July 30, 2014

Ms. Maria Broadbent, Director
City of Annapolis Department of Neighborhood and Environmental Programs
City Hall
160 Duke of Gloucester
Annapolis, MD 21401

Annapolis Environmental Commission Comments on the June 25, 2014 Updated Submittal by Crystal Spring Development (CSD), Crystal Spring Preliminary Forest Conservation Plan (FCP)

Dear Ms. Broadbent:

The Annapolis Environmental Commission (AEC) submits the following comments regarding the above referenced FCP submittal.

Time Allowed for Comment

This project is among the largest, most complex, and most environmentally damaging project ever undertaken in Annapolis. Allowing only the bare minimum time required under law is inappropriate, especially at a time of the year when so many citizens are out of town, on vacation, or have difficulty participating. Providing an opportunity for public oral comment and discussion would be beneficial as a part of the DNEP-orchestrated process.

We strongly advise the city to exercise the maximum discretion it has under the law to provide more time for review and comment by citizens. We do not understand how it is possible for DNEP to do its own analysis, and then also incorporate fully responsible analysis of comments from many concerned and expert citizens, before acting on the FCP.

The developers have had years to develop this complex project, but citizens most affected have been provided only the minimum time required by law to respond to the latest submission of many documents comprising the FCP, as if this were just another small and insignificant project. The city should find some way of extending this time, within constraints provided by law. Because the FCP has serious problems that are already identified here and elsewhere, the best course would be to deny approval of the FCP for cause, notify the public of why the FCP cannot yet be approved, and allow the applicant to re-submit. Another, less attractive, fallback alternative would be to seek agreement from the applicant for a voluntary expansion of the time allowed for public review and comment, and for DNEP analysis before final action to approve or disapprove.

Overall Perspective

Annapolis has very little forest left. The area of the proposed development is the largest among the last. The Forest Conservation Act requires that reasonable efforts be made to protect the priority forest and requires the developer to show that the plan cannot reasonably be altered. Scaling back the development size by eliminating buildings and reducing the scale of the development should be considered before approval of the request to destroy priority forest.
Under COMAR 08.19.04.03, General Forest Conservation Plan Provisions, section B (3.) the granting of a variance to destroy priority forest requires the developer/applicant to demonstrate to the

City how the disturbance of priority forest and priority areas qualifies for a variance under Regulation 10 of the same chapter. Regulation 10 requires the developer/applicant to demonstrate that enforcement of the Forest Conservation Act would result in unwarranted hardship. This requires, among other provisions, that the applicant describe the special conditions peculiar to the property that would cause the unwarranted hardship, and requires the applicant to verify that granting the variance will not adversely affect water quality.

The AEC agrees with DNEP's letter of Sep. 13, 2102: With the exception of physically isolated stands, the entire site is considered a contiguous forest per Natural Resource Article 5-1607 c (ii): "Contiguous Forest that connects the largest undeveloped or most vegetated tracts of land within and adjacent to the site" is a priority for retention and protection. Stand A, part of Stands B, C, D and Stand E (using the Dec 2012 labels) are large vegetated tracts within the site, thus a priority for retention, and contiguous to forested tracts off site. See the "Ecological Values" sections below.

The applicants asserts on p. 18 of the Forest Clearing Justification that this project cannot be further scaled back because the four "nodes" including the Continuing Care Retirement Community, the Village Green, the commercial section and the townhomes all rely on each other, are all essential, and none is a standalone element.

This is a specious assertion which is not supported by facts or anything other than the applicants own assertion. Most communities in the City exist without retail within their development boundaries and there is more than enough retail on Forest Drive to support the additional residents proposed in this development. Smart growth means developing where services already exist, and they do exist along Forest Drive, which obviates the need to pack all the amenities onto a single development site. The attempt to characterize this development as smart growth and use this as a justification for destruction of 44.24 acres of priority forest is misleading at best and should not be accepted or given any consideration.

