

WC 0136-07
SUB

Steen Associates Subdivision

51829-6897

Martin O'Malley
Governor

Anthony G. Brown
Lt. Governor



Margaret G. McHale
Chair

Ren Serey
Executive Director

STATE OF MARYLAND
CRITICAL AREA COMMISSION
CHESAPEAKE AND ATLANTIC COASTAL BAYS

1804 West Street, Suite 100, Annapolis, Maryland 21401

(410) 260-3460 Fax: (410) 974-5338

www.dnr.state.md.us/criticalarea/

July 26, 2010

Mr. Chris McCabe, Natural Resources Administrator
Department of Development Review and Permitting
One West Market Street, Room 1201
Snow Hill, MD 21863

RE: Steen Associates Growth Allocation Proposal

Dear Mr. McCabe,

Thank you for the opportunity to provide informal review and comment for the above referenced pending application. Based on the information provided we offer the following preliminary staff comments:

1. The Critical Area Commission has adopted Growth Allocation Submittal Regulations now found under COMAR 27.01.02.05-1 and 27.01.02.05-2. Although the submittal is fairly complete, the Commission may not accept for processing a growth allocation request unless all of the requirements are provided at the time of submittal. Some of the missing items include: the County's determination that the project meets the Standards found in Natural Resources Article §8-1808.1, current agency review letters including those from the Maryland Department of the Environment, the Department of Natural Resources, the Maryland Historical Trust and the Army Corps of Engineers, a site plan that includes the proposed limits of disturbances, soil features, proposed lot coverage, and location of path or walkways, a subdivision history since June 1, 2002, all stormwater management details, and proposed sediment and erosion control measures. Flood zones are shown on page 4/4, Buffer Planting Plan; however, Zone A is missing in the Buffer planting area.
2. Regarding the 300-foot setback, this line is missing from page 4/4. The Buffer Planting Plan should provide details on the establishment of vegetation in the 300-foot Setback and describe any development activity that is proposed in the setback and why the development can not be located outside of the setback. If activities are proposed within the setback, the applicant will be required to provide extensive environmental offsets equivalent to the benefit derived from a forested 300-foot setback.
3. The limits of disturbance are provided numerically but not identified on the site plan.
4. The former limits on impervious surface now generally apply to lot coverage. The terminology should now refer to lot coverage. Calculations are provided for roads and lots, but not for other coverage such as walkways and infrastructure. *still called IS*

TTY for the Deaf

Annapolis: (410) 974-2609 D.C. Metro: (301) 586-0450

Mr. McCabe
July 27, 2010
Page Two

5. Our data indicate that the area of the site adjoining Gum Pt. Rd. and that which contains the tidal creek is identified as Resource Conservation Area. The site Plan shows that area as Limited Development Area (LDA). Please consult the official County Critical Area maps to confirm the Land Classification.
6. Due to proximity to Forest Interior Dwelling Bird (FID) habitat, the lots adjacent to forest should have signs placed in the rear yards identifying and protecting the FID area.
7. Number 6 in the Evidence of Compliance with Standards should include a brief narrative of how the LDA requirements are being met.
8. A conceptual Buffer Management Plan has been submitted. Because the plan calls for 5,000 sq. ft. or greater of establishment, a major buffer management plan is required. Although much of that requirement is provided, additional details including phragmites removal and native establishment, a 2-year protection, maintenance and monitoring plan and an inspection agreement are needed. Specific details on these and other requirements can be found in COMAR 27.01.09.01-3J.
9. Regarding Additional Factors number 6, details on stormwater management will be required. Specifically, how Environmental Site Design is met will be needed. Although not required, reference to the 10% Pollutant Removal Requirement occurs in numerous places and as such the calculations should be provided.
10. The formal submittal from the County should include a draft copy of the appropriate Critical Area map indicating the area of Land Classification change. Number 1 in the Additional Factors referred to an attached Zoning Map. We did not receive the attachment in our submittal.

Please note that these comments constitute Commission staff's informal review of the materials provided to date. This correspondence in no way serves as approval of growth allocation. Additional comments may be provided and additional information may be required either by Commission staff or by the full Commission during the formal growth allocation review process.

Thank you for the opportunity to provide comments. Please feel free to contact me at (410) 260-3468 if you have any questions.

Sincerely,



Roby Hurley
Natural Resources Planner
RH/jjd
cc: WC 136-07

No New BMP

Martin O'Malley
Governor

Anthony G. Brown
Lt. Governor



Margaret G. McHale
Chair

Ren Serey
Executive Director

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April 28, 2008

Ms. Janet Davis, Critical Area Planner
Department of Development Review and Permitting
Worcester County
One West Market Street, Room 1201
Snow Hill, MD 21863

**RE: Gum Point Road Growth Allocation Proposal
Steen Associates**

Dear Ms. Davis,

Thank you for forwarding additional information from the applicant regarding the above referenced growth allocation. Some issues have been addressed with this new information; however, Critical Area Commission staff still has some outstanding concerns about the proposal. Please note that growth allocation accounting questions from previous letters on this case may be addressed during the next Program comprehensive review, as it has been confirmed that the County should have adequate growth allocation to accommodate this request.

In the event that the growth allocation request will be reviewed by the Critical Area Commission after July 1, 2008, please be aware that the former guidelines have been changed to standards that must be addressed by the Critical Area Commission. Therefore, the standards for growth allocation must be addressed by the County in order for the Commission to process the growth allocation. Issues that must be addressed in order to show that the request meets the new standards include those discussed in the comments below. Please note that under the new legislation, the CAC must act on a proposed local program amendment within 130 days of acceptance of the proposed amendment. The Commission staff has the following comments regarding the current submittal for growth allocation:

1. New LDA in the RCA must be located 300 feet from tidal waters and tidal wetlands unless the local jurisdiction proposes, and the Commission approves, alternate measures for enhancement of water quality and habitat that provide greater benefit to the resources.

