



## MEMORANDUM

May 30, 2018

**TO:** Stephen Aldrich, M-NCPPC Montgomery County Planning

**VIA:** Mike Riley, Director of Parks

Mitra Pedoeem, Deputy Director of Administration, M-NCPPC Montgomery Parks

Jai Cole, Acting Chief Park Planning and Stewardship Division, M-NCPPC Montgomery Parks

**FROM:** Matt Harper, Acting Natural Resources Manager, Park Planning and Stewardship Division

**PROJECT:** MD 355 Bridge Replacement over Little Bennett Creek

**REVIEW TYPE:** Mandatory Referral No. MR2018025

**APPLICANT:** Maryland Department of Transportation State Highway Administration

**APPLYING FOR:** Plan Approval

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**RECOMMENDATION: Approve parkland impacts associated with the replacement and widening of MD 355 Bridge over Little Bennett Creek, the construction of a temporary roadway crossing during construction, and an associated stream restoration within Little Bennett Regional Park's Little Bennett Creek.**

### Description

Mandatory Referral approval is requested for the Maryland Department of Transportation State Highway Administration (MDOT SHA) bridge replacement project on MD 355 (Frederick Road) over Little Bennett Creek in Montgomery County, Maryland. The project would replace the existing structurally deficient 40-foot span concrete T-beam bridge built in 1925 with a pre-stressed concrete slab with two 55-foot spans. The project limits along MD 355 extend approximately 1100' from the intersection at MD 109 (Old Hundred Road) in Hyattstown to the intersection of Croghan Lane to transition the new bridge into existing roadway. The increased span length and clearance height of the proposed bridge will prevent the 50-yr design storm from overtopping the bridge and roadway, allowing for a better alignment with Little Bennett Creek, less frequent flooding of the roadway, and positive drainage on the bridge. The proposed bridge project also includes widened shoulders to accommodate a future bikeway and 750 linear feet of stream restoration to provide stable conveyance of Little Bennett Creek under MD 355 and mitigation for impacts to Parkland. In order to complete the necessary work, the existing two-lane bridge would be closed, and traffic bypassed on a temporary two-lane bridge immediately adjacent during construction.

## Summary

We recommend that the Board approve this project with the following comments to MDOT SHA, SHA shall:

1. Obtain a Park Construction Permit from Montgomery County Department of Parks prior to commencement of any construction activities on Parkland.
2. Design all stormdrain and stormwater facility outfalls proposed on Parkland to Parks' environmental standards to provide stable transitions to the stream, velocity dissipation, and additional stormwater storage.
3. Maintain proposed bridge width (38'-8" clear roadway) and adjust roadway shoulders to accommodate an 8' clear (minimum) elevated shared use path on the western side of the roadway to minimize environmental impacts to this highly constrained and ecologically sensitive resources within Little Bennett Regional Park.
4. Keep both Little Bennett Regional Park access (via Hyattstown Mill Road) and the Hyattstown playground open during construction.
5. Construct the stream restoration project as well as the reconstruction of the playground parking lot as mitigation for the impacts to parkland.

