



FAIRFAX COUNTY

DEPARTMENT OF PLANNING AND ZONING

Zoning Evaluation Division

12055 Government Center Parkway, Suite 801

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V I R G I N I A

December 10, 2001

Gregory A. Riegler
McGuire Woods LLP
1750 Tysons Boulevard, Suite 1800
McLean, VA 22102-4215

Re: Interpretation for RZ/FDP 2000-HM-025, Great Oaks, Tax Map 16-3 ((1)) 14B,
16-3 ((3)) 1-30: Reduction in Number of Residential Units, Additional Stormwater
Management Pond, Additional Bioretention/Rain Garden Facilities, and Change in
Circulation

Dear Mr. Riegler:

This is in response to your letter of July 27, 2001, your memo dated October 4, 2001, your letter of November 1, 2001, and the executive summary for the Great Oak Project dated July 26, 2001, prepared by Christopher Consultants (attached), requesting an interpretation of the proffers and the Conceptual Development Plan (CDP) accepted by the Board of Supervisors, and the development conditions imposed in conjunction with the approval of RZ 2000-HM-025, and the Final Development Plan (FDP) and development conditions approved by the Planning Commission with FDP 2000-HM-025. As I understand it, you have several questions that will be addressed individually below. These determinations are based on the three following exhibits submitted entitled "Overall - Great Oak" dated November 2001, "Great Oak - Section 2" dated October 2001, and "Typical Bioretention Facility 'Rain Garden'", dated July 2001. All the graphics have been prepared by Christopher Consultants.

On February 5, 2001, the Board of Supervisors approved Rezoning RZ 2000-HM-025, subject to proffers dated January 31, 2001, to allow a mix of single family detached, single family attached, and multi-family homes at a density of 12.69 du/ac. The Planning Commission approved Final Development Plan FDP 2000-HM-025 on February 1, 2001, subject to the Board's approval of RZ 2000-HM-025 and the final development plan conditions dated January 17, 2001.

Proffer 15 approved with RZ 2000-HM-025 reads as follows:

"Stormwater management/BMPs shall be provided for the property in accordance with Best Management Practice ("BMP") standards in accordance with Fairfax County requirements or as otherwise may be approved by DPWES. In order to restore a natural appearance to any required stormwater management pond, a landscape plan shall be submitted as part of the first submission of the site or subdivision plan for review and approval by the Urban Forestry Division, showing landscaping with native species in possible planting areas of the pond, to the maximum extent

possible, in keeping with the planting policies of DPWES. Any alternative stormwater management required by Condition 4 of FDP 2000-HM-025 shall only be required if it determined, to the satisfaction of DPWES, that such alternatives are of a construction cost generally comparable to that associated with the structural detention ponds shown on the CDP/FDP.”

Development Condition 4 of the FDP 2000-HM-025, dated January 17, 2001, reads as follows:

“The applicant shall work with DPWES at the time of site plan and/or subdivision plat submission to determine if less land consumptive stormwater management alternatives to the proposed SWM facilities are desirable or feasible for the subject property. If determined feasible by DPWES, such facilities shall be implemented on the subject property in lieu of the ponds shown on the CDP/FDP.”

The approved CDP/FDP shows a total of 82 single family detached units, 115 townhouses, and 248 multi-family units. The ten single family attached units subject to this interpretation are located at the northeastern corner of the property southeast of the multi-family homes. The private drive through the development circles through the area of the multi-family units. The approved CDP/FDP depicted a possible SWM/BMP facility at the southern corner of the property and a possible SWM/BMP facility at the northwestern corner of the property.

You have stated that detailed engineering analysis of the site prior to submission of site plan indicated that the two SWM ponds shown on the CDP/FDP can not meet the SWM/BMP requirements for the drainage of the northern portion of the site. Consequently, a third SWM/BMP facility is being proposed along the northeastern property line southeast of the multi-family units. The private road that extended in front of these units is shown on the “Overall Schematic Plan” as terminating at the eastern side of the proposed SWM/BMP pond. Your first question, as I understand it, is whether the proposed third SWM/BMP pond is in substantial conformance with the proffers, development conditions, and CDP/FDP.

