From: Nathan Randall
Sent: Wednesday, November 01, 2017 1:17 PM
To: Kristen Walentisch; Robert Kerns
Subject: FW: Comments: 3832 & 3834 Seminary Road-Karig Estates

From: Dave Cavanaugh [mailto:dacava1@yahoo.com]
Sent: Wednesday, November 01, 2017 12:40 PM
To: Karl Moritz; Maya Contreras; Nathan Randall
Cc: allisonsilberberg@alexandriava.gov; Justin Wilson
Subject: Comments: 3832 & 3834 Seminary Road-Karig Estates

3832 & 3834 Seminary Road- Karig Estates
DSUP2016-00025-Preliminary Review (Completeness 3)
Applicant is requesting to subdivide the site into 4 lots and to add a new street
Project Managers: Nathan Randall & Maya Contreras

Comment: I ask the proposed subdivision plan be amended. The proposed new residence on Lot 4 should be moved away (or deleted) from the edge of the ravine to avoid increased drainage of water into the ravine and protect the structure of the unstable soils in that area. The proposed residence is on the precipice of the ravine creating additional runoff and erosion in the back of Lot 4. Viewing the erosion in the nature area behind Beth El shows the likelihood of further erosion and loss of soils into the ravine.

Although there is a 50' radius protecting the wetland seep at the bottom of the ravine, it would be a terrible mistake to construct a sewer through the middle. This will have unforeseen consequences on the wetland area and create additional water erosion on adjacent properties. The sewer line should be relocated so as not to disturb existing adjacent property owners.

The development is in a mostly undisturbed natural drainage into Strawberry Run. The scale of development and the technical geotechnical studies will increase runoff into the drainage area and ravine. The technical conclusions that the plan will reduce water runoff defies common sense and should be subject to an unbiased technical peer review.

Thank you

November 2, 2017

Memorandum

To: The Mayor of the City of Alexandria
City Council Members of the City of Alexandria
The City of Alexandria's Planning Commission
The Chair and Members of the City of Alexandria's Planning Commission
The City of Alexandria's Director of Planning and Zoning

From: Yvonnie "Bonnie" Petry
City of Alexandria Resident

Subject: Input Urging City Officials to Reject Development Site Plan #2017-0022 and Protect the Sensitive and High Quality Natural Area on the 3832 and 3834 Seminary Road Property

I am writing to urge that you not allow the plan for the proposed four-house development project at 3832 and 3834 Seminary Road (Development Site Plan #2017-0022) to proceed without significant modifications to protect the site's natural resources, the real interests of residents located downhill/downstream from the project, and the interest of future residents at that property.

While this plan, if allowed to proceed, promises numerous negative impacts on the adjacent neighbors and future owners of homes unwisely placed on fill on top of Marine Clay, **putting a halt to this current plan is of interest to ALL Alexandrians because this site is an extremely high quality intact natural area in a city that has few of them left.**

This area is a sensitive natural area that includes the spring underlying Seminary Ridge's gravely terrace and the intermittent stream that runs through the ravine form the headwaters of Strawberry Run. The area has an outstanding mix of mature native trees and vegetation.

To those who may not have been following this project closely, the proposed development, if allowed to proceed, would place four large (5900 to 6500 sq. ft.) single family homes on this sensitive property, which currently has one home. In order to carry out their current plan, the developers would need to:

- Clear-cut an intact natural area with significant mature native tree canopy
- Run a sewer line through a sensitive wetland (the spring that feeds Strawberry Run and the ravine's intermittent streambed
- Dig a wide swath through an adjacent neighbor's yard to run the sewer line
- Pile fill dirt in this intermittent streambed on top of the bed's Arell/Marine Clay
- And then place homes on top of fill placed on unstable Marine Clay

At this point, it is distressing that the city seems poised to allow this plan to proceed despite its many downsides. The plan is entirely incongruent with the city's tree canopy goals, natural resource management goals, open space master plan goals (one of the goals is to preserve stream valleys), and stormwater goals. The geological/ slope stability issues with building on the site have also been greatly minimized in city staff's report.

This issue is of interest to all Alexandrians because the preservation of this spring/headwaters area (or its destruction) greatly impacts the water quality of Strawberry Run and ultimately the Potomac River at a time that our city is failing to meet its water quality goals year after year.

This interest is reflected in Goal Number 4 of the city's own council-approved Open Space Master Plan, which reads "Protect and expand stream valleys and other environmentally sensitive areas." Yet the city is poised to

allow a project to go forward that will to run a 15'-wide clear-cut path and several feet deep of ditching not only through the city's supposed "protective" stream buffer - destroying this entire sensitive natural feature.

And it is of interest to all Alexandrians because it completely disregards our city's own tree canopy goal – a goal designed to protect our city's ecological health and livability (and by extension city residents' health).

With regards to the issues impacting the property's neighbors, the clear cutting of unstable slopes and subsequent fill work promises nothing but entirely predictable runoff and erosion problems for those other city residents unlucky enough to live downstream.

Early in this process, a number of the neighbors consulted with the same geologist the city hired to produce its recent (2015) and comprehensive (!) "Geologic Atlas of the City of Alexandria, Virginia and Vicinity." This expert geologist has identified a number very concerning problems with this proposed project's impacts on slope stability. Yet his report appears to have gained no traction with Planning and Zoning Staff, whom neglected to even consult the city's own geologic atlas in its review of this plan.

It is confounding that city staff would not take more interest in the geologic issues relevant to this project given the long-time Marine Clay/slope issues in the neighborhood South of Seminary Road and North of Duke Street. In talking to neighbors living on that slope, I have heard the horror stories of the cost and scope of mitigation work required to address structural issues caused by the Marine Clay there. In some cases, mitigation work costs have run in the tens of thousands of dollars, with at least one bill even reaching $100,000.

Recommendations

With regards to the path forward, I join my fellow residents in asking that this project be halted while it still can be and not allowed to go through in its current state.

Alexandria residents deeply concerned about this project have offered a number of constructive suggestions as to the path forward and I ask that this project be remanded back to city staff for **meaningful** adjustments.

One potentially helpful adjustment would be to limit the project to a maximum of three homes. Another would be to move the fourth home significantly closer to Seminary Road.

These adjustments to the homes' placement, however, are only important if they can allow all the homes to be built to tie into the city's sewer system on Seminary Road.

To be clear, I am urging, in the strongest terms possible, that the city not allow the clear-cutting and destruction of the ravine (and by extension, the spring and intermittent stream). Adjustments to housing placement only have meaning if they preserve the ravine where the highest quality mature trees and sensitive wetland exist and prevent the placement of a sewer line in that ravine.

Finally, I can see one other option here, and it deserves full consideration – you, as city officials, could place this project on hold and work in a sincere manner to reach out to other potential buyers of the property (individuals or philanthropic/conservation organizations) to try and broker a deal to preserve this sensitive and high quality natural area.

I am only asking that you, as city officials, abide by your own ecological plans and strategic goals. Your actions will make it abundantly clear as to whether you really do care about the environment, existing residents, and our city's livability or whether your support for the environment only entails lip service.

Sincerely,

Yvonnie "Bonnie" Petry

From: Dave Cavanaugh via Call.Click.Connect. <CallClickConnect@alexandriava.gov>
Sent: Sunday, November 05, 2017 10:13 AM
To: CCC PZ PlanComm
Subject: Call.Click.Connect. #132605: Planning Commission Inquiries, Dockets at 3834 SEMINARY RD Hearing Schedule November 9, 2017Subdi
Attachments: map.png

Dear ***Call.Click.Connect.*** User

A request was just created using ***Call.Click.Connect.*** The request ID is 132605.

Request Details:

This is a "public" request. Information may be provided to anyone who requests it.

- Name: Dave Cavanaugh
- Approximate Address: 3834 SEMINARY RD (See map below)
- Phone Number: 7034613310
- Email: dacava1@yahoo.com
- Service Type: Planning Commission Inquiries, Dockets
- Request Description: Hearing Schedule November 9, 2017
  Subdivision Plan
  DSUP2016-00025-Preliminary Review (Completeness 3)
  Applicant is requesting to subdivide the site into 4 lots and to add a new street
  Project Managers: Nathan Randall & Maya Contreras

  Comment: I ask the proposed subdivision plan be amended to delete Lot#4. Lot#4 as currently designed and laid out is the singularly most damaging element in the subdivision plan. The recent revision to the site plan and subdivision plan is a desperate attempt to mollify City officials to approve the subdivision plan. The lot is on a high point overlooking the swale and ravine. Soil disturbance caused by construction, steep slopes and impervious surfaces will increase water runoff from Lot#4. This will increase the area of saturated soils within the wetland and buffer area and increase the potential of storm water damage to the properties along Colonel Ellis.

  Comment: In lieu of eliminating Lot#4, the proposed residence should be moved back from the crest of the hill. Moving the proposed residence 12.5 feet does not solve the problem of controlling runoff and erosion into the ravine. The house is immediately adjacent to the Line of Construction (LOC) with no setback from the steep slopes. In addition, the existing storm drain in the swale collects water from the Virginia Theological Seminary and the existing home and adjacent properties along St. Stephens and undergrounds it into the seep/wetland.

  To reduce water runoff from Lot#4 into the wetland seep area, the proposed residence on Lot#4 should be moved further back from the ravine. Appropriately sized infiltration trenches or other Best Management Practices (BMPs) should be incorporated into the lot plan within the LOC to slow water runoff into the ravine and swale. Reducing the storm water drainage off Lot#4 will minimize erosion off the hill. It will also minimize expansion of the wetland/seep area, and saturated soils on adjacent Colonel Ellis properties, and hopefully maintain an acceptable level of water quality into the Strawberry Run watershed.

  Comment: Like Lots #2 and #3, the applicant should be required to install permeable surfaces on driveways and sidewalks on Lot#4. This would demonstrate a good faith effort to achieve LEED Certification.

  Comment: Flipping the house around on the lot and placing the garage close to the street is an improvement. However, there is no filtration trench to slow runoff from the house and deck/porch into the swale. This will increase runoff into the wetland further saturating soils in the ravine and adjacent properties along Colonel Ellis. I ask that the Subdivision Plan be amended to include an infiltration trench to control run off from the elevated deck/patio on the west side of the west side of the house. The trench would help slow storm water runoff from the

home and patio draining into the swale.

Comment: Although there is a 50’ radius protecting the wetland seep at the bottom of the ravine, it would be a terrible mistake to construct a sewer anywhere near the seep or the buffer area. This will have unforeseen consequences on the wetland area, impact water quality, increase the area of saturated soils and increase the potential for further erosion on adjacent properties. Other feasible locations should be explored that do not threaten the wetland and unreasonably disrupt existing adjacent property owners.

Comment: The development is in a mostly undisturbed natural drainage into Strawberry Run. The scale of construction and the large size of the proposed homes will increase runoff into the drainage area and ravine. The technical conclusions in the Site Plan that the engineered BMP’s will reduce water runoff defies common sense and should be subject to further analysis and peer review.
Comment: On page 9 there is a comparison of the Previously Approved Lot#4 Layout and the New Lot#4 Layout. The previously approved house square footage was 6,508 GSF. The Proposed New Lot#4 Layout proposes a substantial increase to 9,015 square feet. Reducing the size and footprint of the proposed residence to the average size of the homes on lots 1-3 may provide additional distance or setback from the edge of the hill and space for infiltration trenches or other mitigating water and erosion control features.

- Attachment: IMG_3626.JPG
- Expected Response Date: Friday, November 10

From: Cynthia Evans via Call.Click.Connect. <CallClickConnect@alexandriava.gov>
Sent: Monday, November 06, 2017 5:02 PM
To: CCC PZ Dev
Subject: Call.Click.Connect. #132684: Development Project Inquiries Our property at 1211 Saint Stephens Road

Dear ***Call.Click.Connect.*** User

A request was just created using ***Call.Click.Connect.*** The request ID is 132684.

Request Details:

This is a "public" request. Information may be provided to anyone who requests it.

- Name: Cynthia Evans
- Approximate Address: No Address Specified
- Phone Number: 7033703113
- Email: cynthiaevans52@gmail.com
- Service Type: Development Project Inquiries
- Request Description: Our property at 1211 Saint Stephens Road abuts the ravine which makes up a good part of the property at 3832-3834 Seminary Road (aka Kerig Estates).

  When we purchased our home in 1997, we were informed by our realtor as well as the seller's realtor that the property to the back of ours was unbuildable and would be wooded in perpetuity. Sadly, that now appears to have been untrue. The woods, wetlands, and ravine that we love is in danger of being lost at this point. There are old growth trees there from the 1860s. There is an intermittent stream and an underground spring and stream on our property which feed into the headwaters of Strawberry Run and on into the Potomac River. Anyone with even a rudimentary understanding of water quality knows that wetlands are nature's filters. Destroying any wetland area has repercussions beyond the immediate property. The proposed development cannot help but impact the wetland area. The developer plans to run the sewer line from the huge new homes down through the wetland. This is unacceptable.

  The woods are also home to wildlife that those of us who live here are lucky enough to enjoy. The balance of nature is maintained as long as the woods remain. Rodents are kept under control by predators such as some we have here. It seems that the entire city benefits directly from maintaining tree canopy, maintaining healthy trees whose roots help to stabilize the highly unstable marine clay slope (is the developer planning to go down to bedrock?), and maintaining a greenway for our wild creatures.

  We moved here because we believed that Alexandria was dedicated to the preservation of green space. We are happy to pay our property taxes which go to sustain parks and wild spaces throughout the city. Privately, we used to clear invasives from the ravine behind our home for the elderly woman who lived on the property that is now slated for destruction. Should the city see its way clear to purchase that property outright in order to preserve it, we would be more than happy to volunteer as much time as necessary to help save that treasure for everyone in Alexandria.

  I hope P&Z will reverse its previous approval in order to stop the devastation that this development will cause. This a a unique piece of property and an opportunity for the city. The city would be better served by purchasing the property itself in order to conserve its wildness.

  Very truly yours,
  Cynthia B. Evans

From: Nathan Randall
Sent: Monday, November 06, 2017 4:12 PM
To: Kristen Walentisch
Subject: FW: Rational Stewardship
Attachments: Seminary Approval 10.docx

From: Karl Moritz
Sent: Monday, November 06, 2017 12:46 PM
To: Robert Kerns; Maya Contreras; Nathan Randall
Subject: FW: Rational Stewardship

Please share with TES as appropriate.
Thank you!

Karl W. Moritz
Planning Director | City of Alexandria
Room 2100 | 301 King Street | Alexandria, VA 22314
Desk: 703-746-3804 | Cell: 571-329-3052

From: pat tokarz [mailto:jptokarz@comcast.net]
Sent: Monday, November 06, 2017 12:45 PM
To: Karl Moritz <Karl.Moritz@alexandriava.gov>; Kdbec@aol.com; Burns Kathy; john.lytle@morganstanley.com; Lisa Ring <lisaaring@aol.com>; Nrjennings@comcast.net; usna62@verizon.net; alexacordelia@gmail.com; Andrew Macdonald <ahmacdonald@mac.com>; Ann and Steve Reed <AReed@AnneReedConsulting.com>; ann ellis <annellis51@gmail.com>; Bertha Braddock <Berthabraddock.bb@gmail.com>; 'Betsy Lohmann' <Betsy4005@comcast.net>; Bill Dickinson , William Dickinson <bill.c.dickinson@gmail.com>; Bill Stiers <billstiers@earthlink.net>; bonnie petry <bonnie.petry@outlook.com>; 'Brenda Wilson' <BrendaWilson09@gmail.com>; Brendan Otoole <jbrendanotoole@gmail.com>; Bruce Mccarthy <Mccarthy3912@aol.com>; Cappie Stiers <mcstiers@aol.com>; Carter Flemming <Carterflemming@gmail.com>; Charles Evans <charlese33@gmail.com>; Chris Connell <cvconnell@gmail.com>; Christina Lytle <tinalytle@aol.com>; Christine Michaelis <christinemichaelis@comcast.net>; Cill Dara <cilldara3030@gmail.com>; cynthiaevans52@gmail.com; dacava1@yahoo.com; Dave Levy <bentbiking@yahoo.com>; David Speck <dgspeck@gmail.com>; debora h aspagnol <deborahaspagnoli@gmail.com>; doctor Stoll <krkstoll@yahoo.com>; Eduardo Han <eduhan@yahoo.com>; 'Eileen Wallace' <egwallace@verizon.net>; Elizabeth Wright <wright22304@gmail.com>; Goree, Paul F - WASHINGTON DC <paul_goreeiii@ml.com>; irishoat@aol.com; Janice Lachance <Janice@JaniceLachance.com>; Jeremy.Flachs@Flachslaw.com; jlepanto@bostonpacific.com; 'Joan Otoole' <joandotoole@gmail.com>; John and Nancy Scruggs <nancywscruggs@gmail.com>; John Scruggs <Jscruggs3929@gmail.com>; jptokarz@comcast.net; kirk.beckhorn@squirepb.com; Leslie Pierre <lesliepierre@aol.com>; Lonnie Rich <lcrich@rrbmdk.com>; Loren Needles <Loren@lorenneedles.com>; Lynette Goree <lgoree6@gmail.com>; Marianne and Buck Coates <m-b-coates@comcast.net>; Nancy Connell <neconnell@gmail.com>; Nepenthe; Nina Schwartz <artstop@impulsegraphics.com>; Patty collette <Pattycollette@me.com>; Rebecca Hierholzer at Newport villiage. <Magicbeca@aol.com>; Robert McLaughlin <robertmclaughlin2011@gmail.com>; Shirley Downs <shirleydowns@verizon.net>; Steve Reed <sreed@steptoe.com>; Steven <stevenakey@hotmail.com>; Suzanne McLaughlin <smclaughlin8@gmail.com>; Tokarz Lynn <lhtokarz@gmail.com>; WALTER LOHMAN <wlohmann@kirkland.com>
Cc: 'Mike Ibrahim' <mibrahim@alliancerealestatedevelopment.com>; Allison Silberberg

<allison.silberberg@alexandriava.gov>; 'juston.wilson@alexandriava.gov.'
Subject: Rational Stewardship

KARL,
Thank you for your quick reply and your attention to this important matter.

Two of the twelve contiguous neighbors prefer the first house to be set back 104 feet for aesthetic or historic reasons.

The rest of the neighbors, Beth El, scientists, and a large number of concerned citizens, who have been vigorously sharing their concerns and scientific findings with you and your staff over the past twelve months, strongly feel moving all four houses closer to Seminary road would be a significant improvement.
An independent geologist and a local soil and water engineer have both studied this site plan in depth, and have repeatedly said moving all four houses as far away from the steepest slope as possible would be the safer, more prudent course. City staff recognizes that moving the fourth house is beneficial for all the same reasons that moving all four houses would be even better (see attached).. The builder repeated said that he would prefer moving all four houses, if it did not cause more unreasonable delay to this project. I think if the Commissioners had time to realize that all the players (other than two neighbors) were in agreement as to the major benefits of moving the four houses closer to Seminary road and connecting the sanitary sewer to the Seminary road sewer , and that the builder and staff had already studied preliminary plans to accomplish this, they would have found a way to allow this process to proceed more rapidly.

Staff has already approved the legality of moving the first house closer to Seminary road by exploring various formulas to determine the appropriate blockface setbacks. (see attached).
The attached report documents several shortcomings of conducting business at such a late hour i.e. Forgetting to consider the name of the new road, failing to submit a required plan for subdivision (which should have been available for study and public comment prior to the meeting), and asking the builder to start all over with a new site plan submission for changes that could have been submitted as amendments to the approved site plan (as the subsequent submission of an amendment to move and re-configure the fourth house was done) .
We understand that at 12:30 at night the Commission was unable to give this issue the thought and consideration that it deserved. It will be an unnecessary disgrace if the citizens of Alexandria , the builder, and the city staff were denied an opportunity to develop an improved outcome because of the late hour of the meeting and the need to get the commissioners home.

I ask again. If the Mayor were successful and Mike Ibraham could quickly submit an amendment showing the planned movement and plans to connect the sanitary sewer to the Seminary road sewer (thus protecting more trees and the wetlands), how quickly could your staff render a decision ?
The benefits to the environment and the improvements in slope stability and decreased water runoff warrant all of us to do the best we can to improve this development as much as possible. If you and Mike could work together in a reasonable time frame, the citizens of Alexandria would greatly benefit.

Thank you for your help in this matter.

Pat Tokarz

The strongest argument is the property is unsuitable for development as proposed, is important to the local environment (habitat- trees- drainage), and construction would increase storm water runoff and erosion on adjacent properties.
The proposed sewer line that will run through the protected
Wetland/forested spring should be abandoned in favor of a lift station that pumps the sewage to the sanitary main on Seminary Road.
The current plan for sewage disposal is to run a line through the protected forested spring/wetland area. This will destroy the feature: the trenching activity will irreparably destroy the ground surface and soil structure, while the trench itself

(presumably gravel filled) will act as a drainage tile and dewater the wetland. Of necessity, the trench will be cut into the underlying clay, which acts as a confining unit in the vicinity of the spring. All of this could be avoided by instead installing a lift station, which is a reliable and widely used method of dealing with sewage lines in areas of inconvenient topography.

Moving all of the lots away from the top of the ravine (Lot 4) and closer to Seminary Road would decrease soil disturbance, better protect the natural drainage into the ravine, reduce the length of the proposed road, and reduce the cost of footings and retaining walls to support the construction.

Clustering the houses closer to Seminary Road would also decrease tree loss, reduce soil disturbance and the potential for erosion and slope failure. Adopting this modification as an amendment to the site plan also provides a visual buffer and protects wildlife habitat in the Strawberry Run watershed behind the homes on St. Stephens, Colonel Ellis and behind the Beth El Synagogue nature garden.

While the modification of moving the fourth house 12 feet will be a small improvement, the proposed construction will still cause irreparable harm to the ravine, increase storm water runoff onto adjacent properties causing erosion and potentially undermine and cause slope failure in the disturbed construction areas.

The proposed BMPs are inadequate. Even assuming they may initially work, the infiltration trenches and grass channels will fill with sediment, be expensive to maintain, become a breeding ground for insects, and storm water drainage will gradually get worse.

We request the city work with a local water and soil engineer to develop a more realistic plan.

We feel all the stakeholders can share the goal of having an even better development to bring to market than the current plan. One that addresses the realistic concerns of the city, the neighbors, the owners, the developer , and the environmentally minded citizens (who spent a lot of time, effort and tax money approving the realistic goals of this being an " eco city "with 40 % tree canopy and protections of natural waterways ,wetlands, wildlife and topography by private landowners).
It seems to us that the focus needs to be on environmentally constructive ways for the city, the developer and concerned citizens to act with responsible stewardship of the land and the interests of the community.

Pat

From: Karl Moritz [mailto:Karl.Moritz@alexandriava.gov]
Sent: Monday, November 06, 2017 9:38 AM
To: pat tokarz
Cc: Mike Ibrahim; Allison Silberberg
Subject: RE: Karig Estates

Hello,

Thank you for your thoughtful note; it is much appreciated. The applicant has submitted an amendment to the approved site plan which moves the fourth home closer to Seminary Road. The Planning Commission will be considering this proposed amendment at its November 9 hearing. The staff report on this proposed amendment, which recommends approval, is located here.

You may recall testimony at the hearing from the adjacent neighbor to the west, who opposed moving the first house closer to Seminary. The applicant's proposal achieves both the objective of moving the fourth house closer and leaving the first house where it is in the approved plan.

Thanks again,

Karl

Karl W. Moritz
Planning Director | City of Alexandria
Room 2100 | 301 King Street | Alexandria, VA 22314
Desk: 703-746-3804 | Cell: 571-329-3052

From: pat tokarz [mailto:jptokarz@comcast.net]
Sent: Saturday, November 04, 2017 3:30 PM
To: Karl Moritz <Karl.Moritz@alexandriava.gov>
Cc: Mike Ibrahim <mibrahim@alliancerealestatedevelopment.com>; Allison Silberberg <allison.silberberg@alexandriava.gov>
Subject: Karig Estates

Dear Mr. Moritz
Thank you for your service to the city.
I have asked the Mayor to ask the Pand Z Commission to re-consider their decision late at night on Oct. 3/4th that the movement of the four houses closer to Seminary road could not be considered as an amendment to the site plan as passed, as were the missing subdivision plan, the forgotten motion to name a street and the plan to move and re-configure the fourth house.
If she were successful and Mike Ibraham could quickly submit an amendment showing the planned movement and plans to connect the sanitary sewer to the Seminary road sewer (thus protecting more trees and the wetlands), how quickly could your staff render a decision ?
The benefits to the environment and the improvements in slope stability and decreased water runoff warrant all of us to do the best we can to improve this development as much as possible. If you and Mike could work together in a reasonable time frame, the citizens of Alexandria would greatly benefit.
Thank you for your help in this matter.

Pat Tokarz,
3937 Col. Ellis Ave.
Alexandria.

Seminary Approval 10/17

A. A. Recent Approval Background: On October 3, 2017, Planning Commission approved Development Site Plan #2016-0025 to construct four new single-family dwellings at the Karig Estates project site. The staff report for that approval, which can be found in Attachment #3 at the end of this report, also included a request for and discussion of Street Name Case #2017-0001 to name the new public street associated with the project. That request was inadvertently not mentioned in the approval motion at last month's Commission meeting and was deemed to be not approved. Staff has therefore included the Street Name Case request again in this staff report as a technical matter. The Commission was also informed during the October hearing that a separate subdivision request was required for the subdivision of the project site into four lots in connection with DSP#2016-0025. As a Development Site Plan request only regularly heard by the Planning Commission, the project was deemed not

eligible for the provisions of Section 11-1704(B) which exempts “Council-approved development” from the need for separate subdivision approval. No separate subdivision application had been brought forward to the Commission nor had one been advertised pursuant to regular public noticing requirements. In response, the applicant requested Commission action that evening on the DSP request and agreed to submit a separate subdivision application within 30 days for separate consideration at a future hearing. Consistent with this approach, the Commission amended Condition #25 to require the submission of a subdivision application within 30 days. The applicant submitted a subdivision application and plat three days after the hearing, on October 6, 2017. DSP#2017-0022 SUB#2017-0006 / SNC#2017-0001 Karig Estates 3832-3834 Seminary Road 4

B. Prior to the October 3rd public hearing, several adjoining property owners, including representatives from Beth-El Hebrew Congregation, had contacted staff to ask questions and express a variety of concerns about the proposal. Prominent among

those concerns was the proximity of the proposed dwellings, particularly the one on Lot #4, to the topographical feature on the property that has been referred to as a swale or ravine. Some neighbors advocated, both prior to and during the hearing, for a shift in the location of all four dwellings to the north, closer to Seminary Road, in order to limit impacts to the swale.

