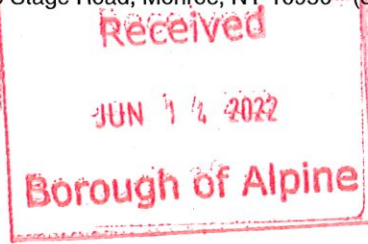




# AZZOLINA & FEURY ENGINEERING, INC.

Professional Engineers and Land Surveyors

30 Madison Avenue, Paramus, NJ 07652 • (201) 845-8500 • Fax (201) 845-3825  
110 Stage Road, Monroe, NY 10950 • (845) 782-8681 • Fax (845) 782-4212



May 31, 2022

Borough of Alpine  
Municipal Building  
100 Church Street  
Alpine, New Jersey 07620

Attn: Ms. Jo Anna Myung  
Secretary to the Alpine Zoning Board of Adjustment

Re: Dorf Residence/Prop. Deck  
Block 53, Lot 6  
116 Miles Street  
A & F File No. ALP-1377

Dear Mrs. Wehmann:

Please be advised that our office is in receipt of the following documents:

- A copy of "Board of Adjustment Application", with Rider/Reasons for Relief;
- A copy of the Letter of Denial from the Alpine Zoning Officer, dated December 6, 2021;
- A copy of the Architectural Plan prepared by Chris Blake, Architect, dated December 11, 2021, December 5, 2021 (three sheets);
- Copies of three photos titled 'Photo Exhibit, Barbara Dorf, 116 Miles Street, Alpine, NJ Block 53, Lot: 6, undated, no photographer named.

As requested, we have reviewed the documents submitted and find as follows:

## I. Zoning / General

The property which is the subject of this review is a single story dwelling with a 'walk-out' basement. Lot 6 is a 50-foot wide by 165 +/- feet in depth, having a total lot area of 9252 square feet. The property is within the Borough's R-3 Residential Zone. The existing Building Coverage is 26.87%, whereas 10% is permitted, and the existing Improved Coverage is 41.27%, whereas 20% is permitted. The owner applicant has proposed the addition of a 404 square foot raised deck at the rear of the existing dwelling. The addition of the subject deck would result in a total Building Coverage of 31.23%, and an Improved Coverage of 41.42%. The change in Improved Coverage is rather small since the deck is proposed to be constructed over an existing 'terrace' at the rear of the home. The deck is shown on the architectural site plan as conforming to the existing required side and rear yard setbacks.

May 31, 2022

Page 2

Borough of Alpine

Attn: Ms. Jo Anna, Secretary to the Zoning Board of Adjustment

A & F File No. ALP-1377

## **II. Septic System**

The septic system on this property was recently replaced. Given the narrow property width (50 feet, the limited rear yard area, and the required horizontal separations from septic system components to other properties, from septic systems on adjoining lots, from dwellings, and other site improvements, the available area(s) for construction of new septic systems conforming to the applicable requirements. To manage/treat the sanitary waste from the existing dwelling, a separate blackwater treatment system was approved and constructed at the lower end (rear) of the back yard. To manage the graywater flows which are expected to be less than the blackwater discharge, a separate graywater system was constructed near the rear of the existing dwelling, at the required five (5) feet from the rear of the house. Unfortunately the septic tanks for the graywater system are under the footprint of the proposed deck. Even though the deck would be minimally seven or eight feet above the septic tank locations, this situation poses a number of potential issues. If the tanks need to be accessed for inspection, cleaning or minor internal repairs, those functions may be possible with little interference from the deck above. However, if the connecting piping between the tanks, or from the tanks to the house needs to be replaced, exposing those pipes, removing them and replacing same may be quite difficult. If the tanks themselves need to be replaced, doing so would be severely impeded by the deck structure above, and removing/replacing the tanks could necessitate first removing/dis-assembling a significant portion of the deck.

