

MSA-S-1829-4936

CS 641-05 Swan Point WWTP Facility  
Site Plan

Robert L. Ehrlich, Jr.  
Governor

Michael S. Steele  
Lt. Governor



Martin G. Madden  
Chairman

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/)

August 4, 2006

Mr. Wayne Cooper  
President  
County Commissioners of Charles County  
PO Box 2150  
La Plata, Maryland, 20646

Re: Swan Point Wastewater Treatment Plan – Modification Request

Dear Mr. Cooper:

The purpose of this letter is to officially notify you of the Critical Area Commission's action on the above referenced project. On August 2, 2006, the Critical Area Commission unanimously approved the County's request to modify the submitted site plan to construct a wastewater treatment and reclamation facility at Swan Point, located in Issue, Maryland. The proposed modification is consistent with the existing planting plan and will not require any modifications. However, please note that all conditions applied with the original October 5, 2005, approval still stand.

Please note that should any changes to the site plan be proposed in the future, additional review and approval by the full Commission will be required. In addition, please notify the Commission once the mitigation plantings have been implemented. Should you have any questions, please feel free to contact me at 410-260-3475.

Sincerely,

A handwritten signature in black ink that reads "Kate Schmidt".

Kate Schmidt  
Natural Resource Planner

Cc: Aimee Daily, Charles County  
John Dunn, USX Realty

## *Critical Area Commission*

### **STAFF REPORT**

**August 2, 2006**

**APPLICANT:** Charles County

**PROPOSAL:** Swan Point Wastewater Treatment Facility - Modifications

**COMMISSION ACTION:** Vote

**STAFF RECOMMENDATION:** Approval

**STAFF:** Kate Schmidt

**APPLICABLE LAW/  
REGULATIONS:** COMAR 27.02.04 State or Local Agency Actions  
Resulting in Major Development on Lands Owned by  
Local Jurisdictions

### **DISCUSSION:**

On October 5, 2005 you, the Commission, unanimously approved the proposal by Charles County to construct a wastewater treatment and reclamation facility at Swan Point, located in Issue, Maryland. Charles County would like to request a modification to that approval in order to realign a small portion of the influent and effluent pipe from the wastewater treatment plant along Swan Point Road in the Critical Area. The proposed change in the pipe alignment is to avoid existing utilities parallel to the road, including SMECO power line, fiber optic cable lines, and an existing storm drain. The realignment would move the pipes approximately 50 feet to the north resulting in 177 linear feet of pipe and disturbing approximately 354 square feet. This location is currently in a grass strip and planting bed area immediately to the left of the edge of forest. The proposal will not impact any Buffer or other protected resource. The proposed change is also consistent with the existing planting plan and will not require any modifications.

Robert L. Ehrlich, Jr.  
*Governor*



Michael S. Steele  
*Lt. Governor*

Martin G. Madden  
*Chairman*

Ren Serey  
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October 6, 2005

Mr. Wayne Cooper  
President  
County Commissioners of Charles County  
PO Box 2150  
La Plata, Maryland, 20646

Re: Swan Point Wastewater Treatment Plan

Dear Mr. Cooper:

The purpose of this letter is to officially notify you of the Critical Area Commission's action on the above referenced project. On October 5, 2005, the Critical Area Commission unanimously approved the County's proposal and site plan to construct a wastewater treatment and reclamation facility at Swan Point, located in Issue, Maryland. This approval included three conditions:

1. The County Commissioners shall obtain permits from the Maryland Department of the Environment's (MDE) Non-Tidal Wetlands Division in order to impact the non-tidal wetlands and associated buffers. These permits shall be obtained prior to commencement of construction activities.
2. The County Commissioners shall obtain the required stormwater and sediment and erosion control permits prior to beginning construction activities.
3. If the permitted discharge outfall is modified, the modification must be submitted to the full Commission for review and approval.

In fulfillment of the above conditions, please provide Commission staff with a copy of all appropriate permits once they have been obtained. Please note that should any changes to the site plan be proposed in the future, additional review and approval by the full Commission will be

Wayne Cooper  
October 6, 2005  
Page 2

required. In addition, please notify the Commission once the mitigation plantings have been implemented. Should you have any questions, please feel free to contact me at 410-260-3482.

Sincerely,



Kerrie L. Gallo  
Natural Resource Planner

Cc: Aimee Daily, Charles County  
John Dunn, USX Realty  
Judy Cole, MDE

## *Critical Area Commission*

### **STAFF REPORT**

**March 2, 2005**

**APPLICANT:** Charles County Commissioners

**PROPOSAL:** Swan Point Wastewater Treatment Facility

**JURISDICTION:** Charles County

**COMMISSION ACTION:** Vote

**STAFF RECOMMENDATION:** Approval with Conditions

**STAFF:** Kerrie Gallo

**APPLICABLE LAW/  
REGULATIONS:** COMAR 27.02.04 State or Local Agency Actions  
Resulting in Major Development on Lands Owned  
by Local Jurisdictions

#### **Discussion:**

The Charles County Commissioners are proposing to construct a 600,000 gallon per day wastewater treatment and reclamation facility. The proposed wastewater treatment facility has been designed to service the Swan Point community in its completed, built-out state. Currently, the County is considering a development proposal for the Swan Point peninsula which would create a mixed use residential/resort community, including marina facilities, lodging elements, and a limited retail component. In addition, 70,000 gallons per day of the proposed treatment capacity for the new facility will be allocated to Charles County to provide public sewer service to residents of the Cobb Neck Peninsula who currently dispose of wastewater through private septic systems and drainfields.

In March of 1993, the Commission granted approval of a similar proposal to construct a wastewater treatment plan at Swan Point. The project was then proposed in two phases, and located slightly to the south of the current proposed location. While the current proposal is similar to that which was approved by the Commission in 1993, there are minor changes proposed in regard to the location and design of the plant, and significant changes proposed in regard to the upgrade in technology that will be used in the current plant.

## **Proposal**

The applicants propose to construct the 600,000 gallon per day wastewater treatment plant in two phases. Upon completion of both phases, the plant will consist of three main components:

- approximately 18,000 linear feet of 12-inch force mains, constructed to connect the new water reclamation facility to an influent pumping station and an outfall pipeline with the Swan Point community;
- a water reclamation facility including an influent/sludge structure, oxidation ditches, two clarifiers, 813 square foot plant building, three dynasand filters, and effluent pumping station, and a UV disinfection facility;
- and a shellfish protection pond added to contain emergency overflows from the plant.

The Maryland Department of the Environment (MDE) has issued the required NPDES permit for the discharge of wastewater. While the ultimate wastewater discharge volume of the proposed plant will be significantly higher than that of the existing plant, the permit for the new plant sets stringent limits for the discharge of phosphorous and nitrogen, whereas the permit for the existing plant does not set a limit for these elements. In addition, the new plant has been designed to exceed the treatment criteria defined within the NPDES permit requirements, and as such, represents a substantial upgrade in the quality of wastewater effluent as compared to both the existing plant, and the plant originally approved in 1993. The total amount of impervious surface area proposed for the construction of both phases of the plant is 18,202 square feet or 2% of the property. The limits of disturbance encompass 4.2 of the 211 acres.

## **Location and Habitat Protection**

The proposed location for new Swan Point facility is at the site of the existing Cobb Island Wastewater treatment Facility, located in Issue, Maryland, on the north side of Swan Point Road. The property is owned by the Charles County Commissioners, is 220.44 acres in size, with 211 acres located within the Limited Development Area (LDA). The existing Cobb Island Facility includes wastewater treatment lagoons and spray fields, a control/maintenance building, pumping facilities, force main, and associated roads and parking areas. The current plant is proposed less than ¼ mile north of the plant approved by the Commission in 1993.

The plant is proposed to be constructed entirely outside of the 100-foot Buffer, and does not propose impacts to tidal wetlands, other than those impacts associated with, and permitted by the MDE wastewater discharge permit. There are approximately 21,000 square feet of temporary impacts proposed to non-tidal wetland buffers, 650 square feet of permanent impacts to non-tidal wetland buffers, and approximately 1,700 square feet of permanent impacts to non-tidal wetlands. These impacts are mainly due to the construction of the force mains, along the existing shoulder of Swan Point Road, and at the existing golf course. The applicants will be required to obtain permits for these impacts from MDE. The ability to obtain these permits is recommended by staff as a

condition of approval. In addition to impacts to non-tidal wetlands, there is approximately 2,300 square feet of permanent forest clearing proposed in conjunction with the construction of the plant improvements, and 24,000 square feet of temporary forest clearing proposed for the installation of the forced mains. A planting plan has been submitted documenting mitigation at a 1:1 ratio.

During the course of project review, it was determined that there exists a bald eagle nest on the property. The active nest is located in a loblolly pine tree overlooking a tidal marsh on Shaw's Branch, north of the proposed facility. The nest is located 850 feet from the western property line, 900 feet north of Swan Point Road, and 2,400 feet west of the proposed facility. Upon consultation with the Department of Natural Resources (DNR), it was determined that there would be no impacts to the nest as a result of the proposed development activities.

### **Staff Recommendation**

Commission staff recommend that this project be approved with the following conditions:

1. The County Commissioners shall obtain permits from the Maryland Department of the Environment's (MDE) non-tidal wetlands division in order to impact the non-tidal wetlands and associated buffers. These permits shall be obtained prior to commencement of construction activities.
2. The County Commissioners shall obtain the required stormwater and sediment and erosion control permits prior to beginning construction activities.



