



MCPB
Item No.
Date: 07.15.2021

Montgomery County Brookville Smart Energy Depot, Mandatory Referral MR2021021



Tsaiquan Gatling, Senior Planner, DownCounty, Tsaiquan.Gatling@montgomeryplanning.org, 301.495.2116



Stephanie Dickel, Supervisor, DownCounty, Stephanie.Dickel@montgomeryplanning.org, 301.495.4527

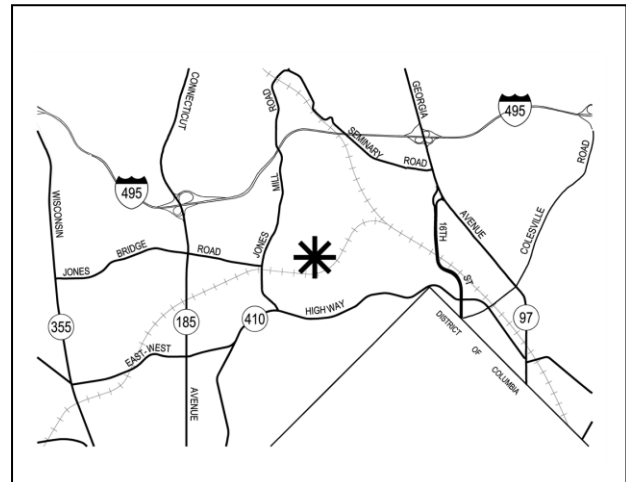


Elza Hisel-McCoy, Chief, DownCounty, Elza.Hisel-McCoy@montgomeryplanning.org, 301.495.2115

Completed: 7/2/2021

Description

- Request to incorporate electric vehicle charging, along with several clean energy production technologies within the existing Montgomery County Brookville Maintenance Facility Transit Shop.
- **Location:** 8710 Brookville Road
- **Zone:** IM-2.5 H-50
- **Master Plan:** 2017 *Greater Lyttonsville Sector Plan*
- **Property size:** 17.47 acres
- **Applicants:** Michael Yambrach, Montgomery County DGS
- **Acceptance Date:** May 18, 2021



Summary

- Staff recommends **APPROVAL** of the Mandatory Referral and transmittal of comments.
- In alignment with Montgomery County's goals to achieve zero greenhouse gas emissions by 2035, the proposed project will provide 2 megawatts (MW) of solar photovoltaic canopies that will provide electrical power to the County's growing electric bus fleet and battery storage systems as well as 1.2 MW of natural gas generation.
- The Applicant filed a new Mandatory Referral MR2021021 for the photovoltaic canopies and is amending the original forest conservation plan associated with this Site.
- The associated Forest Conservation Plan Amendment no. MR2021021, which was previously approved as part of MR2004801, is described in a separate Staff report.
- The Application conforms to the Greater Lyttonsville Sector Plan.

RECOMMENDATION AND CONDITIONS

Staff recommends approval of Mandatory Referral Application No. MR2021021, with the following conditions. The Application must:

1. Comply with the conditions of approval listed in the regulatory staff report of the related Final Forest Conservation Plan Amendment No. MR2021021;

SECTION 1 – SITE DESCRIPTION AND VICINITY

Site Description

The Subject Property (“Property” or “Site”) is located at 8710 Brookville Road in Silver Spring. The Site currently serves as the Brookville Maintenance Facility Transit Shop, otherwise known as the “Brookville Depot” or “Depot”. The Site is subject to the 2017 *Greater Lyttonsville Sector Plan*.



Figure 1 – Aerial photo of the Subject Site (shaded in red)

The 17.47-acre Site, zoned Moderate Industrial (IM), is located at the terminus of Brookville Road, just east of Rock Creek near its crossing with the Capital Crescent Trail. The Depot has a main entrance for buses which exits to the right off of Brookville Road and runs along the Site’s northern Property line. The Site is also served by a secondary entrance for passenger vehicles which pick up as Brookville Road ends and enters the Site along the southern Property line. The Site includes multiple buildings to support the Depot’s functions including a refueling station near Brookville Road, a salt storage facility, as well as an asphalt area near the western side of the Property which is proposed to serve as the installation area for the solar photovoltaic canopies.