C. Another neighbor provided written comments expressing opposition to any shifting of the dwellings closer to Seminary Road. Such a shift would only be possible if Planning & Zoning staff designated an alternative blockface along Seminary Road to be used for the purposes of determining the front yard setback for Lot #1.

D. As noted in the prior staff report for DSP#2016-0025, Planning & Zoning staff was willing to analyze whether an alternative blockface along Seminary Road would be equally appropriate in this instance compared to the blockface used for the front setback in the submitted site plan. Staff stipulated that, if such an alternative blockface determination could be made, the applicant would need to provide

a revised site plan submission, which would defer the project from the October docket. However, the applicant was willing to consider site layout changes only if the project was not deferred from the October docket. Given the change was also too significant to be addressed through condition language and resolved through the final site plan process, staff could not recommend any changes to the Planning Commission regarding the site layout at the October public hearing. Ultimately, approval of DSP#2016-0025 at the October public hearing did not include any changes to the location of the proposed dwellings.

E. In the weeks following Commission approval of DSP#2016-0025, the applicant has reconsidered site layout options for the project in response to both neighborhood and staff feedback. The new proposal, which requires approval of a DSP amendment and a new site plan modification request, would change the location of the proposed dwelling on Lot #4 only. The new proposal is described in detail in Section III of this report.

F. B. Appeal On October 18, 2017, representatives of Beth-El Hebrew Congregation filed an appeal of the Planning Commission's approval of DSP#2016-0025 to City Council. Pursuant to Section 11- 409(C) of the Zoning Ordinance, any group of 25 residents/property owners in the City or any owner of property located within 1,000 feet of the project site may file an appeal and must do so within 15 days of the Planning Commission decision. DSP#2017-0022 SUB#2017-0006 / SNC#2017-0001 Karig Estates 3832-3834 Seminary Road 5 C.

G. Site Context General Information

H. The project site comprises two lots of record: 3832 and 3834 Seminary Road. The 3832 Seminary Road property measures 42,776 square feet (0.98 acres) and is the smaller and narrower of the two lots. An unimproved lot, it has been under the same ownership as the 3834 Seminary Road property for decades. The property at 3834 Seminary Road is the larger of the two properties at the project site at 93,422 square feet (2.15 acres) and is improved with a two-story single-family dwelling. The total project site area is 136,198 square feet (3.13 acres). The site

is surrounded by institutional and residential uses. The Virginia Theological Seminary (VTS) and the synagogue of Beth El Hebrew Congregation are located immediately to the north and east of the site, respectively. Single-family dwellings are located to the south and west, including along Saint Stephens Road and Colonel Ellis Avenue. The upper school campus of Saint Stephen's / Saint Agnes School is located a short distance to the southwest from the site. Topographic and Environmental Features The project site is heavily wooded and contains notable topographical variations. The northeastern, north-central, and central portions of the property slope gently downward to the west and south.

I. As explained in greater detail in the previous staff report for this project, a roughly L-shaped area located along the western and southern portions of the site contains significant grade changes. The area, which has been referred to as a swale or ravine, begins near the northern edge of the property as terrain that is approximately four to six feet lower than surrounding grade.

J. The grade difference increases as the swale continues south such that, at its lowest point, the swale is approximately 25 feet lower than surrounding grade and is defined by relatively steep sides. The swale is not a Resource Protection Area (RPA) or other defined environmental feature and is not subject to protection under current regulations.

K.

L. Near the southern edge of the project site, within the swale area, environmental features known as a seep point and basin have been identified. The seep is a small point in the earth's surface from which groundwater naturally springs upward and the basin is an immediately-adjacent area on the ground where water from the seep may collect. The amount of water on the ground coming from the seep was small and shallow during a site visit early this year, covered in many places by dead leaves. The seep point, basin and adjacent areas meet the definition of an "isolated wetland." The isolated wetland has been depicted on the preliminary site plan and is subject to regulations described in the staff report for DSP#2016-0025. Subdivision History The two

existing properties at the project site were created individually, rather than as part of a planned subdivision in 1938 (3834 Seminary) and 1940 (3832 Seminary) prior to the annexation of this area by the City of Alexandria from Fairfax County in 1952. The plat associated with the creation of 3834 Seminary Road can be found in Graphic #1 on the following page. Aside from the dedication of land to the City in the 1950s for street widening purposes, the boundaries of each property at the project site have remained unchanged since their creation over 75 years ago.

A. General Zoning Regulations The project site is zoned R-20 / Single Family. Pursuant to Section 3-102 of the Zoning Ordinance, single-family residential uses are allowed in R-20 without the need of a Special Use Permit. As described in the previous staff report for the project, the 40-foot front setback listed in the R-20 zone (Section 3-106(A)(1)) has been applied as the front setback requirement for the proposed dwelling on Lot #4, which is the focus of the DSP amendment request. Sections 11-403 and 11-404 require Development Site Plan (DSP) approval for

the contemporaneous development of three or more single-family dwellings, as is the case for this project. Section 11-415 stipulates that changes to an approved DSP not deemed to be minor must be processed as a DSP amendment and reviewed by the Planning Commission. Section 11-416 provides for the potential modification of certain minimum zoning requirements as part of the DSP approval, including the 40-foot front yard setback requirement for Lot #4 that is requested in this application. Several zoning elements of the Lot #4 revisions, Lot #4 as previously approved, and Lots #1-3, which have remained unchanged with regard to zoning, can be found in the table on the following page. B. Subdivision Standards Several sections of the Zoning Ordinance contain requirements and standards for subdivision review. Sections 11-1706 and 11-1709 of the Zoning Ordinance contain several technical subdivision requirements and Section 11-1710(D) stipulates a general requirement that all lots meet zone requirements. Section 11-1710(B) requires that every subdivided lot be “of substantially the same character as to suitability for

residential use and structures, lot areas, orientation, street frontage, alignment to streets and restrictions as other land in the subdivision, particularly with respect to similarly situated lots within the adjoining portions of the original subdivision." Section 11-1710(B) further explains that the lots within a given subdivision proposal should be compared, for the purpose of determining neighborhood character, to: "… the established neighborhood created by the original subdivision, evidence of which may be shown by: (1) Subdivision plat documents, including amendments to the subdivision over time, as well as the development that has occurred within the subdivision; and (2) land in the same general location and zone as the original subdivision with the same features so as to be essentially similar to the original subdivision area." DSP#2017-0022 SUB#2017-0006 / SNC#2017-0001 Karig Estates 3832-3834 Seminary Road 11 C. Zoning Tabulations Site Area:

B.

C. 111,204 SF (new lots) + 24,944 SF (street dedication) = 136,198 SF total (3.13 acres) Zone: R-20 / Single-

family zone Current Use: One single-family dwelling Proposed Use: Four single-family dwellings on four new lots Permitted / Required Previously-Approved Proposed Lot 1 Lot 2 Lot 3 Lot 4 Lot 4 Lot Size 20,000 SF min 29,797 SF 22,840 SF 22,558 SF 36,059 SF 36,059 SF Lot Width 100 feet min (non-corner) N/A 126’ 121’ 135’ 135’ 120 feet min (corner) 208’ N/A N/A N/A N/A 167’ Lot Frontage 75 feet min 210’ 126’ 101’ 75’ 75’ 154’ FAR 0.25 0.21 0.25 0.25 0.17 0.25 Height 35 feet 35’ 35’ 35’ 35’ 35’ Front Yard 104.1 feet (Lot 1 - Seminary Rd) 104.1’ 26.2’* 25.9’* 40’ 27.5’** 40 feet (all others) 40’ Side Yards 12 feet min / 1:2 ratio = 17.5 feet 61.2’ 20.8’ 36’ 21.7’ 30’ 18.7’ 36.5’ 17.7’ 36.5’ 18’ 115’ 109’ Rear Yard 12 feet min / 1:1 ratio = 35 feet N/A 69’ 66.2’ 89.2’ 101’ Tree Canopy 25% of each lot 63.7% 44% 39.9% 39.5% 41% Parking 2 spaces / unit Three garage spaces / unit plus driveway parking *Modification previously-approved ** Modification currently requested DSP#2017-0022 SUB#2017-0006 / SNC#2017-0001 Karig Estates 3832-3834 Seminary Road 12 D.

D.

E. Additional Regulations Several additional regulations regarding wetlands, stormwater, soil erosion, and a geotechnical report are described in the staff report for DSP#2016-0025 in Attachment #3.

F. Section 5-2-64 of the City Code grants authority to the Planning Commission to approve new public street names. In new development projects, the applicant typically proposes new public street names, which are then reviewed for factors such as addressing and emergency response considerations. The City agencies involved in the vetting process include the Fire Department, the Police Department, the Department of Emergency Communications, GIS, Archaeology, Code Administration, and Planning & Zoning. Once proposed street names are vetted, they are presented to the Planning Commission for public comment and an official vote. V. STAFF ANALYSIS Staff recommends approval of the Development Site Plan amendment, subdivision and street name case requests associated with the Karig Estates project. The subdivision and street name cases do not involve aspects of the previous approval that have changed, but are required here

primarily for procedural and administrative reasons. The DSP amendment to revise the location of the dwelling proposed for Lot #4 represents a positive change to the proposal

A. Development Site Plan Amendment Lot #4 Dwelling Placement The three primary revisions to Lot #4 proposed in this amendment - flipping the attached garage to the other side of the dwelling, changing the driveway location and shape, and moving the dwelling 12.5 feet closer to the end of the new public street – achieve several outcomes. Given the specific location and shape of the swale, flipping the dwelling and placing the garage entrance on the east side of the building eliminates the need for the winding driveway across the front yard of Lot #4. Placing the garage entrance and driveway area on the eastern side of the dwelling, where land is comparatively less steep, eliminates the need for the 13-foot tall retaining wall that would have been necessary under the previously-approved plan. The relocation of the driveway necessarily reduces its size and amount of paved area on the lot. Staff also prefers the reduced prominence of the driveway in the current

proposal that is achieved by moving it from the front yard to the side yard of the property. The garage entrance and driveway changes allow for the third, and perhaps most significant, change of moving the dwelling 12.5 feet closer to the end of the new public street. The change, which would not have been possible previously given the driveway location, brings the dwelling farther out of the L-shaped swale at the site. Staff discussed in the previous staff report for the project that the swale does not meet any definitions of an environmental feature and is not subject to regulatory protection. Nonetheless, staff supports efforts to reduce impacts on the swale, when reasonably possible, in a general effort to reduce the impact of development on the DSP#2017-0022 SUB#2017-0006 / SNC#2017-0001 Karig Estates 3832-3834 Seminary Road 13 environment as good urban planning practice. Given that the land on the northern portion of proposed Lot #4 is comparatively less steep than its central and southern portions, the proposed 12.5-foot difference in the house location would reduce impacts to the swale. In addition, the distance between the wetland buffer and the line of disturbance has increased and allows for the protection

of one additional tree to the south of the proposed dwelling compared to the previously-approved plan. The overall tree canopy proposed for the site would increase from 39.5% to 41%. Front Yard Modification Staff also supports the request for a new site plan modification for the front yard setback requirement on Lot #4 (see Graphic #3 below), a request in addition to the previously-approved modifications on Lots #2 and #3. It finds that the proposal meets the three criteria for modifications listed in Section 11-416 as described below. 1. Such modifications are necessary or desirable to good site development. The requested modification of the front yard requirement on Lot #4 from 40 to 27.5 feet is desirable in this instance because it would limit the degree of impact from the development on the swale. Although the swale is not a regulated feature, limiting the changes to the swale to the extent reasonably necessary supports good urban planning practice and good site development.

Please route this letter to the Mayor, Members of City Council, Director of Planning and Zoning, and the Chair and Members of the Planning Commission

Karig Estates Development on Geologically Unstable Hillside Puts Residents at Unacceptable Risk November 5, 2017

I strongly urge the city to reconsider its pending approval of the development project known as "Karig Estates" at 3832-3824 Seminary Road, which lies in a high landslide risk area. The current proposal to grade, fill, and squeeze four large homes into one of the last remaining natural ravines on the largest and most unstable escarpment in the city will disrupt a major hydrologic artery on a steep marine clay slope, directly above an established neighborhood that is already experiencing stormwater and slope stability issues. This is playing with fire: disturbances of the soil and natural hydrology at the crowns of marine clay slopes are a well known trigger for landslides and other ground failures that can damage or destroy buildings, property, and infrastructure, something I have personally observed in the city. Some background is in order.

From 2006 to 2008, and again from 2014 to 2016, I conducted research on the geology, hydrology, and geologic hazards in the City of Alexandria. This included compiling hundreds of geotechnical reports in the City's archive which detail subsurface conditions in nearly every neighborhood. I also walked literally every street, alley, park, and the yards of willing landowners, observing the geologic materials and processes that have acted over millennia to produce the modern landscape. The results were ultimately incorporated into the various maps, documents, and databases that comprise the online Geologic Atlas of Alexandria (www.alexandriava.gov/89974). I hope you have availed yourself of this unique resource, which among other things is intended to help planners, builders, engineers, and policy makers identify and address the geologic conditions and hazards in the City.

Among the places I visited during my research are the property known as Karig Estates and many neighboring properties. All of these places are situated on the Hospital Escarpment, a massive, oversteepened bluff as much as 200 feet high underlain by thick "marine clay" and dotted with abundant evidence of both prehistorical and modern landslides and debris flows. You can see some of this evidence yourselves, simply by driving up almost any city street that traverses the escarpment and observing the commonly rippled pavement and areas of sharply leaning trees, all of which signify an unstable hillside actively moving downhill.

The mechanics of slope failures in this terrain are well documented and will not be repeated here. A summary can be found in the delineation of landslide hazard areas on Plate 7 of the Geological Atlas and in several references therein. Suffice to say that many case studies in northern Virginia, some published by the US Geological Survey and others observed by me during my walkabouts in the city, show: 1) a strong spatial correlation between landslides and developments sited on or too close to the edges of inherently unstable marine clay slopes; and 2) landslides are commonly triggered by disruption of the natural hydrology at the tops of slopes, which changes the water pressure in the marine clay and overlying materials. This process is often amplified by hurricanes and other low-frequency but high impact precipitation events that occur with some regularity in the region.

There are many examples of this in Alexandria, where excavations, grading, and placement of structures and artificial fill at the tops of escarpments at various times during the last several decades have resulted in the failure of the slopes below. In one instance about a quarter mile from the Karig Estates site, a prominent landslide resulted from the emplacement of artificial fill along the side of a ravine similar to the one on the Karig site; the landslide persisted for the better part of a decade before it was finally remediated at considerable cost, but not before traveling hundreds of feet downslope and severely damaging more than an acre of forest and sending many tons of sediment downstream. It

was fortunate no residences or other structures were situated below. The geotechnical report available in the city archive tells the tale.

Such isolation from neighboring structures is not the case with the Karig Estates property, which is perched on the crown of a steep slope that descends to the homes along Colonel Ellis Drive, a neighborhood that already experiences problems with both unstable backyard slopes and wetness during large storms. Moreover, the development of this site as currently contemplated cannot help but severely disrupt shallow groundwater flow and an ecologically important spring, because it involves grading and emplacing a significant mass of fill within a prominent ravine, which represents a major hydrologic artery directly above the steepest section of the slope. Coupled with the conversion of some 2 to 3 acres of mature forest (which has stabilized this part of the slope for centuries) into impervious and less pervious surfaces, the development is expected to dramatically transform the hydrology of both the site and the adjacent slope below, greatly heightening the risk of destabilizing the slope and putting the subjacent landowners and their properties in jeopardy from both debris flows and damaging amounts of stormwater runoff.

I reviewed the site plan and its accompanying geotechnical report and found them woefully deficient in addressing these issues. The authors seem blissfully unaware of the geologic setting and history of landslides in the geologic terrain in which the site resides. In fact, neither the site plan nor comments provided by city staff acknowledge the potential for off-site impacts; instead, they treat this steeply-sloping site as if it exists in a geological vacuum. I assure you, it does not: geological processes do not respect property boundaries, most especially when they involve landslides and stormwater runoff moving down steep slopes. A few small infiltration basins situated in or just above nearly impermeable clay are not going to hold back the runoff from a major storm – much less that from a hurricane. It is not a question of *if* these kinds of storms will occur, the only question is, *when*? Once that question is answered, then the questions become, *what happens if the slope fails?* and *who is responsible - the developer, the city, or the neighbors who will bear the brunt of the resulting debris flows and stormwater runoff?* This question is especially concerning to adjacent landowners in light of the fact that landslides may not initiate until years or decades after the causative disturbance.

Given the well documented hazards associated with building on the Hospital Escarpment, policymakers would be well advised to consider these questions now and not after the fact, when remediating the consequences will be significantly more costly and disruptive.

This leads to a last point: it behooves the City to take a proactive approach in how it deals with the closely intertwined questions of geologically problematic terrain and open space preservation, rather than the reactive approach so apparent in the current debacle regarding the Karig Estates site, which serves no one well and works at cross purposes to the City's stated development, environmental, and quality of life goals (e.g., open space, expanded protection for ravines, Eco City, 40% tree canopy, etc.)

One small step to start bringing all of these competing goals into alignment is to steer high impact development away from geologically fragile places like the Hospital Escarpment, which, not coincidentally, contains some of the most extensive remnant tree canopy and open space in the city. As someone who has served as both staff and consultant to plan commissions, I observe that creating win-win solutions by averting problems before they occur is what planning and zoning are supposed to be all about. I welcome your questions. Yours truly,

Tony Fleming, Licensed Professional Geologist
Author, Geologic Atlas of the City of Alexandria
260-693-3257 loneswantony@cs.com

From: Pat Tokarz via Call.Click.Connect. <CallClickConnect@alexandriava.gov>
Sent: Monday, November 06, 2017 2:40 PM
To: CCC PZ PlanComm
Subject: Call.Click.Connect. #132670: Planning Commission Inquiries, Dockets The Development of Property Located at 3

Follow Up Flag: Follow up
Flag Status: Flagged

Dear ***Call.Click.Connect.*** User

A request was just created using ***Call.Click.Connect.*** The request ID is 132670.

Request Details:

This is a "public" request. Information may be provided to anyone who requests it.

- Name: Pat Tokarz
- Approximate Address: No Address Specified
- Phone Number: 5712211969
- Email: jptokarz@comcast.net
- Service Type: Planning Commission Inquiries, Dockets
- Request Description: The Development of Property Located at 3832-3834 Is Dangerous and Environmentally Undesirable

  We ask the Commission to work with the developer to approve his plan to move all four houses closer to Seminary Rd.

  We further ask the Commission to work with the developer to abandon the proposed sewer line that will run through the protected wetland/forested springs in favor of a lift station that pumps the sewage to the sanitary main on Seminary Road.

  The current plan for sewage disposal is to run a line through the protected forested spring/wetland area. This will destroy the feature: the trenching activity will irreparably destroy the ground surface and soil structure, while the trench itself (presumably gravel filled) will act as a drainage tile and dewater the wetland. Of necessity, the trench will be cut into the underlying clay, which acts as a confining unit in the vicinity of the spring. All of this could be avoided by instead installing a lift station, which is a reliable and widely used method of dealing with sewage lines in areas of inconvenient topography.

  Many homes in Seminary Ridge were built on steep slopes of unstable soil against the advice of the City's Environmental Services Director. For the past forty years, homeowners have paid dearly to correct sliding foundations, leaking basements and runoff problems that were reasonably foreseeable. These problems generally take years to develop. Current residents continue to pay the price, while the City and the developer take no responsibility.

  As a result of our experiences, we believe that the proposal for the development of four large homes on the property located at 3832-3834 is dangerous for the prospective homeowners, as well as the residents of the St. Stephens Road and the Colonel Ellis Avenue sections of our Seminary Ridge neighborhood, and inconsistent with the City's own Eco-City Charter and Environment Action Plan.

  Because the construction of the proposed homes is environmentally detrimental to our Seminary Ridge neighborhood, we have formed a coalition of concerned neighbors working in cooperation with the Beth El Hebrew Congregation and other interested stakeholders to preserve one of Alexandria's last green spaces and a

natural habitat for many species of birds, trees, and other wildlife with whom we share our neighborhood.

Collectively, we oppose approval of the site plan for the development of this property, as submitted, for several reasons.

Dangerous Soil Conditions
The proposed houses would be built on the steep slope of a ravine abutting properties on Seminary Road, Saint Stephens Road, and Colonel Ellis Ave. The project would be built on soil with a high content of Arell (Marine) clay, which has a high shrink/swell potential, making it extremely difficult to stabilize foundations. This slope has been classified by the city engineer as at the highest risk for slope failure (landslide).
A professional geologist has evaluated the proposed measures to manage stormwater as woefully inadequate to handle the greatly increased runoff caused by converting a sloping, mature forest to impervious surfaces. This will worsen the already problematic groundwater conditions for "downstream" neighbors on Colonel Ellis Avenue The proposal also minimizes existing infiltration and inflow problems with the storm sewers in this area.
As existing homeowners, we are concerned about the high retaining walls needed, and the risks of disturbing a huge volume of marine clay. Given the many problems experienced over the past three decades by homeowners of our neighborhood with structural problems caused by shifting marine clay and with the inadequacy of groundwater runoff controls, we have major reservations about the adequacy of the City's building code for addressing our many concerns.
Several developers have evaluated this property in the past and decided that the expense and risks involved made these lots essentially unbuildable. Home prices have increased, but a fluctuating housing market doesn't make this site any more reasonable or safe to develop.
Environmentally Sensitive Space
Allowing this development as proposed is not in the best interests of the citizens of Alexandria and is incongruent with Alexandria's Eco-City Charter and goals set forth in its Open Space and Natural Resources Management Plan.

The City's 2017 update to its Open Space Master Plan includes a number of goals that are relevant to our neighborhood's efforts, specifically:
• Goal 4: Protect and Expand Stream Valleys and other Environmentally Sensitive Areas (p. 5).
• Goal 15: Protect Privately Owned Open Space (p. 6).
https://www.alexandriava.gov/uploadedFiles/recreation/parks/021017x%20Alex%20OS%202017%20Implem%20Strat%20Exec%20Sum%20Reduced%20Size.pdf
As citizens, we feel that some land just should not be developed for housing. It is too valuable as a key part of the natural ecology of Alexandria. This land is not a vacant lot. It has springs that form the headwaters of Strawberry Run. It has streams and wetlands that provide food and water to a complex community of plants, insects, birds, and mammals. It is a natural green space that is home to deer, fox, chipmunks, frogs, turtles, and many species of songbirds. It also provides an important flyway and wildlife corridor for the larger community. Citizens and public officials are the only stewards of our land and natural resources.
Our coalition's foremost priority is to work with the City of Alexandria to prevent the endangerment of people from the harm of building on land that experts agree is unsound for the construction of new homes.
Monticello Park and Ft. Williams Park are two good examples of responsible land use planning where the City has prudently preserved as open space land that was ill-suited for residential construction for the preservation of important parts of the wildlife corridors and greenspace networks of Alexandria.
We believe that the City's own research and studies clearly indicate that that the 3832-3834 Seminary Road property is within the meaning of environmentally significant property as discussed in the Open Space and Natural Resources Management goals, we thus hope that we can count on elected and appointed officials of the City to honor their Eco-City Charter goals for ecological sustainability and not compromise their principles by approval of the construction of housing units on this site.
In the Seminary Hill area where there are few public parks, a nature preserve devoted to protecting the watershed, water quality, wildlife habitat, and native plants in our community would be in the environmental interest of the City of Alexandria, and make a statement for responsible development in Alexandria.
It is our commitment as neighbors and informed citizens to work for the achievement of an end result that meets the long-term needs of our community,

Thank you for your efforts,

The Coalition for Rational Stewardship

- Expected Response Date: Saturday, November 11

From: Nathan Randall
Sent: Monday, November 06, 2017 3:34 PM
To: Dave Cavanaugh
Cc: Karl Moritz; Robert Kerns; Maya Contreras; Kristen Walentisch
Subject: RE: 3832 & 3834 Seminary Road

Follow Up Flag: Follow up
Flag Status: Flagged

Mr. Cavanaugh-

Thank you for your two emails in recent days regarding the Karig Estates project. We have forwarded them to the Planning Commission in anticipation of this Thursday's public hearing.

Nathan

From: Dave Cavanaugh [mailto:dacava1@yahoo.com]
Sent: Sunday, November 05, 2017 10:40 AM
To: Pat Tokarz; Loren Needles; Jeremy Flachs; Denis Otoole; Cill Dara; Bonnie Petry; Cynthia Evans
Cc: Karl Moritz; Nathan Randall; Maya Contreras
Subject: 3832 & 3834 Seminary Road

I sent the following comments via Call Click Connect.

