

Date of Mailing Notice of Decision:

February 14, 2023

Gregg I. Adelman, Esq.
Kaplin Stewart
Union Meeting Corporate Center
910 Harvest Drive
P.O. Box 3037
Blue Bell PA 19422

Re: Preliminary Land Development Plan Approval
Greene-Marks Subdivision Application
Charlestown Township, Chester County

Dear Mr. Adelman:

As required by Section 508 of the Pennsylvania Municipalities Planning Code, this correspondence will serve to memorialize the decision rendered by the Board of Supervisors on February 6, 2023, conditionally approving the preliminary subdivision plan application of Kathy Greene and Christopher Marks for property located 4219 Howell Road, Malvern PA 19355, further identified as Tax Parcel Number 35-05-22.

The conditions of preliminary land development approval are set forth below. Preliminarily, as to each of these conditions, it is the understanding of the Board of Supervisors and the Township Solicitor that each of these conditions is fully acceptable to the applicant based upon communications and discussions which occurred during the meeting of the Board of Supervisors, at which the decision was rendered on the plan approval.

The Plans as referenced in this correspondence include plans and correspondence as prepared by Carta Engineering, entitled Preliminary Subdivision Plan for 4219 Howell Road, dated January 6, 2022, last revised October 18, 2022 consisting of 11 sheets, and as further supplemented by this correspondence (the "Plans").

The Applicants shall comply with the following conditions of preliminary plan approval.

1. Compliance with all outstanding comments set forth in the Township engineer, Montrose Environmental, review letter of December 7, 2022 and attached as Exhibit A.
2. Compliance with all outstanding comments set forth in the Thomas Comitta Associates review letter dated December 6, 2022 and attached as Exhibit B.

3. The Applicants shall implement the Northeast Forestry Concepts Plan for Reforestation of the Property.

4. The Applicants shall apply for and obtain an NPDES permit.

5. The Applicants shall comply with the requirements of the Township Subdivision and Land Development Ordinance pertaining to the provision and execution of a subdivision and land development agreement, the submission of appropriate performance, maintenance and/or escrow financial guarantees (in accordance with construction cost estimates agreed to by the Township Engineer), and including the recording of a Stormwater Maintenance Agreement, all in a form acceptable to the Township Solicitor.

6. The payment of any outstanding review fees, pursuant to Section 503 of the Municipalities Planning Code, including, but not limited to, professional consultations, engineering review and reporting, legal documentation preparation and submittal, legal research and other legal services, incurred by the Township, within thirty (30) days after invoicing.

Waivers are confirmed as being granted from Section 22-503.3.B(3) of the Subdivision and Land Development Ordinance, Section 22-503.3M of the Subdivision and Land Development Ordinance, Section 22-503.3G of the Subdivision and Land Development Ordinance, Section 22-505.2 of the Subdivision and Land Development Ordinance, and Section 23-302.1.B(1)(h) of the Stormwater Management Ordinance, as set forth in the February 6, 2023 letter from Carta Engineering, attached hereto as Exhibit C, and on the Plans.

Very truly yours,

LAMB MCERLANE PC

By: 

Mark P. Thompson

cc: Board of Supervisors (w/o attachments)
Chris Heleniak, Township Manager (w/o attachments)



December 7, 2022

2022-4317

Mr. Frank A. Piliero, Chairman
Charlestown Township Board of Supervisors
1018 Green Lane Road
Malvern, PA 19355

Re: **Kathy Greene-Christopher Marks – Plan Review #5**
4219 Howell Road
Minor Subdivision Plan (Preliminary Plan Review)

Dear Mr. Piliero:

I have reviewed the submitted items listed below and wish to submit the following comments:

Submitted Items:

- Preliminary Minor Subdivision Plan Response Letter, prepared by Carta Engineering, revised October 25, 2022
- Post-Construction Stormwater Management Report, last revised October 2022
- Preliminary Subdivision Plan for 4219 Howell Road, prepared by Carta Engineering, last revised October 18, 2022

Comments:

The Preliminary/Final Subdivision Plan for John A. Garofalo, prepared by E.B. Walsh & Associates, last revised 11-19-96 included a 20-foot wide horse/walking trail access easement that runs along the western property line that shall be added to the plan and included in the net lot area calculations. The proposed driveway swale is within this easement which will require adjustment of either the swale or easement.