Details of the proposed stormwater management pond are depicted on the graphic “Great Oak - Section 2.” The details include a variety of trees within the 25-foot open space area along the northeastern property line, landscaping within the shallow pond area, and a retaining wall along the eastern and southern sides of the SWM pond. You have stated to staff the overall affect of the reduction of townhouse units and the land for the SWM/BMP pond being included in open space will be an increase in open space from 31.3% to 36% and a reduction in density from 12.7 dwelling units per acre to 11.82 dwelling units per acre.

It is my determination that the proposed additional SWM/BMP as shown on the “Great Oak – Section 2” plan is in substantial conformance with the proffers, development conditions, and CDP/FDP, subject to approval by DPWES.

The second question, as I understand it, is whether the addition of seven bioretention/BMP facilities would be in substantial conformance with the proffers, development conditions, and CDP/FDP. As previously stated, the final engineering of the site revealed that SWM/BMP requirements could not be met by two ponds shown at the time of the rezoning. In addition to a third pond, you also propose to add five bioretention/rain garden facilities within the

Mr. Gregory A. Riegle
Page 3

multi-family portion of the development at the northern end of the site, one bioretention/rain garden facility at the eastern property line behind townhouses and one bioretention/rain garden facility by the main site entrance from Fox Mill Road. The seven additional facilities are to provide additional water quality protection and allow the three ponds to be a smaller size and shallower in depth thereby allowing the ponds to be vegetated. You have stated that the bioretention/rain garden facility located near the site entrance will not reduce the approved tree save area. You point out that the FDP Development Condition 4 would be addressed because of the innovative means to improve water quality, improve the aesthetics of the ponds, and reduce the size and depths of the ponds.

It is my determination that the addition of seven bioretention/BMP facilities would be in substantial conformance with the proffers, development conditions, and CDP/FDP subject to their approval by the Department of Public Works and Environmental Services (DPWES).

These determinations have been made in my capacity as the duly authorized agent of the Zoning Administrator. If you have any questions please call Lisa Feibelman at (703) 324-1290.

Sincerely,



Barbara Byron, Director
Zoning Evaluation Division, DPZ

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Attachments: A/S

cc: Catherine Hudgins, Supervisor, Hunter Mill District
John Palatiello, Planning Commissioner, Hunter Mill District
Jane W. Gwinn, Zoning Administrator
Michelle Brickner, Director, Office of Site Development Services, DPWES
Angela Rodeheaver, Section Chief for Site Analysis, DOT
Craig Carinci, Director, Environmental and Facilities Inspection Division, DPWES
File: RZ/FDP 2000-HM-025 and PI 0108 102

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July 27, 2001

RECEIVED
DEPARTMENT OF PLANNING AND ZONING

JUL 30 2001

ZONING EVALUATION DIVISION
ZONING EVALUATION DIVISION

VIA HAND DELIVERY

Barbara A. Byron, Division Director
Zoning Evaluation Division
Department of Planning and Zoning
FAIRFAX COUNTY – Suite 830
12055 Government Center Parkway
Fairfax, VA 22035

RE: Interpretation of Proffers and Development Conditions Associated
With the Approval of RZ/FDP 2000-HM-025

Dear Barbara:

The above-described rezoning was approved on February 5, 2001. For reference, a complete copy of the governing proffers and development conditions are attached for reference as Exhibit 1. Final engineering of the project has revealed the need for two minor modifications to the approved Conceptual/Final Development Plan (CDP/FDP). These modifications are necessary to ensure that the development will comply with all applicable stormwater requirements, as required by the Proffers.

In summary form, the requested modifications involve reducing the number of approved lots to provide an additional detention pond and the strategic incorporation of a number of bio-retention/rain garden facilities. The potential reduction in the number of lots and the provision of bio-retention facilities are contemplated by the governing proffers and conditions. The net effect of the requested changes will ensure compliance with all stormwater requirements in a way that maximizes opportunities for attractive landscaping. A summary of the requested modifications is as follows:

