MCPB Item # 4

October 13, 2011

MEMORANDUM

September 30, 2011

TO: Montgomery County Planning Board

VIA: Mary Bradford, Director of Parks
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FROM: Erin Tush, Senior Natural Resources Specialist, Park Planning and Stewardship Division
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PROJECT: ICC Environmental Stewardship-Compensatory Mitigation Project PR-257 (Olney Family Neighborhood Pond Project) and NW-39 (Stormwater Management Retrofit)

REVIEW TYPE: Mandatory Referral No. 1011-SHA-1 ICC Compensatory Mitigation

APPLICANT: Maryland State Highway Administration (SHA)

APPLYING FOR: Plan Approval

RECOMMENDATION: Approve the construction of stream restoration/wetland enhancement project PR-257 and stormwater management retrofit project NW-39 as part of the ICC Environmental Stewardship and Compensatory Mitigation Program.

Background

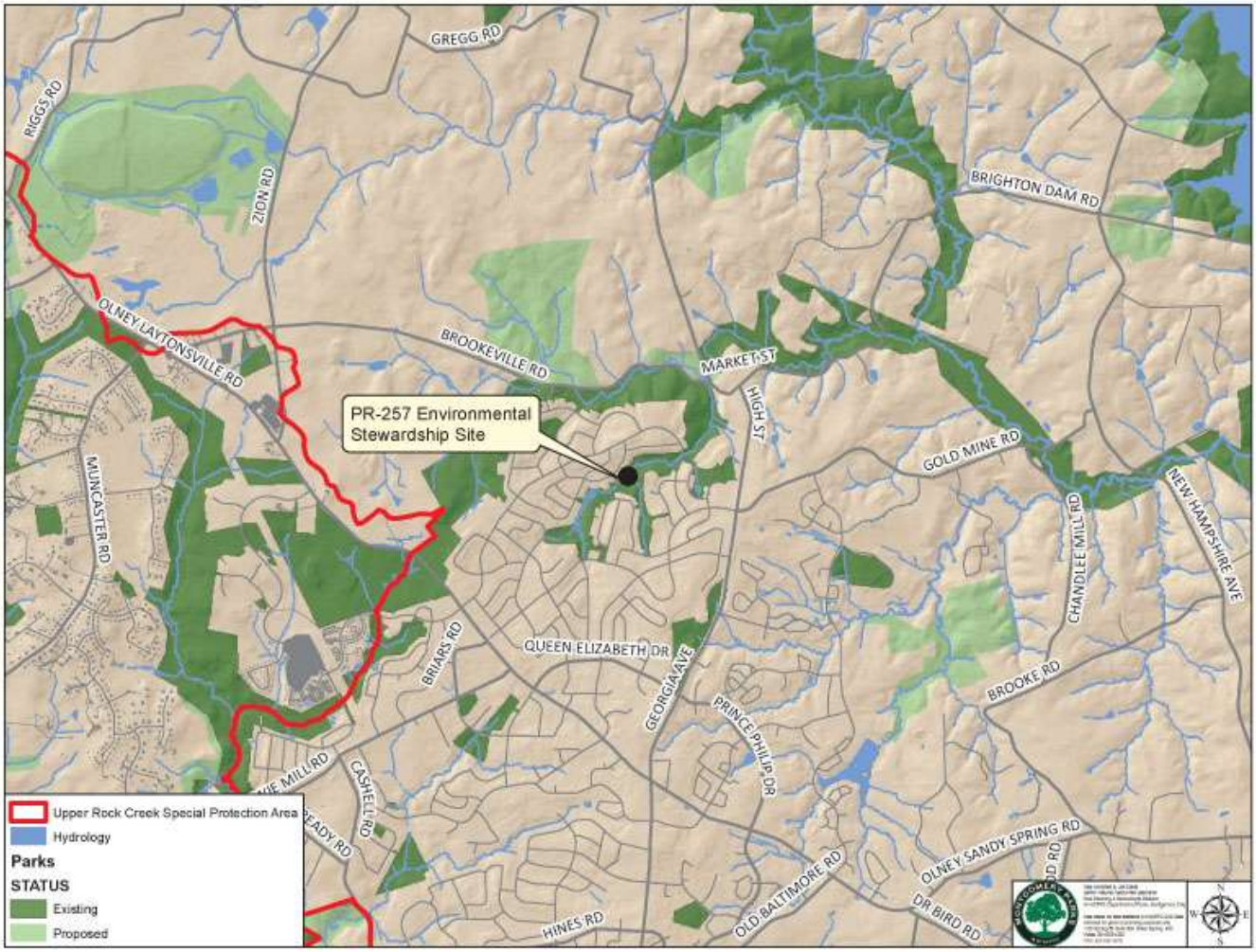
As a part of the Intercounty Connector (ICC) Environmental Stewardship and Compensatory Mitigation (ES-CM) Program, the State Highway Administration (SHA) is completing a number of stream restoration, wetland creation, and stormwater management projects throughout Montgomery County.

