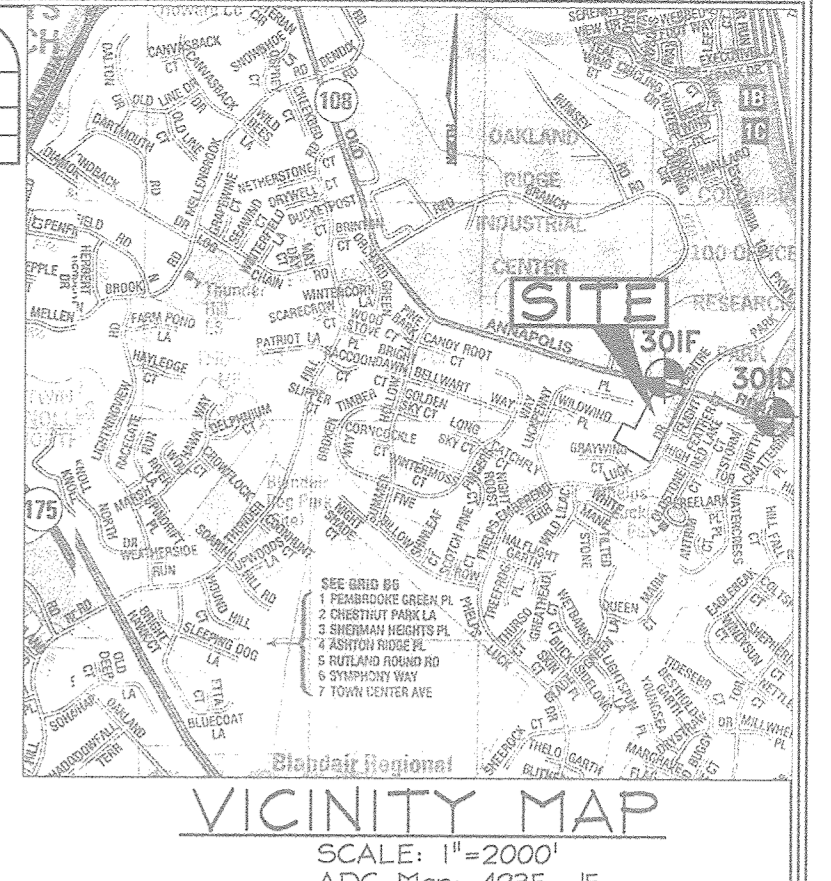


LEGEND

- Existing Contour, Proposed Contour, Proposed Spot Elevation, Existing Spot Elevation, Direction of Flow, Existing Trees to Remain, Existing Sign, Street Light, Fire Hydrant, Lot Lines, Property Boundary, Existing Water Main, Existing Sewer Main, Existing Storm Drain, Existing Storm Drain Inlet, Road Centerline, Building Restriction Line, Existing House / Building, Soils Line, Perimeter Trees, Perimeter Masonry Column, Unmitigated 65 dBA Noise Line, Limit of Disturbance Line, Super Silt Fence Line, Silt Fence Line, Diversion Fence, Stone Construction Entrance (SCE), Proposed Dry Well, Stockpile Area, At Grade Inlet Protection

SOILS LEGEND table with columns: SYMBOL, NAME / DESCRIPTION, SOIL GROUP, K<sub>w</sub>, HYDRIC. Includes symbols G<sub>h</sub>B, G<sub>h</sub>C, G<sub>h</sub>D.



GEODETIC SURVEY CONTROL

Denotes Howard County Geodetic Survey Control. The coordinates shown herein are based upon the Howard County Geodetic Control, which is based on the Maryland State Plane Coordinate System.