Supporting framing for the deck poses other noteworthy challenges. The architectural plan acknowledges the presence of the septic tanks, and notes that alternate spacing for the supporting posts may be necessary. As shown in concept, the support posts in the center of the deck may well be in conflict with the piping between the tanks, and may be in conflict with the tanks themselves. Alternate framing schemes must be investigated to avoid these conflicts or others resulting from the proximity to the septic system. Any leakage or overflow from the tanks is also an issue. Setting the support posts in larger diameter PVC sleeves should be investigated as a way of protecting the supports from septic leakage, should it occur.

Since no other viable options are available, given the area limitations of the property, this alternative system for graywater treatment is acceptable.

## **III. Soil Moving**

Installing the footings for the posts that would support would necessitate less than one cubic

May 31, 2022

Page 3

Borough of Alpine

Attn: Ms. Jo Anna, Secretary to the Zoning Board of Adjustment  
A & F File No. ALP-1377

yard of hand excavation, and would be similar to the excavations for the installation of fence posts. No Soil Movement Permit is therefore necessary.

**IV. Tree Removal**

No trees are scheduled for removal in conjunction with the installation of the proposed deck, if approved.

**V. Summary**

The application is simple from an engineering perspective, and involves neither soil moving, septic replacement nor regrading issues. Therefore it is basically a Zoning matter. However, by copy of this letter, we are notifying Mr. Frugis of our concerns regarding the location of the deck, particularly the deck support posts, in close proximity to the septic tanks and piped interconnections. We recommend that the owner's architect carefully consider an alternate framing plan to completely span the entire area over the tanks. The limits of the tanks and the piping associated therewith should be determined by hand-excavating to uncover these system components prior to the commencement of any construction activities. From our perspective, sufficient information has been provided to declare this application to be complete. We therefore ask that you advise the applicant of the first available date for presenting this matter to the Zoning Board of Adjustment.

If you have any questions regarding this matter, please do not hesitate to contact us.

Very truly yours,

AZZOLINA & FEURY ENGINEERING, LLC



Perry E. Frenzel, P.E., P.P.

cc: Brian Frugis, Alpine Construction Official  
Barbara Dorf/Applicant  
Matthew G. Capizzi, Esq.



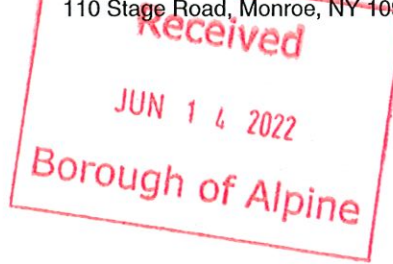


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Borough of Alpine  
Municipal Building  
100 Church Street  
Alpine, New Jersey 07620



January 4, 2022  
UPDATED June 9, 2022

Attn: Ms. Nancy Wehmann, Secretary Alpine Zoning Board of Adjustment

Re: Proposed Lucacel Residence  
AMENDED SITE PLAN  
79 Miles Street  
Block 55, Lot 3.03  
A & F File No.: ALP-1414

Dear Ms. Wehmann:

Previously, our office had reviewed the submittal for the septic systems proposed for construction in conjunction improvement of this property. That review letter addressed to the Alpine Board of Health was dated October 25, 2021. Subsequently our office received copies of the following documents which were received by the Borough on November 30, 2021:

- A plan entitled "Site Plan, Proposed Dwelling, No. 79 Miles Street. Block 55, Lot 3.03, Borough of Alpine, Bergen County, New Jersey", prepared by Hubschman Engineering, dated 8-11-21, revised 5-24-2022;
- "Application for Soil Moving Permit" and Checklist, for 79 Miles Street, for Florin Lucacel, Block 55, Lot 3.03, signed, and notarized but undated;
- NJDEP Appendix B Forms, for proposed septic system installations at the site indicated above, signed by Michael J. Hubschman, P.E., P.P., and dated 8-16-21;
- "Soil Moving Report, Proposed Septic System, 79 Miles Street, Lot 3.03, Block 55, Borough of Alpine, Bergen County, New Jersey, prepared by Michael J. Hubschman, P.E., P.P., dated October 12, 2021;
- "Drainage Report, 79 Miles Street, Lot 3.03, Block 55, Borough of Alpine, Bergen County, New Jersey, prepared by Michael J. Hubschman, P.E., P.P., dated August 11, 2021;

