

CV 0137-07 Wharf Pocket Parks  
Concept Plan

91829-6590



**Step 3: Calculate the Post-Development Load (L<sub>post</sub>)**

**A. New Development and Redevelopment**

$$\begin{aligned}
 L_{\text{post}} &= (R_v) (C) (A) (8.16) \\
 R_v &= 0.05 + 0.009 (I_{\text{post}}) \\
 &= 0.05 + 0.009 ( 13.89) = ( .18) \\
 L_{\text{post}} &= ( .18) ( .30) ( .49) ( 8.16) \\
 &= ( .21) \text{ lbs / year of total phosphorus}
 \end{aligned}$$

Where

- L<sub>post</sub> = Average annual load of total phosphorus exported from the site prior to development (lbs/year)
- R<sub>v</sub> = Runoff coefficient, which expresses the fraction of the rainfall which is converted into runoff
- I<sub>post</sub> = Post-development (proposed) site imperviousness (i.e., I=75 if site is 75% impervious)  
Flow-weighted mean concentration of the pollutant (total phosphorus) in urban runoff (mg/l) = 0.30
- C = mg/l
- A = Area of the site within the Critical Area IDA (acres)
- 8.16 = Includes regional constants and conversion factors

**Step 4: Calculate the Pollutant Removal Requirement (RR)**

$$\begin{aligned}
 RR &= L_{\text{post}} - (0.9) (L_{\text{pre}}) \\
 &= ( .21) - ( .90) ( .23) \\
 &= ( .00) \text{ lbs/year of total phosphorus}
 \end{aligned}$$

Where

- RR = Pollutant removal requirement ( lbs/year )
- L<sub>post</sub> = Average annual load of total phosphorus exported from the post development site ( lbs/year )
- L<sub>pre</sub> = Average annual load of total phosphorus exported from the site prior to development (lbs/year)



**Step 2: Calculate the Pre-Development Load (Lpre)**

**A. New Development**

$$\begin{aligned}
 L_{pre} &= (.50) A \\
 &= (.50) \underline{\hspace{2cm} (.49) \hspace{2cm}} \\
 &= \underline{\hspace{2cm} (0.25) \hspace{2cm}} \text{ lbs / year of total phosphorus}
 \end{aligned}$$

Where:

- Lpre = Average annual load of total phosphorus exported from the site prior to development (lbs/year)
- 0.5 = Annual total phosphorus load from undeveloped lands (lbs/acre/year)
- A = Area of the site within the Critical Area IDA (acres)

**B. Redevelopment**

$$\begin{aligned}
 L_{pre} &= (Rv) (C) (A) (8.16) \\
 Rv &= 0.05 + 0.009 (I_{pre}) \\
 &= 0.05 + 0.009 \underline{\hspace{2cm} (.1548) \hspace{2cm}} = \underline{\hspace{2cm} (.19) \hspace{2cm}} \\
 L_{pre} &= \underline{\hspace{2cm} (.19) \hspace{2cm}} \underline{\hspace{2cm} (.30) \hspace{2cm}} \underline{\hspace{2cm} (.49) \hspace{2cm}} \underline{\hspace{2cm} (8.16) \hspace{2cm}} \\
 &= \underline{\hspace{2cm} (.23) \hspace{2cm}} \text{ lbs / year of total phosphorus}
 \end{aligned}$$

Where

- Lpre = Average annual load of total phosphorus exported from the site prior to development (lbs/year)
- Rv = Runoff coefficient, which expresses the fraction of the rainfall which is converted into runoff
- Ipre = Pre-development (existing) site imperviousness (i.e., I=75 if site is 75% impervious)  
Flow-weighted mean concentration of the pollutant (total phosphorus) in urban runoff (mg/l) = 0.30
- C = mg/l
- A = Area of the site within the Critical Area IDA (acres)
- 8.16 = Includes regional constants and conversion factors

# Worksheet A: Standard Application Process

## Calculating Pollutant Removal Requirements<sup>1</sup>

Project Name: Centreville Pocket Parks - North Parcel

Date: 5/20/2009

**Step 1: Calculate Existing and proposed Site Imperviousness**

**A. Calculate Percent Imperviousness**

- 1) Site Area within the Critical Area IDA, A = 0.49 acres
- 2) Site Impervious Surface Area, Existing and Proposed, (See Table 4.1 for details)

	(a) Existing (acres)	(b) Proposed (acres)
Roads	0.06 *	0.06 *
Parking lots	0.02	0.00 **
Driveways		
Sidewalks/paths		0.01
Rooftops		0.00 ***
Decks		
Swimming pools/ponds		
other		
<b>Total</b>	<b>0.08</b>	<b>0.07</b>

\* Area reduced because a portion of existing road is currently disconnected  
 \*\* Area of proposed parking and turnaround have been disconnected  
 \*\*\* Organic filter provided as compensation for reduced disconnection length

**Imperviousness (I)**

**Existing Imperviousness, Ipre**

$$= \frac{\text{Impervious Surface Area}}{\text{Site Area}}$$

$$= \frac{(\text{Step 2a})}{(\text{Step 1})}$$

$$= \frac{(0.08)}{(0.49)}$$

$$= 15.48\%$$

**Proposed Imperviousness, Ipost**

$$= \frac{\text{Impervious Surface Area}}{\text{Site Area}}$$

$$= \frac{(\text{Step 2b})}{(\text{Step 1})}$$

$$= \frac{(0.07)}{(0.49)}$$

$$= 13.89\%$$

**B. Define Development Category (circle)**

- 1) New Development: Existing Imperviousness less than 15% I (Go to Step 2A)
- 2) Redevelopment: Existing Imperviousness of 15% I or more (Go to Step 2B)
- 3) Single Lot Residential: Single lot being developed or improved; single family residential development; and more than 250 square feet of impervious area and associated disturbance (Go to section 5, Residential Approach, for detailed criteria and requirements).

<sup>1</sup>NOTE: All Acreage used in this worksheet refer to areas within the IDA of the critical area only.

**Step 5: Identify Feasible BMP's**

Select BMP Options using the screening matrices provided in Chapter 4 of the 2000 Maryland Stormwater Design Manual. Calculate the load removed for each option.

