CERTIFICATE OF AUTHENTICITY

THIS IS TO CERTIFY THAT THE FOLLOWING ELECTRONIC RECORDS ARE TRUE AND ACCURATE REPRODUCTIONS OF THE ORIGINAL RECORDS OF JAMES CITY COUNTY GENERAL SERVICES DEPARTMENT- STORMWATER DIVISION; WERE SCANNED IN THE REGULAR COURSE OF BUSINESS PURSUANT TO GUIDELINES ESTABLISHED BY THE LIBRARY OF VIRGINIA AND ARCHIVES; AND HAVE BEEN VERIFIED IN THE CUSTODY OF THE INDIVIDUAL LISTED BELOW.

BMP NUMBER: **99109**

DATE VERIFIED: **October 5, 2012**

QUALITY ASSURANCE TECHNICIAN: **Leah Hardenbergh**

Leah Hardenbergh

LOCATION: WILLIAMSBURG, VIRGINIA

Stormwater Division

MEMORANDUM

DATE: March 13, 2010

TO: Michael J. Gillis, Virginia Correctional Enterprises Document Management Services

FROM: Jo Anna Ripley, Stormwater

PO: 270712

RE: Files Approved for Scanning

General File ID or BMP ID: 99109

PIN: 3741100001B

Subdivision, Tract, Business or Owner Name (if known): Powhatan Secondary

Property Description: General Files

Site Address:

(For internal use only) **Box** 4 **Drawer:** 3

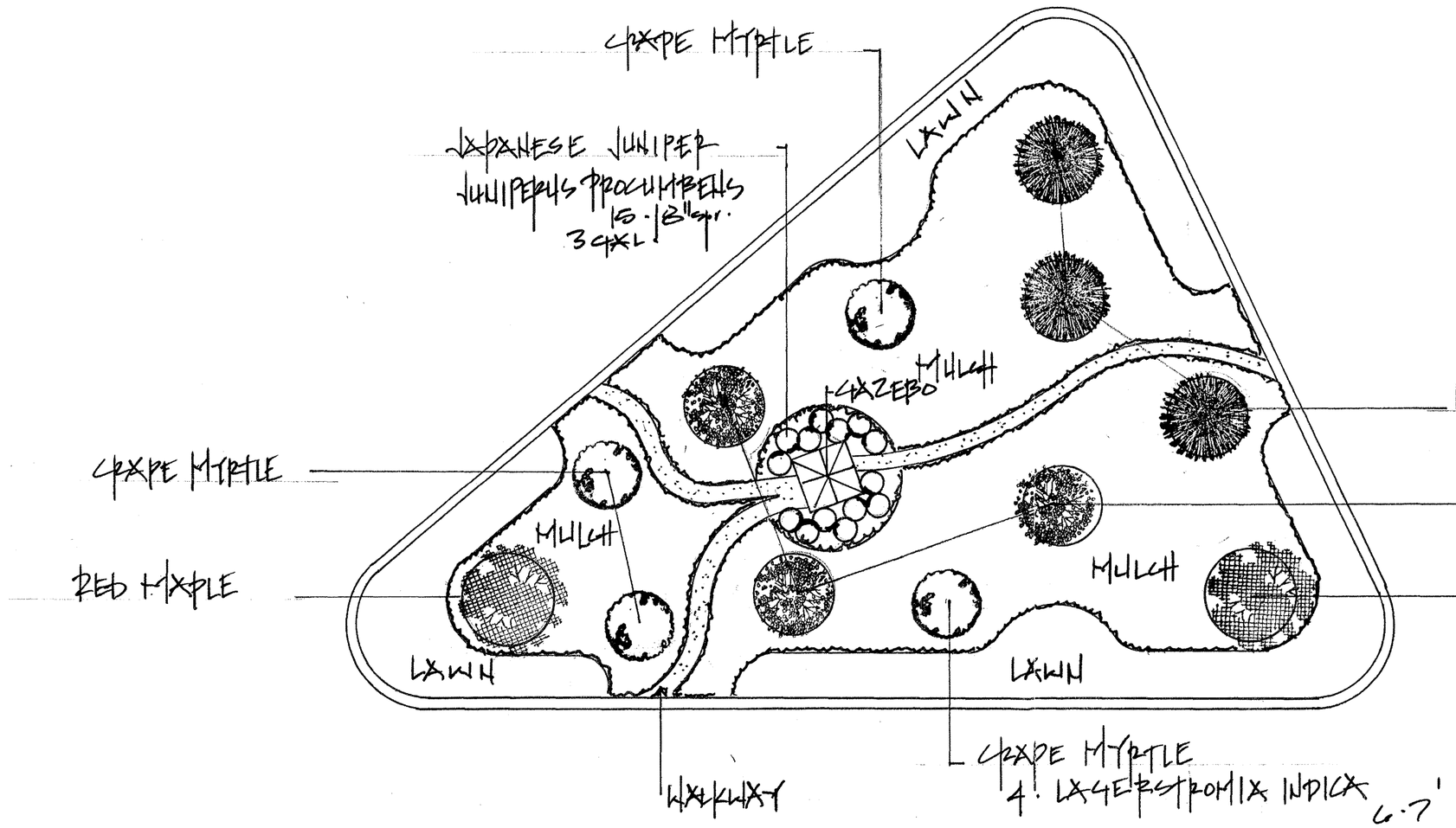
Agreements: (in file as of scan date) **N** **Book or Doc#:** **Page:**

Comments
Watford at Powhatan Secondary

Contents for Stormwater Management Facilities As-built Files

Each File is to contain:

- ☐ 1. Maintenance Agreement
- ☐ 2. Construction certification
- ☐ 3. As-Built plan
- ☐ 4. Design Calculations
- ☐ 6. Correspondence
- ☐ 7. Inspection records
- ☐ 8. Miscellaneous