GENERAL NOTES

- 1. Site Data: Property Address: 5320 Phelps Luck Drive, Columbia, MD 21045-2329. Project Area = 5.241 ac.± (Parcels 'N', 'O' and Open Space 462).
2. The subject property is zoned NT per the 10/6/13 Comprehensive Zoning Plan.
3. Number of Proposed Lots = 18 (Buildable Lots).
4. There are no open space or forest conservation requirements for the subject property.
5. Area of Proposed Buildable Lots = 3,987 ac.±.
6. Area of Proposed Roads Right of Way = 1,074 ac.±.
7. Area of Existing Open Space Lot 462 = 0.180 ac.±.
8. Public water and sewer will be used within this site. Existing Water & Sewer Contracts: 424-D-1445, 343-1485.
9. There are no floodplains, wetlands or cemeteries on-site. The wetlands shown around the existing wet pond and pond outfall were taken from approved plan GP-93-31. There is a historic house on-site that dates back to approximately 1890-1910 (see ex. house shown on sheet 2). This house has been heavily altered and will be removed.
10. This property is in conformance with the latest Howard County Standards unless waivers have been approved.
11. The property is subject to PDP ZB 11121 and FDP 77-A-IV.
12. The existing topography is taken from Howard County GIS.
13. The existing utilities are based on field survey, performed by FSH in January 2018, and Howard County GIS.
14. The existing well will be abandoned according to Health Department requirements.
15. Per FEMA (FIRM Map) 24027C0155D no FEMA delineated floodplain exists on or surrounding the subject property.
16. Approval of this ECP does not constitute approval of any subsequent and associated subdivision plan, site development plan or grading or building permit. Review of this project for compliance with the Howard County Subdivision and Land Development Regulations and the Howard County Zoning Regulations shall occur at the subdivision, site plan or grading and building permit stages.

STORMWATER MANAGEMENT SUMMARY

Required ESDv = 13,458 cu.ft.±
ESDv Provided On-Site:
ESDv Provided through 21 Dry Wells (M-5) = 2,150 cu.ft.±
ESDv Provided through 7 Micro-Bioretenion (M-6) = 4,968 cu.ft.±
ESDv Provided through Non-Rooftop Disconnect (N-2) = 6,340 cu.ft.±
Total On-Site ESDv Provided = 7,205 cu.ft.±
ESDv Remaining = 13,458 cu.ft. - 7,205 cu.ft. = 6,253 cu.ft.
Volume to be provided through extended detention within off-site existing wet pond located within Columbia Village of Long Reach. Per agreement between the developer of Grandfather's Gardens and the Columbia Association the developer has agreed to do a maintenance upgrade to this existing wet pond to meet MD-378 standards. This maintenance upgrade design will provide for 6,253 cu.ft. of extended detention volume to meet the Grandfather's garden volume shortage.
Required Rev = 1,944 cu.ft.±
Rev Provided:
Rev Provided within Dry Wells = 598 cu.ft.±
Rev Provided within Micro-Bioretenion = 1,408 cu.ft.±
Total ESDv Provided = 1,946 cu.ft.±

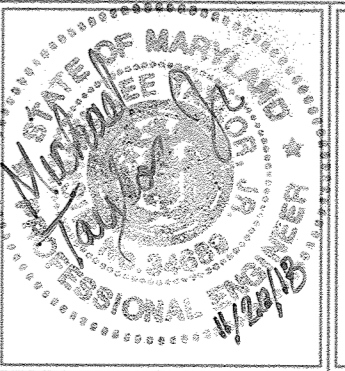
DESIGN NARRATIVE:

- a.) The onsite natural resource, woods, were conserved to the maximum extent practicable while maintaining the intent of the proposed project.
b.) To accommodate 0.8' of runoff from the entire site in the existing wet pond, 1.94 acres of drainage area is diverted to flow into the pond instead of Phelps Luck Drive storm drain system.
c.) Impervious areas were reduced to the maximum extent practical while maintaining the projects intent.
d.) Minimal erosion and sediment control measures are required for this project. Erosion and sediment control will be achieved through the use of silt fence, super silt fence, inlet protection and a stabilized construction entrance.
e.) Stormwater management has been achieved through environmental site design (ESD) practices using 21 dry wells (M-5), 7 micro-bioretenion (M-6) facilities and one non-rooftop runoff disconnect (N-2) credit and through extended detention volume within the off-site wet pond to be upgraded to meet MD-378 standards.