# Planting Agreement for State and Local Projects

State or Local Agency

CHARLES COUNTY DEPT. OF UTILITIES

Project Number

Agency Contact

MELVIN C. BEALL, JR. P.E.

Phone Number

~~410-260-3482~~ 301 609 7400

Commission Approval Date

OCTOBER 5, 2005

CAC Planner

KERRIE GALLOP

Project Name

SWAN PT. WASTE WATER TREATMENT PLANT

Project Location

SWAN PT. ROAD ISSUE MD

Square Feet Cleared Outside 100ft Buffer

26,300

Mitigation Ratio for Clearing Outside Buffer\*

26,300

Mitigation Calculation Outside Buffer

1:1

Square Feet Disturbed/Cleared Within 100ft Buffer

0

Mitigation Ratio for Disturbance/Clearing Within Buffer\*

0

Mitigation Calculation Within Buffer

0

15% Afforestation Requirement Met?

YES

Total Mitigation Required

26,300

Planting and Natural Regeneration Plan (attach additional sheets if necessary)

FOR EXISTING SEWER RIGHT OF WAY - REPLANT R.O.W. (20x1200) 24,000 ft<sup>2</sup> ONCE CONSTRUCTION IS COMPLETE. USE 2" CALIPER TREES; SWEETGUM, RED MAPLE + LOBLOLLY PINE. PLANTS TO BE ON 20ft. CENTERS. FOR 2300 FT<sup>2</sup> PERMANENT IMPACTS, PLANT SAME SPECIES ON 20' CENTERS SOUTH OF ACCESS ROAD TO PLANT, EAST OF SWAN PT ROAD.

Planting Date

FALL 2006

Year

2006

First Site Visit Date

First Site Visit By

Second Site Visit Date

Second Site Visit By

Mitigation Completed?

MULT MCCARTHY

Mult McCarthy  
for John Decker  
Regional Manager  
United States Steel Corporation  
September 26, 2005

\* see back for explanations

Revised 9/03

## 1. Amount of Disturbance and Clearing

There are two ways to calculate the amount of disturbance in the Critical Area. Disturbance is based on either the area disturbed or the number of individual trees that will be cut. It is recommended that when an area to be disturbed more closely resembles in a natural forest (i.e., canopy cover with a multi-layer understory) or when structures or other impervious surfaces are placed within the Buffer or a BEA, even if no trees are cleared, you should quantify the disturbance amount in the *area cleared*. On the other hand, if your site more closely resembles a park setting (i.e., scattered trees with little or no understory), it is recommended that you count the *number of trees removed*.

## 2. Plant Spacings and Mitigation Credits for Various Size Trees and Shrubs\*

Credit Square Feet	Plant Size	Plant Spacing
100 sq. ft.	1 tree (2-inch caliper)	10-foot center
400 sq. ft.	1 tree (minimum: 2-inch caliper and either balled and burlapped or container grown) <u>and</u> understory vegetation (minimum 2 small trees or 3 shrubs)	tree: 20-ft. center understory: 10-ft. center
50 sq. ft.	1 tree (seedlings)	7-ft. center
50 sq. ft.	1 shrub	3 - 7 ft. center

\* The Critical Area Commission recognizes natural regeneration as a method for mitigation on appropriate sites. This will be determined on a case-by-case basis. All plantings will require an easement to ensure that these areas remain forested in perpetuity.

## 3. Mitigation Ratios

Choose from the following for the mitigation ratios:

### Mitigation Ratio for Clearing Outside of Buffer

Clearing of Forest/Woodlands up to 20% 1:1  
 Clearing of Forest/Woodlands up to 30% 1.5:1  
 Clearing of Forest/Woodlands over 30% 3:1  
 Clearing Violation 3:1  
 Other  
 N/A

### Mitigation Ratio for Disturbance/Clearing Within Buffer

New Development/Redevelopment (non-BEA) 3:1  
 New Development/Redevelopment (BEA) 2:1  
 Shore Erosion Control 1:1  
 Public Shoreline Access 2:1  
 Clearing Violation 3:1  
 Other  
 N/A

## 4. Planting Date

The Planting Date should be either the Spring or Fall season following the approval of the project by the Critical Area Commission.

## 5. Site Visits

Two site visits will be conducted over a period of two years by Critical Area Commission staff. The objective of the site visits is to verify that the plantings have been carried out in accordance with the approved planting plan (i.e., species, number of trees/shrubs, location) and that the plantings are surviving.

**REQUEST FOR MODIFICATION TO  
CHESAPEAKE BAY CRITICAL AREA  
APPROVAL OF OCTOBER 6, 2006**

*for*

Swan Point Wastewater Treatment Plant  
Villages at Swan Point  
Charles County, Maryland

*Prepared for:*

Mr. Jon Dunn  
USS Real Estate  
11390 Lord Baltimore Drive  
Issue, Maryland 20645-2229

*Prepared by:*

McCarthy & Associates, Inc.  
Environmental Consultants  
14458 Old Mill Road, Suite 201  
Upper Marlboro, Maryland 20772  
Phone: (301) 627-7505  
FAX: (301) 627-5571

July 2006

**RECEIVED**

JUL 10 2006

CRITICAL AREA COMMISSION

This report is prepared to assess the impacts to Critical Area resources resulting in a proposed change to an influent and effluent wastewater pipe alignment from the wastewater treatment plant along Swan Point Road in the Chesapeake Bay Critical Area. The proposed change in the pipe alignment is to avoid existing utilities parallel to the road. These utilities include SMECO power line servicing Swan Point, Comcast fiber optic cable, Verizon fiber optic, and existing storm drain. The proposed change in alignment is to shift placement of the influent/effluent pipe approximately 50 feet to the north to avoid the previously described utilities. The alignment change begins on the eastern property line of Swan Point and continues west, parallel to Swan Point Road. The change in the alignment will result in 177 linear feet of pipe, as shown on sheet 11 of 16 of the attached plans. The total amount of disturbance is approximately 354 square feet. The area of the proposed change is a maintained right-of-way along the Swan Point Road (east-west) and a storm drain easement to the north. There is a landscape berm located in this area with forest to the north separated by the storm drain easement to the north. The present alignment is shown in photos 1 and 2 which are taken looking along the existing right-of-way of Swan Point Road looking west. The proposed revised alignment is shown in photo #3. This alignment lies between a hardwood forest to the right in photo #3 and a landscape berm to the left. The photo is also taken in a westerly direction. Within the Critical area, the proposed alignment is in the grass strip and planting bed left of the edge of the forest. There will be no encroachment into the forest.

This proposed change in the effluent/influent pipe alignment is a minor modification to what was previously approved by the State of Maryland Critical Area Commission, Chesapeake and

Atlantic Coastal Bays on October 6, 2005.

Since the proposed change in alignment is relatively minor, there will be no impact to those resources defined in the Charles County Critical Area program. In addition, the approval of this request will be consistent with the conditions of approval by the Commission staff pursuant to their October 6, 2005 approval.

The proposed change in the sewer influent/effluent lines will have no adverse effect on the following resources and habitats:

1. Federally of State-listed threatened or endangered species.
2. Riparian forests.
3. Natural heritage areas.
4. Submerged aquatic vegetation.
5. Shellfish beds.
6. Plant and wildlife habitat.
7. Forest Interior Dwelling Birds.
8. Colonial Water Bird Nesting Areas.
9. Anadromous fish propagation waters.
10. Waterfowl staging and concentration areas.
11. Wetland buffers.
12. Tidal and non-tidal wetlands.
13. Expanded buffers.

Attached to this report is the October 6, 2005 Critical Area approval letter for this entire project.

Also attached is the completed 4-page Critical Area Commission Project Application Checklist and Construction Plans for the entire project.

## Swan Point



**Photograph #1.** Looking west down existing utility right-of-way.



**Photograph #2.** Looking west down existing utility right-of-way, showing existing storm drain manhole.

## Swan Point



**Photograph #3.** Proposed alignment of relocated sewer line between planting bed and hardwood forest.

Robert L. Ehrlich, Jr.  
Governor

Michael S. Steele  
Lt. Governor



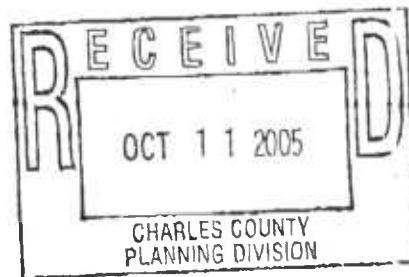
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October 6, 2005

Mr. Wayne Cooper  
President  
County Commissioners of Charles County  
PO Box 2150  
La Plata, Maryland, 20646



Re: Swan Point Wastewater Treatment Plan

Dear Mr. Cooper:

The purpose of this letter is to officially notify you of the Critical Area Commission's action on the above referenced project. On October 5, 2005, the Critical Area Commission unanimously approved the County's proposal and site plan to construct a wastewater treatment and reclamation facility at Swan Point, located in Issue, Maryland. This approval included three conditions:

1. The County Commissioners shall obtain permits from the Maryland Department of the Environment's (MDE) Non-Tidal Wetlands Division in order to impact the non-tidal wetlands and associated buffers. These permits shall be obtained prior to commencement of construction activities.
2. The County Commissioners shall obtain the required stormwater and sediment and erosion control permits prior to beginning construction activities.
3. If the permitted discharge outfall is modified, the modification must be submitted to the full Commission for review and approval.