3832 & 3834 Seminary Road- Karig Estates
DSUP2016-00025-Preliminary Review (Completeness 3)
Applicant is requesting to subdivide the site into 4 lots and to add a new street
Project Managers: Nathan Randall & Maya Contreras

Comment: I ask the proposed subdivision plan be amended to delete Lot#4. Lot#4 as currently designed and laid out is the singularly most damaging element in the subdivision plan. The recent revision to the site plan and subdivision plan is a desperate attempt to mollify City officials to approve the subdivision plan. The lot is on a high point overlooking the swale and ravine. Soil disturbance caused by construction, steep slopes and impervious surfaces will increase water runoff from Lot#4. This will increase the area of saturated soils within the wetland and buffer area and increase the potential of storm water damage to the properties along Colonel Ellis.

Comment: In lieu of eliminating Lot#4, the proposed residence should be moved back from the crest of the hill.

Moving the proposed residence 12.5 feet does not solve the problem of controlling runoff and erosion into the ravine. The house is immediately adjacent to the Line of Construction (LOC) with no setback from the steep slopes. In addition, the existing storm drain in the swale collects water from the Virginia Theological Seminary and the existing home and adjacent properties along St. Stephens and undergrounds it into the seep/wetland.

To reduce water runoff from Lot#4 into the wetland seep area, the proposed residence on Lot#4 should be moved further back from the ravine. Appropriately sized infiltration trenches or other Best Management Practices (BMPs) should be incorporated into the lot plan within the LOC to slow water runoff into the ravine and swale. Reducing the storm water drainage off Lot#4 will minimize erosion off the hill. It will also minimize expansion of the wetland/seep area, and saturated soils on adjacent Colonel Ellis properties, and hopefully maintain an acceptable level of water quality into the Strawberry Run watershed.

Comment: Like Lots #2 and #3, the applicant should be required to install permeable surfaces on driveways and sidewalks on Lot#4. This would demonstrate a good faith effort to achieve LEED Certification.

Comment: Flipping the house around on the lot and placing the garage close to the street is an improvement. However, there is no filtration trench to slow runoff from the house and deck/porch into the swale. This will increase runoff into the wetland further saturating soils in the ravine and adjacent properties along Colonel Ellis. I ask that the Subdivision Plan be amended to include an infiltration trench to control run off from the elevated deck/patio on the west side of the west side of the house. The trench would help slow storm water runoff from the home and patio draining into the swale.

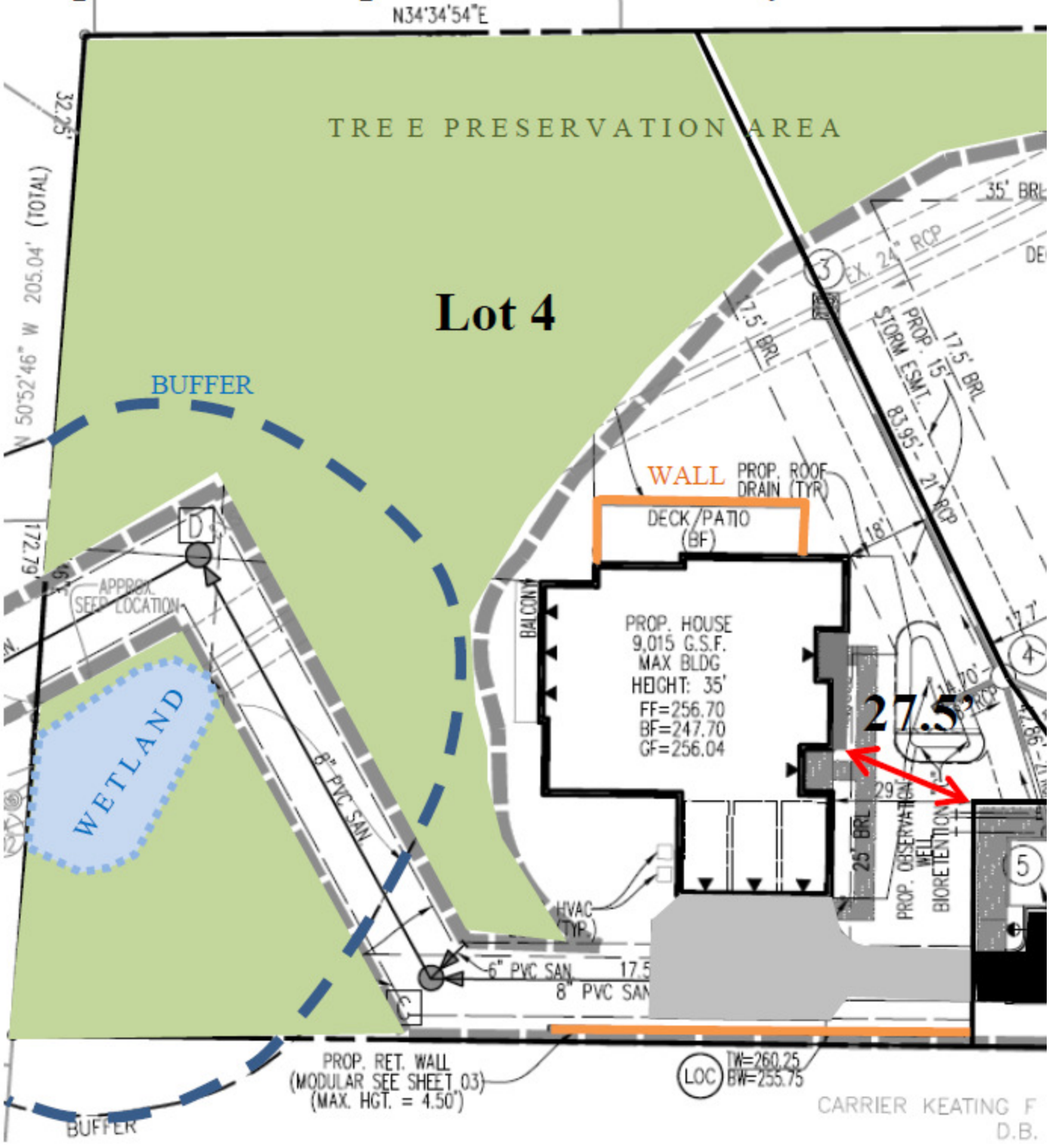
Comment: Although there is a 50' radius protecting the wetland seep at the bottom of the ravine, it would be a terrible mistake to construct a sewer anywhere near the seep or the buffer area. This will have unforeseen consequences on the wetland area, impact water quality, increase the area of saturated soils and increase the potential for further erosion on adjacent properties. Other feasible locations should be explored that do not threaten the wetland and unreasonably disrupt existing adjacent property owners.

Comment: The development is in a mostly undisturbed natural drainage into Strawberry Run. The scale of construction and the large size of the proposed homes will increase runoff into the drainage area and ravine. The technical conclusions in the Site Plan that the engineered BMP's will reduce water runoff defies common sense and should be subject to further analysis and peer review.

Comment: On page 9 there is a comparison of the Previously Approved Lot#4 Layout and the New Lot#4 Layout. The previously approved house square footage was 6,508 GSF. The Proposed New Lot#4 Layout proposes a substantial increase to 9,015 square feet. Reducing the size and footprint of the proposed residence to the average size of the homes on lots 1-3 may provide additional distance or setback from the edge of the hill and space for infiltration trenches or other mitigating water and erosion control features.

Graphic #2-B is from the Site Plan

Graphic #2-B: Proposed New Lot #4 Layout



From: Pat Tokarz via Call.Click.Connect. <CallClickConnect@alexandriava.gov>
Sent: Monday, November 06, 2017 2:17 PM
To: CCC PZ PlanComm
Subject: Call.Click.Connect. #132665: Planning Commission Inquiries, Dockets I send this letter to vice mayor, Wilson

Dear ***Call.Click.Connect.*** User

A request was just created using ***Call.Click.Connect.*** The request ID is 132665.

Request Details:

This is a "public" request. Information may be provided to anyone who requests it.

- Name: Pat Tokarz
- Approximate Address: No Address Specified
- Phone Number: 5712211969
- Email: jptokarz@comcast.net
- Service Type: Planning Commission Inquiries, Dockets
- Request Description: I send this letter to vice mayor, Wilson as more background material for this issue.

To: 'Justin.wilson@alexandriava.gov'
Subject: FW: Seminary Approval 10/3/17 rec. fpr moving 4th house.

Justin,
I am writing you as an update on a matter that will be coming before the city council soon.

Thank you so much for your time and support with our efforts. It meant a lot to us that you took the time to view the ravine and offered your insight. We took to heart your observation that a way could be found to move the four houses closer to Seminary road and re-configure the sanitary sewer to connect with the one on Seminary road (thus preserving more of the mature forest and wetlands) if the city really wanted to work with the developer to make this happen.
It will indeed take great leadership skills to prevent more needless destruction through " business as usual ".
I am attaching a copy of a letter we sent you eight mos. ago, as it is still relevant.

I am also attaching a recent staff report showing the builder was willing to move all four houses closer to Seminary road if it did not cause too great a delay. Instead, P and Z staff recommends moving the fourth house 12.5 feet for all the reasons that a move of all four houses would be a better outcome.
Builder and staff were able to agree on a plan to move the fourth house in five days.This is a small step in the right direction.
They should be able to agree on a plan to move all four houses North and move the sanitary sewer to attach to the one on Seminary road (which would protect the wetlands and its buffer) in a similarly rapid fashion as an amendment to the approved site plan.

It is not necessary to ask the builder to start the process all over again for a fourth time.
Maybe you could convince the staff and commissioners to take a harder look at the science here.Tony Fleming and Ken Fraine (Geologist and soil and water experts, respectively)both recommend avoiding building on the steep slope of lot four and part of lot three. The further away from the steep slope, the better. The benefits of moving the four houses and shifting the sewer away from the wetlands deserve an extra effort from the Commission.

Open the docket and see the staffs latest report. Decisions were made after midnight when people were

exhausted. The Commission forgot to approve the change in the name of the new street and the builder forgot to submit a plan for subdivision. These issues were deemed minor enough to be allowed as amendments later, without slowing down the approval process.
Staff judged moving the 4th house 12.5 feet away from the wetland as good for the city, and approved as an amendment to the approved site plan, but moving all four houses closer to Seminary Rd. as too great a change without submitting a whole new site plan, which the builder, who has agreed to move all 4 houses, refused to do as causing too big a delay.
We should request the P&Z Commission to judge the plan to move all four houses closer to Seminary Rd. as so beneficial to the city and the neighborhood that it also be considered as an amendment to the approved plan to shorten any unnecessary delay.

A better outcome for Alexandria is slipping between our fingers

Thank you for your efforts for all of Alexandria,

Pat Tokarz

3937 Col. Ellis Ave.
Alexandria, Va.

- Expected Response Date: Saturday, November 11

From: Nate Macek <natemacek@hotmail.com>
Sent: Tuesday, November 07, 2017 3:00 PM
To: Kristen Walentisch
Subject: FW: Karig Estate, #8 on Nov. 9 docket
Attachments: Rod Simmons Report.170310.pdf; Tony Fleming Report.171105.docx

Follow Up Flag: Follow up
Flag Status: Flagged

Received by Planning Commission.

From: Lonnie Rich [mailto:lcrich@rrbmdk.com]
Sent: Tuesday, November 07, 2017 2:41 PM
To: Mary Lyman <mlyman@gnarusllc.com>; dwbapc@gmail.com; mindylyle@comcast.net; mmcmahonpc@gmail.com; natemacek@hotmail.com; Koenig Stephen <swkoenig72@gmail.com>; Maria Wasowski <mariawasowski@comcast.net>
Cc: Jeremy Flachs <jeremy.flachs@flachslaw.com>
Subject: Karig Estate, #8 on Nov. 9 docket

Dear Chair and Members of the Planning Commission,

I am writing on behalf of Beth El Hebrew Congregation regarding the Karig Estate project, #8 on Thursday's docket. I do want to thank staff for efforts made to improve the development plan by reconfiguring the 4th house to save one tree and get the house 12 feet closer to Seminary.

However, our view is that the 12 feet is too little, too late. That 4th house is still substantially in the ravine; too many mature trees on the slope will be lost, leaving too much of the slope disturbed and vulnerable to collapse. We are also opposed to building a sewer connection on the south end of the project as proposed because it will destroy even more trees and disturb more of the slope of the ravine. We do not believe that the applicant has made "adequate provision . . . to ensure that the development will not destroy, damage, detrimentally modify or interfere with the enjoyment and function of any significant natural, scenic or physical feature of the site." Section 11-410(W) of the Zoning Code.

We have several requests and additional points to make:

1. We are asking you, the Planning Commission, to invite Rod Simmons, the City Natural Resource Manager to explain his deep concerns and objections to this proposed development. I understand that staff may prefer that he not testify, but you should want and invite him to do so in order for you to get more complete and balanced view of what is at stake. His presence is also necessary for you to be able to ask questions. If staff orders him not to testify, then you should deny the application, which probably requires that you reconsider the October decision, deny the amendment and refer it all back to staff for further work as more fully set out herein.

2. We are asking you to heed the concerns expressed by Rod Simmons and Tony Fleming. (Attached are their respective reports.) We are not dealing with a flat piece of property with a few trees on it, but a remnant forest with an ancient, deep and steep ravine amidst marine clay in an area of town that has historically had significant problems with development – runoff erosion, collapsing slopes and sinking soil. Putting the 4th house in the ravine with its weight and the destruction of the trees and vegetation that protect the slope, plus destroying a 15

foot swath of trees/vegetation and wetland for a sewer – all of which will put the slopes at serious risk of collapse – is simply not responsible development.

3. The City's Environmental regulations require that "no more land shall be disturbed than is necessary for the proposed use or development" and that "indigenous vegetation shall be preserved to the maximum extent practicable consistent with the use or development." Section 13.109(A) and (B) of the Zoning Code. These rules apply to the entire parcel, not just to the buffer area. These rules, in our opinion, must inform the Director of P&Z when exercising his discretion in setting the blockface for this project. In other words, if he has reasonable choices of the blockface, then the Environment regulations require that he chose a blockface that disturbs the least amount of land, vegetation and special features. In this matter, he could have chosen a 57 foot setback from Seminary as the blockface, but instead chose 104 foot setback. It is our position that the City is required to redo the subdivision based on the 57 foot setback and get all four homes closer to Seminary and out of the ravine. The end result should be to move the 4th house about 40 feet from the proposed location toward Seminary.

4. With regard to the sewer easement, there is a feasible alternative – a lift station that will discharge to the sewer main on Seminary. "Adequate provision shall be made to minimize the impact on existing wetlands." Section 11-410(BB) of the Zoning Code. While it is true that sewer lines are exempt from the buffer area created on the south end of the property, see Section 13-123(A)(2) of the Zoning Code, that does not mean that sewers are required to or should automatically go through a buffer area. That exemption should be used sparingly – when it is absolutely necessary and there are no alternatives. There may be some more expense in connecting to the Seminary sewer main; but, in the context of the total project, those costs can be absorbed in order to protect the trees and slopes.

5. We urge you to reconsider your October decision and refer back to the staff and applicant to start with a 57 foot blockface with lots divided so that the 4th house in not in the ravine and so that the sewer can be directed to Seminary rather than through the buffer area. If the 4th house cannot be moved out of the ravine, then it should be deleted from the development plan.

Respectfully submitted,

Lonnie C. Rich

RRBMDK LLP attorneys at law
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DSP – PRELIMINARY SITE PLAN – 3832-3834 SEMINARY ROAD (STUART'S WALK) – RHS review and comments (RPCA, Natural Resources Division, Natural Lands Management Section) – 10 Mar 2017

I visited this site several times, including during the growing season, beginning in July 2013 while performing vegetation and geologic assessment surveys for the City Flora and Alexandria Geologic Atlas. My review comments of this plan are pursuant to a number of serious concerns with the plan's failing to take into account adequately or at all a number of significant environmental issues which are outlined in the sections below.

Negative Impacts of Proposed Plan on Existing Forested Wetlands on Site (Isolated Wetlands-LOC Area including 50' protective buffer)

- On Sheet 06, Lot 4 shows 150' or more x 15'-wide easement of pipe (8" PVC San.) and associated trenching and soil disturbance intruding within the 50'-buffer (LOC) and through the point source of the forested spring and seepage wetlands. This is wholly unacceptable because it is a) an intrusion into a protected area, in this case a forested wetlands (isolated wetlands), and b) such intrusion and disturbance will result in significant damage to the wetlands, including the predictable likelihood of destroying it altogether (see Figs. 1 and 2).

  Moreover, the construction of a 15'-wide filled trench as positioned above and around the groundwater infiltration and flow of the spring and seepage fan will in effect result in a "French drain", which would intercept water flow and carry it along the floor of the trench, away from and bypassing the groundwater source of the wetlands.

- The "D" junction and associated digging of this pipe route are particularly poorly sited because they are situated just above the springhead and if constructed would likely alter or destroy the groundwater flow.

- Does the City typically permit concrete buildings/foundations (Lot 4) that would literally conjoin a protective buffer, let alone a seepage wetlands? This is hard to imagine and would seem to invite an engineering and environmental quandary of worst case scenarios as far as resource protection and sound engineering practices are concerned.

- A more accurate than presented on Sheet 06 delineation of the footprint of the existing forested wetlands is needed, which will show the 50' buffer likely extending farther northeastward into the structures of Lot 4 than the plan currently depicts. In other words, the footprint of the spring and seepage fan needs to be better delineated, especially given that the developer failed to include this wetland on the original plan submissions, thereby raising considerable doubt as to the quality and accuracy of their site assessments and analyses. The delineation of the wetlands needs to be properly depicted and represented on the plan, and based on ground-truthing delineations drawn to contour lines and not from GIS waypoints (the waypoints I provided in December 2016 are likely many feet off at some points owing to the steep topography of the ravine).

- There are serious concerns for the clear-cutting and removal of existing forest vegetation on the steep ravine slopes and especially Lot 4 above the forested spring and seepage fan. Denuding the slope of canopy trees and other vegetation and digging, filling, and re-contouring the slope will likely excise or redirect the perched aquifer that supplies the groundwater flow, resulting in the loss of the wetlands and rendering the protective buffer meaningless.

- There are numerous concerns for what will comprise the landscaping of the western flank of Lot 4 after the slope is clear-cut and canopy trees are removed, and how plantings, including turf, and their maintenance will affect the protected wetlands. What protection and enforcement will be provided if yard waste and other debris are dumped into the wetlands over the years by owners or their landscapers of a property built too close to a sensitive natural feature? (See Fig. 4) Will plantings of non-native invasive plants be allowed, i.e., English Ivy, *Liriope* spp., etc., and if so, be allowed to spread into the adjacent wetlands?

Fig. 1. The aptly-named "Fern Belt" at the northeastern edge of the former Winkler Botanical Preserve as it appeared in the early 1990s. This pristine wetlands was regionally famous as one of the best remaining examples of the globally rare Fall Line Magnolia Bog community: *Nyssa sylvatica - Magnolia virginiana - (Pinus rigida) / Rhododendron viscosum - Toxicodendron vernix / Smilax pseudochina* Woodland (USNVC: CEGL006219). Photo by R.H. Simmons.

Fig. 2. All that remains of the Magnolia Bog at the edge of the Winkler Botanical Preserve and the footprint of the IDA building at 5110 Mark Center Drive (previous page photo) after the site itself and perched aquifer and seepage flow upslope were destroyed by building construction in 1996. Photo by R.H. Simmons.

Negative Impacts of Proposed Plan on Existing Forest Communities and Vegetation

- Much of the 3832 and 3834 Seminary Road parcels comprise old, remnant Oak-Heath Forest, an intermittent waterway, and a spring and forested seepage wetland, all of which collectively protect and form the headwaters of Strawberry Run. The vegetation and topography of this ravine forest is virtually identical to ones at Stevenson Park at the western edge of Alexandria.

  The vegetation of the ravine is largely old-age Low-Elevation Mixed Oak / Heath Forest: *Quercus alba* - *Quercus* (*coccinea, velutina, montana*) / *Gaylussacia baccata* Forest (USNVC: CEGL008521), with Chestnut Oak by far the dominant tree.

- Lot 4, Lot 3, and the back half of the "New Public Street", as proposed, sit directly atop the oldest, most intact, and least disturbed forest on the entire site. Lot 2 and Lot 1 are much more disturbed, with sizeable areas of non-native invasive plants.

  The plan does appear to include tree preservation areas above Lot 4 at the far southwestern upper slope of the site, as well as along the north edge of the property and a small grove of old White

Oak trees in front of the existing Carrier-Keating residence at 3834 Seminary Road. These will preserve some small amount of native remnant forest trees on site. Unfortunately, the plans call for clear-cutting *all of the best remaining forest on site*, from the old-age Chestnut Oak canopy to the understory trees and shrubs and herbaceous plants of the forest floor (see Fig. 3).

Fig. 3. Old-age Low-Elevation Mixed Oak / Heath Forest: *Quercus alba - Quercus* (*coccinea, velutina, montana*) / *Gaylussacia baccata* Forest (USNVC: CEGL008521) community occupying the north-facing, gravelly slope where Lot 4, Lot 3, and the back half of the "New Public Street" are proposed. Photo by R.H. Simmons.

- All of these trees are *irreplaceable* remnants of the native forest canopy that was once dominant throughout such ravines in the City – and are critical in maintaining native tree canopy density throughout Alexandria. The City recently lost (in 2015-2016 alone) a significant number of old native oaks and other canopy trees and great care needs to be given to the preservation of such remaining trees if we are to maintain the sustainability, health, and beauty of Alexandria's native tree canopy. Post-construction tree plantings as part-mitigation for the loss of old, remnant native trees and forest are not in any way a commensurate substitute for the loss of a living system and Alexandria's existing native biodiversity.

- Surveys conducted by Natural Lands Management revealed no Rare, Threatened, or Endangered (R,T,&E) flora on site, except one occurrence of the Alexandria-rare Frosted Hawthorn (*Crataegus pruinosa* var. *pruinosa*) in the footprint of the proposed "New Public Street".

Nevertheless, this is moot because there is no regulatory protection for vegetation that is *privately owned* in Virginia (and most states in the U.S.), unless it is federally listed or occurs within a wetlands, RPA, or other protective designation.

- While it is in no way a substitute for effective and appropriate preservation of irreplaceable natural resources in situ, in the event construction does proceed it is highly recommended that diggable shrubs and other native plants, including the 2 large Frosted Hawthorn, be rescued and transplanted to the closest appropriate location and site conditions next door at Beth El Hebrew Congregation. Permission of course will have to be granted, but I would be happy to help facilitate this if better solutions for preservation do not arise.

Fig. 4. Recent large-scale dumping of yard debris, including non-native invasive plants, by neighboring residence into the forest at 3834 Seminary Road just above the forested wetlands. Photo by R.H. Simmons.

Negative Impacts of Proposed Plan on the Topography, Soils, and Hydrogeology of the Ravine

- There are concerns for the quality, accuracy, and thoroughness of the developer's site assessments as to existing topographical considerations (slope stability and preservation); placement of soil boring tests; detection of wetlands on site; and the general lack of understanding and appreciation of the entire site as an intermittent stream and headwaters ravine.

It does not appear that much preliminary site evaluation work and analysis was done, or done to a high quality or standard. For example, Natural Lands Management and professional geologist Tony Fleming readily noted the presence of the spring and forested wetlands at the site on first visit to the site in 2013, but this was absent from the developer's preliminary site plan proposal in the fall of 2016 and was only integrated into the revised proposal in early 2017.

- Some links in the *Geologic Atlas of the City of Alexandria, Virginia and Vicinity* of major relevance to accurately discerning the geohydrologic conditions of the site are Plates 4, 5, 6, and 7. The *Geologic Atlas of the City of Alexandria, Virginia and Vicinity* is an exceptional resource offered to all by RPCA on the Alexandria Geology webpage at www.alexandriava.gov/89974.

  In particular, **Plate 6. Map of the Piezometric Surface of the Cameron Valley Sand Member (lower aquifer) of the Potomac Formation and Other Aspects of Urban Hydrogeology** shows the locations of springs and isolated wetlands in the City. **Plate 7. Slope Stability Map** presents the areas in the City with slope stability issues arising from the presence of "marine clay" (Arell clay), which outcrops near the base of the ravine.

  Also, in **Plate 4. Geologic Map of the Potomac Formation** and the **Expanded Explanation of Plate 4**, see the description, classification, and discussion of Arell clay, which is the most massive unit of so-called "marine clay" (misnomer; not marine in origin) in the City, which beautifully holds up the Seminary heights and terrace. (Its weakness though is fracturing/trenching it and digging into it extensively; which thereby exposes sections of it to likely slope failure.)

- It is hard to tell how thoroughly performed and appropriately sited the soil boring tests were and where on site they were conducted. It does not appear that soil borings were taken on the northwest slope of the ravine. Several borings are visible on the gravelly southeast slope bordering Beth El Hebrew Congregation. An accurate assessment and depiction of underlying soil types of all sections of the ravine proposed for development are essential for any plans to follow.

  Of course, great care must be afforded to ensure that no boring equipment or disturbance encroaches into the protected spring and wetlands near the southwest end of the property (LOC).

- There are great concerns for the proposed filling in of sections of the ravine. This must be regarded by all planners and engineers as the most drastic, lowest quality practice of all, and one that would render a site thoroughly degraded. For example, this very scenario was recently approved by the City and constructed at 2208 Russell Road, in which a mostly perennial, natural-channel, spring-fed stream at the foot of a steep ravine was completely filled in over a galvanized pipe for a significant section of its length (see Figs. 5, 6, and 7). It's hard to imagine how this grading permit was ever approved and granted in this day and age in Alexandria.

Fig. 5. Large-scale filling in of the mostly perennial, natural-channel, spring-fed stream at 2208 Russell Road. Pictured here is the outflow of the galvanized pipe that spans the filled segment – a considerable stretch of the ravine. Photo by R.H. Simmons.

Fig. 6. Middle section of filled in stream channel at 2208 Russell Road showing damaged trees and buried toe and lower slope of old-age forested ravine. Photo by R.H. Simmons.