Developer's Priority for Retaining Environmental Resources

In the document 06-25-2014-forest-clearing-justification-(00352816).pdf p.5, the following priority was stated for retaining environmental resources:

1. Intermittent Drainage Way
2. MDE-designated "vernal pool"
3. Non-tidal wetlands
4. Steep Slopes
5. Wildlife Corridor
6. Tree stands that connect Arborist-identified tree stands

This priority order makes little sense in a context of achieving the main purpose of a forest conservation plan, retaining forest and habitat. Stating this order of priorities pretty much guarantees that its objective will not be met. Priorities would make align better if they were roughly reversed. Number 6 on the list makes no sense to the AEC. What is an "arborist identified tree stand?" The stand boundaries were submitted to DNEP and accepted in 2013. The Applicant cannot change the boundaries *post hoc* by resubmitting a kind of Forest Stand Delineation (FSD) within this FCP.

The FCP should include justification/explanation for any priority ranking on which the plan for retaining environmental resources rests. Considering that the priorities for reforestation under

COMAR 08.19.04.08(G)(2) establishing or increasing existing forested corridors states that the second priority is existing forested corridors, it would make more sense if the CSD priority order #6 that calls for tree stands to connect with other tree stands, should be near the top of the list.

Under the heading Summary of Forest Conservation Act Standards on p. 16, the applicant rightly cites that they must demonstrate: a) how techniques for retention have been exhausted, and b) why priority forest and priority areas are not being retained. However, it omits the requirement under COMAR 08.19.04.03(B)(3) to demonstrate how the disturbance to the priority forest qualifies for a variance in accordance with Reg. 10 of that chapter.

CSD Claims Regarding Unwarranted Hardship

The FCP notes 82.24 acres of Priority Forest, but asserts that preserving the entire Priority Forest "would create an unwarranted hardship by preventing development on virtually all of the property" and "could be construed as an illegal taking." This is a straw man argument. Nobody holds that all development rights on property containing forest would or could be denied to an applicant. The AEC believes, however, that project reconfiguration and rescaling are necessary to preserve essential environmental values, and that this can be accomplished without creating undue hardship as defined in law and in case law.

The justification for clearing priority forest appears entirely based on a desire to maximize the profitability of the project. Reducing the profitability of a project by reducing the extent of the development in order to address forest conservation and other environmental objectives, does not itself create an unwarranted hardship.

Refer to *Belvoir Farms Homeowners Ass'n v. North*, 355 Md. 259 (1999) (in the context of a variance, an unwarranted hardship is equivalent to the denial of reasonable and significant use of the property); *see also Loyola Federal Sav. & Loan Asso. v. Buschman*, 227 Md. 243 (1961) (it is settled Maryland law that the fact that some use other than that which is permitted under a zoning ordinance would be more profitable than a permitted use, is not enough to invalidate a use restriction if the property can reasonably be used for some purpose for which it is adapted).
This point is also more simply expressed as: "if reasonable use exists, generally an unwarranted hardship would not*." North v St. Mary's County,* 99 Md. App. 502, 517-518 (1994) (holding that denial of requested variance to build a gazebo on a property already used for residential purposes is not an unwarranted hardship). It is therefore reasonable to require the developer to further modify the project to reduce impacts to the priority forest areas.

The City's decision to disallow destruction of the priority forest in the area south of the intermittent stream would in no way constitute and unwarranted hardship, especially considering that the applicant also proposes destroying priority forest designated for preservation located north of the intermittent stream. There is no doubt that if the city allows destruction of close to 30 acres of priority forest for retail, commercial and assisted living residential units, then under the current case law this would surely be deemed as allowing more than "reasonable use" of the property.

The developer compares their current site plan to a prior site plan as part of their justification. This is irrelevant (especially considering that both plans significantly exceed the footprint proposed during the annexation hearings). Current site conditions, as described in the Forest Stand Delineation, are the

legal starting point of a Forest Conservation Plan, not a concept plan created before the FSD was approved.

When the site was annexed into the City in 2006, the owners promised small three to five acre farmettes with white picket fences and horses strolling about and water access to the public and that all 75 acres of Mas Que Farm would be preserved in a permanent conservation easement. So far, no easement has been placed on the 75 acres and the owner has rescinded her promise to allow public access to the creek, while quadrupling the size and scope of what was described to the Planning Commission and City Council when they voted to allow the annexation of the site into the City.