Vine & vine - some locations

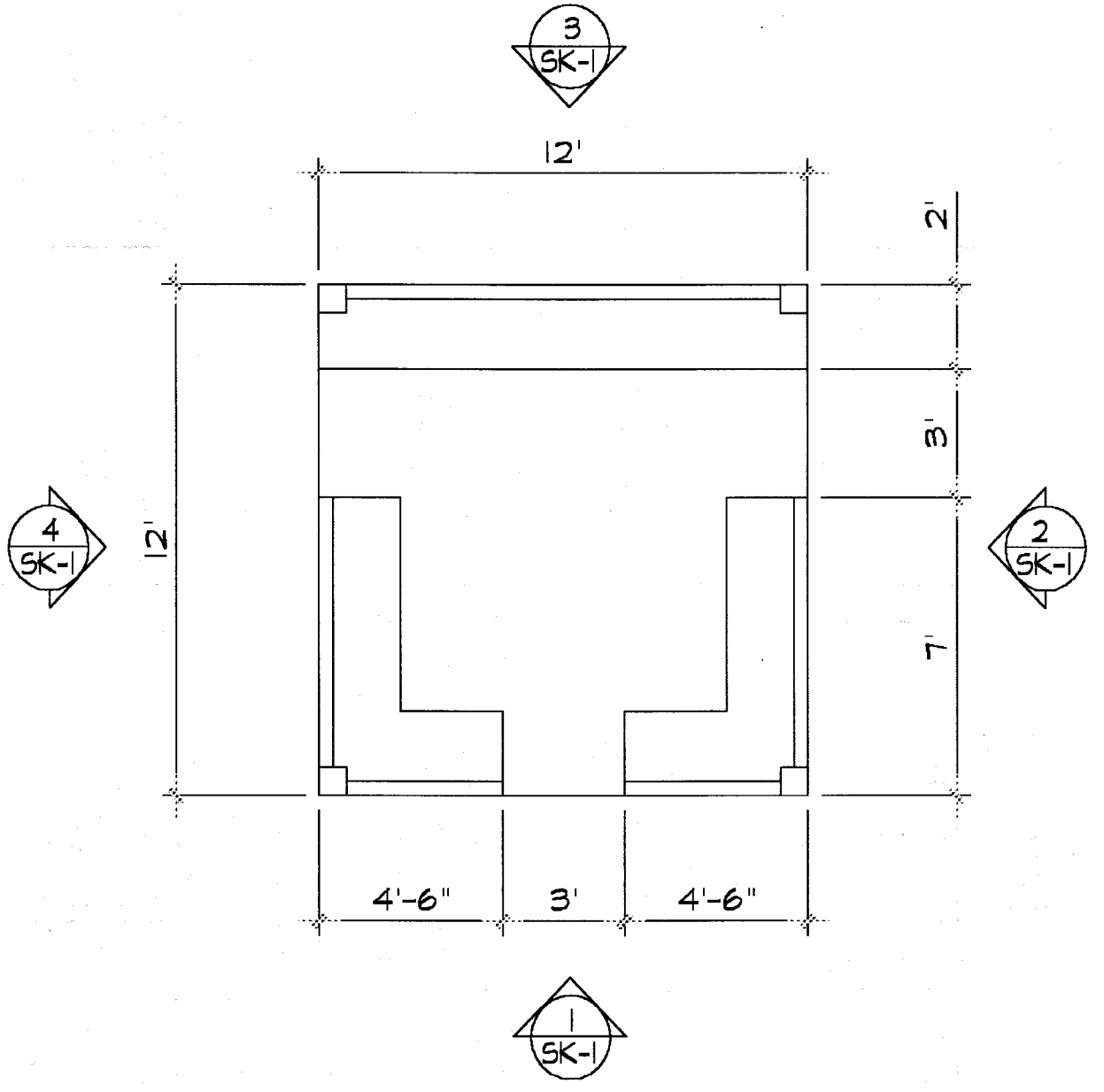
LANDSCAPE PLAN

WATERFORD

SCALE: 1"=20'	APPROVED BY:	DRAWN BY CH
DATE: 3.2000		REVISED

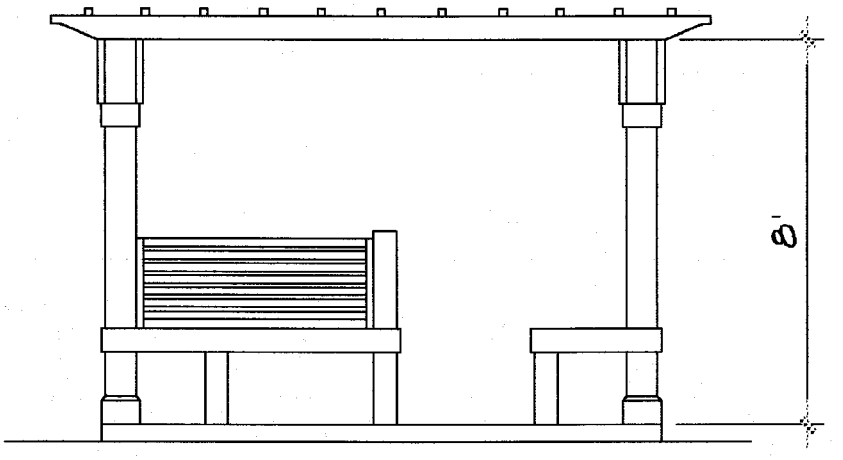
TERRY PETERSON RESIDENTIAL

LINN NURSERY OF VA. INC. | DRAWING NUMBER L-4

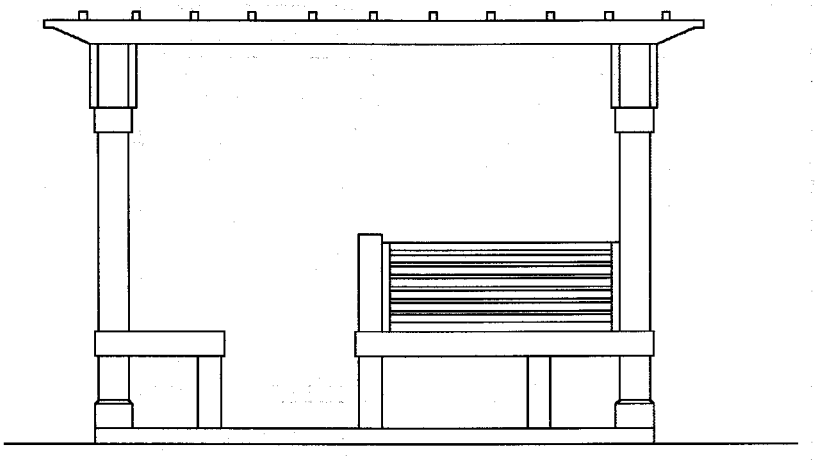


PLAN

Progressive Designs	DRAWN BY: LRS	CHECKED BY: LRS
	SCALE: 1/4"=1'-0"	
	DATE: 11.16.99	
Chesapeake, Virginia	XXXX.XX	SHEET
DESCRIPTION: WATERFORD		SK-1

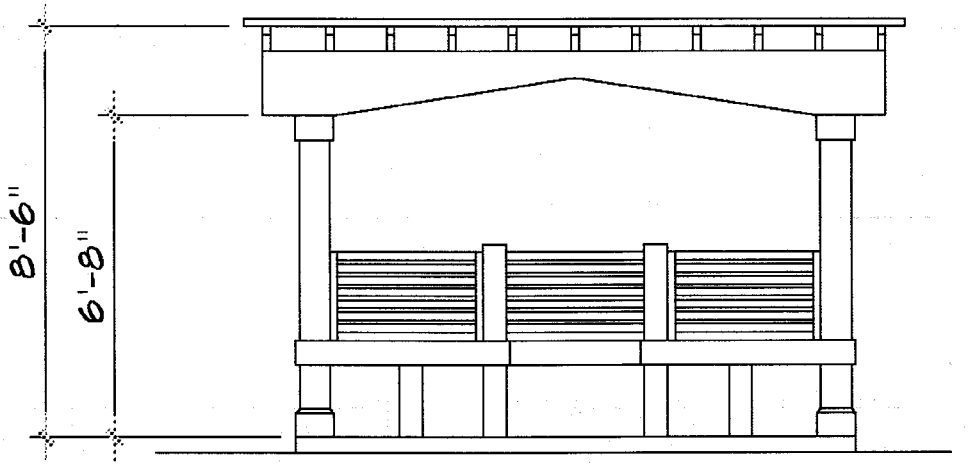


2 / SK-1 ELEVATION

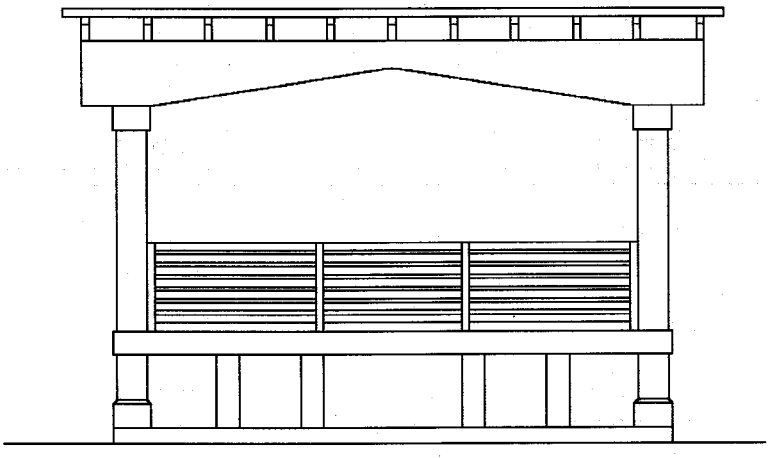


4 / SK-1 ELEVATION

Progressive Designs	DRAWN BY: LRS	CHECKED BY: LRS
	SCALE: 1/4"=1'-0"	
	DATE: 11.16.99	
Chesapeake, Virginia	XXXX.XX	SHEET
DESCRIPTION: WATERFORD		SK-1



1 / SK-1 ELEVATION



3 / SK-1 ELEVATION

Progressive Designs	DRAWN BY: LRS	CHECKED BY: LRS
	SCALE: 1/4"=1'-0"	
	DATE: 11.16.99	
Chesapeake, Virginia	XXXX.XX	SHEET
DESCRIPTION: WATERFORD		SK-1

Do we need the center open space?