BMP Type	( Lpost )	X	( BMPre )	X	( % DA Served ) =	LR
_____		X	_____	X	_____ =	0 lbs / year
_____		X	_____	X	_____ =	_____ lbs / year
_____		X	_____	X	_____ =	_____ lbs / year
_____		X	_____	X	_____ =	_____ lbs / year
_____		X	_____	X	_____ =	_____ lbs / year
Load Removed, LR ( Total ) =						0 lbs / year
Pollutant Removal Requirement, RR ( From Step 4 ) =						-0.03 lbs / year

Where

Load Removed, LR = Annual total phosphorus load removed by the proposed BMP ( lbs/year )

Lpost = Pre-development (existing) site imperviousness (i.e., I=75 if site is 75% impervious)

BMPre = BMP removal efficiency for total phosphorus, Table 4.8 ( % )

% DA Served = Fraction of the site area within the critical area IDA served by the BMP ( % )

RR = Pollutant removal requirement ( lbs/year )

If the Load Removed is equal to or greater than the Pollutant Removal Requirement computed in Step 4, then the onsite BMP complies with the 10% Rule.

**Has the RR ( pollutant removal requirement ) been met?**

**yes**  
Met through the Rooftop  
Disconnection Credit and use

**Step 3: Calculate the Post-Development Load (Lpost)**

**A. New Development and Redevelopment**

$$\begin{aligned}
 L_{\text{post}} &= (R_v) (C) (A) (8.16) \\
 R_v &= 0.05 + 0.009 (I_{\text{post}}) \\
 &= 0.05 + 0.009 ( 7.16 ) = ( .11) \\
 L_{\text{post}} &= \frac{ ( .11) ( .30) ( .19) ( 8.16) }{ } \\
 &= ( .05) \text{ lbs / year of total phosphorus}
 \end{aligned}$$

Where

- Lpost = Average annual load of total phosphorus exported from the site prior to development (lbs/year)
- Rv = Runoff coefficient, which expresses the fraction of the rainfall which is converted into runoff
- Ipost = Post-development (proposed) site imperviousness (i.e., I=75 if site is 75% impervious)
- C = Flow-weighted mean concentration of the pollutant (total phosphorus) in urban runoff (mg/l) = 0.30 mg/l
- A = Area of the site within the Critical Area IDA (acres)
- 8.16 = Includes regional constants and conversion factors

**Step 4: Calculate the Pollutant Removal Requirement (RR)**

$$\begin{aligned}
 RR &= L_{\text{post}} - ( 0.9 ) ( L_{\text{pre}} ) \\
 &= ( .05) - ( .90) ( .09) \\
 &= -( .03) \text{ lbs/year of total phosphorus}
 \end{aligned}$$

Where

- RR = Pollutant removal requirement ( lbs/year )
- Lpost = Average annual load of total phosphorus exported from the post development site ( lbs/year )
- Lpre = Average annual load of total phosphorus exported from the site prior to development (lbs/year)

**Step 2: Calculate the Pre-Development Load (Lpre)**

**A. New Development**

$$\begin{aligned}
 L_{pre} &= (.50) A \\
 &= (.50) \underline{(.19)} \\
 &= \underline{(0.09)} \text{ lbs / year of total phosphorus}
 \end{aligned}$$

Where:

- Lpre = Average annual load of total phosphorus exported from the site prior to development (lbs/year)
- 0.5 = Annual total phosphorus load from undeveloped lands (lbs/acre/year)
- A = Area of the site within the Critical Area IDA (acres)

**B. Redevelopment**

$$\begin{aligned}
 L_{pre} &= (Rv) (C) (A) (8.16) \\
 Rv &= 0.05 + 0.009 (I_{pre}) \\
 &= 0.05 + 0.009 \underline{( 9.40)} = \underline{( .13)} \\
 L_{pre} &= \underline{( .13)} \underline{( .30)} \underline{( .19)} \underline{( 8.16)} \\
 &= \underline{( .06)} \text{ lbs / year of total phosphorus}
 \end{aligned}$$

Where

- Lpre = Average annual load of total phosphorus exported from the site prior to development (lbs/year)
- Rv = Runoff coefficient, which expresses the fraction of the rainfall which is converted into runoff
- Ipre = Pre-development (existing) site imperviousness (i.e., I=75 if site is 75% impervious)  
Flow-weighted mean concentration of the pollutant (total phosphorus) in urban runoff (mg/l) = 0.30
- C = mg/l
- A = Area of the site within the Critical Area IDA (acres)
- 8.16 = Includes regional constants and conversion factors



# Worksheet A: Standard Application Process

## Calculating Pollutant Removal Requirements<sup>1</sup>

Project Name: Centreville Pocket Parks - South Parcel

Date: 5/20/2009

**Step 1: Calculate Existing and proposed Site Imperviousness**

**A. Calculate Percent Imperviousness** *Ni*

- 1) Site Area within the Critical Area IDA, A = 0.19 acres
- 2) Site Impervious Surface Area, Existing and Proposed, (See Table 4.1 for details)

	(a) Existing (acres)	(b) Proposed (acres)
Roads		
Parking lots	0.018	
Driveways		
Sidewalks/paths		0.013
Rooftops		0.000 *
Decks		
Swimming pools/ponds		
other		
	0.018	0.013

\* Roof top area to be disconnected, so area is subtracted out

**Imperviousness (I)**

**Existing Imperviousness, Ipre**

$$\begin{aligned}
 &= \text{Impervious Surface Area/Site Area} \\
 &= (\text{Step 2a})/(\text{Step 1}) \\
 &= (0.02) / (.19) \\
 &= 9.40\%
 \end{aligned}$$

**Proposed Imperviousness, Ipost**

$$\begin{aligned}
 &= \text{Impervious Surface Area/Site Area} \\
 &= (\text{Step 2b})/(\text{Step 1}) \\
 &= (.01) / (.19) \\
 &= 7.16\%
 \end{aligned}$$

**B. Define Development Category (circle)**

- |    |                                       |  |
|----|---------------------------------------|--|
| 1) | <b><u>New Development:</u></b>        | Existing Imperviousness less than <b>15% I</b> (Go to Step 2A)   |
| 2) | <b><u>Redevelopment:</u></b>          | Existing Imperviousness of <b>15% I</b> or more (Go to Step 2B)  |
| 3) | <b><u>Single Lot Residential:</u></b> | Single lot being developed or improved; single family residential development; and more than <b>250</b> square feet of impervious area and associated disturbance (Go to section 5, Residential Approach, for detailed criteria and requirements). |

<sup>1</sup>NOTE: All Acreage used in this worksheet refer to areas within the IDA of the critical area only.

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/](http://www.dnr.state.md.us/criticalarea/)

July 20, 2009

Mr. Robert McGrory, Town Manager  
Town of Centreville  
101 Lawyers Row  
Centreville, MD 21617

Re: Centreville Pocket Parks Consistency Report

Dear Mr. McGrory:

Thank you for forwarding the above-referenced project to this office per the requirements of COMAR 27.02.02 - State and Local Agency Actions Resulting in Development of Local Significance on Private Lands or Lands Owned by Local Jurisdictions. The project consists of creating 2 waterfront parks, associated amenities and shoreline erosion control methods. The site is mapped Intense Development Area and Buffer Exemption Area. This project is considered redevelopment due to the existing impervious surfaces and historic uses.