In fulfillment of the above conditions, please provide Commission staff with a copy of all appropriate permits once they have been obtained. Please note that should any changes to the site plan be proposed in the future, additional review and approval by the full Commission will be



Wayne Cooper  
October 6, 2005  
Page 2

required. In addition, please notify the Commission once the mitigation plantings have been implemented. Should you have any questions, please feel free to contact me at 410-260-3482.

Sincerely,



Kerrie L. Gallo  
Natural Resource Planner

Cc: ~~WineDaily@CharlesCounty~~  
John Dunn, USX Realty  
Judy Cole, MDE

# *Critical Area Commission Project Application Checklist*

State Agency Actions Resulting in Development  
on State-Owned Lands in the Critical Area  
(COMAR 27.02.05)

## General Instructions

The following checklist contains a list of items for consideration by the Critical Area Commission during its review of each State project affecting the Critical Area. While some items will not apply to the project of concern, the responsible Agency should review and be able to discuss aspects of each relevant item. This checklist should be completed and sent, with all other completed information, to the Critical Area Commission staff contact prior to Commission review. Please be aware of the following general guidelines:

- (1) **The completed checklist, maps, and all other pertinent project materials must be submitted to Critical Area staff contact at least 1 month prior to scheduled review by the Project Subcommittee at the Critical Area Commission's monthly meeting.**
- (2) **The sediment and erosion control plan must be finalized prior to scheduling the project for review by the Project Subcommittee.**
- (3) **All other resource/environmental permits and other release documents must be obtained or must be in their final stages (i.e., public comment period completed, permit conditions in final form) prior to scheduling the project for review by the Project Subcommittee.**

If there are any questions with any aspect of this form or with the Commission's review process, please do not hesitate to call the Commission staff contact at (410) 260-3460.

## General Mapping Features

Please include the following features on all site plans:

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Vicinity map  | <input checked="" type="checkbox"/> Project boundary/Limits of disturbance  |
| <input checked="" type="checkbox"/> Scale 1" = 50'  | <input checked="" type="checkbox"/> Orientation   |
| <input checked="" type="checkbox"/> Project Name and Location                               | <input checked="" type="checkbox"/> Tract or lot lines  |
| <input checked="" type="checkbox"/> Critical Area boundary<br>DRAWING C-8<br>SHEET 11 of 16 | <input type="checkbox"/> N/A Development area boundaries (Intensely Developed Areas - IDAs, Limited Development Areas - LDAs, Resource Conservation Areas - RCAs if information is available)<br>UTILITY INSTALLATION |

N/A One hundred-year floodplain boundary

N/A Agricultural lands

N/A Dredging activity and spoil site

N/A Surface mining sites and wash plants

Topography

Vegetative cover:

N/A Soil:

Existing forest

Type

Forest clearing (L.O.D.)

Area of hydric soils

N/A Afforestation/reforestation areas

Area of highly erodible soils

N/A Mitigation areas (Buffer impacts)

Existing and proposed structures (buildings, roads, other paved or impervious areas, parking lots, lots, storm drains, septic, stormwater management systems, shore erosion control structures).

N/A Natural parks

### Habitat Protection and other Sensitive Area Mapping Features

Please show the following Habitat Protection Area features on all site plans, if relevant to the particular project site:

Buffers:

Minimum 100 ft. from tidal waters, tidal wetlands and tributary streams

Expanded Buffer to include 15% slopes, hydric soils and highly erodible soils

25 ft. from nontidal wetlands

N/A Plant and Wildlife Habitat (Colonial water bird nesting sites, historic waterfowl staging and concentration areas, riparian forest, forest interior dwelling bird habitat, areas of state or local significance, and natural heritage areas)

Tidal Wetlands

Nontidal Wetlands

Plant and Wildlife Habitats (same as above)

N/A Threatened and Endangered Species (including species in need of conservation)

ON SITE BUT NOT NEAR PROJECT AREA. BALD EAGLE +

Anadromous Fish Propagation Waters (CUCKHOLD CREEK) PURPLE HAIR-STREAK BUTTERFLY

### General Project Information

Please include the following text information, if applicable to the site, in the project application materials. This information may be included in the form of letters, reports, or site plan notes.

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> <b>Project name and location</b>  | _____ <b>State agency sponsoring project</b>  |
| <input checked="" type="checkbox"/> <b>Project description</b><br>(brief narrative including project type, i.e. industrial, port-related, etc.)   | _____ <b>Anticipated timeline</b><br>(Include project milestones, approximate start and completion dates)         |
| <input checked="" type="checkbox"/> <b>Total acreage in Critical Area</b>   | _____ <b>Whether project is on State-owned land, locally-owned land or privately-owned land</b>                   |
| <input checked="" type="checkbox"/> <b>Total forest area cleared</b>  | _____ <b>Method of stormwater control</b>   |
| <u>N/A</u> <b>10% calculations (Please enclose worksheet) or impervious surface information</b>   | <input checked="" type="checkbox"/> <b>Soil erosion and sediment control measures and implementation strategy</b> |
| <u>N/A</u> <b>Mitigation required for clearing of forest area (1:1 ratio outside the 100-foot Buffer, 1.5:1 if between 20%-30% clearing, and 3:1 ratio inside the 100-foot Buffer or if above 30% clearing)</b> |   |
| <u>N/A</u> <b>Afforested area (site must have a minimum of 15% forest cover if not IDA)</b>   |   |

#### Minimum Documentation Requirements

The following permits and documents should be secured or must be in their final stages (i.e., public comment period completed, permit conditions in final form), if applicable to the site, prior to scheduling the project for review by the Project Subcommittee:

- Maryland Department of the Environment (MDE)**
  - Stormwater Management
  - Sediment and erosion control plan \*
  - N/A Tidal wetlands permits
  - Nontidal wetlands permits
  - Water Quality Certification

#### N/A **Army Corps of Engineers (ACOE) Tidal Wetlands Permit (404)**

\* All applicants are required to obtain their sediment and erosion control plans from MDE prior to review by the CBCAC.

**State / Federal Agency Recommendations**

Review and comment from the appropriate MDE, DNR, and ACOE units shall be provided, if applicable to the site, for the following resources and habitats:

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Threatened and Endangered Species       | <input checked="" type="checkbox"/> Plant and Wildlife Habitat                         |
| <input checked="" type="checkbox"/> Riparian Forests                        | <input checked="" type="checkbox"/> Forest Interior Dwelling Birds (FIDs)              |
| <input checked="" type="checkbox"/> Natural Heritage Areas                  | <input checked="" type="checkbox"/> Colonial water birds                               |
| <input checked="" type="checkbox"/> Submerged Aquatic Vegetation            | <input checked="" type="checkbox"/> Anadromous Fish Propagation Waters                 |
| <input checked="" type="checkbox"/> Other Aquatic Species (Shellfish, etc.) | <input checked="" type="checkbox"/> Historic Waterfowl Staging and Concentration Areas |

**Site Visits**

Site visits should be arranged by the responsible agency in advance of Commission review. At a minimum, the site visit should include the Commission staff contact.

**PLEASE MAIL OR FAX THE ABOVE INFORMATION TO:**

**CRITICAL AREA COMMISSION  
1804 WEST STREET, SUITE 100  
ANNAPOLIS, MARYLAND 21401  
(410) 260-3460  
Fax (410) 974-5338**

WAYNE COOPER, PRESIDENT  
ROBERT J. FULLER  
CANDICE QUINN KELLY  
EDITH J. PATTERSON, Ed.D  
ALLAN R. SMITH



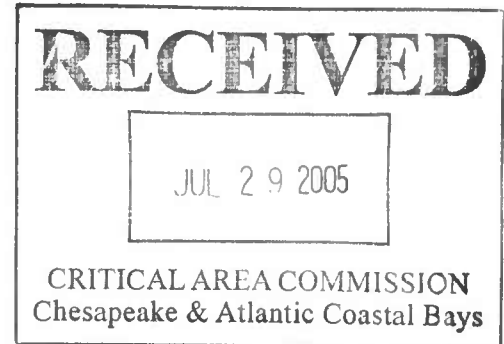
EUGENE T. LAUER  
COUNTY ADMINISTRATOR

## *County Commissioners of Charles County*

P.O. BOX 2150  
LA PLATA, MARYLAND 20646  
(301) 645-0550, METRO 870-3000, TOLL FREE (877) 807-8790  
TDD 1-800-735-2258 or 7-1-1; FAX: (301) 645-0560

July 25, 2005

Ms. Kerrie J. Gallo  
Natural Resource Planner  
State of Maryland Critical Area Commission  
1804 West Street, Suite 100  
Annapolis, Maryland 21401



Re: Swan Point Wastewater Treatment Facility

Dear Ms. Gallo:

Please find enclosed a report which will address your initial concerns and questions regarding the Swan Point Wastewater Treatment Facility. We are eager to begin this project as both Swan Point and Cobb Island are communities located predominantly within the Critical Area and are in need of improved wastewater treatment facilities.

✓ The Commissioners believe the location of the Swan Point Treatment Facility is consistent with the provisions and requirements of our Critical Area Program and the Critical Area Program for the State of Maryland. As stated in section VII of the Swan Point Wastewater Treatment Facility Critical Area Report, dated May 18, 2005, the location of the facility has been designed such that it will not disturb sensitive habitat areas or natural habitat protection areas. Additionally, the report summarizes the development plan for the Wastewater Treatment Facility as an environmentally sensitive design which provides wastewater treatment services to the Swan Point Community and recorded lots within the Cobb Island Service Area. It proposes minimal impacts to existing plant and wildlife habitats and adheres to the Critical Area criteria with respect to impervious surfaces, water quality and clearing.