EXISTING 20' JAMES CITY COUNTY SERVICE AUTHORITY SANITARY SEWER EASEMENT P.B.66, PG.70

JAMES CITY COUNTY GEODETIC GROUND CONTROL COORDINATE N3626011.25 E11987128.39

JAMES CITY COUNTY GEODETIC GROUND CONTROL COORDINATE N3625851.21 E11987000.00

N85°41'03"E 295.01' S84°25'26"E 134.38'

N72°56'40"E 219.33'

N70°01'12"E 250.28'

N63°01'21"E 391.78'

N76°55'00"E 137.35'

N55°06'05"W 255.72'

N69°51'27"W 531.17'

S24°55'08"W 170.37'

S20°05'23"E 356.09'

S 69°12'03" W (TIE LINE) 450.02'

24,888

19,283

C72

C73

PHASE ONE

PHASE TWO

PHASE THREE

PHASE FOUR

PHASE FIVE

PHASE SIX

PHASE SEVEN

PHASE EIGHT

PHASE NINE

PHASE TEN

PHASE ELEVEN

PHASE TWELVE

PHASE THIRTEEN

PHASE FOURTEEN

PHASE FIFTEEN

PHASE SIXTEEN

PHASE SEVEN-TEEN

PHASE EIGHTEEN

PHASE NINETEEN

PHASE TWENTY

PHASE TWENTY ONE

PHASE TWENTY TWO

PHASE TWENTY THREE

PHASE TWENTY FOUR

PHASE TWENTY FIVE

PHASE TWENTY SIX

PHASE TWENTY SEVEN

PHASE TWENTY EIGHT

PHASE TWENTY NINE

PHASE THIRTY

PHASE THIRTY ONE

PHASE THIRTY TWO

PHASE THIRTY THREE

NATURAL OPEN SPACE

NATURAL OPEN SPACE

POWHATAN SECONDARY

PROPOSED VA. STATE ROUTE 5 RELOCATED

DEVELOPMENT MANAGEMENT

101-E MOUNTS BAY ROAD, P.O. BOX 8784, WILLIAMSBURG, VIRGINIA 23187-8784
(757) 253-6671 Fax: (757) 253-6850 E-MAIL: devtman@james-city.va.us

CODE COMPLIANCE	ENVIRONMENTAL DIVISION	PLANNING	COUNTY ENGINEER
(757) 253-6626	(757) 253-6670	(757) 253-6685	(757) 253-6678
codecomp@james-city.va.us	environ@james-city.va.us	planning@james-city.va.us	INTEGRATED PEST MANAGEMENT
			(757) 253-2620

April 20, 2000

Mr. Richard Bowie
Terry-Peterson Residential Companies
4640 Shore Drive, Suite 111
Virginia Beach, VA 23455

RE: Exception Request for Waterford at Powhatan Secondary

Dear Mr. Bowie:

Pursuant to your letter request of March 31, 2000, an exception from the Chesapeake Bay Preservation Ordinance's 10-point stormwater management criteria is granted to allow the landscaping of the triangular central park. As detailed in my March 1, 2000, letter regarding this issue, the stormwater plan approved for the site required that this area be a natural open space area and be placed in conservation easement. This exception will allow the landscaping of the area in accordance with the landscape plan dated 3/2000 and entitled "Landscape Plan Waterford" submitted with your letter. It also removes the requirement for establishing this area as a conservation easement. An acceptable modification to the landscape plan would be to allow the planting of vinca minor for groundcover in place of some of the hardwood mulch.

The plants will need to be installed prior to the release of the erosion control surety for the project. Please contact me at 253-6673 if you have any questions.

Sincerely,

Darryl E Cook

Darryl E. Cook, P.E.
Environmental Director

Terry·Peterson Residential

March 31, 2000

Mr. Darryl E. Cook, P.E.
Environmental Director
Development Management
Post Office Box 8784
Williamsburg, VA 23187-8784

Re: Waterford at Powhatan Secondary

Dear Mr. Cook:

In regard to your letter dated March 1, 2000, please be advised that we are requesting an exception to your Ordinance's 10-point BMP procedure for the triangular central park in Waterford at Powhatan Secondary. To accompany this request, we have attached two copies of our proposed landscape plan of this area establishing a minimum of 13,000 square feet as low maintenance landscaping.

Should you have any questions or require additional information, please feel free to contact me.

Very truly yours,

Richard L. Bowie, P.E
President

RLB/dyw

Enclosure

TERRY·PETERSON RESIDENTIAL
COMPANIES
4640 SHORE DRIVE
SUITE 111
VIRGINIA BEACH, VA 23455-2859

757·460·1770
FAX 757·460·2336
www.terrypeterson.com
e-mail: homestpr@terrypeterson.com

DEVELOPMENT MANAGEMENT

101-E MOUNTS BAY ROAD, P.O. BOX 8784, WILLIAMSBURG, VIRGINIA 23187-8784
(757) 253-6671 Fax: (757) 253-6850 E-MAIL: devtman@james-city.va.us

CODE COMPLIANCE
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codecomp@james-city.va.us

ENVIRONMENTAL DIVISION
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PLANNING
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planning@james-city.va.us

COUNTY ENGINEER
(757) 253-6678

INTEGRATED PEST MANAGEMENT
(757) 253-2620

March 1, 2000

Mr. Richard Bowie
Terry Peterson Residential Companies
4640 Shore Drive, Suite 111
Virginia Beach, VA 23455-2859

RE: Waterford at Powhatan Secondary

Dear Mr. Bowie:

This is in response to your letter request to Wayland Bass of January 14, 2000, regarding the triangular central park area in the above community. As we discussed, this area was proposed as a natural open space area for the purposes of Chesapeake Bay Preservation Ordinance water quality protection. I understand that your desire is to turn this area into a passive open space amenity.

From an analysis of the project's compliance with the Ordinance's 10-point BMP evaluation procedure, it is necessary for approximately 13,000 square feet or roughly two-thirds of this central area to be established as natural open space in order for the site to meet the County's requirements. As you mention in your letter, the area was totally disturbed during the construction process, so there is no existing vegetation to protect in this area. Given the circumstances, the intent of the water quality protection provisions of the Ordinance would be met if 13,000 square feet of the park were established as a low maintenance landscaped area. This means that only trees, shrubs, and mulch would be established in that area; no grass would be allowed. On the remaining approximately 6000 square feet, grass would be allowed. The construction of a gazebo would also be allowed. Trails and sidewalks would be allowed throughout the entire park area.

To resolve this issue, an exception to the Ordinance's 10-point BMP procedure would need to be granted. Please submit a letter requesting this exception along with a landscape plan that establishes at least 13,000 square feet of the area as a low maintenance landscape area with plants from the attached list. After approval, the plants would need to be installed prior to the erosion control surety being released for the project. Once the exception is granted, there would be no requirement to establish the park area as a conservation easement. If you have any questions, please contact me at 253-6673.