Fig. 7. Upstream intake of spring-fed, mostly perennial stream into galvanized pipe underlying an area at 2208 Russell Road where the stream was filed in with massive amounts of soil. Photo by R.H. Simmons.

- Despite the presence of an artificial stormwater infrastructure that follows the entire length of the ravine within the property boundary (21" reinforced concrete pipe with a number of open-drain catch basins), the entire ravine – its topography, geohydrology, and forested vegetation - functions as a natural channel intermittent stream and is the ultimate headwaters of Strawberry Run. Denuding the ravine of vegetation, especially forest canopy, and filling in sections of it and adding impervious surface (roofs, driveways, "New Public Street", etc.) where none currently exists will have major negative consequences, both on site and for the properties downslope, including waterways. No amount of mitigation can be hoped to offset these effects, particularly because many of the consequences of poorly siting construction in inappropriate sites like ravines will not be immediately evident and will take years to develop.

Prepared by:

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Karig Estates Development on Geologically Unstable Hillside Puts Residents at Unacceptable Risk
November 5, 2017

I strongly urge the city to reconsider its pending approval of the development project known as “Karig Estates” at 3832-3834 Seminary Road, which lies in a high landslide risk area. The current proposal to grade, fill, and squeeze four large homes into one of the last remaining natural ravines on the largest and most unstable escarpment in the city will disrupt a major hydrologic artery on a steep marine clay slope, directly above an established neighborhood that is already experiencing stormwater and slope stability issues. This is playing with fire: disturbances of the soil and natural hydrology at the crowns of marine clay slopes are a well known trigger for landslides and other ground failures that can damage or destroy buildings, property, and infrastructure, something I have personally observed in the city. Some background is in order.

From 2006 to 2008, and again from 2014 to 2016, I conducted research on the geology, hydrology, and geologic hazards in the City of Alexandria. This included compiling hundreds of geotechnical reports in the City’s archive which detail subsurface conditions in nearly every neighborhood. I also walked literally every street, alley, park, and the yards of willing landowners, observing the geologic materials and processes that have acted over millennia to produce the modern landscape. The results were ultimately incorporated into the various maps, documents, and databases that comprise the online Geologic Atlas of Alexandria (www.alexandriava.gov/89974). I hope you have availed yourself of this unique resource, which among other things is intended to help planners, builders, engineers, and policy makers identify and address the geologic conditions and hazards in the City.

Among the places I visited during my research are the property known as Karig Estates and many neighboring properties. All of these places are situated on the Hospital Escarpment, a massive, oversteepened bluff as much as 200 feet high underlain by thick “marine clay” and dotted with abundant evidence of both prehistorical and modern landslides and debris flows. You can see some of this evidence yourselves, simply by driving up almost any city street that traverses the escarpment and observing the commonly rippled pavement and areas of sharply leaning trees, all of which signify an unstable hillside actively moving downhill.

The mechanics of slope failures in this terrain are well documented and will not be repeated here. A summary can be found in the delineation of landslide hazard areas on Plate 7 of the Geological Atlas and in several references therein. Suffice to say that many case studies in northern Virginia, some published by the US Geological Survey and others observed by me during my walkabouts in the city, show: 1) a strong spatial correlation between landslides and developments sited on or too close to the edges of inherently unstable marine clay slopes; and 2) landslides are commonly triggered by disruption of the natural hydrology at the tops of slopes, which changes the water pressure in the marine clay and overlying materials. This process is often amplified by hurricanes and other low-frequency but high impact precipitation events that occur with some regularity in the region.

There are many examples of this in Alexandria, where excavations, grading, and placement of structures and artificial fill at the tops of escarpments at various times during the last several decades have resulted in the failure of the slopes below. In one instance about a quarter mile from the Karig Estates site, a prominent landslide resulted from the emplacement of artificial fill along the side of a ravine similar to the one on the Karig site; the landslide persisted for the better part of a decade before it was finally remediated at considerable cost, but not before traveling hundreds of feet downslope and severely damaging more than an acre of forest and sending many tons of sediment downstream. It was fortunate no residences or other structures were situated below. The geotechnical report available in the city archive tells the tale.

Such isolation from neighboring structures is not the case with the Karig Estates property, which is perched on the crown of a steep slope that descends to the homes along Colonel Ellis Drive, a neighborhood that already experiences problems with both unstable backyard slopes and wetness during large storms. Moreover, the development of this site as currently contemplated cannot help but severely disrupt shallow groundwater flow and an ecologically important spring, because it involves grading and emplacing a significant mass of fill within a prominent ravine, which represents a major hydrologic artery directly above the steepest section of the slope. Coupled with the conversion of some 2 to 3 acres of mature forest (which has stabilized this part of the slope for centuries) into impervious and less pervious surfaces, the development is expected to dramatically transform the hydrology of both the site and the adjacent slope below, greatly heightening the risk of destabilizing the slope and putting the subjacent landowners and their properties in jeopardy from both debris flows and damaging amounts of stormwater runoff.

I reviewed the site plan and its accompanying geotechnical report and found them woefully deficient in addressing these issues. The authors seem blissfully unaware of the geologic setting and history of landslides in the geologic terrain in which the site resides. In fact, neither the site plan nor comments provided by city staff acknowledge the potential for off-site impacts; instead, they treat this steeply-sloping site as if it exists in a geological vacuum. I assure you, it does not: geological processes do not respect property boundaries, most especially when they involve landslides and stormwater runoff moving down steep slopes. A few small infiltration basins situated in or just above nearly impermeable clay are not going to hold back the runoff from a major storm – much less that from a hurricane. It is not a question of if these kinds of storms will occur, the only question is, when? Once that question is answered, then the questions become, what happens if the slope fails? and who is responsible - the developer, the city, or the neighbors who will bear the brunt of the resulting debris flows and stormwater runoff? This question is especially concerning to adjacent landowners in light of the fact that landslides may not initiate until years or decades after the causative disturbance.

Given the well documented hazards associated with building on the Hospital Escarpment, policymakers would be well advised to consider these questions now and not after the fact, when remediating the consequences will be significantly more costly and disruptive.

This leads to a last point: it behooves the City to take a proactive approach in how it deals with the closely intertwined questions of geologically problematic terrain and open space preservation, rather than the reactive approach so apparent in the current debacle regarding the Karig Estates site, which serves no one well and works at cross purposes to the City's stated development, environmental, and quality of life goals (e.g., open space, expanded protection for ravines, Eco City, 40% tree canopy, etc.)

A first step towards bringing all of these competing goals into alignment is to steer high impact development away from geologically fragile places like the Hospital Escarpment, which, not coincidentally, contains some of the most extensive remnant tree canopy and open space in the city. As someone who has served as both staff and consultant to plan commissions, I observe that creating win-win solutions by averting problems before they occur is what planning and zoning are supposed to be all about. I welcome your questions.

Yours truly,

Tony Fleming, Licensed Professional Geologist

Author, Geologic Atlas of the City of Alexandria

260-693-3257 loneswantony@cs.com

From: Nate Macek <natemacek@hotmail.com>
Sent: Tuesday, November 07, 2017 3:01 PM
To: Kristen Walentisch
Subject: FW: Rod Simmons

Follow Up Flag: Follow up
Flag Status: Flagged

Received by Planning Commission.

From: Lonnie Rich [mailto:lcrich@rrbmdk.com]
Sent: Monday, November 06, 2017 10:23 AM
To: dwbapc@gmail.com; Koenig Stephen <swkoenig72@gmail.com>; mindylyle@comcast.net; mmcmahonpc@gmail.com; natemacek@hotmail.com; mariawasowski@comcast.net
Cc: Mary Lyman <mlyman@gnarusllc.com>
Subject: RE: Rod Simmons

One more point: Mary was informed that Parks and Rec (the Department in which Rod Simmons is working) had nothing to do with this development project. That is not exactly accurate since Rod provided numerous comments to P&Z, which were discounted or ignored.

It only seems reasonable for you to get a balance of views before making a decision or reconsidering the decision already made.

Lonnie

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From: Lonnie Rich
Sent: Monday, November 06, 2017 10:03 AM
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<natemacek@hotmail.com>; 'mariawasowski@comcast.net' <mariawasowski@comcast.net>
Cc: 'Mary Lyman' <mlyman@gnarusllc.com>
Subject: FW: Rod Simmons

Planning Commission members,

About a week ago, I asked Mary Lyman to request that Rod Simmons, the city naturalist, present at the public hearing on Karig Estates, #8 on Thursday's docket. He has serious concerns about development in or near the ravine. She did ask and higher ups have not only resisted but may have directed Rod that he cannot speak at the hearing.

I wanted you to have my arguments in favor of the Planning Commission being able to ask for whatever staff members you want to hear from in making your decision. See the email trail below.

Lonnie

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From: Lonnie Rich
Sent: Friday, November 03, 2017 5:02 PM
To: Mary Lyman <mslyman@verizon.net>
Cc: Allison Silberberg <allison.silberberg@alexandriava.gov>; Justin Wilson <justin@justin.net>; Tim Lovain <timlovain@gmail.com>; Paul Smedberg <Paul.Smedberg@alexandriava.gov>; Del Pepper <delpepper@aol.com>; willie.bailey@alexandriava.gov; john.taylor.chapman@alexandriava.gov
Subject: Re: Rod Simmons

Mary,

I understand that you don't have subpoena power. But you are in effect the boss and can request/demand that a particular staff person appear to testify. If staff refuses, then you can deny the application. I don't think staff is going to not produce him. Of course, if what he is saying is inconsistent with staff's position, you would surely want and expect staff to respond. And I am sure the person they send will be capable of doing that.

In a sense it doesn't matter in what capacity he testifies. We all know that his testimony will not entirely reflect the staff's current position. In effect, it will be a minority's view for whatever it is worth — much like a

minority opinion from a state supreme court to the US Supreme Court. Or much like some Presidents will have several generals with different views meet to help thrash out a position.

I know that staff has worked many hours doing their best to give you their best recommendation. I don't blame them for wanting to advance their recommendation. But surely staff does not get to control the flow of information to the decision maker, especially if you (Planning Commission) see a need for additional info. In the end, that has to be your decision. And it will be a better decision if, in a hard case, like this one, you have broader, more balanced information.

Finally, as I explained to someone, this matter involves a conflict between engineers, who think anything can be built anywhere, and environmentalist (naturalists) who take a longer, broader view of the consequences of what is or can be done. I believe that Rod Simmons views will shed some light — and you will still have a decision to make.

Lonnie

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On Nov 3, 2017, at 4:26 PM, Mary Lyman <mslyman@verizon.net> wrote:

> I don't have subpoena power, Lonnie. I can make the request again but I can't compel the City to produce him. He is of course free to come and speak on his own behalf if he chooses to, but I can't force the City to authorize his appearance in his official capacity.
>
> ---
>
> **From:** Lonnie Rich [mailto:lcrich@rrbmdk.com]
> **Sent:** Friday, November 3, 2017 3:59 PM
> **To:** Mary Lyman <mslyman@verizon.net>
> **Cc:** Allison Silberberg <allison.silberberg@alexandriava.gov>; Justin Wilson <justin@justin.net>; Tim Lovain <timlovain@gmail.com>; Paul Smedberg <Paul.Smedberg@alexandriava.gov>; Del Pepper <delpepper@aol.com>; willie.bailey@alexandriava.gov; john.taylor.chapman@alexandriava.gov
> **Subject:** Re: Rod Simmons
>
> Mary
>
> I agree that city departments can designate whom they would like to testify. I disagree that you or the Planning Commission or City Council are powerless to call anyone that you see fit to assist you in making decisions.

All of the staff work for the City and either Council or Planning Commission within its delegated authority from Council can ask for any person you want. In my opinion, because of your duty to make public decisions, it is more important than ever that you be able to get the information you think necessary. Departments can play hide the info from me, but not from you.

You ought to have Rod Simmons there so he can explain his concerns and so he can answer questions that you may have. Yes, I can send his opinion — if staff will permit that? — but I can't answer questions that may legitimately follow.

If you (or the Commission) decide not to invite Rod to testify, that will be your decision, not because staff or the city attorney has directed you otherwise. They are not decision makers. You are. They are advisors.

Respectfully,

Lonnie

<image001.jpg>

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Website: www.rrbmdk.com

On Nov 3, 2017, at 3:24 PM, Mary Lyman <mslyman@verizon.net> wrote:

> Hi Lonnie—
>
> I haven't forgotten you, was waiting to hear back from City staff on exactly how this stands.
>
> The Recreation, Parks and Cultural Activities Department is aware of the request and I understand will have someone at the hearing to answer questions. There will be someone there solely at my request, because that department has had no involvement in the Karig Estates matter. The issues in question are the jurisdiction of T&ES. However, I have been advised by the City Attorney's office that it is up to each department to choose who will represent them at public hearings and that I have no power to direct that choice. It is a City personnel matter that is outside my wheelhouse and that I don't feel it is appropriate for me to try to interfere with.
>
> I completely agree that all viewpoints should be heard, and I think the best way to go about it is to for you state Mr. Simmons' views in your own testimony, and I will ask the City representatives to respond. And of course, you are always free to apprise the Commissioners of those views verbally or in writing before the hearing. But having Mr.

Simmons speak at the hearing in his capacity as a City employee is unfortunately not something I can accomplish for you.

I look forward to seeing you next week.

Mary

From: Lonnie Rich [mailto:lcrich@rrbmdk.com]
Sent: Friday, November 3, 2017 10:52 AM
To: Mary Lyman <mslyman@verizon.net>
Cc: Allison Silberberg <allison.silberberg@alexandriava.gov>; Justin Wilson <justin@justin.net>; Tim Lovain <timlovain@gmail.com>; Paul Smedberg <Paul.Smedberg@alexandriava.gov>; Del Pepper <delpepper@aol.com>; willie.bailey@alexandriava.gov; john.taylor.chapman@alexandriava.gov
Subject: Rod Simmons

Since I haven't heard from you, I thought I would inquire if you were going to request that Rod speak at the public hearing. His testimony would add to and balance what is in the staff report. It ought to be of high interest to the Planning Commission as decision makers.

If staff should try to discourage or preclude his testimony, the optics would not be good for our "green, eco-city."

Lonnie

<image001.jpg>

Lonnie C. Rich
Rich Rosenthal Brincefield Manitta Dzubin & Kroeger, LLP
201 N. Union Street, Suite 230
Alexandria, VA 22314
Phone: (703) 299-3440
Fax: (703) 299-3441
Email: LCRich@RRBMDK.com
Website: www.rrbmdk.com

From: Karl Moritz
Sent: Wednesday, November 08, 2017 9:54 AM
To: Kristen Walentisch
Cc: Maya Contreras; Nathan Randall; Robert Kerns
Subject: FW: Support for Karig Estate development as approved

Ms. Michaelis asked that her email be shared with the Planning Commission.
Thanks!

Karl W. Moritz
Planning Director | City of Alexandria
Room 2100 | 301 King Street | Alexandria, VA 22314
Desk: 703-746-3804 | Cell: 571-329-3052

From: christinemichaelis@comcast.net [mailto:christinemichaelis@comcast.net]
Sent: Wednesday, November 08, 2017 6:27 AM
To: Karl Moritz <Karl.Moritz@alexandriava.gov>
Subject: Support for Karig Estate development as approved

Dear Karl,

How do I indicate my support as originally approved to the Planning and Zoning commission?

I support the Karig Estate development as approved by Planning and Zoning. The plans approved by Planning and Zoning were the result of extensive work, revision, outreach and compromise over many months. The approved plans support individual property owner rights while also maintaining extensive tree canopy.

I live at 3976 Seminary Road. I do not support a cluster of homes near Seminary Road (or sewer access from Seminary) as it will adversely affect our view, devalue the development, and unfairly affect homes situated on the north end of the development. Moreover, clustering homes near Seminary would be extremely detrimental to 3908 Seminary, my neighbor who would then look at two homes, and cause yet another delay in this project.

Delay is the goal of certain neighbors in the hope that the developer will give up. Then their plan is to somehow force the owners to sell the property at a steep discount (or not at all, they don't care that the owners only asset is this property). They also hope, next, to further pressure the City to purchase the property as a park. However, there are neighbors who strongly oppose a park on this property.

I have kept silent to date because there has been extensive pressure on those who support redevelopment to nothing. I am not able to keep silent anymore. Please support the Karig Estate development as already approved by Planning and Zoning. Thank you.

Christine Michaelis

From: Nathan Randall
Sent: Tuesday, November 07, 2017 6:03 PM
To: Kristen Walentisch
Cc: Robert Kerns
Subject: FW: Karig Development Seminary Road

From: Kevin Durkin [mailto:durkinkj@gmail.com]
Sent: Tuesday, November 07, 2017 8:43 AM
To: Allison Silberberg; Justin Wilson; Karl Moritz; Nathan Randall; Maya Contreras; Mike
Subject: Karig Development Seminary Road

Madam Mayor, Councilman Wilson, Mr. Moritz and Mr. Ibrahim,

Moving the houses forward destroys the trees that are in the front of the property which gives the property a unique feel with the mature trees acting as a buffer to the very busy Seminary Road. That there are mature trees in the front of the lot as well gets lost in the discussion about tree clearing line at the rear of the property..

The builder, the planning staff and planning commission have done a great job trying to take all views and opinions into consideration. I look forward to the planning commission meeting on Thursday night to share my views on why the houses should not be moved forward in an open meeting that all in the city can attend.

As I said to the Mayor two Saturdays ago at her Mayor on your block meeting, a settlement is just that a settlement....not all parties get what they want but a compromise is reached. Mr. Ibrahim and the staff have done a great job in achieving just that... a settlement.

Thank you for seeing that the compromise that has been put forward achieves the best possible outcome for all.

Kevin Durkin
3908 Seminary Road

From: Nathan Randall
Sent: Wednesday, November 08, 2017 12:54 PM
To: Kristen Walentisch
Subject: FW: "Reality Check" (As posted to City Officials and Staff)
Attachments: Open LTR Tony Fleming.pdf; Rod Simmons (From FOIA).pdf

Follow Up Flag: Follow up
Flag Status: Flagged

From: Karl Moritz
Sent: Wednesday, November 08, 2017 9:43 AM
To: Maya Contreras; Nathan Randall; Robert Kerns; Jesse Maines
Cc: Yon Lambert
Subject: FW: "Reality Check" (As posted to City Officials and Staff)

FYI. Includes Rod's comments.

Karl W. Moritz
Planning Director | City of Alexandria
Room 2100 | 301 King Street | Alexandria, VA 22314
Desk: 703-746-3804 | Cell: 571-329-3052

From: Loren Needles [mailto:loren@lorenneedles.com]
Sent: Wednesday, November 08, 2017 1:05 AM
To: Karl Moritz <Karl.Moritz@alexandriava.gov>; Beckhorns (Kirk & Christina) Kdbec@aol.com <Kdbec@aol.com>; Lisa Ring <lisaaring@aol.com>; Nrjennings@comcast.net; Richard Hayes <usna62@verizon.net>; Alexa Glock <alexacordelia@gmail.com> <alexacordelia@gmail.com>; Andrew Macdonald <ahmacdonald@mac.com>; Ann and Steve Reed <AReed@AnneReedConsulting.com>; ann ellis <annellis51@gmail.com>; Bertha Braddock <Berthabraddock.bb@gmail.com>; Betsy Lohmann <Betsy4005@comcast.net>; Bill Dickinson , William Dickinson <bill.c.dickinson@gmail.com>; Bill Stiers <billstiers@earthlink.net>; bonnie petry <bonnie.petry@outlook.com>; Brenda Wilson <BrendaWilson09@gmail.com>; Brendan Otoole <jbrendanotoole@gmail.com>; Bruce Mccarthy <Mccarthy3912@aol.com>; Cappie Stiers <mcstiers@aol.com>; Carter Flemming <Carterflemming@gmail.com>; Charles Evans <charlese33@gmail.com>; Chris Connell <cvconnell@gmail.com>; Christina Lytle <tinalytle@aol.com>; Christine Michaelis <christinemichaelis@comcast.net>; Cill Dara <cilldara3030@gmail.com>; Cyn <cynthiaevans52@gmail.com>; Dave Cavanaugh <dacava1@yahoo.com>; Dave Levy <bentbiking@yahoo.com>; David Speck <dgspeck@gmail.com>; debora h aspagnol <deborahaspagnoli@gmail.com>; doctor Stoll <krkstoll@yahoo.com>; Eduardo Han <eduhan@yahoo.com>; Eileen Wallace <egwallace@verizon.net>; Elizabeth Wright <wright22304@gmail.com>; Goree, Paul F - WASHINGTON DC <paul_goreeiii@ml.com>; Denis Otoole <irishoat@aol.com>; Janice Lachance <Janice@JaniceLachance.com>; Jeremy.Flachs@Flachslaw.com; jlepanto@bostonpacific.com; Joan Otoole <joandotoole@gmail.com>; John and Nancy Scruggs <nancywscruggs@gmail.com>; John Scruggs <Jscruggs3929@gmail.com>; pat tokarz <jptokarz@comcast.net>; kirk.beckhorn <kirk.beckhorn@squirepb.com>; Leslie Pierre <lesliepierre@aol.com>; Lonnie Rich <lcrich@rrbmdk.com>; Loren R R. Needles <Loren@lorenneedles.com>; Lynette Goree <lgoree6@gmail.com>; Marianne and Buck Coates <m-b-coates@comcast.net>; Nancy Connell <neconnell@gmail.com>; Nina Schwartz <artstop@impulsegraphics.com>; Patty collette <Pattycollette@me.com>; Rebecca Hierholzer at Newport villiage. <Magicbeca@aol.com>; Robert McLaughlin <robertmclaughlin2011@gmail.com>; Shirley Downs <shirleydowns@verizon.net>; Steve Reed <sreed@steptoe.com>;

Steven <stevenakey@hotmail.com>; Suzanne McLaughlin <smclaughlin8@gmail.com>; Tokarz Lynn <lhtokarz@gmail.com>; WALTER LOHMAN <wlohmann@kirkland.com>; juston.wilson@alexandriava.gov; Tony Fleming <loneswantony@cs.com>; Pat Tokarz, MD <ptokarzmd@specialdocs.com>
Subject: "Reality Check" (As posted to City Officials and Staff)

Hello All

Here is the message I posted to the Mayor, Council, Planning Commission and P&Z staff.

> All--Thank you for your continuing interest and support . Please join me and your other neighbors at the the Planning Commission at City Hall, Second Floor, 7:00 PM. We are #8 on the Docket so it will be at least an hour past 7:00 before we are up. I suggest you stop nearby for dinner and then mosey over to the meeting. Alternately, watch for my eMail alerts on meeting progress. Hope to see you there. The Commission likes to see citizen participation. It helps them choose what is important.
> Best Regards, Loren

To City Officials and Staff:
I appreciate all the effort to find a Win-Win solution to the idea of building in the ravine 3832 and 3834 Seminary Road . My property (1115 St Stephens Road) is contiguous with the property so I am deeply concerned.

I have studied all the opinions and suggestions of city staff, commissioners, experts, neighbors and activists as well as the site plans.

I have concluded that most site design alternatives amount to putting lipstick on the pig. It is obvious P&Z has not given sufficient consideration to the scientific circumstances found in the Ravine or to the legal issues.

Neither P&Z nor the Planning Commission has addressed the published professional opinions of Geologist Anthony Fleming or Naturalist Rod Simmons. The important professional opinions of both gentlemen are attached.

I commissioned the first and second Fleming works because I believed we needed to include real science along with the routine default regulations for decision-making guidance. It is helpful Tony volunteered further comment most recently.

I filled a FOIA to better understand the inputs to the city's internal decision-making processes. That surfaced the opinions of City Naturalist Rod Simmons who addressed multiple science-based concerns about the effect of building in the ravine.

I called for more attention to science in the decision-making process because it is so easy to cite so-called applicable regulations without further thought. There is much to complain about such an approach. Here, let's just agree that regulations are written to apply to all circumstances as if all circumstances are the same. In fact, some situations like building in a geologically difficult natural ravine is so far from average that we need to seek out a better understanding of the appropriateness of the regulation in this circumstance of its use.

Professional opinions of Fleming and Simmons are now in full public view. Both are officially connected to the city in some significant way. I believe that requires the city to demonstrate it has objectively and publicly considered both gentleman's professional opinions in choosing the WIN-WIN option.

The "by-right" legal issue is a pivotal concern. It is essentially the common-law principle that a private owner has the right to develop his/her land if it does not harm his neighbors. There are several ways to think about what the city should do.

1) Roll over and approve the site plan once the developer promises to follow all city requirements. That avoids a law suit.

2) Require the developer to adjust the site plan in some small or medium way(s). Requiring costly site plan adjustments in a large way may risk a by-right law suit which the city prefers to avoid.

3) Permanently reject the building plan likely inviting a law suit although there is influential thinking that no judge would ever rule against a city for ensuring quality control for its land and taxpayers. Particularly if there is an acceptable alternative for the landowner. (See #4)

4) Think outside the box.

• Consider the fact is that Birdie Carrier has publicly stated she is very tired of all the delays and is willing to sell to anyone that will pay $3 Million for her 3 acres of woodland.

• And consider the fact that Birdie's sales contract with the developer is contingent on final city site approval. Heirs report they can walk away anytime.

• And consider the fact that a buyer can come along before resolution of all appeals.

• I believe there are wealthy buyers interested in building a large luxury home on 3 wooded acres, 15 minutes from ground zero of world power (Whitehouse, Capitol hill, K-Street, etc.) and tax benefited by a conservation trust can be found.

• Alternatively, I believe one or several conservation trusts can engineer the purchase.

• I also believe that Birdie has been persuaded (even intimidated?) by those who want to destroy the ravine to profitably build on the land that the present plan is better for her. How could that be? She just wants her money and sooner rather than later. Who could blame her for that?

Birdie and her sisters and the grandchildren may well prefer to not destroy their childhood playground. Simple solution: Birdie needs to replace her pro bono lawyer with a different lawyer that does not have a dog in the fight. We all know the relative value of free advice she is now depending on.