The parks in the site plan and 10% stormwater calculations are referred to as North Parcel and South Parcel. The South Parcel proposal includes a gazebo, ADA accessible paver walkways and replacement bulkhead. The North Parcel proposal includes a pavilion, ADA accessible paver walkways, 4 parking spaces, a turnaround for the end of Front St. a marsh creation and offshore pier and slips.

After reviewing the consistency report, this office agrees that the project is generally consistent with the Town of Centerville's Critical Area Program. I offer the following review comments:

1. There is no existing forest; thus, no clearing is proposed.
2. 10 % Stormwater management is met on site through a combination of impervious surface reduction, porous pavers, disconnection of rooftops and paved areas and an organic filter.



Mr. McGrory  
July 20, 2009  
Page Two

3. Impacts to the Buffer are mitigated at 2:1 and the Bufferyard is fully established as required in the Town's Program. I have enclosed a planting agreement. Please fill out referencing Sheet 8, sign and return for our files.
4. A May 21, 2009 letter from DNR Heritage indicated that there are no State or Federal records for rare, threatened or endangered species.
5. The project will not impact non-tidal wetlands.
6. The project will impact tidal wetlands. From a conversation with MDE tidal wetlands staff I was advised that the application has met all environmental requirements and a permit will be issued following completion of a navigational study by the Army Corp of Engineers.
7. A sediment and erosion control permit (SEC) is expected shortly.

We respectfully request a copy of the SEC and MDE permits when they have been received and a copy of the signed planting agreement. Thank you again for your cooperation and assistance with reviewing this project. If you have any questions, please call me at (410) 260-3468.

Sincerely,



Roby Hurley  
Natural Resources Planner

RH/jjd

Enclosure  
cc: Ms. Christina Clark  
CV 0317-07

Martin O'Malley  
Governor

Anthony G. Brown  
Lt. Governor



Margaret G. McHale  
Chair

Ren Serey  
Executive Director

STATE OF MARYLAND  
CRITICAL AREA COMMISSION  
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May 20, 2008

Mr. Chris Clark  
Town of Centreville  
101 Lawyer's Row  
Centreville, MD 21617

**Re: Town of Centreville, 103/115 Front Street  
Wharf Pocket Parks**

Dear Mr. Clark:

This office has received revised plans for the wharf expansion project on the Corsica River in the Town of Centreville. The project as proposed does not appear to be consistent with the Critical Area Program, and would therefore require review by the Critical Area Commission under the provisions for Conditional Approval (COMAR 27.02.06). Critical Area Commission Staff has provided comments on the revised Concept/Sketch Plan. The site is within the Intensely Developed Area (IDA) of the Chesapeake Bay Critical Area. It is also within the Centreville Buffer Exempt Area (BEA), which requires that development activities minimize impacts in the Buffer, or demonstrate that there is no feasible alternative given the guidelines under Section 1-124(d)(1). After reviewing the revised plan, this office has the following comments.

1. A portion of the original boardwalk proposed has been removed from the plan. It is our understanding that the existing bulkhead at the south end of the park will be replaced as approved by MDE and a fishing/handicapped accessible water access boardwalk facility is proposed, and that a living shoreline project is proposed along the rest of the site waterfront. The concept plan also shows a pathway and boardwalk on the northern portion of the site. Please address the boardwalks relative to the BEA standards. The applicant would need to establish that there is no feasible alternative, and that the standards are met by the proposal.
2. Stormwater management plans should be submitted, including existing and proposed impervious surface area and the calculations for the 10% pollutant reduction requirement (Worksheet A from the Critical Area 10% Rule Guidance Manual). Please note that improving the existing riprap swale through stormwater best management practices



Chris Clark  
May 20, 2008  
Page 2 of 2

(BMP) is highly recommended. The benefits of an improved stormwater management system on the site could offset impacts of the project. Typically stormwater treatment ponds or other BMPs are not allowed in the setback of the BEA. Please address the BEA standards in respect to the stormwater wetland proposed on the plans.

3. If the applicant is proposing a soft or living shoreline planting project at the site, please provide specific technical plans for this part of the proposal.
4. Please submit any additional landscaping plans, plant lists and planting schedules for meeting the 25 foot bufferyard planting requirement. Plantings of native trees, shrubs, and groundcover are strongly recommended for the portions of this site that are shown as lawn. This type of improvement would further offset impacts of the project.

Thank you for the opportunity to comment. Please contact me at (410) 260-3460 if you have any questions.

Sincerely,



Marshall Johnson  
Natural Resources Planner

cc: Sandi Pepe, DNR  
CV 137-07





**STATE OF MARYLAND  
CRITICAL AREA COMMISSION  
CHESAPEAKE AND ATLANTIC COASTAL BAYS**

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[www.dnr.state.md.us/criticalarea/](http://www.dnr.state.md.us/criticalarea/)

March 23, 2007

Mr. Chris Clark  
Town of Centreville  
101 Lawyer's Row  
Centreville, MD 21617

**Re: Town of Centreville, 103/115 Front Street  
Warf Pocket Parks**

Dear Mr. Clark:

Thank you for submitting plans for the above-referenced project. The project as proposed would not be consistent with the Critical Area Program, and would therefore require review by the Critical Area Commission under the provisions for Conditional Approval (COMAR 27.02.06). Critical Area Commission Staff has provided comments on the submitted Concept/Sketch Plan. The site is within the Intensely Developed Area (IDA) of the Chesapeake Bay Critical Area. It is also within the Centreville Buffer Exempt Area (BEA), which requires that development activities minimize impacts in the Buffer, or demonstrate that there is no feasible alternative given the guidelines under Section 1-124(d)(1). After reviewing the plan submitted, this office has the following comments.

1. As proposed, the boardwalks along the riverbank would not be allowed in the BEA because they do not meet the standards mentioned above. However, if the need for an ADA accessible pathway and boardwalk at the fishing/deep water docking pier can be justified based on the standards, the southern park boardwalk may be acceptable. The applicant would need to establish that there is no feasible alternative, and that the standards are met by the proposal.
2. Based on the Critical Area Program standards, the gazebo and pavilion structures are not allowed in the BEA. In addition, the proposed pump out facility should be moved closer to the road, and as far from the river as possible, in order to minimize impacts.
3. The pervious surface roadway appears to be proposed where there is an existing roadway. Please confirm the existing perviousness of the site and details for the proposed pervious

Chris Clark  
March 23, 2007  
Page 2 of 2

roadway construction. These details should include: existing soil conditions, potential for successful percolation, material proposed for pervious paving, maintenance needs and schedule to maintain perviousness. Gravel roadways compacted by vehicular traffic are generally not pervious.

