

**Responses to Questions and Comments for Which the I-495 Express Lanes Northern Extension (495 NEXT) Project Team Indicated Complementary Responses Would be Provided
495 NEXT May 26, 2022 Meeting Related to Live Oak Drive Design Plans**

1. Can the Maryland Team plan to construct the Live Oak sound wall early in the Maryland construction project to help protect the Live Oak community from the noise produced by both construction and ongoing traffic?

Response:

VDOT has forwarded this question to the Maryland project and they have provided the following response below:

The MDOT contract with its developer will require the noise barrier adjacent to Live Oak Drive to be constructed as an early work activity to the greatest extent practical. Due to the need for access and staging for construction of the American Legion Bridge (ALB) and other constraints at this location, a portion of the noise barrier near the ALB may need to be deferred to later in construction. Details and timing of noise barrier construction will be more fully developed and shared as final design is undertaken by the MDOT developer.

Information on how to contact the Maryland MLS project team regarding construction of the noise barriers along Live Oak Drive associated with the MLS project or other MDOT construction-related work in Virginia can be found online at <https://oplanesmd.com/contact/>.

2. Can the Maryland Team match the aesthetic characteristics of the sound wall that VDOT is constructing along Live Oak Drive in conjunction with the I-495 NEXT project?

Response:

VDOT has forwarded this question to the Maryland project and they have provided the following response below:

Noise barriers required by the MLS in Virginia will match the materials and architectural finishes of adjacent noise barriers, in this case the adjacent noise barrier to be constructed by Project NEXT.

3. Is there a way to find out whether there is a noise receptor in my property in the noise analysis conducted for the study?

Response:

Noise receptor locations are shown graphically in the Final Design Noise Analysis. The results of the analysis have not been published. However, a graphic from the preliminary noise study can be accessed at this link: http://www.495northernextension.org/documents/pim032020/i-495_next_8a_preliminary_noise_tech_report_appendices_final.pdf. The receptor location will likely be within the same vicinity as what is shown in the preliminary noise study. Description of the different elements of the noise analysis, including receptors, is provided in the VDOT Highway Traffic Noise Impact Analysis Guidance Manual, Version 9 which can be found at https://www.virginiadot.org/projects/resources/noisewalls/Highway_Traffic_Noise_Guidance_Manual_V9_acc021822.pdf.

4. What is the height of the noise receptors used for the noise analysis?

Response:

The noise models use a five feet default receptor height.

5. When did VDOT first present information about the changes made to the project for the ramps that provide access to the George Washington Memorial Parkway in the vicinity of Live Oak Drive? Why were these changes made?

Response:

The analysis conducted as part of the National Environmental Policy Act (NEPA) process is iterative in order to consider public and agency feedback as well as analysis of new information. The current modified interchange reflects the incorporation of results of this process.

VDOT hosted a Public Information Meeting on May 20th, 2019. During this meeting, VDOT presented proposed interchange options under consideration and also presented exhibits depicting the proposed conceptual plans for the Interim Year (2025) and Design Year (2045). The Design Year exhibits depict an early concept of the improvements that were being studied at the George Washington Memorial Parkway (GWMP) interchange. This exhibit was posted on the 495 NEXT website in May 2019:

http://www.495northernextension.org/documents/pim052019/pim052019_07designyeardraft.pdf

The 495 NEXT Revised Environmental Assessment (EA) published in May 2021 shows the adjustment to the GWMP interchange related to the ramp configuration, in Exhibit 2-1e in Chapter 2 of the main EA document on page 2-22, which also depicts a preliminary concept of ramp modifications proposed by the MLS project. This document was posted to the project website for 495 NEXT in May 2021:

http://www.495northernextension.org/documents/studies/070121/i-495_next_revised_ea_-_may_2021.pdf

VDOT and MDOT hosted a Public Information Meeting on September 29, 2021, to provide status updates for both projects. During this meeting, VDOT presented the modified GWMP interchange. Information and documents related to the meeting content – including the updated configuration of the GWMP interchange, were posted on the project website on the day of the meeting: https://495northernextension.org/public_meetings/092921_vpim.asp

The presentation slides and associated graphics presented at the September 2021 Public Information Meeting, which show improvements under study by MDOT, were posted on VDOT's 495 NEXT Project website on the day of the meeting:

https://495northernextension.org/documents/pim092021/2021-09-29_495_next_pim_presentation_final.pdf

The limits associated with VDOT's 495 NEXT project at the George Washington Memorial Parkway, including the change in ramp alignment for the northbound Express Lanes exit ramp (Ramp 3 in Figure 1), are shown on Slide 12. MDOT's study which showed approximate limits and assumed construction responsibilities in Virginia are shown on the graphics dated August 18, 2021, as shown in slides 23, 25, and 26. Specific responsibilities with respect to necessary tie-in work are dependent upon the timing of implementation of each of the projects.