The Applicant indicates they believe they are able to provide plantings and perform grading within the easement, since there is no indication of exclusionary activities for the easement. Since the intent of the easement is for a walking and horse-riding trail, it must be clear for walking and riding. We recommend the Applicant review the possibility of relocating the easement to utilize the private road and shared driveway to the maximum extent possible.

The Applicant has provided a letter from the Horse-Shoe Trail Conservancy indicating they have no issue with the abandonment of this easement. The Existing Features Plan now shows this easement to be extinguished. This item is resolved.

The abandonment of the easement has been rescinded and the plan revised to not impact the easement. **This item is resolved.**

Zoning:

2. The construction of streets and driveways within steep slopes requires Conditional Use approval in accordance with Zoning Ordinance 27-1203.2.B(6) when no viable alternative alignment or location is feasible. It appears the driveway to the dwelling on Lot 1 can be realigned to avoid steep slopes. An application for the Conditional Use shall be submitted.

A Conditional Use Application report prepared by Carta Engineering, dated April 13, 2022 has been submitted. A completed copy of the Township's Conditional Use Application shall be provided. This application can be downloaded from the Township's website.

A Conditional Use Application was submitted and our first review was issued May 16, 2022.

The Conditional Use Order shall be added to the plan once it has been issued.

3. No subdivision shall be created which creates a situation whereby more than three lots have access onto a street which does not conform to Part 5 of the Charlestown Township Subdivision and Land Development Ordinance pertaining to design standards for streets, curbs and gutters, and the like in accordance with Zoning Ordinance 27-1610.2. Since there are four lots with access to the proposed driveway it shall comply with the street standards of the Subdivision and Land Development Ordinance.

The Applicant has revised the design to provide an 18 foot wide private street from Hollow Road to the existing barn driveway. The Applicant proposes to taper to a 10 foot wide shared driveway from the barn driveway to the three single family lots. A pull off area shall be provided along the driveway between Stations 5+00 and 6+00 so passing vehicles can pull out of each other's way. The first 330 feet of the shared driveway has been revised to 14 feet wide with a waiver request to allow for the reduction from 18 feet wide.

We have no technical objection to this waiver request.

Subdivision and Land Development:

7. A draft of any proposed covenants or restrictions upon or against the subdivision or any lot thereof, or upon or against any land development subject to the approval of the Township Solicitor Shall be provided in accordance with SLDO 22-403.1.C(9).

Applicant indicates they will provide the required documentation once the technical details and conditional use issues are resolved.

10. A minimum grade of 1% shall be provided on all streets; a maximum grade of 10% shall be permitted on all local roads in accordance with SLDO 22-503.3.C. The proposed shared driveway was graded using the maximum 15% grade of the driveway standards listed in SLDO 22-506.4. The plan has been revised to comply with SLDO 22-503.3.C. However, the plan no longer complies with SLDO 22-503.G which requires the maximum grade on the approach to any intersection shall be 4% for the distance of 50 feet, measured from the nearest right-of-way line of the intersecting street along the curb line or edge of the cartway. The intersection to Howell Road shall be revised accordingly or a waiver requested.

The Applicant requests a waiver to allow 5% grade at the intersection.

We have no issue with this waiver request.

13. A 75-foot clear sight triangle shall be provided at the intersection of the new shared driveway with Howell Road.

The Applicant requests a waiver to provide a 50-foot sight triangle and describes their reasoning in their Preliminary Minor Subdivision Plan by Carta Engineering dated April 13, 2022. We have no issue with this waiver request since the design meets PennDOT's requirements for sight distance.

14. The proposed stormwater management system ties into the existing inlet within the Right of way of Howell Road. This inlet drains under Howell Road in a 12 inch pipe that discharges on the opposite side of the road.