The NW-G Contract of the ICC ES-CM Program is comprised of two projects, stream restoration/wetland enhancement project PR-257 and stormwater management retrofit project NW-39. PR-257 is on M-NCPPC Parkland while NW-39 is owned by a local homeowners association.

PR-257

The goal of PR-257, a stream restoration/wetland enhancement project, is to help improve water quality and benefit stream ecology both within the project area and downstream of the project site. This project is located in Olney Family Neighborhood Park along an unnamed tributary to Reddy Branch, which is in the Hawlings River watershed (Figure 1). The site is behind Falling Green Road, Treadway Road, and Richwood Lane. The areas to be restored and enhanced include the in-line pond and approximately 800 linear feet of stream channel downstream of the existing pond.

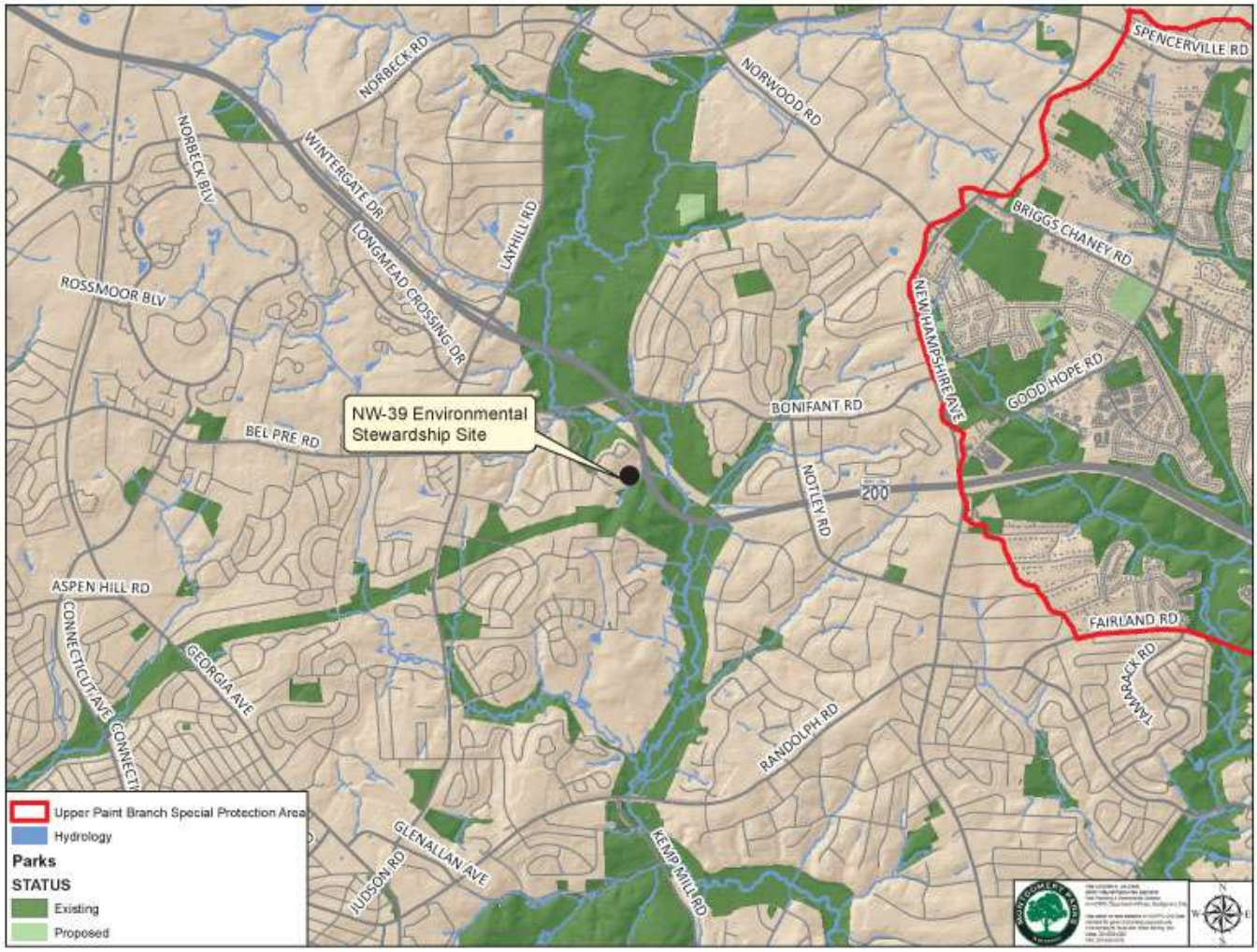
Figure 1. PR-257 Vicinity Map



NW-39

The scope of stormwater management retrofit project NW-39 is to update the existing dry pond facility, originally constructed in 1982, to reduce downstream velocities and improve water quality. The pond is located in the Wheaton-Glenmont area of Montgomery County on Bonifant Woods Community Homeowner's Association (HOA) Property. It drains into an unnamed tributary to Northwest Branch (Figure 2). The project site is bounded to the north by Long Green Drive and to the south by Alderton Lane.

Figure 2. NW-39 Vicinity Map



Olney Family Neighborhood Park

Olney Family Neighborhood Park is a 32.6 acre facility that includes a softball field, basketball court, volleyball court, three playgrounds and approximately 8 acres of community use open space (Figure 3). An unnamed tributary to Reddy Branch runs through the park and into the adjacent Reddy Branch Stream Valley Park. A large portion of this park exists in the stream buffer and thus much of the area is frequently flooded.