Sincerely,

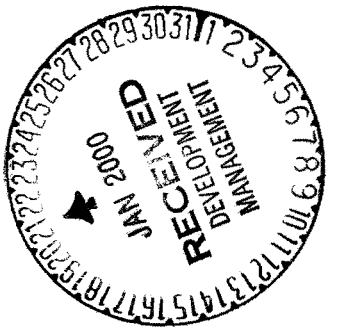
Darryl E Cook

Darryl E. Cook, P.E.
Environmental Director

DARRYL

Terry Peterson Residential

January 14, 2000



Mr. Wayland Bass, P.E.
County Engineer
Development Management
James City County
Post Office Box 8784
Williamsburg, VA 23187

Re: Waterford at Powhatan Secondary

Dear Wayland:

In regard to our recent telephone conversation, attached is a copy of a portion of our site development plan indicating the location of the gazebo and walks we propose to construct in the central park of our community. I am also attaching a copy of the architectural detail of this gazebo.

I use the term park because it was always our intention to crate a passive, open space amenity in the center of our community. This location also served as our temporary sediment basin during our site development phase, so it was obvious, at least to us, that we would be removing any existing vegetation to accomplish this goal. Once site work was completed and the denuded site areas vegetated, we filled the sediment basin, with the County's approval, to create a maintainable grassed open space/park area.

While we agreed to record a deed of easement for Natural Open Space on the open space area at the western side of the property knowing this area would not be disturbed, we were never aware, nor was it our intention, to record this easement over the central park.

I have asked our engineer, Kimley-Horn and Associates, to research their file on this requirement, but also wanted to get this information into your hands for your review and consideration. As soon as they advise me of their understanding, I will contact you so that we can determine a course of action.

I look forward to talking to you soon.

Very truly yours,

Richard L. Bowie, P.E.
President

RLB/dyw

Enclosures

wbassltr

reduce or eliminate grass
gazebo OK, paths ok
provide trees, shrubs, mulch in e least 13,000 SF

TERRY•PETERSON RESIDENTIAL
COMPANIES
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757-460-1770
FAX 757-460-2336
www.terrypeterson.com
e-mail: homestpr@terrypeterson.com

Tracey

United Property Associates

873-1185 (o)

532-9508 (m)

management Company for Development

"PLANTS FOR STORMWATER MANAGEMENT IN HAMPTON ROADS"

The following matrix provides over 200 plants which can be used for the various types of vegetative practices and vegetative stormwater BMPs described in the text. Blanks have been inserted where information was not available.

KEY

Notes

L = Plant species has a limitation for use in Hampton Roads. Refer to Section 8A of Appendix E for further information on this species.

PI = Plant species is potentially invasive in Hampton Roads. Refer to Section 8B of Appendix E for further information on this species.

Mature Height/Width

Refers to the plant's height and width at maturity. This should be read as: Plant Height at Maturity/Plant Width at Maturity. If only one dimension is listed, this dimension refers to plant height at maturity, only.

Tolerance for Inundation: Temporary or Seasonal

Refers to the plant's ability to withstand periods of water inundation. All plants species have a different tolerance for duration of water inundation. "Temporary" means the plant can only tolerate short periods of inundation, i.e., a storm event, with maximum inundation time 2-3 hours. "Seasonal" means the plant can tolerate extended periods of inundation, i.e., seasonal wet periods.

pH Range

Refers to the fertility level in the soil. All plants require a certain soil pH in order to grow. The pH scale has a range of 1 to 14, with 1 being most acidic, 7 being neutral, and 14 being most basic. Soils may have to be amended or altered in order to achieve the correct pH level for specific plantings. It is best to group plants with similar pH requirements together.

Light

Refers to the amount of light (shade or sun) necessary for proper plant growth.

s = shade
sS = partial shade
S = full sun

Growth

Refers to the growth rate of the plant, relative to environmental conditions.

S = slow
M = moderate
F = fast
VF = very fast

Primary Use

Where noted, certain plants have been recommended for certain uses, Please refer back to the discussion in Sections 1-3 in Appendix E for futher explanation of each use. If a primary use is not designated for a plant, it can still be used for overall stormwater management purposes.

E&S = Erosion and Sediment Control
DA = Disturbed Area Reclamation
IT = Can be used in or around infiltration trenches
DB = Cab be used in or around detention basins

Native

Refers to the native/non-native status of the plant. All plants found on this matrix are either native to the State of Virginia and/or the Hampton Roads region, in particular, or they have been introduced to the State of Virginia and/or the Hampton Roads region and have adapted well to climate, soil, and hydrologic conditions. Refer to Appendix C for a more detailed discussion on landscaping with native plants.

Yes = Plant is native to Virginia
No = Plant has been introduced to Virginia and has adapted well

Available

Refers to the commercial availablity of the plant in nurserys and garden centers throughout Hampton Roads. Please consult individual nurseries and gardens centers for their availability of a particular species.

Wetland Plants

Submergent wetlant plants are completely submerged in the water and no part of the plant grows beyond the water surface. Plants will germinate in the water and exist in conditions which are 100% flooded. Plants will also flower or fruit in the water.

Emergent wetland plants are rooted in the water but parts of the plant grow above the water surface. Plants will grow in saturated soils as well as in flooded conditions.