Please be aware that the County is working with MDE to evaluate alternative outfall/discharge locations, however the location of the treatment facility itself will remain the same. As such, we look forward to your concurrence with this public project which is necessary for the health and welfare of the County residents. If you have any questions or need additional

Ms. Gallo  
July 25, 2005  
Page 2

information, please contact Mr. Charles Rice, our Environmental Programs Manager, at (301) 645-0651.

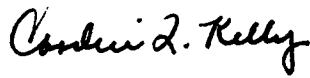
Very truly,


COUNTY COMMISSIONERS OF  
CHARLES COUNTY, MARYLAND

  
Wayne Cooper, *President*

  
Robert J. Fuller

  
Edith J. Patterson

  
Candice Quinn Kelly

  
Allan R. Smith

CC/CR/tlg/50050

cc: David A. Umling, *Planning Director*  
Chuck Beall, *Chief of Development Services*  
Charles Rice, *Environmental Programs Manager*  
Jon Dunn, *U.S. Steel Corp.*

**REVISED SWAN POINT  
Wastewater Treatment Facility  
Critical Area Report**

**OWNER**

Charles County Commissioners  
P.O. Box B  
LaPlata, Maryland 20646

**DEVELOPER**

USS Real Estate,  
A Division of United States Steel Corporation  
11500 Swan Point Boulevard  
Issie, Maryland 20645

*Prepared by:*

McCarthy & Associates, Inc.  
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*2<sup>nd</sup> Revision*  
**September 23, 2005**



## I. INTRODUCTION

The revision to the Swan Point Wastewater Treatment Plant Chesapeake Bay Critical Area Compliance Report is the result of an on-site meeting on August 25, 2005 with representatives of the Chesapeake Bay Critical Area staff and Charles County Department of Planning and Zoning. The revision is prepared to eliminate any confusion in regard to development of Phases I and II of the proposed plant. The original report addressed Phase I only while this revision addresses full build-out of the facility, i.e., Phase II.

The existing Swan Point Wastewater Treatment Facility, developed in 1982, is located off of Swan Point Road, adjacent to the Swan Point Yacht and Country Club. It's current capacity serves a limited number of residents within the Swan Point Community in subdivisions that were platted beginning in the 1970's. The capacity of the existing facility is limited to 70,000 gpd. A NPDES permit has been approved by Maryland Department of the Environment that will facilitate the replacement of the existing facility with a new 600,000 gpd wastewater treatment plant. The expansion of the wastewater treatment facility within the community is consistent with the approved 1986 Master Plan and will be consistent with the revised Master Plan.

A Development Concept Plan for the Swan Point Community, based on the Waterfront Planned Community Zone (WPC) and current environmental regulations, is presently under review by Charles County Planning and Zoning. In conjunction with the design of Swan Point, an alternatives analysis was developed to identify the most environmentally safe and economically feasible location for expansion of the wastewater treatment facilities which would serve the entire Swan Point Community. This analysis indicated that the best solution would be to build a new facility at the current Cuckold Creek Wastewater Treatment Facility site.

The purpose of this report is to present an overview of the Swan Point Wastewater Treatment Facility design and document its consistency with the regulations for development of water dependent facilities in the Critical Area resulting from local agency programs.

It should be noted that this project, with a similar but not identical design, was presented to the Chesapeake Bay Critical Area Commission and approved on March 15, 1993. The proposed changes to the previously approved plan are two-fold. First, the overall technology for treatment of wastewater has improved. The proposed facility utilizes a much more up-to-date technology for the sole purpose of improving discharge water prior to release into Cuckold Creek. The second change is that the location of the proposed facility has shifted in a very minor sense to the north, but pretty much within the same footprint as that which the 1993 plant design occupied. This has been done at this particular location due to the lack of any habitat located in this area and to take advantage of a previously disturbed location for the same type of operation.

The format of this report follows, to some degree, that of the Critical Area Compliance Report, prepared by Greenhorne & O'Mara, Inc., with a revised date of February 1993. The primary difference between the original report and this report deals with more updated natural resource

information, especially on threatened and endangered species, and the fact that there is no work being proposed in tidal waters, as with the original proposal. This is due to the fact that the overall design for the influent and effluent pipes is to tie in to the existing pipes, thus precluding the need to disturb tidal waters and the resources associated with tidal waters of the State.

## II. EXISTING CONDITIONS

### EXISTING DEVELOPMENT

The existing Cobb Island Wastewater Treatment Facility and the proposed location for the new Swan Point facility are located in Issue, Maryland, on the north side of Swan Point Road, approximately seven tenths of a mile from the intersection of Swan Point Road and Maryland Route 257. The site is identified on Tax Map 88 as Parcel 3, Liber 1366/Folio 528 and is owned by the County Commissioners of Charles County. Of the site's 220.44 acres, approximately 211 acres are located within the Critical Area Overlay Zone. The existing wastewater treatment facility and the proposed improvements and additions are located almost entirely within the site's Critical Area.

The existing Cobb Island Facility includes: wastewater treatment lagoons and spray fields, a control/maintenance building, pumping facilities, a force main and associated roads and parking facilities.

### TOPOGRAPHY AND DRAINAGE

The existing topography of the wastewater treatment facility is relatively flat with no slopes greater than 15 percent. Elevations on the site reach approximately fourteen (14) feet above sea level within the north-central portion of the site. From this 'high' area, natural drainage flows to Cuckold Creek, Wise Marsh and Shaw's Pond. Drainage flows to the east and west from the eastern and western portions of the site, respectively.

A portion of the site is located within the 100-year flood plain as shown on the Charles County Flood Insurance Rate Maps (Community-Panel Number 240089 0118 B). The 100-year flood plain elevation in this area is shown as 6 feet above mean sea level.

### SOILS

According to the Charles County Soil Survey, the wastewater treatment facility site consists of Elkton, Keyport, Matapeake, Mattapex, and Sassafras series soils. In addition, Tidal Marsh (Tm) areas are associated with Wise Marsh along the northern and eastern sections of the site (see Exhibit 2).

The area of the site proposed for development consists mainly of Keyport silt loam (KpA) soils along the southern half and Matapeake silt loam (MnA) soils along the northern half. The Keyport soils consist of moderately well drained, nearly level to moderately sloping soils. The

Matapeake soils are made up of deep, well drained, level to moderately sloping soils. In addition, two narrow vertical bands of Elkton silt loam (Ek) soils are located within the central portion of the proposed development area. Soil borings have been performed by a geo-technical engineer to ensure that appropriate foundation and lagoon design is followed within the project area.

## WETLANDS AND BUFFERS

There are tidal wetlands on the site along Shaw's Branch and Cuckold Creek. Shaw's Branch borders the southwestern edge of the property and flows north into Cuckold Creek. The tidal wetlands along Cuckold Creek are associated with Wise Marsh, which is located in the northeastern portion of the site. The tidal wetlands are characterized by giant cordgrass (Spartina cynosuroides), saltmeadow cordgrass (Spartina patens), wax myrtle (Myrica frutescens), and high-tide bush (Baccharis halimifolia). Construction of the proposed facility and outfall sewer will not impact tidal wetlands. Species composition of tidal wetlands is shown in the Appendix of this report.

Nontidal wetlands, as currently defined by the 1987 Corps of Engineers Wetlands Delineation Manual, are not present on the area of the proposed facilities. A narrow band of forested, nontidal wetlands exist along Wise Marsh and Shaw's Branch. These nontidal wetlands typically consist of red maple (Acer rubrum) and wax myrtle (Myrica cerifera). A twenty-five foot wetlands buffer will remain undisturbed along these nontidal wetlands in accordance with Charles County Critical Area criteria. The upper reaches of Shaw's Branch appear to be impounded. This area has become ponded with dead trees dominating a large portion of this wetland. This change in hydrologic regime has caused a shift in plant community structure to fresh water scrub/shrub wetland. The wetland boundary south of and adjacent to the proposed facility was delineated in the field and confirmed by the Corps of Engineers on January 8, 2004.

## CRITICAL AREA BUFFER

In accordance with the Charles County Critical Area Program, a 100-foot natural tidal wetlands/shoreline buffer has been delineated along Cuckold Creek, Shaw's Branch and Wise Marsh. With the exception of temporary buffer disturbance adjacent to non-tidal wetlands for the installation of the influent and effluent pipes, there are no additional impacts to non-tidal wetland buffers. Refer to the attached permit drawings.

## PLANT HABITAT

The area of the site where the new plant is proposed consists of predominately reed canary grass and fescue, which is periodically mowed during maintenance of the spray irrigation fields.

Surrounding portions of the site also include wooded areas that are characterized by two principal types of forests-mixed hardwood and pine. The pine forest is dominated by loblolly pine. The mixed hardwood forest is composed of oaks and other hardwoods. A complete listing of species in the forest is given in the Appendix. Understory and groundcover species in these mixed

hardwood forests include young saplings of the overstory species, American holly, greenbrier, poison ivy, New York fern, and field garlic.