2. Jurisdictions must address how the growth allocation has been located in a manner that minimizes impacts to the defined uses of the RCA.
3. The former limits on impervious surface now generally apply to lot coverage. For the subdivision, there is a limit of 15% of a lot or parcel, while a local jurisdiction may allow individual lots less than one acre in a new subdivision to exceed 15% lot coverage, if the overall subdivision does not exceed 15%.
4. The County must provide an analysis of the growth allocation request based on whether the proposal:
 - Is consistent with local Comprehensive Plan
 - Is served by a public wastewater system or a septic system that uses the Best Available Nitrogen Removal Technology
 - Completes an existing subdivision
 - Is an expansion of an existing business
 - Is clustered
 - Uses public infrastructure where practicable
 - Is consistent with State and regional environmental protection policies concerning threatened and endangered species and species in need of conservation that may be located on-site or off-site
 - Has impacts on a Priority Preservation Area as defined under Agriculture Article 2-518
 - Has environmental impacts from wastewater management and discharges, and stormwater management and discharges to tidal waters, tidal wetlands, and tributary streams
 - Has environmental impacts from location in a coastal hazard area or increased risk of severe flooding attributable to the proposed development
5. Due to the small size of the proposed lots, it is necessary to confirm that areas available to develop the lots are adequate to accommodate a house and reasonable amenities such as impervious decks, porches, patios, driveways, garages, sheds, etc while meeting impervious surface or lot coverage restrictions. It should be confirmed either with a breakdown of areas for the elements listed above or with a standard conceptual lot development plan showing how lots of the sizes proposed will meet a 25% lot coverage restriction.
6. The Heritage Division of the Department of Natural Resources has confirmed that Forest Interior Dwelling Bird habitat exists on this site. Lot 60 appears to unnecessarily impact FIDS habitat due to the available clear area directly adjacent. In order to avoid FIDS habitat impacts and the necessary FIDS habitat mitigation, Lot 60 should be reconfigured to avoid forest clearing.

7. A conceptual Buffer Management Plan has been submitted. A more detailed plan should be submitted for this project when materials are submitted for Critical Area Commission growth allocation review process.
8. The Critical Area Report submitted states that there is a 0.21 acre tidal wetland on the site. Please clarify whether this tidal wetland is private or State and how that determination was made (what methodology for delineation). This is necessary because State tidal wetlands should not be included within the boundaries of any privately owned lot or parcel and cannot be used for density calculations or to meet the performance standards for development within the Critical Area, such as the impervious or lot coverage of the subdivision. Documentation regarding how the private/State determination was made must be submitted, so that the Maryland Department of the Environment and the Board of Public Works can verify the methodology used. It is possible that they may want to verify the delineation and supporting information in the field, so appropriate detail should be provided. The acreage of State and private tidal wetlands affects all of the calculations based on the acreage of the property, including those relating to growth allocation, stormwater management, and the area of the 100-foot Buffer; therefore, this information is necessary to properly review the project.

The preceding comments represent the review and evaluation of the project plans and documents by Commission staff. I look forward to working with you to address these comments as the project progresses through the local approval process. As you know, the Critical Area Commission must review and approve all requests for map amendments involving the use of growth allocation. During the Commission's formal review, they may request additional information or have additional concerns. Thank you for the opportunity to provide comments on this proposal at this stage in the design. Please contact me if you have any questions at (410) 260-3479.

Sincerely,



Marshall Johnson
Natural Resource Planner

cc: WC 136-07



**STATE OF MARYLAND
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May 4, 2007

Ms. Janet Davis, Critical Area Planner
Department of Development Review and Permitting
Worcester County
One West Market Street, Room 1201
Snow Hill, MD 21863

**RE: Gum Point Road Growth Allocation Proposal
Steen Associates**

Dear Ms. Davis,

Thank you for forwarding additional information from the applicant regarding the above referenced growth allocation. Some issues have been addressed with this new information; however, Critical Area Commission staff still has some outstanding concerns about the proposal. As you are aware the General Assembly amended the Critical Area law in 2006 and clarified the locational guidelines. Based on this legislation, the Commission's analysis of growth allocation requests has changed. We would like to meet with you, the developer and his consultants to discuss the changes to the law and how they may affect the Commission's review of this proposal. We will contact you next week to schedule a meeting.

During the review of the George Mount growth allocation request in 2004, the need to determine the acreage of growth allocation used during the program development process, and to verify the remaining amount of growth allocation, was identified. In the April 7, 2004 letter by Keith Lackie of Worcester County, the County provided an Initial Report on the status of the County's growth allocation acreage (please see the attached letter). This Initial Report stated that 247.18 acres remained, and provided estimated acreage for two interim projects and two Residential Planned Communities that were provided with specific dedication methodology in the Coastal Bays legislation. In order to review the current growth allocation request, the Commission needs a final accounting of the remaining growth allocation. This accounting should include the final acreage used for the George Mount subdivision, as the acreage had not been finalized when the Commission reviewed it. Please provide the final results of the growth allocation account assessment. To my knowledge, updated Critical Area designation maps reflecting the current designations, including approved growth allocation projects, have not been sent to the Commission. Please provide copies of the relevant maps.