1. Reduction of Lot Yield/Incorporation of Additional Stormwater Management Pond.

The final engineering of the project has confirmed that the stormwater ponds conceptually shown on the CDP/FDP are not of a size and/or configuration suitable to ensure compliance with the applicable stormwater management requirements. After careful analysis of a number of alternatives and in consideration of the applicable proffers and development conditions, the developer proposes to locate an additional structural detention pond in the location generally shown on Exhibit 2 attached to this letter. A narrative from the civil engineers describing the decision making process and the need for this additional pond, is attached as Exhibit 3. This narrative was reviewed with staff of the Department of Public Works and Environmental Services, who have initially concurred that the evaluation of the engineering

issues and the selection of an alternative based on those issues is reasonable. The additional pond will necessitate the elimination of approximately ten previously approved townhouse lots. A potential reduction in the number of lots was contemplated by Proffer 6, which, while capping the maximum number of approved lots that also states the number may be reduced at final engineering. As further required by Proffer 6, this reduction in units and the incorporation of a new pond and associated landscaping serves to increase the amount of open space on the Property.

2. Incorporation of Bio-Retention Facility/Rain Gardens.

As is also shown on Exhibit 2, the developer proposes to incorporate several bio-retention/rain garden type facilities in the courtyard areas of the approved multi-family development and near the main site entrance from Fox Mill Road. As shown on the landscape details also included within Exhibit 2, the rain gardens will be landscaped in a manner consistent with the concepts shown on the approved CDP/FDP. These rain gardens, while not directly shown on the CDP/FDP, are nonetheless consistent with FDP Condition 4. This Condition requires the developer to explore options to use innovative means to improve water quality, improve the aesthetics of the ponds and potentially reduce their size or depth. Proffer 15 further requires the developer to maximize efforts to landscape stormwater areas and make the required ponds as attractive as possible. Consistent with the letter and intent of FDP Condition 4, the inclusion of the proposed rain gardens will provide additional water quality protection and thereby enable the necessary stormwater ponds to be developed at a smaller size and shallower depth. This makes the ponds more conducive to the installation of trees and landscaping materials as required by Proffer 15, and, in general, makes the development more attractive.

Upon receipt, if you have any questions or require any additional information, please do not hesitate to give me a call.

Sincerely yours,



Gregory A. Riegler

GAR/jww
Exhibits

cc: Don Hague, Christopher Consultants, via telecopy
John Levto, Christopher Consultants, via telecopy
✓ Kevin Guinaw, Fairfax County

10/04/01

GREAT OAK
MEMO TO KEVIN GUINAW RELATING
TO THE PROFFER INTERPRETATION

As you know from the interpretation request letter, this stormwater management pond (pond 3) is the solution that was determined to be the best way to meet the storm drainage and water quality requirements that could not be met with the ponds shown on the cdp/fdp. The location chosen was configured and sized to optimize all available space to not result in the loss of any more units than necessary. The configuration displaces 10 lots in the townhouse section. I understand that there are some concerns that the 25' open space that is between the lots and the site boundary on the cdp/fdp is being lost in the area of the pond. The pond is already expanded to almost the edges of what is around it (roads, lots etc.). To pull it back would surely require it to consume more lots. One thing to consider is that the pond itself is open space and is in an area that was slated to be 3-story town homes. So while it is closer to the site boundary it is aesthetically less obtrusive since it will be screened with trees and the landscape drops off so it will not be in a line of sight the way a building would.

Per your request we have increased the amount of screening trees between the pond and the property line. We have also prepared a cross section of the pond to show the pond top and bottom elevations and the adjacent property elevation.

As for the plantings in the pond, we have proposed plantings above the bmp water surface elevation (WSE) on the side slopes of the pond. Since the facility is fully excavated there is no dam embankment constructed so a dam restrictive planting easement does not apply. Site review has concurred with this after discussion on the exact subject on the Section 1 plan.

We have included a detail of the standard HR-2 that is the safety hand rail specified on the plans. Is this acceptable or did you have something else in mind?

We have removed the riprap that was shown on the earlier exhibit. This riprap is to be temporary in nature to eliminate any erosion problems that might occur in the interim condition until the townhouse site is graded and constructed.

In regards to the fencing noted around the apartment building, that was included to reflect the fencing that was shown with the architectural plans. After discussions with the client it is determined that this is not a necessary site feature and will be removed.

