ROBINS, KAPLAN, MILLER & CIRESI L.L.P.

ATTORNEYS AT LAW

SUITE 1200
1801 K STREET, N.W.
WASHINGTON, D.C. 20006-1307
TEL: 202-775-0725 FAX: 202-223-
www.rkmc.com

RICHARD B. NETTLER
JEANNINE RUSTAD
(202) 775-0725

March 2, 2005

BY HAND
Mr. Geoffrey Griffis
Chairperson
Board of Zoning Adjustment
441 4th Street, NW, Room 210
Washington, DC 20001

RECEIVED
D.C. OFFICE OF ZONING
2005 MAR -2 PM 12: 59

Re: BZA Application No. 17276
2101 Foxhall Road, N.W.; Square 1346, Lot 822

Dear Mr. Griffis:

Pursuant to the Board's request at the conclusion of the February 15 and 22, 2005 hearings in the above-referenced matter, attached you will find the following material:

1. Preliminary grading plan;
2. On-site storm drain/storm water management plan and off-site storm drain concept layout plan (with contours);
3. On-site storm drain/storm water management plan and off-site storm drain concept layout plan (without contours);
4. Tree preservation plan;
5. Site plan;
6. On-site potable water supply concept layout plan;
7. On-site sewer concept layout plan;
8. Site Contour Sections for lots A-13, A-34 and A-35;
9. Typical retaining wall section;

Also enclosed you will find:

10. Filterra and Baysavers examples;
11. 840 acres drainage area map;
12. Email response to Ann Haas regarding Julie Moore's (biologist) comments and letter response prepared for the February 2, 2005 ANC meeting;
13. Open space exhibit; and
14. Resumes for Roy H. Gauzza, R.L.A., Mary K. Sears, and James R. Ingram of Greenhorne & O'Mara, Inc.

Word 45668841.1

BZA
Case No. 17276
Exhibit No. 50

Board of Zoning Adjustment
District of Columbia
CASE NO. 17276
EXHIBIT NO. 50

Thank you for your attention to this matter.

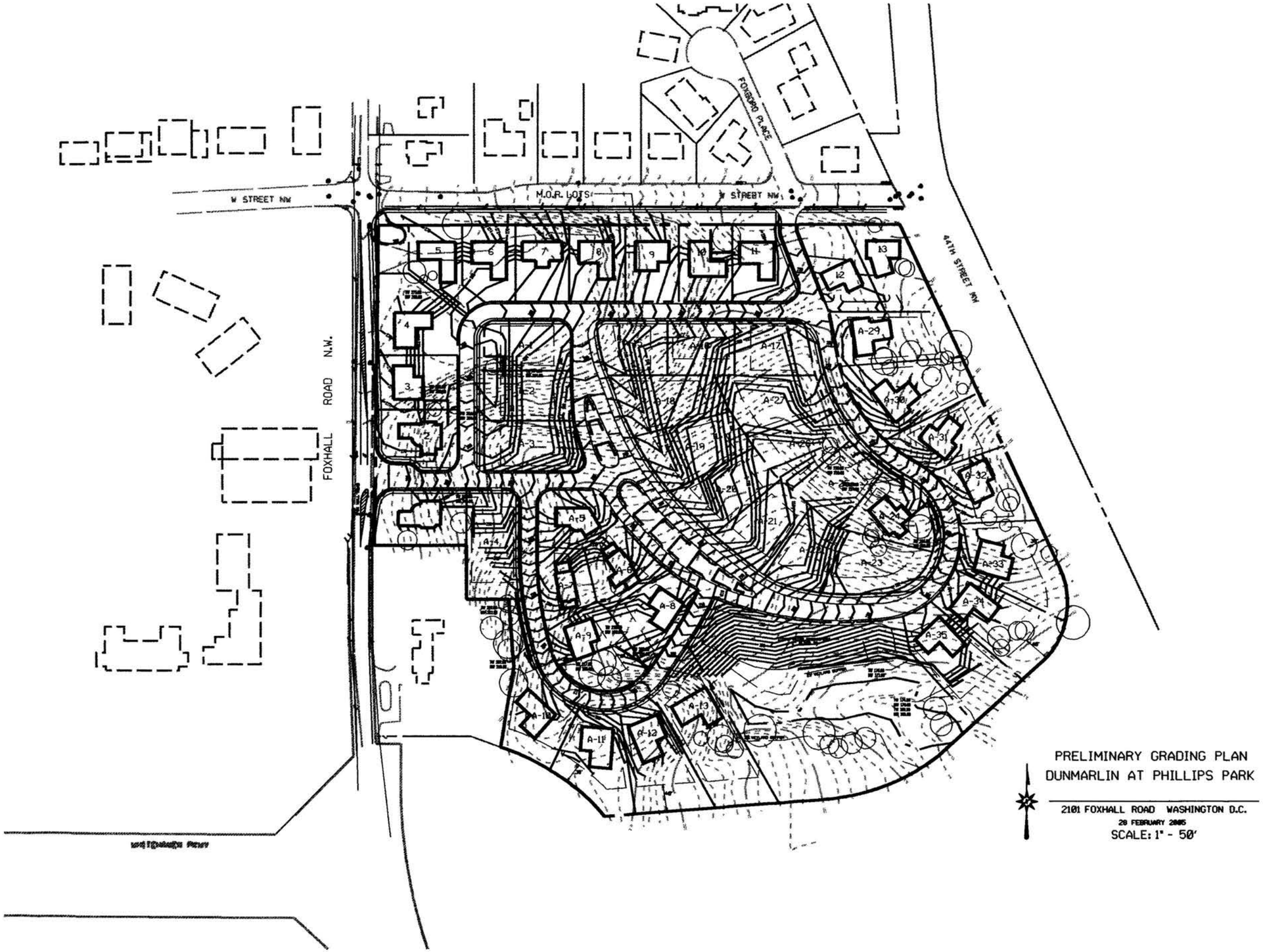
Sincerely,

ROBINS, KAPLAN, MILLER & CIRESI L.L.P.

Richard B. Nettler
Jeannine Rustad

Enclosures (as stated)
cc: Mr. Felipe Paraud
Alma Gates, ANC 3D Commissioner
Office of Planning, Joel Lawson
David Murphy, NPS
Ms. Chandra Hardy
Friends of Whitehaven (c/o William Snape, III, Esquire)
Certain Residents of W Street (c/o Maggie Brady)
(All with enclosures by hand)

1



PRELIMINARY GRADING PLAN
DUNMARLIN AT PHILLIPS PARK

2101 FOXHALL ROAD WASHINGTON D.C.
28 FEBRUARY 2005
SCALE: 1" - 50'

EXHIBIT 50

CASE NO. 17276

IS AN OVERSIZED EXHIBIT

PLEASE SEE AT OFFICE

2

W STREET NW

M.O.R. LOTS

W STREET NW

44TH STREET NW

THIS STORM DRAIN SYSTEM IS INDEPENDENT FROM THE DUNMARLIN SITE

PROPOSED 15" STORM DRAIN

FOXHALL RD

JOINS EXISTING 30" STORM DRAIN

WHITEHAVEN PKWY

BAYSAVER

PROPOSED OUTFALL

PROPOSED OUTFALL

72" UNDERGROUND PIPE ARRAY STORM WATER MANAGEMENT FACILITY, +/- 16,500 SF

ON-SITE STORM DRAIN/
STORM WATER MANAGEMENT
(BAYSAVER SYSTEM)
AND OFF-SITE STORM DRAIN
CONCEPT LAYOUT PLAN
WITH CONTOURS

2101 FOXHALL ROAD WASHINGTON D.C.

28 FEBRUARY 2005

SCALE: 1" - 50'

DUNMARLIN AT PHILLIPS PARK

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EXHIBIT 50

CASE NO. 17276

IS AN OVERSIZED EXHIBIT

PLEASE SEE AT OFFICE

3

W STREET NW

M.O.R. LOTS

W STREET NW

44TH STREET NW

THIS STORM DRAIN SYSTEM IS INDEPENDENT FROM THE DUNMARLIN SITE

PROPOSED 15" STORM DRAIN

FOXHALL RD

BAYSAVER

PROPOSED OUTFALL

PROPOSED OUTFALL

JOINS EXISTING 30" STORM DRAIN

WHITEHAVEN PKWY

72" UNDERGROUND PIPE ARRAY STORM WATER MANAGEMENT FACILITY, +/- 16,500 SF

ON-SITE STORM DRAIN/
STORM WATER MANAGEMENT
(BAYSAVER SYSTEM)
AND OFF-SITE STORM DRAIN
CONCEPT LAYOUT PLAN
WITHOUT CONTOURS

2101 FOXHALL ROAD WASHINGTON D.C.

28 FEBRUARY 2005

SCALE: 1" - 50'

DUNMARLIN AT PHILLIPS PARK

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4



TREE LC.	TREE SPECIES
2	SWEETBAY MAGNOLIA
3	SWEETBAY MAGNOLIA
4	SYCAMORE
22	AMERICAN ELM
31	BLACK WALNUT
34	SYCAMORE
38	SYCAMORE
40	TULIP POPLAR
42	SYCAMORE
43	TULIP POPLAR
44	TULIP POPLAR
45	TULIP POPLAR
48	TULIP POPLAR
60	SOUTHERN RED OAK
61	SOUTHERN RED OAK
62	TULIP POPLAR
75	MULBERRY
77	RFT MAPLE
82	SOUTHERN RED OAK
85	SOUTHERN RED OAK
87	TULIP POPLAR
88	TULIP POPLAR
89	TULIP POPLAR
90	TULIP POPLAR
92	TULIP POPLAR
94	TULIP POPLAR
97	TULIP POPLAR
98	TULIP POPLAR
122	TULIP POPLAR
124	TULIP POPLAR
125	TULIP POPLAR
127	TULIP POPLAR
129	TULIP POPLAR
130	TULIP POPLAR
137	AMERICAN BEECH
138	AMERICAN BEECH
139	WHITE OAK
140	AMERICAN BEECH
151	WHITE OAK
152	TULIP POPLAR
157	WHITE OAK
161	NORTHERN RED OAK
172	WHITE OAK
173	WHITE OAK
174	WHITE OAK
181	CHESTNUT OAK
182	CHESTNUT OAK
183	CHESTNUT OAK
198	TULIP POPLAR
196	WHITE OAK
197	PIGNUT HICKORY
199	WHITE OAK
201	WHITE OAK
202	WHITE OAK
203	PIGNUT HICKORY
204	WHITE OAK
205	AMERICAN BEECH
206	SLIPPERY ELM
207	BLACK WALNUT
214	TULIP POPLAR
221	TULIP POPLAR
249	AMERICAN ELM