No justification is given for why the particular 44.24 acres of priority forest must be destroyed. Moreover, the applicant has not demonstrated that destroying 44.24 acres of priority forest, and replacing it by developed land, will not adversely affect water quality. Forest is the land cover that is most protective of local streams and the Chesapeake Bay. It adds the lowest load of nutrient and sediment pollution. The applicant has provided no quantitative information about the additional pollution loads that will accompany development. The AEC believes they will be significant and will adversely affect stream and Chesapeake Bay water quality.

Ensuring Forest Contiguity

While the main Continuing Care Retirement Community building (CCRC) in this submission is placed north of the intermittent stream, the AEC finds that the FCP is inadequate for retaining forest contiguity. Alarmingly, cottage units planned south of Wetland B and the intermittent stream will eliminate and fragment high quality forest.

The AEC mentioned in prior comments concerning the Forest Stand Delineation, that the forest boundaries are inaccurate in places, and show less contiguity than actually exists. For example, the forest is contiguous across Crystal Spring Farm Road. The unbroken tree canopy, which meets the normal definition of forest contiguity, is vital for many bird species that thrive in this forest. Also, the area between Stand A and the forest to the southwest is much more contiguous than depicted on the FSD and FCP. In fact, AEC members, with permission from the owner, measured this area and the narrowest point between these exceeds 110 feet.

The AEC recommends increasing the buffer around the intermittent stream to 300 feet and permitting the development to take place only north of the stream.

Ecological Values: Specimen Trees

The highest quality priority forest is dominated by large white oaks, containing wetlands, drainage headwaters, numerous specimen trees, few invasive species (primarily along an old road), a diverse forest structure (rated "Good" in the FSD), and high regenerative potential. The AEC, during a permitted visit, measured two representative canopy white oaks in different parts of the stand with diameters at breast height of 18.7" and 17.6", corresponding to a stand age of at least 80 years. Many trees are much bigger than this. Historic aerial photos confirm that this forest is at least this old. The high canopy and dense understory provide excellent forest bird habitat. Forest health appeared excellent during AEC's visits from 2011-13, with only occasional snags or downed logs (which actually are important habitat elements). The stand contains numerous oak seedlings, indicating good

recruitment and long-term persistence. It serves as essential wildlife habitat and a broad-scale corridor linking offsite forest, as recognized by Anne Arundel County's Greenways Master Plan.

The FCP proposes to remove 17 specimen trees with diameters at breast height of 24 inches or greater. Pursuant to the Forest Conservation Act, such trees "shall be considered priority for retention and protection, and they shall be left in an undisturbed condition unless the applicant has demonstrated, to the satisfaction of the State or local authority, that the applicant qualifies for a variance under § 5-1611 of this subtitle…" MD. CODE ANN. NAT. RES. § 5-1607(c)(2)(iii). The Act states in § 5-1611 that the "State and local authorities shall provide for the granting of variances to the requirements of this subtitle, where *owing to the special features of a site or other circumstances*, implementation of this subtitle would result in unwarranted hardship to an applicant. MD. CODE ANN. NAT. RES. § 5-1611(a) (emphasis added). The law provides two guidelines for the development of variance procedures by local authorities. They shall (1) "[b]e designed in a manner consistent with the spirit and intent of [the Forest Conservation Act]"; and (2) "[a]ssure that the granting of a variance will not adversely affect water quality." *Id*. at § 5-1611(b).

Ecological Values: Forest and Wildlife

The FCP fails to describe how the ecological values of forest and wildlife will be preserved.

Over 200 bird species, including many interior forest passerines, have been found on the property. This is one of very few properties remaining in Annapolis with habitat suitable for these birds. According to Ross Geredien, a professional biologist with expertise in ornithology, the following birds listed by Maryland Dept. of Natural Resources (DNR) as having the greatest conservation value, have been confirmed breeding at the property:

- Field Sparrow
- Acadian Flycatcher
- Brown Thrasher
- Eastern Towhee
- Hairy Woodpecker
- Wood Thrush
- Scarlet Tanager
- Pileated Woodpecker

"There are several other species," he wrote, "at least 20 more, on the list that overwinter on or migrate through the property but that do not breed there in the summer. Typically, breeding habitat is the most critical for species conservation, but wintering and stopover areas are important for species as well. Hence the overall value to birds of greatest conservation need is quite significant. A few of the species, like Brown Thrasher, Eastern Towhee, and Field Sparrow, actually are there year-round."