### THREATENED AND ENDANGERED SPECIES

Review of the Charles County Habitat Protection Area Maps for the Swan Point Area indicates a Habitat Protection Area (HPA) in the tidal marsh of the confluence of Wise Marsh and Cuckold Creek. This HPA was documented as supporting short-bristled horned rush (Rhynchospora corniculata). Discussions with Ms. Lori Byrne of the Wildlife and Heritage Program, Maryland Department of Natural Resources (DNR), indicates that the status of this species has been down graded and is no longer listed as threatened or endangered by DNR.

Recent field work on the property has revealed an undocumented bald eagle (Haliaeetus leucocephalus) nest located on the property. The nest, which is active, is located in a loblolly pine tree overlooking a pocket tidal marsh on Shaw's Branch, north of the proposed facility. The nest is located 850 feet from the western property line; 900 feet north of Swan Point Road, and 2,400 feet from west of the proposed facility. Given the distance from any land disturbance activity related to the proposed facility or the influent or effluent pipes, there should be no adverse impact to the eagles due to the distance from the activity to the nest. A field visit is being scheduled with DNR and U.S. Fish & Wildlife service to confirm the location of the new nest.

### WILDLIFE HABITAT

A variety of wildlife species can be found on the site. These species reflect the landscape of the region and include whitetail deer, raccoon, striped skunk, eastern cottontail, Virginia opossum, muskrat, woodchuck, meadow mice and snapping turtle. Birds observed on the site include American crow, ~~ring-necked~~ waterfowl, mallard, northern cardinal, blue jay, mourning dove, thrushes and sparrows.

#### Forest Interior Dwelling Birds

The Chesapeake Bay Critical Area Program criteria requires that protection be provided to Forest Interior Dwelling Birds (FIDS) and their habitat. These species require either relatively large, undisturbed forest areas, or their populations depend on such areas. The Critical Area Commission developed protection requirements as a result of the substantial decline in the number of these species in parts of Maryland over the past 30 years. The decline is due to direct loss, and the fragmentation/isolation of forest habitat necessary to sustain such birds.

The wastewater treatment facility property contains approximately fifty-nine acres of FIDS habitat. This habitat is located on either side of Shaw's Branch and is not within the proposed development portion of the site. Therefore, the proposed construction will not impact FIDS habitat.

### Colonial Nesting Birds

There are no colonial nesting birds within the proposed improvement areas of the wastewater treatment facility based on information shown on current resource management maps prepared by the Maryland Department of Natural Resources.

### Waterfowl Concentration and Staging Areas

No waterfowl concentration and staging areas are known to exist in the area of the proposed wastewater treatment facility improvement and additions.

## WATER-RELATED ISSUES

### Submerged Aquatic Vegetation

Submerged aquatic vegetation (SAV) has been observed offshore from the proposed wastewater treatment facility in Cuckold Creek. The types found include horned pondweed (Zannichellia palustris), Eurasian watermilfoil (Myriophyllum spicatum), common waterweed (Elodea canadensis), and an unidentified algae.

The beds of SAV found along the banks of Cuckold Creek were located in water ranging in depth from 0 to 3.8 feet at mean low water. There was a distinct correlation between density of the SAV and water depth. SAV was most dense in water depths ranging from 0 to 2.5 feet which extended approximately 60 feet from shore where an existing pier located off the County property is located. An intermediate density of SAV was found at water depths of 2.5 to 3.0 feet extending from 6 to 165 feet from shore and low density was observed at water depths between 3.0 and 3.8 feet. Low density extended across the creek until shallower depths were encountered. Water depth appears to be the primary factor affecting density of SAV.

The water depth increases more quickly at the point where Shaw's Branch and Cuckold Creek meet and, therefore, the SAV does not extend very far into the water. There is a SAV band of  $\pm 30$  feet located approximately 200 feet downstream from the County pier which extends about 350 feet down the southern end of Cuckold Creek to the point where Shaw's Branch flows into the Creek. The water depth in the middle of Cuckold Creek at this point reaches approximately 5 feet.

Since there is no work proposed in tidal waters, there will be no impact to SAV.

### Shellfish Harvesting

Cuckold Creek is designated as a Class 2 Water by the 1990 Maryland Department of the Environment Water Quality Standards Regulations. Class 2 Waters have the potential to support shellfish harvesting. As of December 31, 1992, the shellfish waters in the Creek were either closed (around the existing outfall pipe) or were conditionally managed. None of the Creek is presently open for shellfish harvesting unconditionally.

### Anadromous Fish Spawning Areas

In a report titled "Survey of Anadromous Fish Spawning Streams-Potomac and Upper Chesapeake Bay" (C'Dell et al. 1975), Cuckold Creek and the Potomac River are described as providing nursery areas for anadromous fish. The species noted include white perch (Morone americana), striped bass (Morone saxatilis), and blueback herring (Alosa aestivalis). The proposed facility will not result in any impact within the nursery area and thus will have no impact to anadromous fish since there is no work proposed in tidal water.

## III. PROPOSED DEVELOPMENT

### DESCRIPTION

The proposed Swan Point wastewater treatment plant has been designed to service the Swan Point community in its projected "built-out" state. The Villages at Swan Point will be a mixed use, residential/resort community that will include single and multi-family residences, golf and country club facilities, a marina, lodging elements and a limited retail component that will service the needs of the current and future Swan Point residents. In addition, 70,000 gallons per day of the proposed treatment capacity for the new plant will be allocated to Charles County to provide public sewer service to residents in the local area that currently dispose of wastewater through private septic systems and drainfields.

The facility will be constructed in 2 phases that will ultimately treat, on average, 600,000 gallons of wastewater daily.

The proposed Swan Point Water Reclamation Facility will feature a design that will meet or exceed the Maryland Department of the Environment's "Enhanced Nutrient Removal" (ENR) criteria for the treatment of nitrogen and phosphorus elements. Incorporated into this facility will be the following improvements and systems:

1. Force mains- approximately 18,000 lineal of 12-inch force mains will be

constructed to connect the new water reclamation facility to an influent pumping station and an outfall pipeline within the Swan Point community.

2. Water reclamation facility - Phase I and II will consist of a 600,000 gallon per day treatment process that will include the following improvements:
  - a. Influent/sludge structure (2,387 square feet of building space);
  - b. Oxidation ditches (s)
  - c. Two clarifiers;
  - d. Plant building (813 square feet of building space);
  - e. Dynasand filters (3);
  - f. Effluent pumping station; and,
  - g. UV disinfection facilities.
  
3. Shellfish protection pond - a shellfish protection pond will be added to contain emergency overflows from the plant.

The proposed wastewater treatment plant has been designed to exceed the treatment criteria that are defined in the NPDES permit for the system in order to provide an efficient and environmentally sound approach for wastewater treatment that will benefit local residents for years to come. A copy of the Maryland Department of the Environment Discharge Permit (NPDES) MD 0057525 is attached.

**IMPERVIOUS SURFACE**

As defined in the Charles County Critical Area Program, impervious surfaces shall be limited to fifteen (15) percent of the gross site area. The following table is a summary of the impervious surfaces located within the Critical Area portion of the site.

**SWAN POINT WASTEWATER RECLAMATION FACILITY**

**IMPERVIOUS SURFACES  
WITHIN THE CRITICAL AREA**

<u>Land Use</u>	<u>Impervious Surface</u>
Oxidation ditches (2)	8,231 sq. ft.
Clarifiers (2)	2,700 sq. ft.
EHB (shellfish protection pond)	4,100 sq. ft.
Additional filters	400 sq. ft.
Augmented UV disinfection system	200 sq. ft.
Pavement	2,100 sq. ft.

The total amount of incremental impervious surface that is associated with Phase 2 of the proposed plant is 18,202 square feet. The combined plant phases will impact 4.2 acres of the 211 acres of the site that are classified as Critical Area lands. The corresponding impervious surface ratio under such a scenario is 2%.

#### WATER-RELATED ISSUES

##### Water Quality

The proposed 600,000 gallons per day wastewater treatment facility will replace an existing 70,000 gallons per day capacity conventional wastewater treatment plant, which provides secondary levels of treatment. The NPDES permit limits for the existing wastewater treatment plant and the proposed facility operating at an average flow amount of 600,000 gallons per day are as follow:

Waste	Existing Plan Permit Limitations	Proposed Water Reclamation Facility at 600,000 gallons per day average flows
BOD	30 mg/1 (monthly average)	5/1 - 10/31- 15 mg/1 11/1-4/30 - 30 mg/1
Total Suspended Solids	30 mg/1 (monthly average)	30 mg/1
Total Phosphorus	None	.25 mg/1
Total Nitrogen	None	5.0 mg/1
pH	6.5 to 8.5	6.5 - 8.5
Dissolved Oxygen	>5.0 mg/1	>5.0 mg/1
Fecal Coliform	< 14 MPN/100 ml (monthly median concentration)	<14 MPN/100 ml
Flow	70,000 gallons per day	600,000 gallons per day

#### FOREST CLEARING/REFORESTATION

Page 8: "FOREST CLEARING/REFORESTATION" Section: A component of the Phase 2 plant improvements will encroach into a stand of volunteer loblolly pine that falls within the size classifications of saplings (2" to 5" DBH) and small poles (6" to 9" DBH). The overall height of this juvenile stand of timber is approximately 25 feet. The encroachment area is less than 2300 square feet as scaled from the attached Drawing "C-4"



(see "Future EHB" element on drawing to identify the referenced impact site). In addition, the existing sanitary sewer easement that contains the discharge pipeline for the existing plant will be cleared of trees to Manhole #6 to facilitate the retrofit of the pipeline. The clearing width will be 20 feet x length of approximately 1,200 feet. 24,000 square feet of forested area will be temporarily impacted. This area will be replanted in place over the existing easement area proposed to be cleared.