TREE PRESERVATION PLAN

2101 FOXHALL ROAD WASHINGTON D.C.

28 FEBRUARY 2005

SCALE: 1" - 50'

DUNMARLIN AT PHILLIPS PARK

5

LOT AREA CALCULATIONS

LOT	AREA
M.O.R. LOTS	
1	11,308 SF
2	10,274 SF
3	9,856 SF
4	12,807 SF
5	8,451 SF
6	8,721 SF
7	9,181 SF
8	9,648 SF
9	9,163 SF
10	9,179 SF
11	9,870 SF
12	10,203 SF
13	10,790 SF

LOT	AREA
THEORETICAL LOTS	
A-1	9,569 SF
A-2	9,684 SF
A-3	10,662 SF
A-4	12,869 SF
A-5	8,567 SF
A-6	8,905 SF
A-7	7,980 SF
A-8	9,812 SF
A-9	12,683 SF
A-10	13,826 SF
A-11	13,378 SF
A-12	14,481 SF
A-13	19,020 SF
A-15	8,169 SF
A-16	8,242 SF
A-17	9,338 SF
A-18	11,813 SF
A-19	11,776 SF
A-20	10,118 SF
A-21	9,847 SF
A-22	8,554 SF
A-23	10,424 SF
A-24	9,855 SF
A-25	8,738 SF
A-26	9,434 SF
A-27	10,743 SF
A-29	13,219 SF
A-30	15,637 SF
A-31	10,647 SF
A-32	11,088 SF
A-33	15,891 SF
A-34	15,428 SF
A-35	14,570 SF

W STREET NW

M.O.R. LOTS

W STREET NW

FOXBORO PLACE

44TH STREET NW

FOXHALL RD

WHITEHAVEN PKWY

STORM WATER MANAGEMENT
+/- 35,586 SF

25' WETLAND BUFFER

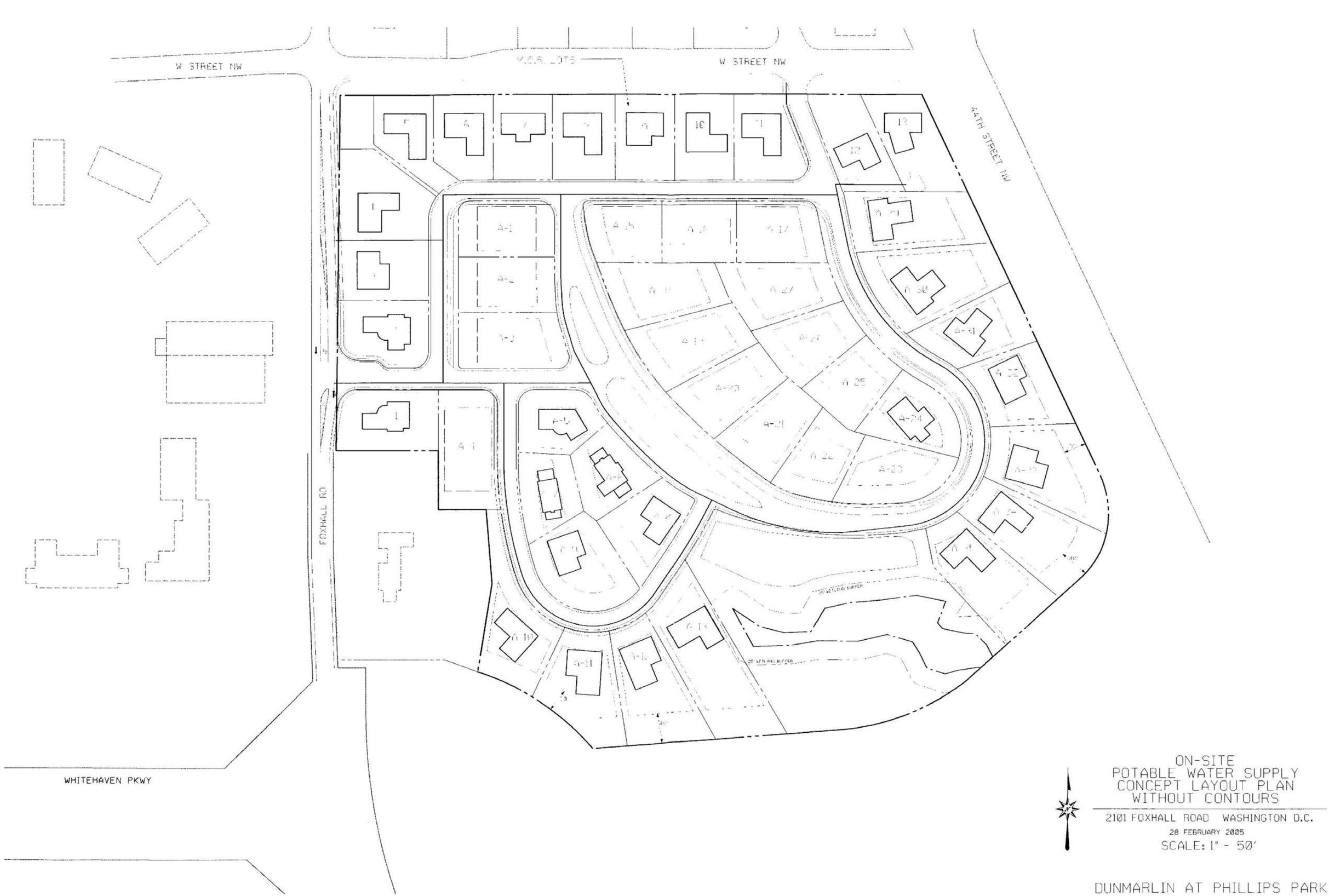
WETLAND WATER

SITE PLAN

2101 FOXHALL ROAD WASHINGTON D.C.
28 FEBRUARY 2005
SCALE: 1" - 50'

DUNMARLIN AT PHILLIPS PARK

6



ON-SITE
POTABLE WATER SUPPLY
CONCEPT LAYOUT PLAN
WITHOUT CONTOURS

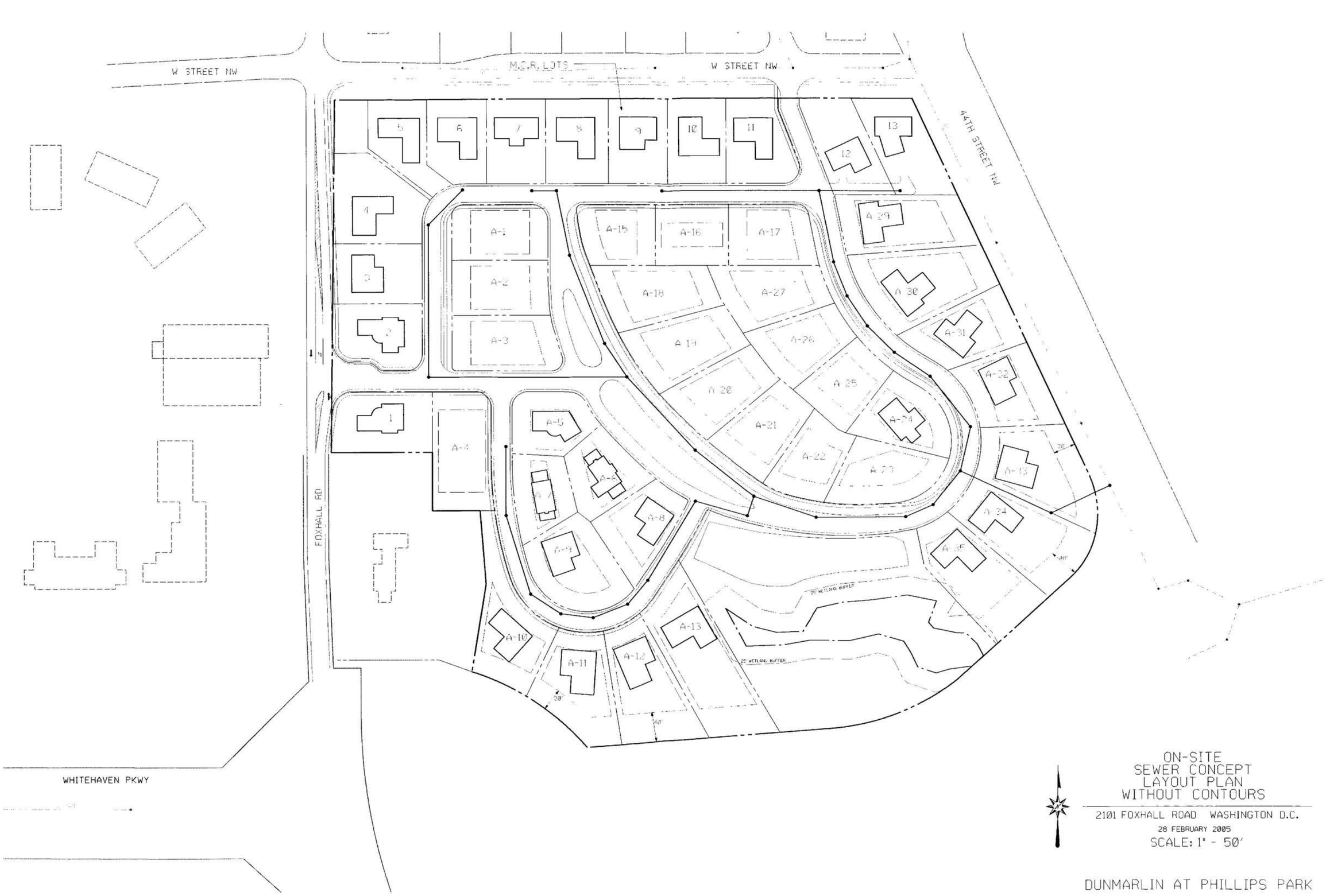
2101 FOXHALL ROAD WASHINGTON D.C.