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ZONING EVALUATION DIVISION

JUN 2 2 00

DEPARTMENT OF PLANNING AND ZONING

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November 1, 2001

Kevin J. Guinaw, Branch Chief
Zoning Evaluation Division
Department of Planning and Zoning
Suite 830
12055 Government Center Parkway
Fairfax, VA 22035

VIA TELECOPY and FIRST-CLASS MAIL

RE: *Pending Interpretation for Approved Rezoning RZ 2000-HM-025*

Dear Kevin:

During our most recent discussion on the above-described matter, staff had recommended that the design for the additional stormwater management pond be revised to provide greater separation between the pond and the northern property line. Based on this recommendation, our civil engineers have redesigned the pond so that a uniform 25 feet of open area is provided between the edge of the pond and the property line. The actual edge of the pond is delineated by the dashed line on the attached exhibit. This 25 foot wide area is consistent with the separation shown on the approved Conceptual Development Plan/Final Development Plan (CDP/FDP) between the privacy fences of the private lots and the northernmost lot line.

Please also note that the design of the stormwater pond no longer incorporates a retaining wall along the pond's northern edge. This will eliminate the need for the previously contemplated concrete structure and railing. This, in turn, makes the pond less visually obtrusive than that previously proposed. The attached drawing continues to reflect the developer's commitment to provide significant screening and landscaping both within the pond and along the area adjacent to the property line. The amount of screening and landscaping proposed is in accordance with the requirements of the applicable proffers and development conditions and well above that shown on the approved CDP/FDP. Upon receipt, if you have any questions or require any additional information, please do not hesitate to give me a call.

Sincerely yours,



Gregory A. Riegler

GAR/jww

cc: Don Hague
John Levkov



July 26, 2001

Executive Summary for the Great Oak Project

RE: Great Oak CDP/FDP Tax Map # 16-3
Parcels 1-30 14b
Rezoning Case # RZ-2000-HM-025

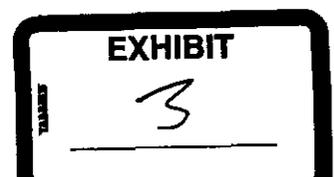
I Introduction

The purpose of this summary is to provide additional technical justification for the pending Conceptual Development Plan / Final Development Plan (CDP/FDP) interpretation to incorporate the use of an additional Stormwater Management (SWM)/ Best Management Practices (BMP) pond and the use of so-called "rain gardens". In addition we have provided insight on the decision making that led to the current proposal and our consideration of various alternative options.

Fairfax County design standards detailed in the Fairfax County Public Facilities Manual (PFM) require that the storm drainage from any new development be detained and treated in a manner that reduces the peak post-development runoff to below the rates of the pre-development runoff. In addition it is required that the runoff be treated for water quality as well (BMP). To this end all sites must be analyzed to assess how the site currently drains and how it will drain with the development which is to be proposed. The topography of the site dictates where the drainage will go. The existing drainage divides must be honored with the proposed development. In regards to the subject property the topography for this site results in a drainage divide which basically splits site into drainage sheds which in turn go to two major outfalls for the approximately 35 acre site. The first outfall which is to the southwest drains approximately 14 acres of the subject property. The second major outfall which is to the northern end of the site drains approximately 21 acres of the site in a northerly direction to existing twin culverts under Sunrise Valley Road.

II SWM Currently shown on CDP/FDP

The CDP/FDP developed was created as an overall concept layout utilizing preliminary sound engineering practices to layout the site. It is not unusual for final engineering to necessitate certain changes from the CDP/FDP. Final Engineering has confirmed that, given the existing topography, the location of the outfall and the final grades there are only certain areas that would lend themselves to be utilized for SWM/BMP purposes. The area to the southwestern portion of the site which drains approximately 14 acres of that drainage shed on the southern side of the site has an existing outfall which crosses under the existing Foxmill Road into a storm system designed to handle the runoff from the site. The drainage travels in a southwesterly direction from there. This area was identified as a location for a SWM/BMP pond on the CDP. The first site plan submitted for the Great Oak site (Section 1 0933-SP-01) has utilized that location successfully.