6. How tall will the sound barriers in the vicinity of Live Oak Drive be and will the ramps from GW Parkway be taller than the barriers?

Response:

The preliminary noise analysis (EA Preliminary Noise Technical Report, pages 56 – 57), indicates that the height of the proposed noise walls (Barrier 10 and 10 [ext]) range from 8 to 26 feet. These heights may change based on the Final Noise Analysis. Please refer to Attachment 1: Elevations for Proposed GWMP Associated with 495 NEXT Project. This exhibit is based on design information shared at the May 26th Live Oak Meeting. Even though the exhibit is not inclusive of every elevation along Live Oak Drive, it provides the general sound barrier elevations along Live Oak Drive and the proposed elevations of the ramps associated with the 495 NEXT project.

7. Is there a visualization of what the project modifications will look like from Live Oak Drive?

Response:

The Live Oak Drive visualizations can be found at http://www.495northernextension.org/documents/project_next_-_live_oak_drive_visualization_2021_01_21.pdf. Additionally, VDOT has prepared the Line of Sight Exhibits in Attachment 2 that depict representative perspectives along Live Oak Drive.

8. How many feet will Live Oak Drive be shifted?

Response:

Approximately 1,200 linear feet of Live Oak Drive, is planned to shift to the west a distance ranging from 6 to 24 feet. Detailed graphics showing the shift can be found at https://495next.org/project_maps/default.asp.

9. How many noise receptors were used on Live Oak Drive?

Response:

Based on the information from the preliminary noise study, a total of 106 receptors within the project area were evaluated in the Live Oak area. The Live Oak area is located in the Common Noise Environment (CNE) C and E in the preliminary noise report. The full preliminary noise study report can be accessed at these links:

http://www.495northernextension.org/documents/pim032020/i-495_next_8_preliminary_noise_tech_report_final.pdf and http://www.495northernextension.org/documents/pim032020/i-495_next_8a_preliminary_noise_tech_report_appendices_final.pdf.

The Final Design Noise Analysis is currently under development. Once the analysis has been finalized and approved by VDOT and Federal Highway Administration (FHWA), the results will be made publicly available.

10. When is the Final Noise Analysis Report going to be available for public review?

Response:

The Final Noise Analysis Report is anticipated to be available for public review by the end of 2022.

11. What was the process by which VDOT came to the ramp modification at the George Washington Parkway interchange in the vicinity of Live Oak Drive?

Response:

The response to this question is provided in the Technical Memorandum provided in Attachment 3.

12. Can you share the Landscaping Elements of the project Technical Requirements?

Response:

See requested Landscaping Elements of the project Technical Requirements as Attachment 4.