#### IV. IMPACTS AND MITIGATION

##### PLANT AND WILDLIFE HABITATS

No impact other than temporary wetland buffer will occur. A temporary impact to approximately 1,700 square feet of emergent non-tidal wetland will occur at the golf course for the pipe installation.

Because disturbance of the relocated Swan Point wastewater treatment facility is limited to a relatively small portion of the grassed areas of the site (10 ± %), it is not anticipated that there will be any significant impact to the plant and wildlife habitats on the site. The permanent wetland buffer impact, based on the revised site plan, is 650 square feet of non-tidal wetland buffer. This impact is to grass field.

##### WETLANDS

The proposed construction will temporarily impact non-tidal wetland portions of the site, therefore, no wetland mitigation will be necessary.

##### WATER-RELEASED ISSUES

###### Water Quality

The proposed 600,000 gpd wastewater treatment facility, which will provide advanced wastewater treatment, will replace an existing 70,000 gpd capacity conventional wastewater treatment plant, which provides secondary levels of treatment. The NDPES wastewater discharge permit for the proposed plant has been issued by the Maryland Department of the Environment (MDE) Municipal NPDES Permits Division. In setting the discharge limitations for this permit, MDE conducted an evaluation of water quality for the receiving stream, and analyzed impacts on the receiving stream. The permit discharge limitations are established so the water quality in the receiving stream remains within the quality levels established by law.

The ultimate wastewater discharge volume from the proposed new wastewater treatment plant will be significantly higher than that for the existing plant; however, the proposed NPDES permit data indicates the permit will require stringent limits for discharge

of nitrogen and phosphorus (nutrients) whereas the permit criteria in effect for the existing wastewater treatment plant does not have any nitrogen and phosphorus limits.

## STORMWATER MANAGEMENT

Stormwater management for quality control will be provided by constructing two shallow marsh ponds on site. Drainage from impervious surfaces will be collected into swales and ditches and directed to the ponds. Wetland plantings will be included in the design. The ponds will drain ultimately to Cuckold Creek as it did prior to construction.

Quantity stormwater management will not be required for the site since no downstream development will be affected by the minimal increase in storm drainage from the site to Cuckold Creek.

## V. MANAGEMENT PLANS

At this time it is not anticipated that any specific management plans will be required since no significant impact to plant or wildlife habitats is proposed. Any vegetation removed in the Buffer during construction will be replanted. Construction limitations and mitigation techniques will minimize the effects on aquatic vegetation.

## VI. REASONS FOR SITING THE SWAN POINT WASTEWATER TREATMENT PLANT IN THE CRITICAL AREA

The primary reasons for choosing the proposed site, which is in the Chesapeake Bay Critical Area, are that (1) it is already an existing wastewater treatment site for the Cobb Island Sewer System (with spray fields and lagoons), (2) it is in a strategic location to serve the Swan Point community, (3) no alternatives existed outside the Critical Area, and (4) there is no impact to terrestrial or estuarine resources other than a mowed field.

Both Swan Point and Cobb Island Sewer Systems are located predominantly in the Critical Area and are in need of improved wastewater treatment facilities. The current plant that serves the Swan Point community is in the Critical Area, but has limited potential for expansion, given the small size of the site and its proximity to residential areas. The plant is surrounded on three sides by land slated for future residential development. The existing Swan Point plant is located on a 3.8 acre site, making it difficult to expand or place adequate buffers between the conflicting land uses, or to continue operations during expansion construction. The proposed site is much larger and will be separated from future development by existing wetlands and densely forested areas that will be preserved as habitat protection areas. Both the existing and proposed sites discharge into Cuckold Creek and are in the Critical Area.

Although a small portion of the proposed property lies outside the Critical Area, it

is predominantly non-tidal wetlands and is therefore not suitable for development, prohibiting the use of the portion of the property that is outside the Critical Area.

Soil limitations strongly dictated the choice of property for the existing Cobb Island spray field irrigation facility on Cuckold Creek. This site was identified primarily for its suitability for development as a spray irrigation facility. The 1985 201 Facilities Plan identified two sites, the Breeze Farm facility and the Cuckold Creek facility sites, as the only two areas on the Cobb Neck Peninsula suitable for handling spray irrigation of effluent and related sewage treatment processes.

Finally, consolidation of the existing Swan Point and secondary Cobb Island facilities is logical as they are currently less than a mile apart from one another. Because the proposed expansion site has the capacity to handle the new facility and combining the facilities at one location would significantly reduce operating and maintenance expenses for the County, it was a sensible decision to relocate the expanded Swan Point facility to the County property in the Critical Area.

#### **VII. CONSISTENCY OF DEVELOPMENT WITH PROVISIONS/REQUIREMENTS OF THE CHARLES COUNTY CRITICAL AREA PROGRAM**

Charles County believes that the project is consistent with the provisions and requirements of both the Charles County Critical Area Program and the Critical Area Program for the State of Maryland. The project will not affect Growth Allocation at this time, particularly as it is designed to improve wastewater treatment for the existing area. The service area will not be expanded as a result of this project. The project has been designed so that sensitive habitat areas will not be disturbed, and only minimal Buffer disturbance will occur during construction.

Activities in the Buffer are limited to the installation of the influent and effluent force mains in the shoulder of Swan Point Road and the emergent wetland located on the golf course. Both the wetland and wetland buffer impacts are temporary.

The project also does not disturb other natural habitat protection areas. Proposed development will occur entirely in already cleared areas. No Endangered Species will be adversely affected by either the facility or the placement of the pipes. Forest Interior Dwelling Bird habitat and wetlands on the site will remain undisturbed with the exception of the temporary impact to emergent wetlands. Disturbance is avoided to anadromous fish habitat and submerged aquatic vegetation.

#### VIII. EFFECTS OF THE PROJECT ON THE CHARLES COUNTY CRITICAL AREA PROGRAM

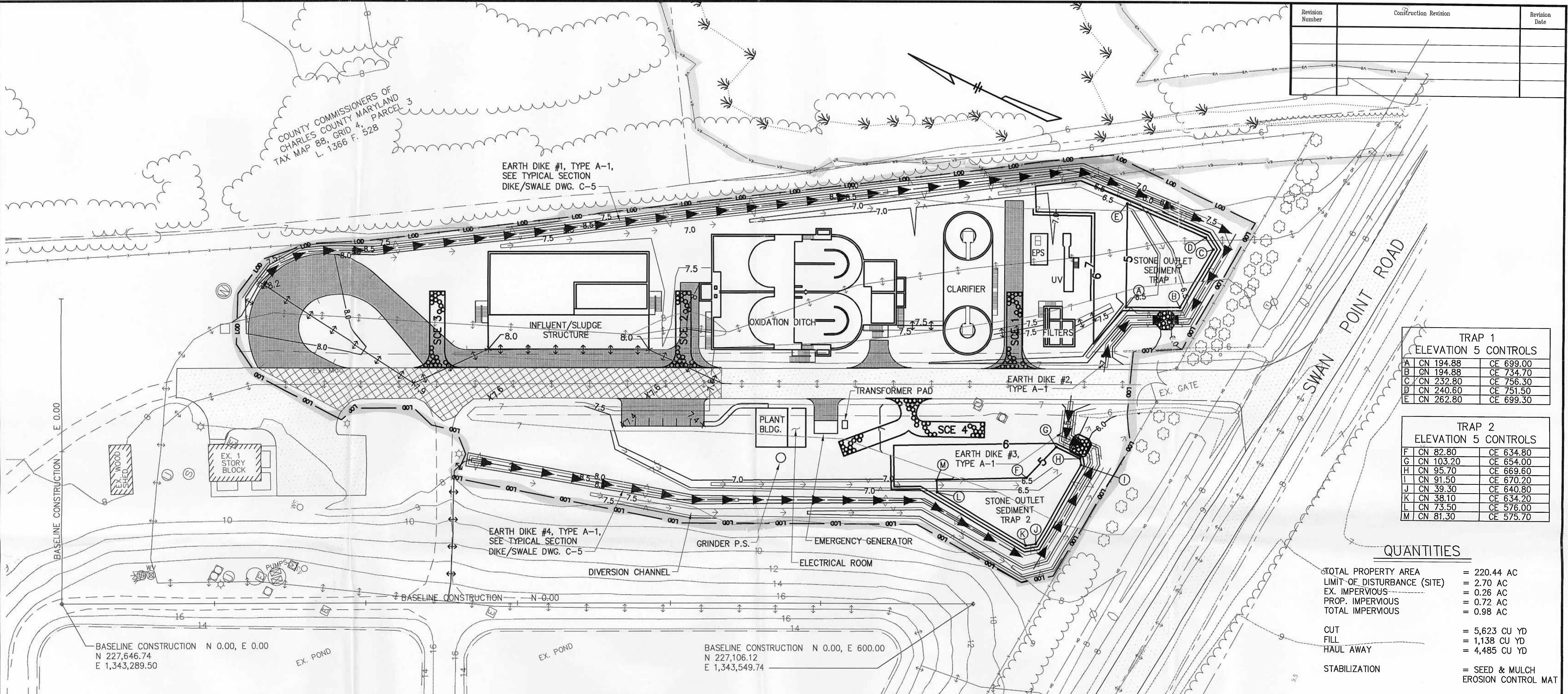
This is a public project on public land and is necessary for the health and welfare of the County residents. As a result, the County feels that it will have a beneficial effect on the Critical Area program. The communities that this project serves are predominantly in the Critical Area and have limited wastewater treatment facilities. The service area will not be expanded and treatment will be improved. This can only help to improve the overall water quality in the area and will have a positive effect on the Critical Area Program.