4. Stormwater management plans should be submitted, including existing and proposed impervious surface area and the calculations for the 10% pollutant reduction requirement (Worksheet A from the Critical Area 10% Rule Guidance Manual). Please note that improving the existing riprap swale through stormwater best management practices is highly recommended. The benefits of an improved stormwater management system on the site could offset impacts of the project.
5. If the applicant is proposing a soft or living shoreline planting project at the site, please provide specific technical plans for this part of the proposal.
6. Please submit any additional landscaping plans, plant lists and planting schedules for meeting the 25 foot bufferyard planting requirement. In addition, the Centreville Critical Area Program states that if practicable, permeable areas shall be established in vegetation. There are many wildlife and water quality benefits to having natural vegetation (i.e. vegetation that would be expected in the absence of human disturbance) along streams and rivers. Plantings of native trees, shrubs, and groundcover are strongly recommended for the portions of this site that are shown as lawn. This type of improvement would further offset impacts of the project.

Thank you for the opportunity to comment. Please contact me at (410) 260-3460 if you have any questions.

Sincerely,



Marshall Johnson  
Natural Resources Planner

cc: CV 137-07

137-07

# McCRONE

- Engineering
- Environmental Sciences
- Construction Services
- Land Planning & Surveying

MDE Contact

- Alex Roy 537-3739  
COE issue w/ turnaround  
Verbal written

Ltr

T. del Bernis  
DNR-H Ltr 5/21/9  
S+EC - Pending Permit  
All ST revo from 25'  
incl AP walls

July 8, 2009

Mr. Roby Hurley  
Natural Resources Planner  
Critical Area Commission  
1804 West Street, Suite 100  
Annapolis, MD 21401



**RE: RESUBMITTAL OF THE TOWN OF CENTREVILLE POCKET PARKS  
PROJECT, FRONT STREET, CENTREVILLE, MARYLAND  
McCRONE, INC. JOB #D1080201**

Dear Mr. Hurley:

*if can't meet diy co math  
then provide sm TRMP*

We are re-submitting the above-referenced project on behalf of the Town of Centreville for a consistency review by the Critical Area Commission. This application includes the following information:

- 1 copy of this cover letter
- 1 copy of the engineering plans
- 1 copy of the 10% Rule Calculations

We have addressed your previous comments on the north parcel by shifting the north/south oriented pervious pathway landward and out of the 25' bufferyard. The proposed plantings have been revised accordingly.

We also revised the 10% Rule Calculations to subtract the portion of the north parcel's existing pavement that is currently disconnected. The 10% reduction is achieved by disconnecting all of the proposed impervious surfaces, with an organic filter acting as compensation for reduced disconnection length on the proposed pavilion. For the south parcel, the 10% reduction is achieved through impervious area reduction, the same as the April calculations. On both parcels, the area of pervious pathways is assumed to be 60% impervious, reflecting the 40% credit for the type of material.

Please note that the cantilevered boardwalk shown on the south parcel on the previous plan has been replaced with a conventional bulkhead and an at-grade pervious pathway. This change was made to improve constructability and reduce the cost, and the bufferyard and plantings have been adjusted accordingly.

Mr. Roby Hurley  
D1080201  
July 8, 2009  
Page 2

We believe all outstanding comments are addressed with this submittal. We understand you are still awaiting issuance of the Maryland Department of the Environment (MDE) wetland permit before issuing the consistency report. At this time, we believe the Army Corps of Engineers is evaluating the proposed channel encroachment, and that until they sign off on the permit, MDE cannot issue the permit. We have been following up with the Army Corps of Engineers to assure that this issue is addressed.

If you have questions or need additional information, please contact me at 410-758-2237.

Sincerely,

McCRONE, INC.



Christina Pompa Clark, AICP  
Assistant Branch Manager

pc: Robert McGrory, Town Manager

# McCRONE

- Engineering
- Environmental Sciences
- Construction Services
- Land Planning & Surveying

April 23, 2009

Mr. Roby Hurley  
Natural Resources Planner  
Critical Area Commission  
1804 West Street, Suite 100  
Annapolis, MD 21401

**RE: CONSISTENCY REVIEW FOR TOWN OF CENTREVILLE POCKET PARKS  
PROJECT, FRONT STREET, CENTREVILLE, MARYLAND  
McCRONE, INC. JOB #D1080201**

Dear Mr. Hurley:

We are submitting the above-referenced project on behalf of the Town of Centreville for a consistency review by the Critical Area Commission. This application includes the following information:

- 1 copy of this cover letter
- 1 copy of the engineering plans
- 1 copy of the CAC Project Notification Application
- 1 copy of the CAC Project Application Checklist
- 1 copy of the Stormwater Management Report addressing 10% Rule requirements

The project is located on two parcels on Front Street (Map 300, Parcels 1306 and 1311) totaling 0.68 acres. The property is owned by the Town of Centreville and is zoned R-2. The property is entirely within the Critical Area with a land use classification of IDA. The property is a mapped Buffer Exemption Area and the entire project falls within the 100-foot Buffer.

The project is a redevelopment of a previously disturbed property into a waterfront Town park for the citizens of the Town of Centreville and others. Details of the project include construction of 82 linear feet of replacement bulkhead, 74 linear feet of boardwalk, pervious paver access paths, a gazebo, a pavilion, 190 linear feet of living shoreline, a parking area, a boat pump-out facility, and an 82-foot wide floating dock system to accommodate boats and smaller vessels like kayaks and canoes.

Low impact design elements are included such as conversion of a rip-rap lined channel to a vegetated swale using ScourStop™ and Ankamat™ turf reinforced matting, an organic filter



Mr. Roby Hurley  
D1080201  
April 23, 2009  
Page 2

system to treat stormwater generated from the pavilion roof, the use of pervious pavers for site paths, the creation of living shoreline where none currently exists, and extensive site landscaping.

Currently no forest exists on site. To comply with Town of Centreville BEA standards a 25-foot vegetated buffer has been provided along the entire waterfront and additional plantings have been provided to mitigate for additional impervious surface and disturbance in the Buffer.

Other agency submittals have been made for the project as follows:

- Initial tidal wetlands permit application sent to MDE on April 20, 2009
- Initial submittal to Queen Anne's County SCD for review of sediment and erosion control measures on April 23, 2009
- Initial submittal to Queen Anne's County Department of Public Works for review of stormwater management measures on April 23, 2009
- Request for DNR Heritage review sent April 23, 2009

Once comments have been received from all agencies, the plans will be revised appropriately.

We ask that you review this project and provide any comments you may have. If you have questions or need additional information, please contact me at 410-758-2237.