PLANTS FOR STORMWATER MANAGEMENT IN HAMPTON ROADS

Notes	Botanical Name	Common Name	Mature Height / Width	Tolerance for Inundation	Preferred Soils	pH Range	Light	Growth	PRIMARY USES E&S	PRIMARY USES DA	PRIMARY USES IT	PRIMARY USES DB	Native	Available
					LARGE DECIDUOUS TREES									
PI	Acer plantanoides	Norway Maple	40'-50'/30'-40'	Temporary	D/M/W	6.5-7.5	sS-S	F	X				No	Yes
	Acer rubrum	Red Maple	50'-80'/40'-50'	Seasonal	D/M/W; poorly-drained	4.5-7.5	sS-S	F	X			X	Yes	Yes
	Acer saccharum	Sugar Maple	10'-75'/40	Temporary	D/M/W	6.5-7.5	sS-S	M	X				Yes	Yes
	Betula nigra	River Birch	20'-90'/16'-20'	Seasonal	D/M; poorly-drained	4.0-5.0	sS-S	F	X			X	Yes	Yes
	Celtis laevigata	Sugar Hackberry	80'-90'	Seasonal	D/M/W	6.5-7.5	sS-S	F	X				Yes	[redacted]
	Celtis occidentalis	Common Hackberry	30'-50'/25'-40'	Seasonal	D; poorly-drained		sS-S	F					Yes	
	Fagus grandifolia	American Beech	80'-100'/50'-70'	Temporary	D/M	6.5-7.5	sS-S	S	X				Yes	No
	Fraxinus pennsylvanica	Green Ash, Red Ash	30'-80'/10'	Seasonal	D; poorly-drained		S	F				X	Yes	Yes
	Ginko biloba	Ginko (male)	80'/40'	Seasonal	D/M	6.0-6.5	S	S	X	X			No	Yes
	Gleditsia triancanthos	Honey Locust	70'-80'/35'-40'	Seasonal	D/M/W	6.5-7.5	S	F	X				Yes	Yes
	Liquidambar styraciflua	Sweetgum	50'-70'/40'	Seasonal	D/M/W	6.0-7.5	sS-S	M	X			X	Yes	Yes
	Liriodendron tulipfera	Tulip Poplar	90'/50'	Seasonal	M		S	M		X			Yes	Yes
	Nyssa sylvatica	Blackgum / Tupelo	70'-100'/40'-60'	Seasonal	D/M; poorly-drained	5.0-6.0	S	M	X			X	Yes	Yes
	Nyssa sylvatica var. biflora	Blackgum / Tupelo	80'	Seasonal	M/W	5.0-6.0	sS-S	M	X				Yes	Yes
	Platanus acerifolia	London Plane Tree	70'-100'/65'-80'	Seasonal	M	6.5-7.5	sS-S	F/VF	X				No	Yes
	Platanus occidentalis	Sycamore	80'/15'	Seasonal	M		sS-S	F				X	Yes	Yes
	Pyrus calleryana	Callery Pear	50'-60'/15'-20'	Temporary	M/W	6.5-7.5	sS-S	M	X				No	Yes
PI	Quercus acutissima	Sawtooth Oak	35'-40'/30'-35'	Temporary	D/M		sS-S	M					No	Yes
	Quercus alba	White Oak	60'-80'	Temporary	D/M/W	6.5-7.5	sS-S	S/M	X				Yes	Yes
	Quercus bicolor	Swamp Oak	60'	Seasonal	M		sS-S	S/M					Yes	Yes
	Quercus coccinea	Scarlet Oak	70'/40'-50'	Temporary	D/M/W	6.0-6.5	sS-S	VF	X				Yes	No
	Quercus falcata	Southern Red Oak	70'/50'	Temporary	D/M/W	4.0-5.0	S	M	X				Yes	Yes
	Quercus michauxii	Swamp Chestnut Oak	80'/30'-40'	Seasonal	D/M/W	6.0-6.5	sS-S	M	X				Yes	Yes
	Quercus nigra	Water Oak	70'/45'	Seasonal	M/W		sS	M					Yes	Yes
L	Quercus palustris	Pin Oak	50'-90'/50'	Seasonal	D/M/W	5.5-6.5	sS-S	VF	X				Yes	Yes
	Quercus phellos	Willow Oak	50'-90'/30'-40'	Seasonal	D/M/W	4.0-6.5	sS-S	F	X			X	Yes	Yes
L	Robinia pseudo-acacia	Black Locust	30'-50'	Temporary	D/M/W	5.0-7.5	S	F	X	X			Yes	Yes
L	Salix babylonica	Weeping Willow	40'/35'	Seasonal	D/M/W		S	F					No	Yes
	Salix nigra	Black Willow	30'-50'/25'	Seasonal	M/W		S	F					Yes	Yes
	Taxodium distichum	Bald Cypress	60'-100'/30'-50'	Seasonal	M/W; poorly-drained		sS-S	F				X	Yes	[redacted]
	Tilia americana	Basswood	60'/40'	Temporary	M		s-sS-S	F		X			Yes	
	Ulmus alata	Winged Elm	45'	Temporary	D/M		s-sS-S	M					Yes	No
	Ulmus parvifolia	Chinese Elm	80'-75'/40'-50'	Seasonal	D; poorly-drained		sS-S	M/F					No	Yes
	Zelkova serrata	Zelkova	80'/80'	Temporary	D/M	6.0-6.5	S	M	X				No	Yes
					LARGE EVERGREEN TREES									
	Cedrus atlantica	Atlas Cedar	40'-60'/30'-40'	Temporary	D/M		sS-S	M					No	Yes
L	Cedrus deodara	Deodara Cedar	60'-100'/40'-50'	Temporary	D/M		sS-S	F					No	Yes
	Cedrus libani	Cedar of Lebanon	75'/50'	Temporary	D/M		sS-S	M					No	No
	Chamaecyparis thyoides	White Cedar	100'/40'	Seasonal	M/W		S	F					Yes	Yes
	Cryptomeria japonica	Cryptomeria	100'/25'-30'	Seasonal	M		S	S					No	Yes
	Cupressocyparis leylandii	Leyland Cypress	60'-70'/10'-15'	Temporary	M		sS-S	VF				X	No	Yes

PLANTS FOR STORMWATER MANAGEMENT IN HAMPTON ROADS

Notes	Botanical Name	Common Name	Mature Height / Width	Tolerance for Inundation	Preferred Soils	pH Range	Light	Growth	PRIMARY USES E&S	DA	IT	DB	Native	Available
PI	Magnolia grandiflora	Southern Magnolia	80'100'/50'-80'	Seasonal	D/M/W	4.0-7.0	sS-S	S/M	X				Yes	Yes
	Magnolia virginiana	Sweet Bay / Swamp Magnolia	80'-100'/20'-40'	Seasonal	M/W; poorly-drained		sS-S	S/M					Yes	Yes
	Pinus echinata	Shortleaf Pine	80'-100'	Temporary	D/M	4.0-6.5	S	F	X				Yes	No
L	Pinus elliotti	Slash Pine	75'-100'/30'-40'	Seasonal	D/M/W		sS-S	F					No	Yes
	Pinus taeda	Loblolly Pine	75'-100'/30'-40'	Seasonal	D/M; poorly-drained	4.0-6.5	S	F	X	X		X	Yes	Yes
	Quercus laurifolia Darlingtonia	Darlington Oak	50'/40'-50'	Temporary	M		S	S					No	Yes
L	Quercus virginiana	Live Oak	40'-80'/60'-100'	Temporary	D/M		sS-S	S					Yes	Yes
	Thuja occidentalis	Arbor Vitae 'Pyrimidalis'	60'/10'-12'	Seasonal	M/W		S	M					Yes	
					SMALL DECIDUOUS TREES									
	Acer campestre	Maple Hedge	20'-30'	Temporary	D/M/W	6.5-7.5	sS-S	S	X				No	No
	Amelenchier arborea	Shadbush, C. Serviceberry	20'-30'/12'-15	Temporary	M/W		sS-S	VF					Yes	Yes
	Carpinus caroliniana	American Hornbeam	40'/25'	Seasonal	M	6.5-7.5	s-sS-S	S	X				Yes	No
	Cercis canadensis	Eastern Redbud	20'-30'/25'-35'	Temporary			sS-S						Yes	Yes
	Chionanthus virginicus	Fringe Tree	10'-20'	Temporary	M		sS-S	S					Yes	Yes
	Cornus florida	Flowering Dogwood	15'-30'/12'-20'	Temporary	M	5.0-6.5	sS-S	M	X				Yes	Yes
	Cornus kousa	Korean Dogwood 'Kousa'	20'/15'-18'	Temporary	M		sS-S	M					No	Yes
	Crateegus spp.	Hawthorne	15'-25'	Temporary	M	6.0-7.5	sS-S	F	X				?	Yes
	Diospyros virginiana	Persimmon	30'	Temporary	D		sS-S	S/M					Yes	No
	Franklinia alatamaha	Franklinia	20'-30'/15'-20'	Temporary	M		S	S					No	Yes
	Halesia carolina	Carolina Silverbell	30'/20'	Temporary	M		sS-S	M					Yes	No
	Ilex opaca	American Holly	30'/12'-20'	Seasonal	D/M/W; poorly-drained	4.0-6.0	sS-S	S	X				Yes	Yes
	Koelreuteria paniculata	Golden Rain Tree	20'-30'/25'-35'	Temporary	M/W	6.0-6.5	sS-S	M	X				No	Yes
	Lagerstroemia indica	Crape Myrtle	30'/15'-20'	Temporary	M/W		S	M				X	No	Yes
	Malus angustifolia	Crabapple	15'-20'/10'	Temporary	M	6.5-7.5	S	M	X				No	Yes
	Ostrya virginiana	Eastern Hophornbeam	40'/25'	Seasonal	M		S	M					Yes	No
	Oxydendrum arboreum	Sourwood	to 60'	Temporary	D	5.5-6.5	sS-S	S					Yes	Yes
	Prunus cerasifera pisserdi	Pissard/Purple-leaf Plum	15'-30'/20'-25'	Temporary	M		S	M/F			X		No	Yes
L	Prunus serrulata 'Kwanzan'	Japanese 'Kwanzan' Cherry	15'-25'/15'-20'	Temporary	M	6.5-7.5	sS-S	M					No	Yes
	Sassafras albidum	Common Sassafras	40'/25'	Temporary	D/M		sS-S	M		X			Yes	No
	Styrax japonica	Japanese Snowbell	20'-30'/15'-20'	Temporary	M		sS-S	S					No	Yes
					SMALL EVERGREEN TREES									
	Juniperus virginiana	Eastern Red Cedar	45'/20'	Temporary	D/M/W	6.0-6.5	S	M	X	X		X	Yes	
	Osmanthus americanus	Devilwood	to 45'	Temporary	M/W		s-sS-S	S/M					Yes	
	Persea borbonia	Redbay	to 60'	Seasonal	D/M		sS-S	M					Yes	No
	Prunus caroliniana	Carolina Cherry-Laurel	20'-30'/15'-20'	Temporary	M; poorly-drained		s-sS-S	VF					No	Yes
					DECIDUOUS SHRUBS									
	Alnus serrulata	Common/Tag Alder												
	Aronia arbutifolia	Red Chokeberry	3'-6'	Seasonal	D/M/W								Yes	Yes
	Baccharis halimifolia	Groundsel Bush	to 9'	Seasonal	M/W		sS-S	M					Yes	Yes
PI	Berberis thunbergi	Japanese Barberry	4'/4'	Temporary	M		sS-S	M			X	X	No	Yes
	Callicarpa americana	Purple Beautyberry	to 9'	Temporary	M								Yes	Yes