#### IX. SUMMARY

The development plan for the Swan Point Wastewater Treatment Facility presents an environmentally sensitive design solution which provides wastewater treatment services to the Swan Point Community and recorded lots within the Cobb Island Service Area. It proposes minimal impacts to existing forest and wildlife habitats in the area. The project also adheres to the Critical Area criteria with respect to impervious surfaces, water quality and clearing.

Revision Number	Construction Revision	Revision Date

COUNTY COMMISSIONERS OF CHARLES COUNTY MARYLAND  
TAX MAP 88, GRID 4, PARCEL 3  
L. 1366 F. 528



**TRAP 1  
ELEVATION 5 CONTROLS**

A	CN 194.88	CE 699.00
B	CN 194.88	CE 734.70
C	CN 232.80	CE 756.30
D	CN 240.60	CE 751.50
E	CN 262.80	CE 699.30

**TRAP 2  
ELEVATION 5 CONTROLS**

F	CN 82.80	CE 634.80
G	CN 103.20	CE 654.00
H	CN 95.70	CE 669.60
I	CN 91.50	CE 670.20
J	CN 39.30	CE 640.80
K	CN 38.10	CE 634.20
L	CN 73.50	CE 576.00
M	CN 81.30	CE 575.70

**QUANTITIES**

TOTAL PROPERTY AREA	= 220.44 AC
LIMIT-OF-DISTURBANCE (SITE)	= 2.70 AC
EX. IMPERVIOUS	= 0.26 AC
PROP. IMPERVIOUS	= 0.72 AC
TOTAL IMPERVIOUS	= 0.98 AC
CUT	= 5,623 CU YD
FILL	= 1,138 CU YD
HAUL AWAY	= 4,485 CU YD
STABILIZATION	= SEED & MULCH EROSION CONTROL MAT

CSCD 8 OF 10

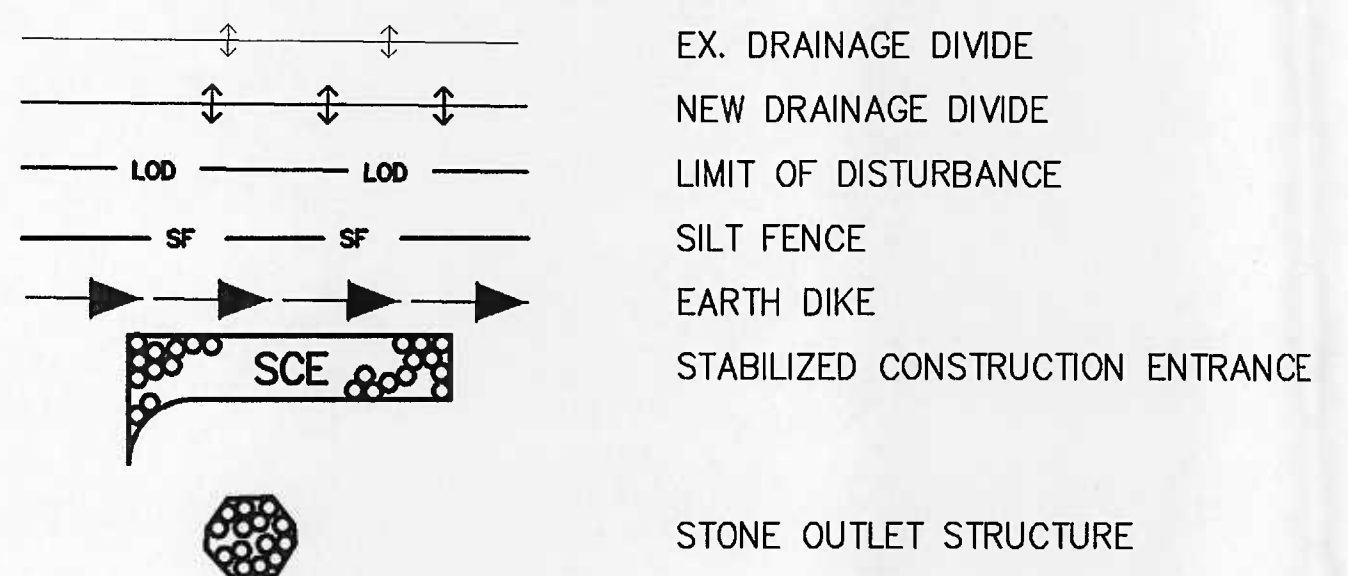
**SEQUENCE OF CONSTRUCTION**

1. NOTIFY MARYLAND DEPARTMENT OF THE ENVIRONMENT 5 DAYS PRIOR TO COMMENCING CONSTRUCTION. PHONE NUMBER 410-537-3599. (1 DAY)
2. THE LIMITS OF DISTURBANCE SHALL BE FIELD MARKED PRIOR TO CLEARING OF TREES, INSTALLATION OF SEDIMENT CONTROL MEASURES, CONSTRUCTION, OR ANY LAND DISTURBING ACTIVITIES. (1 WEEK)
3. CONDUCT PRE-CONSTRUCTION MEETING ON-SITE. (1 DAY)
4. INSTALL SCE 1 TO SCE 4, SEDIMENT TRAPS 1 AND 2, EARTH DIKES 1 THROUGH 4, AND DIVERSION CHANNEL. DIVERSION CHANNEL AND ALL EARTH DIKES TO BE IMMEDIATELY STABILIZED WITH EROSION CONTROL MATTING (SEE DETAILS DRAWING C-5) (1 WEEK)
5. OBTAIN WRITTEN APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR. (1 DAY)
6. CONSTRUCT NEW WRF, PAVEMENT, AND OVERLAY OF EXISTING PAVEMENT. STABILIZE ALL DISTURBED AREAS. (19 MONTHS)
7. ONCE ALL AREAS ARE STABILIZED, OBTAIN WRITTEN APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR AND THEN BEGIN FINAL REMOVAL OF SEDIMENT CONTROLS. PLACE FILL TO BRING SEDIMENT TRAP STORAGE AREAS TO FINAL GRADES. STABILIZE GRASS CHANNELS WITH EROSION CONTROL MATTING AND REMAINING AREAS WITH SEED AND MULCH. REMOVE STONE OUTLET STRUCTURES AND STABILIZE WITH EROSION CONTROL MATTING. REMOVE ALL SCE AND STABILIZE THOSE AREAS WITH SEED AND MULCH. (1 WEEK)

**NEW WWTP - PLAN**

SCALE: 1" = 30'

**SEDIMENT CONTROL LEGEND**



**SEDIMENT TRAP #1**

TRAP TYPE	= STONE OUTLET
EX. DRAINAGE AREA	= 1.60 AC
PROP. DRAINAGE AREA	= 1.37 AC
VOLUME REQUIRED	= 5,760 CU FT
VOLUME PROVIDED	= 5,800 CU FT
SIDE SLOPES, MINIMUM	= 2:1
TOP OF EMBANKMENT	= 7.50
WEIR CREST	= 6.50
DRY STORAGE ELEV.	= 6.50
WET STORAGE ELEV.	= 6.00
CLEANOUT ELEV.	= 5.55
BOTTOM ELEV.	= 5.00
MIN. BOTTOM AREA @ 5.00	= 2,710 SQ FT
MIN. SURFACE AREA @ 6.00	= 5,625 SQ FT

**SEDIMENT TRAP #2**

TRAP TYPE	= STONE OUTLET
EX. DRAINAGE AREA	= 1.30 AC
PROP. DRAINAGE AREA	= 1.54 AC
VOLUME REQUIRED	= 5,544 CU FT
VOLUME PROVIDED	= 5,600 CU FT
SIDE SLOPES, MINIMUM	= 2:1
TOP OF EMBANKMENT	= 7.50
WEIR CREST	= 6.50
DRY STORAGE ELEV.	= 6.50
WET STORAGE ELEV.	= 6.00
CLEANOUT ELEV.	= 5.50
BOTTOM ELEV.	= 5.00
MIN. BOTTOM AREA @ 5.00	= 2,610 SQ FT
MIN. SURFACE AREA @ 6.00	= 5,476 SQ FT



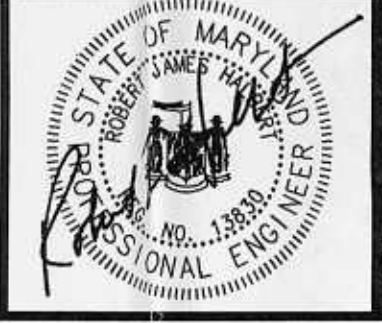
**FINAL DESIGN  
WORKING  
DRAWINGS**

**CHARLES COUNTY GOVERNMENT**  
Department of Planning & Growth Management  
Development Services Division

Approved For:			Remarks or Conditions:
Grading	Construction	as-built	
Roads	Construction	as-built	
Storm Drainage	Construction	as-built	
Stormwater Management	Construction	as-built	
Water	Construction	as-built	
Sewer	Construction	as-built	
Other	Construction	as-built	This Permit Expires on:
signed:	date:	date:	



**THE WHITING-TURNER  
CONTRACTING COMPANY  
ENGINEERS AND CONTRACTORS**  
300 EAST JOPPA ROAD, TOWSON  
BALTIMORE, MARYLAND 21286  
WWW.WHITING-TURNER.COM  
TELE: (410)821-1100 FAX: (410)337-5770



**RUMMEL, KLEPPER & KAHL, LLP  
CONSULTING ENGINEERS**  
81 MOSHER STREET  
BALTIMORE, MARYLAND 21217  
TELE: (410)728-2900 WWW.RKKEENGINEERS.COM FAX: (410)728-2992

SCALE: AS SHOWN  
DATE: MAY 25, 2005  
DESIGNED K.C.D.  
DRAWN D.C.E.  
CHECKED R.J.A.