Forest fragmentation has many negative effects including promoting the spread of invasive species and impacting sensitive native wildlife. Several of the birds on the list above require large areas of contiguous interior (away from edges) forest to breed successfully.

Ecological Values: Wetlands and Hydrology

The Crystal Spring property has a seasonally high water table throughout much of the site, and contains several acres of functional wetlands. These provide important ecosystem services, including abatement of stormwater runoff, groundwater recharge, and maintaining water quality in Crab Creek

and the South River. In addition to the intermittent stream that drains through the center of the property to the south, there is also a smaller drainage to the west of this stream that provides periodic surface flow from the wetlands in the 80+ year old white oak-dominated stand, and several smaller areas of hydric soils that weren't noted on the consultant's maps. The forested wetlands are likely linked via subsurface flow as well, as most of these soils are permeable sandy loams.

Conversion of contiguous forest to buildings, roads and parking lots is likely to alter site hydrology, including the perennially flooded wetland at the south edge of the property (which the intermittent stream drains into). It could scour out the intermittent stream and thereby deliver sediment into the perennially flooded wetland and possibly offsite. Any development should be carefully planned with preservation of wetland and stream hydrology in mind.

Relocation of the CCRC building away from the most ecologically important portion of the site is helpful. However, it still infringes on the Wetland B buffer, and converts a large proportion of its drainage area from forest to impervious cover. The AEC doubts strongly that green roofs can compensate for such a dramatic change.

The proposed houses sited within in the mature forest existing in the south will have a major impact in terms of forest loss and fragmentation. They also infringe on the buffer of wetland B. The AEC urges that these houses be moved to a less damaging location well north of the intermittent stream and its drainage.

Wetland F is not isolated. There is periodic surface flow east from this area, through a drainage pipe, and into an ephemeral drainage ravine that empties into the intermittent stream. We urge an independent review of this and other non-tidal wetlands on the site. The developers continue to plan a stormwater management pond ("#6") that drains into the intermittent stream through a steep, highly erodible valley, even though state law requires Environmental Site Design techniques be employed to the maximum extent practicable. Adding additional stormwater will almost certainly erode the sandy soils there. The developers plan to route most of the stormwater from the retirement cottages and adjacent buildings this way. The AEC recommends an alternative solution that does not alter existing hydrology and threaten natural features.

At least one wetland, a vernal pool, is not mapped on the FCP, and should be included. The grassy vernal pool in the southwest portion has been observed holding standing water, supports amphibian breeding (e.g., spring peepers), and contains hydric soils (according to a core performed on April 18, 2013). Vegetation is affected by repeated mowing, and a sizeable drainage pipe removes standing water quicker than at the forested vernal pool to the north of it. The AEC has recommended for well over a year that the city examine this vernal pool using a certified wetland delineator independent of the developer.

The AEC supports functional wetland and stream buffers (generally at least 100 feet, but it depends on surface and groundwater flow), rather than the state regulatory minimum of 25 feet. 25 feet is insufficient to protect against altered hydrology, increased sediment and pollutant input, wind throw, increased solar radiation, invasive species, songbird predators, and other edge effects. Amphibians like spring peepers and wood frogs require contiguous forest to move between breeding sites and feeding areas. The AEC requests an analysis by a qualified wetland professional not affiliated with the developer that delineates buffers that will actually protect the wetlands (e.g., Wetland B, which is

surrounded by fill, buildings, and roads in the current plan) and drainages from negative impacts, and provide additional measures needed to protect existing hydrology and habitat.

The City has agreed not to permit the alteration of the hydrology on this property and has the authority under both the Forest Conservation Act as well as Chapter 21.62.080 *Surface water drainage*. It states that "A proposed development shall be designed to provide for proper surface water management through a system of controlled drainage that, wherever practicable, preserves the existing natural drainage patterns and wetlands, enhances groundwater recharge areas…"

Roads

Deletion of a road previously indicated as crossing the intermittent stream and bisecting the forest, is helpful to reducing forest destruction and fragmentation. However, a planned road embankment will affect the hydrology of Wetland B so the AEC recommends measures that will not affect hydrology.

