



CARDEROCK SPRINGS
National Register of Historic Places

November 12, 2021

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Deputy Director, I-495 & I-270 P3 Office
Maryland Department of Transportation State Highway Administration
707 North Calvert Street
Mail Stop P-601
Baltimore, MD 21202

RE: I-495/I-270 Managed Lane Study Supplemental Draft Environmental Impact Statement

Dear Mr. Folden:

I am President of the Carderock Springs Citizens Association (CSCA), a community organization that represents Carderock Springs and Carderock Springs South, which together include approximately 600 homes. Carderock Springs is designated as a National Historic District as a notable example of “situated modernism”.

We have closely followed the I-495/I-270 Managed Lanes Study environmental process and have been pleased to participate as a Consulting Party in the Section 106 consultation process. This letter provides our comments regarding the Supplemental Draft Environmental Impact Statement (SDEIS) released by the SHA on October 1, 2021.

We believe that the SDEIS is legally deficient in a number of important areas, including the lack of a sufficient visual impact analysis based on the scoping questionnaire (Appendix J) and an inconsistent and misleading analysis of the noise impacts on the Carderock Springs community (Appendix E) as more particularly detailed below. Further, we disagree with the conclusion in the SDEIS that the project would have no adverse impact on Carderock Springs.

Visual Impact Assessment and Scope of this Supplemental Draft EIS

As communities directly adjacent to I-495, we are deeply concerned by the lack of visual impact analysis in the SDEIS. The SDES Executive Summary states that a Visual Impacts Assessment will be conducted in the Final EIS (ES-5) and only a scoping questionnaire for assessing visual impacts is included in the SDEIS (Appendix J). This approach is inadequate and inconsistent with NEPA regulations. 40 CFR 1502.9 requires that Draft Environmental Impact Statements (DEIS) provide a consistent level of analysis as the Final and be sufficiently detailed to permit “meaningful analysis” of impacts. SHA has failed, in both the DEIS and now the SDEIS, to disclose and analyze the visual impacts of the alternatives in any meaningful way by failing to perform a Visual Impact Assessment (VIA). As a result, the document is legally deficient, and

SHA should not proceed to a Final EIS until visual impacts have been adequately disclosed through an appropriately scoped VIA.

As it stands currently, the scoping questionnaire (Appendix J) is inaccurate on several key points, resulting in a determination to insufficiently assess the potential impacts when a VIA is finally conducted. On Environmental Compatibility Question 3, SHA indicates that “Public comments received to date, including those received during the public comment period for the DEIS, did not express local concern for visual impacts” (Pg. 2). CSCA notes that we have raised concerns about visual impacts, including the removal of trees and vegetation along the right-of-way and from the design of the MD 190/Cabin John Parkway fly-over ramps and the larger project in our October 5, 2020 comments on the Draft EIS, our April 12, 2021 comments on the draft Programmatic Agreement and our October 8, 2021 comments on the Section 106 materials. Additionally, the Preferred Alternative substantially modifies the infrastructure element most likely to have visual impacts on our community, the flyover ramps from the managed lanes for the MD 190/Cabin John Parkway interchange, increasing our level of concern about visual impacts. With this statement, we believe that the answer to Environmental Compatibility Question 3 should be upgraded to “High Concern.” Since SHA made similar representations in response to Viewer Sensitivity Question 1, there the potential for the project to be controversial within the community should also be updated to “High Potential.” We assure you that Project elements are causing controversy in our community and that visual impacts are at the heart of our community’s concerns.

With these appropriate modifications to the scoping questionnaire, the scoring on the questionnaire would increase to at least 21 instead of the score of 19 indicated in Appendix J to the SDEIS. As a result, a Standard VIA, versus an Abbreviated VIA, would be required and should be pursued and shared with our community prior to the release of the Final EIS.

When conducting the Standard VIA, SHA needs to amend its envisioned scope for the focus of the analysis. The SDEIS states, “This VIA focuses on the views from recreational/parks neighbors at five key park locations based on agency and public comments received to date” (Pg. 4-26). Later, the SDEIS states that there will be “renderings at the key park locations” with no mention of other developed renderings (Pg. 4-27). The proposed flyover ramps for the MD 190/Cabin John Parkway interchange have the potential to create meaningful changes to the visual context of the highway adjacent to our community. These ramps should be rendered with the opportunity for CSCA to review and provide comment before the Final EIS. Only with this information can we adequately assess and understand the potential visual impacts to our community. Given that SHA has concurred with performing such renderings for park stakeholders who made the request, it would be consistent and appropriate for SHA to do the same for our interests, particularly given the historic nature of our community.