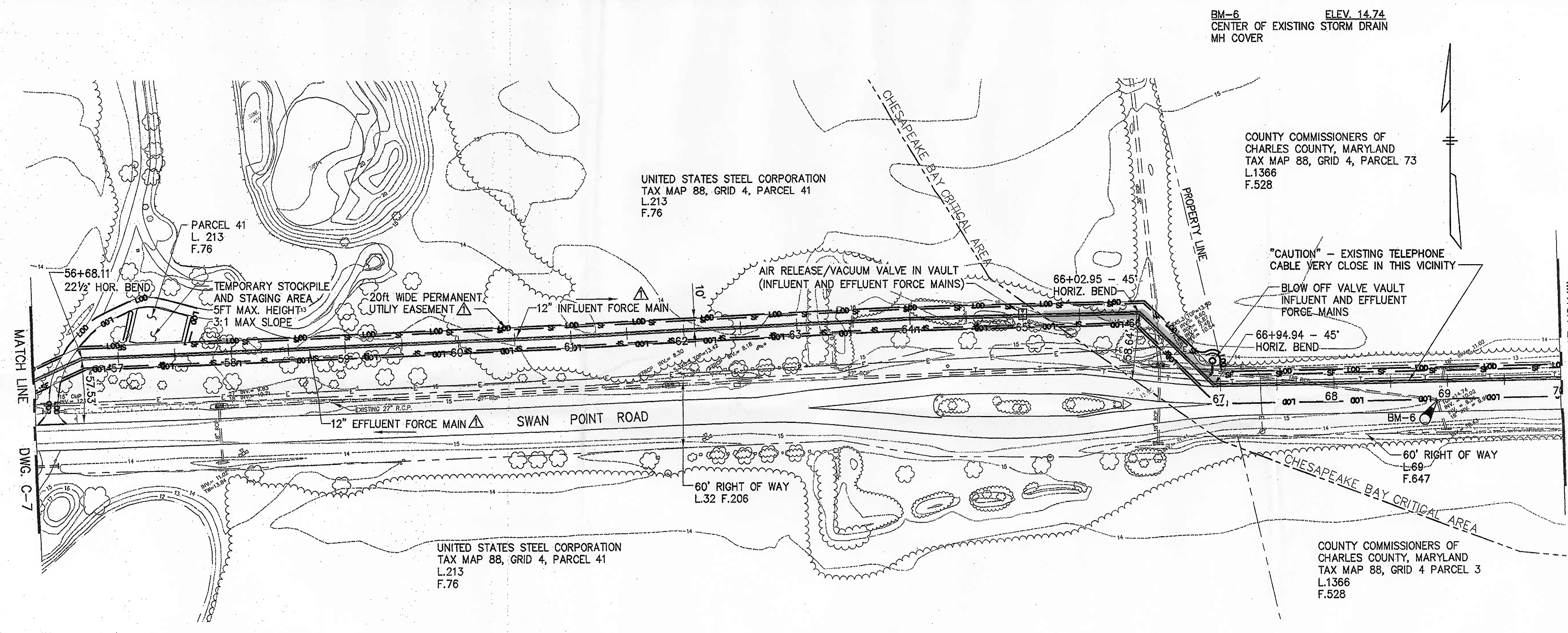
**UNITED STATES STEEL  
CORPORATION**  
11390 LORD BALTIMORE DRIVE  
SWAN POINT, MARYLAND 20645  
301-259-4412

**SWAN POINT  
WASTEWATER PUMPING AND  
WATER RECLAMATION FACILITIES**

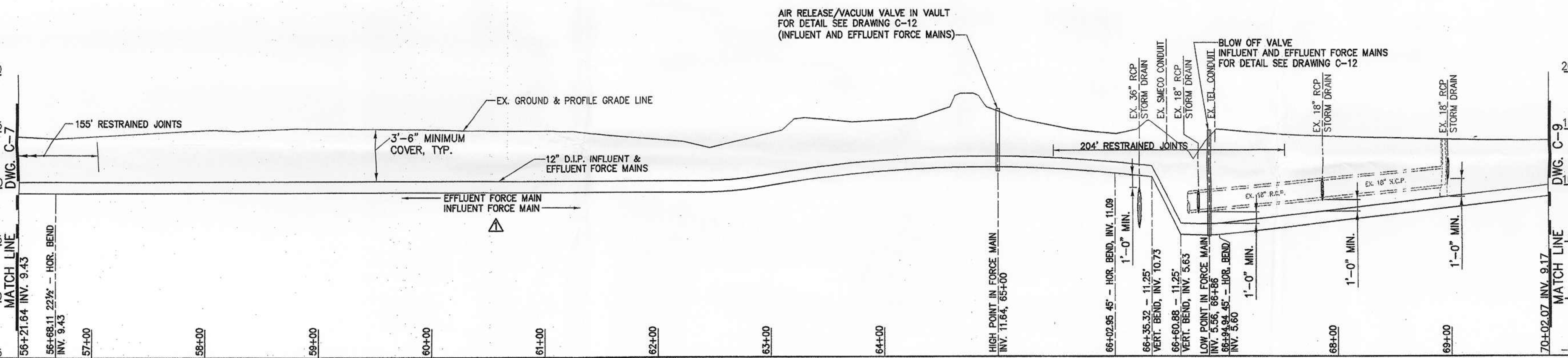
**NEW WRF  
EROSION AND SEDIMENT CONTROL PLAN**

**DRAWING  
C-7**  
SHEET 12 OF 66

Revision Number	Construction Revision	Revision Date
1	REVISED ALIGNMENT	5/24/06

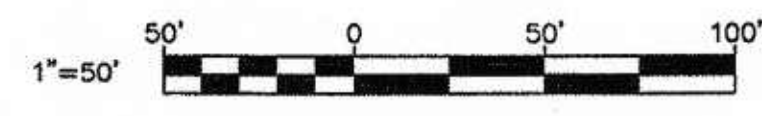


PLAN  
SCALE: 1" = 50'



PROFILE  
SCALE: 1" = 50' HOR.  
1" = 5' VERT.

**STANDARD STABILIZATION NOTE:**  
 FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN SEVEN (7) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND FOURTEEN DAYS (14) AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. ONCE VEGETATION IS ESTABLISHED, THE SITE SHALL HAVE 95% GROUND COVER TO BE CONSIDERED ADEQUATELY STABILIZED.



**FINAL DESIGN  
WORKING  
DRAWINGS**

CHARLES COUNTY GOVERNMENT Department of Planning & Growth Management Development Services Division		
Approved For:		Remarks or Conditions:
Grading	Construction	as-bills
Roads	Construction	as-bills
Storm Drainage	Construction	as-bills
Stormwater Management	Construction	as-bills
Water	Construction	as-bills
Sewer	Construction	as-bills
Other	Construction	as-bills
signed: <i>[Signature]</i> 5/24/06 date:		date:

404-112  
 DWG. C-8  
 MATCH LINE  
 56+21.64 INV. 9.43  
 56+68.11 22 1/2° HOR. BEND  
 INV. 9.43  
 57+00  
 58+00  
 59+00  
 60+00  
 61+00  
 62+00  
 63+00  
 64+00  
 HIGH POINT IN FORCE MAIN  
 INV. 11.64, 65+00  
 66+02.95 45° HOR. BEND, INV. 11.09  
 66+35.32 - 11.25° VERT. BEND, INV. 10.73  
 66+60.88 - 11.25° VERT. BEND, INV. 5.63  
 LOW POINT IN FORCE MAIN  
 INV. 5.66, 66+86  
 66+94.94 45° HOR. BEND/  
 INV. 5.60  
 68+00  
 69+00  
 70+02.07 INV. 9.17  
 MATCH LINE  
 DWG. C-9

**WT**  
WHITING-TURNER

THE WHITING-TURNER CONTRACTING COMPANY  
ENGINEERS AND CONTRACTORS  
300 EAST JOPPA ROAD, TOWSON  
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**RK & K**

STATE OF MARYLAND  
REGISTERED PROFESSIONAL ENGINEER

RUMMEL, KLEPPER & KAHL, LLP  
CONSULTING ENGINEERS  
81 MOSHER STREET  
BALTIMORE, MARYLAND 21217  
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SCALE: AS SHOWN  
DATE: JUNE 13, 2006  
DESIGNED T.A.B.  
DRAWN D.C.E.  
CHECKED R.J.A.

UNITED STATES STEEL CORPORATION  
11390 LORD BALTIMORE DRIVE  
SWAN POINT, MARYLAND 20845  
301-258-4412

SWAN POINT  
PARALLEL FORCE MAINS AND  
EXISTING OUTFALL SEWER  
MODIFICATIONS

INFLUENT AND EFFLUENT  
FORCE MAINS PLAN AND PROFILE

DRAWING  
C-8  
SHEET 11 OF 16