The Commission staff has the following comments regarding the current submittal for growth allocation:

1. Significant portions of 20 residential lots are located within the 100-foot Buffer. Because most of the lots are approximately one half acre in size, and the site is to be intensely developed, it is likely that the Commission will have significant concerns about the Buffer being used as a rear yard on these lots. It is strongly recommended that the subdivision be reconfigured to avoid lots located within stream buffers.
2. The Heritage Division of the Department of Natural Resources has confirmed that Forest Interior Dwelling Bird habitat exists on this site; therefore, the applicant must address protection and conservation of this habitat. Protection and conservation can be accomplished by showing compliance with the publication: "A Guide to the Conservation of Forest Internal Dwelling Birds in the Chesapeake Bay Critical Area" dated June 2000. This guide can be accessed online:
http://www.dnr.state.md.us/criticalarea/tweetyjune_2000.pdf.
3. A Buffer Management Plan for the 100-foot Buffer from tidal wetlands, tidal waters, and tributary streams will need to be prepared and submitted for this project in accordance with the provisions in the Critical Area law that require establishment of the 100-foot Buffer. A conceptual plan should be submitted to the Critical Area Commission as part of the growth allocation review process.
4. Additional information about the area of State and private tidal wetlands should be included in the environmental report. State tidal wetlands should not be included within the boundaries of any privately owned lot or parcel and cannot be used for density calculations or to meet the performance standards for development within the Critical Area. If portions of the project site have been determined to be private tidal wetlands, documentation regarding how this determination was made must be submitted, so that the Maryland Department of the Environment and the Board of Public Works can verify the methodology used. It is possible that they may want to verify the delineation and supporting information in the field, so appropriate detail should be provided. The acreage of State and private tidal wetlands affects all of the calculations based on the acreage of the property, including those relating to growth allocation, stormwater management, and the area of the 100-foot Buffer; therefore, this information is necessary to properly review the project.
5. In Section D of the Critical Area Report submitted, "Site Topography and Soil Conditions," it is stated that the soils on site range from poorly drained to well drained. There appear to be significant areas of hydric soils adjacent to the 100-foot Buffer or tidal waters, tidal wetlands, and tributary streams; however, expansion of the 100-foot Buffer for all of these features has not been addressed. The Buffer is required to be expanded to include contiguous sensitive areas, such as hydric soils, whose development or disturbance may impact streams, wetlands, or other aquatic

environments. In the case where nontidal wetlands are contiguous to the 100-foot Buffer, expansion of the Buffer is required. The assessment does not indicate that there has been any analysis to determine whether expansion of the Buffer may be necessary. More detailed information is needed.

The preceding comments represent the review and evaluation of the project plans and documents by Commission staff. I look forward to working with you to address these comments as the project progresses through the local approval process. As you know, the Critical Area Commission must review and approve all requests for map amendments involving the use of growth allocation. During the Commission's formal review, they may request additional information or have additional concerns. Thank you for the opportunity to provide comments on this proposal at this stage in the design. Please contact me if you have any questions at (410) 260-3479.

Sincerely,



Marshall Johnson
Natural Resource Planner

enclosure: Lackie Letter

cc: WC 136-07



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March 30, 2007

Ms. Janet Davis, Critical Area Planner
Department of Development Review and Permitting
Worcester County
One West Market Street, Room 1201
Snow Hill, MD 21863

**RE: Gum Point Road Growth Allocation Proposal
Steen Associates**

Dear Ms. Davis,

Environmental Features

1. A complete environmental features or environmental assessment map has not been received by the Commission for review. A "Critical Area Site Plan" was included; however, it only includes site topography and limited vegetation information. Much of the information that is usually included on a comprehensive environmental features map has been shown on various display documents such as copies of a soil survey and other topography map. The environmental features map is still needed in order to see the relationship between these features on a single map.
2. There are extensive areas of hydric soils on the project site. Soil types must be shown on the environmental features map, so that it can be verified that all hydric soil areas have been identified and the relationship between nontidal wetlands and streams can be evaluated. This information is necessary so that expansion of the 100-foot Buffer for hydric soils can be addressed.

Tidal Wetlands

3. The southern portion of the site includes a tidal wetland that requires the establishment of a 100-foot Buffer. The Buffer must be shown on the plan. It appears that there may be non-tidal wetlands in this site as well; however, they are not shown on the plans. A

field delineation of the wetlands on the site should be performed to determine the exact boundaries of tidal wetlands and that State and private tidal wetlands have been identified. This information should be submitted to the Critical Area Commission for review.

4. Additional information about the area of State and private tidal wetlands should be included in the environmental report. State tidal wetlands should not be included within the boundaries of any privately owned lot or parcel and cannot be used for density calculations or to meet the performance standards for development within the Critical Area. If portions of the project site have been determined to be private tidal wetlands, documentation regarding how this determination was made must be submitted, so that the Maryland Department of the Environment and the Board of Public Works can verify the methodology used. It is possible that they may want to verify the delineation and supporting information in the field, so appropriate detail should be provided. The acreage of State and private tidal wetlands affects all of the calculations based on the acreage of the property, including those relating to growth allocation, stormwater management, and the area of the 100-foot Buffer; therefore, this information is necessary to properly review the project.

100-foot Buffer and Other Habitat Protection Areas

5. The applicant must provide written correspondence from the Heritage Division of the Department of Natural Resources for this specific project. The applicant has submitted a letter from the Heritage Division dated November 23, 2004 for the adjacent parcel; however, the letter must be for the project site and current to within no more than two years. A copy of an updated letter from the Heritage Division of the Department of Natural Resources pertaining to the current proposal has not been received by the Commission.
6. Tributary streams are shown on the site plan. A stream identification and delineation to confirm the location of these water features should be performed and the 100-foot Buffer delineated based on this information. A summary of the field work for the delineation should be included in the Environmental Report.
7. Significant portions of 20 residential lots are located within the 100-foot Buffer. Because most of the lots are approximately one half acre in size, and the site is to be intensely developed, it is likely that the Commission will have significant concerns about the Buffer being used as a rear yard on these lots. It is strongly recommended that the subdivision be reconfigured to avoid lots located within stream buffers.
8. In Section D of the Critical Area Report submitted, "Site Topography and Soil Conditions," it is stated that the soils on site range from poorly drained to well drained. There appear to be significant areas of hydric soils adjacent to the 100-foot Buffer or tidal waters, tidal wetlands, and tributary streams; however, expansion of the 100-foot Buffer for all of these features has not been addressed. The Buffer is required to be expanded to include contiguous sensitive areas, such as hydric soils, whose

development or disturbance may impact streams, wetlands, or other aquatic environments. In the case where nontidal wetlands are contiguous to the 100-foot Buffer, expansion of the Buffer is required. The assessment does not indicate that there has been any analysis to determine whether expansion of the Buffer may be necessary. More detailed information is needed.