The stormwater management system no longer ties into the existing inlet. Discharge from the subsurface basin will drain from an endwall and drain overland to the existing inlet.

The stormwater management discharge point at the intersection of the driveway and Howell Road has been revised to include a plunge pool that will drain into a new pipe that will be piped to the existing inlet which will be replaced. When the capacity of the storm sewer system in Howell Road is exceeded, runoff will overtop Howell Road and flow across Parcel 35-5-3.3 through an existing drainage easement to the stream.

The stormwater system has been revised to replace the swale along the south side of the drive with pipe in order to not impact the equestrian easement. The plunge pool has been removed and the storm sewer tied directly into the existing storm sewer within Howell Road.

A plunge pool has been included in the revised design. This item is resolved.

Stormwater Management:

17. Since the Applicant proposes to tie into the existing inlet in Howell Road, the capacity of the existing storm sewer system shall be taken into account in the routing analysis. The existing and proposed conditions shall be compared to ensure the peak rate and velocity of flow at the endwall are not increased in accordance with SMO 23-301.1.A.

The stormwater management design has been revised to no longer tie into the existing structure. The new design utilizes an endwall that will discharge overland to the inlet through a proposed swale. Any runoff not captured by the inlet will flow across the roadway. For regulated activities with one acre or more of proposed earth disturbance, existing drainage peak rate discharges up to and including the one-hundred-year storm onto or through adjacent property(ies) or downgradient property(ies), including diffuse drainage discharge, shall not be altered in any manner without written permission from, and, where applicable as determined by the Municipality an easement and agreement with, the affected landowner(s) for conveyance of discharges onto or through their property(ies) in accordance with SMO 23-303.1.B. Since the current stormwater management design for the proposed development will create a new point source discharge adjacent to the driveway at Howell Road where there is currently a diffuse drainage discharge condition, this section shall be complied with.

The updated design has been revised to more closely mimic the current flow conditions at Howell Road and at the shared property line with Parcel 35-5-21. This item is resolved.

The design has been revised to tie directly into the existing storm sewer. See Comments 39-43 below.

A plunge pool has been included in the revised design. This item is resolved.

19. A minimum of one inch of runoff from all areas disturbed shall be infiltrated to protect groundwater recharge and stream base flows in accordance with SMO 23-302.1.B(1)(h).

The Applicant requests a Waiver from this requirement with the intent of complying with the state recharge requirement of the difference in two-year volume.

We have no issue with this waiver request.

21. The capacity of the existing storm sewer system within Howell Road shall be taken into account in the routing analysis to ensure the downstream property is not adversely impacted. The existing and proposed conditions shall be compared to ensure the peak rate and velocity of flow at the endwall are not increased in accordance with SMO 23-301.1.A. The existing pipe and broad crested weir flow across Howell Road shall be modeled in the existing and proposed conditions. The existing and proposed flows through the existing pipe and across Howell Road have not been added to the stormwater management analysis. This is an open issue.

The stormwater management calculations have been updated as required and demonstrate that the post developed peak flow rate and velocity during all design storms will be equal to, or less than, the predeveloped peak rate and velocity for the same design storm.

The design has been revised to tie directly into the existing storm sewer. See Comments 39-43 below.

This item is resolved.

23. In order to maximize compatibility with surroundings, minimize the potential for negative aesthetic impacts, and to avoid creation of mosquito breeding areas, all stormwater management facilities shall be subsurface in accordance with SMO 23.303.1.E. If proposing a surface stormwater management facility for a property, the applicant shall request a waiver from the Board of Supervisors, and shall document that the type of facility proposed is designed to meet the objectives of §23-103 to the greatest extent practicable and shall optimize the following:

- (a) The quality of discharged water.
- (b) The quantity of recharged water.
- (c) The availability of safe, additional uses on or within the facility in addition to the handling of stormwater. Creation of natural habitat and passive recreation area would be one of the acceptable additional uses.
- (d) Visual and environmental compatibility with the adjacent natural and built land uses remaining after development of the property.