MD 190/Cabin John Parkway Interchange Design

The Preferred Alternative identified in the SDEIS includes a flyover ramp from the eastbound managed lanes to the southern edge of the highway right-of-way to provide access to the MD 190 interchange and a flyover ramp leading from the MD 190 interchange to the westbound managed lanes on the northern edge of the right-of-way. As indicated by our comments above regarding the lack of an appropriate VIA, we have a number of concerns regarding these flyover ramps. Those that extend beyond visual impacts are described below.

First, the Environmental Resource Mapping (Appendix D) does not clearly indicate whether noise barriers would be provided on the ramps. There is an apparent gap in the noise barriers that are proposed (Maps 7 & 8). As shown, Carderock Springs and Carderock Spring South residents would be exposed to traffic noise from these ramps with no adequate protection. Any ramp should include appropriate noise barriers to address this concern, consistent with the broader approach to noise barriers in this section of I-495.

Second, the ramp alignments would have impacts on private property and forest conservation easements. We believe that these impacts should be avoided through deeper design refinement to the potential location of the ramps. A more gradual curve from the managed lanes to the at-grade portion of the ramps would both improve safe operations of the ramps and move the ramps away from private property, forest areas, and our community more broadly.

Third, we maintain that these flyover ramps are out of character with a residential neighborhood in a forested setting. As a result, SHA should give removal of these ramps in favor of other alternatives a “hard look” that it is required to do under NEPA jurisprudence and that it has failed to do so far. The SDEIS says that a direct access interchange approach was chosen at MD 190 because of “high traffic demand” (Pg. 2-7). We recommend that SHA consider the following alterations or modifications to the direct access approach in this location to more meaningfully avoid impacts to our community:

- Provide at-grade access from the managed lanes between the Clara Barton Parkway and MD 190 to the general-purpose lanes, allowing as much as one-mile for users to merge over to the exit lane and on to the managed lanes. Such an approach is consistent with at-grade interchanges present on the Virginia side of I-495.
- Shift the direct access ramp east of Seven Locks Road using the widened median area, while avoiding impacts to the Gibson Grove or Moses Hall sites.
- Provide direct access to the MD 190 overpass itself. If combined with direct access in the westbound direction, this approach could reduce the technical complexity of the proposed managed lane on-ramp from MD 190. As proposed (Map 9) by SHA, the on-ramp would require large aerial structures over the general purpose and managed lanes. A different approach may simplify the structures required, delivering cost and risk savings to SHA and a less disrupted environment to our community.

These alternative approaches should be more deeply explored to identify opportunities for impact avoidance in the Final EIS.

In any eventuality, we would request that SHA make the P3 Developer available to coordinate with our community regarding the design and aesthetics of this exit so that potential impacts to our community can be mitigated through a collaborative design process.

Noise Analysis in SDEIS

There appear to be a number of discrepancies and inconsistencies in the analysis of the noise impacts on Carderock Springs that collectively appear to (a) understate the current and proposed noise levels and (b) overstate the cost of installing effective noise barriers for our community. We therefore believe that the height of the proposed noise barriers should be increased to a height recommended for similarly situated communities along the Beltway between River Road and the I-270 spur (e.g., 29 – 32 feet).

1. Combination of Disparate Noise Sensitive Areas to measure noise reduction impacts.

As indicated on Appendix E to the SDEIS (Noise Analysis Technical Report Addendum), Noise sensitive area, NSA 1-03, which includes the Carderock Springs Elementary School and the homes located on Stone Trail Drive and a portion of Hamilton Spring Road, for which there are currently no existing noise barriers, was bundled together with NSA 2-01 to the east, a large portion of which has existing noise barriers.¹ The SDEIS indicates that both NSAs will share a common proposed barrier design, 495 MD-3. This practice appears to have been used widely across the noise study on other areas as well, obviously to cut some costs; however, per Executive Summary's Section ES.2 *Land Uses and Methodology*, the areas within NSAs for single barrier design should be similar in nature and "share a common noise environment".