PLANTS FOR STORMWATER MANAGEMENT IN HAMPTON ROADS

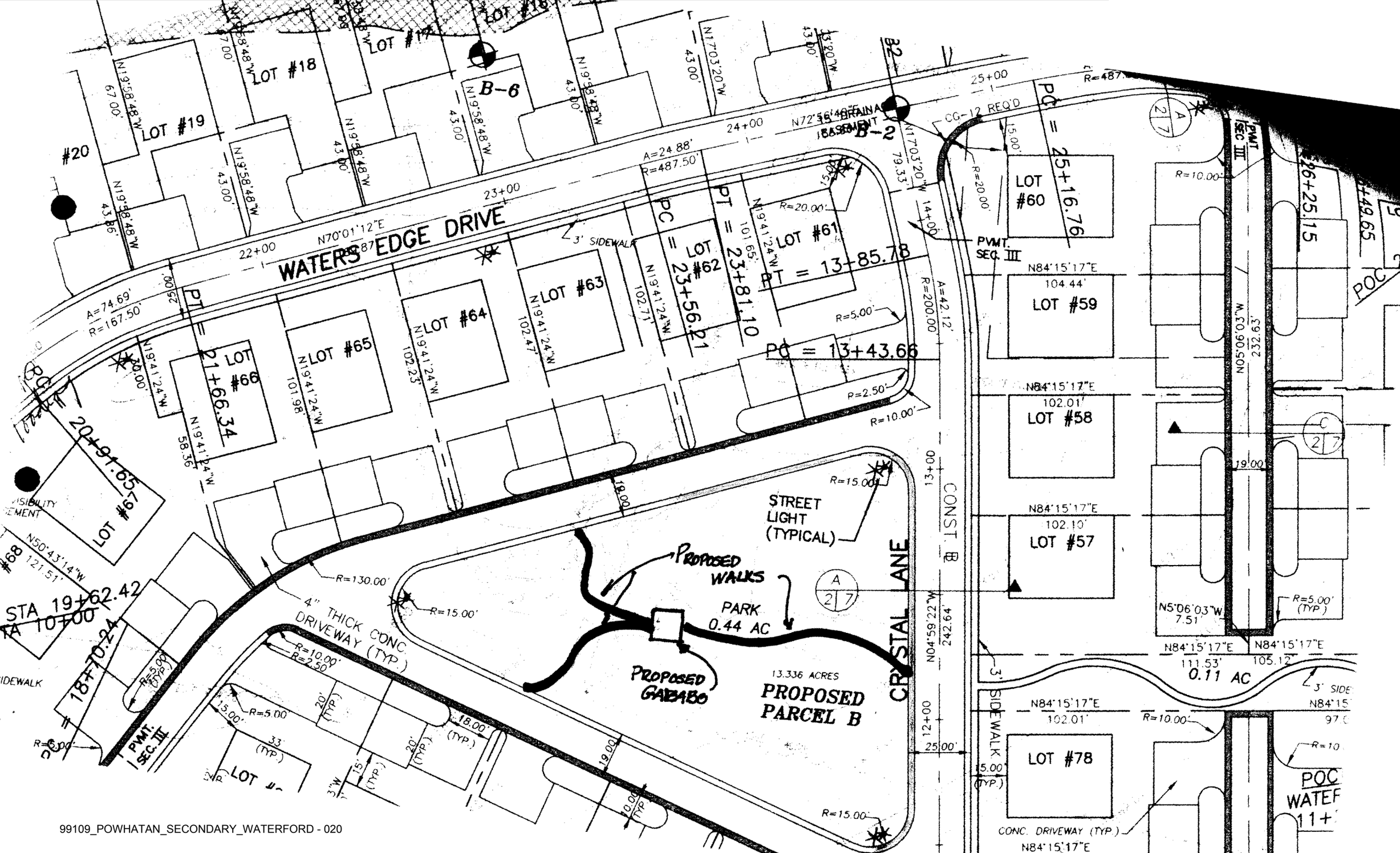
Notes	Botanical Name	Common Name	Mature Height / Width	Tolerance for Inundation	Preferred Soils	pH Range	Light	Growth	PRIMARY USES E&S	DA	IT	DB	Native	Available
	Calycanthus floridus	Carolina Allspice	6'/5'-8'	Temporary	M		s-S	M					Yes	Yes
	Cephalanthus occidentalis	Buttonbush	6'-9'	Seasonal	M/W		S						Yes	Yes
	Comptonia peregrina	Sweet Fern	2'-4'	Temporary	Droughty to mod.-well-drained	5.0-6.0	S						Yes	No
	Cornus amomum	Silky Dogwood	4'-10'	Seasonal	M/W		s	M/F					Yes	Yes
	Corylus americana	American Filbert	3'-9'	Temporary	D/M		aS-S	M/F					Yes	No
PI	Cytisus scoparis	Scotch Broom	6'/4'	Temporary	D/M		aS-S	M	X		X	X	No	Yes
PI	Elaeagnus angustifolia	Russian Olive	to 20'	Temporary	M		S	M/F				X	No	Yes
PI	Elaeagnus umbellata	Autumn Olive	10'-20'/20'	Temporary	M; droughty to mod.-well-drained	4.5-7.0	S	F	X	X			No	Yes
PI	Euonymous alata	Burning Bush/Winged Euonymous	8'-10'/8'-10'	Temporary	M		aS-S	M					No	Yes
	Forsythia intermedia	Border Forsythia	8'-10'/3'-5'	Temporary	D/M		S	F	X			X	No	Yes
	Hamamelis virginiana	Witch Hazel	10'/10'	Temporary	M		s	S					Yes	Yes
	Ilex decidua	Possumhaw	20'-15'	Seasonal	D/M/W		aS-S	M					Yes	Yes
	Ilex verticillata	Winterberry	8'-10'/6'	Seasonal	M/W; well to poorly-drained	5.0-6.0	aS-S	S		X			Yes	Yes
	Jasminum nudiflorum	Winter Jasmine	4'/6'	Temporary	D/M		aS-S	M	X	X			No	Yes
PI	Lespedeza bicolor	Bicolor Lespedeza 'Natob'	12'/6'	Temporary	D/M; droughty to mod.-well-drained	4.5-6.5	S	M	X	X			No	Yes
PI	Lespedeza striata thunberg	Shrub Lespedeza		Temporary	D; moderately-well-drained					X			No	Yes
	Lindera benzoin	Spice Bush	12'-25'	Seasonal	M/W; rich		s	S/M					Yes	No
PI	Lonicera maackii	Amur Honeysuckle / Rem Red	12'/12'	Temporary	D/M; droughty to somewhat-prly.-dr.	6.5-8.0	s-aS-S	M		X			No	No
PI	Lonicera tatarica	Tartarian Honeysuckle	10'/8'	Temporary	D/M; well to mod.-well-drained	6.5-8.0	aS-S	F		X		X	No	No
	Myrica pensylvanica	Northern Bayberry	6'-9'/6'-10'	Seasonal	D/M/W; droughty to mod.-well-dr.	5.0-6.0	aS-S	M		X	X		Yes	Yes
	Rhus glabra	Smooth Sumac	10'/6'	Temporary	D/M		S	F	X	X			Yes	No
	Sambucus canadensis	Elderberry	3'-12'	Seasonal	D/M/W; well to poorly-drained	6.0-7.5	aS-S			X			Yes	No
	Spirea prunifolia	Double Bridal Wreath	4'-6'/5'-8'	Temporary	M		s-S	F			X		No	Yes
	Vaccinium corymbosum	Highbush Blueberry	12'/12'	Seasonal	M/W		S	S					Yes	Yes
	Viburnum dentatum	Southern Arrowwood	to 10'	Seasonal	M/W		aS						Yes	Yes
	Vitex agnus-castus	Chaste Tree	9'-10'/10'-12'	Temporary	D/M		aS-S	F					No	Yes
	Weigelia florida	Weigelia	6'-8'/6'-8'	Temporary	M						X		No	Yes
					EVERGREEN SHRUBS									
	Abelia grandiflora	Glossy Abelia	5'-7'/4'-6'	Temporary	M		s-S	F			X	X	No	Yes
	Berberis julianae	Wintergreen Barberry	3'-6'/2'-5'	Temporary	M		aS-S	F			X		No	Yes
	Ilex cornuta 'Burfordi'	Burford Holly	10'-12'/6'-8'	Temporary	M; sandy, well-drained		aS-S	M			X		No	Yes
	Ilex crenata	Japanese Holly	3'-6'/3'-6'	Temporary	M		s-S	S/M			X		No	Yes
	Ilex glabra "Compacta"	Compact Inkberry	3'-6'	Temp. / Seas.	M/W								Yes	Yes
	Ilex serrata	Sparkleberry (female)	15'/10'-15'	Temporary	M/W		aS-S	M					No	Yes
	Ilex vomitoria	Yaupon Holly	15'-20'/5'-10'	Seasonal	D; poorly-drained		s-S	M			X		Yes	Yes
	Juniperus chinensis pfitzeriana	Pfitzer Juniper	3'-6'/8'-12'	Temporary	D/M		S	F	X		X	X	No	Yes
	Kalmia latifolia	Mountain Laurel	5'-10'/6'	Temporary	M; acidic		aS	S					Yes	Yes
PI	Ligustrum japonicum	Japanese Privet	6'-12'/6'-8'	Seasonal	M		s-aS-S	M		X		X	No	Yes
	Myrica cerifera	Southern Wax Myrtle	12'/15'	Seasonal	D/M		aS-S	M				X	Yes	Yes
	Nandina domestica	Nandina	3'-7'/2'-5'	Temporary	M		aS-S	F				X	No	Yes
	Osmanthus heterophyllus	Holly Osmanthus	15'-20'/12'-18'	Seasonal	M		aS-S	M			X		No	Yes
	Prunus laurocerasus	English Laurel 'Otto Luykens'	3'-4'/4'-6'	Temporary	M		aS-S	M			X		Yes	Yes