Pursuant to your request, we have reviewed these documents and offer the following comments:

## I. General / Zoning

Florin Lucacel is the owner of the property known as 79 Miles Street, Lot 3.03 of Block 55 as shown on the Tax Maps of the Borough of Alpine, and the applicant in this matter. The

January 4, 2022  
UPDATED June 9, 2022

Page 2

Borough of Alpine

Ms. Nancy Wehmann, Secretary to the Zoning Board of Adjustment

Re: Lucacel Septic Systems/79 Miles Street

A & F File No. ALP-1414

applicant has retained Hubschman Engineering to prepare a site plan for a new residence having five (5) bedrooms which will be constructed on the subject property. The property is a sloped lot, dropping in grade approximately 36 feet from the frontage on the Miles Street cul-de-sac to the rear lot line at the southwest corner of the lot, approximately 170 feet from the right-of-way of Miles Street. In the northwesterly corner of the site, an area which is the least sloped portion of the site exist which is suitable for the construction of separate blackwater and greywater 'gravity' septic systems. The proposed dwelling is proposed to be on approximately the same horizontal plane as the proposed septic fields, and the dwelling is proposed to be located to the south of the cul-de-sac. The lot is within the Borough's R-1 Residential Zone, and has a conforming Lot Area of 40,993.73 square feet. The previous 'septic system' submittal is designed to provide adequate treatment capability for a five-bedroom dwelling. The design for the dwelling and the site indicates that the setback from the front lot line to the window wells in the front of the proposed dwelling would be 45 feet, and 50 feet to the front of the dwelling. A minimum front setback of 60 feet is required. The proposed front setback is therefore non-conforming.

## **II. Soil Moving**

The 'Site Plan' depicts tiered retaining walls along the rear (southwesterly) of the site and the westerly property line. The northerly portion of the retaining walls along the westerly lot line are apparently proposed to provide stability for the proposed septic systems. However, the walls along in the side yard encroach into the required ten-foot tree buffer and the lower wall is shown on the Site Plan at the side lot line, whereas a six-foot minimum setback from either a lot line or from the required tree buffer of six-feet is required by Section 185-3D(2)(g) Borough's Soil Fill and Soil Removal Ordinance.

Cross-Sections submitted with the 'Site Plan' indicate proposed fill depths exceeding 10-feet in certain areas of the site. On lots such as the subject property which is less than two acres in total area, Section 185-D(2)(d) prohibits post-construction fill depths above the natural topography of the site in excess of five vertical feet.

The Soil Moving Permit Application with the supporting calculations and cross-sections indicate a total soil moving volume ( 'Cut' + 'Import' ) of 4,458 cubic yards> This volume exceeds the 1,000 cubic yard maximum which can be approved administratively. The proposed volume would require a waiver from Section 185-5D(5)(a) of the ordinance.