The Applicant shall document that the surface basins will comply with the above requirements.

We have no issue with this waiver request.

24. Permanent surface basins shall have interior and exterior side slopes not exceeding one foot vertical in four feet horizontal in accordance with SMO 23-303.1.E.(4)(a). The surface infiltration basins are graded at 3:1 and shall be revised accordingly.

Applicant requests a waiver from this requirement in order to limit the footprint of the surface basins. Due to the location of these basins, we do not have an issue with this waiver request.

The basins have been revised to subsurface basins. This item is no longer applicable.

38. A note on Sheet 3 indicates all new inlets shall be installed with an earthen berm with a 12 inch minimum height. A symbol shall be added to the plan and legend showing the berm locations. A permanent liner or blanket will be required for these berms. The inlets are approximately 2 feet or more below the pavement elevation and directly against the pavement edge. The layout shall be revised to ensure there is not a drop off along the edge of the driveway.

This item is resolved.

39. The HydroCAD routing analysis shows Swale 2.2 flowing directly to Howell Road while the plan shows the swale flowing into Inlet 4 which ties into the proposed storm sewer system. The routing analysis shall be updated accordingly.

This item is resolved.

40. The storm sewer reach (SS1) within HydroCAD models 860 LF of 18 inch pipe at 9.72% slope. The storm sewer profile shows 790 LF of 18 inch pipe and 134 LF of 30 inch pipe. The average slope of the 18 inch pipe is 10.27% while the average slope of the 30 inch pipe is 2.17%. The routing analysis shall be updated accordingly.

This item is resolved.

41. The HydroCAD routing utilizes a reach for the storm sewer system that collects the swales runoff and pipes it to the existing inlet. According to the HydroCAD help manual:

"A reach models the effect of a hydrograph being routed through a uniform stream, channel, or pipe under open-channel flow conditions. This results in attenuation and delay of the peak flow due to the storage and travel time of the reach."

"A reach operates strictly according to Manning's equation, and should be used only when you can assure that normal open-channel flow exists. If you need to consider the possible effects of inlet control, headwater, or tailwater, you should use a "pond with a culvert outlet" instead of a pipe reach. For further details please read about node types and pond modeling."

Since the impacts of tailwater and possible effects of inlet control are critical in this analysis, the reach shall be revised to a pond with a culvert outlet in accordance with the HydroCAD help manual. Each change in pipe size shall consist of a separate pond with culvert outlet.

This item is resolved.

42. In order to model the tailwater effect the existing inlet and 12 inch pipe outlet will have on the proposed storm sewer system, the existing inlet will need to be modeled as a pond with the catch basin option that includes the 12 inch outlet pipe and top of grate as the outlets. The flow from the Heatherwood Development and proposed storm sewer system would discharge to this Pond. The outflow through the 12 inch pipe would flow to a link representing DP-001 while the outflow from the top of grate would discharge to the Howell Road Pond. The 12 inch pipe discharge would be removed from the Howell Road Pond with the discharges from the remaining Howell Road Pond flowing to the DP-001 Link.

The Applicant has removed the inlet tops from the model. This item is resolved.

43. The Culvert Report for JB-1 to X Inlet assumes a tailwater elevation of 418.67 with free flow above this elevation. This does not take into account the actual tailwater restrictions caused by the existing inlet which consist of the 12" outlet pipe and the top of grate elevation and open area. This calculation will no longer be necessary if the above comment is completed.

This item is resolved.

44. The maximum distance between storm sewer structures is 300 feet for 18 inch pipe in accordance with SMO 23-303.1.F.(2)(c).

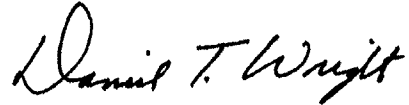
This item is resolved.