9. A Buffer Management Plan for the 100-foot Buffer from tidal wetlands, tidal waters, and tributary streams will need to be prepared and submitted for this project in accordance with the provisions in the Critical Area law that require establishment of the 100-foot Buffer. A conceptual plan should be submitted with the growth allocation application.

Growth Allocation and Development Envelopes

10. It is not clear from the information submitted if the proposed growth allocation request has met all of the requirements for the use of growth allocation set forth in the Worcester County Code including those relating to adjacency to other IDA and LDA, the 300-foot setback, and the parcel history. Additional information about conformance with the County's growth allocation provisions is needed. As you are aware, the locational guidelines relating to growth allocations were clarified in 2006 by the General Assembly. When a county submits a request for the Commission to review and approve the use of growth allocation, the request shall state how the local government has applied the locational guidelines as set forth in Chapter 55 of the 2006 Laws of Maryland. The Commission shall ensure that these guidelines have been applied in a manner that is consistent with the purpose, policies, goals and provisions of the Critical Area Law and all Criteria of the Commission.
11. The proposed growth allocation on a portion of Parcel 72 does not meet Critical Area Commission guidelines for counting growth allocation, which state that total acreage of a parcel should be counted against the allocation, even when development is not proposed on the entire parcel. It appears that an alternative subdivision design with a similar number of lots could remain completely within the bounds of Parcel 67, eliminating the need for forest removal and growth allocation on Parcel 72. This alternative would also eliminate loss of connectivity of a portion of the forest, reducing the impact within the Critical Area. The applicant should address this issue.
12. The application does not include the Critical Area acreage of Parcel 67 and the Critical Area acreage of Parcel 74. There is also no subdivision history of the parcels, so it is not clear if this configuration existed at the time the Atlantic Coastal Bays Protection legislation was adopted. Without this information, it cannot be determined if the development envelope and proposed growth allocation acreage is accurate.

The preceding comments represent the review and evaluation of the project plans and documents by Commission staff. I look forward to working with you and the County Council to address these comments as the project progresses through the local approval process. As you know, the Critical Area Commission must review and approve all requests for map

Janet Davis
March 30, 2007
Page 4

amendments involving the use of growth allocation. During the Commission's formal review, they may request additional information or have additional concerns. Thank you for the opportunity to provide comments on this proposal at this stage in the design. Please contact me if you have any questions at (410) 260-3479.

Sincerely,



Marshall Johnson
Natural Resource Planner

cc: Worcester County Council

Conceptual Buffer Planting Plan

(Note: Narrative keyed to enclosed 2004 aerial photo)

Ditch#1:

This man-made agricultural ditch runs east-west and joins two forests. The subdivision plan calls for the ditch to be culverted for an entrance road from Gum Point Road. East of the culvert, the first 200' of south side of the ditch is presently populated by young trees and shrubs, with an adjoining upland meadow that has been continuously mowed. The upland meadow should be planted with large ($\approx 2''$ dbh), fast-growing native trees such as tulip poplars and pin oaks on 20' centers. Because of their size, these trees may have enough of a start to out-compete the inevitable colonization by native pines and early succession hardwoods like sweet gums and red maples. Between the trees, the ground should be lightly tilled and seeded with an upland native meadow mix available from various nurseries. By creating a herbaceous meadow that will last a few years before the area becomes forest, we will be creating the rarest of habitats in contemporary Worcester County—an early succession meadow for insects and birds that use such habitat. In historical times such habitats were created by fire. A dense meadow also provides very effective water quality improvement because of its high nutrient uptake and erosion control.

The north side of the ditch could be graded down to the elevation of the ditch bottom for the width of the buffer and allowed to naturally regenerate into a non-tidal wetland. The bank should be seeded with native grasses and stabilized with standard erosion control techniques.

The easterly portion of this ditch (about 100') is dominated by common reed (*Phragmites australis*). The *Phragmites* should be chemically controlled with an aquatic-approved herbicide and specimen trees as above should be planted on the upland buffers. The remaining portions around the trees should be allowed to naturally regenerate while spot spraying of the *Phragmites* in the ditch should be continued for five years. I am reluctant to disturb the soil too much in this buffer for fear of encouraging spread of the *Phragmites*.