28 FEBRUARY 2005

SCALE: 1" - 50'

DUNMARLIN AT PHILLIPS PARK

7



ON-SITE
SEWER CONCEPT
LAYOUT PLAN
WITHOUT CONTOURS

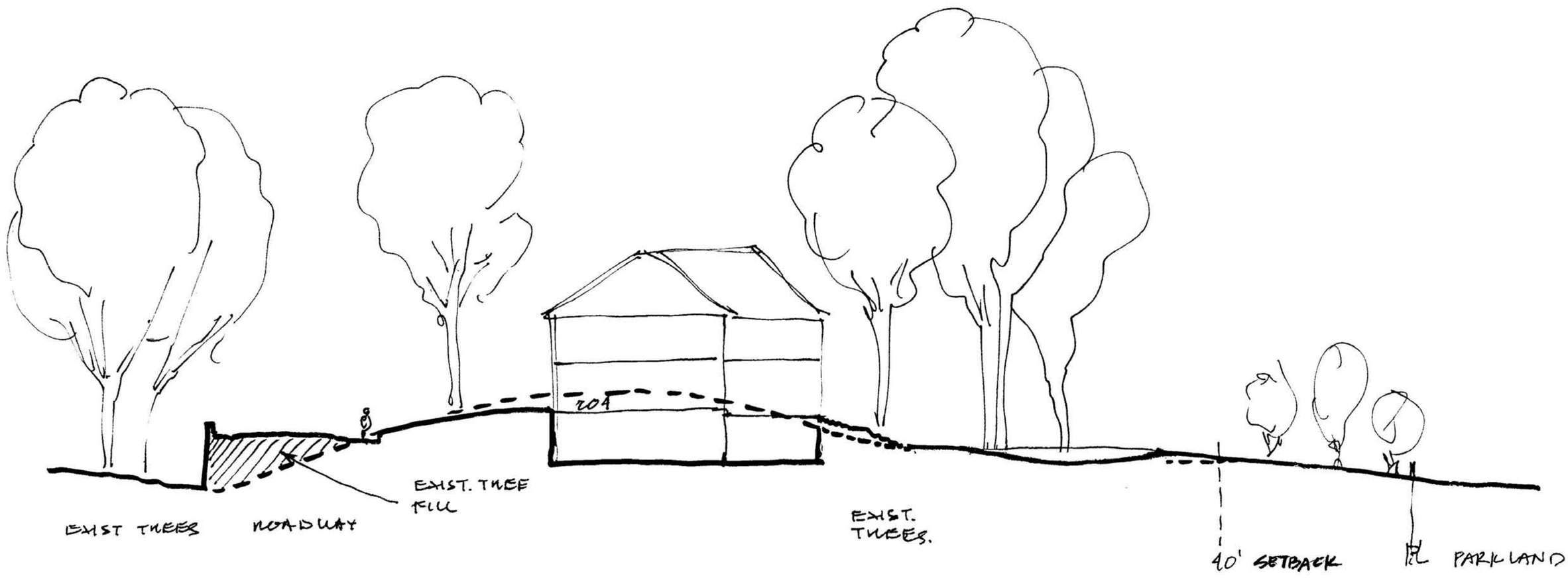
2101 FOXHALL ROAD WASHINGTON D.C.

28 FEBRUARY 2005

SCALE: 1" - 50'

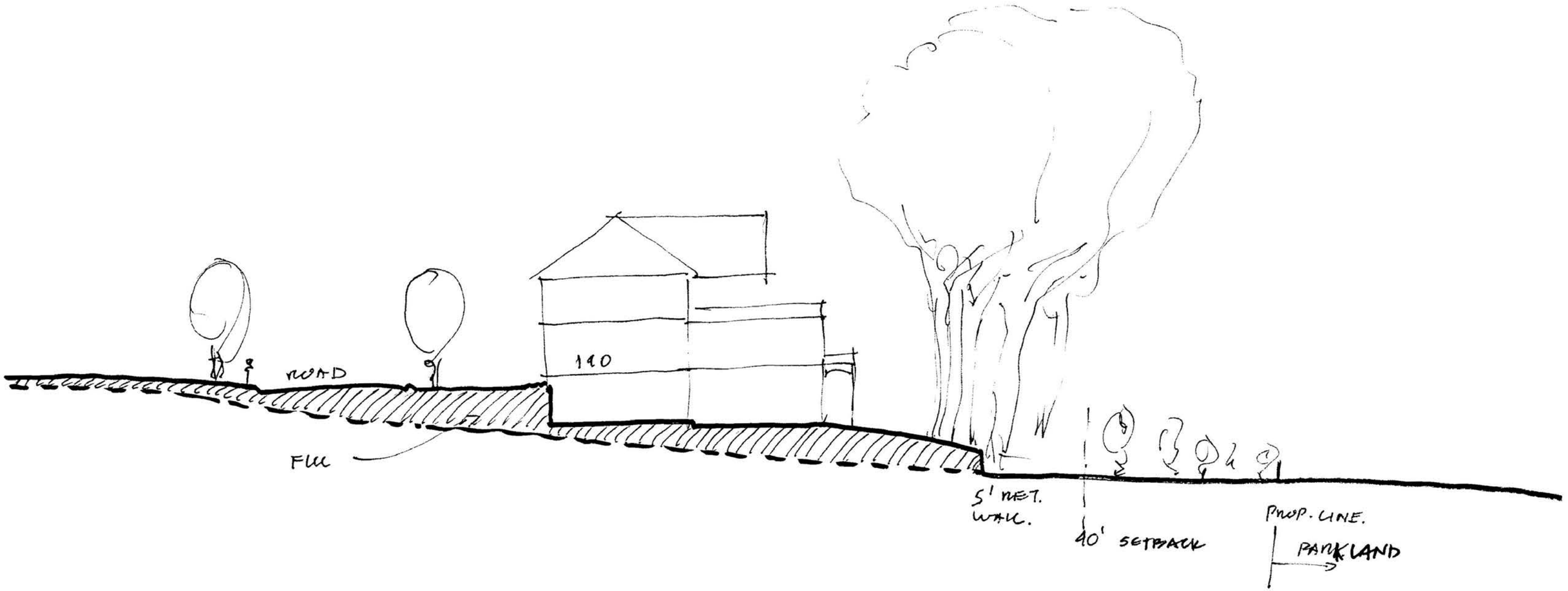
DUNMARLIN AT PHILLIPS PARK

8



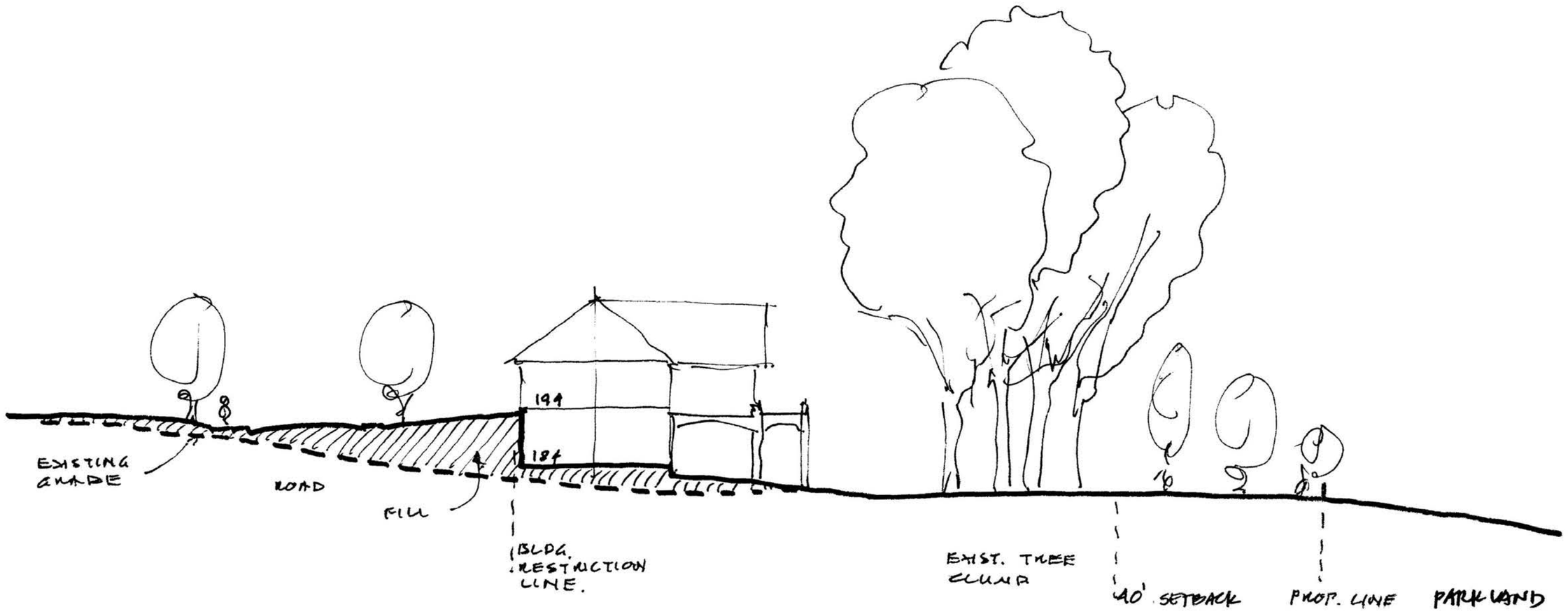
DUNMARUN SITE A-13 CONTOUR SECTION AA.

1" = 20' 02.27.05 BY A.



DUNMARLIN SITE A-35 CONTROL SECTION 15/5

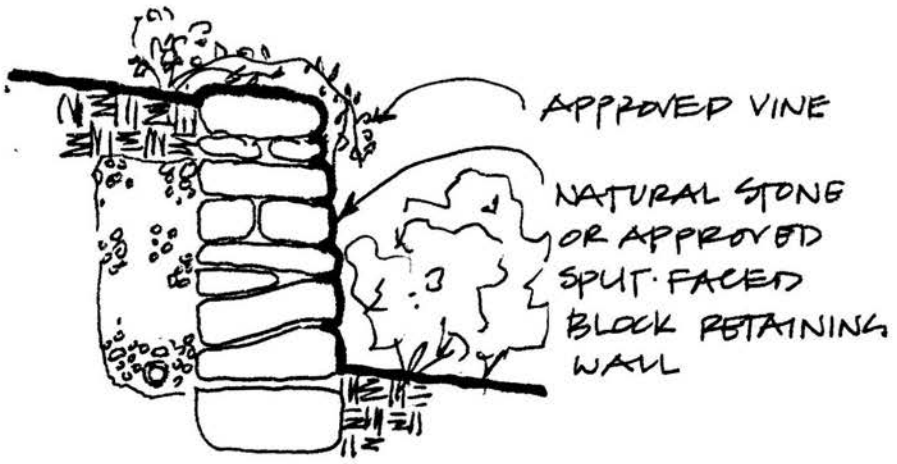
1"=20' 02.27.05 BVA.



DUNMARLIN SITE A-34 CONTOUR SECTION CC

1"=20' 02.27.05 BYA.

9



DUNMAIZLIN.