The Subject Property is within the Lower Rock Creek watershed which is a Use I watershed¹. In addition to the watershed, there is an adjacent, but off-site, area of forest to the west of the Site between the Subject Property and Rock Creek. The Site is also associated with the FEMA 100-year flood plan from Rock Creek which overlaps slightly with the Property but does not extend onto the developed and paved portions of the Site. There are no cultural facilities or historic sites located within or adjacent to this Site nor any known endangered species or critical habitats.

¹ WATER CONTACT RECREATION, PROTECTION OF AQUATIC LIFE. Waters that are suitable for: water contact sports: play and leisure time activities where the human body may come in direct contact with the surface water; fishing; the growth and propagation of fish (other than trout); other aquatic life, and wildlife; agricultural water supply; and industrial water supply.

Previous Approvals

The available regulatory history of this Site dates back to August of 2004 at which time the Montgomery County Department of Public Works and Transportation submitted a Mandatory Referral Application (No. MR2004801) for a two-phased development to improve site circulation, operations, and maintenance needs through the creation of an additional access point at the north of the Site for buses, building improvements, parking layout modifications, and improved stormwater management. The second phase of the project consisted of a building improvement associated with the highway depot.

Along with MR2004801, an associated NRI/FSD and Forest Conservation Plan was required due to the then proposed clearing of 1.08-acres of forest and removal of six (6) specimen and eight (8) significant trees which fell within the LOD of the improvements. The Applicant used a mix of onsite and off-site methods to meet the calculated Forest Conservation requirements; the 2.16-acres of reforestation requirements were met offsite through credits from a forest bank. The 1.68-acres of afforestation requirements were met through retention of existing onsite landscaping plantings as well as offsite reforestation plantings.

In April of 2017, the Subject Property was included in an additional Mandatory Referral Application (No. MR2017012). The purpose of this plan was to construct three salt/material storage buildings to replace their aging predecessors. With this proposal, site layout was also modified in coordination with the needs of the construction of the MTA Purple Line which required the transfer of land. The then proposed work took place in the southern portion of the site and resulted in minor impacts to, but retention of, two specimen trees.

The Applicant has now filed a new Mandatory Referral, MR2021021, for the photovoltaic canopies and is amending the original forest conservation plan for this site. Previously filed with Mandatory Referral MR2004801, the amended Final Forest Conservation Plan will be carried forward under plan number MR2021021.

SECTION 2 – PROJECT DESCRIPTION

Proposal

The current Application proposes to support Montgomery County's growing electric transit bus fleet through the creation of a "smart energy depot" at the Brookville Maintenance Facility Transit Shop. In total, the smart energy depot is posited to serve as a microgrid to power the electric bus fleet through the installation of 2 megawatts (MW) of photovoltaic canopies which will be arranged in four sections (Figure 1). These solar canopies will provide electrical power to the buses as well as a battery storage system located to the north of canopies 1 and 2 as shown in Figure 1. In addition to the solar arrays, there will be battery storage of approximately 1.5 MW/4.3 MGW, 1.2 MW of natural gas generation separate from the solar facilities, as well as a system of microgrid controllers to manage the system.

The Brookville Depot will continue to serve as the hub for maintaining, servicing, and parking over 200 County Ride-On buses. The proposed facilities will contribute to meeting Montgomery County's 2035 goal of achieving zero greenhouse gas emissions. Efforts began in 2019 with the first electric buses coming into service; another 10 buses will be added in 2021, and in total this microgrid system is planned to support the power requirements of the first 44 electric buses which will be added over the coming years.

This project is proposed to be delivered in two phases; Phase 1 will consist of all the electric infrastructure: the installation of the solar canopies, the battery energy storage system, one generator and up to seven additional e-bus chargers. The start of construction for Phase 1 is estimated to begin in September 2021 with completion planned for February 2022. Phase 2 will consist of the installation of an additional generator and up six additional e-bus chargers; this phase is anticipated to occur in 2024.