## Site Context

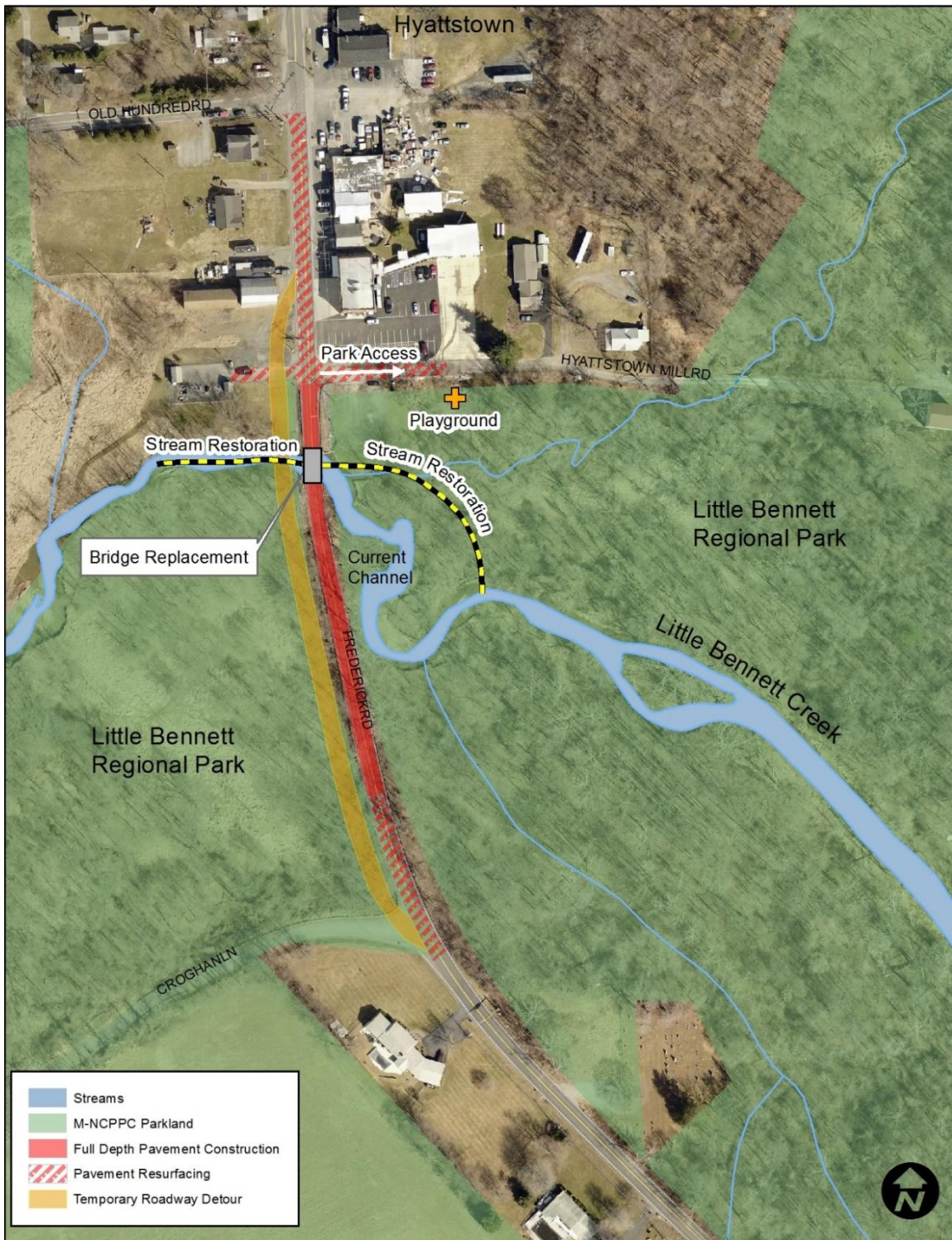
The MD 355 bridge spans Little Bennett Regional Park, including the associated Little Bennett Creek's naturalized floodplain (Figure 1). The project extends north of the bridge along MD 355 to the intersection at Old Hundred Road and south to the intersection of Croghan Lane. Properties adjacent to the project area north of the proposed bridge include a WSSC Wastewater Facility and residential lots west of MD 355 and the Hyattstown Volunteer Fire Department (HVFD) and commercial businesses to the east. The remainder of the immediate project area is part of Little Bennett Regional Park, which includes the Hyattstown Playground located on the southeast corner of MD355 and Hyattstown Mill Rd (Figure 2).

Little Bennett Regional Park east of MD 355 is part of the Little Bennett Best Natural Area, classified as one of the Park system's best quality and most unique ecological communities. Little Bennett Creek is a Use III-P stream (Nontidal Cold Water and Public Water Supply), which supports one of the few brown trout fisheries in the County.

**Figure 1. MD 355 Bridge Replacement over Little Bennett Creek Project Location Map**



Figure 2. MD 355 Bridge Replacement over Little Bennett Creek Project Vicinity Map





## **Background**

The bridge improvements are necessary due to the structure being structurally deficient with significant deterioration of the deck, concrete beams and abutments. The bridge has significant undermining of the abutments due to stream scour and the current stream alignment is eroding the roadway side slopes of MD 355 at two locations, one at the bridge south abutment and another approximately 200 feet to the south of the bridge. Grout bags have been installed on several occasions to shore up the bridge abutments in an attempt to prevent further undermining. MDOT SHA is proposing to reprofile the bridge due to flooding concerns and lack of positive drainage on the bridge. The roadway will be raised a maximum of 23 inches at the bridge site. This, combined with the increased span length, will prevent the 50-yr. design storm from overtopping the bridge and roadway.

