

## 1.0 INTRODUCTION

On behalf of the Maryland-National Capital Park and Planning Commission (M-NCPPC), the Montgomery County Department of Transportation (MCDOT) has prepared an Environmental Assessment (EA) for the proposed replacement of Bridge No. M-PK24 on Beach Drive over Silver Creek in Rock Creek Park. This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 USC§ 4332(c)), the Council on Environmental Quality (CEQ) implementing regulations for NEPA (40 CFR parts 1500-1508), and the National Capital Planning Commission's (NCPC) Environmental and Historic Preservation Policies and Procedures. Additionally, as outlined in 23 CFR 774, the Federal Highway Administration (FHWA) has made a *de minimis* impact finding with respect to the use of 3,000 square feet of Rock Creek Park for transportation purposes, to comply with the requirements of Section 4(f). Furthermore, MCDOT notes that the requirements of Section 4(f) do not apply to the temporary use of Rock Creek Park associated with staging and construction related efforts.

The existing bridge, built in 1964, is located on Beach Drive within the confines of Rock Creek Park in Kensington, Maryland (**Attachment 1**). Existing land use in the study area is primarily forested national parkland surrounded by a medium density residential setting. Beach Drive is a two-lane road with a posted speed limit of 25 miles per hour. A raised asphalt path uses the north side of Bridge No. M-PK24 to cross Silver Creek. This asphalt path is called Rock Creek Trail, which is part of the Rock Creek Park trail system. Directly west of Bridge No. M-PK24 is the intersection of Beach Drive and Kensington Parkway. Beach Drive is a park road with an average daily traffic of 5,500 cars per day and is classified as SR-16 (Signed Shared Roadway – Class III). Trucks are prohibited from using Beach Drive.

Bridge No. M-PK24 consists of three steel plate arches, each approximately nine feet long, with masonry headwalls and parapets. Silver Creek flows beneath the structure from north to south. The bridge provides a 24'-0"± wide clear roadway that carries two lanes of traffic with a 7'-0"± trail on the north side, Rock Creek Trail, and two 1'-9"± parapets. The existing structure has an approximate out-to-out width of 37'-2". The steel plate arches are skewed approximately 57° to Beach Drive and have an overall length of approximately 45'-6". The pavement for Beach Drive in the region of the structure is asphalt. The existing bridge and approach roadways are overtopped by any storm larger than the 2-year design storm.

## 2.0 PURPOSE AND NEED FOR PROPOSED ACTION

The 2015 Biennial Bridge Inspection Report indicates that the bridge is in poor condition with a Bridge Sufficiency Rating of 49.3 which being below 50, makes it eligible for rehabilitation or replacement using federal funding under the Highway Bridge Program. The south headwall has a 26'-0" length of failed masonry beginning in the center of the center arch and extending to the east side of the eastern arch. The failed area is full height by full depth. Due to the poor condition of the south headwall and parapet, a two-foot wide precast concrete traffic barrier has been placed along the edge of the roadway about eight inches in front of the parapet. The corrugated steel arches typically exhibit laminar rust at and below the waterline. The west side of Arch Nos. 1 and 3 have holes in the steel along the waterline at the north and south ends, respectively. The stream channel exhibits moderate erosion with vertical cut banks and scour up to two feet deep within the channel and up to five feet deep along the west pier and the center arch.

Therefore, based on the information discussed in the proceeding paragraphs, purpose and need for the replacement of Bridge No. M-PK24 is to:

- replace a structurally deficient bridge with a Sufficiency Rating of 49.3 which is less than 50, making it eligible for rehabilitation or replacement using Federal funding under the Highway Bridge Program; and
- improve pedestrian and vehicular safety.

### 3.0 ALTERNATIVES ANALYSIS

This EA considered the No Action alternative and the proposed action alternative, see the Type, Size, and Location Study for Replacement of Bridge No. M-PK24.

**No Action Alternative** – Under the No Action Alternative, the structurally deficient Bridge No. M-PK24 would not be replaced, its Sufficiency Rating would continue to worsen, and pedestrian and vehicular safety would not be improved. While the No Action Alternative would not meet the identified purpose and need of the proposed action, it was considered in this EA in compliance with NEPA to provide a baseline for comparison of impacts associated with the proposed action.

**Proposed Action Alternative** – The replacement bridge is proposed to be a prestressed concrete adjacent solid slab beam bridge. These beams will be designed to be non-composite in conformance with Maryland State Highway Administration (SHA) standards for prestressed concrete solid slab beam bridges. The proposed roadway bridge will provide two 11-foot traffic lanes and two five-foot bike lanes each with a one-foot offset to a 2'-4" wide parapet. At the request of M-NCPPC, concrete bridge parapets encased in stone masonry will be provided along the outside of each offset sidewalk to maintain the look and feel of the existing bridge. The proposed roadway bridge will be built on horizontal and vertical alignments similar to that of the existing bridge. The approach roadways will be milled and resurfaced to tie into the new concrete bridge deck. There will be approximately 200 feet of approach roadway east of the bridge and approximately 75 feet of approach roadway work to the west. The proposed abutments will be placed on a skew to the roadway that is similar to the existing structure. Riprap will be used to protect the slopes and abutments from scour.