Figure 3. Olney Family Neighborhood Park

Three ponds are present within the park limits. Two of them are off-line stormwater management extended detention wetlands constructed in the mid-1990's to provide water quality treatment in an area otherwise lacking in stormwater management controls. With off-line ponds, water is diverted out of the stream channel into the pond during periods of high flow. Off-line ponds minimize negative impacts to aquatic resources in the stream channel and typify the modern design standard.

The third pond is an in-line pond constructed in the late 1970's by the local developer as an amenity for the community. With in-line ponds, all stream flow runs through the pond and eventually exits through the pond outlet, which is frequently a riser structure. In-line ponds are typically no longer built because of their significant negative impact on aquatic resources in the stream channel. Additionally, this pond was not properly sized for the drainage area and has very little stormwater capacity.

The Montgomery County Department of Environmental Protection (DEP) performs structural maintenance on stormwater ponds in Montgomery County, including the two off-line ponds mentioned above. Because the in-line pond does not qualify as a stormwater pond, Department of Parks (Parks) is responsible for full maintenance of this pond and associated infrastructure. Over time, silt accumulated in the pond and a malfunction of the riser structure in 2010 allowed the water level to drop to the extent that water depths in the pond now rarely exceed 6-12 inches. Stagnant, shallow water and excessive siltation have allowed vegetation to encroach into the pond limits resulting in the pond no longer providing the same functions it once did as a recreational pond for the community.

