MCPB Item # 10

December 16, 2010

MEMORANDUM

DATE: December 9, 2010

TO: Montgomery County Planning Board

VIA: Mary Bradford, Director of Parks
Mike Riley, Deputy Director of Parks
John E. Hench, Ph.D., Chief, Park Planning and Stewardship Division
Doug Redmond, Natural Resources Manager, Park Planning and Stewardship Division

FROM: Jai Cole, Principal Natural Resources Specialist, Park Planning and Stewardship Division

PROJECT: ICC Environmental Stewardship-Compensatory Mitigation (ES-CM) Projects PB-43, PB-46A, PB-133 and PB -48

REVIEW TYPE: Mandatory Referral No. 1007-SHA-1 ICC Environmental Stewardship

APPLICANT: Maryland State Highway Administration (SHA)

APPLYING FOR: Plan Approval

RECOMMENDATION: 1. Approve the construction of three STORMWATER MANAGEMENT (SWM) projects and one SPECIAL PROTECTION AREA BEST MANAGEMENT PRACTICES (SPA BMP) project in the Upper Paint Branch Special Protection Area (SPA) as part of the ICC Environmental Stewardship and Compensatory Mitigation Program.

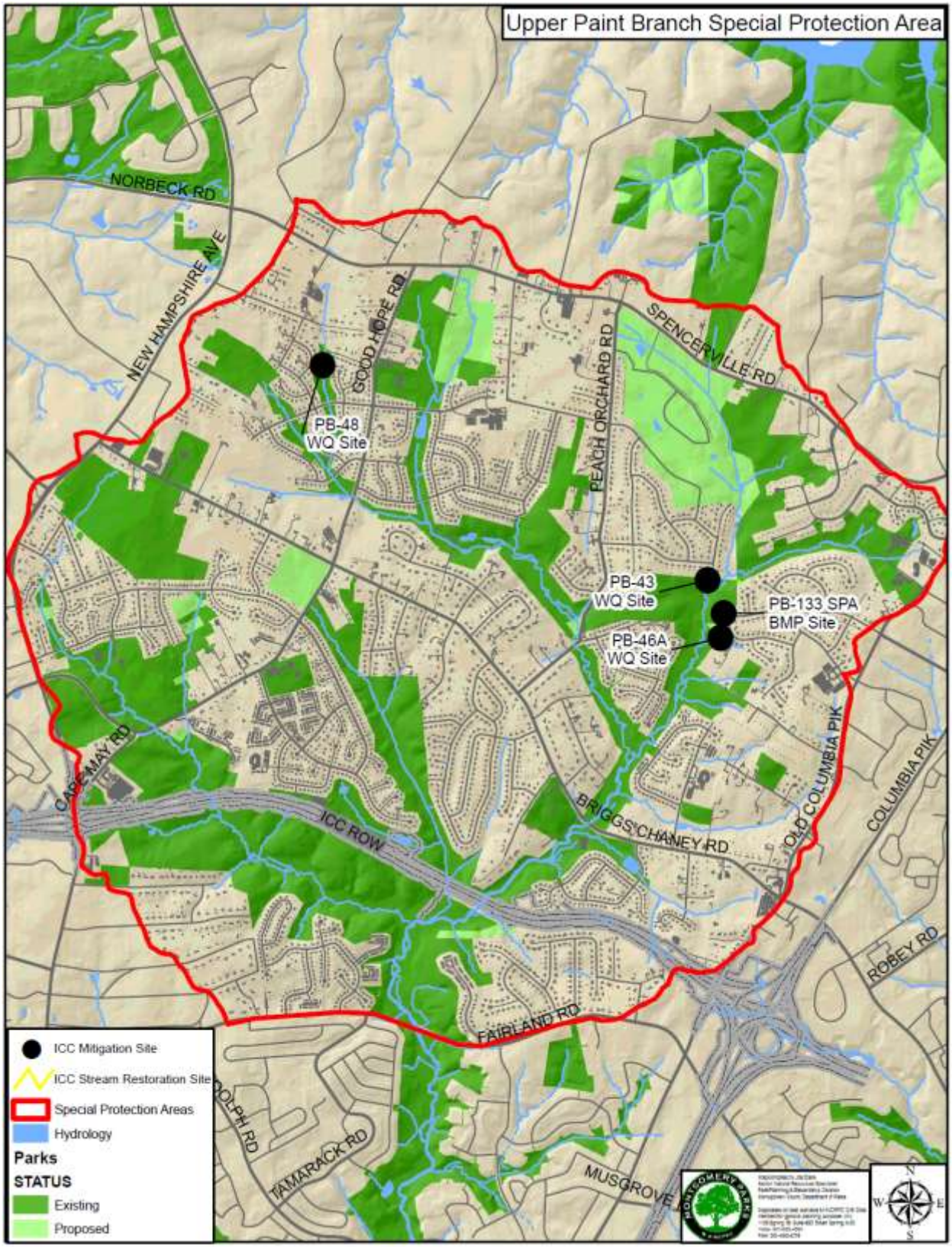
Background

As a part of the ICC Environmental Stewardship and Compensatory Mitigation Program, the State Highway Administration (SHA) is completing a number of stream restoration, wetland creation, and stormwater management projects throughout Montgomery County. Many of these projects focus on the Upper Paint Branch SPA due to the proximity of the ICC to the watershed's high water quality and unique self-sustaining brown trout population.

The PB-E contract consists of three stormwater management (SWM) projects and one special protection area best management practices (SPA BMP) project in the Upper Paint Branch Special Protection Area (SPA). All four projects are part of the ICC Environmental Stewardship and Compensatory Mitigation program.

The PB-43 project is located on parkland south of Peach Orchard Heights, PB-46A on land obtained by SHA for this project along Cabin Creek Drive, PB-133 is located within Montgomery County Department of Transportation (DOT) right of way in the Fairland Gardens community, and PB-48 is located on parkland in the Colesville Heights community (Figure 1.).

Figure 1 –Project Locations for PB- 43, PB-46A, PB-133, and PB-48



Design

The proposed designs of these water quality improvement projects have been coordinated extensively with M-NCPPC and the MCDEP. The collection and analysis of design data within these watersheds has been continuous since 2005 when they were identified for restoration. In order to understand the stream systems, identify concerns, and ultimately set reachable restoration goals, these studies incorporated hydraulic modeling, hydrology, watershed history, geomorphic assessment, and habitat and biological assessments. The following describes the four (4) proposed projects:

PB-43

This project consists of a new stormwater management pond that will be constructed on existing parkland at the end of Timberlake Drive. This shallow wetland marsh will divert untreated stormwater from an existing storm drain system and direct it into a pond. This will provide stormwater quantity and quality control for the large residential watershed. Key features of the facility include a forebay (i.e. a deeper pool to collect sediment and road grit), shallow permanent pools that will provide ecological habitat and slowly release the treated water, and maintenance access from Timberlake Drive. Several design iterations were considered to preserve the forest buffer along adjacent properties and to avoid impacts to wetlands and forests.

PB-46A

This project is a retrofit of an undersized SWM pond located at the end of Perrywood Drive that was built with the original neighborhood development. In addition to the lack of treatment volume in the existing pond, the current flow configuration creates a "short-circuit" within the pond, reducing the level of treatment available prior to discharging to the Right Fork. The new extended detention dry pond will direct the flows through a forebay to provide initial treatment, then through a separate vegetated basin cell for additional treatment. The additional volume created and interior pond modification will allow the facility to meet current water quality standards.

PB-133

This project entails the installation of biotrench facilities within existing roadside ditches in DOT right of way along Perrywood Drive, Cabin Creek Drive, Prince John Court and a portion of Friendlywood Drive. Biotrenches are essentially in-line bioretention facilities consisting of an excavated trench, approximately four to six feet in depth, filled with specific gradations of stone and planting soil. The surface of the biotrench is planted with turf grass/sod for final stabilization. When completed, the biotrenches will be similar in appearance to the existing grass swales.

PB-48

This project is a retrofit of an existing storm drain outfall and installation of a new gravel wetland facility. The existing outfall currently discharges untreated runoff to an area of rip-rap and sparse vegetation before entering the Left Fork upstream of Rainbow Drive. The new gravel wetland will enhance water quality treatment by capturing runoff and providing contact with wetland plantings to promote the biological uptake of nutrients. The treated water will then exit the wetland facility along the existing flow path.