New Comments:

45. **Facility 1.B bottom elevation is below the infiltration testing elevation and the bottom of the test pit for the closest test. Infiltration testing and depth to limiting zone confirmation for this basin shall either be performed prior to plan approval or shall be performed prior to earth moving at the site. If the testing will be performed prior to earth moving at the site, the sequence of construction shall be updated to include the testing requirement right after the installation of erosion and sedimentation controls. The sequence of construction item shall also indicate that if the testing does not meet the requirements of the stormwater design for the bmp, construction at the site must stop until an adequate infiltration basin replacement has been designed and approved by the Township.**
46. **Facility 2 bottom of bed is 568.8 in the calculations but 568.5 in the detail. The plan or calculations shall be revised accordingly.**

If you have any further questions, please contact me.

Very truly yours,



Daniel T. Wright, P.E.
Township Engineer / Zoning Officer
Charlestown Township

DTW:

cc: Charlestown Township Board of Supervisors
Charlestown Township Planning Commission
Chris Heleniak, Township Manager
Linda M. Csete
Mark Thompson, Township Solicitor
Lisa Gardner
Kathy Greene & Christopher Marks
Carta Engineering



THOMAS COMITTA ASSOCIATES, INC.
Town Planners & Landscape Architects

MEMORANDUM

TO: Charlestown Township Officials, Staff, and Consultants
Greene-Marks Applicant Team

FROM: Thomas J. Comitta, AICP, CNU-A, RLA

DATE: February 24, 2022; May 6, 2022; June 29, 2022; September 6, 2022;
September 27, 2022; **Further Updated: December 6, 2022**

SUBJECT: **GREENE-MARKS PRELIMINARY SUBDIVISION PLAN**
4219 HOWELL ROAD, DATED REVISED 10-18-2022,
AND TCA FURTHER UPDATED REVIEW COMMENTS

Please note the enclosed **further updated** review comments below pertaining to the documents listed below that we received on **November 16, 2022**, and to a site visit on May 5, 2022.

- Preliminary Subdivision Plan, dated revised **10-18-2022**;
- EIA Report, dated revised **October 2022**;
- Consultant Response Letter, dated **10-25-2022**; and
- Waiver Request Letter, dated **10-25-2022**.

Most of our previous comments have been addressed. We recommend that three (3) additional Norway Spruce Trees be added west of the proposed dwelling on Lot 2. Please see comment 2.3.f.

Please call if there are any questions.



THOMAS COMITTA ASSOCIATES, INC.
Town Planners & Landscape Architects

GREENE-MARKS PRELIMINARY SUBDIVISION PLAN
4219 HOWELL ROAD, DATED REVISED 10-18-2022,
AND TCA FURTHER UPDATED REVIEW COMMENTS

February 24, 2022; May 6, 2022; June 29, 2022; September 6, 2022; September 27, 2022
Further Updated: December 6, 2022

Previous comments that were resolved have been removed, and new comments are in bold type.

1. Overview

- 1.1. The **Plans** for the proposed 3 Lot Subdivision **have been substantially revised relative to** needed replacement trees and the Landscape Plan as noted below.

2. Landscape Plan (Sheet 7 of 10)

- 2.2. The “**Replacement Tree Calculation**” on **Sheet LP-1** indicates that **92** Replacement Trees are needed (23 trees/acre x **4.0** acres of Woodland Clearing). We previously recommended that the Applicant revise the Landscape Plan to depict:

2.2.a. An Allee of Shade Trees along the proposed driveways; and

2.2.b. Shade Trees on lots south of the 590 contour, on the uphill side of the proposed dwellings on Lots 2 and 3.

The revised **Landscape** Plan now indicates **92** Replacement Trees.

- 2.3.f. To be clear on the above items, and to better address the notion of “Right Plant – Right Place”, we recommend the following Landscape Plan revisions:

- (i) to still propose more Pin Oak trees due to their lower, descending branches that would help to screen the properties to the north and to the west (as they should be located along the property line facing the Beyer/Green lot to the north, and the Sweppenhiser and Smethers lots to the west);
- (ii) to **still** propose more Norway Spruce trees to provide screening/buffering as indicated in the comments above; and

We recommend that three (3) additional Norway Spruce Trees be added west of the proposed dwelling on Lot 2, in order to better screen the views from the Smethers property.