Due to these reasons (in-line pond, demanding maintenance responsibilities, and loss of community amenity), restoring a stream channel through this area is the focus of this project.

Design

The proposed designs of these water quality improvement projects have been coordinated extensively with Parks and DEP, as well as state and federal agencies. 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 systems, identify concerns, and ultimately set reachable restoration goals, these studies incorporated hydraulic modeling, hydrology, watershed history, geomorphic assessments, and habitat and biological assessments.

PR-257

The primary goals of the project include improving water quality and enhancing aquatic habitat. This will be accomplished by returning the in-line pond to a continuous stream.

A stream channel flow path with adjacent vegetated wetland benches will be established in the existing pond footprint. Flow through the riser structure into the principally spillway, which is how the pond water currently drains into the stream below, will be cut off. The embankment will be breached so water will exit the pond by flowing through the current emergency spillway, which will be lowered, into the downstream channel. Stream restoration work, such as bank grading and bed stabilization, will take place along the emergency spillway as well as the downstream channel to ensure a stable transition from the newly constructed channel into the existing channel downstream.

The design elements listed below will help accomplish the project goals:

- Re-establishment of open channel flow and wetland enhancement in the current pond area
- Removal of the existing riser structure and principal spillway
- Stabilization of downstream eroding banks

- Re-connection of the downstream channel to the adjacent floodplain
- Reforestation of adjacent floodplain areas

NW-39

The objective of this pond retrofit is to enhance stormwater treatment by increasing water quality and channel protection volume benefits. The existing dry pond facility at this site was constructed prior to, and therefore is not in accordance with, current stormwater management regulations found in the Maryland Department of the Environment's 2000 Maryland Stormwater Design Manual Volumes I and II. The goal of this project is to raise the performance of the facility to, or as close as possible to, 2000 Manual guidelines while minimizing impacts to adjacent forest stands, the existing embankment, steep slopes, and outfall features.

The above goals will be accomplished through the design elements listed below:

- Removal of the in-line feature of the stormwater pond through diversion of baseflow
- Extending the existing closed storm drain system to minimize channel erosion
- Grading of the pond to provide additional volume for channel protection
- Construction of a new permanent access to provide safe and easy maintenance access to the pond

Access

Access to the project areas will require specialized access routes that are designed to protect natural resources while providing the minimum space required for constructing the proposed improvements. Access for these projects has been closely coordinated with the project team to minimize forest and other natural resource impacts.

All staging areas located near site access points will allow for deliveries to take place safely and with minimal impact to traffic. These areas will be fenced properly to prevent community access to the construction site.

PR-257

Construction access to the PR-257 project site will occur off of Treadway Road just west of 19257 Treadway Road (Figure 4). This access will be in the same location as the current maintenance access for Parks. Because the approved access route and the construction staging locations bisect some of the park open space, portions of that area will be closed during construction. A flagger will be provided to allow the community to cross the construction access area in order to utilize the playground. After construction, these open space areas will be returned to turf grass.

NW-39

Construction access to the NW-39 site will be off of the northeast corner of the end of Alderton Lane (Figure 5). This access route will become the permanent maintenance access for the pond.

Figure 5. PR-257 Access

Figure 4. NW-39 Access

Wetland and Stream Impacts

SHA and the Department of Parks have coordinated efforts to ensure that natural resource impacts are avoided or minimized to every extent possible while still meeting the goals of the restoration. Numerous field reviews have taken place to ensure that access, stream work, and landscaping do not unduly impact natural resources.

Temporary impacts to jurisdictional waters including wetlands or their buffers will occur as a result of this project. These impacts have been minimized to the greatest extent practicable during field reviews of the design plans. All temporary access paths where construction equipment will traverse wetlands will require the placement of protective wood mats. These mats will distribute the weight of the equipment to protect the integrity of the wetland. When access through these areas is no longer needed, the wood mats will be removed and the area re-stabilized with vegetation as necessary. Canopy trees adjacent to wetlands were avoided whenever possible.