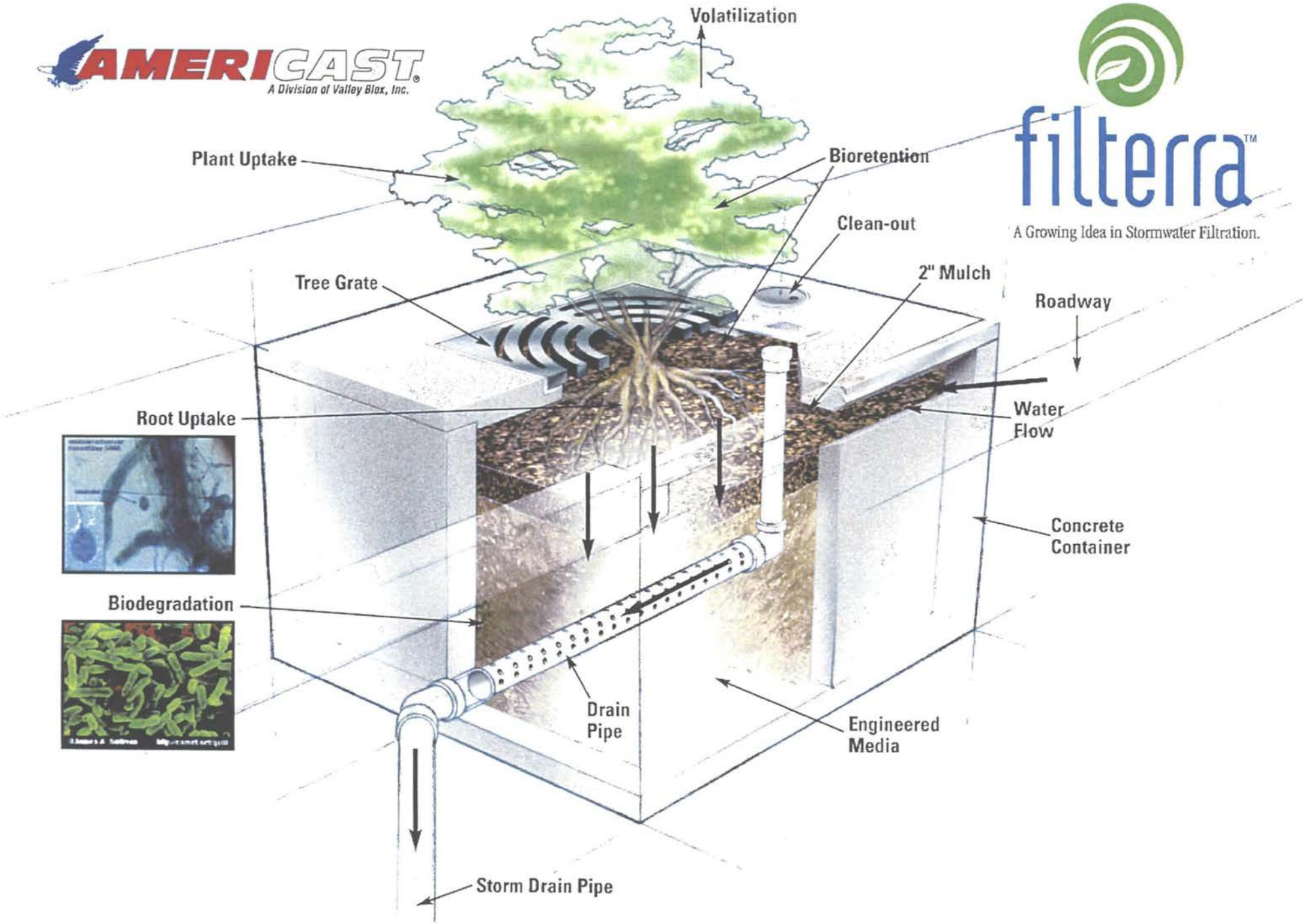
TYPICAL RETAINING WALL SECTION

NO SCALE 2'28·05 B.V.A.

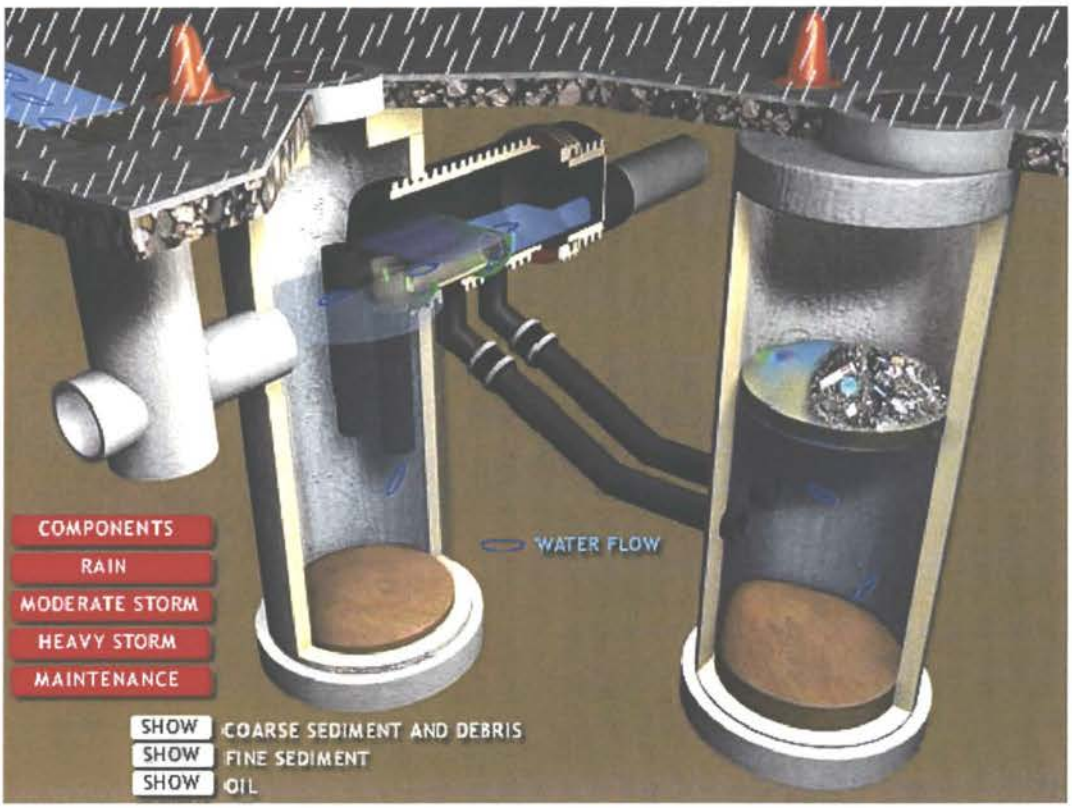
10

AMERICAST
A Division of Valley Blox, Inc.

filterra™
A Growing Idea in Stormwater Filtration.



BaySaver® Separation System



11


D.A. =
640 AC.

12

From: "Ankie Barnes" <abarnes@barnesvanze.com>
To: <ahaas212@comcast.net>, "Edith MacArthur" <EMacArthur@barnesvanze.com>, <rbnettler@rkmc.com>, <jrustad@rkmc.com>
Date: 1/31/2005 9:41:06 PM
Subject: RE: A biologist's comments about the Phillips property

Ann,

Thanks for sharing these comets and overview with me. I have shared these with the team. Our views co-incide with those of the biologists on many of these issues and much of our overall design intent has focused on these issues.

Recently, while conducting an environmetal peer review and responding to neighborhood comncerns, we have made a few adjustments to our plan to improve the environmental fit of our design. These specifically address the retention of clumps of trees wherever possible and the layout of the southern road loop.

These will be discussed and offered as refinements at Wednesday's meeting.

I will try to call you again tomorrow.

Regards,

Ankie Barnes

-----Original Message-----
From: ahaas212@comcast.net [mailto:ahaas212@comcast.net]
Sent: Mon 1/31/2005 3:43 PM
To: Ankie Barnes
Cc: tvisnic@mbvisnic.com
Subject: A biologist's comments about the Phillips property

I appreciate Julie Moore's comments and hope that you will, too.

Ann Haas

***

Observations following a December 2004 Site Visit

to the Phillips Estate, to be Developed as Dunmarlin,

2101 Foxhall Road, N. W., Washington, D. C.,

By Julie H. Moore, Conservation Biologist*

Topography:

The site is topographically varied with a high elevation of 280 feet, MSL (mean sea

level) at the northwestern corner of the property to a low of 160 feet MSL along southeastern boundary of the property where the drainage exits the property and flows into Foundry Branch in the Glover Archbold Park, a drop of 120 feet.

A considerable flow of water is coming off the high northern ridge, some of which is natural and some seems to be from improperly functioning water lines, resulting in wetter conditions than is natural.

Vegetation:

A variety of uses have impacted the 16-acre site through the years. Today it has a mixture of native and exotic species. The ground cover is generally in a degraded condition due to past land use and weedy species. The tree canopy is in better condition with a variety of species many of which represent the native mesic (moist) hardwood forest characteristic of the Potomac River region. Some of the native hardwoods have attained considerable size such as the beech and oaks. Some of the beech trees may be 120-years old. Other species, such as black locust that are early successional species that colonize disturbed soils, have reached the end of their natural lifespan and are dying. Hardwoods, such as red maples, that tolerate wet conditions, are found along the drainage.

Wetlands:

The west-to-east trending drainage removes both natural and unnatural moisture from the property. Wetlands determinations have been made indicating the types of wetlands present. Although somewhat impacted by past land use and an elevated road, they are valuable in filtering water, prevent flooding, and providing habitat for birds and other wildlife and aesthetics for people.

Issues:

The interesting existing attributes of the property have been largely ignored in planning the residential development. The natural topographic variation will be reshaped if the current plan is followed, whereas it may be feasible to keep the "terrace" effect of the contours, at least in the northwestern sector on the steep slopes south of the old mansion site. Plans show that existing cover of many mature trees will be removed, and scattered individual trees retained. Most of the existing trees are species that are susceptible to impact if care is not taken to maintain their root systems. They currently function as a stand rather than as individual trees and thus will be susceptible to wind-throw if they are reduced to isolated representatives.

A considerable amount of earth-moving will be needed if the property is reshaped to follow current development plans. The high, nearly level ridge at the corner of Foxhall Road and W Street will be cut down and material pushed south to make the site more level for homes. Considerable erosion is probable, and sediment will quickly impact the wetlands and probably move through the drain into the adjacent parkland. The wetlands will be impacted by both the earth-moving and by the proposed road system.