Sincerely,

McCRONE, INC.



Christina Pompa Clark, AICP  
Assistant Branch Manager

pc: Robert McGrory, Town Manager



# CONSTRUCTION DRAWINGS

FOR:

# CENTREVILLE POCKET PARKS

THIRD ELECTION DISTRICT, QUEEN ANNE'S COUNTY, MARYLAND

PREPARED FOR: TOWN OF CENTREVILLE

## GENERAL NOTES

- THE EXISTING UTILITIES SHOWN WERE TAKEN FROM THE BEST AVAILABLE RECORDS. THE CONTRACTOR SHALL VERIFY THEIR EXACT LOCATION PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE INCURRED TO SUCH UTILITIES SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING TWO (2) WEEKS PRIOR TO THE START OF CONSTRUCTION AND SHALL COORDINATE CONSTRUCTION WITH THE UTILITY COMPANIES INVOLVED:
 

DELMARVA POWER DELIVERY	1-410-758-0830
MISS UTILITY	1-800-441-8355
MCCRONE, INC.	1-410-758-2237
TOWN OF CENTREVILLE	1-410-758-1180
MARYLAND DEPARTMENT OF ENVIRONMENT	1-410-901-4020
QUEEN ANNE'S COUNTY SOIL CONSERVATION DISTRICT	1-410-479-2182
VERIZON	1-410-778-8010
MSHA	1-410-758-0700
- THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT, LABOR, AND MATERIALS FOR ANY MISCELLANEOUS OR TEST PIT EXCAVATIONS REQUIRED BY THE ENGINEER. CONTRACTOR SHALL TEST PIT TO CONFIRM THE ACTUAL LOCATION OF ANY AND ALL EXISTING UTILITIES AT EACH AND EVERY CROSSING AND TIE-IN.
- ALL CONSTRUCTION SHALL BE MARKED FOR TRAFFIC AND PEDESTRIAN SAFETY. ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH SECTION VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE TOWN OF CENTREVILLE STANDARDS.
- THE CONTRACTOR ASSUMES ALL RESPONSIBILITIES FOR ANY DEVIATIONS FROM THESE PLANS, UNLESS SAID DEVIATION IS APPROVED BY THE ENGINEER. THE CONTRACTOR SHALL RECEIVE WRITTEN PERMISSION FROM THE ENGINEER IF A DEVIATION FROM THE PLAN IS NECESSARY.
- ALL DISTURBED AREAS SHALL BE SMOOTHLY GRADED TO PROVIDE POSITIVE DRAINAGE IN THE DIRECTION OF FLOW ARROWS HEREIN AND STABILIZED WITH TOPSOIL, SEED, AND MULCH. IF SETTLEMENT OCCURS, TOPSOIL, SEEDING AND MULCHING SHALL BE REPEATED UNTIL SETTLEMENT SUBSIDES (SEE EROSION AND SEDIMENT CONTROL SPECIFICATIONS).
- ALL TRASH, TREES, DEMOLITION DEBRIS, AND UNDERBRUSH ARE TO BE CLEARED AND REMOVED FROM THE SITE TO AN APPROVED DUMP SITE BY THE CONTRACTOR.
- ANY EXCESS EXCAVATED MATERIAL PLACED OUTSIDE OF THOSE AREAS DESIGNATED ON THIS PLAN SHALL MEET APPROVAL OF QUEEN ANNE'S COUNTY SOIL CONSERVATION AND THE ENGINEER.
- ANY EXISTING SURVEY MONUMENTATION THAT IS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY A REGISTERED SURVEYOR AT THE CONTRACTOR'S EXPENSE.
- ALL FILL AREAS WITHIN LIMITS OF BUILDING CONSTRUCTION AND OTHER AREAS AS DESIGNATED ON THESE PLANS SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY AND LAID AND COMPACTED IN 8" MAXIMUM LIFTS.
- CONTRACTOR IS TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH QUEEN ANNE'S COUNTY AND TOWN OF CENTREVILLE ENGINEERS AND OTHER INVOLVED PARTIES AT LEAST TWO (2) WEEKS BEFORE CONSTRUCTION.
- THE MAXIMUM SLOPE FOR A RAMP IN NEW CONSTRUCTION SHALL BE 12:1.
- ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH A SLOPE OF 2% MAXIMUM.
- PAVILION AND GAZEBO INCLUDED IN CONTRACT BID. CONTRACTOR SHALL PROVIDE CUT SHEETS OF THREE OPTIONS TO THE TOWN OF CENTREVILLE FOR APPROVAL.
- ALL ELECTRICAL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICIAN WITH WORK PERFORMED IN ACCORDANCE WITH THE LATEST NATIONAL ELECTRIC CODE AND LOCAL ELECTRICAL CODE REQUIREMENTS.
- WETLANDS PERMIT # 200961073

## TRAFFIC CONTROL MEASURES

THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL DEVICES ALONG IMPACTED ROADWAYS WHEN WORKING WITHIN OR ADJACENT TO THE ROAD. CONTROLS MAY INCLUDE:

- ROAD CONSTRUCTION AHEAD SIGNS;
- SHOULDER WORK AHEAD SIGNS;
- CONSTRUCTION BARRIERS;
- FLAG MEN.

ALL CONTROLS SHALL BE IN ACCORDANCE WITH THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION. MAINTAIN A MINIMUM OF ONE-WAY TRAFFIC DURING WORKING HOURS AND RESTORE EXISTING TRAFFIC PATTERNS DURING NON-WORKING HOURS.

## SITE NOTES

- SITE ADDRESS:  
115 FRONT STREET  
CENTREVILLE, MD 21617
- FOR DEED REFERENCE TO PARCELS SEE MWM 445/806 AND MWM 264/267.
- THIS SITE IS LOCATED WITHIN THE 100YR FLOOD PLAIN ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S F.I.R.M. MAP 2400560001B.
- THE SITE IS LOCATED WITHIN THE CRITICAL AREA ZONE IDA AND IS BUFFER EXEMPT.
- THIS SITE IS SERVED BY PUBLIC WATER AND SEWER.
- NO NONTIDAL WETLANDS WERE OBSERVED ON SITE.
- FIELD MARK TOPOGRAPHY RUN BY MCCRONE, INC. ON FEBRUARY, 2008.
- BATHYMETRY INFORMATION OBTAINED FROM A DRAWING TITLED "CENTREVILLE LANDING CORSICA RIVER QUEEN ANNE'S COUNTY HYDRO+TOPO SURVEY", DATED 11/08/06 AND SURVEY DATE 9/18/06 AND 9/19/06.