Ditch/Tributary Stream #2:

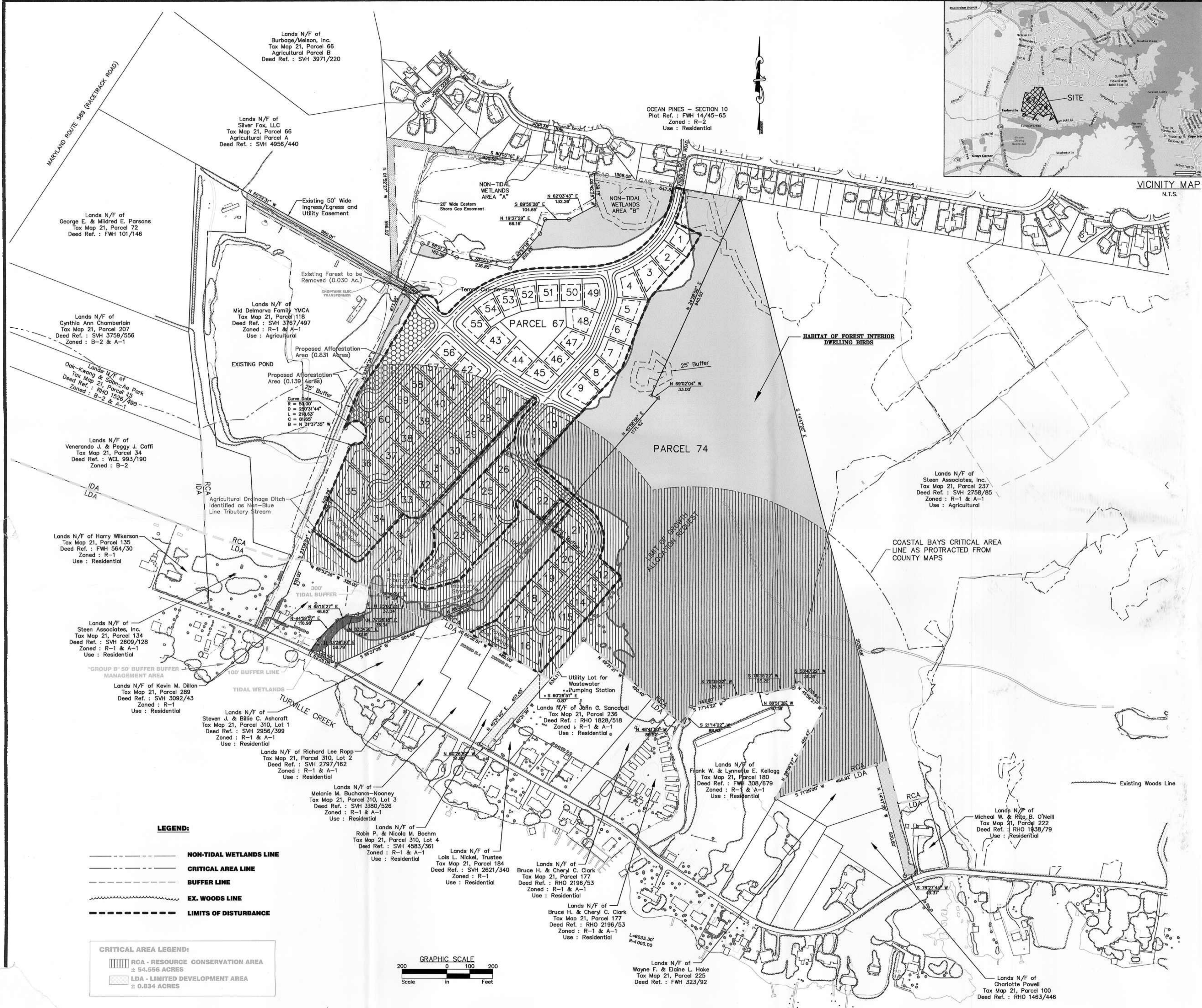
A portion of this ditch is a channelized tributary stream with a 100' buffer on either side, and a portion is a regulated non-tidal wetland ditch with a 25' buffer on either side. The first 100' or so of the ditch is dominated by *Phragmites* and this area should be managed primarily for *Phragmites* control as outlined above. The upland buffer area adjacent to the ditch should be planted with specimen fast-growing native trees at a density as above and the remainder allowed to naturally regenerate for the reason stated above.

Ditch/Tributary Stream #3:

Much of this ditch is a channelized tributary stream with a 100' buffer on either side. No *Phragmites* in this ditch. The buffer should be planted with native trees as above and seeded with an upland meadow mix of native herbaceous plants.

A more specific plan detailing planting density and species of trees along with the *Phragmites* control protocol and species mix of herbaceous meadow seeds is to be approved by Worcester County Development and Review and Planning at a time determined by the Department.

Details
on 0/10
on 1/10
will need more details for 6/10



AREA TABLE FOR CRITICAL AREA FOR PARCELS 67 AND 74:

- TOTAL SITE AREA: 92.037 ACRES
- TOTAL CRITICAL AREA (RCA AND LDA): 55.390 ACRES
 - RCA - RESOURCE CONSERVATION AREA: 54.556 ACRES
 - LDA - LIMITED DEVELOPMENT AREA: 0.834 ACRES
- TOTAL FOREST AREA TO BE REMOVED: 0.00 ACRES
- AREAS WITHIN CRITICAL AREA:
 - EXISTING FOREST: 26.487 ACRES
 - EXISTING FOREST TO BE REMOVED: 0.00 ACRES
 - EXISTING FOREST TO REMAIN: 26.487 ACRES
- PROPOSED FOREST AREA: 0.361 ACRES
- EXISTING IMPERVIOUS SURFACE: 0.00 ACRES
- PROPOSED IMPERVIOUS SURFACE: 5.188 ACRES
 - 25' WIDE ROAD WITHIN ROW: 1.720 ACRES
 - ALLOWABLE IMPERVIOUS FOR LOTS: 3.468 ACRES
- PROPOSED PERCENTAGE OF IMPERVIOUS SURFACE: 9.33% (SURFACE WITHIN CRITICAL AREA)
- TOTAL LIMITS OF DISTURBANCE WITHIN CRITICAL AREA: 17.90 ACRES
- GROWTH ALLOCATION REQUEST:
 - RCA TO LDA = 30.426 ACRES
- LDA FORESTED AREAS:
 - TOTAL PROPOSED LDA AREA = 33.164 ACRES
 - EXISTING FORESTED AREA TO REMAIN = 5.786 ACRES
 - PROPOSED FORESTED AREA TO BE ADDED = 0.361 ACRES
 - TOTAL FORESTED AREA = 6.147 ACRES (17.63%)
- TOTAL NO. OF LOTS WITHIN CRITICAL AREA = 38