PLANTS FOR STORMWATER MANAGEMENT IN HAMPTON ROADS

Notes	Botanical Name	Common Name	Mature Height / Width	Tolerance for Inundation	Preferred Soils	pH Range	Light	Growth	PRIMARY USES				Native	Available
									E&S	DA	IT	DB		
	Pyracantha coccinea	Firethorn	15'/10'	Temporary	D/M; droughty to mod.-well-drained	6.0-8.0	S	F	X	X			No	Yes
	Raphiolepis indica	Indian Hawthorne	3'-5'/4'-5'	Temporary	M		sS-S	M			X		No	Yes
	Rhododendron viscosum	Swamp Azalea	6'/4'	Seasonal	M/W		sS	M					Yes	No
				DECIDUOUS GROUNDCOVERS / VINES										
	Adiantum pedatum	Maidenhair Fern	1.5'	Seasonal	M/W		s	M					Yes	Yes
PI	Artemisia stelleriana	Dusty Miller/Beach Wormwood	1'-2'/2'	Temporary	Droughty to mod.-well-dr.	6.0-7.5	S	M	X				No	Yes
	Asarum canadense	Wild Ginger		Temporary	D/M								Yes	No
	Clematis virginiana	Virgin's Bower	6'-9'	Temporary	M								Yes	No
	Convallaria majalis	Lily-of-the-Valley	1'	Temporary	D/M; droughty to smwht.-prly.-dr.	4.5-6.0	sS-S	M	X				No	Yes
PI	Coronilla varia	Crownvetch	3'	Temporary	D/M; well-drained		S	M/F	X	X			No	Yes
	Hemerocallis sp.	Daylily	3'/3'	Temporary	M/W; droughty to poorly-drained	6.0-8.0	sS-S	F	X	X			No	Yes
PI	Lathyrus latifolius	Perennial Pea 'Lancer'	2'/3'	Temporary	D/M; well-drained		sS-S	M	X	X			No	No
PI	Lathyrus sylvestris	Flatpea	2.5'	Temporary	D/M; well-drained		s-sS-S	S	X	X			No	No
PI	Lespedeza cuneata	Lespedeza 'Appalow'	2'-4'/6'	Temporary	D/M; well-drained		S	M	X	X			No	No
	Lonicera sempervirens	Coral Honeysuckle	50'	Temporary	D/M/W		sS-S	VF					Yes	Yes
PI	Lotus corniculatus	Birdsfoot Trefoil	1'-2'	Temporary	D/M; poorly-drained		S	M	X	X			No	Yes
	Monarda didyma	Beebalm / Oswegontea		Temporary	M								Yes	Yes
	Osmunda cinnamomea	Cinnamon Fern	3'-4'/3'	Seasonal	M; poorly-drained		s-sS	S					Yes	No
	Parthenocissus quinquefolia	Virginia Trumpet Creeper	50'/15'; sprawling	Seasonal	D/W; droughty to mod.-well-dr.	5.0-7.5	s-sS-S	F	X				Yes	Yes
	Rudbeckia hirta	Black-eyed Susan	3'	Temporary	D/M		S	F	X	X			Yes	Yes
	Rosa wichuraiana	Memorial Rose		Temporary	D								No	No
	Sedum x "Autumn Joy"	Stonecrop	1'/2'	?	D/M		S	M					No	Yes
	Teucrium canadense	Germander		Seasonal	M/W								Yes	No
	Wisteria frutescens	Native Wisteria		Temporary	M/W								Yes	Yes
				EVERGREEN GROUNDCOVERS / VINES										
PI	Ajuga reptans	Bugleweed	.5'	Temporary	M; well to mod.-well-drained	6.0-7.5	s-sS-S	F	X				No	Yes
	Arctostaphylos uva-ursi	Bearberry	.6'/10'	Temporary	M; droughty to well-drained	4.5-6.0	sS-S	S	X				Yes	No
	Dryopteris goldiana	Goldie's Wood Fern		Temporary									Yes	No
	Dryopteris marginalis	Marginal Shield Fern		Temporary	M/W; high organic		sS-S	M	X				Yes	No
	Gelsemium sempervirens	Carolina Jasmine	80'/10'	Seasonal	M/W		sS-S	M					Yes	Yes
PI	Hedera helix	English Ivy	.5'	Temporary	M; droughty to mod.-well-drained	6.0-8.0	s-sS-S	M	X				No	Yes
PI	Hedera helix 'Baltica'	Baltic Ivy		Temporary	M								No	Yes
	Juniperus conferta	Shore Juniper 'Emerald Sea'	1.5'/5'	Temporary	D/M; droughty to well-drained	5.0-6.0	sS-S	F	X				No	Yes
	Juniperus horizontalis	Creeping Juniper	1.5'/3'	Temporary	D/M; droughty to well-drained		S	F	X				No	Yes
	Juniperus procumbens	Common Juniper	1'/4'	Temporary	D/M; well-drained		S	M					No	Yes
	Liriope muscari / spicata	Lilyturf	6"-1'/6"-1'	Temporary	D/M; droughty to smwht-prly.-dr.	4.5-6.0	s-sS-S	M	X				No	Yes
	Pachysandra terminalis	Japanese Spurge 'Pachysandra'	.75'	Temporary	M; well to moderately-well dr.	4.5-5.5	s	M	X				No	Yes
	Polystichum acrostichoides	Christmas Fern	2'/2'-3'	Seasonal	M		s-sS	S	X				Yes	Yes
	Polystichum munitum	Western Swordfern		Temporary	Organic		sS	M	X				No	No
PI	Vinca minor	Periwinkle 'Vinca'	.5'	Temporary	M; well to moderately-well dr.	6.0-7.5	sS-S	F	X				No	Yes