Wetland and stream impacts are being coordinated and permitted as required with the Maryland Department of the Environment and the U.S. Army Corps of Engineers.

PR-257

Approximately 837 linear feet of stream impacts will occur to waters of the U.S. associated with restoration to a natural open channel through construction of stream stabilization structures. Approximately 0.6 acre of impact to wetlands will occur in conjunction with access and wetland enhancement activities.

NW-39

Approximately 184 linear feet of perennial/intermittent stream and 204 linear feet of ephemeral stream impacts will occur to waters of the U.S. as a result of this project. Approximately 0.2 acre of impact to wetlands will also occur.

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.

Forest Impacts and Conservation

Disturbance to the forest floor will occur during these projects for construction access and grading. An extensive reforestation/planting plan has been developed as a part of the ICC ES-CM projects and impacts are being coordinated with the Maryland Department of Natural Resources as required in accordance with the Maryland Forest Conservation Act. Strategies for protecting trees adjacent to and within some work areas would include root pruning, avoidance of critical root zones, and tree protection fencing. Disturbed and impacted areas will be stabilized and replanted once construction is complete.

Public Meetings

PR-257

SHA hosted a public meeting on September 15, 2010 to provide the community an opportunity to review and comment on plans for this project as well as others. The meeting was well attended, but mostly by residents there to discuss other ICC ES-CM projects not addressed in this memorandum. Parks staff encouraged SHA to follow up with the community regarding the PR-257 project, as there is strong community interest in Olney Family Neighborhood Park.

A second public meeting was held on November 10, 2010 at the Olney Mill Community Association (OMCA) HOA meeting. At this meeting a proposal for a meadow management area was introduced by the park manager. The meadow management concept was to increase the ecological value of the stream buffer area by planting a meadow in two currently mowed fields and for the old playground to be removed, as those features are located within the stream buffer. The community voiced strong opposition to the meadow establishment and playground removal proposal citing, among other things, appreciation of the open space and the use of that space for the annual community 4th of July picnic.

In an effort to accommodate the request for open space for the picnic and playing fields, Parks staff reduced the proposed meadow area to include only the field closest to the pond, but still pursued the removal of the playground. The next public meeting was held at the OMCA HOA meeting on March 9, 2011 where that proposal was presented. The community was again strongly against this idea citing that children use that playground often and that residents enjoy walking their dogs through that field and around the pond. SHA also presented a current version of the pond design, showing the open channel system with an adjacent wetland berm, and the community was generally not averse to this concept.

Parks staff revised the meadow management proposal in a continued effort to improve the stream buffer while providing the community with the amenities it values most. To continue to provide walking paths, it was proposed that space to walk continue to be mowed along the old pond embankment and around the playground, which would remain. Mowed trails were proposed through the meadow area to provide additional walking paths. This was introduced to the community at the September 14, 2011 OMCA HOA meeting when SHA presented the updated pond design with multiple wetland benches. The community was accepting of SHA's pond design but was still not pleased with Parks' proposed meadow area and walking trails. They communicated that the open space and playground are what they value most about the park, not necessarily the ability to traverse the pond.

Given the clearer view of the priorities of the community, Parks staff reevaluated the best way to both provide an environmental lift (i.e. increased planted buffer) and protect the open space in the park. Additionally, at this point in time Parks received confirmation from MDE that the pond embankment, upon completion of the work proposed by SHA, would no longer qualify as one having to meet the MD-378 requirements. Thus, Parks will not be required to continue to keep that area free of woody vegetation. Given this new information and the community's priorities for the park, Parks proposed to include the embankment, area around the emergency spillway, and approximately 30 feet off of the southern pond edge into the field for reforestation, and the remainder of the field to continue to be mowed (Figure 6). This plan optimizes the balance between the goals of the community and stewardship of the environment. It allows the forest to be extended while still preserving the majority of the currently mowed open space and allowing the playground to remain. In addition to the open space, there will also be an 8 foot wide mowed maintenance access route/trail that will run along the fence behind the houses on Falling Green Road. This access will be needed for reforestation

maintenance and will provide a connection between the people's choice trails along Reddy Branch and the hiker biker asphalt trail as requested by some community members.