TABLE OF ALLOWABLE IMPERVIOUS AREA ON LOTS IN LDA

LOT	AREA	Allowable Impervious (25%)
10	14,927.5	3,731.9
11	12,271.9	3,068.0
12	10,060.1	2,515.0
13	10,000.0	2,500.0
14	10,000.0	2,500.0
15	11,897.0	2,974.3
16	19,323.0	4,830.8
17	15,967.5	3,991.9
18	16,980.0	4,245.0
19	13,316.8	3,329.2
20	12,980.0	3,245.0
21	22,804.6	5,701.2
22	17,365.9	4,341.5
23	26,745.9	6,686.5
24	25,375.5	6,343.9
25	17,370.6	4,342.7
26	20,076.6	5,019.2
27	23,136.2	5,784.1
28	17,000.0	4,250.0
29	17,000.0	4,250.0
30	17,000.0	4,250.0
31	17,000.0	4,250.0
32	17,000.0	4,250.0
33	16,187.9	4,047.0
34	22,635.0	5,658.8
35	27,210.0	6,802.5
36	20,788.2	5,197.1
37	12,500.0	3,125.0
38	12,500.0	3,125.0
39	12,500.0	3,125.0
40	12,500.0	3,125.0
41	12,500.0	3,125.0
42	12,943.6	3,235.9
43	12,500.0	3,125.0
44	12,500.0	3,125.0
45	12,500.0	3,125.0
46	12,500.0	3,125.0
47	12,500.0	3,125.0
48	12,500.0	3,125.0
49	12,500.0	3,125.0
50	12,500.0	3,125.0
51	12,500.0	3,125.0
52	12,500.0	3,125.0
53	12,500.0	3,125.0
54	12,500.0	3,125.0
55	12,500.0	3,125.0
56	12,500.0	3,125.0
57	12,500.0	3,125.0
58	12,500.0	3,125.0
59	12,500.0	3,125.0
60	21,758.1	5,439.5
UTILITY LOT	12,659.0	3,164.8
TOTAL ALLOWED	= 152,945.8 sq.ft.	

LEGEND:

- NON-TIDAL WETLANDS LINE
- CRITICAL AREA LINE
- BUFFER LINE
- EX. WOODS LINE
- LIMITS OF DISTURBANCE

CRITICAL AREA LEGEND:

- RCA - RESOURCE CONSERVATION AREA ± 54.556 ACRES
- LDA - LIMITED DEVELOPMENT AREA ± 0.834 ACRES

GRAPHIC SCALE
Scale: 0 100 200 Feet

- GENERAL NOTES:**
- Owner: Parcel 67 - G. Marvin & Beverly P. Steen
627B Ocean Parkway
Berlin, MD 21811-1708
Parcel 74 - Steen Associates, Inc.
627B Ocean Parkway
Berlin, MD 21811-1708
 - Developer: Steen Associates, Inc.
627B Ocean Parkway
Berlin, MD 21811-1708
 - Deed Ref.: Parcel 67 - SVH 3720/505
Parcel 74 - SVH 2666/581
 - Zoning: Parcel 67 - R-1
Parcel 74 - R-1
 - Use: Parcel 67 - Residential
Parcel 74 - Residential
 - Based on the Federal Emergency Management Agency Flood Insurance Rate Map, Panel 105 of 250, Community Panel No. 240083 0025 A, dated Feb. 15 1979, the property shown herein is located within Zones A7, B & C.
 - Minimum Lot Area = 8,000 sq.ft. (Clustered)
 - Setbacks: Front = 15'
Side = 6'
Rear = 20'