Most of these items have been addressed in the revised Landscape Plan. We recommend three (3) additional Norway Spruce Trees.



THOMAS COMMITTA ASSOCIATES, INC.
Town Planners & Landscape Architects

GREENE-MARKS PRELIMINARY SUBDIVISION PLAN
4219 HOWELL ROAD, DATED REVISED 10-18-2022,
AND TCA FURTHER UPDATED REVIEW COMMENTS

February 24, 2022; May 6, 2022; June 29, 2022; September 6, 2022; September 27, 2022
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- 2.3.g. We still recommend that the Landscape Plan be sealed by a Registered Landscape Architect (RLA). After visiting the site to observe the existing remnants of the tree canopy (especially because the existing, shallow rooted Tulip Poplar trees that may fall over during upcoming wind storms, and because the building envelopes/building locations for the 3 proposed lots may need to be adjusted so that the houses are farther away and not likely to be affected by falling Tulip Poplar trees), the RLA will probably have other ideas on how to best re-landscape the three proposed lots.

The Landscape Plan, Sheet LP-1, by InFocus Planning, dated 10-28-2022, has been sealed by Rachel Sclan Vahey, RLA.

3. Environmental Impact Assessment (EIA) report

- 3.1. Please still revise the EIA report to more completely address the denuding of the woodlands that has already taken place, and the related need for replacement tree plantings. The EIA report still needs to more effectively address the massive amount of tree clearing that has already taken place.

The EIA report has been revised in these regards.

- 3.3. Please still revise the EIA report to address the mitigation of visual impacts with proposed evergreen tree plantings (see comments 2.3.e. and 2.3.f.) along the western boundary of the site.

The EIA report has been revised in this regard.

- 3.4. Also, still revise the EIA report to address the vegetation of the steep side slopes that will be disturbed through the construction of the proposed driveways. In other words, in addition to the replacement trees, a substantial amount of shrub plantings will still be needed to stabilize the proposed steep side slopes of the driveways.

The EIA report has been revised in this regard.

- 3.6. As mentioned at the May 10th Charlestown Township Planning Commission meeting, the Applicant needs to remove the existing building materials, signs, vacant shed, debris, etc. from the area around proposed Lot 1. This is now addressed in the EIA report, revised October 2022, on page 3 in the "Pollution" paragraph.



THOMAS COMITTA ASSOCIATES, INC.
Town Planners & Landscape Architects

GREENE-MARKS PRELIMINARY SUBDIVISION PLAN
4219 HOWELL ROAD, DATED REVISED 10-18-2022,
AND TCA FURTHER UPDATED REVIEW COMMENTS

February 24, 2022; May 6, 2022; June 29, 2022; September 6, 2022; September 27, 2022
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4. Conditional Use Standards & Criteria, and BOS Approval

- 4.1. The Applicant **addressed** Standards set forth in §27-1809 of the Zoning Ordinance **at the Conditional Use Hearing on 10-3-2022.**
- 4.2. The Applicant received Conditional Use Approval on 11-7-2022.

Please call if there are any questions.

CARTA ENGINEERING
CONSULTING * CIVIL ENGINEERING * SITE PLANNING
LAND DEVELOPMENT * LAND SURVEYING

February 6, 2023

Charlestown Township
Attn: Board of Supervisors
1018 Green Lane Road
Malvern, PA 19355

RE: Kathy Greene-Christopher Marks
4219 Howell Road
Preliminary Minor Subdivision Plan

Dear Members:

On behalf of the applicant, Kathy Greene and Christopher Marks, we respectfully request waivers from the following sections of the Charlestown Township Code.