## SITE STATISTICS

EXISTING & PROPOSED USE - COUNTY AND STATE PARKS & RECREATION AREA  
TAX MAP 300, GRID 2A, PARCELS 1311, AND 1306

GROSS SITE AREA:	0.68 Ac.
CRITICAL AREA:	0.68 Ac.
AREA IN FLOODPLAIN:	0.68 Ac.

## NORTH PARCEL:

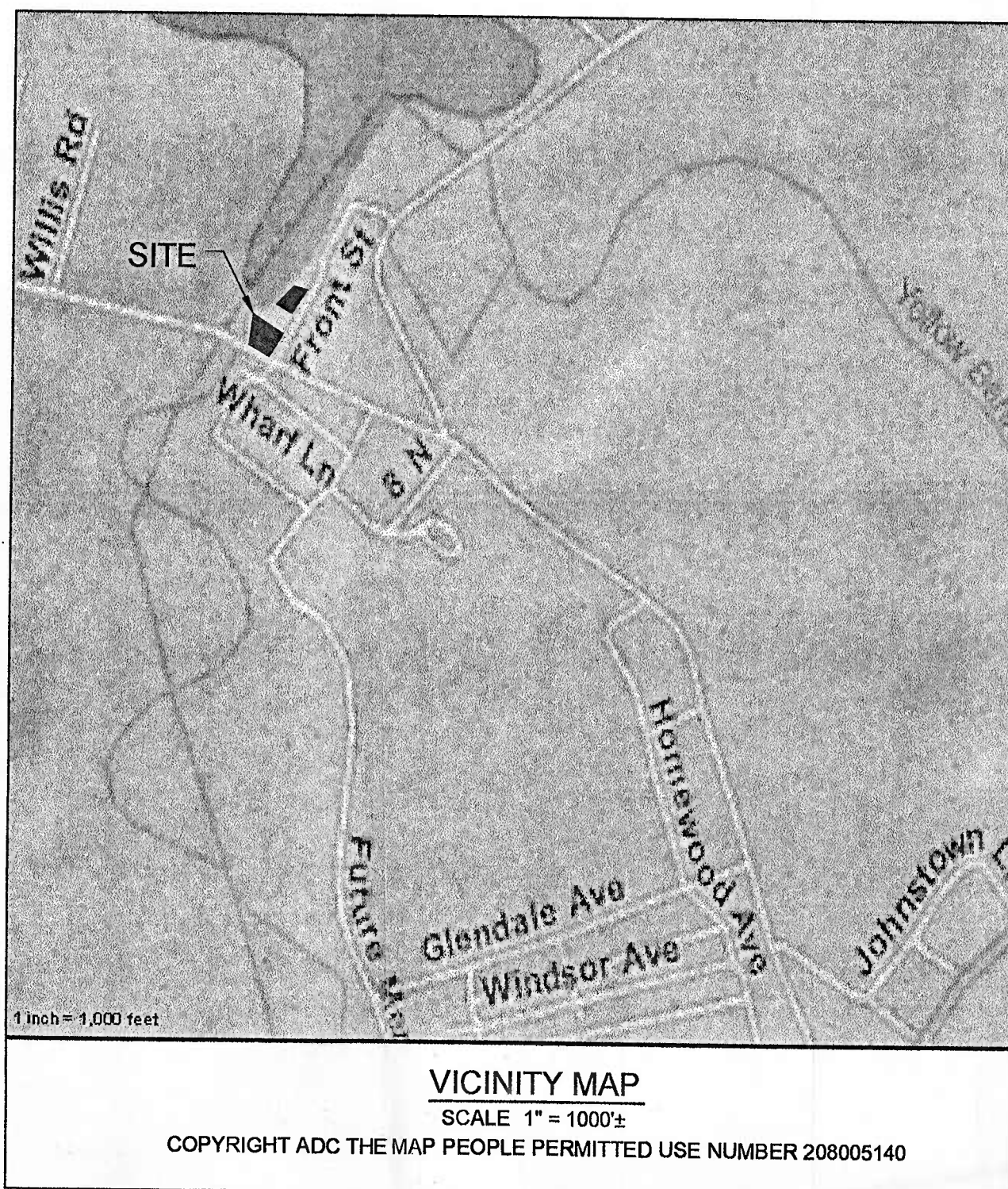
	ACTUAL (SQ.FT)	ROUNDED (AC)
GROSS AREA	= 21,458.44	0.49
PROPOSED BUILDING FOOTPRINT	= 336.00	0.01
PROPOSED BUILDING COVERAGE	= 1.57%	

## SOUTH PARCEL:

	ACTUAL (SQ.FT)	ROUNDED (AC)
GROSS AREA	= 8,133.90	0.19
PROPOSED BUILDING FOOTPRINT	= 283.00	0.01
PROPOSED BUILDING COVERAGE	= 3.5%	

## STORMWATER MANAGEMENT NOTES

- STORM WATER QUALITY FOR THE PROPOSED PROJECT IS TO BE PROVIDED BY THE FOLLOWING CREDITS: THE ROOFTOP DISCONNECTION CREDIT FOR THE SOUTH PARCEL GAZEBO, AND THE NON-ROOFTOP DISCONNECTION AND GRASSED CHANNEL CREDITS FOR A PORTION OF THE EXISTING AND PROPOSED PAVEMENT.
- THE SOUTH PARCEL GAZEBO SHALL EITHER HAVE NO DOWNSPOUTS, OR IF DOWNSPOUTS ARE PROVIDED, THEY SHALL MEET THE FOLLOWING CRITERIA:
  - NO MORE THAN 500 SF OF ROOF SHALL DRAIN THROUGH A SINGLE DOWNSPOUT.
  - MAXIMUM PERMITTED SLOPE FROM DOWNSPOUTS TO TIDEWATER IS 5.0%.
  - DOWNSPOUTS MUST BE AT LEAST 10' AWAY FROM THE NEAREST IMPERVIOUS SURFACE TO DISCOURAGE RE-CONNECTIONS.
- THE PROPOSED PARKING AND TURNAROUND ON THE NORTH PARCEL ARE PROPOSED TO BE DISCONNECTED, ALONG WITH THE ADJACENT AREAS OF EXISTING WHARF LANE. THESE AREAS MUST MEET THE FOLLOWING CRITERIA:
  - NO MORE THAN 1000 SF OF PAVEMENT SHALL DISCHARGE TO A SINGLE LOCATION.
  - THE MINIMUM FLOW DISTANCE FROM PAVEMENT TO TIDEWATER SHALL BE 75 FT.
  - MAXIMUM PERMITTED SLOPE FROM PAVEMENT TO TIDEWATER IS 5.0%.
- THE PROPOSED PAVILION ON THE NORTH PARCEL SHALL HAVE GUTTERS ALONG BOTH EAVES, WITH DOWNSPOUTS ON THE SOUTH ENDS DIRECTED INTO THE ORGANIC FILTER PRETREATMENT BUCKETS.