The existing roadway widths of 11-foot lanes and 1-foot shoulders (total 24' clear roadway) will be widened to 11-foot lanes and 6-foot minimum shoulders (total 38'-8" clear roadway) for bicycle compatibility. An extra wide 9' minimum width shoulder is being provided on the west side of the bridge to be able to accommodate a future shared use path in accordance with the proposed Clarksburg Master Plan and Hyattstown Special Study Area.

## **Maintenance of Traffic**

MDOT SHA is proposing to install a temporary roadway and temporary bridge immediately to the west of the existing structure in Little Bennett Regional Park. This will prevent the need for a detour or temporary signal and will allow for two lanes of traffic to be maintained at all times during construction. Preventing a detour is necessary due to the close proximity of the Hyattstown Fire Station at the corner of MD 355 and Hyattstown Mill Road and because MD 355 is a detour route for I-270, especially during vehicular incidents. Roadway traffic would be maintained at all times through the project site along the temporary roadway. Access to all residential, business, fire station, and Little Bennett Regional Park (via Hyattstown Mill Rd) entrances adjacent to the work zone would also be maintained.

Construction of the MD 355 Bridge over Little Bennett Creek project is tentatively scheduled to begin in fall 2018 and will start with the construction of the temporary roadway bridge across Little Bennett Creek. This work will take approximately 6 months. Once the temporary bridge is constructed, Clarksburg Rd traffic will be diverted onto the temporary road and work will begin on the bridge replacement project and stream restoration. The bridge construction and associated stream work is estimated to last for 18 months, making the total construction duration approximately two years. MDOT SHA intends to make every effort to complete this project as quickly as possible while minimizing impacts to local residents and motorists.

## **Park Impacts**

The MD 355 bridge spans Little Bennett Creek at the northwest corner of Little Bennett Regional Park (Figure 2). While the existing roadway bridge itself is within the public right of way, the widening of the bridge, access to the project, temporary roadway/bridge construction, proposed stormwater management, and construction staging areas would impact parkland. MDOT SHA will be required to obtain a Park Construction Permit from Montgomery County Department of Parks prior to commencement of any construction activities on parkland. Both Little Bennett Regional Park access (via Hyattstown Mill Road) and the Hyattstown Playground would remain open during construction. Any short-term closures would need to be coordinated with the Department of Parks.

The Hyattstown playground parking lot is needed for construction and staging. With sufficient parking at the fire house across Hyattstown Mill Rd, the playground will remain open throughout the duration of the construction. MDOT SHA would be required to provide signage in the HVFD parking area that regulates this use for playground parking during the construction period and must be coordinated with HVFD staff. Once construction is complete, the existing playground parking lot will be reconfigured and rebuilt by MDOT SHA to better

accommodate the stream restoration, fire truck access for pumping from Little Bennett Creek, an ADA accessible parking space with access isle, and 3 standard parking spaces that better match the demands of the existing playground. The temporary roadway and bridge will be removed following the completion of the permanent bridge and the impacted area will be naturalized and planted per the Park Construction Permit.

MDOT SHA anticipates needing right-of-way (ROW) along MD 355 adjacent to Little Bennett Regional Park to accommodate proposed bridge and roadway widening. The anticipated right-of-way needs include approximately 11,300 square feet (0.26 acre) of fee simple for the new bridge and 31,000 square feet (0.7 acre) of perpetual easement for stormwater management and newly constructed roadway side slopes. An approved Limit of Disturbance (LOD) for this work would be finalized during Park Permit Review and an approved park permit would grant construction access to MDOT SHA to this area on Parkland.

A portion of the stormwater from the bridge project would be treated on the northwest side of the bridge in a proposed gravel wetland stormwater management facility that has been sized to treat volumes at a level that compensates for discharges being left untreated on other parts of the project. Parks would work with MDOT SHA through the Park Permit Review Process to adjust the outfall located on Parkland at the Northeast portion of the bridge to be designed to safely convey untreated discharge to the stream using a series of step pools that transition into the restored stream.