The northern portion of the site was allotted a corner parcel on the CDP/FDP between the multi family units and Fox Mill Road, to be utilized for SWM/BMP facilities. Based on the preliminary engineering available, at this time of rezoning stormwater location was logical. The proposed pond parcel while not directly in the outfall swale location appears to be close enough to the natural drainage path to be utilized this purpose. Final engineering determined that the southern pond appeared to have adequate area and location set aside to be utilized for the drainage shed that it would be servicing. Upon a more detailed final engineering analysis of the northern drainage shed it was determined that the location allotted on the CDP/FDP for SWM/BMP for that portion of the site was not, in and of itself, an adequate location to account for all of the runoff on the northern side of the drainage divide.

III Need for Additional SWM Facility

There are several reasons why the pond intended to serve the northern portion of the site is not fully adequate. First being the outfall location which is under Sunrise Valley Drive and is approximately 600' from the location of the pond shown on the CDP/FDP. Even providing the minimum slope from the outfall culverts up to the pond, this would create a situation where the bottom elevation of that pond would not allow large portions of the site to drain to it unless large amounts of fill are imported in order to raise the eastern portion of the site. Even if that option were utilized it was determined that the allotted location for the pond was still not adequate to properly detain the runoff. Unfortunately, this pond area cannot be expanded due to the location of the entrance road and the need for its alignment with an existing entrance across Fox Mill Road. Utilizing the maximum possible area given for that SWM/BMP pond it was determined that there would be no way to create sufficient volume needed to handle the runoff from the northern portion of the site in a manner that meets with the Fairfax County PFM requirements. Due to the unusual shape of the pond, even incorporating a taller dam, which, in theory, would give the pond the ability to impound a deeper volume of water, would not sufficiently increase the volume. Another issue to consider is that as the dam gets higher there is a greater danger of dam breach which could be a flood hazard to the downstream properties which are planned for the future to be Van Metre at Woodland Park multifamily dwelling units. An abnormally high dam would also be less attractive than a contemplated pond.

IV Consideration of Alternatives

Once it was determined that the original pond location could not be configured to meet the SWM requirements for the northern drainage of the site, all alternatives were investigated. These alternatives included utilizing the existing downstream SWM of the Woodland park pond as one offsite option. Another offsite option was to consider a minor reconfiguration of the approved development of Van Metre at Woodland Park which is downstream of the Great oak Property and just upstream of the twin culverts under Sunrise Valley Road. In addition, various locations were considered onsite as being reasonable locations to adequately serve as SWM/BMP facilities. The offsite options were investigated first. The offsite existing SWM pond in the Woodland Park development was first considered. This option was ruled out as evaluation of the issues

with Fairfax County Storm Drainage Department of the Department of Public Works confirmed significant re-engineering and reconstruction of this particular pond in order to accommodate a higher density development upstream and current Fairfax County PFM standards. This would in effect more than doubling the freeboard hydrograph storms required for that pond to contain. The result would be a number of unacceptable visual and developmental related impacts, due to the fact that this is an existing pond with established development in close proximity. Another option which was looked at was the offsite area just downstream and north of the Great Oak Site in the area just above the existing twin culverts under Sunrise Valley Road. Several configurations were looked at and sized for this location. It was determined that an adequate pond for that area could not be constructed without serious displacement of the approved Woodland Park development for that area. For these reasons there are no available offsite options.