**OWNER:**  
THE TOWN OF CENTREVILLE  
C/O BOB MCGORRY, TOWN MANAGER  
101 LAWYERS ROW  
CENTREVILLE, MARYLAND 21617  
(410) 758-2237

**DEVELOPER:**  
THE TOWN OF CENTREVILLE  
C/O BOB MCGORRY, TOWN MANAGER  
101 LAWYERS ROW  
CENTREVILLE, MARYLAND 21617  
(410) 758-2237

## SURVEYOR/ENGINEER:

MCCRONE, INC.  
207 N. LIBERTY STREET  
CENTREVILLE, MARYLAND 21617  
410-758-2237

INDEX OF DRAWINGS	
SHEET #	DESCRIPTION
1	COVER SHEET
2	EXISTING CONDITIONS PLAN
3	SITE PLAN
4	GRADING AND SEDIMENT AND EROSION CONTROL PLAN
5	SEDIMENT AND EROSION CONTROL DETAILS
6	CONSTRUCTION DETAILS
7	CONSTRUCTION DETAILS
8	LANDSCAPE PLAN

	EXISTING	PROPOSED
SETBACK LINE	---	N/A
MAJOR CONTOUR	---25---	25
MINOR CONTOUR	---24---	24
ROAD CENTERLINE	---	---
EDGE OF PAVEMENT	---	---
PAVEMENT HATCH	[Hatch]	[Hatch]
GRAVEL HATCH	[Hatch]	[Hatch]
BUILDING OUTLINE	---	---
BUILDING HATCH	N/A	[Hatch]
SIDEWALK HATCH	N/A	[Hatch]
STORM PIPE	---	---
RIP RAP	[Hatch]	[Hatch]
SANITARY MANHOLE	⊙	N/A
SANITARY CLEANOUT	⊙	N/A
SANITARY PIPE	---	6SS
WATER PIPE	4W	4W
UTILITY POLE	⊙	⊙
DECIDUOUS TREE	[Symbol]	[Symbol]
CONIFEROUS TREE	[Symbol]	[Symbol]
TREELINE	---	---
SILT FENCE	---	---
LIMIT OF DISTURBANCE	---	---
FIRE HYDRANT	[Symbol]	N/A

## DEVELOPERS CERTIFICATE

QUEEN ANNE'S SOIL CONSERVATION DISTRICT \_\_\_\_\_ DATE \_\_\_\_\_  
NOTE: THE QUEEN ANNE'S SOIL CONSERVATION DISTRICT RESERVES THE RIGHT TO ADD, DELETE, MODIFY, OR OTHERWISE ALTER THE EROSION CONTROL PROVISIONS OF THIS PLAN IN THE EVENT ADDITIONAL PROTECTION BECOMES NECESSARY.

I HEREBY CERTIFY THAT ALL THE DEVELOPMENT AND/OR CONSTRUCTION SHALL BE DONE ACCORDING TO THIS PLAN OF EROSION AND SEDIMENT CONTROL.

SIGNATURE: *[Signature]* DATE: 4/20/09

PRINT NAME: **ROBERT C. MCGORRY**  
TOWN OF CENTREVILLE  
101 LAWYERS ROW  
CENTREVILLE, MD 21617  
410-758-4741

- IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR OR THE SUBCONTRACTOR TO NOTIFY THE ENGINEER OF ANY DEVIATION FROM THIS PLAN. ANY CHANGE MADE IN THIS PLAN WITHOUT WRITTEN AUTHORIZATION FROM THE ENGINEER WILL PLACE RESPONSIBILITY FOR SAID CHANGE ON THE CONTRACTOR OR SUBCONTRACTOR.
- ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

## PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

PRINTED NAME: **STEVE S. LAYDEN**  
31184  
LICENSE NO. \_\_\_\_\_ EXPIRATION DATE: 1/16/11

PREPARED FOR: TOWN OF CENTREVILLE



REVISIONS	DATE	DESCRIPTION

APPROVAL	DATE

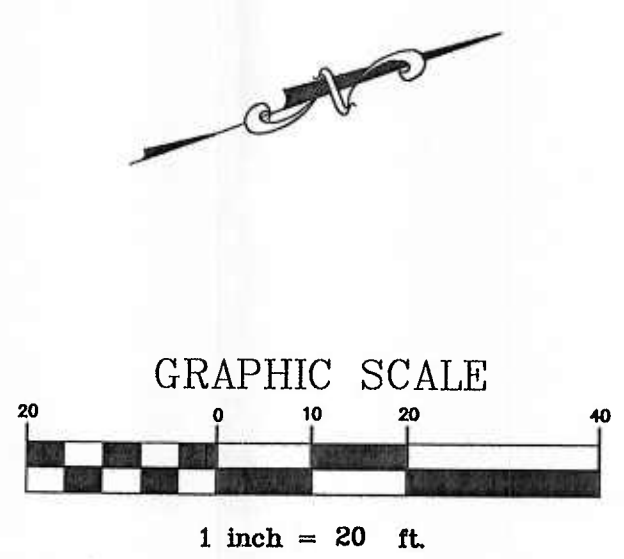
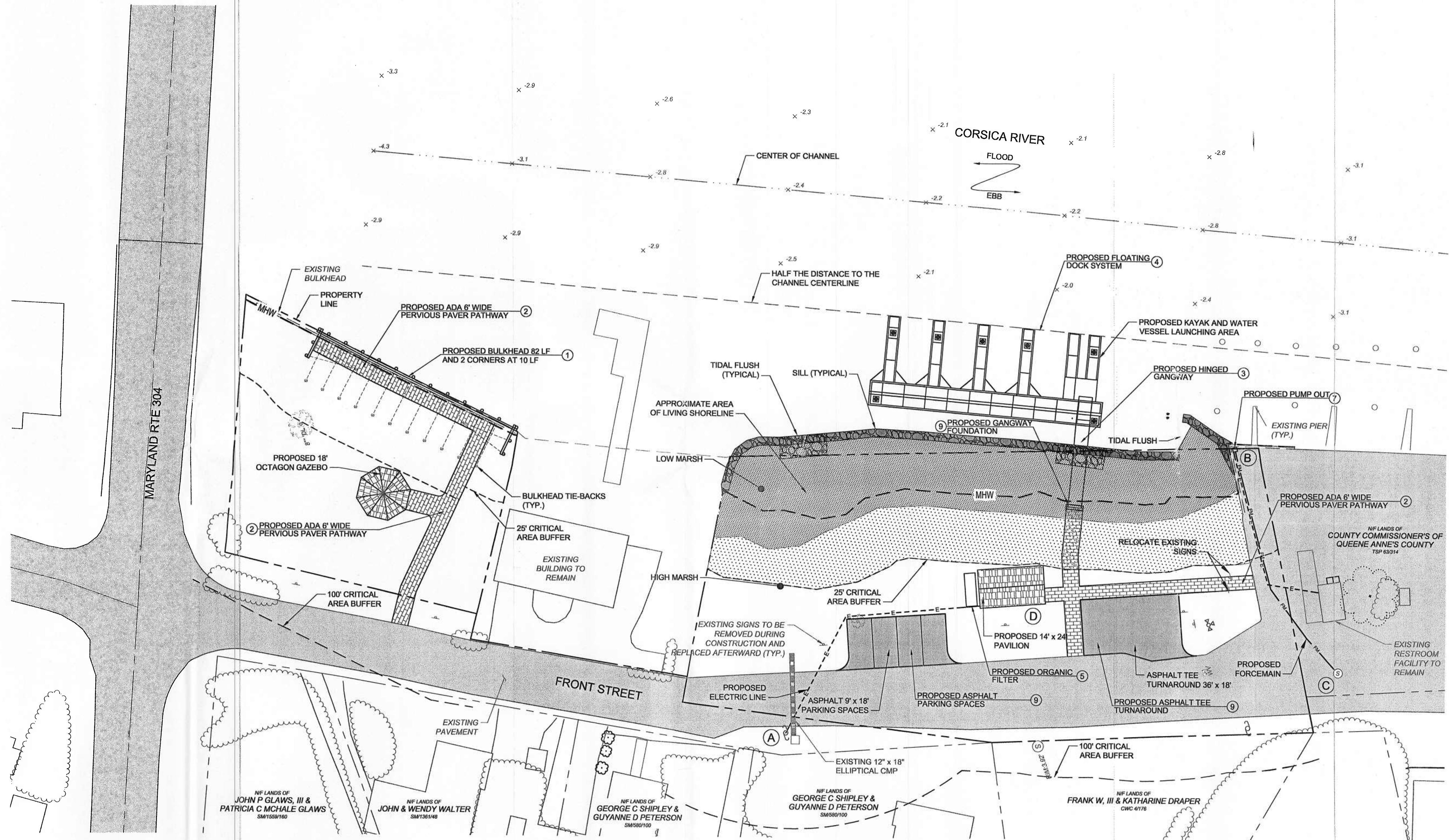
**MCCRONE**  
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 801 LIBERTY STREET  
 CENTREVILLE, MD 21617  
 (410) 758-2237 • FAX (410) 758-2464  
 www.mccrone-inc.com  
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DATE	JOB NUMBER	SCALE	AS NOTED	DRAWN BY	DESIGNED BY	APPROVED BY	FOLDER REFERENCE
APRIL 2009	D1080201	AS NOTED		D. CARUTHERS	D. CARUTHERS	S. LAYDEN	358

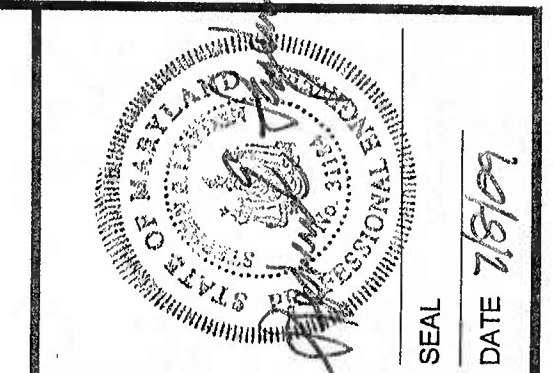
COVER SHEET  
 FOR:  
**CENTREVILLE POCKET PARKS**  
 THIRD ELECTION DISTRICT, QUEEN ANNE'S COUNTY, MARYLAND  
 TAX MAP - 300, GRID - 0, PARCELS - 1306 AND 1311  
 PREPARED FOR: TOWN OF CENTREVILLE



PLOTTED: Jul 08, 2009 - 2:03pm C:\D:\080201-Cville-Wharf-Pocket-Parks.dwg Engineering D:\080201-03 SITE PLAN.dwg .....Tab:3



- KEYED NOTES**
- (A) CONTRACTOR SHALL PROVIDE AND INSTALL ALL CONDUIT, WIRE, OVERCURRENT PROTECTION AND SERVICE EQUIPMENT TO CONNECT THE STREET LIGHT CIRCUIT TO THE TOWN OF CENTREVILLE METER AND SERVICE. PROVIDE AND INSTALL ALL REQUIRED CONDUIT, WIRE, AND BRANCH CIRCUIT PROTECTION FOR POWER TO PROPOSED PAVILION LIGHTING. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH APPLICABLE BUILDING CODES.
  - (B) CONTRACTOR TO COORDINATE ELECTRICAL SERVICE AND CONNECTION WITH QUEEN ANNE'S COUNTY PARKS AND RECREATION. CONTACT GUS GARTNER AT 410-758-0835. ALL MATERIALS AND WORKMANSHIP SHALL BE IN CONFORMANCE WITH APPLICABLE BUILDING CODES.
  - (C) TIE FORCE MAIN INTO EXISTING SANITARY SEWER MANHOLE.
  - (D) CONTRACTOR TO PROVIDE LIGHTING FIXTURE CUT SHEETS TO OWNER FOR APPROVAL. FIXTURE SHALL BE ENERGY EFFICIENT AND TAMPER RESISTANT.



REVIEWED BY:	DATE
APPROVAL	DATE
REVIEWED BY: CA C. DEPARTMENT OF PUBLIC WORKS	DATE
APPROVAL	DATE
REVIEWED BY:	DATE
APPROVAL	DATE
SEAL	DATE

REVISIONS	DATE	DESCRIPTION

**MICROCRONE**

- Engineering
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207 NORTH LIBERTY STREET  
CENTREVILLE, MARYLAND 21617  
(410) 756-2537 • FAX (410) 756-2684  
www.microne-inc.com

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DATE	APRIL 2009
JOB NUMBER	D1080201
SCALE	1" = 20'
DRAWN BY:	D. CARUTHERS
DESIGNED BY:	D. CARUTHERS
APPROVED BY:	S. LAYDEN
FOLDER REFERENCE	365

**SITE AND UTILITY PLAN**

FOR:  
**CENTREVILLE POCKET PARKS**  
THIRD ELECTION DISTRICT, QUEEN ANNE'S COUNTY, MARYLAND  
TAX MAP - 300, GRID - 0, PARCELS - 1306 AND 1311

PREPARED FOR: TOWN OF CENTREVILLE

SHEET NO.: **3** OF **8**

FILE NO.: Site Plan.dwg