January 4, 2022  
UPDATED June 9, 2022

Page 3

Borough of Alpine

Ms. Nancy Wehmann, Secretary to the Zoning Board of Adjustment

Re: Lucacel Septic Systems/79 Miles Street

A & F File No. ALP-1414

### III. Septic System Design

A previously stated, Hubschman Engineering has designed two completely new and separate blackwater and greywater septic systems to which the sanitary waste from the proposed dwelling will flow by gravity. No pumps or pre-treatment systems will be utilized. On April 6, 2021, in the presence of representatives of Hubschman Engineering and myself, four (4) test pit excavations were performed in the general locations of the two proposed septic disposal fields. The logs of the findings and field analysis of the exposed subsoils is attached to the Standard Forms For Submission of Soils/Engineering Data and has been submitted in support of this application. The Johnson Soils report attached to the NJDEP standard forms, Appendix B, describes the underlying soils in greater detail. To generalize, all four test pits were advanced to 65 to 72 inches below the existing ground level. The soil material found in the excavation was predominantly sand with some minor percentages of silt and clay. No groundwater, seepage nor evidence of seasonal high groundwater were found. The in-situ soil material is well-suited for septic treatment and disposal. As designed, both the blackwater and greywater systems will meet the standards of both the Borough and the NJDEP. The two systems as designed and depicted on the submitted plans are acceptable. A plumbing permit will be required for the final connection between the first septic tank and the dwelling once the proposed dwelling is constructed. During the testimony presented to the Alpine Zoning Board of Adjustment on this matter, the applicant's architect indicated that the proposed dwelling would have six (6) bedrooms, not five (5) as was indicated on the Site Plan. Upon confirmation that 'six' was indeed the correct number of bedrooms, Applicant's Engineer was advised at the hearing of the need to amend the septic design calculations and increase the size of the septic field(s) as needed to accommodate the additional bedroom. This was done, and the revised plan was submitted to us for review. The amended calculations indicated that the blackwater septic field as originally designed was of adequate size to service a six-bedroom dwelling. However the calculations also indicated that greywater septic field had to be increased to 1,150 square feet. Revised plans were submitted, but the note shown at the location of the greywater field on the plan did not indicated the increased size required by the calculations. Applicant's Engineer was advised of this minor discrepancy and revised plans ( Revision No. 4, dated 5-24-2022) were submitted to the Borough for review. We have reviewed the 5-24-2022 revision and now find the submitted plan to be acceptable.

January 4, 2022  
UPDATED June 9, 2022

Page 4  
Borough of Alpine  
Ms. Nancy Wehmann, Secretary to the Zoning Board of Adjustment  
Re: Lucacel Septic Systems/79 Miles Street  
A & F File No. ALP-1414

#### **IV. Tree Removal**

Tree removal in conjunction with the installation of septic systems is exempt from the provisions of the Borough's "Trees" ordinance. A total of twenty one (21) trees are scheduled for removal in conjunction with the septic installations. The Hubschman plan shows thirty four (34) additional trees to be removed in conjunction with the construction of the proposed dwelling be removed. Of the total number of trees which are indicated for 'removal' on the 'Site Plan', ten (10) trees are subject to the replacement provisions of the "Trees" ordinance as per Section 205-1E(4). Applicant shall file an application for Tree Removal, which shall include an inventory/condition survey of all trees to be removed, which shall minimally include a plan showing the trees to be removed by individual numbering, and a listing to the trees by individual tree number, species, caliper, condition and an indication of whether or not each tree is subject to replacement requirements. Tree Protection for any tree in close proximity to the construction operations must be installed, inspected by our office and accepted PRIOR to the commencement of any site disturbance. An acceptable tree protection detail shall be provided on the 'Site Plan'.

#### **V. Storm Drainage**

The submitted documents include the 'Drainage Report', dated August 11, 2021. The project neither proposes more than one-quarter acre of new impervious surface nor more than one acre of total disturbance. The project is therefore NOT a 'major' project as defined by the NJDEP and water quality treatment is therefore not required. The runoff from the proposed roof, driveway and other impervious areas will be collected and piped to four seepage pits behind the proposed dwelling. Collected storm runoff will be recharged from the seepage pits into the subsurface groundwater table. The design for the proposed drainage system as related to the proposed improvements to the site is acceptable.

A secondary 'drainage. Issue involves the flow of storm runoff onto Miles Street into the collection system on the adjoining property of the Alpine Country Club. The current means of conveyance from the catch basin within the pavement at the low end of Miles Street, which happens to be in front of the subject property, is via a short section of pipe from the catch basin to the down-sloping natural ground surface between the cul-de-sac and the Country Club. Storm