Sincerely yours,
Loren Needles
Co-Chair, Coalition for Responsible Stewardship
1115 St Stephens Rd
703-836-5800

From Tony Fleming

An Open Letter to Members of the Alexandria Plan Commission and City Planning & Zoning Staff

From 2006 to 2008, and again from 2014 to 2016, I carried out detailed research on the geology, hydrology, and geologic hazards in the City of Alexandria, which ultimately was incorporated into the various maps, documents, and databases that comprise the online Geologic Atlas of the City of Alexandria (www.alexandriava.gov/89974). The atlas incorporates a large amount of historical geological, hydrological, and engineering information collected over more than a century by various geologists, many of them experts of their times who worked for the U.S. Geological Survey, along with hundreds of geotechnical engineering reports in the City's archive which detail subsurface conditions in nearly every neighborhood. I also walked literally every street, alley, park, and the yards of willing landowners, observing the geologic materials and processes that have acted over millennia to produce the modern landscape. I hope you have availed yourself of this unique resource, which among other things is intended to help planners, engineers, and policy makers identify and address the geologic conditions and hazards that present themselves in various places around the City.

One of the places I visited during this process is the property known as Karig Estates, and the larger Strawberry Run watershed it is part of, including several homes along Colonel Ellis Drive directly below the Karig Estates site. The physiographic region of the City in which all these properties are situated is called the Hospital Escarpment, a massive, oversteepened bluff as much as 200 feet high underlain by "marine clay" and dotted with abundant evidence of both prehistorical and modern landslides and debris flows. You can see some of this evidence yourselves, simply by driving up any of the city streets that traverse the escarpment and observing the commonly rippled pavement and areas of sharply leaning trees, all of which signify an unstable hillside actively moving downhill.

The mechanics of slope failures in this terrain are well understood. In fact, the renown engineering geologist Stephen Obermeier of the USGS published an entire book on the subject, focusing on adjacent parts of Fairfax County having identical geology to the Hospital Escarpment, and including several case studies of landslides observed over decadal time scales. This escarpment has very likely evolved into its present shape by large-scale mass wasting triggered by the highly expandable and strongly fractured nature of the underlying clay, which causes strong shrink-swell of the soil profile during seasonal wetting and drying cycles and – of particular concern –

during major precipitation events, such as the periodic hurricanes and torrential thunderstorms that visit the region. It is during these low-frequency, high-impact precipitation events that the largest and most severe slope failures tend to initiate.

One of the most important observations made by both Obermeier and myself is the strong correlation between slope failures and disruption of the natural groundwater hydrology at the crowns of slopes. There are many examples of this in Alexandria, where excavations, grading, and placement of structures and artificial fill at the tops of escarpments have resulted in the failure of the slopes below. A prominent landslide at St. Stephens School, for example, resulted from the emplacement of artificial fill over the wall of a deep ravine; the landslide persisted for more than a decade before it was finally remediated at considerable cost, but not before traveling hundreds of feet downslope and toppling more than an acre of high quality forest. It was fortunate no residences or other structures were situated below.

That is not the case with the Karig Estates property, which is perched on the crown of a steep slope that descends to the homes along Colonel Ellis Drive, a neighborhood that already experiences problems with unstable backyard slopes and wetness during large storms. Moreover, the development of this site as currently contemplated will severely disrupt shallow groundwater flow and an ecologically important spring by regrading and emplacing a significant mass of fill in the thalweg of a prominent ravine, which represents a major hydrologic artery directly above the steepest part of the slope – in other words, the filling and regrading of the site, coupled with the conversion of some 2 to 3 acres of mature forest into impervious and less pervious surfaces will dramatically transform the hydrology of both the site and the adjacent slope below, greatly heightening the risk of destabilizing the slope and putting the subjacent landowners and their properties in jeopardy from both debris flows and damaging amounts of stormwater runoff.

I reviewed the site plan and found it woefully deficient in addressing these issues. In fact, it does not acknowledge the potential for off-site impacts at all and treats this steeply-sloping site as if it exists in a geological vacuum. I assure you, it does not: geological processes, including landslides and stormwater runoff, do not respect property boundaries, most especially when they are moving down steep slopes. A few small retention basins situated just above nearly impermeable clay are not going to hold back the runoff from a major storm – much less that from a hurricane. It is not a question of *if* these kinds of storms will occur, the only question is, *when*? Once that question is answered, then the questions become, *what happens if the slope fails?* and *who is responsible (especially if the failure occurs years or decades after the development is built, a common situation) - the developer, the city, or the*

neighbors who will bear the brunt of the resulting debris flows and stormwater runoff?

Given the well documented hazards associated with building on the Hospital Escarpment, policymakers would be well advised to consider these questions now and not after the fact, when remediating the consequences will be significantly more costly.

This leads to my final point: I strongly urge the City to take a proactive approach in how it deals with the closely intertwined questions of geologically problematic terrain and open space preservation, rather than the reactive approach so apparent in the current debacle regarding the Karig Estates site, which serves no one well. From my perspective, the present process appears dysfunctional: the lack of a strategic vision based on science and resource inventories results in a haphazard process that works at cross purposes to the City's stated goals as they pertain to both development and natural resource protection. For example, the City simply cannot achieve its stated goal of 40% tree canopy by permitting the destruction of the best and largest tracts of mature tree canopy in its jurisdiction.

The Karig site is hardly unique. In fact, it is emblematic of most of the landscape of the Hospital Escarpment, not only in its readily recognizable geological hazards, but also in the fact that some of the best remaining mature tree canopy in the City occurs on the escarpment between Pegram Street and College Park, where it collectively forms a nearly continuous corridor of high-quality forest. Using planning and zoning tools to restrict high-impact development on this geologically fragile landscape, while also establishing mechanisms to acquire open space at a fair price from property owners (or the development rights via conservation easements) is highly compliant with the Eco-City standards to which the City aims to adhere. To the best of my knowledge, no such mechanism is currently in place, which leads to the currently fragmented landscape anddevelopment process.

On the other side of the ledger, the geological terrain in many other parts of the City does not possess the kinds of potentially high-impact geologic hazards found on the escarpment, and contains large areas that are perfectly suitable for development that do not host large tracts of high quality tree canopy. In short, I urge you to take full advantage of the resources at your disposal, including the geologic atlas, to establish a forward-looking approach that brings the goals of preserving tree canopy and steering development away from geologically unsuitable terrain into alignment. As someone who has served on Planning Commissions, creating win-win solutions by

solving problems before they occur is what planning and zoning are supposed to be all about.

Yours truly,

Tony Fleming, Licensed Professional Geologist
Author, Geologic Atlas of the City of Alexandria

DSP – PRELIMINARY SITE PLAN – 3832-3834 SEMINARY ROAD (STUART'S WALK) – RHS review and comments (RPCA, Natural Resources Division, Natural Lands Management Section) – 10 Mar 2017

I visited this site several times, including during the growing season, beginning in July 2013 while performing vegetation and geologic assessment surveys for the City Flora and Alexandria Geologic Atlas. My review comments of this plan are pursuant to a number of serious concerns with the plan's failing to take into account adequately or at all a number of significant environmental issues which are outlined in the sections below.

Negative Impacts of Proposed Plan on Existing Forested Wetlands on Site (Isolated Wetlands-LOC Area including 50' protective buffer)

- On Sheet 06, Lot 4 shows 150' or more x 15'-wide easement of pipe (8" PVC San.) and associated trenching and soil disturbance intruding within the 50'-buffer (LOC) and through the point source of the forested spring and seepage wetlands. This is wholly unacceptable because it is a) an intrusion into a protected area, in this case a forested wetlands (isolated wetlands), and b) such intrusion and disturbance will result in significant damage to the wetlands, including the predictable likelihood of destroying it altogether (see Figs. 1 and 2).

  Moreover, the construction of a 15'-wide filled trench as positioned above and around the groundwater infiltration and flow of the spring and seepage fan will in effect result in a "French drain", which would intercept water flow and carry it along the floor of the trench, away from and bypassing the groundwater source of the wetlands.

- The "D" junction and associated digging of this pipe route are particularly poorly sited because they are situated just above the springhead and if constructed would likely alter or destroy the groundwater flow.

- Does the City typically permit concrete buildings/foundations (Lot 4) that would literally conjoin a protective buffer, let alone a seepage wetlands? This is hard to imagine and would seem to invite an engineering and environmental quandary of worst case scenarios as far as resource protection and sound engineering practices are concerned.

- A more accurate than presented on Sheet 06 delineation of the footprint of the existing forested wetlands is needed, which will show the 50' buffer likely extending farther northeastward into the structures of Lot 4 than the plan currently depicts. In other words, the footprint of the spring and seepage fan needs to be better delineated, especially given that the developer failed to include this wetland on the original plan submissions, thereby raising considerable doubt as to the quality and accuracy of their site assessments and analyses. The delineation of the wetlands needs to be properly depicted and represented on the plan, and based on ground-truthing delineations drawn to contour lines and not from GIS waypoints (the waypoints I provided in December 2016 are likely many feet off at some points owing to the steep topography of the ravine).

- There are serious concerns for the clear-cutting and removal of existing forest vegetation on the steep ravine slopes and especially Lot 4 above the forested spring and seepage fan. Denuding the slope of canopy trees and other vegetation and digging, filling, and re-contouring the slope will likely excise or redirect the perched aquifer that supplies the groundwater flow, resulting in the loss of the wetlands and rendering the protective buffer meaningless.

- There are numerous concerns for what will comprise the landscaping of the western flank of Lot 4 after the slope is clear-cut and canopy trees are removed, and how plantings, including turf, and their maintenance will affect the protected wetlands. What protection and enforcement will be provided if yard waste and other debris are dumped into the wetlands over the years by owners or their landscapers of a property built too close to a sensitive natural feature? (See Fig. 4) Will plantings of non-native invasive plants be allowed, i.e., English Ivy, *Liriope* spp., etc., and if so, be allowed to spread into the adjacent wetlands?

Fig. 1. The aptly-named "Fern Belt" at the northeastern edge of the former Winkler Botanical Preserve as it appeared in the early 1990s. This pristine wetlands was regionally famous as one of the best remaining examples of the globally rare Fall Line Magnolia Bog community: *Nyssa sylvatica - Magnolia virginiana - (Pinus rigida) / Rhododendron viscosum - Toxicodendron vernix / Smilax pseudochina* Woodland (USNVC: CEGL006219). Photo by R.H. Simmons.

Fig. 2. All that remains of the Magnolia Bog at the edge of the Winkler Botanical Preserve and the footprint of the IDA building at 5110 Mark Center Drive (previous page photo) after the site itself and perched aquifer and seepage flow upslope were destroyed by building construction in 1996. Photo by R.H. Simmons.

Negative Impacts of Proposed Plan on Existing Forest Communities and Vegetation

- Much of the 3832 and 3834 Seminary Road parcels comprise old, remnant Oak-Heath Forest, an intermittent waterway, and a spring and forested seepage wetland, all of which collectively protect and form the headwaters of Strawberry Run. The vegetation and topography of this ravine forest is virtually identical to ones at Stevenson Park at the western edge of Alexandria.

  The vegetation of the ravine is largely old-age Low-Elevation Mixed Oak / Heath Forest: *Quercus alba* - *Quercus* (*coccinea, velutina, montana*) / *Gaylussacia baccata* Forest (USNVC: CEGL008521), with Chestnut Oak by far the dominant tree.

- Lot 4, Lot 3, and the back half of the "New Public Street", as proposed, sit directly atop the oldest, most intact, and least disturbed forest on the entire site. Lot 2 and Lot 1 are much more disturbed, with sizeable areas of non-native invasive plants.

  The plan does appear to include tree preservation areas above Lot 4 at the far southwestern upper slope of the site, as well as along the north edge of the property and a small grove of old White

Oak trees in front of the existing Carrier-Keating residence at 3834 Seminary Road. These will preserve some small amount of native remnant forest trees on site. Unfortunately, the plans call for clear-cutting *all of the best remaining forest on site*, from the old-age Chestnut Oak canopy to the understory trees and shrubs and herbaceous plants of the forest floor (see Fig. 3).

Fig. 3. Old-age Low-Elevation Mixed Oak / Heath Forest: *Quercus alba - Quercus* (*coccinea, velutina, montana*) / *Gaylussacia baccata* Forest (USNVC: CEGL008521) community occupying the north-facing, gravelly slope where Lot 4, Lot 3, and the back half of the "New Public Street" are proposed. Photo by R.H. Simmons.

- All of these trees are *irreplaceable* remnants of the native forest canopy that was once dominant throughout such ravines in the City – and are critical in maintaining native tree canopy density throughout Alexandria. The City recently lost (in 2015-2016 alone) a significant number of old native oaks and other canopy trees and great care needs to be given to the preservation of such remaining trees if we are to maintain the sustainability, health, and beauty of Alexandria's native tree canopy. Post-construction tree plantings as part-mitigation for the loss of old, remnant native trees and forest are not in any way a commensurate substitute for the loss of a living system and Alexandria's existing native biodiversity.

- Surveys conducted by Natural Lands Management revealed no Rare, Threatened, or Endangered (R,T,&E) flora on site, except one occurrence of the Alexandria-rare Frosted Hawthorn (*Crataegus pruinosa* var. *pruinosa*) in the footprint of the proposed "New Public Street".

Nevertheless, this is moot because there is no regulatory protection for vegetation that is *privately owned* in Virginia (and most states in the U.S.), unless it is federally listed or occurs within a wetlands, RPA, or other protective designation.

- While it is in no way a substitute for effective and appropriate preservation of irreplaceable natural resources in situ, in the event construction does proceed it is highly recommended that diggable shrubs and other native plants, including the 2 large Frosted Hawthorn, be rescued and transplanted to the closest appropriate location and site conditions next door at Beth El Hebrew Congregation. Permission of course will have to be granted, but I would be happy to help facilitate this if better solutions for preservation do not arise.

Fig. 4. Recent large-scale dumping of yard debris, including non-native invasive plants, by neighboring residence into the forest at 3834 Seminary Road just above the forested wetlands. Photo by R.H. Simmons.

Negative Impacts of Proposed Plan on the Topography, Soils, and Hydrogeology of the Ravine

- There are concerns for the quality, accuracy, and thoroughness of the developer's site assessments as to existing topographical considerations (slope stability and preservation); placement of soil boring tests; detection of wetlands on site; and the general lack of understanding and appreciation of the entire site as an intermittent stream and headwaters ravine.

It does not appear that much preliminary site evaluation work and analysis was done, or done to a high quality or standard. For example, Natural Lands Management and professional geologist Tony Fleming readily noted the presence of the spring and forested wetlands at the site on first visit to the site in 2013, but this was absent from the developer's preliminary site plan proposal in the fall of 2016 and was only integrated into the revised proposal in early 2017.

- Some links in the *Geologic Atlas of the City of Alexandria, Virginia and Vicinity* of major relevance to accurately discerning the geohydrologic conditions of the site are Plates 4, 5, 6, and 7. The *Geologic Atlas of the City of Alexandria, Virginia and Vicinity* is an exceptional resource offered to all by RPCA on the Alexandria Geology webpage at www.alexandriava.gov/89974.

  In particular, **Plate 6. Map of the Piezometric Surface of the Cameron Valley Sand Member (lower aquifer) of the Potomac Formation and Other Aspects of Urban Hydrogeology** shows the locations of springs and isolated wetlands in the City. **Plate 7. Slope Stability Map** presents the areas in the City with slope stability issues arising from the presence of "marine clay" (Arell clay), which outcrops near the base of the ravine.

  Also, in **Plate 4. Geologic Map of the Potomac Formation** and the **Expanded Explanation of Plate 4**, see the description, classification, and discussion of Arell clay, which is the most massive unit of so-called "marine clay" (misnomer; not marine in origin) in the City, which beautifully holds up the Seminary heights and terrace. (Its weakness though is fracturing/trenching it and digging into it extensively; which thereby exposes sections of it to likely slope failure.)

- It is hard to tell how thoroughly performed and appropriately sited the soil boring tests were and where on site they were conducted. It does not appear that soil borings were taken on the northwest slope of the ravine. Several borings are visible on the gravelly southeast slope bordering Beth El Hebrew Congregation. An accurate assessment and depiction of underlying soil types of all sections of the ravine proposed for development are essential for any plans to follow.

  Of course, great care must be afforded to ensure that no boring equipment or disturbance encroaches into the protected spring and wetlands near the southwest end of the property (LOC).

- There are great concerns for the proposed filling in of sections of the ravine. This must be regarded by all planners and engineers as the most drastic, lowest quality practice of all, and one that would render a site thoroughly degraded. For example, this very scenario was recently approved by the City and constructed at 2208 Russell Road, in which a mostly perennial, natural-channel, spring-fed stream at the foot of a steep ravine was completely filled in over a galvanized pipe for a significant section of its length (see Figs. 5, 6, and 7). It's hard to imagine how this grading permit was ever approved and granted in this day and age in Alexandria.

Fig. 5. Large-scale filling in of the mostly perennial, natural-channel, spring-fed stream at 2208 Russell Road. Pictured here is the outflow of the galvanized pipe that spans the filled segment – a considerable stretch of the ravine. Photo by R.H. Simmons.

Fig. 6. Middle section of filled in stream channel at 2208 Russell Road showing damaged trees and buried toe and lower slope of old-age forested ravine. Photo by R.H. Simmons.

Fig. 7. Upstream intake of spring-fed, mostly perennial stream into galvanized pipe underlying an area at 2208 Russell Road where the stream was filed in with massive amounts of soil. Photo by R.H. Simmons.

- Despite the presence of an artificial stormwater infrastructure that follows the entire length of the ravine within the property boundary (21" reinforced concrete pipe with a number of open-drain catch basins), the entire ravine – its topography, geohydrology, and forested vegetation - functions as a natural channel intermittent stream and is the ultimate headwaters of Strawberry Run. Denuding the ravine of vegetation, especially forest canopy, and filling in sections of it and adding impervious surface (roofs, driveways, "New Public Street", etc.) where none currently exists will have major negative consequences, both on site and for the properties downslope, including waterways. No amount of mitigation can be hoped to offset these effects, particularly because many of the consequences of poorly siting construction in inappropriate sites like ravines will not be immediately evident and will take years to develop.

Prepared by:

Rod Simmons
Natural Resource Manager / Plant Ecologist
Natural Resources Division
Department of Recreation, Parks & Cultural Activities
2900-A Business Center Drive
Alexandria, VA 22314
Rod.Simmons@alexandriava.gov

To: Karl Moritz
Subject: RE: URGENT "Reality Check" (As posted to City Officials and Staff)

From: Karl Moritz
Sent: Wednesday, November 08, 2017 2:21 PM
To: Mark Jinks
Cc: JoAnn Maldonado; Kendra Jacobs; Kristen Walentisch
Subject: Re: URGENT "Reality Check" (As posted to City Officials and Staff)

Certainly.
FYI - while individual Planning Commissioner email addresses are not listed on the website, there is a link to "send a message to the Planning Commission" prominently on the main PC information page.
https://www.alexandriava.gov/planning/info/default.aspx?id=6698
Clicking on that link creates an email prepopulated with the email address.

Sent from my iPhone

On Nov 8, 2017, at 1:40 PM, Mark Jinks <Mark.Jinks@alexandriava.gov> wrote:

Can you make sure that you all send this material to Planning asap if not done already so they can send to the PC? Thanks

From: Allison Silberberg
Sent: Wednesday, November 08, 2017 1:36 PM
To: Loren Needles <loren@lorenneedles.com>
Cc: Lonnie Rich <lcrich@rrbmdk.com>; pat tokarz <jptokarz@comcast.net>; Mark Jinks <Mark.Jinks@alexandriava.gov>; JoAnn Maldonado <JoAnn.Maldonado@alexandriava.gov>; Call Click Connect <CallClickConnect@alexandriava.gov>; Karl Moritz <Karl.Moritz@alexandriava.gov>; Mary Lyman <mslyman@verizon.net>; Kyle Herman <Kyle.Herman@alexandriava.gov>
Subject: Re: URGENT "Reality Check" (As posted to City Officials and Staff)

Dear Loren,

Thank you very much for your note and for sharing your concerns about the city's process and the CCC system. This does sound frustrating. When residents like yourself take the time to send an email and attachments, the Commissioners need to have the reading material in order to ensure that all sides are heard and considered.

Please know that I am sharing your note with our City Manager, Mark Jinks. By sheer coincidence, we are currently looking closely at the CCC system right now. So your input is certainly helpful. As you may know, I am fully committed to civic engagement, very accessible government, and far more transparency. If there is a way to improve our system, we need to consider such a suggestion.

I am surprised to hear that the Planning Commissioners' contact info is not listed on our site. That can be fixed if the contact info is not listed or if it is difficult to find.

In the meantime, please send me the note and any attachments that should go to the Planning Commission, and I will forward it to Mary Lyman right away in order to get it to all the members of the Commission.

Thank you again for taking the time to share your thoughts and concerns. As always, I welcome and encourage your input as well as the input of our residents across the city. I believe that engagement of our residents is crucial to our city's well-being and democracy.

All my best,

Allison

Mayor Allison Silberberg
Alexandria, Virginia
allison.silberberg@alexandriava.gov
o: 703-746-4500
c: 571-319-9948

Cc: Kyle Herman, Executive Assistant

On Nov 8, 2017, at 12:51 PM, Loren Needles <loren@lorenneedles.com> wrote:

Thanks Lonnie.

I just learned CCC cannot confirm my "Reality Check" e-mail with vital attachments has arrived at the Commission and has been distributed to the Commissioners. I can only confirm CCC has received my stuff and it takes an unknown amount of time to pass it on. I am so frustrated with this process I'm about to walk away. It is just not worth it. I have already suffered impossible and cavalier delays during the last hearing. Where is the democracy resident citizen George Washington was fighting for?

Oh yeah, CCC is the way to go? MAYBE FOR CITY INSIDERS BUT CERTAINLY NOT FOR US OUTSIDE THE HALLS OF GOVERNMENT. Unusable, no step by step use instructions, no way to confirm the untended happened.

Alexandria needs to understand the concept of usability testing AND MEANINGFUL CITIZEN communication.

Frankly Lonnie, after all the work, I think my best option is just to walk away from this mess and try to sell the house before it losses it's woodland value. What the hell, its only money.

PS: I can't even find commissioner email addresses that I might use to pass along my thinking. Just another example of hiding from citizens because it is inconvenient to actual talk to them outside of already dysfunctional hearing sessions.

Sadly, Loren

On Nov 8, 2017, at 11:59 AM, Lonnie Rich <lcrich@rrbmdk.com> wrote:

Try this unsigned word doc. May not be the final version, but it is close.

<image001.jpg>

Lonnie C. Rich
Rich Rosenthal Brincefield Manitta Dzubin & Kroeger, LLP
201 N. Union Street, Suite 230
Alexandria, VA 22314
Phone: (703) 299-3440
Fax: (703) 299-3441
Email: LCRich@RRBMDK.com
Website: www.rrbmdk.com

From: Loren Needles [mailto:loren@lorenneedles.com]
Sent: Wednesday, November 08, 2017 11:55 AM
To: Lonnie Rich <lcrich@rrbmdk.com>
Subject: Re: "Reality Check" (As posted to City Officials and Staff)

Hi Lonnie
Thanks but not attached, sorry
Shows up on my Mac as a question mark in a box
L

On Nov 8, 2017, at 11:22 AM, Lonnie Rich <lcrich@rrbmdk.com> wrote:

Attached is the appeal.

<image001.jpg>

Lonnie C. Rich
Rich Rosenthal Brincefield Manitta Dzubin & Kroeger, LLP
201 N. Union Street, Suite 230
Alexandria, VA 22314
Phone: (703) 299-3440
Fax: (703) 299-3441
Email: LCRich@RRBMDK.com
Website: www.rrbmdk.com

From: Loren Needles [mailto:loren@lorenneedles.com]
Sent: Wednesday, November 08, 2017 7:55 AM
To: Lonnie Rich <lcrich@rrbmdk.com>; Jeremy Flachs <jeremy.flachs@flachslaw.com>
Cc: pat tokarz <jptokarz@comcast.net>
Subject: Re: "Reality Check" (As posted to City Officials and Staff)

Thanks Lonnie. That means a lot!

PS: Somehow I'm missing my copy of your appeal.
Appreciate having a fresh copy for my archive.
Thanks
Loren

On Nov 8, 2017, at 7:14 AM, Lonnie Rich <lcrich@rrbmdk.com> wrote:

Good job!

Lonnie

Lonnie C. Rich
Rich Rosenthal Brincefield Manitta Dzubin & Kroeger, LLP
201 N. Union Street, Suite 230
Alexandria, VA 22314
Phone: (703) 299-3440
Fax: (703) 299-3441
Email: LCRich@RRBMDK.com
Website: www.rrbmdk.com

On Nov 8, 2017, at 1:06 AM, Loren Needles <loren@lorenneedles.com> wrote:

Hello All

Here is the message I posted to the Mayor, Council, Planning Commission and P&Z staff.

All--Thank you for your continuing interest and support . Please join me and your other neighbors at the the Planning Commission at City Hall, Second Floor, 7:00 PM. We are #8 on the Docket so it will be at least an hour past 7:00 before we are up. I suggest you stop nearby for dinner and then mosey over to the meeting. Alternately, watch for my eMail alerts on meeting progress. Hope to see you there. The Commission likes to see citizen participation. It helps them choose what is important.
Best Regards, Loren

To City Officials and Staff:
I appreciate all the effort to find a Win-Win solution to the idea of building in the ravine 3832 and 3834 Seminary Road . My property (1115 St Stephens Road) is contiguous with the property so I am deeply concerned.

I have studied all the opinions and suggestions of city staff, commissioners, experts, neighbors and activists as well as the site plans.