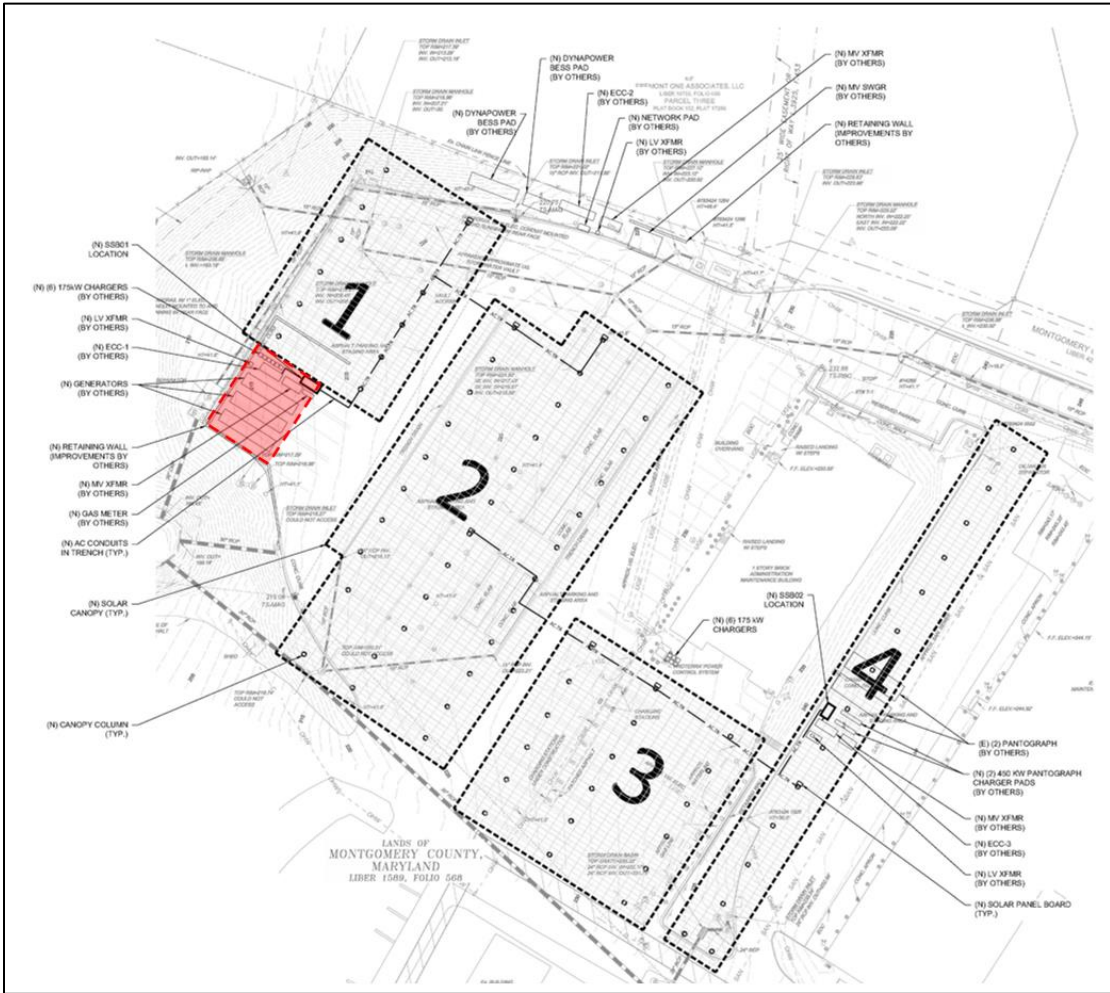


Figure 2: Layout of Photovoltaic Solar Canopies and other proposed features (area included in Phase 2 installation shaded in red)