PROFESSIONAL CERTIFICATION

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 334689, Expiration Date: 7/05/2019.

ENVIRONMENTAL CONCEPT PLAN PROPOSED CONDITIONS PLAN GRANDFATHER'S GARDENS A RESUBDIVISION OF PARCELS 'N' AND 'O' PLAT BOOK 18 FOLIO 44 5320 PHELPS LUCK DRIVE LIBER 14769, FOLIO 480 TAX MAP 30, GRID 24 PARCEL 289, ZONED NT 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

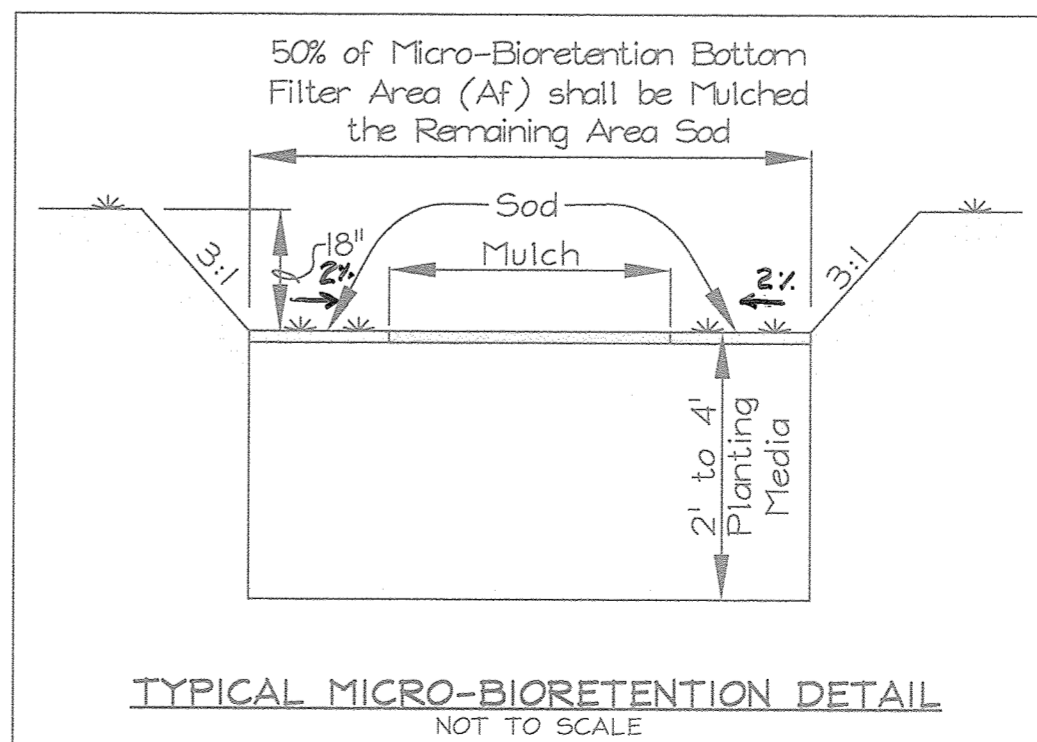


FSH Associates Engineers Planners Surveyors 8338 Howard Lane, Elkridge, MD 21075 Tel: 410-587-5200 Fax: 410-798-1552 E-mail: info@fsheri.com