Recommendations:

Minimize topographic alterations by using a road layout that does not require considerable cut and fill. Remove roads from steep slopes.

Protect wetlands and use them as an amenity for the development. Protect the steep slope at head of drainage north of Whitehaven Parkway. Springs may originate there at old cistern. Buffer the wetlands with water-tolerant species such as sweet bay magnolia.

Maintain groups or groves of trees such as the ones on the southwest facing slopes in the eastern sector—rather than trying to select specimen trees that are easily damaged during construction and are susceptible to wind-throw if isolated as individual trees after having been part of a forest or grove. Retain stands of trees as wooded areas that give character to the site and prevent the need for lawns with their maintenance requirements and runoff issues.

Delete from the plan the road that crosses the drainage at the southeastern portion of the property. That will eliminate the need to build a bridge that will further impact the drainage.

Smaller lots could provide more open space within the development for residents to use as their own parkland.

Other Issues:

How to minimize the impacts of the development, such as erosion and sedimentation, on contiguous public lands to the east and to the south, including Glover Archbold Park.

Suggestions:

Establish setbacks for homes from public property lines.

Install fences along property lines to keep residents in and prevent them from treating parkland as if it were theirs, as well as to protect the residents from public using the parkland.

Maintain a standard percentage of lots in existing vegetation—i.e., only a certain percentage of the lot may be cleared.

* Julie Moore has a B.S. in Biology from Tulane University and an M.S. in Botany from the University of North Carolina. She has worked on variety of southern forest ecosystems, both uplands and wetlands, most recently with longleaf pine forests and the many associated plant and animal species. Immediately before moving to the Washington area, Julie Moore worked in Mississippi for the Natural Heritage Program and The Nature Conservancy coordinating the Department of Defense funded biological inventory of Camp Shelby National Guard Training Site. She is the author of "Managing the Forest and the Trees," a guide for longleaf forest landowners funded by The Nature Conservancy, the Longleaf Alliance, and the Southern Group of State Foresters.

Julie Moore was with the North Carolina Natural Heritage Program for over a dozen years as a botanist and ecologist specializing fire dependent systems and working with private landowners. As director of conservation at Tall Timbers Research Station, she initiated a conservation easement program for the Red Hills region of south Georgia and the Florida panhandle.

CC: <invstusa@bellsouth.net>

February 2, 2005

Mr. Anthony S. Barnes
Barnes Vanze Architects
1238 Wisconsin Ave., NW
Washington, D.C. 20007

Dear Ankie:

This letter will address some of the concerns expressed by Ms. Julie Moore, conservation biologist, concerning the Dunmarlin site on Foxhall Road.

In particular, I feel it is appropriate for me to comment on the following issues:

- Vegetation
- Mature trees
- Tree protection measures
- Invasive vines

I. Vegetation –

Ms. Moore is correct that the interior of the site is overrun with invasive, and most likely, exotic vines and shrubs. I believe that ESA has adequately detailed the variety of these plants. The very heavy density of these vines has eliminated the majority of forest regeneration in this part of the property.

Fortunately, the tree canopies along the perimeter of the site are thick enough to have limited the movement of these sun-loving invasive plants into the stands.

The perimeter forest stands are in a *climax* stage of forest development. This is the final stage of forest succession where there are large trees that are widely spaced and with ample *regeneration* material in the *understory*. Also, the presence of large diameter beech trees is a sure sign that the forest is in a climax stage of development.

The stands on this site are typical of the *tulip poplar forest association* found in the mid-Atlantic region. This association includes tulip poplar, white oak, chestnut oak, northern red oak, red maple, hickories, black cherry, flowering dogwood and others. There are also some tree species such as sycamore, green ash and boxelder that are found in the Sycamore-Green Ash-Boxelder-Silver Maple forest association. So, there is a bit of an overlap of two major forest associations on this site.

II Mature trees –

In a *climax* stage of succession there are many over-mature trees that are apt to fail in the short-term (<20yrs.). When this happens, it creates gaps in the forest canopy and the smaller trees (the regeneration material) then grow up to take its place. There is plenty of good regeneration material in the stand on the northern boundary of the property. There is less regeneration on the southern stand. In fact, the regeneration in the southern stand is actually comprised of an invasive species, *Ailanthus altissima*, better know as the Tree-of-heaven. This is not a species that we would want to retain on the site.

My survey identified those trees in a *late successional* stage of development. These were not over-mature trees. I did not want to pick trees that could fail within the next 20 years, or less.

III. Tree protection strategy –

My approach to a large site like this is to concentrate on *groupings of trees*. This enables us to preserve more trees with the same general critical root zone as one large tree. This method also captures some of the regeneration material beneath them which acts to provide better screening, soil chemistry, wind buffering and wildlife habitat.

During the rough grading process, I *enclose these groups with fencing* to keep the heavy machinery out of the critical root zones. Any *grading* that must take place inside these zones is considered *fine grading*. It is done after the rough grading and always under my supervision and with very small machinery such as bobcats.

I also work with the engineers to accomplish positive water flow from the sites in a way that reduces the impact to the *hydrology* within the critical root zones.

IV. Invasive vines –

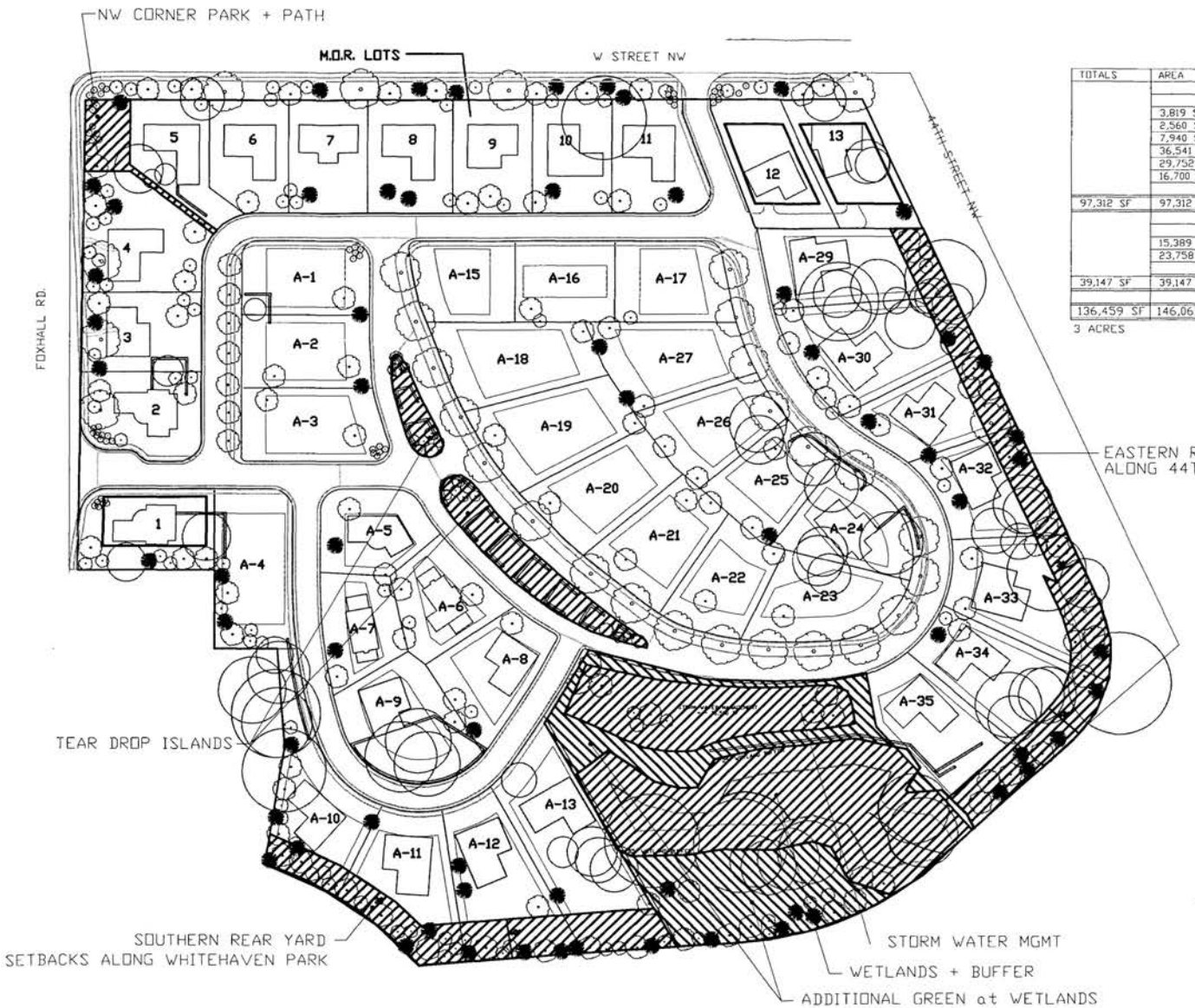
I believe that the large-scale removal of invasive vines and shrubs from this site will greatly reduce the pressure of these plants moving into neighboring properties including Glover-Archibold Park.

I hope that these notes help in your understanding of the issues raised by Ms. Moore. Please call me if you need further clarification.

Sincerely,

Keith Pitchford
Pitchford Associates

13



OPEN GREEN AREAS CALCULATIONS

TOTALS	AREA	LOCATION
		OPEN PUBLIC GREEN AREA
	3,819 SF	NW CORNER PARK + PATH
	2,560 SF	NORTH TEAR DROP ISLAND
	7,940 SF	SOUTH TEAR DROP ISLAND
	36,541 SF	WETLANDS + 25' WETLANDS BUFFER
	29,752 SF	ADDITIONAL GREEN AT WETLANDS *
	16,700 SF	SWM
		*(82,993-16,700 SWM-36,541 WETLANDS/BUFFER = 29,752 SF)
97,312 SF	97,312 SF	TOTAL OPEN PUBLIC GREEN AREA
		HOME OWNERS' GREEN AREA
	15,389 SF	SOUTHERN REAR YARD COVENANT ALONG WHITEHAVEN PARK
	23,758 SF	EASTERN REAR YARD COVENANT ALONG 44TH ST
39,147 SF	39,147 SF	TOTAL HOME OWNER'S GREEN AREA
136,459 SF	146,061 SF	TOTAL OF OPEN GREEN AREAS

3 ACRES

OPEN GREEN AREAS
DUNMARLIN AT PHILLIPS PARK

2101 FOXHALL ROAD WASHINGTON D.C.

28 FEBRUARY, 2005

SCALE: NTS

14

ROY H. GAUZZA, R.L.A.