Wetland and Stream Impacts

Limited areas of temporary impacts will occur in the stormwater/stream channel at PB-43, PB-46A and PB-48 due to access and construction of the proposed improvements. In-stream construction would occur primarily to make any necessary connection of the new facilities to the existing drainage or stream

channel. This would cause temporary impacts to the streambed, which would naturally re-stabilize over time. All disturbed areas, including streambanks, would be regraded as needed and stabilized. Temporary wetland impacts would occur at PB-48 in order to gain access to the stream work areas. These impacts have been minimized during field review of the design plans. Canopy trees adjacent to wetlands were avoided. All temporary access paths through environmentally sensitive areas would require the placement of protective matting. Wetland and stream impacts are being coordinated as required with the Maryland Department of the Environment and the U.S. Army Corps of Engineers. All areas affected temporarily during construction will be fully restored to pre-construction conditions.

Maryland Historical Trust

Cultural or Historic Architectural Resources: The completed ICC Cultural Resource Studies have not identified any historic properties within the general vicinity of the project. As such, no impacts to National Historic eligible properties or to cultural resources significant to Montgomery County are anticipated. Coordination with MHT would continue as the design plans evolve.

Natural Resource Inventory and Forest Stand Delineation (NRI/FSD)

There would be limited impacts to forested areas due to construction and access to the SWM sites. These proposed impacts have been reviewed and minimized through M-NCPPC and SHA cooperation. Impacts are being coordinated with the Maryland Department of Natural Resources as required and mitigated for in accordance with the Forest Conservation Act.

SHA and M-NCPPC have coordinated these efforts to ensure that natural resource impacts are avoided, or minimized, to the extent possible while still meeting the goals of the restoration projects. Numerous field reviews have taken place to ensure that access, construction and landscaping activities do not unduly impact natural resources. Impact to some trees within the immediate riparian buffer would be unavoidable due to the proposed work. Strategies for protecting trees adjacent to and within some work areas would include root pruning, avoidance of critical root zones, matting along access routes, and tree protection fencing. Disturbed and impacted areas would be stabilized and replanted once construction is complete.

Air and Noise

As proposed, the project is not expected to have any significant affect on traffic within the adjacent communities. Therefore, an environmental traffic noise analysis and assessment was not conducted. The construction phase of the project has the potential to temporarily affect the local ambient air quality by generating dust through activities such as vehicle traffic, excavation, and materials handling. SHA has addressed this possibility by establishing "*Standard Specifications for Construction and Materials*" that specifies procedures to be followed by contractors involved in site work.

Traffic Control

SHA will coordinate with the appropriate staff of the DOT for construction access. The project plans and specifications address maintenance of traffic and safety considerations for access from residential streets and county roads. Access is inherently limited in order to protect trees and shrubs while providing the minimum space required for constructing the proposed improvements. In areas where communities are adjacent to work areas, blaze orange fencing and signage would be installed for safety purposes.

Public Meetings

Meeting were held April 14, 2010 and May 25, 2010 to provide the community an opportunity to review and comment on plans for the project. Representatives from M-NCPPC and SHA met with local residents. The meeting was well attended.

Funding

The proposed environmental projects are being funded by the Maryland State Highway Administration.

Implementation

Construction is expected to begin June 2011 following the award of the contract under the normal SHA advertisement process. The final Plans, Specifications, and Estimate submittal is scheduled for January 2011.

Maintenance

Following construction, the initial period of maintenance and monitoring of the site would be conducted by SHA until projects are accepted by the County. Montgomery County Department of Environmental Protection (MCDEP) is responsible for structural maintenance of all SWM within the right of way and on parkland. M-NCPPC is responsible for non-structural maintenance (i.e. landscaping, mowing, and trash/debris removal) for all SWM facilities on parkland. The anticipated Operating Budget Impact (OBI) for PB-43 and PB-48 for this contract year is $732 per pond per year. The ultimate ownership of the PB-46A site has not yet been determined and is being coordinated between SHA, M-NCPPC, and the County.

PC:

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