I have concluded that most site design alternatives amount to putting lipstick on the pig. It is obvious P&Z has not given sufficient consideration to the scientific circumstances found in the Ravine or to the legal issues.

Neither P&Z nor the Planning Commission has addressed the published professional opinions of Geologist Anthony Fleming or Naturalist Rod Simmons. The important professional opinions of both gentlemen are attached.

I commissioned the first and second Fleming works because I believed we needed to include real science along with the routine default regulations for decision-making guidance. It is helpful Tony volunteered further comment most recently.

I filled a FOIA to better understand the inputs to the city's internal decision-making processes. That surfaced the opinions of City Naturalist Rod Simmons who addressed multiple science-based concerns about the effect of building in the ravine.

I called for more attention to science in the decision-making process because it is so easy to cite so-called applicable regulations without further thought. There is much to complain about such an approach. Here, let's just agree that regulations are written to apply to all circumstances as if all circumstances are the same. In fact, some situations like building in a geologically difficult natural ravine is so far from average that we need to seek out a better understanding of the appropriateness of the regulation in this circumstance of its use.

Professional opinions of Fleming and Simmons are now in full public view. Both are officially connected to the city in some significant way. I believe that requires the city to demonstrate it has objectively and publicly considered both gentleman's professional opinions in choosing the WIN-WIN option.

The "by-right" legal issue is a pivotal concern. It is essentially the common-law principle that a private owner has the right to develop his/her land if it does not harm his neighbors. There are several ways to think about what the city should do.

1) Roll over and approve the site plan once the developer promises to follow all city requirements. That avoids a law suit.

2) Require the developer to adjust the site plan in some small or medium way(s). Requiring costly site plan adjustments in a large way may risk a by-right law suit which the city prefers to avoid.

3) Permanently reject the building plan likely inviting a law suit although there is influential thinking that no judge would ever rule against a city for ensuring quality control for its land and taxpayers. Particularly if there is an acceptable alternative for the landowner. (See #4)

4) Think outside the box.

• Consider the fact is that Birdie Carrier has publicly stated she is very tired of all the delays and is willing to sell to anyone that will pay $3 Million for her 3 acres of woodland.

• And consider the fact that Birdie's sales contract with the developer is contingent on final city site approval. Heirs report they can walk away anytime.

• And consider the fact that a buyer can come along before resolution of all appeals.

• I believe there are wealthy buyers interested in building a large luxury home on 3 wooded acres, 15 minutes from ground zero of world power (Whitehouse, Capitol hill, K-Street, etc.) and tax benefited by a conservation trust can be found.

• Alternatively, I believe one or several conservation trusts can engineer the purchase.

• I also believe that Birdie has been persuaded (even intimidated?) by those who want to destroy the ravine to profitably build on the land that the present plan is better for her. How could that be? She just wants her money and sooner rather than later. Who could blame her for that?

Birdie and her sisters and the grandchildren may well prefer to not destroy their childhood playground. Simple solution: Birdie needs to replace her pro bono lawyer with a different lawyer that does not have a dog in the fight. We all know the relative value of free advice she is now depending on.

Sincerely yours,
Loren Needles
Co-Chair, Coalition for Responsible Stewardship
1115 St Stephens Rd
703-836-5800

<Open LTR Tony Fleming.pdf>
<Rod Simmons (From FOIA).pdf>

<171018 Appeal to Council - filed.pdf>

<Appeal to Council.docx>

To: Karl Moritz
Subject: RE: Reality Check: Karig Estates--3832 and 3834 Seminary Road

From: Allison Silberberg
Sent: Wednesday, November 08, 2017 3:08 PM
To: Justin Wilson <justin.wilson@alexandriava.gov>; Del Pepper <Del.Pepper@alexandriava.gov>; Paul Smedberg <Paul.Smedberg@alexandriava.gov>; John Chapman <john.taylor.chapman@alexandriava.gov>; Willie Bailey <willie.bailey@alexandriava.gov>; Timothy Lovain <timothy.lovain@alexandriava.gov>; Mary Lyman <mslyman@verizon.net>; Nathan Macek <natemacek@hotmail.com>; Stephen Koenig <swkoenig@icloud.com>; mindylyle@comcast.net; Maria Wasowski <mariawasowski@comcast.net>; dwbapc@gmail.com; Melissa McMahon <m.e.b.mcmahon@gmail.com>
Cc: Call Click Connect <CallClickConnect@alexandriava.gov>; Mark Jinks <Mark.Jinks@alexandriava.gov>; Karl Moritz <Karl.Moritz@alexandriava.gov>; Kyle Herman <Kyle.Herman@alexandriava.gov>; Loren Needles <loren@lorenneedles.com>; Lonnie Rich <lcrich@rrbmdk.com>; JoAnn Maldonado <JoAnn.Maldonado@alexandriava.gov>
Subject: Fwd: Reality Check: Karig Estates--3832 and 3834 Seminary Road

Dear Colleagues and the Planning Commission,

Please see the attached email from Mr. Loren Needles with regard to the Karig Estate matter, per Mr. Needles' request. There are also attachments here.

Thank you.

All my best,

Allison

_____

Mayor Allison Silberberg
Alexandria, Virginia
allison.silberberg@alexandriava.gov
o: 703-746-4500
c: 571-319-9948

Cc: Kyle Herman, Executive Assistant

Begin forwarded message:

> **From:** "Loren Needles" <loren@lorenneedles.com>
> **To:** "Call Click Connect" <CallClickConnect@alexandriava.gov>
> **Cc:** "Allison Silberberg" <allison.silberberg@alexandriava.gov>
> **Subject: Reality Check: Karig Estates--3832 and 3834 Seminary Road**
>
> **Attention CCC:**

1) Please forward this message to Mayor, all the Council Members, the Chair and members of the Planning Commission, and Planning Commission staff.

2) Please send me the ticket number.

Thanks

Dear Staff, Council and Planning Comittee

I appreciate all the effort to find a Win-Win solution to the idea of building in the ravine 3832 and 3834 Seminary Road . My property (1115 St Stephens Road) is contiguous with the property so I am deeply concerned.

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• And consider the fact that Birdie's sales contract with the developer is contingent on final city site approval. Heirs report they can walk away anytime.

• And consider the fact that a buyer can come along before resolution of all appeals.

• I believe there are wealthy buyers interested in building a large luxury home on 3 wooded acres, 15 minutes from ground zero of world power (Whitehouse, Capitol hill, K-Street, etc.) and tax benefited by a conservation trust can be found.

• Alternatively, I believe one or several conservation trusts can engineer the purchase.

• I also believe that Birdie has been persuaded (even intimidated?) by those who want to destroy the ravine to profitably build on the land that the present plan is better for her. How could that be? She just wants her money and sooner rather than later. Who could blame her for that?

Birdie and her sisters and the grandchildren may well prefer to not destroy their childhood playground. Simple solution: Birdie needs to replace her pro bono lawyer with a different lawyer that does not have a dog in the fight. We all know the relative value of free advice she is now depending on.

Sincerely yours,
Loren Needles
1115 St stephens Rd
703-836-5800

From: Maya Contreras
Sent: Tuesday, November 07, 2017 11:10 AM
To: Karl Moritz; Robert Kerns; Nathan Randall
Cc: Kristen Walentisch
Subject: Fw: Input to the Chair and Members of the Planning Commission (with routing to the Mayor and Council)
Attachments: Stuarts Walk Karig Estates Report by Professional Geologist Tony Fleming.pdf

FYI

From: Bonnie Petry <bonnie.petry@outlook.com>
Sent: Tuesday, November 7, 2017 11:02 AM
To: Call Click Connect
Cc: Maya Contreras; Allison Silberberg
Subject: Input to the Chair and Members of the Planning Commission (with routing to the Mayor and Council)

Dear Sir or Madam,

Please forward the attached report directly to:
- The Chair and Members of the Planning Commission
- The Mayor
- Members of City Council
- The Director of Planning and Zoning

This report pertains to the current development project under review for 3832 and 3834 Seminary Road (also known as "Karig Estates."

The attached, detailed report by a licensed professional geologist was prepared at the request of concerned citizens and submitted to Planning and Zoning ***last spring*** for consideration in the planning process for the 3832/3834 Seminary Road parcels.

Regrettably, it appears that Planning and Zoning staff has not provided a copy of this to the Planning Commission Members so they can thoroughly carry out their responsibilities in evaluating this project.

As such, I am submitting this report directly through CallClickConnect so that it is routed for the Planning Commission's direct consideration.

This report was prepared by Licensed Professional Geologist Tony Fleming, the same geologist who was contracted to prepare the City of Alexandria's own Geologic Atlas. I am including a link to the city's Geologic Atlas below as this is an important resource that Planning Commission Members should be aware of:(https://www.alexandriava.gov/recreation/info/default.aspx?id=89974)

-- I ***look forward to both (a) receiving a CallClickConnect ticket tracking number and (b) confirmation of receipt by the Planning Commission itself.***

I have included two interested parties on the copy line to ensure this is provided to the planning commission.

Have a great day,

Bonnie Petry
Resident of the City of Alexandria

Summary: Stuart's Walk Geologic Issues
Stuart's Walk Action Team (SWAT)

The stormwater runoff management measures in the developer's site plan are woefully inadequate to address the greatly increased runoff that will be caused by converting a sloping, mature forest to impervious surfaces. It will exacerbate the already problematic "downstream" conditions for residents on Colonel Ellis Drive.

The ravine's steep slopes are underlain by Arell ("marine") clay. Changes to the hydrology at the tops of clay slopes are a well-known risk factor for landslides. Another well-documented trigger for slope failure is the emplacement of artificial fill at the crown of a slope.

The very high shrink-swell potential of the Arell clay typically poses problematic building foundation conditions.

Similar sites that were approved for development in the past by the City experienced foreseeable landslides, foundation failures and water runoff problems with serious financial consequences for the homeowners. Examples include Chelsea Court, Arell Court, and The Point at Landmark

Similar sites that were not developed have been converted into parks and nature preserves. Examples include Monticello Park, Fort Williams Park, the ravines to the northwest and below St. Stephen's and St. Agnes Upper School Campus, Winkler Botanical Preserve, Dora Kelley Nature Park, Rynex Natural Area, and Goat Hill Park.

Please see following *"Review of Geologic Conditions at the Stuart's Walk Site."*

A Review of Geologic Conditions at the "Stuart's Walk" Site (3832-3834 Seminary Road)

Anthony H. Fleming, LPG

The following sections provide an overview of geologic conditions on and around the parcel identified as 3832-3834 Seminary Road, where a development called Stuart's Walk (the "site" or "parcel") is proposed. Most of the information contained herein is summarized from the Geologic Atlas of Alexandria (Fleming, 2016) and several references therein. It is also based on direct field observations made by the author at the site and its surroundings in the course of fieldwork for the preparation of the atlas.

General Setting

The parcel occupies portions of an upland ravine in the headwaters of Strawberry Run (historical name), a large, deeply entrenched tributary of Cameron Run those main stem parallels Fort Williams Drive. The ravine and the south facing hillside it is trenched into are part of the Hospital Escarpment, an oversteepened bluff that separates the highest elevations in the City at the Episcopal Seminary from the lowest along Cameron Run. The site has approximately 33 feet of topographic relief according to the topographic map provided in the site plan, and lies at the top of a longer slope that descends towards Colonel Ellis Drive and Fort Williams Drive.

Most of the site is covered by mature forest and exhibits little evidence of prior soil disturbance. The development plan proposes to establish a public street down the east side of the site and to place four large residences closer to the thalweg of the ravine. The site plan also contemplates major clearing and regrading of the parcel, notably in the mid and upper parts of the ravine, which are intended to be filled to several feet above natural grade. A 15 foot wide sewer easement currently follows the ravine, with a subsurface drain of unknown, but apparently small size having been installed in the past.

Geology

The site straddles the southern edge of the Seminary terrace, one of several upland terraces in the City deposited by the ancestral Potomac River (fig. 1). The terrace consists predominantly of weathered sand and coarse, cobbly gravel, and is about 25 feet thick at the highest point of the site adjacent to Seminary Road. The terrace gravel thins to a feather edge in the lower part of the site.

The terrace gravel overlies the Arell clay member of the Potomac Formation. The Arell clay consists of massive, lacustrine clay that is commonly fractured and jointed, especially on and near steep hillsides. Texturally, the Arell clay consists of about 90-95% clay and fine silt; in unweathered samples, nearly all of the clay minerals consist of highly expandable montmorillonitic clays. The Arell clay is 125-150 feet thick in this part of the Hospital escarpment; it extends from the base of the Seminary terrace to Duke Street in the vicinity of Fort Williams Drive and Quaker Lane, and is responsible for the rugged relief of the escarpment, which is vividly demonstrated by the sharp grade of Ft. Williams Drive.

The Arell clay is the primary landslide maker in the City and is what is historically (but incorrectly) referred to as "marine clay" by geotechnical engineers and city planning staff. The very high shrink-swell potential of the clay typically poses problematic foundation conditions and creates unstable slope conditions.

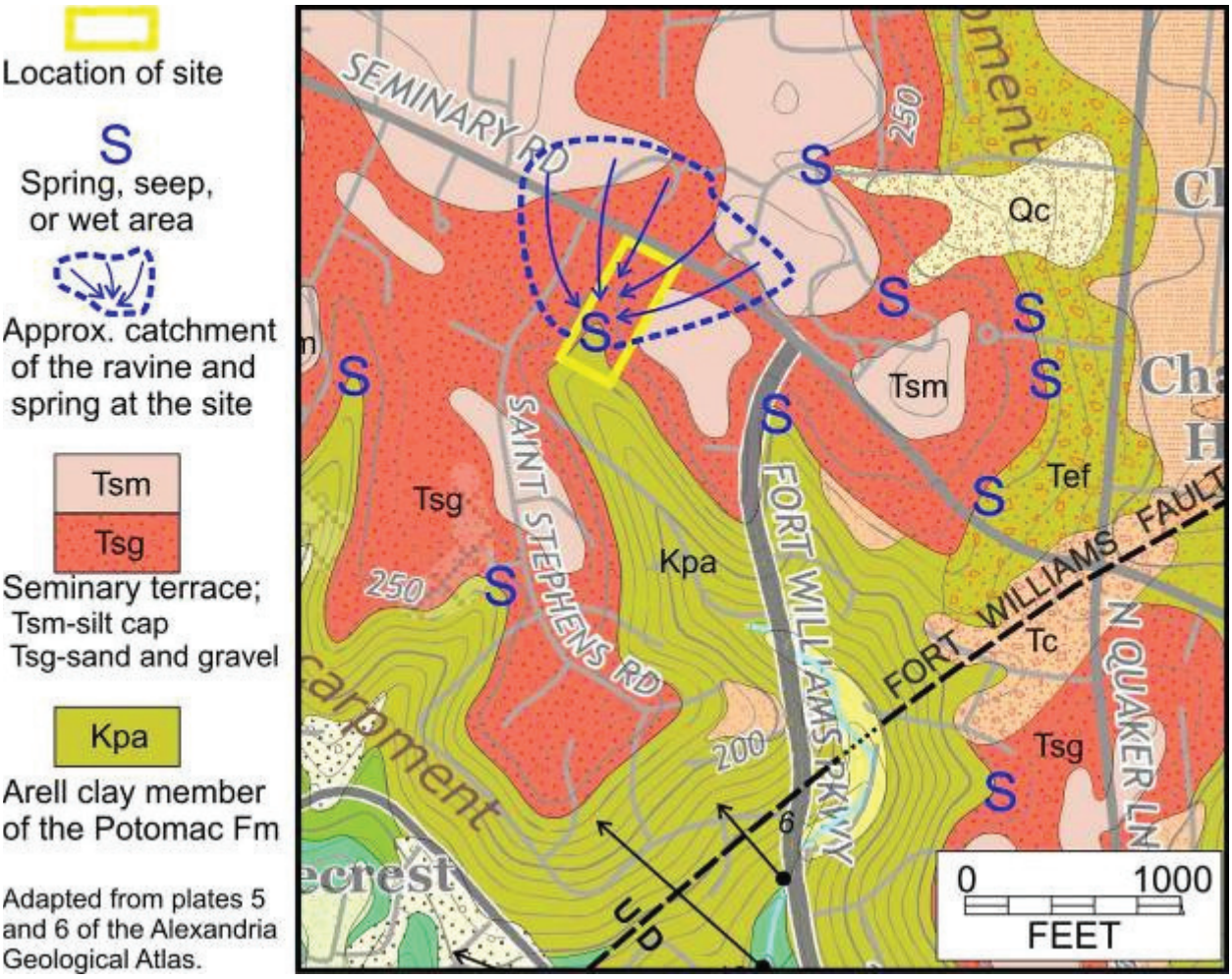

Figure 1. Geologic map of 3832-3834 Seminary Road and vicinity, identifying the major geologic units present at the site and the locations of nearby springs associated with the edge of the Seminary terrace gravel.

The contact between the Arell clay and the overlying terrace gravel undulates locally in response to gravel-filled swales and channels that were cut into the top of the clay as the river deposited the overlying terrace gravel (fig. 2). The contact appears to lie at an elevation of 235 - 245 feet in the area of figure 1. A spring in the lower part of the ravine at the site very likely marks this contact at an elevation of about 240 feet (see **Hydrology**, below). In any case, the majority of the site (above ~240 feet elevation) is underlain by gravel, while the portions below that are underlain by Arell clay at shallow depth.

Hydrology

Surface Water: By the time it enters Fort Williams Park, Strawberry Run is a medium-sized perennial stream with a respectable base flow. Base flow is the portion of stream flow supported by ground water discharge and which occurs consistently, irrespective of the presence or lack of recent precipitation and overland runoff. The base flow of Strawberry Run is derived in part from several headwaters springs along the edge of the Seminary terrace high in the watershed (see Ground Water, below), including the spring at the site.

The ravine at 3832-3834 Seminary Road is the last headwaters ravine of Strawberry Run that remains in an even semi-natural condition: the rest have been filled and altered to various extents by urbanization.

Stream flow in Strawberry Run is dramatically larger following periods of prolonged rainfall or major storms, a characteristic that has contributed to considerable stream erosion further downstream along with damage to property and infrastructure. In response, the city has expended considerable resources to restore sections of the stream within Fort Williams Park to a more natural, less gullied channel profile. High peak flows are partly a function of the steep terrain and clayey, low-permeability soils of the watershed, and partly due to runoff from the sizable urbanized areas (streets, driveways, roofs, lawns) present within the watershed.

The gravelly soil and natural vegetation at the site allow it to absorb and hold a considerable amount of the precipitation that falls on it, before the soil becomes saturated and runoff begins occurring. However, even a natural landscape can absorb only so much water, as the presence of the ravine on this site attests to. While the streambed may be considered "intermittent", there is no question that the ravine itself was (and continues to be) cut by running water. This downcutting action occurs during major hydrological events, such as hurricanes, torrential thunderstorms, and other major precipitation events falling on already saturated ground. **There is little question that flows capable eroding cobble-size particles occur periodically in the ravine on the site; otherwise the ravine would not exist**.

While relatively uncommon, the frequency of these major hydrological events and their impact on the landscape have undoubtedly been increased by urban runoff that drains into the ravine; they will be increased even further by the replacement of the sponge-like forest cover and native soil at the site by impervious and less pervious surfaces. **According to the site plan, more than 50% of the site will experience soil disturbance and even more will have its forest cover replaced by far less permeable kinds of land cover**.

The development plan contemplates taking the surface runoff generated from the majority of the site and attempting to infiltrate it via several small retention basins that amount to much less than 1% of the total site area. This is rather unlikely to be successful during major precipitation events, and **can be expected to lead to noticeably greater stormwater flows leaving this strongly sloping site**. The site plan does not address this issue realistically.

Ground Water: The upland gravel deposits, including the Seminary terrace, are relatively permeable and capable of transmitting sufficient ground water to support shallow, small-capacity residential wells and numerous springs. Many dug and bored wells that served as the primary domestic water supplies for residences prior to the advent of a city water system still exist on the upland terraces today, and **it would not be surprising if such a well was present here, given the age of the home on site**, which precedes the public water supply by several decades.

The permeability of the underlying Arell clay is several orders of magnitude less, however, consequently, the clay acts as a confining unit, or aquitard. This arrangement – permeable gravel over much less permeable clay – is responsible for the perched water table in the terrace gravel (fig. 2). The flat landscape of the terrace minimizes surface runoff and promotes ground-water recharge. This is one reason ravines and other surface drainages are poorly developed in the interior of the Seminary terrace.

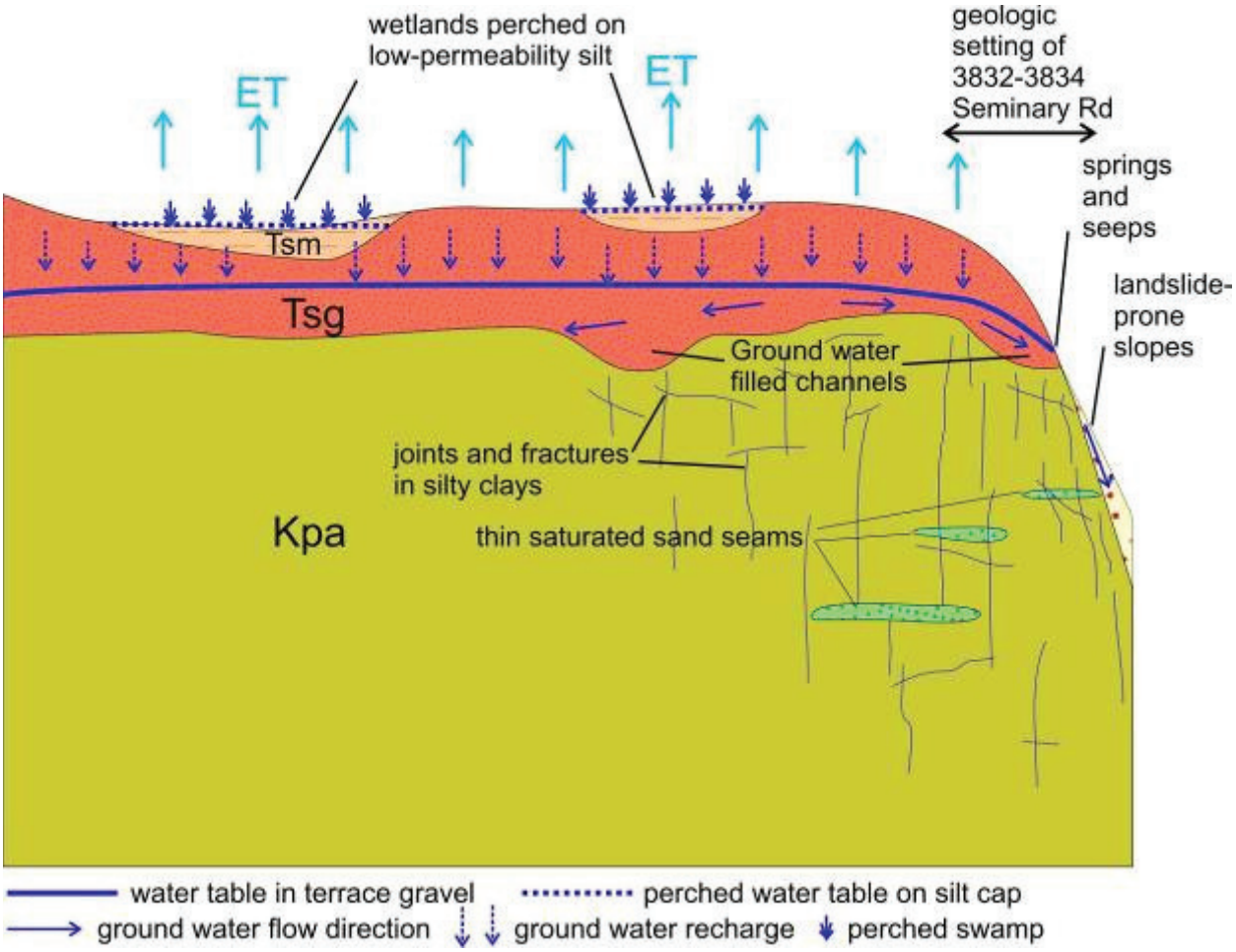

Figure 2. Geologic cross section adapted from figure 6-11 of the Geologic Atlas of Alexandria. The diagram illustrates the main geologic, hydrologic, and geotechnical elements of the Seminary terrace. The site spans the feather edge of the terrace, where the water table in the terrace gravel (Tsg) discharges to the surface and immediately above the oversteepened portion of the Hospital escarpment, where fractured, expandable clay (Kpa) produces unstable, landslide-prone slopes.

During periods of excess precipitation (beyond what is removed through evapotranspiration during the growing season), a water table mound typically develops in the gravel and the water table rises. Ground water flows outward towards the edges of the terrace, where it discharges in springs and seepage faces at the heads of ravines and elsewhere. Over the summer and fall, the water table mound dissipates and the water table falls in response to less precipitation and recharge, higher temperatures, more evapotranspiration, and the ongoing discharge of ground water along the edges of the terrace.

Most of the springs that emanate from the Seminary terrace (fig. 1) are concentrated along the contact with the underlying Arell clay: the low permeability clay forces the ground water to flow laterally until it is intercepted by the hillsides bounding the terrace. The spring present in the bottom of the ravine at the site is of this type. Discharge from the spring follows the seasonal hydrology described above, being greatest from late winter through spring, and gradually diminishing through the summer and fall. Nevertheless, the spring was quite damp during a visit in November, 2014, indicating that ground water was only

inches beneath the surface. **During one of our site visits, a long-time resident (Birdie Carrier) noted of the spring and ravine "I played in it when I was child – it was a wet ditch"**. The presence and location of the spring signify that the poorly permeable Arell clay is present just below and is forcing ground water to the surface at this location.