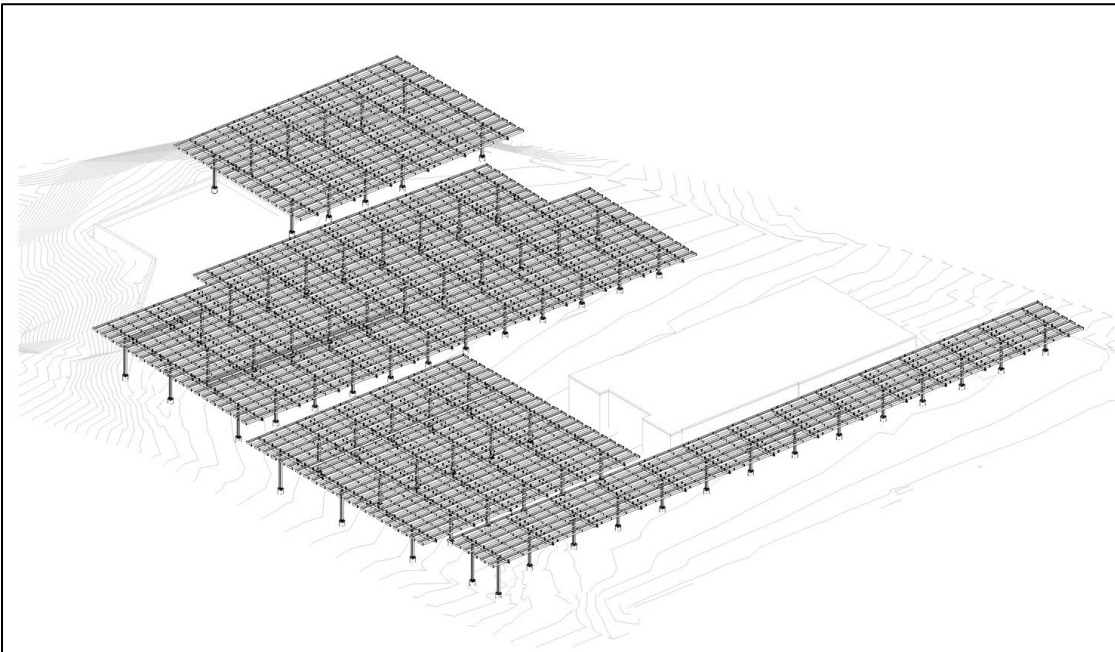


Figure 3: Isometric view of solar canopies in relation to site topography and existing building

Access and Circulation

This project will not change circulation onsite, nor will it add staff necessitating site circulation changes. As such, no impacts to pedestrian, vehicle traffic, or fire access is anticipated. The Applicant has provided an example of typical bus circulation to make use of the proposed facilities in Figure 4 below.