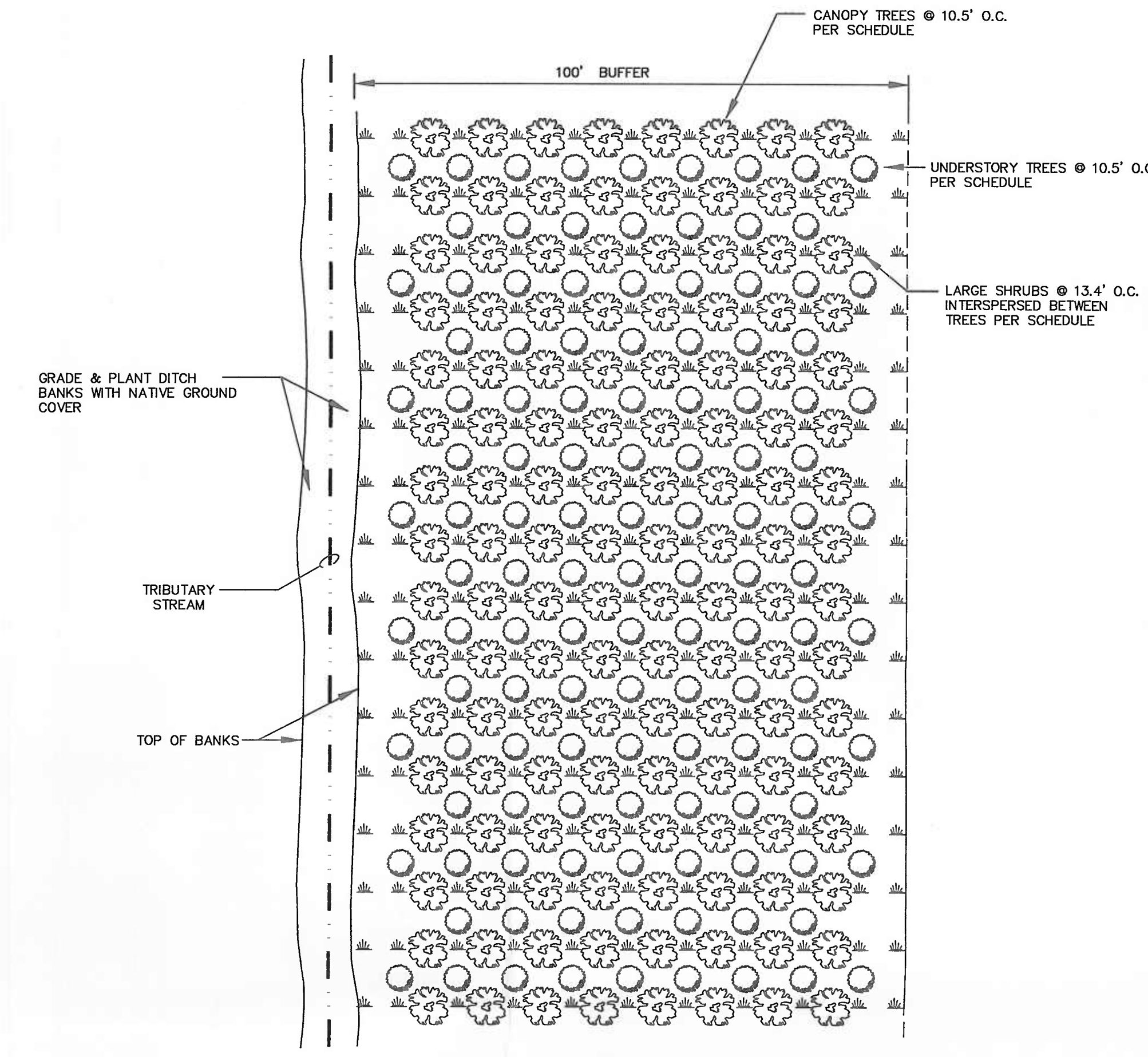
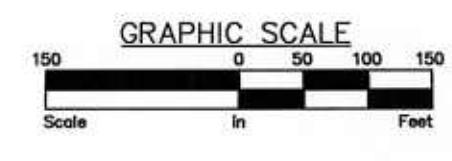
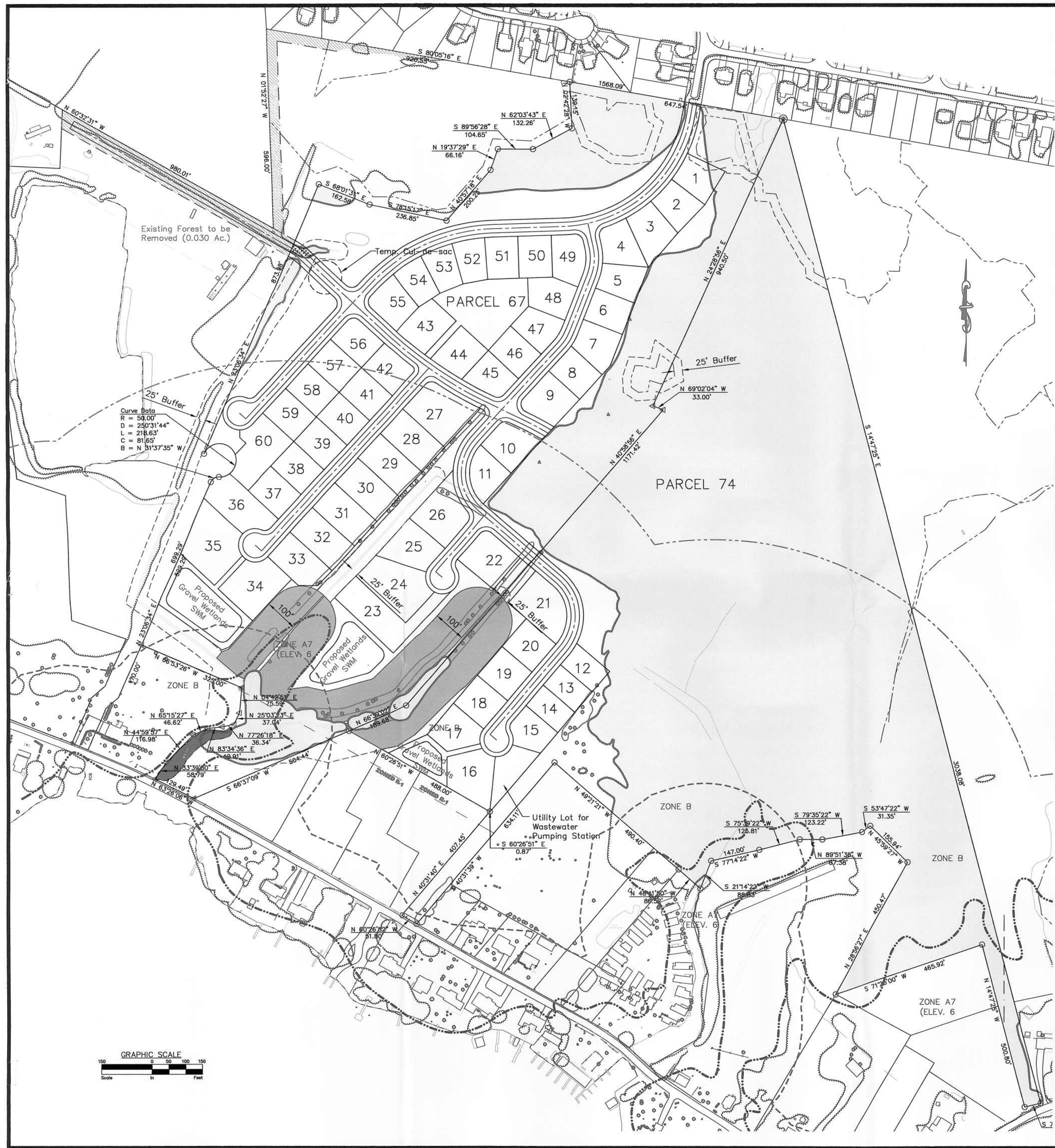
REVISIONS
 Date Issued for: **RECEIVED**
 OCT 14 2010
 CRITICAL AREA COMMISSION
 Chesapeake & Atlantic Counties