13. Please provide detailed information about the landscaping plan along Live Oak Drive.

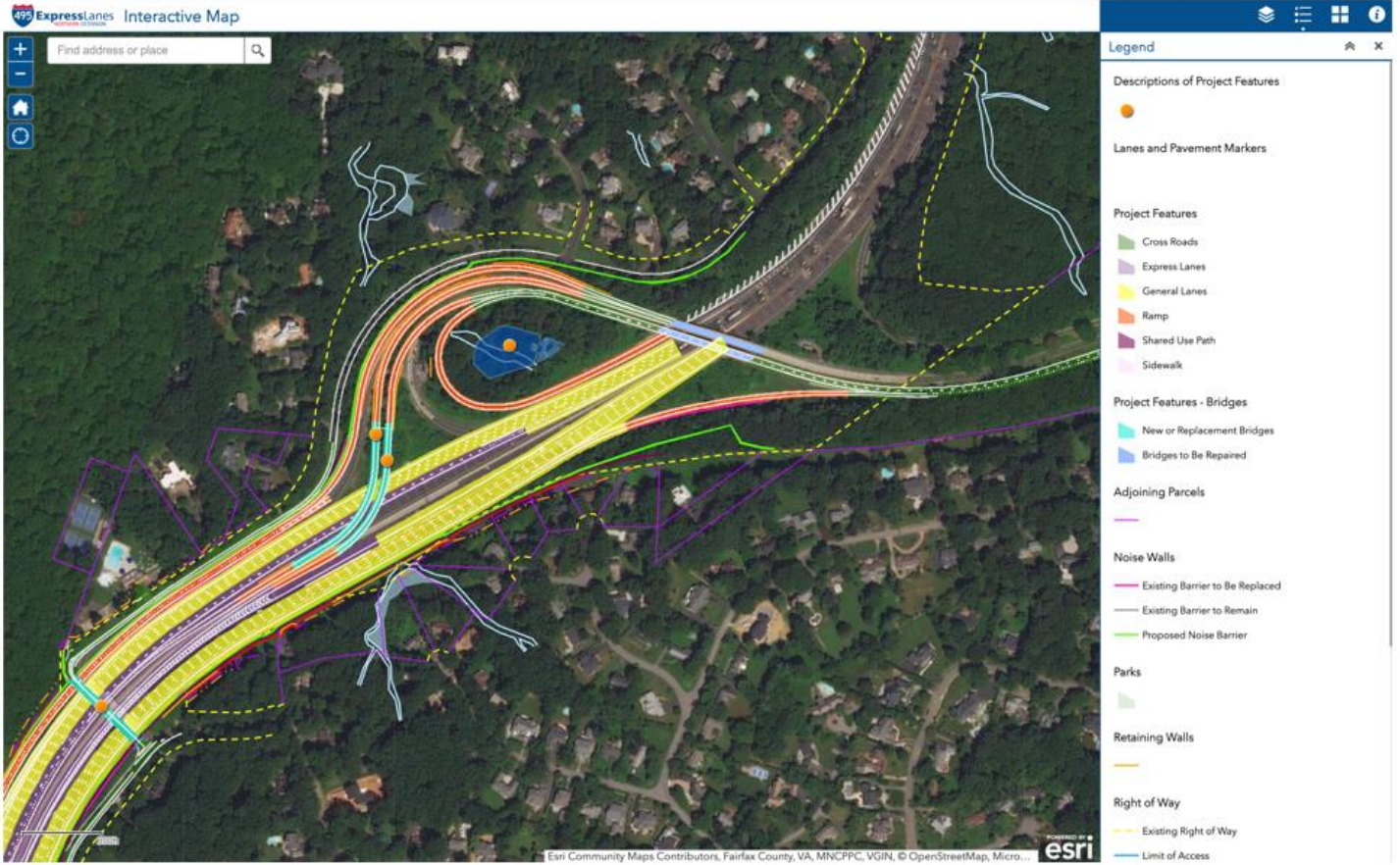
Response:

Locations of landscaping and tree replacement, in accordance with the project Technical Requirements, will be developed in 2023 at which time locations will be identified.