The spring represents an important water source for wildlife and songbirds, as well as a key site for amphibians and other ground-water dependent organisms, whose breeding habitats are already naturally restricted on the generally dry, south-facing hillsides of the Hospital escarpment and even further diminished by the loss of many other such springs and seeps to urbanization.

As currently proposed, the structures, impervious surfaces, and landscape disturbances associated with the development project are likely to significantly diminish ground water recharge and disrupt the downslope flow of ground water towards the spring; these changes have the potential to cause the spring to largely become dry year round. The inward flow of ground water toward the ravine and its seasonal proximity to the surface may also prove problematic for foundations and basements in the lower portions of the site.

Slope Stability

The site is perched on the edge of the Hospital escarpment, which produces the longest, steepest slopes and the greatest topographic relief in the city (more than 200 feet of elevation change in less than a half mile in some places). This massive, oversteepened escarpment is largely held up by the stout but landslide-prone Arell clay. Several large landslide scars and at least two active landslides were observed on the escarpment during the fieldwork for the Geologic Atlas of Alexandria, and it is virtually certain that the escarpment itself has evolved into its present form and position over thousands of years primarily by the action of landslides.

While landslides are naturally occurring in this geologic setting, both their overall frequency and their specific locations are greatly affected by human alterations to the landscape, particularly those that change the near-surface hydrology. It was noted earlier that the Arell clay is poorly permeable to ground water. Much of what little ground water circulates through the clay does so in fractures and joints – planar partings that commonly open in response to erosional unloading, and thus tend to parallel nearby hillsides (figs. 2 and 3). As is well documented by several case studies in northern Virginia and elsewhere in the greater Washington area (Obermeier, 1984), the fractures commonly act as failure surfaces for landslides. A common trigger involves changes in hydrostatic (ground water) pressure in the fractures, which reduce frictional forces between the blocks on opposite sides, leading to the inception of a landslide.

Another well documented trigger for slope failure is the emplacement of artificial fill at the crown of a slope, such as the filling of the ravine contemplated by the development plan at the site. Not only does this practice place additional stress on the underlying clay, which must support the added mass of the fill material without any concomitant increase in bearing strength, but the fill material can also act like a confining unit over the fractured clay, increasing the hydrostatic pressure in the shallow ground water system. The placement of fill at the crowns of slopes preceded several slope failures observed in the city, including a large landslide below nearby St. Stephens School, which continued for more than a decade until remedial measures finally stabilized the slope.

Figure 3. Left: Heavily fractured Arell clay exposed on a hillside in the Hospital escarpment. Photo by Rod Simmons. Right: Ground water discharging from a fracture (to the left of lens cap) in otherwise nearly impervious clay. When the hydrostatic pressure inside the fracture increases, such as during heavy rains or through human alteration of near-surface hydrology, the fracture dilates. When this process occurs on hillsides, it may lead to a loss of frictional strength sufficient to cause the slope to fail along the fracture. Photo by Tony Fleming.

A particularly problematic aspect of landslides in the kind of geologic terrain found in the city is that they often don't start, or at least become noticeable, until long after the disturbance that triggered them occurred. Obermeier (1984) notes several instances where landslides began years, or even decades, following the emplacement of fill or other disturbances at the crowns of slopes. The landslide at St. Stephens School appears to have had a similar history, lagging behind the causative disturbance (emplacement of fill over the side of a ravine) by a decade or more. This lag time leads to a false sense of security in that everything may appear to be stable for a number of years following a development or other alteration at the crown of a steep slope. By the time the slope failure occurs, however, it is often too late to mitigate the worst of the damage, much less perform a reliable post-mortem evaluation.

The development plan for the site contemplates extensive regrading as well as various structures and activities that are likely to significantly alter near-surface hydrology, both at the site itself and in the underlying clay that holds up the slopes below the site. These are precisely the sorts of activities that are well known to trigger slope failures. Considering that the site is situated at the crown of a major escarpment known to be landslide prone, policy makers would be well advised to think long and hard about the long-term impact of the proposed development on slope stability, particularly in light of the fact that the cost of any

subsequent slope failures will be borne not by the developer or occupants of Stuarts Walk, but by existing residences located below the site on Colonel Ellis Drive who are impacted by it.

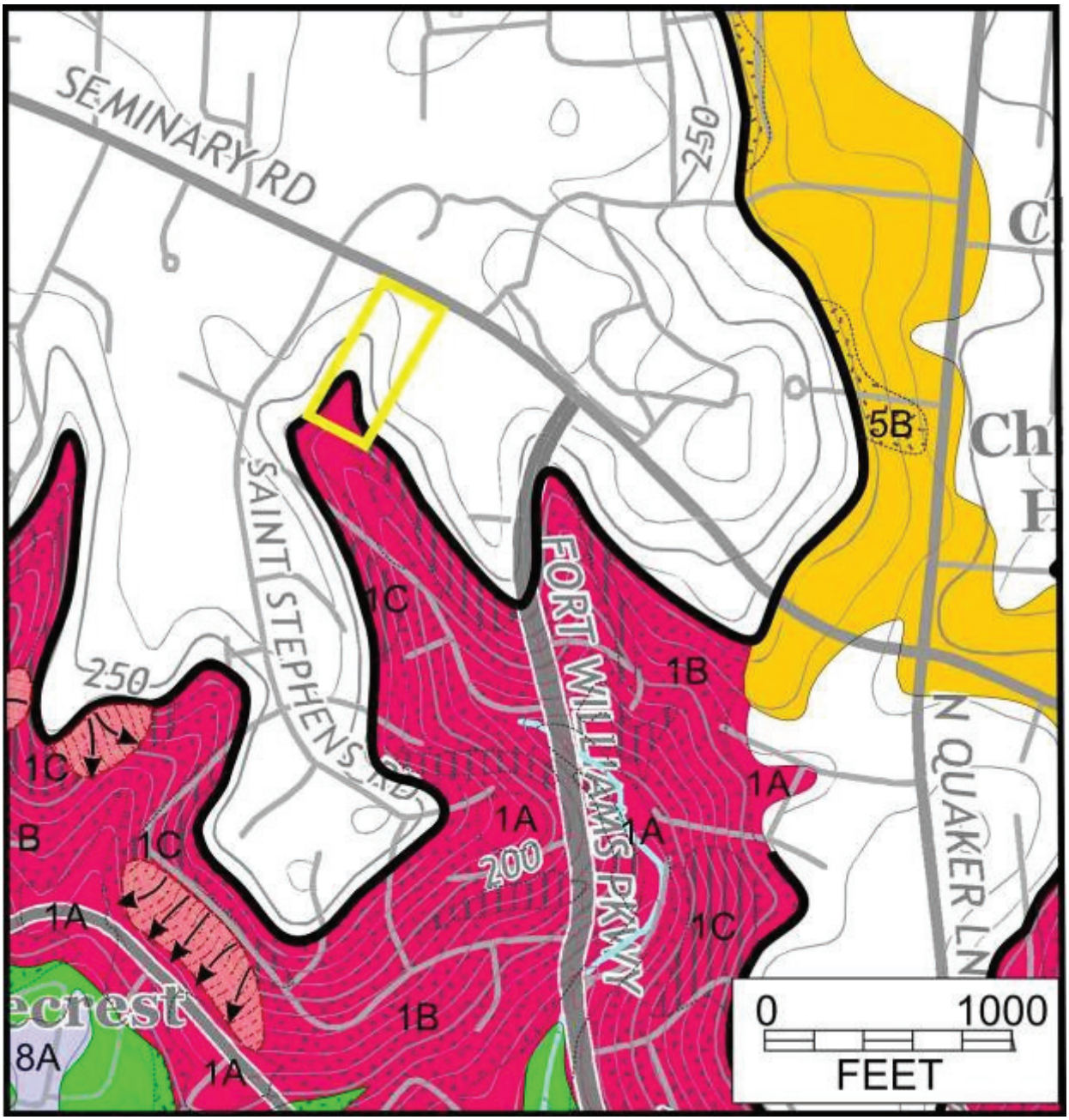

Figure 4. Part of the Slope Stability Map (Plate 7) of the Alexandria Geologic Atlas. The site is identified by the yellow rectangle. The area shown in red is rated as being one of the most susceptible landscapes in the City to landslides, with 1A, 1B, and 1C being differentiated by increasing slope pitch. This assessment is based on the combination of favorable geologic conditions, generally steep slope pitch, and apparent abundance of historical and pre-historical landslides. The arrows in the southwest part of the map area correspond to active landslides or recent landslide scars. The heavy black line represents the feather edge of the terrace gravel at the crown of the slope, a favored setting for the inception of landslides following disturbance (Obermeier, 1984)

References

Fleming, A.H., 2016, Geologic Atlas of the City of Alexandria: www.alexandriava.gov/89974

Johnston, P.M., 1961, Geology and ground-water resources of Washington, D.C. and vicinity – well records and data tables: U.S. Geological Survey Open-File Report 61-79.

Johnston, P.M., 1964, Geology and ground-water resources of Washington, D.C. and vicinity: U.S. Geological Survey Water Supply Paper 1776, 98 p., scale 1:62,500. http://pubs.usgs.gov/wsp/1776/report.pdf

Obermeier, S.F., ed., 1984, Engineering Geology and Design of Slopes for Cretaceous Potomac Deposits in Fairfax County, Virginia, and Vicinity: U.S. Geological Survey Bulletin 1556, 88 p. http://pubs.usgs.gov/bul/1556/report.pdf

Obermeier, S.F., 1979, Slope stability map of Fairfax County, Virginia: U.S. Geological Survey Miscellaneous Field Studies Map MF-1072, scale 1:48,000 http://pubs.usgs.gov/mf/1072/plate-1.pdf

From: Nathan Randall
Sent: Thursday, November 09, 2017 2:13 PM
To: Kristen Walentisch
Subject: FW: Rational Stewartship and Karig Estates

From: Karl Moritz
Sent: Tuesday, November 07, 2017 10:44 AM
To: Mark Jinks; Emily Baker; Yon Lambert; Gregg Fields
Cc: Robert Kerns; Maya Contreras; Nathan Randall
Subject: FW: Rational Stewartship and Karig Estates

Making sure you are in the loop. Note Mayor and Vice Mayor are copied.

Karl W. Moritz
Planning Director | City of Alexandria
Room 2100 | 301 King Street | Alexandria, VA 22314
Desk: 703-746-3804 | Cell: 571-329-3052

From: Deborah Spagnoli [mailto:deborahaspagnoli@gmail.com]
Sent: Tuesday, November 07, 2017 10:30 AM
To: Loren Needles <haystacked@icloud.com>
Cc: Karl Moritz <Karl.Moritz@alexandriava.gov>; Beckhorns (Kirk & Christina) Kdbec@aol.com <Kdbec@aol.com>; Lisa Ring <lisaaring@aol.com>; Nrjennings@comcast.net; Richard Hayes <usna62@verizon.net>; Alexa Glock <alexacordelia@gmail.com> <alexacordelia@gmail.com>; Andrew Macdonald <ahmacdonald@mac.com>; Ann and Steve Reed <AReed@annereedconsulting.com>; ann ellis <annellis51@gmail.com>; Bertha Braddock <Berthabraddock.bb@gmail.com>; Betsy Lohmann <Betsy4005@comcast.net>; Bill Dickinson , William Dickinson <bill.c.dickinson@gmail.com>; Bill Stiers <billstiers@earthlink.net>; bonnie petry <bonnie.petry@outlook.com>; Brenda Wilson <BrendaWilson09@gmail.com>; Brendan Otoole <jbrendanotoole@gmail.com>; Bruce Mccarthy <Mccarthy3912@aol.com>; Cappie Stiers <mcstiers@aol.com>; Carter Flemming <Carterflemming@gmail.com>; Charles Evans <charlese33@gmail.com>; Chris Connell <cvconnell@gmail.com>; Christina Lytle <tinalytle@aol.com>; Christine Michaelis <christinemichaelis@comcast.net>; Cill Dara <cilldara3030@gmail.com>; Cyn <cynthiaevans52@gmail.com>; Dave Cavanaugh <dacava1@yahoo.com>; Dave Levy <bentbiking@yahoo.com>; David Speck <dgspeck@gmail.com>; doctor Stoll <krkstoll@yahoo.com>; Eduardo Han <eduhan@yahoo.com>; Eileen Wallace <egwallace@verizon.net>; Elizabeth Wright <wright22304@gmail.com>; Goree, Paul F - WASHINGTON DC <paul_goreeiii@ml.com>; Denis Otoole <irishoat@aol.com>; Janice Lachance <Janice@janicelachance.com>; Jeremy.Flachs@flachslaw.com; jlepanto@bostonpacific.com; Joan Otoole <joandotoole@gmail.com>; John and Nancy Scruggs <nancywscruggs@gmail.com>; John Scruggs <Jscruggs3929@gmail.com>; pat tokarz <jptokarz@comcast.net>; kirk.beckhorn <kirk.beckhorn@squirepb.com>; Leslie Pierre <lesliepierre@aol.com>; Lonnie Rich <lcrich@rrbmdk.com>; Loren R R. Needles <Loren@lorenneedles.com>; Lynette Goree <lgoree6@gmail.com>; Marianne and Buck Coates <m-b-coates@comcast.net>; Nancy Connell <neconnell@gmail.com>; Nina Schwartz <artstop@impulsegraphics.com>; Patty collette <Pattycollette@me.com>; Rebecca Hierholzer at Newport villiage. <Magicbeca@aol.com>; Robert McLaughlin <robertmclaughlin2011@gmail.com>; Shirley Downs <shirleydowns@verizon.net>; Steve Reed <sreed@steptoe.com>; Steven <stevenakey@hotmail.com>; Suzanne McLaughlin <smclaughlin8@gmail.com>; Tokarz Lynn <lhtokarz@gmail.com>; WALTER LOHMAN <wlohmann@kirkland.com>; Allison Silberberg <allison.silberberg@alexandriava.gov>; juston.wilson@alexandriava.gov; Tony Fleming <loneswantony@cs.com>
Subject: Re: Rational Stewartship and Karig Estates

History is repeating itself. Our current expert will testify and the city will ignore the testimony -- and the homeowners on Colonel Ellis and beyond will have lots of problems and issues as a result. Which is what happened in the 70's -- the city heard from a similar expert with the US Soil Conservation Service and engineers in its own department opposed the development (see article below) but ignored that evidence and allowed the building anyway.

The issue is politics. And money. I know this group has asked for other residents who have had problems with their homes as a result of the soil and water to come forward with their stories. How many do you have? Those homeowners (including myself) should join together to tell their stories to the city (and add up the related costs associated with the problems) (and go against Pulte too). Public PR nuisances - generating strategically messaged negative press will get a response.

Alexandria Heads Knew of Unstable Clay in Hilly Area

By Thomas Grubisich May 26, 1978

Alexandria city officials agreed nine years ago to allow homes to be built on a hilly 88-acre tract that is now subject to severe earth slides despite warnings that the land there was likely to slide.

Both City Planning Commission and City Council members overruled the objections of city engineers and planners and agreed to allow rezoning of the site in the Seminary Ridge subdivision.

The action allowed a developer to begin building single-family homes on the land, where recent land slides have threatened a $165,000 home and where other homes have lost large sections of their yards to slippage.

Must Reads

5 stories you can't afford to miss, every Saturday.

City officials have disclaimed any responsibility for the slides and have said that the problem in an issue between the homeowners and the builder.

Yet on July 29, 1969, city records show that Glenn B. Anderson, a district conservationist with the Northern Virginia office of the U.S. Soil Conservation Service gave city officials notice of potential trouble with the soils. In his letter, Anderson noted that the tract contained soils that "caused serious slippage problems in nearby areas" and cautioned that the site was "highly susceptible to slips and slides.

His warning was echoed by a city planning report that cautioned that the yards in the proposed development "will require constant maintenance to keep them from sliding."

But these warnings were unanimously rejected by the planning commission and the council, which approved the rezoning.

The developer, Pulte Home Corp., had originally considered building town houses on the land, with an old Civil War fortification there being preserved. When neighboring citizen associations voiced strong opposition to the

town houses, Plute went before the city with a new proposal calling for single-family houses - a plan that would destroy the old Fort Worth as well as permit construction on steep slopes that had been called "highly unstable."

The neighbors who had been angry over the town house plan backed off their oppostion and the council approved the single-family housing plan. "I guess the citizens' associations had more clout than we did," said Dayton L. Cook, who was then the city's engineer and one of the opponents of the single-family home development plan.

Alexandria City Manager Douglas Harman, who had earlier disclaimed city responsibility for the troubles with the lands said yesterday he was "not in a position to comment" on the 1969 city reports. "I was not here" at that time, he said. "What the staff had to say is a matter of record."

Residents of the Seminary Ridge development whose homes have been threatened by the slides have been furious at the city for allowing the homes to be built on soils containing highly unstable marine clay, which runs through the tract.

Officials of Pulte Home, located in suburban Maryland, could not be reached for comment yesterday.

Marine clay "is a plastic clay with a high liquid limit causing it to be very unstable," Anderson, the conservationist told the city in his 1969 letter. "When saturated, such soils are highly susceptible to slips and slides," he said.

Cook, now city director of transportation and environmental services, said he opposed the rezoning - which permitted 234 houses throughout the tract - and favored instead town houses clustered on a relatively flat area, with the steep sections and the old Civil War fortification preserved.

At the 1969 hearings the question of whether the old fort would be preserved was as much an issue as the soils. M. W. Belcher Jr., a member of the Seminary Hills Citizens Association and opponent of the premliminary plan calling for town houses, said yesterday: "It would have been out of keeping with the area. This is a single-family-home community . . . I feel no regret that the fort was bulldozed. I don't think it would have been practical to preserve it."

However, the staff report that went to the Planning Commission in 1969 said: "It should be noted that this fort is better preserved than was Fort Ward prior to its restoration."

On Tue, Nov 7, 2017 at 1:17 AM, Loren Needles <haystacked@icloud.com> wrote:

> All:
> I'm most pleased to see Tony Fleming has weighed in. He is the expert among us that can best address the problem. He is nationally recognized by his professional peers. The US Geological Survey agency has placed his Geological Atlas of Alexandria on its Web Site as a best practice example for municipalities. See one atlas plate at www.alexandriava.gov/8997.
>
> There is no evidence that Fleming's reports on marine clay, slope stability and hydrology have been considered by the city in the Karig Estates matter although it is duty-bound to do so . After all, the city commissioned and paid for the Atlas and placed it on its own web site. Why now ignore the facts it illustrates?
>
> Loren
>
> On Nov 6, 2017, at 2:52 PM, Tony Fleming <loneswantony@cs.com> wrote:

Gentlemen:

Moving the 4th house a few tens of feet is basically just rearranging the deck chairs on the Titanic. It doesn't fundamentally reverse the hydrologic disruptions that risk destablizing the slope at the base of the site. It doesn't substantively reduce the volume of stormwater runoff that the site will generate during major storms. And it doesn't avert the placement of sanitary and storm sewers through the wetland/spring (or its buffer) and down the fragile marine clay slope into Pat's backyard.

Assuming all else fails, I would push very hard for the replacement of the proposed sewer line with a lift station that directs the subdivision's sewage to the sewer main along Seminary Road.

I regret not being able to attend the meeting, but my doctor cautioned against flying or otherwise taking very long trips for now due to a blood clot I experienced a few months ago. I'm fine now and suspect it was a pure fluke from being forced to sit for 15 hours, but better not to take chances.

Below is the commentary I submitted to the mayor, council, and plan commission via callclickconnect@alexandriava.gov. It's a slightly more succinct version of the one I distributed to our group previously. I also submitted a much shorter version as a LTE to both local papers.

Tony Fleming
"Civilization exists by geological consent, subject to change without notice" - Will Durant

Karig Estates Development on Geologically Unstable Hillside Puts Residents at Unacceptable
Risk November 5, 2017

I strongly urge the city to reconsider its pending approval of the development project known as "Karig Estates" at 3832-3834 Seminary Road, which lies in a high landslide risk area. The current proposal to grade, fill, and squeeze four large homes into one of the last remaining natural ravines on the largest and most unstable escarpment in the city will disrupt a major hydrologic artery on a steep marine clay slope, directly above an established neighborhood that is already experiencing stormwater and slope stability issues. This is playing with fire: disturbances of the soil and natural hydrology at the crowns of marine clay slopes are a well known trigger for landslides and other ground failures that can damage or destroy buildings, property, and infrastructure, something I have personally observed in the city. Some background is in order.

From 2006 to 2008, and again from 2014 to 2016, I conducted research on the geology, hydrology, and geologic hazards in the City of Alexandria. This included compiling hundreds of geotechnical reports in the City's archive which detail subsurface conditions in nearly every neighborhood. I also walked literally every street, alley, park, and the yards of willing landowners, observing the geologic materials and processes that have acted over millennia to produce the modern landscape. The results were ultimately incorporated into the various maps, documents, and databases that comprise the online Geologic Atlas of Alexandria (www.alexandriava.gov/89974). I hope you have availed yourself of this unique resource, which among other things is intended to help planners, builders, engineers, and policy makers identify and address the geologic conditions and hazards in the City.

Among the places I visited during my research are the property known as Karig Estates and many neighboring properties. All of these places are situated on the Hospital Escarpment, a massive, oversteepened bluff as much as 200 feet high underlain by thick

"marine clay" and dotted with abundant evidence of both prehistorical and modern landslides and debris flows. You can see some of this evidence yourselves, simply by driving up almost any city street that traverses the escarpment and observing the commonly rippled pavement and areas of sharply leaning trees, all of which signify an unstable hillside actively moving downhill.

The mechanics of slope failures in this terrain are well documented and will not be repeated here. A summary can be found in the delineation of landslide hazard areas on Plate 7 of the Geological Atlas and in several references therein. Suffice to say that many case studies in northern Virginia, some published by the US Geological Survey and others observed by me during my walkabouts in the city, show: 1) a strong spatial correlation between landslides and developments sited on or too close to the edges of inherently unstable marine clay slopes; and 2) landslides are commonly triggered by disruption of the natural hydrology at the tops of slopes, which changes the water pressure in the marine clay and overlying materials. This process is often amplified by hurricanes and other low-frequency but high impact precipitation events that occur with some regularity in the region.

There are many examples of this in Alexandria, where excavations, grading, and placement of structures and artificial fill at the tops of escarpments at various times during the last several decades have resulted in the failure of the slopes below. In one instance about a quarter mile from the Karig Estates site, a prominent landslide resulted from the emplacement of artificial fill along the side of a ravine similar to the one on the Karig site; the landslide persisted for the better part of a decade before it was finally remediated at considerable cost, but not before traveling hundreds of feet downslope and severely damaging more than an acre of forest and sending many tons of sediment downstream. It was fortunate no residences or other structures were situated below. The geotechnical report available in the city archive tells the tale.

Such isolation from neighboring structures is not the case with the Karig Estates property, which is perched on the crown of a steep slope that descends to the homes along Colonel Ellis Drive, a neighborhood that already experiences problems with both unstable backyard slopes and wetness during large storms. Moreover, the development of this site as currently contemplated cannot help but severely disrupt shallow groundwater flow and an ecologically important spring, because it involves grading and emplacing a significant mass of fill within a prominent ravine, which represents a major hydrologic artery directly above the steepest section of the slope. Coupled with the conversion of some 2 to 3 acres of mature forest (which has stabilized this part of the slope for centuries) into impervious and less pervious surfaces, the development is expected to dramatically transform the hydrology of both the site and the adjacent slope below, greatly heightening the risk of destabilizing the slope and putting the subjacent landowners and their properties in jeopardy from both debris flows and damaging amounts of stormwater runoff.

I reviewed the site plan and its accompanying geotechnical report and found them woefully deficient in addressing these issues. The authors seem blissfully unaware of the geologic setting and history of landslides in the geologic terrain in which the site resides. In fact, neither the site plan nor comments provided by city staff acknowledge the potential for off-site impacts; instead, they treat this steeply-sloping site as if it exists in a geological vacuum. I assure you, it does not: geological processes do not respect property boundaries, most especially when they involve landslides and stormwater runoff moving down steep slopes. A few small infiltration basins situated in or just above nearly impermeable clay are not going to hold back the runoff from a major storm – much less that from a hurricane. It is not a question of *if* these kinds of storms will occur, the only question is, *when*? Once that question is answered, then the questions become, *what happens if the slope fails?* and *who is responsible - the developer, the city, or the neighbors who will bear the brunt of the resulting debris flows and stormwater runoff?* This question is especially concerning to adjacent landowners in light of the fact that landslides may not initiate until years or decades after the causative disturbance.

Given the well documented hazards associated with building on the Hospital Escarpment, policymakers would be well advised to consider these questions now and not after the fact, when remediating the consequences will be significantly more costly and disruptive.

This leads to a last point: it behooves the City to take a proactive approach in how it deals with the closely intertwined questions of geologically problematic terrain and open space preservation, rather than the reactive approach so apparent in the current debacle regarding the Karig Estates site, which serves no one well and works at cross purposes to the City's stated development, environmental, and quality of life goals (e.g., open space, expanded protection for ravines, Eco City, 40% tree canopy, etc.)

A first step towards bringing all of these competing goals into alignment is to steer high impact development away from geologically fragile places like the Hospital Escarpment, which, not coincidentally, contains some of the most extensive remnant tree canopy and open space in the city. As someone who has served as both staff and consultant to plan commissions, I observe that creating win-win solutions by averting problems before they occur is what planning and zoning are supposed to be all about. I welcome your questions. Yours truly,

Tony Fleming, Licensed Professional Geologist
Author, Geologic Atlas of the City of Alexandria
260-693-3257 loneswantony@cs.com

-----Original Message-----
From: pat tokarz <jptokarz@comcast.net>
To: Jeremy.Flachs <Jeremy.Flachs@Flachslaw.com>; Lonnie Rich <lcrich@rrbmdk.com>
Cc: Loren Needles <Loren@lorenneedles.com>; Tony Fleming <loneswantony@cs.com>
Sent: Mon, Nov 6, 2017 11:29 am
Subject: FW: Karig Estates

As Predicted. One neighbor's testimony vs. all the science.