DESIGN BY: FLT DRAWN BY: CRH2 CHECKED BY: ZYF SCALE: 1" = 50' DATE: Nov. 20, 2018 H.O. No.: 3741 SHEET No.: 1 OF 2

SITE ANALYSIS DATA

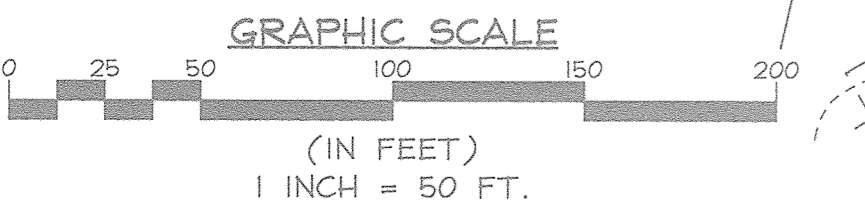
- 1. Total area of site = 5.241 ac.
2. No wetlands, wetland buffers or streams exist on site.
3. No 100-year floodplain exists on site.
4. Existing forest area on site = N/A
5. No areas of 15-24.9% slopes exist on site.
6. No 25% slopes or greater exist on site.
7. Limits of disturbance:
a.) 5.28 ac.± (excludes pond maintenance LOD)
b.) 0.18 ac.± (pond maintenance LOD)
8. Proposed impervious area = 2.02 ac.±
9. Erodible soils (K > 0.35) = 0.03 ac.±
10. Existing site use: Commercial, Active Nursery, Landscaping and Garden Center
Proposed site use: Residential



TYPICAL MICRO-BIORETENTION DETAIL NOT TO SCALE

OWNER/DEVELOPER

LANG MILLER AND ASSOCIATES, INC. 5320 Phelps Luck Drive Columbia, Maryland 21045 Phone: 301-317-4058



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

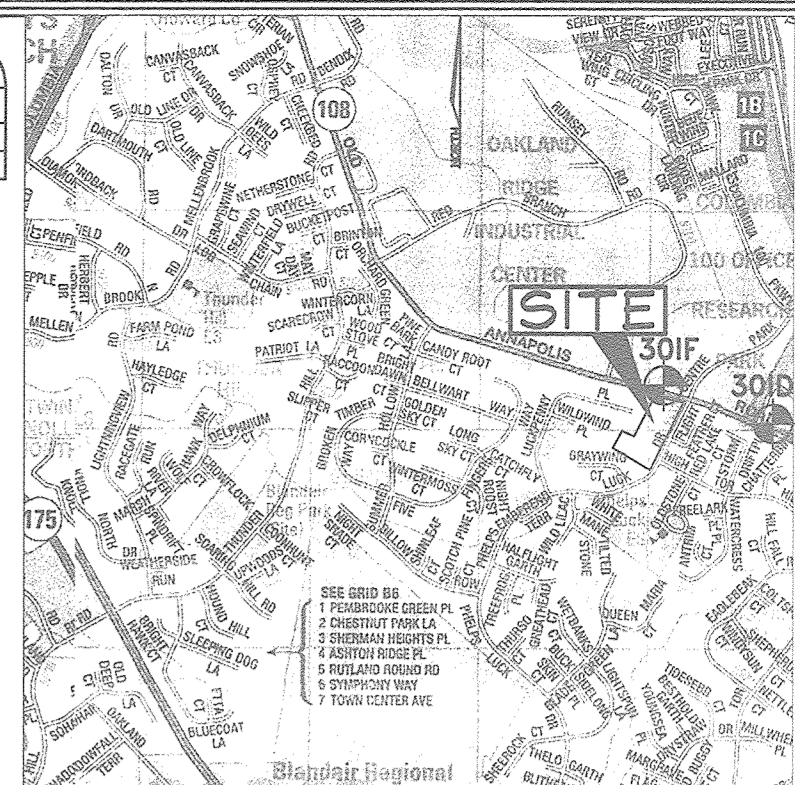
Chief, Development Engineering Division 11-30-18 DATE
Chief, Division of Land Development 11-30-18 DATE



**LEGEND**

- Existing Contour -382
- Existing Trees
- Existing Sign
- Street Light
- Fire Hydrant
- Lot Lines
- Property Boundary
- Existing Water Main
- Existing Sewer Main
- Existing Storm Drain
- Existing Storm Drain Inlet
- Road Centerline
- Building Restriction Line
- Existing House / Building
- Soils Line