18470 Brooke Road
Sandy Spring, Maryland 20860
301-774-0239

SUMMARY OF QUALIFICATION

A wide range of experience in planning, design, and management in landscape architectural and land planning projects for: single family, townhouse and apartment subdivisions; office building, university facility, museum, nursing home, retirement, retail shopping and warehouse complexes; streetscape, park, recreational facility and greenhouse complexes.

MANAGERIAL COMPETENCE

Complete managerial responsibility focusing on client/developer/ builder relationship, employee management and the entitlement process.

*Initiation of client contact and coordination of client's building program, focusing on economic, physical, and regulatory aspects.
*Lead and coordinate multi-disciplinary teams in project development.
*Meet time and budgetary constraints.
*Lead meetings; provide public presentations.
*Supervise employees
*Manage bidding and procurement process.
*Implement problem solving procedures.

LANDSCAPE ARCHITECTURAL/ LAND PLANNING COMPETENCE

Track record in project management from concept to construction.

*Preparation of feasibility studies, impact statements and conceptual designs, including analysis of site conditions, code and zoning regulations, and environmental impact; recommendations of building site selection and building density potential.
*Preparation of grading, landscape, tree conservation, wetland mitigation and sediment and erosion control plans and construction details.
*Coordination and preparation of utility, mechanical, architectural and stormwater management plans.
*Subdivision layout creation for major and minor residential, commercial, industrial and recreational developments.
*Preparation of renderings, perspectives, etc.
*Preparation of final construction document, and RFPs,
*Coordination of bidding and construction administration.
*Review of independent design consultant documents for permit and code compliance.

EMPLOYMENT

Greenhorne & O'Mara, Inc. Greenbelt, Maryland

The Maryland-National Capital Park and Planning Commission Riverdale, Maryland
Landscape Architect Intern, (6/78 - 7/80)

Mary K. Sears
578 Quaker Ridge Court
Arnold, MD 21012

Education:
B.S., Civil Engineering, University of Maryland at College Park, 1997

Registration:
Engineer-In-Training Certificate, 1997, DE
Professional Engineers License, 2002, MD

Responsibilities:
Experience includes responsibilities as a Project Manager and Design Engineer on a variety of residential, commercial and industrial land development projects. Project Management experience includes communication and coordination with external and internal clients, sub-consultants, and review agencies. Tasks also involve project scheduling, billing, contract modifications and negotiations. Design Engineer experience primarily included water resources engineering. Designed stormwater management ponds, underground stormwater management, infiltration devices, hydraulic structures, storm drains, open channels and bioretention facilities. Computer application knowledge includes Microstation cadd program and stormwater management software such as TR-55, TR-20, HEC-1, HEC-2, HEC-RAS and PondPack.

Project Experience:
Greenhorne & O'Mara, Inc., Greenbelt, MD – Project Manager, January 2004 to Present

- Chesterfield Estates, Prince George's County, MD
  Project Manager for a 22 lot, single-family subdivision. Responsibilities included engineering design plan preparation and processing to achieve agency approvals and permits. Project required wetland permitting with MDE and USACE due to extensive wetland impacts for the stormwater management pond and bioretention facility.

- Marlborough Station, Prince George's County, MD
  Project Manager for a 19 lot single-family, in-fill development located in historic Upper Marlboro. Responsible for the engineering design plan coordination and processing to obtain plan approval with the Prince George's County, Maryland State Highway Administration and the Town of Upper Marlboro. Project required an extensive, offsite storm drain outfall design along Marlboro Pike (MD 725) using 48" and 54" pipe.

- Penn Mar Shopping Center, Prince George's County, MD
  Project Manager for the construction of a Staples and Petco store that involved redevelopment of an existing shopping center. Oversaw numerous utility relocation plans. Stormwater management regulations entailed a 20% impervious reduction design. Worked with the architect, and sub-contractors during design & construction to meet an aggressive project schedule.

- Prince George's Community College, Prince George's County, MD
  Project Manager for the 32,000 sq. ft. High Technology Center building constructed within an existing parking lot. Responsible for the redevelopment construction documents including design plans and specifications. Also involved coordination with the architect and sub-consultants during the review and approval processes for Prince George's County and the State of Maryland Department of General Services (DGS).

Greenhorne & O'Mara, Inc., Greenbelt, MD – Project Engineer, December 1996 to January 2004
(Engineer III, Jan. '03 – Jan. '04 / Engineer II, Apr. '01 – Jan. '03/ Engineer I, Oct. '98 – Apr. '01 / Engineer Tech I, '96 – Oct. '98)

- Linwood Knolls, Prince George's County, MD. Responsible for the design of an in-stream stormwater management facility to accomodate the construction of a single-family residential development. The required stormwater management was achieved via the construction of a 22-foot tall dam embankment meeting MD-378 requirements. Also designed two culvert crossings that addressed stream erosion with riprap plunge pools at the outfalls.

- University Courtyard, University of Maryland at College Park, Prince George's County, MD. Project Engineer for the design of a water quality pond and four bioretention facilities for the student housing expansion. The site drains into the Paint Branch Floodplain, which has a 30.2 square mile drainage area. Completed a 100-year floodplain study to show no adverse impact. Also performed the construction inspection.

- Junior Tennis Champions Center, Maryland-National Capital Park & Planning Commission, Prince George's County, MD. Project Engineer responsible for designing two bioretention facilities, one water quality pond and storm drain for the construction of 15 outdoor tennis courts and 12 indoor courts, service buildings and parking located entirely within the 100-year floodplain of the northeast branch of the Anacostia River. Also performed the construction inspection.

- East Gate Shopping Center, Prince George's County, MD. Project Engineer for the storm drain/stormwater management design and 100-year floodplain analysis. This project involved the redevelopment of an existing shopping center and included a complex stormwater management facility that provided bioretention, 1-year extended detention and compensatory storage simultaneously within the 100-year floodplain of Folly Branch. Also designed a precast, three-cell 4'x8' box culvert in Folly Branch maintaing the 2-, 10-, and 100-year flood elevations.

- MD 193 Relocation from MD 202 to Keverton Drive, Maryland State Highway Administration, Prince George's County, MD. Project Engineer for the design of three stormwater management ponds that provide 2- and 10-year attenuation and/or water quality. One of the ponds required a retrofit design to accommodate the additional impervious area water quality requirement.

- S.R. 0032 Bridge over Paunacussing Creek, Pennsylvania Department of Transportation, Bucks County, PA. Project Engineer responsible for performing HEC-RAS modeling of the existing bridge and alternative bridge replacements. The final bridge was a 36" x 17" pre-stressed, adjacent box beam, single-span (45' - 6") bridge. The HEC-RAS model was used to determine the water surface elevations with respect to the proposed bridge and to verify that the road does not overtop during the 100-year storm.

- Kingsbury Center, Washington, DC. Project Engineer for the preliminary and final design of the on-site storm drain, an underground 48-inch stormwater management facility, and Stormceptor water quality device that discharged to an existing combined sewer and storm drain system.

- Vista Gardens, Phase III & Phase IV, Prince George's County, MD. Project Engineer for the design of bioretention facilities to treat water quality for a 400-unit townhouse development. Designed the onsite storm drain which included a flowsplitter structure to divert the water quality storm event to the bioretention and overflow the larger storm events to an outfall. Also analyzed the hydraulic affects of the bioretention facility on the existing MDSHA 72 inch cross-culvert under US 50.

James R. Ingram

Environmental Scientist

Education

B.S./1981/Environmental Studies/Youngstown State University
Post Graduate Work/1985/Environmental Studies/Temple University

Registration

Affiliations

Society of Wetlands Scientists

Capabilities

Mr. Ingram, with more than 22 years of experience, supervises and conducts wetland delineations, and prepares permit applications and environmental assessments associated with private and public development projects in many different parts of the country. He also develops plans and specifications to mitigate impacts to wetlands and stream channels. Mr. Ingram authors sections of Environmental Assessments and Environmental Impact Statements.

OPEN-ENDS

Mr. Ingram has delineated and flagged wetland boundaries throughout Maryland, Pennsylvania, Delaware, Virginia, and New Jersey for public and private clients. He has prepared wetland mitigation plans projects throughout the Mid-Atlantic area, giving him an intimate familiarity with a variety of technical and regulatory policies and practices. He is involved with the natural resource agencies coordinating jurisdictional determination field meetings, reviewing potential wetland mitigation, and stream restoration sites.

Experience

TRANSPORTATION

Open-End Contract for H&H Studies and Wetland Delineation, Maryland State Highway Administration, Bureau of Highway Design. Delineated, flagged, and mapped wetlands within rights-of-way for highway projects statewide. Coordinated with the U.S. Army Corps of Engineers for the review and permitting of these projects. Also identified potential wetland impact mitigation sites within rights-of-way.

US 421 Corridor Study, North Carolina Department of Transportation, Wilkes and Yadkin Counties, NC. Authored sections of an EA for seven miles and an EIS for 10 miles of limited-

access highway to be upgraded from two lanes to four. Identified, flagged, and mapped impacted wetlands.

MD 32 Wetlands Mitigation, Howard County, MD. Identified and delineated, including flagging, all wetlands within the proposed right-of-way. Prepared a report describing the wetland systems. Identified all potential mitigation sites within the study area and adjacent properties. Prepared avoidance/minimization/mitigation report to facilitate the permit process. Designed final engineering plans and specifications for two acres of forested wetland mitigation adjacent to Cricket Creek near the MD 32 crossing.

US 70 EIS, North Carolina Department of Transportation, Wake and Johnston Counties, NC. Searched for potential wetland mitigation sites and prepared conceptual mitigation site.

Wetland and Stream Restoration, Maryland State Highway Administration, Bureau of Landscape Architecture. Served as Project Manager under several open-end task order agreements related to all aspects of wetlands and stream restoration design. Duties included identifying potential mitigation sites, ranking sites, and contacting and interacting with property owners to determine their interest in selling/leasing suitable sites to the State. Developed final design plans, specifications, and cost estimates, prepared permit applications, and conducted post-construction monitoring.

MD 97 at I-70, Howard County, MD. Prepared final plans for a 0.6-acre scrub-shrub wetland and completed post-construction monitoring.

Beehive/Schultz Property, Howard and Anne Arundel Counties, MD. Prepared plans for two sites totaling seven acres of emergent wetlands. Completed post-construction monitoring.

Chesapeake Baptist Church Site, Anne Arundel County, MD. Prepared plans for six acres of forested and emergent wetlands.