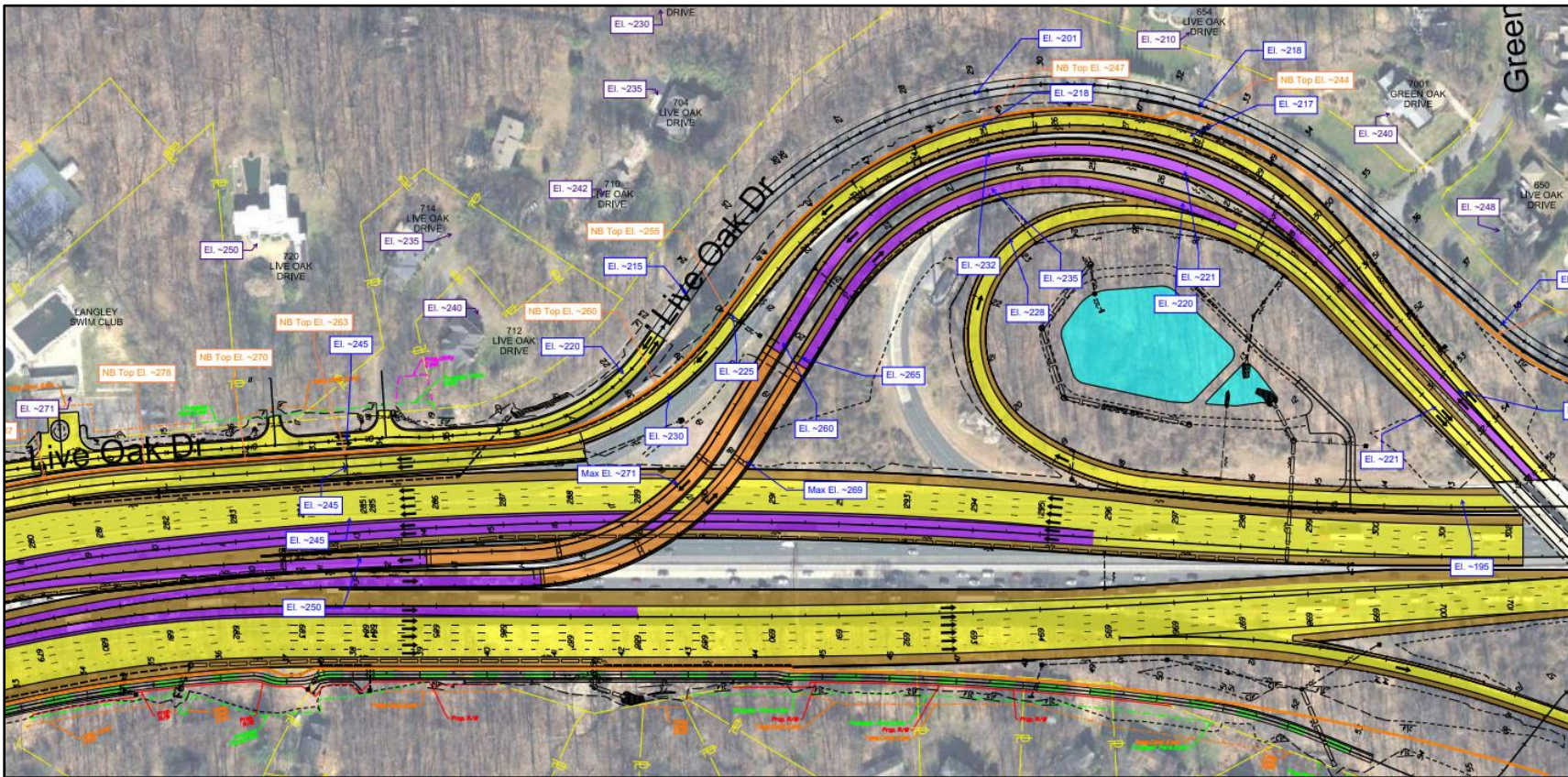
14. Is the VDOT Project constructing the replacement bridge of the George Washington Memorial Parkway over I-495?

Response:

As shown in the revised graphic below, the George Washington Memorial Parkway bridge over I-495 is not being replaced, but is being repaired as part of the 495 NEXT project. Please visit the Maryland website (<https://oplanesmd.com/feis/>) to find out more about what the MLS project is proposing for these bridges or any other MDOT construction-related work in Virginia.



Attachment 1
Elevations for Proposed GWMP Associated with 495 NEXT Project
Exhibit



Notes:

- 1) Elevations of existing conditions are based on survey information except for elevations at 720 Live Oak Drive and 708 Live Oak Drive, which are based on Google Earth Terrain data due to being outside of the project survey area.
- 2) Elevations have a margin of error of approximately 1-foot due to file conversion of land survey information overlaid on aerial imagery.
- 3) Elevations shown on the proposed design elements are from roadway surface based on Design Plans shared at May and June 2022 Public Information Meetings.

Attachment 2

Line of Sight for Proposed Ramps at George Washington Memorial
Parkway Ramp Exhibit

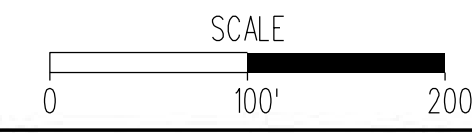
495 Express Lanes Northern Extension Project