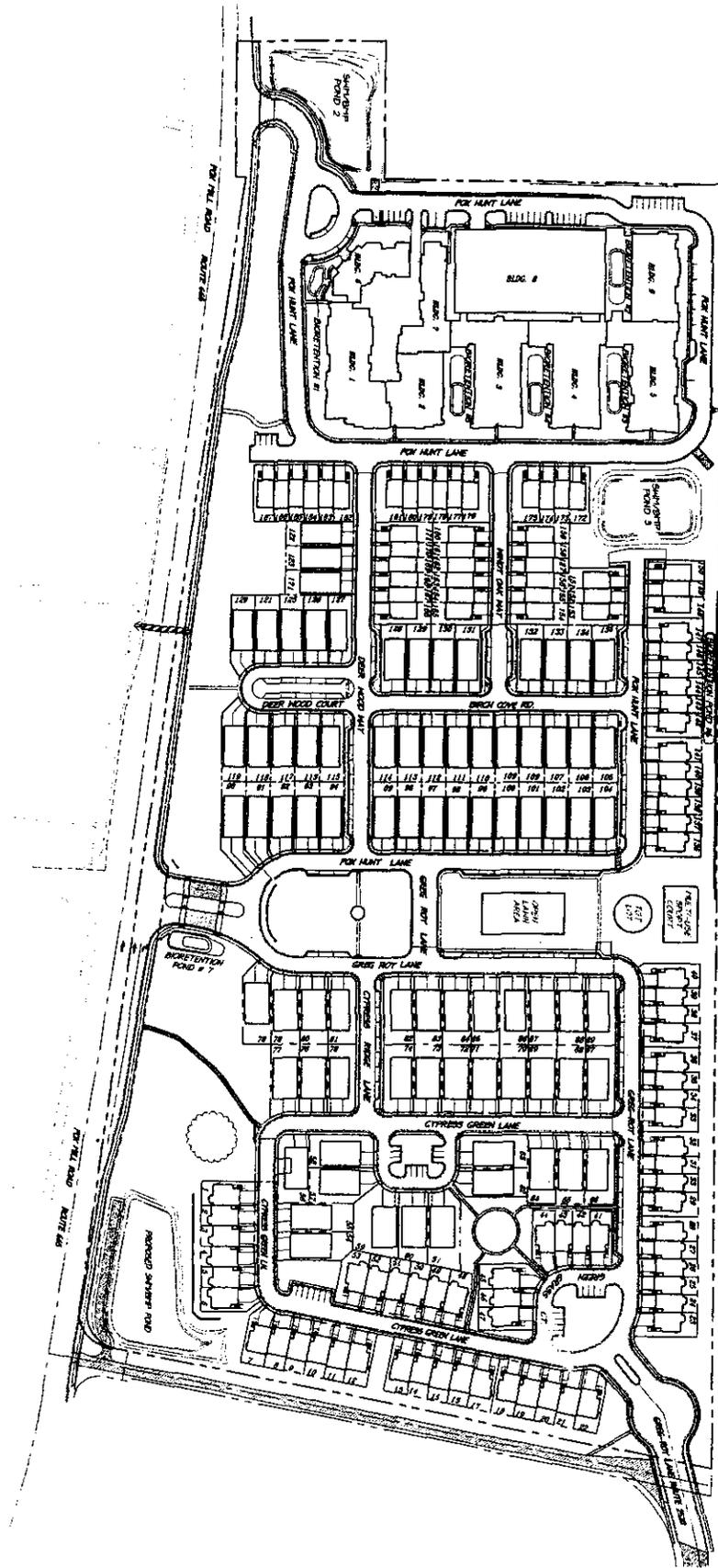
V Selection of Onsite Option

Various onsite options were considered to meet the SWM needs. It was determined that given the location of the pond proposed on the CDP/FDP this was still an appropriate location to handle at least a portion of the drainage from that northern drainage shed of the site. Various other locations were considered to meet the remaining SWM needs for the site. These included locating the pond at the northernmost downstream extents of the property, as well as just upland from that and slightly south of the multi family dwelling units. Of the various locations considered and analyzed it was determined that the location which best met the needs of the site as well as working with the site as a whole and not compromising the design in an unfavorable manor was the location as we have shown on our exhibit. This location will be displacing 10 of the single attached units which were shown on the approved CDP/FDP.

This pond is consistent with the design concept of the CDP for several reasons. There will be a decrease in unit density with an increase in open space. Per the proffers, this pond will be landscaped so as to increase the aesthetic value of the pond. In addition, as required in the FDP development conditions, alternative means are to be utilized on site in order to meet the BMP requirements. These will entail the use of bioretention facilities otherwise known as "rain gardens". These facilities will primarily be located in the courtyard areas of the multi family dwelling units which are proposed with the Great Oak section 2 apartment site plan. These "rain gardens" will be treating several portions of the impervious area onsite. This will therefore reduce the required BMP storage in the SWM/BMP ponds and subsequently, each of the facilities will be shallower and smaller than otherwise. This will result in a more desirable situation than deeper and potentially larger ponds which provide full BMP treatment without the utilization of the "rain gardens".

VI Conclusion

For all the above mentioned reasons we feel justified in requesting this interpretation that a third SWM/BMP pond be utilized in addition to the two that are shown on the CDP/FDP.



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KSI GREAT OAK

OVERALL

REGISTERED PROFESSIONAL ENGINEER
 No. 2191

christopher consultants