SOILS LEGEND				
SYMBOL	NAME / DESCRIPTION	SOIL GROUP	Kw	HYDRIC
GnB	Glenelg-Urban land complex, 0 to 8 percent slopes	B	0.20	N
GnE	Glenelg-Urban land complex, 8 to 15 percent slopes	B	0.20	N
GnF	Glenelg-Urban land complex, 15 to 25 percent slopes	B	0.20	N
GnC	Glenelg-Urban land complex, 0 to 8 percent slopes	C	0.37	Y



**VICINITY MAP**  
SCALE: 1"=2000'  
ADC Map: 49B5-J5

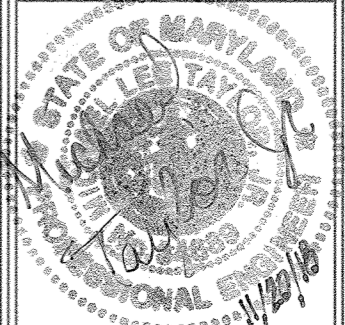
**GEODETIC SURVEY CONTROL**

Denotes Howard County Geodetic Survey Control.  
The coordinates shown herein are based upon the Howard County Geodetic Control, which is based on the Maryland State Plane Coordinate System. Howard County Monument Nos. 301D and 301F were used for this project.  
301D N 567,645.518 E 1,365,277.738 (NAD 83/91) Elev. 517.715 (NGVD 88)  
301F N 568,033.070 E 1,363,934.332 (NAD 83/91) Elev. 473.359 (NGVD 88)

SHEET INDEX	
DESCRIPTION	SHEET No.
Environmental Concept Plan-Existing Conditions	1 of 2
Environmental Concept Plan-Proposed Conditions	2 of 2

**OWNER/DEVELOPER**  
LANG MILLER AND ASSOCIATES, INC.  
5320 Phelps Luck Drive  
Columbia, Maryland 21045  
Phone: 301-317-4058

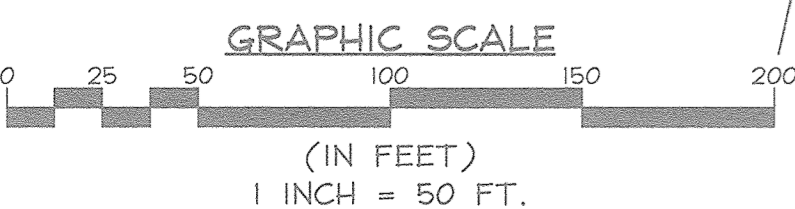
**ENVIRONMENTAL CONCEPT PLAN**  
**EXISTING CONDITIONS PLAN**  
**GRANDFATHER'S GARDENS**  
A RESUBDIVISION OF PARCELS 'N' AND 'O' PLAT BOOK 18 FOLIO 44  
5320 PHELPS LUCK DRIVE  
LIBER 14769, FOLIO 480  
TAX MAP 30, GRID 24 PARCEL 289, ZONED NT  
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



**FSH Associates**  
Engineers Planners Surveyors  
8339 Howard Lane, Elkridge, MD 21075  
Tel 410-567-5200 Fax 410-796-1562  
E-mail: info@fsh.net

DESIGN BY: MLT  
DRAWN BY: CRH2  
CHECKED BY: ZYF  
SCALE: 1" = 50'  
DATE: Nov 20, 2018  
W.O. No.: 3741  
SHEET No.: 2 OF 2

**PROFESSIONAL CERTIFICATION**  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. #34689, Expiration Date: 07/08/2019.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

**11-30-18**  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**11-30-18**  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE



11/20/18 11:00 AM 10/20/18 11:00 AM 10/20/18 11:00 AM 10/20/18 11:00 AM 10/20/18 11:00 AM 10/20/18 11:00 AM 10/20/18 11:00 AM 10/20/18 11:00 AM 10/20/18 11:00 AM