### **Wetland and Stream Impacts**

The existing Little Bennett Creek bridge has significant undermining of the abutments due to scour and the current stream alignment is eroding the roadway side slopes of MD 355 at two locations, one at the bridge south abutment and another approximately 200 feet to the south of the bridge. To address these concerns, MDOT SHA is planning to extend the southeast wing wall and divert main channel flows upstream of the roadway embankment to prevent the stream from eroding these roadway features into the future. The proposed bridge replacement would utilize the existing bridge abutment and pier footprint within the active channel and therefore would not create new wetland or stream impacts during construction. The temporary roadway bridge on the western side of MD 355 would have temporary impacts to floodplain wetlands, which would be reestablished to their original extent when it is removed at the end of construction. Wetland and stream impacts are being coordinated as required with the Maryland Department of the Environment and the U.S. Army Corps of Engineers.

Section 4(f) implementing regulations allow the Federal Highway Administration (FHWA) to determine that certain transportation uses of Section 4(f) land will have only minor impacts on the protected resource (publicly-owned public parks, recreation areas, wildlife and waterfowl refuges and historic sites). The permanent ROW impacts of this project will not impair the activities, features, and attributes important to the Little Bennett Regional Park. MDOT SHA will request that M-NCPPC and FHWA concur with a *de minimis* impact finding for permanent use of the resource. In addition to the permanent impacts, construction of the temporary roadway, widening of the new roadway and bridge, as well as the stream relocation and restoration will result in temporary impacts to Parkland.

### **Parkland Mitigation**

MDOT SHA has committed to mitigating impacts to Little Bennett Regional Park by completing a stream relocation and restoration project. The general scope of work for the mitigation project includes approximately 750 feet of stream reconstruction and re-alignment, 500 feet upstream from the structure to 250 feet downstream of the existing bridge structure (Figure 2). Reconstruction of the stream will consist of a series of cross vanes, rifles, and pools that will help to reorient the flows through the bridge, improve aquatic habitat, and stabilize an area upstream of the bridge where the existing channel drops dramatically by three vertical feet. The channel on the east side of MD 355 would also be relocated outside of the existing channel to better align stream flows with the bridge opening. Additional grading would be performed to allow the stream to access the southern span of the proposed bridge extension and provide relief to the stream during elevated flow events. In

addition, as stated above, once construction is complete, the existing playground parking lot will be reconfigured and rebuilt by MDOT SHA to better accommodate the stream restoration, fire truck access for pumping from Little Bennett Creek, an ADA accessible parking space with access isle, and 3 standard parking spaces that better match the demands of the existing playground.

## **Maryland Historic Trust**

A portion of the project is included in the Hyattstown Historic District. The Maryland Historical Trust has reviewed the proposed project and has determined that the project would have no adverse effect and acknowledges FHWA's intent to make a *de minimis* impact finding.

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

There would be impacts to forested areas on parkland resulting from the bridge replacement, access, staging areas, stream restoration/realignment, and the temporary vehicular bridge. These proposed impacts have been reviewed and minimized through Parks staff review and coordination with MDOT SHA. Impacts are being coordinated with the Maryland Department of Natural Resources as required and mitigated for in accordance with both the Maryland Forest Conservation Act and Park Permit. Forest impacts for this project have been estimated at 2.3 acres. A reforestation/planting plan has been developed as part of this project and replanting on parkland will be reviewed and approved as part of the park construction permitting process.

MDOT SHA and Parks Staff have coordinated these efforts to ensure that natural resource impacts are avoided or minimized, to every extent possible, while still meeting the goals of the rehabilitation. Numerous field reviews have taken place to ensure that access, construction work, and landscaping do not unduly impact natural resources. Certain impacts to trees within the area proposed for the temporary pedestrian bridge and stream realignment would be unavoidable. Parks will continue to work with SHA as plans are finalized to develop further methods to avoid and/or minimize tree impacts. These strategies will be detailed in the park construction permit and would include root pruning, avoidance of critical root zones, mulch access with hardwood matting, and tree protection fencing. Disturbed and impacted areas would be stabilized and replanted once rehabilitation of the bridge is complete.

## **Public Outreach**

A Request for Public Comment on the project's Section 4 (f) of the US Department of Transportation Act- *de minimis* Finding has been posted on SHA's website and can be found here:

[http://www.roads.maryland.gov/OPPEN/MD\\_355\\_over\\_Little\\_Bennett\\_Creek\\_Section\\_4f\\_de\\_minimis\\_finding\\_Request\\_for\\_Public\\_Comment\\_October\\_23\\_2017.pdf](http://www.roads.maryland.gov/OPPEN/MD_355_over_Little_Bennett_Creek_Section_4f_de_minimis_finding_Request_for_Public_Comment_October_23_2017.pdf)

cc:

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