In coordination with, and at the request of M-NCPPC, Beach Drive will be closed during construction and accelerated bridge construction techniques will be utilized to minimize the duration of construction. It is anticipated that the construction will take place during one summer between the last day of one school year and the first day of the following school year. The proposed detour route utilizes Connecticut Avenue (MD 185), Plyers Mill Road/ Metropolitan Avenue/Capital View Avenue (MD 192), and Stoneybrook Drive, which are all equal or better roadways than Beach Drive. The proposed detour route is approximately 4.4 miles and would take approximately 15 minutes.

Because of the presence of Rock Creek Trail on the existing bridge and the need to maintain pedestrian traffic during construction, a temporary pedestrian bridge was proposed to be located approximately 90 feet north and upstream of the Beach Drive Bridge. This location was selected to avoid cherry trees which are considered to be of significant value to the M-NCPPC. Subsequently, and in agreement with the M-NCPPC, the decision was made to make this bridge a permanent crossing for the Rock Creek Trail and relocate the trail alignment from the crossing of the Beach Drive Bridge to crossing this pedestrian bridge. Bicycle lanes will still be provided on Beach Drive for higher speed cyclists who require a less circuitous alignment.

Based upon a preliminary stream geomorphology report prepared in November 2014, stream improvements will be made from approximately 125 feet downstream of the Beach Drive Bridge to approximately 125 feet upstream of the Beach Drive Bridge. These stream improvements are proposed to include grade control features, streambank stabilization measures, utility crossing stabilization measures,

and outfall stabilization. All stream improvements are being coordinated with M-NCPPC. The limits of disturbance (LOD) for the project include a staging area southeast of the bridge and east of Silver Creek.

Letters dated June 13, 2017 were sent to the Montgomery County Fire and Rescue, Montgomery County Public Schools, and the Montgomery County Police Department requesting concurrence for the road closure and detour plan. A letter dated July 5, 2017 from the Montgomery County Fire and Rescue Service concurred with the road detour plan. A letter dated August 3, 2017 from the Montgomery County Public Schools also concurred with the road detour plan (**Attachment 2**). Montgomery County Police requested a meeting to discuss the detour route. The detour route was discussed with the M-NCPPC Park Police, Montgomery County Police, and with Montgomery County Fire and Rescue in a meeting held August 24, 2017. No objections were received, but it was suspected that detoured traffic may attempt to utilize local roads adjacent to the project site. MCDOT stated that they were prepared to fund additional traffic enforcement if local traffic issues arise.

A public meeting was held on May 31, 2016 to discuss this bridge replacement project, design considerations, and the proposed detour route (**Attachment 2**). There were three members of the public in attendance and no comments were received.

#### 4.0 ENVIRONMENTAL ANALYSIS

The replacement of the existing Bridge No. M-PK24, approach roadway work, and the construction of the revised Rock Creek Trail pedestrian bridge and approach trail work will remain wholly within the existing M-NCPPC and Montgomery County rights-of-way (ROW).

On February 12, 2015 the Maryland Historical Trust (MHT) concurred that further archaeological investigations are not warranted for the proposed project (**Attachment 3**). Additionally, the MHT has determined that there are no historic properties affected by this undertaking.

MCDOT requested that FHWA make a *de minimis* impact finding, with respect to the 3,000 square feet of Section 4(f) property that would be converted from park use to transportation use and that the requirements of Section 4(f) do not apply to the temporary use of 84,042 square feet of Rock Creek Park for staging and construction related efforts. Due to the temporary use of the land given that the officials with jurisdiction over this resource have indicated their agreement with the following five criteria:

- The duration (of the occupancy) will be temporary, i.e., less than the time needed for construction of the project, and there should be no change in ownership of the land;
- The scope of the work will be minor, i.e., both the nature and the magnitude of the changes to the Section 4(f) resource are minimal;
- There are no anticipated permanent adverse physical impacts, nor will there be interference with the activities or purpose of the resource, on either a temporary or permanent basis;
- The land being used will be fully restored, i.e., the resource will be returned to a condition which is at least as good as that which existed prior to the project; and
- There must be documented agreement of the appropriate Federal, State, or local officials having jurisdiction over the resource regarding the above conditions.

The above temporary use criteria and other park-related issues of this project were discussed with M-NCPPC, the officials with jurisdiction over the Park, on the following dates: August 20, 2014 and April 8, 2015. M-NCPPC concurred on July 12, 2017 with the above *de minimis* impact finding and temporary use criteria (**Attachment 4**). Additionally, in accordance with 23 CFR 774, the proposed project was posted for public availability on August 7, 2017 (**Attachment 4**); no public comments were received.

regarding the proposed project. Thus, in accordance with 23 CFR 774, the 84,042 square feet of temporary impacts associated with the staging area and construction activities would not be subject to the requirements of Section 4(f) and 3,000 square feet of park conversion to transportation uses would qualify for a *de minimus* impact finding. FHWA provided their concurrence on the *de minimis* finding December 11, 2017.