PLANTS FOR STORMWATER MANAGEMENT IN HAMPTON ROADS

Notes	Botanical Name	Common Name	Mature Height / Width	Tolerance for Inundation	Preferred Soils	pH Range	Light	Growth	PRIMARY USES E&S	DA	IT	DB	Native	Available
					SEMI-EVERGREEN GROUNDCOVERS/VINES									
	Hypericum calycinum	St. Johnswort/Aaron's Beard	1'	Temporary	D/M; sandy		sS-S	F	X				No	Yes
					GRASSES									
PI	Agrostis alba	Redtop	18"	Temporary	Very acid, infertile	4.0-7.5	S	F	X	X			No	Yes
	Ammophila breviligulata	American Beachgrass	3'-4'	Temporary	D/M		S	F	X				Yes	Yes
	Avena sativa	Oats		Temporary	D	5.5-7.0			X				Yes	Yes
PI	Cynodon dactylon	Bermudagrass	1'	Seasonal	D/M		S	F	X	X			No	Yes
PI	Festuca arundinacea	Tall Fescue 'Kentucky 31'		Temporary	D/M	5.5-8.0	sS-S	F	X	X			No	Yes
PI	Festuca rubra	Red Fescue	18"	Temporary	D/M	4.5-6.5	s-sS-S	M	X				Yes	Yes
	Lolium multiflorum	Ryegrass, annual		Temporary	M	5.5-7.5	sS-S		X				No	Yes
	Lolium perenne	Ryegrass, perennial	1'-2'	Temporary	M	5.5-7.5	S	F	X	X			No	Yes
	Panicum amarum	Atlantic Coastal Panicgrass	3'	Temporary	D/M		S	F	X	X			Yes	No
	Panicum virgatum	Switchgrass	6'	Temporary	D/M		S	M	X	X			Yes	Yes
	Phalaris arundinacea	Reed Canary Grass		Seasonal	W; muck and peat	5.0-7.5			X				Yes	Yes
PI	Poa pratensis	Kentucky Bluegrass		Temporary	D/M	6.0-7.0	S		X				Yes	Yes
	Spartina alterniflora	Smooth Cordgrass	4'-7' or 4"-20"	Seasonal	M/W		S	M	X				Yes	Yes
	Spartina patens	Saltmeadow Cordgrass/Hay	3'	Seasonal	M/W		S	M	X				Yes	Yes
	Uniola paniculata	Sea Oats	4'	Temporary	D/M		S	M	X				Yes	Yes
					SUBMERGENT WETLAND PLANTS									
	Ceratophyllum demersum	Coontail		Seasonal									Yes	Yes
	Potamogeton spp.	Pond Weed		Seasonal									Yes	Yes
					EMERGENT WETLAND PLANTS									
	Acorus calamus	Sweet Flag	2'-5'	Seasonal									Yes	Yes
	Andropogon virginicus	Broomsedge		Seasonal									Yes	Yes
	Cephalanthus occidentalis	Buttonbush		Seasonal									Yes	Yes
	Hibiscus moscheutos	Marsh Hibiscus		Seasonal									Yes	Yes
PI	Iris pseudacorus	Water Iris		Seasonal									No	Yes
	Leersia oryzoides	Rice Cutgrass		Seasonal									Yes	Yes
	Nasturtium officinale	Water Cress		Seasonal									No	No
	Nuphar luteum	Spatterdock		Seasonal									Yes	Yes
	Panicum virgatum	Switchgrass		Seasonal									Yes	Yes
	Peltandra virginica	Arrow Arum/Duck Corn	2'-6' +	Seasonal									Yes	Yes
PI	Polygonum spp.	Smartweed		Seasonal									Yes	Yes
	Pontederia cordata	Pickerelweed	2'-4'	Seasonal									Yes	Yes
	Sagittaria latifolia	Arrowhead/Duck Potato	1.5'-3'	Seasonal									Yes	Yes
	Saururus cernuus	Lizard's Tail		Seasonal									Yes	Yes
	Scirpus americanus	Common Three-Square		Seasonal									Yes	Yes
	Scirpus validus	Soft-Stem Bulrush		Seasonal									Yes	Yes
	Typha spp.	Cattail		Seasonal									Yes	Yes



99109_POWHATAN_SECONDARY_WATERFORD - 020

Jack Bowie
757-460-1770

WATERFORD AT POWHATAN SECONDARY.

WORKSHEET FOR BMP COMPLIANCE

A. STRUCTURAL BMP POINT ALLOCATION

BMP	BMP POINTS		FRACTION of SITE SERVED (14.20 ACRES)		Weighted BMP POINTS
WET POND	10	X	94.4%	=	9.44 POINTS

B. OPEN SPACE CREDIT:

FRACTION of SITE

1.22 ACRES = 7.84% x .1 per 1% = .784

C. TOTAL Weighted POINTS

9.44	+	0.784	=	10.22 710
STRUCTURAL		OPEN SPACE		TOTAL 50 OK

11/2/99

1.01 ac prov. / 15.57 x10 = 0.65 pts

+ 9.44

10.09 – ok

NOS / 15.57 x 10 = .56

NOS = .872 = 37,980

24,888

13,092 min needed

ENVIRONMENTAL DIVISION CITIZEN COMPLAINT RESPONSE FORM

Complainant's Name: Tracy (H.O. Assoc.)

Address: United Property Associates

Telephone No.: 873-1185(o) 532-2508(m)

Date Received: 7/13/01

Date Assigned: ~~7-13-01~~ 7-14-01

Location of Problem: Waterford @ P. Secondary (for sediment basin)

Type of Complaint

- ☐ Drainage
- ☐ Erosion
- ☐ Land Disturbing
- ☐ Tree Removal
- ☐ Sink Hole
- ☐ Street Sign
- ☐ Street Light
- ☒ Other:

Removed trees in common area (for 10-pt. BMP variance) & E&S office OK'd planting. Homeowner's Assoc. wants to add to it. What do you need?

Inspector Assigned: CED

Watershed Code: PC

Date Investigated: 8-10-01

Complainant Contacted? ☒ Yes ☐ No

Field Investigation? ☐ Yes ☒ No

Follow up Required? ☐ Yes ☒ No

Results of Investigation:

Referenced common area was designated for sediment basin. Variance to 10-point BMP was approved by Darryl in April 2000. Landscape plan must be implemented

prior to release of surety. Management Company / H.O.A. would like to add to area with additional plantings. Darryl oked additional plantings and maintain minimal or elimination of turf. A letter and plan will be submitted next week per Tracey.

Note: BMP 10-point variance was in BMP filing system not in the Waterford files. I was made aware of the preceeding transactions and required / approved landscape plan on 8-10-01 by DEC. Joan will log in variance information and place it in the Waterford file.