The issue with bundling NSA 1-03 and NSA 2-01 into a single barrier design is that these two NSAs, unlike other bundled NSAs in the study, have quite different noise environments as evidenced by the noise levels registered at the critical measured receptors. NSA 1-03 has a total of five measured critical sensitive receptors that registered above 75dB(A) (two receptors above 80dB(A)), whereas NSA 2-01 to the east has no critical measured receptors above 75dB(A). Therefore, it appears the resulting proposed barrier design, 495 MD-03, provides a single, averaged out barrier design solution for the two NSAs with dissimilar noise environments (i.e.: same barrier height, same wall area per benefited residence for both NSAs). This results in the barrier underperforming for NSA 1-03 where the higher noise mitigation is really needed. We strongly believe that noise sensitive areas, NSA 1-03 and NSA 1-02, should be separated for the purpose of analyzing and modeling the two NSAs individually to produce two separate

¹ (Both NSAs are in the Carderock Spring neighborhood although NSA 2-01 also incorporates the Thornley Court neighborhood that had been assessed by the State to pay for the erection of the existing noise barriers).

proposed barriers designs: e.g., 495 MD-3A and 495 MD-3B, each with its corresponding wall length and height.

The SDEIS states on Page 41 of Appendix E (Paragraph D Barrier System 495 MD-3 (NSAs 1-03 and 2-01)), that the proposed barrier design 495 MD-3 will have a variable height from 24 to 32 feet; however, we have determined through back calculation (given the barrier length, average height and total barrier wall area) that the 32 foot barrier stretch would be only 211 feet long, and there is no indication in the SDEIS as to where this 32 foot high wall portion will be located along the barrier. It seems evident that 211 linear feet of 32-foot-high wall barrier would be insufficient to produce an adequate/effective increase in noise mitigation for the targeted small area since this length would barely cover the property frontage of at most two residences. We believe that the SDEIS needs to be amended to increase the height of proposed barrier design 495 MD-3 along the entire segment, and if there are to be variable heights within the segment, to clarify where the higher section of barrier is located along the 495 MD-3, what is the length of it, and what is intended to be shielded with the higher wall section.

2. Inconsistent application of cost-effectiveness analysis among NSAs.

We compared the measurement of cost used in the SDEIS for other communities located along the Beltway between River Road and the I-270 spur to those used for Carderock Springs and noticed striking discrepancies in the methodologies which resulted in the overstatement of cost-effectiveness for the portion of the noise barriers for Carderock in relation to that of these communities.

For example, in the case for proposed barrier design 495 MD-7 for NSA 1-38 (Fox Hill Senior Living Condominiums - 5-Story buildings), the impacted residences density factor had great influence on wall design/height. Even though none of the modeled critical noise receptors in this NSA registered higher than the 75dB(A) absolute noise level criterium (therefore the barrier design was subject to a lower cost-effectiveness threshold of 1700 SF per benefited residence), the MD-7 barrier design resulted in a 32-foot-high wall with a low cost-effectiveness parameter of 1132 SF-p-r. The fact that NSA 1-38 was analyzed and modeled individually (no bundling with either NSA 1-05 to the south or NSA 4-01 to the north) contributed greatly to the 495 MD-7 resulting proposed barrier design for this 5-story senior living condominium community. In fact, the proposed barrier design has ample spare room on the cost-effectiveness criterium for a 40-foot-high wall barrier design without reaching the threshold of 1,700 SF per residence.

The proposed barrier design 495 MD-6 for NSA 2-02, which includes the widely spread and large single-family residences in the Arrowood neighborhood and a portion of the Burning Tree Country Club at the back of the NSA, a condition similar to Carderock Springs, was analyzed and modeled individually (i.e., no bundling with dissimilar noise environment NSAs or schools as was done for NSA 1-03 and NSA 2-01). A significant number of first line critical measured receptors in this NSA registered above 75dB(A) and a few above 80dB(A). The great majority of impacted residences are evenly laid out in close proximity to the first line critical measured

receptors where the noise is; therefore, the areas within the NSA close to the right of way are quite homogeneous, similar in nature and “share a common noise environment,” which contributed positively to the 495 MD-6 proposed barrier design, thus resulting in a variable wall height of 32 to 36 feet and a considerable wall length of over 4,400 feet.

For proposed barrier 495 MD-6 the SDEIS analysis appears to have allowed the barrier cost effectiveness parameter (i.e., 2,474 square feet per residence) to increase closer to the cut off threshold (2,700 square feet per residence), than was the case with Carderock Spring’s proposed barrier design 495 MD-3, whose cost effectiveness parameter remained at the lower end of the acceptable range (i.e., 2,026 square feet per residence). Using a comparable cost effectiveness parameter for Carderock Springs’ proposed barrier wall design, 495 MD-3, would have permitted a wall height of 30 feet, which would result in the cost effectiveness parameter increasing to 2,488 square feet per residence, which is comparable to the proposed 495 MD-6 barrier design’s cost effectiveness parameter of 2,474 square feet per residence.