Tree Canopy

The submitted forest clearing justification is incorrect in asserting that the project will "increase the tree canopy to 54%, which exceeds the City of Annapolis Comprehensive Plan Goal for 2036 of 50%."

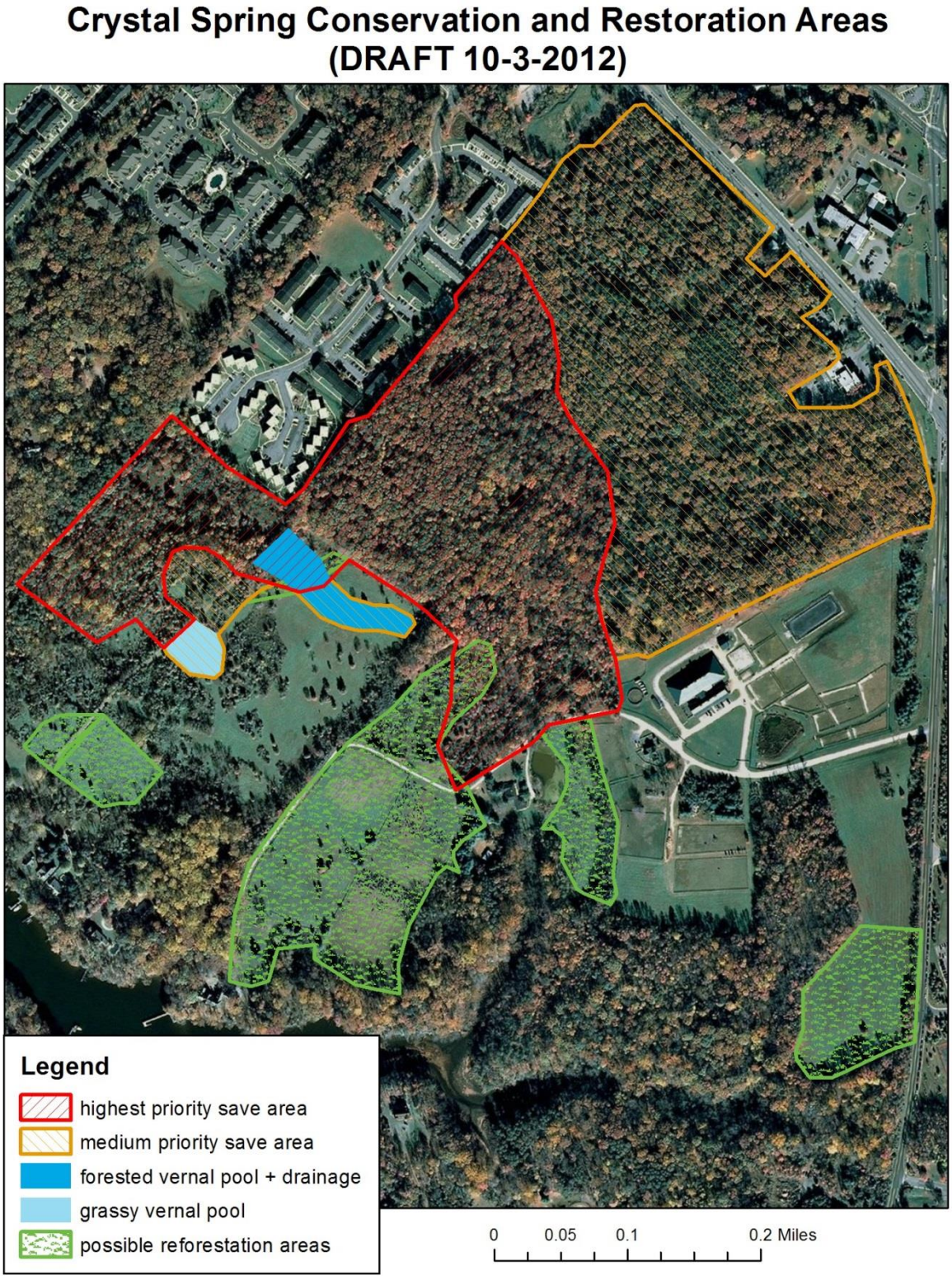
It is wrong in its implicit assumption that the goal applies to individual properties, rather than to the aggregate of all properties comprising the City *in toto*, and is misleading in its conclusion. Among all private tracts, the proposed Crystal Spring development project comprises the largest forest in the City and now contributes the largest single source of canopy cover toward meeting the Annapolis-wide goal. It is obvious that cutting trees to make way for the development will *reduce* that contribution, and take the city backward in its progress toward its overall tree canopy goal.