Warren Street Extension and Relocation/Reconstruction of US 222 Environmental Impact Statement (EIS), Pennsylvania Department of Transportation, District 5-0, Berks County, PA. Conducted a wetlands study to support environmental documentation for the extension of the Warren Street Bypass and the relocation and reconstruction of S.R. 0222. Presently coordinating with the U.S. Army Corps of Engineers and the Pennsylvania Department of Environmental Resources regarding the selection of candidate sites to provide approximately 20 acres of forested, scrub-shrub and emergent wetlands creation and enhancement for sites to composite for 6,000 lf of stream channel impacts.

DEVELOPMENT

Prison Construction Wetland Delineation, RBA Group, Statewide, Pennsylvania. Conducted a wetland investigation of 15 existing prison properties to be enlarged throughout Pennsylvania to comply with NEPA regulations. Visited each site and delineated the limits of wetlands according to the 1987 U.S. Army Corps of Engineers Manual. Classified all wetlands according to the Cowardin classification system considering the soils, vegetation, and hydrology of each site.

Wetlands Construction/Mitigation Banking Design/Build, Marsh Resources, Inc., NJ. Handled the Phase I design/build of a 120-acre tidal wetland mitigation bank in the Meadowlands located in Bergen County, New Jersey. A perimeter dike was built to prevent water from entering the site, which allowed excavation of the marsh plain under dry conditions.



Site elevations were lowered from one to five feet, 10,500 feet of tidal channels were created throughout the site, and approximately 83,000 cubic yards of material were excavated. Weekly site visits were made to document project construction according to plans and specifications.

Washington Post Facility Wetland Mitigation. Completed a wetlands delineation and obtained authorization to relocate a small on-site stream. Established design criteria and developed conceptual alternatives using Rosgen Classification System and bioengineering techniques for the new stream channel design. Developed and incorporated wetland vegetation planting plan into the project plans. Provided construction and inspection monitoring during the channel construction phase of the project and during the planting phase. Obtained required permits.

Wetland Delineation and Permitting for Atholton Park, Howard County, MD. Identified and delineated the wetlands within a section of the park where site improvements were proposed. Prepared a Section 404 application for the removal of an instream culvert, restoration of the streambed, and installation of a bridge over its wetlands. Tracked the permit application and received all necessary wetland permits.

Open-End Wetland Delineation Services, Park Authority, Fairfax County, VA. Under an open-end, task order contract, performed wetland delineation services. The first task involved completion of a wetland study for Richard W. Jones Park, a 245-acre site. Three distinct wetland sites were delineated, and recommendations were made that, if future plans for development come close to the areas, these areas should be flagged and surveyed.

Statewide Delineation of Freshwater Wetlands, New Jersey Department of Environmental Protection. Provided field and technical support on this project to map all of the freshwater wetlands in New Jersey. Assisted in developing a computerized data entry system for recording field data for use by State agencies.

Enterprise Shopping Center, Prince George's County, MD. Conducted an environmental inventory of the site and used the resulting information to complete an EA and EIS for the project. Also developed the final mitigation plan to offset wetland losses. Coordinated with all agencies to secure the necessary permits to allow development of the site. Provided site supervision of all subcontractors involved in grading and planting the mitigation area. Conducted field work to measure the success of the mitigation and prepared monitoring reports.

Patuxent River Watershed Mitigation Site Selection, Howard County, MD. Participated in the evaluation of over 130 sites in the Patuxent River Watershed, including over 40 sites in Howard County, for their suitability as wetland mitigation sites. Included an analysis of wetland and upland vegetation characteristics, soils, depth to water table, percent slope, hydrologic conditions, and land use characteristics.

Swan Point Wetland Delineation, Baltimore Gas & Electric Company, Issue, MD. Identified and delineated tidal and nontidal wetlands using both the 1987 and 1989 delineation manuals. Performed agency field reviews necessary to receive approval of the delineations. Conducted habitat studies associated with the wetland permit/certification process. Prepared permit applications and processed the permits through the U.S. Army Corps of Engineers and state agencies. Designed and provided full time on-site coordination during the construction of a one-acre tidal wetlands mitigation site. Conducted field work to measure the success of the created wetlands for three years. The wetlands received final signoff from all required regulatory agencies.



Tinkers Creek, Prince George's County, MD. Identified and delineated all wetlands within the proposed limits of disturbance for the construction of two regional stormwater management facilities. Coordinated the agency field view of the wetland boundaries and received approval of the boundaries. Submitted a Section 404 permit application to the U.S. Army Corps of Engineers, and tracked the application to facilitate a timely issuance of the Section 404 and Section 401 certification. Installed groundwater monitoring wells within the proposed mitigation site to gather data which was used in the development of final design drawing for more than three acres of forested wetlands within the floodplain of Tinkers Creek. Submitted and received approval of the mitigation plans from the Maryland-National Capital Park & Planning Commission and the Maryland Department of the Environment.

Wetland Identification for Richard Jones Park, Fairfax County Park Authority, Fairfax County, VA. Conducted wetlands identification and delineation of Richard Jones Park. Prepared a technical report describing the wetlands and delineation methodology. Prepared wetland impact assessment and coordinated results with park planning staff.

Earth Observing System Data Information Storage Building, National Aeronautics and Space Administration, Goddard Space Flight Center, Greenbelt, MD. Stormwater management design and wetlands evaluation and permitting for a $40 million facility, housing sophisticated computer areas, workstations, offices, conference areas, and mechanical/electrical services. Conducted a wetlands investigation to flag the wetlands boundaries.

Cultural and Natural Resources Inventory Study, Pennsylvania Department of Environmental Resource, Scenic Rivers Division. During this four-month internship, conducted a cultural and natural resources inventory study of the Pine Creek in Tioga County to support its inclusion in the Pennsylvania Scenic Rivers Program. Also met with local groups to explain the Scenic Rivers Program and to foster support for the inclusion of the river.

Relocation of Station New Orleans, U.S. Coast Guard. Completed a wetland investigation of the project site in accordance with the U.S. Army Corps of Engineers (USACE), Wetland Delineation Manual. Applied for and lead a jurisdictional Determination field meeting with the USACE to confirm the limit of jurisdictional wetlands. Reviewed the USACE project files related to the history of Section 404/401 permitting on this parcel. Met with USACE regulators to discuss this proposed project and to garner their support for the project.

Integrated Support Command, U.S. Coast Guard, Portsmouth, VA. Completed a wetland investigation of the project site in accordance with the Corps of Engineers Wetland Delineation Manual. This investigation determined that no wetlands were present within the project site. Reviewed the requirements of the Chesapeake Bay Preservation Act to determine what classification the project falls within, and therefore what reductions in non-point source pollution would be required.

Kentlands, Montgomery County, MD. Completed wetland delineations, impact assessments, agency coordination, and Section 404 and 401 permitting. Through negotiations with the resource agencies, arranged to have the wetland mitigation requirements converted from creation to riparian buffer establishment, which resulted in considerable cost savings to the client. Contributed to the development of the Lake Helene stormwater management retrofit plan.

Augustine North, Stafford County, VA. Developed final planting plans and specifications for two large irrigation ponds and for a five-acre forested mitigation site in this residential golf



course community. The landscape plans for the irrigation ponds were designed to be an integral aesthetic component of the golf course.

WATERSHED/RIPARIAN RESTORATION

Pine Creek Scenic River Study, Pennsylvania Department of Natural Resources, Division of Scenic Rivers and Wetlands Conservation, Tioga County, PA. Conducted a study of Pine Creek to determine its qualification for entry into the Pennsylvania Scenic Rivers System. The study entailed a review of the cultural and natural resources within an 18-mile corridor from Ansonia to Blackwell.

Melwood Springs Stream Restoration, Prince George's County, MD. Remediation of a small stream stressed by the unmanaged release of stormwater from an existing residential subdivision. The combination of increased discharge and steep channel gradient have contributed to headward downcutting of the channel bed, bank erosion, and downstream sedimentation. Utilized Rosgen stream classification methods to identify potential restoration methods for the distressed stream reach. The final design combined engineered stream meanders and bioengineered bank stabilization techniques to mitigate the erosive energy of the stream. At completion, this project will provide Prince George's County with a showcase for various restoration methods while fulfilling the mitigation requirements of the developer.

Marley Creek, Anne Arundel County, MD. As required by a Section 404 permit, conducted field investigations of sites identified in Phase II of the Marley Creek Watershed Assessment. This step was required as part of developing final design plans, specifications, and estimates for two proposed projects. Prior to commencing with final design, coordinated with the regulatory agencies concerning the suitability of these sites and to solicit technical input.

Engineering Study of the Swan Creek Watershed, Harford County, MD. Participating in the selection of water quality and stream restoration sites. Identifying potential wetland impacts, assessing concept designs, and coordination with state and federal agencies regarding ability to permit proposed sites.

Missouri River Bank Navigation and Mitigation Project, U.S. Army Corps of Engineers, Omaha District, Hamburg Bend, Otoe County, NE; California Bend, Harrison County, IA; and Langdon Bend, Nemaha County, NE. Conducted field investigations of wetlands and other biological resources. Analyzed field, modeling, and resource agency data to aid in selecting the proposed alternative which best met the goal of restoring large river fisheries habitat, chutes, wetlands, and/or migratory waterfowl habitat. Authored sections of Definite Project Report(s), which addressed the requirements of NEPA, the Federal Endangered Species Act, and Section 404 of the Clean Water Act. Responsible for researching and developing alternatives for terrestrial habitat and for backwater wetland complexes.

Ohio Water Service, Project Manager. Project Manager of a water quality study that identified sources of acid mine drainage into a series of reservoirs used to serve residential customers. Collected and analyzed lake and stream water samples. Also initiated correspondence with state-level pollution control agencies that resulted in remedial action by the State of Ohio.

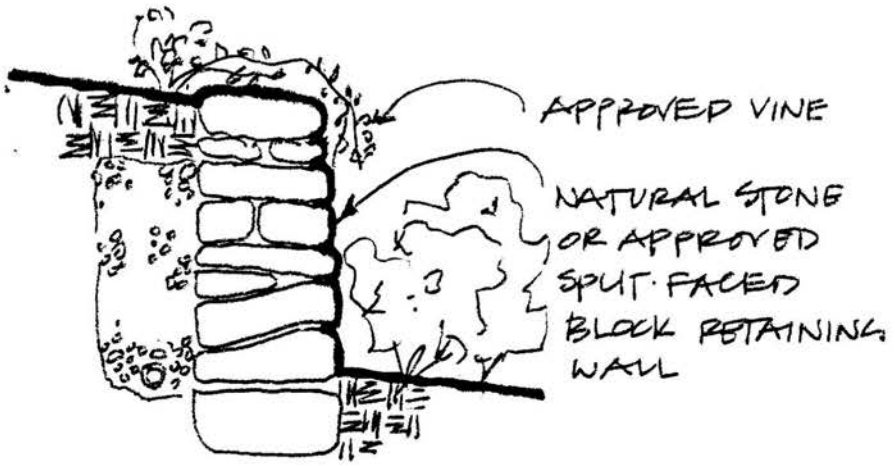
RECREATION

Redskins Stadium, Redskins Stadium, Inc., Landover, MD. Environmental Scientist on this project which included civil engineering, surveying, environmental, landscape architecture, and transportation services on this fast-track project. Work includes conceptual engineering through



construction documentation services for all on-site and off-site related improvements. Special design consideration was given to the on-site historic fossil area and the buffering of adjacent residential areas.