On February 24, 2015, the Wildlife and Heritage Service of the Maryland Department of Natural Resources (DNR) stated that the Potomac Stygobromid (*Stygobromus tenuis potomacus*) has been documented in close proximity to the project site (**Attachment 5**). While not currently receiving legal protection, this tiny aquatic invertebrate is on a species watchlist for Maryland due to it being a globally rare species. DNR requests that steps be taken to avoid altering the groundwater hydrology or water quality, as this is a species found in groundwater spring habitats. Based on current designs plans, no alteration of the groundwater hydrology or water quality is expected; therefore, no further action is required regarding the Potomac Stygobromid. In a letter dated June 17, 2016, the Environmental Review Program of DNR stated that Rock Creek and tributaries near the project site are classified as Use I streams (Water Contact Recreation, and Protection of Aquatic Life). Generally, no instream work is permitted in Use I streams from March 1 through June 15. No anadromous fish have been documented near the project site. Also, caution should be taken to avoid contact of stream water with curing concrete as it can cause significant pH spikes in the stream. Care should also be taken to maintain passage opportunities for aquatic life after project completion (**Attachment 6**). According to the U.S. Fish and Wildlife Service, there are no federally proposed or listed endangered or threatened species known to exist within the project area (**Attachment 7**).

The bridge project resides primarily within the 2013 regulated 100-year floodplain and 2-year floodplain. The stream is often flooded as Rock Creek backs up into this creek. The project will alleviate some flooding of the roadway by increasing the hydraulic opening. The project will result in approximately 1.97 acres of permanent and temporary impacts to the Silver Creek floodplain from grading, clearing/grubbing, and structure replacement. Additionally, 105 square feet of permanent stream impacts and 7,419 square feet of temporary stream impacts will be associated with the placement of riprap for scour protection. Measures will be undertaken during construction of the project to minimize water quality impacts to Silver Creek. These measures could include: restricting the contractor's access to the stream, protecting the stream by using sand bag diversion dikes during the subsequent placement of the new abutments and riprap for scour protection, and restricting construction during environmentally sensitive times.

The proposed project would require minimal tree clearing and in a letter dated December 12, 2017, a Forest Conservation Act exemption was granted from the Montgomery County Planning Department of the M-NCPPC. The project site is exempt the Forest Conservation Law because the site is a State or County highway construction activity that is subject to Section 5-103 of the Natural Resources Article of the Maryland Code or Section 22A-9 of the Forest Conservation Law (**Attachment 8**).

The existing bridge currently does not have overhead utilities present which could interfere with construction. Two sanitary sewer lines are located roughly parallel to the creek at approximately 16 feet and 50 feet east of the east bank. These utilities were test-pitted during preliminary engineering to determine their exact location and coordination with the Washington Suburban Sanitary Commission is underway.

This project qualifies as a Type III project under FHWA/SHA noise policy and guidance, and does not require a noise study because the project does not add through capacity. This project is exempt from the requirement that a conformity determination be made (U.S. Environmental Protection Agency (EPA)

Criteria and Procedures for Determining Conformity to State or Federal Implementation Plans, Programs or Projects – Final Rule) and under the Clean Air Act (CAA) pursuant to 40 CFR 93.126 as a reconstruction of a bridge with no additional travel lanes being added. No analysis or discussion of Mobile Source Air Toxins (MSAT) is necessary. This project is not a project of air quality concern for particulate matter 2.5 (PM 2.5,) as defined in the final rule at 40 CFR 93.123(b)(1). Since this project is not adding through roadway traffic capacity, air quality and noise analyses are not warranted.

No displacements are required. This project is consistent with the Kensington Sector Plan- Montgomery County Planning Department, adopted June 2011. The project is within a Priority Funding Area, as defined under the Smart Growth Areas Act of 1997. This project is identified in the current 2013-2018 STIP/TIP stating the bridge is to be replaced over Silver Creek and reconstruct roadway approaches.

No voluntary cleanup program (VCP) sites listed with the MDE land restoration program (LRP) are located within a half mile radius of the project site. While six sites are located within a mile radius, they will likely cause no effect to the bridge replacement project.

The proposed project will not provide new access to any new or planned development areas. Therefore, secondary impacts are not anticipated as a result of this project. No disproportionately high or adverse effects on minority or low-income populations will occur as a result of this project.

In summary, the proposed project will not involve any significant environmental impacts to socio-economic, natural, or cultural resources. It will not induce significant foreseeable alterations in land use or affect planned growth.

## **5.0 COORDINATION**

The following is list of key agencies consulted in preparation of this EA, all coordination is documented in the attachments included with this EA.

- National Capital Planning Commission
- Federal Highway Administration
- U.S. Fish and Wildlife Service
- Maryland National Capital Park Planning Commission (M-CPPC)
- M-NCPPC Park Police
- Maryland Historical Trust (MHT)
- Maryland Department of Natural Resources - Wildlife and Heritage Service
- Maryland Department of Natural Resources - Environmental Review Program
- Maryland State Highway Administration
- Montgomery County Department of Transportation
- Montgomery County Fire and Rescue
- Montgomery County Public Schools,
- Montgomery County Police Department
- Montgomery County Planning Department