Mitigation of environmental impacts

The developers should avoid and minimize negative impacts to the forest, wetlands, hydrology, and other natural resources to the degree possible. Impacts not avoided should be mitigated. To conform to the city's goal of increasing rather than decreasing tree canopy, all forest removed should be replaced at least acre for acre. The AEC identified some possible reforestation areas (Figure 1 below) that would improve forest connectivity and contiguity and help protect Crab Creek and the South River.

Street trees should not qualify toward forest mitigation. Replacement should be native forest (e.g., oak-hickory, or whatever species mix is appropriate for the planting site). One should keep in mind it will take 80 years to regain what's been lost, and even then the new forest will be behind the curve. For that reason, and because so many planted trees die, the AEC favors 2:1 to 4:1 afforestation ratios (similar to wetland requirements and the city tree replacement code, with the ratio depending on the age and condition of the forest destroyed). Also, any mitigation projects should be monitored (at least 5 years, with 10 preferable), and dead trees replaced. MDE requires 5 years of monitoring for wetland projects.

Fig. 1. Map produced by Annapolis Environmental Commission in 2012 of priority reforestation and preservation areas on the Crystal Spring property. If undeveloped, the field south of the priority forest block would be the best afforestation site."



The Crystal Spring forest is a significant local carbon sink. If converted as planned, it will become a huge carbon source instead, increasing the city's contribution to climate change despite the goals of its sustainability plan. As the city pledged to reduce rather than increase its greenhouse gas emissions, the AEC would like the city to calculate the change in carbon storage and atmospheric CO_2, and recommend measures to mitigate these impacts.

Green Development Initiatives mentioned in the FCP are potentially helpful, especially those relating to parking, if the "under buildings" parking includes the creation of multilevel parking that will significantly reduce impervious surface area. Others of these initiatives have not been evaluated but we surmise that their collective effectiveness is dwarfed by the removal of forested area contemplated by the FCP.

On-site and Off-site Mitigation

Mention is made of possible voluntary restoration of watercourses flowing from offsite drainage areas. While such activities may be commendable, they do not begin address the very large negative impacts that will be created on-site. The scale and effectiveness of such off-site mitigation efforts is not quantified and is not relevant to the project itself which must focus on on-site environmental efforts.

Crystal Spring Development LLC (CSD) cites their agreement with the South River Federation to undertake improvements to stormwater drainage to Crab Creek as part of their justification to destroy 44.24 acres of priority forest out of a total of 82.24 priority forest acres on the site. This gesture cannot be considered as part of the rationale to award a variance to the developers. The Forest Conservation Act aims to protect priority forest and the only mitigation measures contemplated under the Act are on-site or offsite reforestation or payment to a fund used for reforestation as mitigation measures after all techniques and retention options have been exhausted. (See Md. Nat Resources Code Ann 5-1607) The Act does not contemplate or recognize any other types of restoration measures as equivalent to retention of retaining priority forest, nor does it recognize them as justification for destruction of priority forest. Therefore, this factor adds no weight to the case for granting a variance.

Afforestation Plan

(1) "Forest land" means a biological community dominated by trees and other woody plants … at least 100 trees per acre with at least 50% of those trees having a 2-inch or greater diameter at 4.5 feet above the ground.
(2) "Forest land" includes forested areas that have been cut but not converted to other land uses.

Street trees should not count toward mitigation. They do not remotely compensate for the destruction of naturally functioning mature forest. Neither does the state consider isolated trees as forest. The AEC urges the city to require any credited afforestation to be contiguous with existing natural forest and to improve contiguity and connectivity.

Tree replacements under City Code Chapter 17.09.070 must be enforced, such as requiring two trees on site for each tree removed, when diameters are between 18" and 24," etc. The developer did

submit details showing there were 178 trees between 24" and 30" DBH with many of them removed in the development plans.