SOULÉ & ASSOCIATES, P.C.
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 122 ARLINGTON ROAD
 ARLINGTON BUSINESS CENTER
 SALISBURY, MARYLAND 21801
 (410) 742-7797

CRITICAL AREA SITE PLAN
CRITICAL AREA DESIGNATIONS
GROWTH ALLOCATION REQUEST
STEEN ASSOCIATES 60 LOT SUBDIVISION
TAX MAP 21, PARCELS 67 & 74
THIRD TAX DISTRICT, WORCESTER COUNTY, MARYLAND

Designed By: _____
 Drawn By: MPB/JWH
 Date: June 2010
 Job No.: 07-008
 Drawing File No.: 07-008crit-2010.dwg
 Sheet No.: 1 of 11

Date Plotted: 9/22/10
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BUFFER PLANTING DETAIL
1" = 20'

GENERAL NOTES

- PLANTING PLAN DEVELOPED PER LOCAL GOVERNMENT ASSISTANCE GUIDE, CRITICAL AREA BUFFER, COMAR 27-01-09-01.
- PHRAGMITES CONTROL:
 - PRIOR TO PLANTING, MOW ENTIRE BUFFER PLANTING AREA AND TREAT PHRAGMITES WITH AN AQUATIC APPROVED HERBICIDE, APPLIED BY AN APPLICATOR LICENSED IN THE STATE OF MARYLAND.
 - ANNUALLY THEREAFTER, SPOT TREAT AREAS OF PHRAGMITES REGROWTH AS NECESSARY.
- SPECIFIC MIX OF TREE AND OTHER PLANTINGS SHOWN IN SCHEDULE TO BE REVIEWED DURING DESIGN AND APPROVED BY WORCESTER COUNTY DEVELOPMENT REVIEW AND PERMITTING.

LEGEND

- Denotes Area of Existing Dense Woods
- Denotes Area of Proposed 100' Buffer Plantings
- Denotes 100 Year Flood Line
- Denotes 300' Tidal Buffer Setback Line

BUFFER PLANTING PLAN SCHEDULE

REQUIREMENTS:
Total Buffer Area + 4.16 Ac.
Buffer Area in Forest + 0.61 Ac.
Area to be Planted + 3.55 Ac.

PLANTINGS:
Buffer is Greater Than 1 Acre but Less than 5 Acres
Landscape Stock Requirements = 25% Minimum
Flexible Stocking = Remainder

1. LANDSCAPE STOCK
25% OF 3.55 AC. = 0.89 AC. = 38,768 S.F.

Use: Mix of Canopy Trees, Understory Trees and Large Shrubs

Canopy Trees:
97 2" Caliper Trees, 8' Tall @ 200 SF/EA = 19,400 S.F.
1/3 Atlantic White Cedar (*Chamaecyparis thyoides*)
1/3 American Sweet Gum (*Liquidambar styraciflua*)
1/3 Willow Oak (*Quercus phellos*)

Understory Trees:
971" Caliper, 6' High @ 75 SF/EA = 7,275 S.F.
1/3 Juneberry (*Amelanchier canadensis*)
1/3 American Holly (*Ilex opaca*)
1/3 So. Crab Apple (*Fyrus angustifolia*)

Large Shrubs:
242 - 1 Gallon, 4' High @ 50 SF/EA = 12,100 S.F.
1/3 Red Chokeberry (*Aronia arbutifolia*)
1/3 Marsh Elder (*Iva frutescens*)
1/3 Southern Bayberry (*Morrelia Cerifera*)

Total Credit From Landscape Stock = 38,775 S.F.

2. Flexible Stocking
Remainder = 3.55 Ac. - 0.89 Ac. = 2.66 Ac. = 115,870 S.F.
Use 1/2 Inch to 1 Inch container grown trees
No. Required = 2.66 Ac. X 450 / Acre = 1,197
Use Same Planting Ratio of Trees as Above, with 1/6 (200) of Each Type of Canopy Tree and Understory Tree

Total Number of Canopy Trees = 697
Total Number of Understory Trees = 697
Total Number of Large Shrubs = 242

Spacing of Trees = 10.5' + O.C.
Spacing of Large Shrubs = 13.4' + O.C. Between Trees

**CRITICAL AREA SITE PLAN
CONCEPTUAL BUFFER PLANTING PLAN
GROWTH ALLOCATION REQUEST**

STEEN ASSOCIATES 60 LOT SUBDIVISION
TAX MAP 21, PARCELS 67 & 74
THIRD TAX DISTRICT, WORCESTER COUNTY, MARYLAND

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REVISIONS	Date	Issued for	EXTENDED, MOVED & RESIZED
1	11/23/09	FOR REVIEW	FOR REVIEW
2	01/14/10	FOR REVIEW	FOR REVIEW

Date Plotted : 9/23/10

Designed By
Designed By
MPB/JWH/RR

Date
February 2010

Job No.
07-008

Drawing File No.
07-008ConceptBuffer.dwg

Sheet No.
4 of 11

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