Pat

From: Karl Moritz [mailto:Karl.Moritz@alexandriava.gov]
Sent: Monday, November 06, 2017 9:38 AM
To: pat tokarz
Cc: Mike Ibrahim; Allison Silberberg
Subject: RE: Karig Estates

Hello,

Thank you for your thoughtful note; it is much appreciated. The applicant has submitted an amendment to the approved site plan which moves the fourth home closer to Seminary Road. The Planning Commission will be considering this proposed amendment at its November 9 hearing. The staff report on this proposed amendment, which recommends approval, is located here.

You may recall testimony at the hearing from the adjacent neighbor to the west, who opposed moving the first house closer to Seminary. The applicant's proposal achieves both the objective of moving the fourth house closer and leaving the first house where it is in the approved plan.

Thanks again,

Karl

Karl W. Moritz
Planning Director | City of Alexandria
Room 2100 | 301 King Street | Alexandria, VA 22314
Desk: 703-746-3804 | Cell: 571-329-3052

From: pat tokarz [mailto:jptokarz@comcast.net]
Sent: Saturday, November 04, 2017 3:30 PM
To: Karl Moritz <Karl.Moritz@alexandriava.gov>
Cc: Mike Ibrahim <mibrahim@alliancerealestatedevelopment.com>; Allison Silberberg <allison.silberberg@alexandriava.gov>
Subject: Karig Estates

Dear Mr. Moritz
Thank you for your service to the city.
I have asked the Mayor to ask the Pand Z Commission to re-consider their decision late at night on Oct. 3/4th that the movement of the four houses closer to Seminary road could not be considered as an amendment to the site plan as passed, as were the missing subdivision plan, the forgotten motion to name a street and the plan to move and re-configure the fourth house.
If she were successful and Mike Ibraham could quickly submit an amendment showing the planned movement and plans to connect the sanitary sewer to the Seminary road sewer (thus protecting more trees and the wetlands), how quickly could your staff render a decision ?
The benefits to the environment and the improvements in slope stability and decreased water runoff warrant all of us to do the best we can to improve this development as much as possible. If you and Mike could work together in a reasonable time frame, the citizens of Alexandria would greatly benefit.
Thank you for your help in this matter.

Pat Tokarz,
3937 Col. Ellis Ave.
Alexandria.

From: Nathan Randall
Sent: Thursday, November 09, 2017 2:13 PM
To: Kristen Walentisch
Subject: FW: Rational Stewartship and Karig Estates

From: Karl Moritz
Sent: Tuesday, November 07, 2017 9:14 AM
To: Maya Contreras; Nathan Randall
Cc: Robert Kerns
Subject: FW: Rational Stewartship and Karig Estates

Making sure you have this.

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From: Loren Needles [mailto:haystacked@icloud.com]
Sent: Tuesday, November 07, 2017 1:17 AM
To: Karl Moritz <Karl.Moritz@alexandriava.gov>; Beckhorns (Kirk & Christina) Kdbec@aol.com <Kdbec@aol.com>; Lisa Ring <lisaaring@aol.com>; Nrjennings@comcast.net; usna62@verizon.net; Alexa Glock <alexacordelia@gmail.com> <alexacordelia@gmail.com>; Andrew Macdonald <ahmacdonald@mac.com>; Ann and Steve Reed <AReed@AnneReedConsulting.com>; ann ellis <annellis51@gmail.com>; Bertha Braddock <Berthabraddock.bb@gmail.com>; Betsy Lohmann <Betsy4005@comcast.net>; Bill Dickinson , William Dickinson <bill.c.dickinson@gmail.com>; Bill Stiers <billstiers@earthlink.net>; bonnie petry <bonnie.petry@outlook.com>; Brenda Wilson <BrendaWilson09@gmail.com>; Brendan Otoole <jbrendanotoole@gmail.com>; Bruce Mccarthy <Mccarthy3912@aol.com>; Cappie Stiers <mcstiers@aol.com>; Carter Flemming <Carterflemming@gmail.com>; Charles Evans <charlese33@gmail.com>; Chris Connell <cvconnell@gmail.com>; Christina Lytle <tinalytle@aol.com>; Christine Michaelis <christinemichaelis@comcast.net>; Cill Dara <cilldara3030@gmail.com>; Cyn <cynthiaevans52@gmail.com>; Dave Cavanaugh <dacava1@yahoo.com>; Dave Levy <bentbiking@yahoo.com>; David Speck <dgspeck@gmail.com>; debora h aspagnol <deborahaspagnoli@gmail.com>; doctor Stoll <krkstoll@yahoo.com>; Eduardo Han <eduhan@yahoo.com>; Eileen Wallace <egwallace@verizon.net>; Elizabeth Wright <wright22304@gmail.com>; Goree, Paul F - WASHINGTON DC <paul_goreeiii@ml.com>; Denis Otoole <irishoat@aol.com>; Janice Lachance <Janice@JaniceLachance.com>; Jeremy.Flachs@Flachslaw.com; jlepanto@bostonpacific.com; Joan Otoole <joandotoole@gmail.com>; John and Nancy Scruggs <nancywscruggs@gmail.com>; John Scruggs <Jscruggs3929@gmail.com>; pat tokarz <jptokarz@comcast.net>; kirk.beckhorn <kirk.beckhorn@squirepb.com>; Leslie Pierre <lesliepierre@aol.com>; Lonnie Rich <lcrich@rrbmdk.com>; Loren R R. Needles <Loren@lorenneedles.com>; Lynette Goree <lgoree6@gmail.com>; Marianne and Buck Coates <m-b-coates@comcast.net>; Nancy Connell <neconnell@gmail.com>; Nina Schwartz <artstop@impulsegraphics.com>; Patty collette <Pattycollette@me.com>; Rebecca Hierholzer at Newport villiage. <Magicbeca@aol.com>; Robert McLaughlin <robertmclaughlin2011@gmail.com>; Shirley Downs <shirleydowns@verizon.net>; Steve Reed <sreed@steptoe.com>; Steven <stevenakey@hotmail.com>; Suzanne McLaughlin <smclaughlin8@gmail.com>; Tokarz Lynn <lhtokarz@gmail.com>; WALTER LOHMAN <wlohmann@kirkland.com>; Allison Silberberg <allison.silberberg@alexandriava.gov>; juston.wilson@alexandriava.gov; Tony Fleming <loneswantony@cs.com>
Subject: Rational Stewartship and Karig Estates

All:
I'm most pleased to see Tony Fleming has weighed in. He is the expert among us that can best address the problem. He is nationally recognized by his professional peers. The US Geological Survey agency has placed his Geological Atlas of Alexandria on its Web Site as a best practice example for municipalities. See one atlas plate at www.alexandriava.gov/8997.

There is no evidence that Fleming's reports on marine clay, slope stability and hydrology have been considered by the city in the Karig Estates matter although it is duty-bound to do so . After all, the city commissioned and paid for the Atlas and placed it on its own web site. Why now ignore the facts it illustrates?

Loren

On Nov 6, 2017, at 2:52 PM, Tony Fleming <loneswantony@cs.com> wrote:

Gentlemen:

Moving the 4th house a few tens of feet is basically just rearranging the deck chairs on the Titanic. It doesn't fundamentally reverse the hydrologic disruptions that risk destablizing the slope at the base of the site. It doesn't substantively reduce the volume of stormwater runoff that the site will generate during major storms. And it doesn't avert the placement of sanitary and storm sewers through the wetland/spring (or its buffer) and down the fragile marine clay slope into Pat's backyard.

Assuming all else fails, I would push very hard for the replacement of the proposed sewer line with a lift station that directs the subdivision's sewage to the sewer main along Seminary Road.

I regret not being able to attend the meeting, but my doctor cautioned against flying or otherwise taking very long trips for now due to a blood clot I experienced a few months ago. I'm fine now and suspect it was a pure fluke from being forced to sit for 15 hours, but better not to take chances.

Below is the commentary I submitted to the mayor, council, and plan commission via callclickconnect@alexandriava.gov. It's a slightly more succinct version of the one I distributed to our group previously. I also submitted a much shorter version as a LTE to both local papers.

Tony Fleming
"Civilization exists by geological consent, subject to change without notice" - Will Durant

Karig Estates Development on Geologically Unstable Hillside Puts Residents at Unacceptable Risk November 5, 2017

I strongly urge the city to reconsider its pending approval of the development project known as "Karig Estates" at 3832-3834 Seminary Road, which lies in a high landslide risk area. The current proposal to grade, fill, and squeeze four large homes into one of the last remaining natural ravines on the largest and most unstable escarpment in the city will disrupt a major hydrologic artery on a steep marine clay slope, directly above an established neighborhood that is already experiencing stormwater and slope stability issues. This is playing with fire: disturbances of the soil and natural hydrology at the crowns of marine clay slopes are a well known trigger for landslides and other ground failures that can damage or destroy buildings,

property, and infrastructure, something I have personally observed in the city. Some background is in order.

From 2006 to 2008, and again from 2014 to 2016, I conducted research on the geology, hydrology, and geologic hazards in the City of Alexandria. This included compiling hundreds of geotechnical reports in the City's archive which detail subsurface conditions in nearly every neighborhood. I also walked literally every street, alley, park, and the yards of willing landowners, observing the geologic materials and processes that have acted over millennia to produce the modern landscape. The results were ultimately incorporated into the various maps, documents, and databases that comprise the online Geologic Atlas of Alexandria (www.alexandriava.gov/89974). I hope you have availed yourself of this unique resource, which among other things is intended to help planners, builders, engineers, and policy makers identify and address the geologic conditions and hazards in the City.

Among the places I visited during my research are the property known as Karig Estates and many neighboring properties. All of these places are situated on the Hospital Escarpment, a massive, oversteepened bluff as much as 200 feet high underlain by thick "marine clay" and dotted with abundant evidence of both prehistorical and modern landslides and debris flows. You can see some of this evidence yourselves, simply by driving up almost any city street that traverses the escarpment and observing the commonly rippled pavement and areas of sharply leaning trees, all of which signify an unstable hillside actively moving downhill.

The mechanics of slope failures in this terrain are well documented and will not be repeated here. A summary can be found in the delineation of landslide hazard areas on Plate 7 of the Geological Atlas and in several references therein. Suffice to say that many case studies in northern Virginia, some published by the US Geological Survey and others observed by me during my walkabouts in the city, show: 1) a strong spatial correlation between landslides and developments sited on or too close to the edges of inherently unstable marine clay slopes; and 2) landslides are commonly triggered by disruption of the natural hydrology at the tops of slopes, which changes the water pressure in the marine clay and overlying materials. This process is often amplified by hurricanes and other low-frequency but high impact precipitation events that occur with some regularity in the region.

There are many examples of this in Alexandria, where excavations, grading, and placement of structures and artificial fill at the tops of escarpments at various times during the last several decades have resulted in the failure of the slopes below. In one instance about a quarter mile from the Karig Estates site, a prominent landslide resulted from the emplacement of artificial fill along the side of a ravine similar to the one on the Karig site; the landslide persisted for the better part of a decade before it was finally remediated at considerable cost, but not before traveling hundreds of feet downslope and severely damaging more than an acre of forest and sending many tons of sediment downstream. It was fortunate no residences or other structures were situated below. The geotechnical report available in the city archive tells the tale.

Such isolation from neighboring structures is not the case with the Karig Estates property, which is perched on the crown of a steep slope that descends to the homes along Colonel Ellis Drive, a neighborhood that already experiences problems with both unstable backyard slopes and wetness during large storms. Moreover, the development of this site as currently contemplated cannot help but severely disrupt shallow groundwater flow and an ecologically important spring, because it involves grading and emplacing a significant mass of fill within a prominent ravine, which represents a major hydrologic artery directly above the steepest section of the slope. Coupled with the conversion of some 2 to 3 acres of mature forest (which has stabilized this part of the slope for centuries) into impervious and less pervious surfaces, the development is expected to dramatically transform the hydrology of both the site and the adjacent slope below, greatly heightening the risk of destabilizing the slope and putting the subjacent landowners and their properties in jeopardy from both debris flows and damaging amounts of stormwater runoff.

I reviewed the site plan and its accompanying geotechnical report and found them woefully deficient in addressing these issues. The authors seem blissfully unaware of the geologic setting and history of landslides in the geologic terrain in which the site resides. In fact, neither the site plan nor comments provided by city staff acknowledge the potential for off-site impacts; instead, they treat this steeply-sloping site as if it exists in a geological vacuum. I assure you, it does not: geological processes do not respect property boundaries, most especially when they involve landslides and stormwater runoff moving down steep slopes. A few small infiltration basins situated in or just above nearly impermeable clay are not going to hold back the runoff from a major storm – much less that from a hurricane. It is not a question of *if* these kinds of storms will occur, the only question is, *when*? Once that question is answered, then the questions become, *what happens if the slope fails?* and *who is responsible - the developer, the city, or the neighbors who will bear the brunt of the resulting debris flows and stormwater runoff?* This question is especially concerning to adjacent landowners in light of the fact that landslides may not initiate until years or decades after the causative disturbance.

Given the well documented hazards associated with building on the Hospital Escarpment, policymakers would be well advised to consider these questions now and not after the fact, when remediating the consequences will be significantly more costly and disruptive.

This leads to a last point: it behooves the City to take a proactive approach in how it deals with the closely intertwined questions of geologically problematic terrain and open space preservation, rather than the reactive approach so apparent in the current debacle regarding the Karig Estates site, which serves no one well and works at cross purposes to the City's stated development, environmental, and quality of life goals (e.g., open space, expanded protection for ravines, Eco City, 40% tree canopy, etc.)

A first step towards bringing all of these competing goals into alignment is to steer high impact development away from geologically fragile places like the Hospital Escarpment, which, not coincidentally, contains some of the most extensive remnant tree canopy and open space in the city. As someone who has served as both staff and consultant to plan commissions, I observe that creating win-win solutions by averting problems before they occur is what planning and zoning are supposed to be all about. I welcome your questions. Yours truly,

Tony Fleming, Licensed Professional Geologist
Author, Geologic Atlas of the City of Alexandria
260-693-3257 loneswantony@cs.com

-----Original Message-----
From: pat tokarz <jptokarz@comcast.net>
To: Jeremy.Flachs <Jeremy.Flachs@Flachslaw.com>; Lonnie Rich <lcrich@rrbmdk.com>
Cc: Loren Needles <Loren@lorenneedles.com>; Tony Fleming <loneswantony@cs.com>
Sent: Mon, Nov 6, 2017 11:29 am
Subject: FW: Karig Estates

As Predicted. One neighbor's testimony vs. all the science.

Pat

From: Karl Moritz [mailto:Karl.Moritz@alexandriava.gov]
Sent: Monday, November 06, 2017 9:38 AM
To: pat tokarz
Cc: Mike Ibrahim; Allison Silberberg
Subject: RE: Karig Estates

Hello,

Thank you for your thoughtful note; it is much appreciated. The applicant has submitted an amendment to the approved site plan which moves the fourth home closer to Seminary Road. The Planning Commission will be considering this proposed amendment at its November 9 hearing. The staff report on this proposed amendment, which recommends approval, is located here.

You may recall testimony at the hearing from the adjacent neighbor to the west, who opposed moving the first house closer to Seminary. The applicant's proposal achieves both the objective of moving the fourth house closer and leaving the first house where it is in the approved plan.

Thanks again,

Karl

Karl W. Moritz
Planning Director | City of Alexandria
Room 2100 | 301 King Street | Alexandria, VA 22314
Desk: 703-746-3804 | Cell: 571-329-3052

From: pat tokarz [mailto:jptokarz@comcast.net]
Sent: Saturday, November 04, 2017 3:30 PM
To: Karl Moritz <Karl.Moritz@alexandriava.gov>
Cc: Mike Ibrahim <mibrahim@alliancerealestatedevelopment.com>; Allison Silberberg <allison.silberberg@alexandriava.gov>
Subject: Karig Estates

Dear Mr. Moritz
Thank you for your service to the city.
I have asked the Mayor to ask the Pand Z Commission to re-consider their decision late at night on Oct. 3/4th that the movement of the four houses closer to Seminary road could not be considered as an amendment to the site plan as passed, as were the missing subdivision plan, the forgotten motion to name a street and the plan to move and re-configure the fourth house.
If she were successful and Mike Ibraham could quickly submit an amendment showing the planned movement and plans to connect the sanitary sewer to the Seminary road sewer (thus protecting more trees and the wetlands), how quickly could your staff render a decision ?
The benefits to the environment and the improvements in slope stability and decreased water runoff warrant all of us to do the best we can to improve this development as much as possible. If you and Mike could work together in a reasonable time frame, the citizens of Alexandria would greatly benefit.
Thank you for your help in this matter.

Pat Tokarz,
3937 Col. Ellis Ave.
Alexandria.

From: Nathan Randall
Sent: Thursday, November 09, 2017 2:14 PM
To: Kristen Walentisch
Subject: FW: Rational Stewartship and Karig Estates
Attachments: Full Disclosure Requirements for Real Estate Brokers and Agents LegalMatch Law Library.pdf

From: Karl Moritz
Sent: Tuesday, November 07, 2017 12:13 PM
To: Maya Contreras; Nathan Randall
Cc: Robert Kerns
Subject: FW: Rational Stewartship and Karig Estates

Karl W. Moritz
Planning Director | City of Alexandria
Room 2100 | 301 King Street | Alexandria, VA 22314
Desk: 703-746-3804 | Cell: 571-329-3052

From: Loren Needles [mailto:loren@lorenneedles.com]
Sent: Tuesday, November 07, 2017 11:19 AM
To: Deborah Spagnoli <deborahaspagnoli@gmail.com>
Cc: Karl Moritz <Karl.Moritz@alexandriava.gov>; Beckhorns (Kirk & Christina) Kdbec@aol.com <Kdbec@aol.com>; Lisa Ring <lisaaring@aol.com>; Nrjennings@comcast.net; Richard Hayes <usna62@verizon.net>; Alexa Glock <alexacordelia@gmail.com> <alexacordelia@gmail.com>; Andrew Macdonald <ahmacdonald@mac.com>; Ann and Steve Reed <AReed@annereedconsulting.com>; ann ellis <annellis51@gmail.com>; Bertha Braddock <Berthabraddock.bb@gmail.com>; Betsy Lohmann <Betsy4005@comcast.net>; Bill Dickinson , William Dickinson <bill.c.dickinson@gmail.com>; Bill Stiers <billstiers@earthlink.net>; bonnie petry <bonnie.petry@outlook.com>; Brenda Wilson <BrendaWilson09@gmail.com>; Brendan Otoole <jbrendanotoole@gmail.com>; Bruce Mccarthy <Mccarthy3912@aol.com>; Cappie Stiers <mcstiers@aol.com>; Carter Flemming <Carterflemming@gmail.com>; Charles Evans <charlese33@gmail.com>; Chris Connell <cvconnell@gmail.com>; Christina Lytle <tinalytle@aol.com>; Christine Michaelis <christinemichaelis@comcast.net>; Cill Dara <cilldara3030@gmail.com>; Cyn <cynthiaevans52@gmail.com>; Dave Cavanaugh <dacava1@yahoo.com>; Dave Levy <bentbiking@yahoo.com>; David Speck <dgspeck@gmail.com>; doctor Stoll <krkstoll@yahoo.com>; Eduardo Han <eduhan@yahoo.com>; Eileen Wallace <egwallace@verizon.net>; Elizabeth Wright <wright22304@gmail.com>; Goree, Paul F - WASHINGTON DC <paul_goreeiii@ml.com>; Denis Otoole <irishoat@aol.com>; Jeremy.Flachs@flachslaw.com; jlepanto@bostonpacific.com; Joan Otoole <joandotoole@gmail.com>; John and Nancy Scruggs <nancywscruggs@gmail.com>; John Scruggs <Jscruggs3929@gmail.com>; pat tokarz <jptokarz@comcast.net>; kirk.beckhorn <kirk.beckhorn@squirepb.com>; Leslie Pierre <lesliepierre@aol.com>; Lonnie Rich <lcrich@rrbmdk.com>; Lynette Goree <lgoree6@gmail.com>; Marianne and Buck Coates <m-b-coates@comcast.net>; Nancy Connell <neconnell@gmail.com>; Nina Schwartz <artstop@impulsegraphics.com>; Patty collette <Pattycollette@me.com>; Rebecca Hierholzer at Newport villiage. <Magicbeca@aol.com>; Robert McLaughlin <robertmclaughlin2011@gmail.com>; Shirley Downs <shirleydowns@verizon.net>; Steve Reed <sreed@steptoe.com>; Steven <stevenakey@hotmail.com>; Suzanne McLaughlin <smclaughlin8@gmail.com>; Tokarz Lynn <lhtokarz@gmail.com>; WALTER LOHMAN <wlohmann@kirkland.com>; Allison Silberberg <allison.silberberg@alexandriava.gov>; juston.wilson@alexandriava.gov;

Tony Fleming <loneswantony@cs.com>; Cc: 'Mike Ibrahim' <Mibrahim@alliancerealestatedevelopment.com>
Subject: Re: Rational Stewartship and Karig Estates

Well said Debbie.

Unfortunately, marine clay is Alexandria's dirty little secret. Home sellers and realtors are required by law to fully disclose all information concerning foundation problems. For realtors, the requirement is limited to known facts and their sellers are not about to report anything that might reduce the home price even though they are legally required to do so. Hence, Alexandria's has a dirty little secret.

That legal requirement has not been enforced because buyers have not complained that they were not informed. Actually buyers can sue both seller and realtor in the absence of disclosure. Realtors should be made to fear non-disclosure.

Good luck.

Loren

PS: See attached

Live links at Full Disclosure Requirements for Real Estate Brokers and Agents | LegalMatch Law Library

PPS: It seems to me that the Karig Estates developer will have to disclose the presence of marine clay, slope collapse and storm water hazards even though he believes he has mitigated the risks because there are professional opinions out there that report mitigation is inadequate. In the end the developer will have to report the risks or take on the new risk of a contingency law suite brought by one or more of his buyers.

Sadly, that does not help with your problem but may add some muscle to your cause.

L

> On Nov 7, 2017, at 10:29 AM, Deborah Spagnoli <deborahaspagnoli@gmail.com> wrote:
>
> History is repeating itself. Our current expert will testify and the city will ignore the testimony -- and the homeowners on Colonel Ellis and beyond will have lots of problems and issues as a result. Which is what happened in the 70's -- the city heard from a similar expert with the US Soil Conservation Service and engineers in its own department opposed the development (see article below) but ignored that evidence and allowed the building anyway.
>
> The issue is politics. And money. I know this group has asked for other residents who have had problems with their homes as a result of the soil and water to come forward with their stories. How many do you have? Those homeowners (including myself) should join together to tell their stories to the city (and add up the related costs associated with the problems) (and go against Pulte too). Public PR nuisances - generating strategically messaged negative press will get a response.

Full Disclosure Requirements for Real Estate Brokers and Agents

Authored by Leigh Ebrom, LegalMatch Legal Writer

Why Is "Full Disclosure" Important?

Under state and federal laws, realtors and real estate brokers must disclose certain information to buyers and sellers. Full disclosure provides parties with the information needed to properly negotiate price and assess the property's suitability for their needs. Your agent should disclose all identified hazards on a property—as well as other factors that may impact the property's price.

What Kinds of Information Must a Real Estate Agent or Broker Disclose?

In real estate transactions, full disclosure typically means that the seller must disclose any property defects and any other important information that could have an effect on a party's decision to enter into the deal.

Disclosing Known Hazards and Defects

Under federal law, you must disclose the presence of lead-based paint if your house was built before 1978. Additional state disclosure laws vary dramatically. Depending on where you live, you may have to disclose material defects involving:

- Termite, pest, and mold issues,
- Structural defects (such as roof and foundation issues),
- Sewer and plumbing issues,
- Natural hazard risks (such as being located within a flood or seismic zone),
- The presence of convicted sex offenders in the neighborhood (under Megan's Law), and
- Any other relevant issues.

Sellers and real estate agents must disclose known defects and hazards. (You do not have to search for unknown defects.) However, it is always in your best interest to disclose all known and suspected hazards. Failure to disclose can result in a failed sales transaction and litigation.

Typically, disclosures must be in writing. Most states have a standard form that you must complete and provide to any prospective buyers. Your real estate broker should provide you with a property disclosure form and may assist in its completion.

Disclosing Other Factors

In addition to disclosing known and suspected hazards, a real estate broker has a fiduciary duty to disclose other information that would impact the value of a sale. This includes:

- All offers that are made on a piece of property,
- The buyer's willingness to increase an offer,
- The seller's willingness to accept a lower price,
- Whether the seller has an urgent need to sell the property,
- Whether the broker has any conflicts of interest,
- How long the property has been on the market,
- Estimates of the property's value, and
- Updates on offers and counteroffers that are made.

What If My Real Estate Broker or Agent Has Failed to Fully Disclose?

Both the seller and the real estate brokers have duties to disclose. If information is withheld, the buyer or seller may be entitled to damages. In a lawsuit, you may recover:

- **Economic damages**: compensation for lost profits, repairs, and other out-of-pocket expenses,
- **Non-economic damages**: compensation for your pain and suffering, and
- **Punitive damages**: compensation that punishes the agent for intentional and very serious non-disclosures.

If you believe that you suffered losses due to a real estate agent's actions, keep all records and documents relating to your dealings with the agent. Be sure to gather important data such as any prices that were presented to you, dates of offers, acceptances of offers, written reports that have suspicious or questionable figures, disclosure statements, and home inspections.

Do I Need a Lawyer?

When working with a real estate broker or agent, you should double-check the information that they provide to you. You may wish to hire a property appraiser for a second opinion, or speak with a real estate lawyer regarding your rights as a buyer or as a seller. A real estate lawyer can help protect your interests by confirming that all information has been properly