1. SALDO Section 503.3.B(3) – Cartway Width

The ordinance requires a 24-foot wide cartway width for roadways. The plan proposes approximately 330 lineal feet of new private roadway. Although the plan proposes only three residences (one existing lot and two new lots), and a shared driveway would be adequate, an adjoining parcel has an access easement for their barn which adds a fourth lot to the driveway. Therefore the plan has been updated to provide a section of the new driveway to be constructed to Township road standards, including pavement section and concrete curbing. However, in the interest of reducing stormwater impacts and impervious area, we feel a cartway width of 14-feet is sufficient for the short section of private roadway. The proposed width is sufficient for the minor two-way traffic anticipated on the new access driveway.

2. SALDO Section 503.3M – Intersection Triangle

The ordinance requires a 75-foot intersection triangle area that is intended to be free of visual obstructions in order to provide a more visually open intersection for streets. The new private road meets the definition of a street due to the adjoiner's barn access and would therefore be required to meet this section. Due to the geometric constraints of the lot, a 50-foot intersection triangle is proposed to be free and clear of visual obstructions. The new "roadway" is essentially a dead-end street with possibly the lowest level of traffic needed to marginally meet the definition of a street. Discounting the adjoiner access to their barn, the intersection would fall under driveway regulations which requires a 25-foot intersection triangle. Furthermore, the intersection has the necessary sight

distance according to PennDOT standard. Therefore we feel the provision of a 50-foot intersection triangle will suitable enhance the openness of the intersection and satisfy the intention of the ordinance.

3. SALDO Section 503.3.G – Intersection Approach Slope

The ordinance requires an intersection approach slope of 4% for a distance of 50 feet before transitioning to a steeper slope. The plan proposes an intersection approach slope of 5% for 25 feet before transitioning to a steeper slope. The proposed roadway grades enable to the vertical street profile to hold more closely to the existing grades and limits site disturbances and vegetation removal. Providing an intersection meeting 503.3G would have the effect of lowering the entire driveway elevation by approximately 1 to 2 feet. Because the driveway use is limited to four (4) units, we feel the minor departure from the required intersection grade is minimal and outweighed by the benefit to preserving existing natural features.

4. SALDO Section 505.2 – Vertical Curbing

The Ordinance requires vertical curbing on streets where the gradient is 4% or greater. The plan proposes flush curbing along the new private road which has longitudinal slopes ranging between 5% and 10%. Flush curbing has been provided in order to allow runoff from the road and upslope areas to be directed to and managed by the proposed drainage channel. Vertical curbing would channelize runoff into a curb line cutter and direct runoff towards Howell Road at a higher velocity. Storm sewers inlets would be required and they would be less efficient at managing the runoff and have the potential for grate clogging, whereas the armored channel will be more suitable and effective for conveying runoff to the plunge pool area.

5. SWMO Section 302.1.B(1)(h) – Infiltration Volume

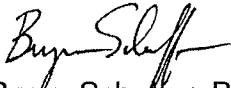
The ordinance suggests that an infiltration volume of 1-inch over all disturbed areas be provided.

The plan proposes to infiltrate the net increase in runoff volume that is proposed by the development. This is in accordance with SWMO Section 302.1.B(1)(a) and the requirements of the state NPDES permit. This is the typical engineering practice as this will cover over 90% of all precipitation events. Higher intensity events do not typically contribute to groundwater recharge as the majority of volume is converted to runoff as soils become saturated.

The requirement to infiltrate 1-inch of runoff volume over areas that will be restored to pervious surface would significantly increase the required storage volumes of the stormwater facilities and thereby increase site grading, disturbances, and vegetation removal in order to accommodate the requirement.

For the reasons listed, we feel that waivers of the above referenced sections are justified. We look forward to discussing the requested relief at the next available opportunity. Should you have questions or require additional information, please contact me. Thank you for your consideration of this request.

Sincerely,

A handwritten signature in black ink, appearing to read 'Brynn Schaffer', with a stylized flourish at the end.

Brynn Schaffer, PE, PLS

cc: Greg Adelman, Esq., Kaplin Stewart (via email)
Daniel T. Wright, PE, Advanced GeoServices (via email)
Anthony Holowsko, RB Ashley Customs (via email)
Christopher Marks and Kathy Greene, Applicants (via email)