3. Error in assigning only one residence equivalent to Carderock Springs Elementary School

Per Table 4-8 on Page 42 of Appendix E to the SDEIS, the analysis clearly shows how the entire Carderock Springs Elementary School (CSES) area was modeled as less than one equivalent residence (i.e., 0.99 ER, see line M1-3-1 on Table 4-8). Reviewing the NSA 1-03 map, there was only one critical measured receptor placed within school property (M1), which registered 78dB(A). The issue is that when the length of the property frontage of CSES (approximately 850 linear feet) is treated as benefitting a single residence, the overall cost effectiveness for proposed barrier 495 MD-3 is reduced greatly and the resulting cost effective measure grossly understates the benefit of providing noise abatement to the over 350 students and 50 teachers, administrative staff and support staff who attend that facility on a daily basis, not to mention the many other community residents who use the ball fields on the school property. Accordingly, counting the school as a single residence in NSA 1-03 greatly understates the overall cost effectiveness of noise barrier 495 MD-3 and correspondingly results in a lower overall height for the noise barrier that can be constructed across the entire NSA.

We believe that there is no question that CSES deserves an appropriate barrier design to shield the students and staff against emissions pollution and noise. Since the school has a critical measured location receptor that registered above 75dB(A) and given the sensitiveness of the issue here where elementary school kids are exposed to noise and pollutants and would benefit greatly from the shielding, the school should have been modeled separately and as a special case NSA with higher noise reduction design goals than the minimum 7dB(A) as allowed by the MDOT SHA Highway Noise Policy. Given that the model assigns less than one equivalent residence (0.99ER) to the entire school area, the school alone would flunk the cost-effectiveness threshold criterion of 2,700 square feet of barrier per benefited residence since the resulting school sound barrier would be approximately 850 linear ft or 20,400 square feet of wall at 24 feet of height; this is 7.5 times more wall area than allowed by the cost feasibility criterion.

Impacts on Limits of Disturbance

It is noted in the SDEIS that “the Preferred Alternative would result in permanent and temporary impacts of less than 0.1 acre of the Carderock Springs Historic District”. (page 4-35). Carderock Springs Elementary School, a community facility, would have a temporary impact of 0.1 acres and a permanent impact of 0.2 acres (Table 4.4 on p. 4-9). These represent an increase from the “no impact” reported in the DEIS. Furthermore, it is stated that the LOD adjoining Carderock Springs Historic District will impact approximately 3.2 square feet of the rear yard at 7610 Hamilton Spring Road, a contributing resource within the district. Based on our review of Map 7 in Appendix D of the SDEIS, which contains the Environmental Resource Mapping, it appears that this impact occurs at 7608 Hamilton Spring Road, not at the adjacent property at 7610 Hamilton Spring Road. This should be verified and amended as appropriate and as needed in the Final EIS. This LOD impact is in part due to the shifting of the centerline of I-495 noted above in combination with the construction of the new noise barrier walls and the 10-foot offset of the LOD behind the proposed walls. While we consider the noise barrier walls to be an important part of this project if the Preferred Alternative moves forward, we still consider this physical effect to have adverse effect on the Carderock Springs Historic District and specifically on the property at 7608 Hamilton Spring Road.

Given the foregoing, and the comments that we had previously delivered on the DEIS and Section 106 materials regarding the loss of tree canopy and increased exposure to air pollution for the residents of the community and the children and staff of the Carderock Springs Elementary School, we therefore disagree with the findings in the SDEIS that there will be no adverse impact on the Carderock Springs Historic District.

We hope that you will consider these comments as you work through the SDEIS and prepare for the issuance of the Final DEIS. We expect to continue to be actively involved in the NEPA process and, if the project advances, the design and construction of the improvements.

Sincerely,

Jack Orrick

Jack Orrick
CSCA President

CC: Governor Lawrence J. Hogan
Comptroller Peter V.R. Franchot
Treasurer Nancy Kopp
County Executive Marc Elrich
Councilmembers Andrew Friedson, Tom Hucker, Gabe Albornoz, Evan Glass, Will Jawando, and Hans Riemer
Senator Susan Lee and Delegates Ariana Kelly, Marc Korman, and Sara Love