Page 5

Borough of Alpine

Ms. Nancy Wehmann, Secretary to the Zoning Board of Adjustment

Re: Lucacel Septic Systems/79 Miles Street

A & F File No. ALP-1414

runoff continues to flow overland to the upper end of a piped collection system near the southwest corner of the Applicant's property. In order to develop the site, and more specifically to construct the septic systems as proposed, the 'Site Plan' depicts a new piped connection between the catch basin at the low end of Miles Street and the piped collection system on the Country Club property. From a storm water management perspective, this is acceptable since the proposed piped connection would not increase the runoff onto the Country Club's property, and would effectively eliminate a possible source of erosion, or scouring in extreme storm events on the Applicant's property. However, before the 'Site Plan' can be finally accepted by the Borough, the Applicant must provide an acceptable agreement/letter of acceptance from the Alpine Country Club approving the construction of the proposed connection as depicted on the current 'Site Plan', stating that the Applicant/Applicant's contractor has the permission of the Country Club to enter on the property thereof to construct the subject improvement, and grants an approval to the Borough of Alpine to continue to discharge the storm drainage from the lower end of Miles Street into the storm water collection system on the property of the Alpine Country Club. A copy of this letter/agreement shall be submitted to the Alpine Borough Attorney and the Alpine Zoning Board Attorney for review. No construction of the drainage improvement can commence until this agreement is accepted since it involves parties other than the Applicant and the Zoning Board of Adjustment.

#### **VI. Summary and Conditions**

Based upon our review the documents that have been provided and reviewed, we find the submitted 'Site Plan' and Application for Soil Movement complete and request that the Applicant be advised of the first available meeting of the Zoning Board of Adjustment at which this matter can be heard. Should the Board move to act favorably on this application, we ask that said approval be subject to the following conditions, and any other appropriate conditions that arise from the Board's deliberations:

1. No construction activities may commence until the applicant has filed for and obtained



Page 6

Borough of Alpine

Ms. Nancy Wehmann, Secretary to the Zoning Board of Adjustment

Re: Lucacel Septic Systems/79 Miles Street

A & F File No. ALP-1414

Soil Erosion and Sediment Control Plan Certification from the Bergen County Soil Conservation District. A copy of that approval must be filed with the Borough.

2. The Borough must be notified at least 48 hours in advance of any scheduled construction activities or site disturbance.
3. The applicant and applicant's contractor(s) are responsible for any damage to the Borough rights-of-way or any component thereof by vehicles and equipment accessing and leaving the site.
4. The applicant and applicant's contractor shall be required to clean and maintain the surface of the Borough's roadways of any dirt or debris resulting from the delivery and export of soil materials from the site, or from general construction traffic. Roadways shall be inspected and cleaned by the end of each working day.
5. Applicant's engineer shall prepare and submit acceptable stability calculations for the proposed retaining walls.
6. Applicant's engineer shall modify the Site Plan and related documents as necessary and submit same for our review and acceptance before any permits can be issued for the proposed improvements. **Based upon our review of the revised calculations necessitated by increasing the number of bedrooms in the proposed dwelling to six (6) instead of five (5) as originally indicated, and our review of the relevant revisions to the Site Plan, as amended through 5-24-2022 ( Revision No. 4), we take no exception to the issuance of a Septic Installation Permit since 1) the Zoning Board has acted favorably on this matter, and the septic design calculations and the plan for the proposed septic systems are now accurate and acceptable.**
7. Applicant shall submit a Tree Removal Application with the appropriate supporting documents as required herein and as required by the Borough's 'Trees' ordinance.
8. Applicant shall provide an acceptable agreement/letter from the Alpine Country Club for the construction of drainage improvements on property thereof, which shall address the need of the Borough to continue to discharge storm runoff from Miles Street into the collection system on the property of Alpine Country Club.

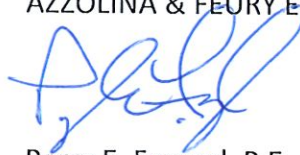
January 4, 2022  
UPDATED June 9, 2022

Page 7  
Borough of Alpine  
Ms. Nancy Wehmann, Secretary to the Zoning Board of Adjustment  
Re: Lucacel Septic Systems/79 Miles Street  
A & F File No. ALP-1414

As always, please do not hesitate to contact us if you have any questions regarding this matter.

Very truly yours,

AZZOLINA & FEURY ENGINEERING, INC.



Perry E. Frenzel, P.E., P.P.

cc: Florin Lucacel, Owner/Applicant  
Matthew G. Capizzi, Esq.  
Brian Frugis, Construction Official/Zoning Officer  
Hubschman Engineering  
Alpine Environmental Commission