Rows of decorative street trees do not remotely mitigate destruction of 44.24 acres of mature functioning contiguous forest. The applicant should be required by the City to replant at least 44.24 acres of forest that are destroyed during development, and because it takes 80 years for a tree stand to mature and provide the ecological benefits that had been provided by the existing priority forest, the City should apply the higher 2:1 ratio when applicable under the Code. All reforestation should be on-site.

The City Code gives authority to the City to require replanting of trees removed during development. Chapter 17.09.070 establishes guidelines to allow development while also minimizing impacts to existing woodland communities and to encourage reforestation with species native to the area. Other stated purposes of this section of the code are to establish standards of practice for the preservation of trees and the environmental design of landscapes in development areas in order to better control soil erosion and the transport of sediment, improve the environmental quality of surface and ground waters, screen noise, and preserve, protect and enhance wildlife habitat.

Furthermore, the section provides that where any provision of the Forest Conservation Act (FCA) and a provision of the City Code both apply, the more restrictive requirements may be employed. Therefore, even if the FCA does not require reforestation, the City code section can apply and require reforestation for a development. The code under section 17.09.070 (F) even notes that the reforestation required by the Forest Conservation Act should be considered the minimum applicable standard for replacement of trees.

Applicants seek to destroy 44.24 acres of priority forest by concentrating their buildings near Forest Drive where the priority forest is dense, mature and functioning well. Because the City will lose the ecological value and water quality value of the only remaining large tract of priority forest, and considering the loss of these acres will set the City back 44.24 acres from our tree canopy goal, the City should strictly require replanting of the trees on the replacement basis set forth in table 17.09.070.

To conform with the city's goal of increasing rather than decreasing tree canopy, all forest removed should be replaced at a minimum 1:1 ratio, and should be replaced at a 2:1 ratio when diameters are between 18" and 24," as provided for in the Code.

The areas identified by the AEC identified as possible reforestation/afforestation areas (Figure 1 above), which are below the intermittent stream, would improve forest connectivity and contiguity. Also creation of forest cover closer to the water will help protect water quality of Crab Creek and the Chesapeake Bay. It should be noted that all of Maryland including Annapolis is subject to a federally imposed Total Maximum Daily Load that requires reduction of pollution and improvement of water quality. Maintaining forest cover is one of the best and least costly strategies to reduce pollution.

City code intends that tree replanting be on-site unless this cannot be accomplished. With a 110 acre development site, there is plenty of space for reforestation on-site. To maximize replanting onsite, we recommend that all development be confined to the area above the intermittent stream and that afforestation/reforestation occur below the intermittent stream. Other afforestation should be limited to the Crab Creek watershed and be configured to increase forest connectivity and contiguity.

The Forest Conservation Prototype Easement (Exhibit B)

This is difficult to evaluate for relevancy at this point, since it appears to be prototypical boilerplate that serves mainly as the starting point for a substantive easement. This could be important, or cosmetic green-washing, depending on what lands and features it will actually cover, and other details not yet specified. The prototype appears to contain many loopholes limiting its effectiveness if owners in later years seek to escape its intent. Moreover, the public and the city have a strong interest in public access to areas that are protected under a conservation easement, but this prototype appears to assume as its default denying public access.

Because public access to natural areas is already severely limited, the city should seek to secure commitments from the developers for public access to areas that contain significant natural environmental and ecological amenities. A development of this scale will exact large environmental and other public costs and it is not unreasonable for the city to seek to achieve public access in partial compensation.

Summary

For the reasons stated above, the AEC urges the City of Annapolis to reject the Preliminary FCP and associated documents, as detailed above, and to require revisions that satisfy these concerns.

Sincerely,

Kurt Riegel, Chairman
Annapolis Environmental Commission

PDF version of this document is available at kurtriegel.com/aec-cs.pdf

CC: Mayor Mike Pantelides, Alderman Joe Budge, Alderman Fred Paone, Alderwoman Rhonda Pindell Charles, Alderwoman Sheila Finlayson, Alderman Jared Littmann, Alderman Kenneth Kirby, Alderman Ian Pfeiffer, and Alderman Ross Arnett