During the September 14th community meeting, residents expressed their desire to connect the existing hiker/biker trail with Treadway Road citing the absence of a way for children to bike from that part of the community to Rosa Parks Middle School without using the main road. Parks staff is investigating, as a future project not associated with PR-257, the possibility of constructing a trail to connect Treadway Road to the asphalt trails along the stream to provide a walking/biking route.

In response to the design shown in Figure 6 that was presented to the OMCA HOA via email on September 17, 2011, OMCA has expressed their satisfaction with the latest proposal and has written a memo in support of the project (Attachment 1). Parks was also contacted by State Senator Zucker who has been following this project and submitted a letter supporting the latest proposal (Attachment 2). Delegate Zucker also acknowledged staff's efforts to achieve a workable compromise with the community.

Figure 6. PR-257 Reforestation Proposal

NW-39

A general public meeting was hosted by SHA on June 9, 2010 at Argyle Middle School for the NW-39 project as well as several other ICC ES-CM projects not addressed in this memorandum. This meeting was not very well attended.

An additional meeting was held with SHA representatives and the Bonifant Woods HOA on January 19, 2011. Design concepts were presented to the HOA and community members were able to provide comments and preferences on the design. Comments expressed by HOA members included access locations, tree impacts, maintenance responsibility, temporary construction easements, monetary compensation, plant materials, visual effects, and project schedule. The project team revised the design to minimize tree impacts, selected the closed channel design extension of the storm drain system, and shifted the access to the south of the pond to accommodate these preferences.

Another meeting was held with SHA and the HOA on April 25, 2011 to present the revised design. SHA reports that the HOA felt that their comments were addressed and that they are in support of the revised design.

Funding

The proposed environmental stewardship projects are being funded by SHA.

Implementation

Construction is expected to begin in September 2012 following the award of the contract under the normal SHA bid process that is used for similar environmental contracts.

Traffic Control

SHA will coordinate with the appropriate staff of the Montgomery County Department of Transportation for construction access and materials transport. The project plans address maintenance of traffic and safety considerations for access from residential streets and county roads. In areas where communities are adjacent to work areas, blaze orange fencing and signage will be installed for safety purposes. As discussed above under *Access*, temporary staging areas for this project have been proposed in areas that will allow deliveries to take place safely and with minimal impact to local traffic.

Air and Noise

As proposed, these projects are not expected to have any significant effect on traffic within the adjacent communities. Therefore, an environmental traffic noise analysis and assessment was not conducted. The construction phase of these projects has the potential to temporarily impact 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.

Maintenance

PR-257

The stabilization, enhancement, and restoration techniques proposed are designed to be self-sustaining, so long-term maintenance is expected to be minimal. Following construction, maintenance and monitoring of the site will be conducted by SHA for up to two years, or until deemed necessary by the permitting agencies. SHA will also maintain the reforestation areas for two years. Upon completion of a successful monitoring period, the project will be turned over to M-NCPPC.

Maintenance is expected to be decreased from pre-construction conditions. With the embankment no longer qualifying under MD-378 and the removal of the riser, efforts to keep the embankment free of woody vegetation and the riser functional and trash-free will no longer be needed.

NW-39

Following construction, the initial period of maintenance and monitoring of the site would be conducted by SHA until projects are accepted by the County. At that point, MCDEP will responsible for structural maintenance of the pond under a stormwater management easement while the HOA will responsible for storm drain maintenance as well as non-structural maintenance (i.e. landscaping, mowing, and trash/debris removal) to the pond.

PC:

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