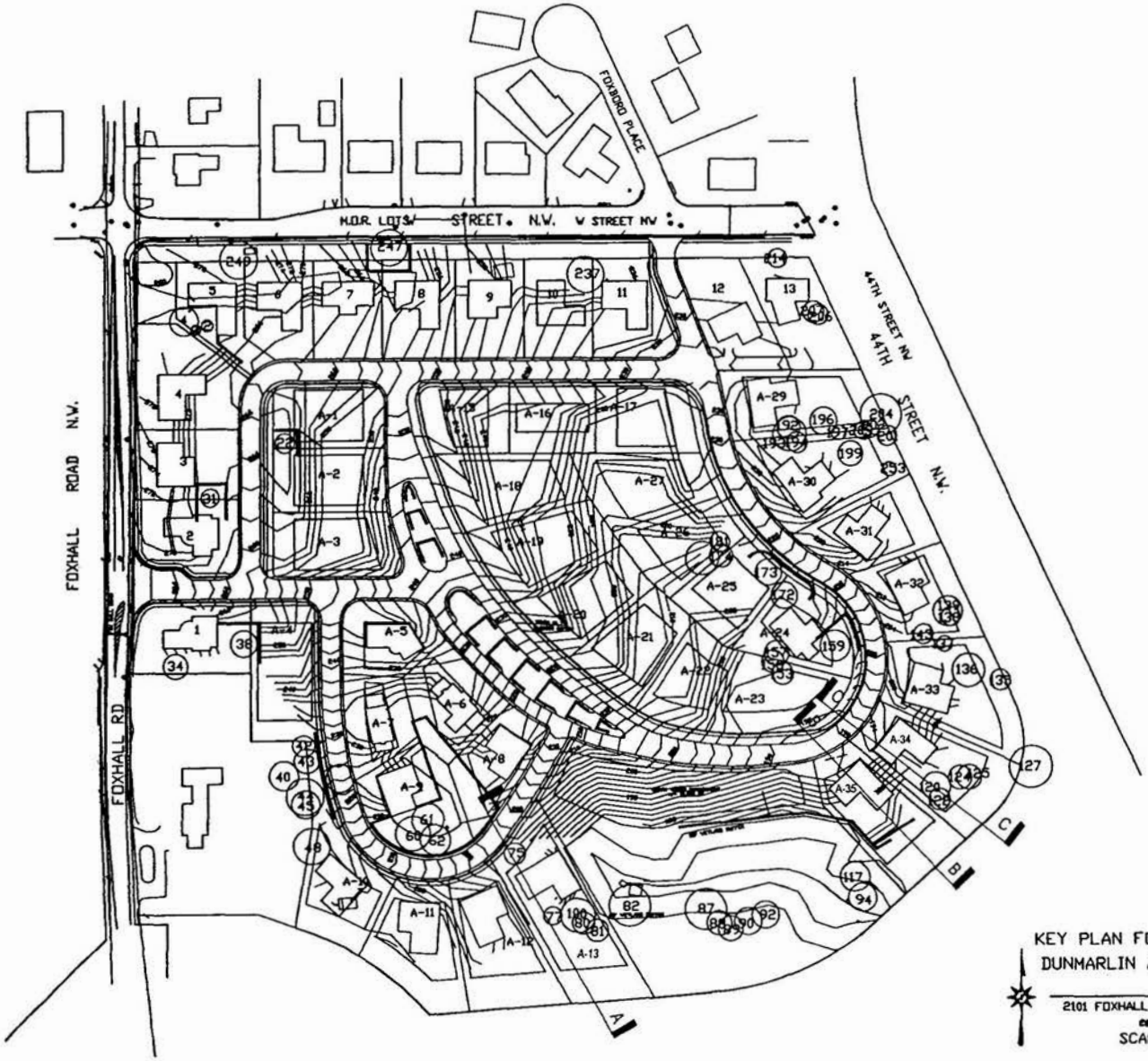
Prince George's Stadium, Maryland Baseball, Bowie, MD. Environmental Scientist on this project which included civil engineering, environmental, surveying, and tree conservation services for this 8000-seat, 65,720-sf, Triple A baseball stadium located in suburban Maryland. The 25-acre project site is surrounded by environmentally sensitive floodplain and wetland areas. The native woodland was preserved and serves as the backdrop for this picturesque ballpark.



DUNMAIZLIN.

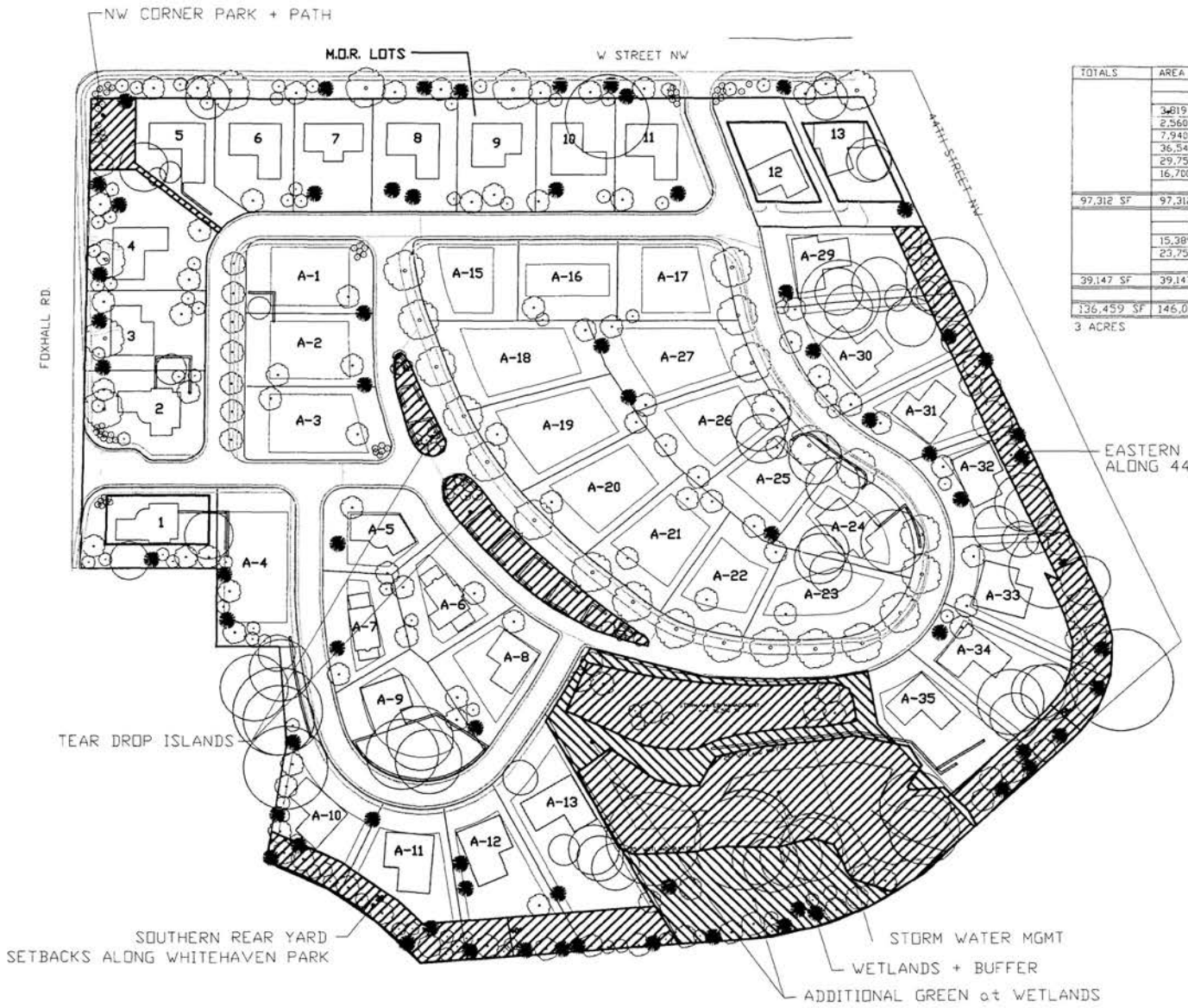
TYPICAL RETAINING WALL SECTION

NO SCALE 22.8.05 B.V.A.



KEY PLAN FOR SECTION DRAWINGS
DUNMARLIN AT PHILLIPS PARK

2101 FOXHALL ROAD WASHINGTON D.C.
08 FEBRUARY 2005
SCALE: 1" - 200'



OPEN GREEN AREAS CALCULATIONS

TOTALS	AREA	LOCATION
		OPEN PUBLIC GREEN AREA
	3,819 SF	NW CORNER PARK + PATH
	2,560 SF	NORTH TEAR DROP ISLAND
	7,940 SF	SOUTH TEAR DROP ISLAND
	36,541 SF	WETLANDS + 25' WETLANDS BUFFER
	29,752 SF	ADDITIONAL GREEN AT WETLANDS *
	16,700 SF	SWM
		*(82,993-16,700 SWM-36,541 WETLANDS/BUFFER = 29,752 SF)
97,312 SF	97,312 SF	TOTAL OPEN PUBLIC GREEN AREA
		HOME OWNERS' GREEN AREA
	15,389 SF	SOUTHERN REAR YARD COVENANT ALONG WHITEHAVEN PARK
	23,758 SF	EASTERN REAR YARD COVENANT ALONG 44TH ST
39,147 SF	39,147 SF	TOTAL HOME OWNER'S GREEN AREA
136,459 SF	146,061 SF	TOTAL OF OPEN GREEN AREAS

3 ACRES

OPEN GREEN AREAS
DUNMARLIN AT PHILLIPS PARK
2101 FOXHALL ROAD WASHINGTON D.C.
28 FEBRUARY, 2005
SCALE: NTS