requirements of SLDO § 608.C for the above noted location at its May 7, 2018 meeting, subject to the engineer demonstrating the hydraulic performance recommended above. The Stormwater Report includes calculations indicating that inlets 9 & 11 can capture 100% of the 10 year runoff within the individual inlet drainage area. This analysis does not include an assessment of any 10-year by-pass flow from upgrade inlets. The calculations should be revised to calculate and account for any 10-year bypass flow from inlets 17, 16, 13, 11a, and 9a.

**Response:** Calculations have been provided that assess the impact of bypass flow from upgrade inlets. The revised design uses double inlets for inlets 9, 9A and 11A. The design is acceptable. We recommend the double inlets (9, 9A and 11A) be separated by 10' and connected with a short piece of storm sewer. This arrangement will drain the street with greater efficiency. This item is resolved, subject to the requested revision with the double inlet layout.

17. This comment was previously resolved.
18. This comment was previously resolved.
19. This comment was previously resolved.
20. This comment was previously resolved.

21. The plans have been reviewed by the Township's Sanitary Sewer Engineer, AECOM. Their comments should be addressed. We note that they have commented that the plans must show the construction details to connect the Lot 55, (the Everfast property), to the public sewer. The plans should also specify that demolition and removal of the existing septic systems, include the removal of the septic fields located underneath units 15/16 and 17/18. (SLDO § 620)

**06-25-18 and current response:** General Note #45 specifies the demolition/removal of the existing septic system components, and the plans have been revised to include notes specifying the removal of the existing septic fields at units 15/16 and 17/18. This item is resolved, subject to addressing any remaining comments from AECOM.

22. A copy of the CWA plan should be submitted to the Township. (SLDO § 621)

**06-25-18 and current response:** The engineer's response letter indicates that Evans Mill Environmental is working with CWA to prepare the construction plans for the water distribution system, and that they will be provided to the township when available. This item is resolved, subject to the Township's receipt of the water plans.

**Stormwater Management Ordinance (SWMO):**

23. This comment was previously resolved.
24. We have the following comments with respect to the calculations:
  - a. This comment was previously resolved.
  - b. Additional documentation should be provided to support the amount of proposed impervious cover in the calculations. The documentation should support the statement in the project narrative that "... stormwater management has been designed assuming an additional 10% of proposed building area to account for any potential future expansion." Please note that we estimate the amount of proposed impervious area on the plans is more than 370,000 square feet, which is less than the amount of impervious area listed in the calculations (338,319 sf).



06-25-18: The engineer provided an additional worksheet to document the impervious cover calculations. We recommend a note be added to the plans (sheets 2 and 8) that states the maximum building footprint permitted for any unit, based on the calculations. This item is resolved, subject to the addition of the recommended note.

**Response: The requested note has been added to the plan. The note provides a total building area permitted for all 54 units. The Township should inform the building inspector that they will need to maintain a running tally of building square footage as applications as submitted to ensure the permitted total is not exceeded. This item is resolved.**

- c. This comment was previously resolved.
- d. This comment was previously resolved.
- e. This comment was previously resolved.
- f. This comment was previously resolved.
- g. This comment was previously resolved.
- h. This comment was previously resolved.

25. This comment was previously resolved.

26. The Owner's SWM & BMP Acknowledgment should be included on the PCSWM Plan, and should include all of the language listed in Section 704.B.4 of the SWMO.

06-25-18: The requested note has been added. Our prior comment inadvertently omitted an additional reference to Section 402.A.3. The note should be revised to read as follows:

*"... in a condition which does not conform to the O&M plan, without written approved from the Municipality. The landowner also acknowledges that any revision to the approved Stormwater Management Site plan shall be submitted to and approved by the municipality, and that a revised Erosion and Sediment Control Plan shall be submitted to, and approved by, the Conservation District for a determination of adequacy prior to construction of the revised features."*

In addition, an Engineer's Certification should be added to sheet 8. (SWMO § 402.A.4)

**Response: The certifications have been revised and/or added to sheet 8 as noted above. This item is resolved.**

27. Concurrent with the Final Plan, a SWM O&M Agreement must be executed and recorded with the Post-Construction Stormwater BMP plan. (§703 and Appendix 7)

**06-25-18 and current response: The current submission includes a copy of the O&M agreement. This item is resolved, subject to the applicant's recording of the O&M document, and providing a recorded copy to the Township.**

28. This comment was previously resolved.

**General Comments:**

29. The plan shows four (4) phases, but the purpose of the phasing is not clear; i.e., is it intended for staging of earth disturbance activities, or is it intended for financing and bonding purposes. A note or notes should be added to the plan to clarify the purpose of the phasing, and the sequence of construction notes on sheet 10 should be revised to clearly indicate whether multiple phases can be disturbed simultaneously.

06-25-18: Notes have been added to clarify that the phasing is for bonding purposes, rather than staging of earth disturbance, and that the phases may be constructed sequentially or concurrently. This item is resolved, subject to the Sequence of Construction being revised to clarify that the sediment traps must remain in place until all phases are complete, as discussed in our response to item 11.b above. We also recommend the Phasing be shown on sheet 2 for clarity.

**Response: The note has been revised as requested, and the phases have been shown on sheet 2. This item is resolved.**

30. Plans and calculations for the retaining wall located south of unit 30, signed and sealed by a professional engineer, should be submitted.

06-25-18: The engineer's response letter indicates that signed and sealed plans for the retaining wall will be submitted prior to building permit issuance. These plans must be submitted prior to execution of any development agreements for Phase III.