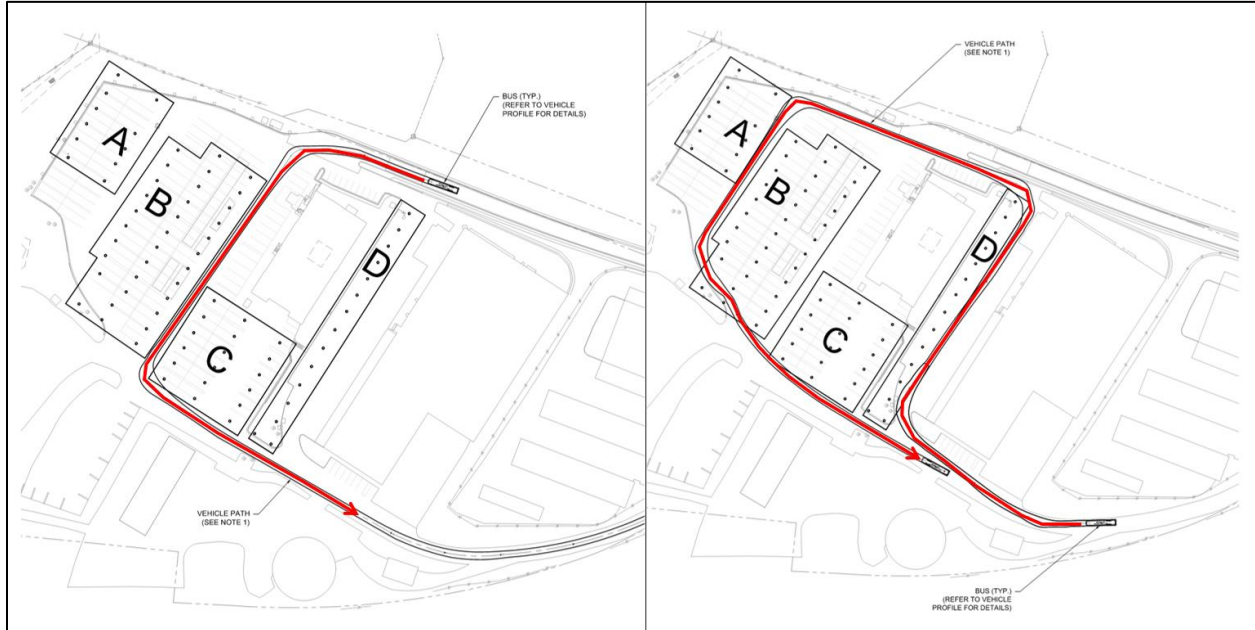


Figure 4: Bus circulation for utilization of renewable energy charging

Adequate Public Facilities

The proposed project is within the Greater Lyttonsville Policy Area and is not expected to generate any new trips for the public. The project will not increase the number of staff on the Property, and Staff agrees there will be no net increase in trips during the peak travel periods. Overall, from the standpoint of transportation, this plan is acceptable as it maintains the currently approved facilities.

Master Plan Conformance

The 2017 *Greater Lyttonsville Sector Plan* identifies the industrial/institutional vicinity in which this project is located as desirable in order to support the current activities into the future and maintain conformance with the present height and density requirements. The Brookville Bus Depot is currently zoned IM, which is in line with the stated Sector Plan recommendations. Further, the bus depot is specifically mentioned within the Sector Plan as a “valuable County asset located close to a large customer base and should be preserved”. This Project’s proposal to integrate renewable, reliable energy sources into the Site operations positions the depot as a facility which will have lasting importance for the County, which directly aligns with the stated Sector Plan goals.

Forest Conservation

As conditioned, all applicable Chapter 22A Forest Conservation requirements will be met. With this Mandatory Referral Application, a Forest Conservation Amendment has been filed and will be described in a separate report.

Stormwater Management (SWM)

A Stormwater Management Concept Plan was submitted to the Montgomery County Department of Permitting Services on March 30, 2021. The stormwater concept plan proposes to continue meeting the

required stormwater management goals via the existing wet pond structural treatment area. On June 16, 2021 the Applicant received approval from MCDPS for the submitted stormwater concept plan without the use of waivers. As such, this project will meet all applicable Ch. 19 stormwater management requirements.

Montgomery County Noise Ordinance

This project will be in compliance with the Montgomery County Noise Ordinance. The generators proposed with this project include several noise-reducing features such as baffles for air intake and outlet, low-noise fans, soundproofing, exhaust silencing, and low-noise fans for emergency cooling. This project lies within an area zoned for industrial uses, and therefore is not anticipated to conflict with neighboring property. Additionally, the Applicant has provided a noise analysis which shows estimated noise levels of 35.1 dB and 38.4 dB at the nearest residential properties and noise levels of 42.3 dB or below at the Property lines. All of the described noise levels are within the acceptable limits of the County Noise Ordinance.

Funding

This Project is being funded by a Power Purchase Agreement from Montgomery County.

Impacts to Parkland

The Project will have no impact on public park land, or any land owned by M-NCPPC.

LEED Certification

This project is not currently registered for LEED and will not seek LEED certification as part of this Application as there are no buildings or structures which are eligible for LEED certification.

SECTION 3 – CONCLUSION

Staff recommends that the Planning Board approve the Mandatory Referral with the recommendations cited in this staff report.

Attachments:

Attachment A – Mandatory Referral Plan

Attachment B – MCDPS Stormwater Approval Letter