**Response: The engineer's response letter acknowledges the retaining wall plans and calculations will be submitted prior to execution of the Phase III development agreements. We recommend a general note to this effect be added to sheet 2. This item is resolved, subject to the addition of a general note on sheet 1.**

31. Additional construction details are required for a Final Plan. These include, but may not be limited to:

- a. This comment was previously resolved.
- b. This comment was previously resolved.
- c. A schedule of storm drain inlet boxes should be provided, if variable inlet box sizes are required;

06-25-18: Additional inlet box details have been added to sheet 11. The drainage design will require more than one size of inlet box, to accommodate the proposed piping. For example, the 15" pipe out of inlet #9A will fit in the standard box shown in the details on sheet 11. The 36" pipe out of inlet #6 will not fit in a standard box. Inlet #6 box will need a Type 4 box. We are requesting a chart be added to the plans, listing the inlet number,

size and invert(s) of pipes into/out of the inlet box, and the size of inlet box required, to facilitate review of the drainage design and shop drawings.

**Response: The inlet box schedule has been added to sheet 12. The inlet box detail (PennDOT standard sheet RC-46M) has been shrunk, and the text has pixilated and is not legible. This item is resolved, subject to including a legible copy of RC-46M on the sheet.**

- d. This comment was previously resolved.
- e. This comment was previously resolved.
- f. Sanitary sewer details, as required by AECOM; and,

**06-25-18 and current comment: The engineer's response letter indicates that the sanitary sewer details have been revised to address the Township Sewer Consultant's comments. This item is resolved, subject to any further comments from the Township Sewer Consultant.**

- g. This comment was previously resolved.

32. This comment was previously resolved.

33. Road names should be provided for Roads A-D and should be vetted and approved by the post office and the emergency management coordinator. The Final Plan should include the postal numbers for each of the units.

06-25-18: The current submission includes proposed road names. The engineer's cover letter indicates that postal numbers have been provided on sheet 2, but we were unable to locate them. The Township should confirm that the proposed street names are acceptable to emergency services, and add the postal numbers to sheet 2 when available.

**Response: The engineer's response states that postal numbers will be added to the plan when they are available. This item is resolved, subject to completion of the street addressing on the plan.**

34. This comment was previously resolved.

Additional comments based on the 06-25-18 submission:

35. Swale 3 concentrates flow at the top of a steep slope discharging across a corner of the Forte property towards basin 2. This area should be analyzed to demonstrate there will not be erosive conditions in the area of the proposed retaining wall or on the adjacent property. Alternatively, we recommend the engineer consider adding an inlet and pipe to divert some of the swale flow to inlet #20. (SWMO § 301.G)

**Response: An inlet (#35) has been added to divert some of the swale flow to the storm sewer. The grate elevation should be lowered from 418.5 to 418.0 to ensure it will intercept the swale flow. This item is resolved, subject to the revising the inlet grate elevation.**

36. The outlet structure from Basin 1 should include a child proof trash rack over the 24" orifice. (SWMO § 311.A.7)

**Response: A child proof trash rack has been added to the basin 1 detail. The plan does not include any information with respect to construction or specifications for the trash rack. This information should be added to the plan, as an additional detail, or in narrative form.**

37. We recommend the pipe between inlets 3 and 4 be eliminated, and the discharge from inlet 4 be piped directly to Basin 1. This will allow for a greater infiltration flow length from the basin inlet to the outlet structure for a greater percentage of the flow into the basin. (SWMO § 311.A.10)

**Response: The above recommendation has been incorporated into the Final Plan. This item is resolved.**

38. All storm drain inlet grates and manhole covers must have the phrase "No dumping, drains to stream" cast into them. The details on sheet 11 should be revised to comply. (SWMO § 311.B.5.e)

**Response: The requested note has been added to the details on sheet 11. This item is resolved.**

39. Sheet 6 should be revised to show the location and extents of the swale erosion control matting and spillway turf reinforcement matting. (E&S 53-5.G)

**Response: The types of matting have been delineated on the plans with unique shadings. This item is resolved.**

40. Details should be added for the following:
- a. Belgian block curb;
  - b. Typical trench backfill, per Section 801.C.3 of the SLDO; and,
  - c. Underdrain should be added to the Typical Road Cross-section; the underdrain should be specified on both sides of the road, extending 50' either direction at the low points, and connecting to the inlets.

**Response: The requested details have been provided on sheet 12. We have noted that a granite curb detail has been provided in lieu of the Belgian block detail. We have no objection to the specification with this detail. We have also noted that the typical trench detail is from the sanitary sewer detail for the Township. We have no object to this detail for the storm sewer backfill, but request that a note be added to the detail to indicate this trenching shall be used for both sanitary**

and storm sewers. **This item is resolved**, subject to addition of the recommended note to the trench detail.

41. Calculations should be submitted demonstrating that the proposed sediment traps are capable of managing runoff from the disturbed site in compliance with the peak rate restrictions of the SWMO. (E&S 53-5.C)

**Response: Sediment trap calculations have been provided and are acceptable. This item is resolved.**

42. The Conservation/Open Space Management Plan should be revised to remove the topsoil stockpiles, and include the meadow/landscape restoration area.

**Response: The requested revisions have been made to the two plans noted above. A seed mix specification and maintenance notes should be provided for the meadow restoration areas. These notes should be included on sheet 8, the PCSWM plan.**

If you have any questions, please call.

Sincerely,  
VanDemark & Lynch, Inc.  
Township Engineers

  
James W. Hatfield, P.E.

cc: Planning Commission  
Ross Unruh, Esq.  
Lisa Thomas, R.L.A., Glackin Thomas Panzak  
Ed Strauss, PE, URS  
Gerald Baker, Traffic Planning and Design  
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James Fritsch, P.E., Register Associates, Inc.