June 2022 Public Update Meeting Design - Cross Section View Map

Project NEXT

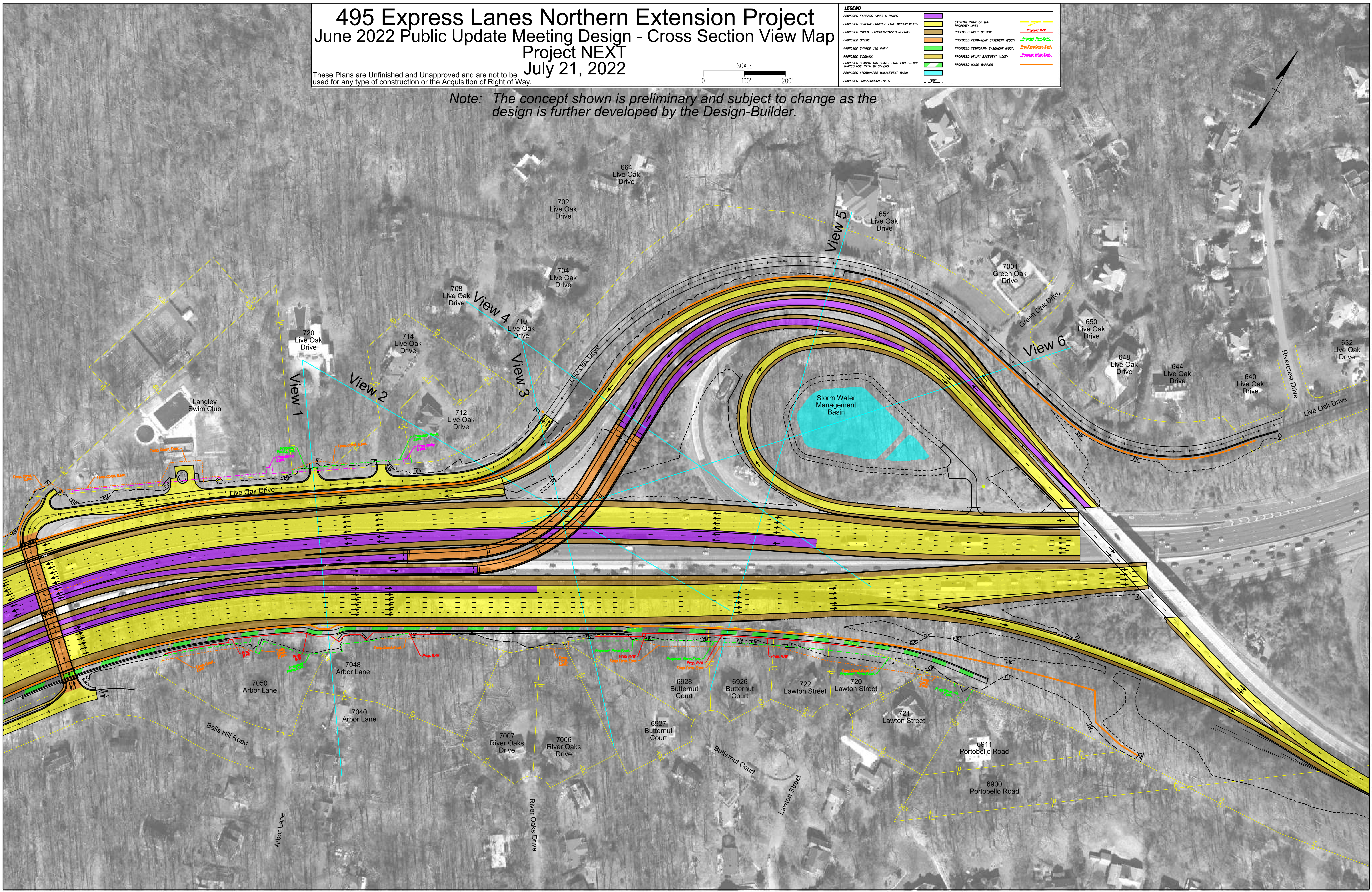
July 21, 2022

These Plans are Unfinished and Unapproved and are not to be used for any type of construction or the Acquisition of Right of Way.



LEGEND	
PROPOSED EXPRESS LANES & RAMP	EXISTING RIGHT OF WAY
PROPOSED GENERAL PURPOSE LANE IMPROVEMENTS	PROPOSED RIGHT OF WAY
PROPOSED PAVED SHOULDER/RAISED MEDIANS	PROPOSED PERMANENT EASEMENT (WOT)
PROPOSED BRIDGE	PROPOSED TEMPORARY EASEMENT (WOT)
PROPOSED SHARED USE PATH	PROPOSED UTILITY EASEMENT (WOT)
PROPOSED SIDEWALK	PROPOSED NOISE BARRIER
PROPOSED GRADING AND SHOULDER TRAIL FOR FUTURE SHARED USE PATH OR OTHERS	PROPOSED CONSTRUCTION LIMITS
PROPOSED STORMWATER MANAGEMENT BASIN	

Note: The concept shown is preliminary and subject to change as the design is further developed by the Design-Builder.



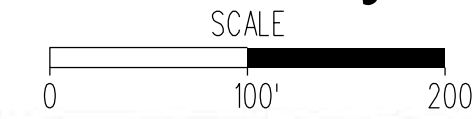
495 Express Lanes Northern Extension Project

June 2022 Public Update Meeting Design - Cross Section View Map

Project NEXT and I-495/I-270 Managed Lanes Study

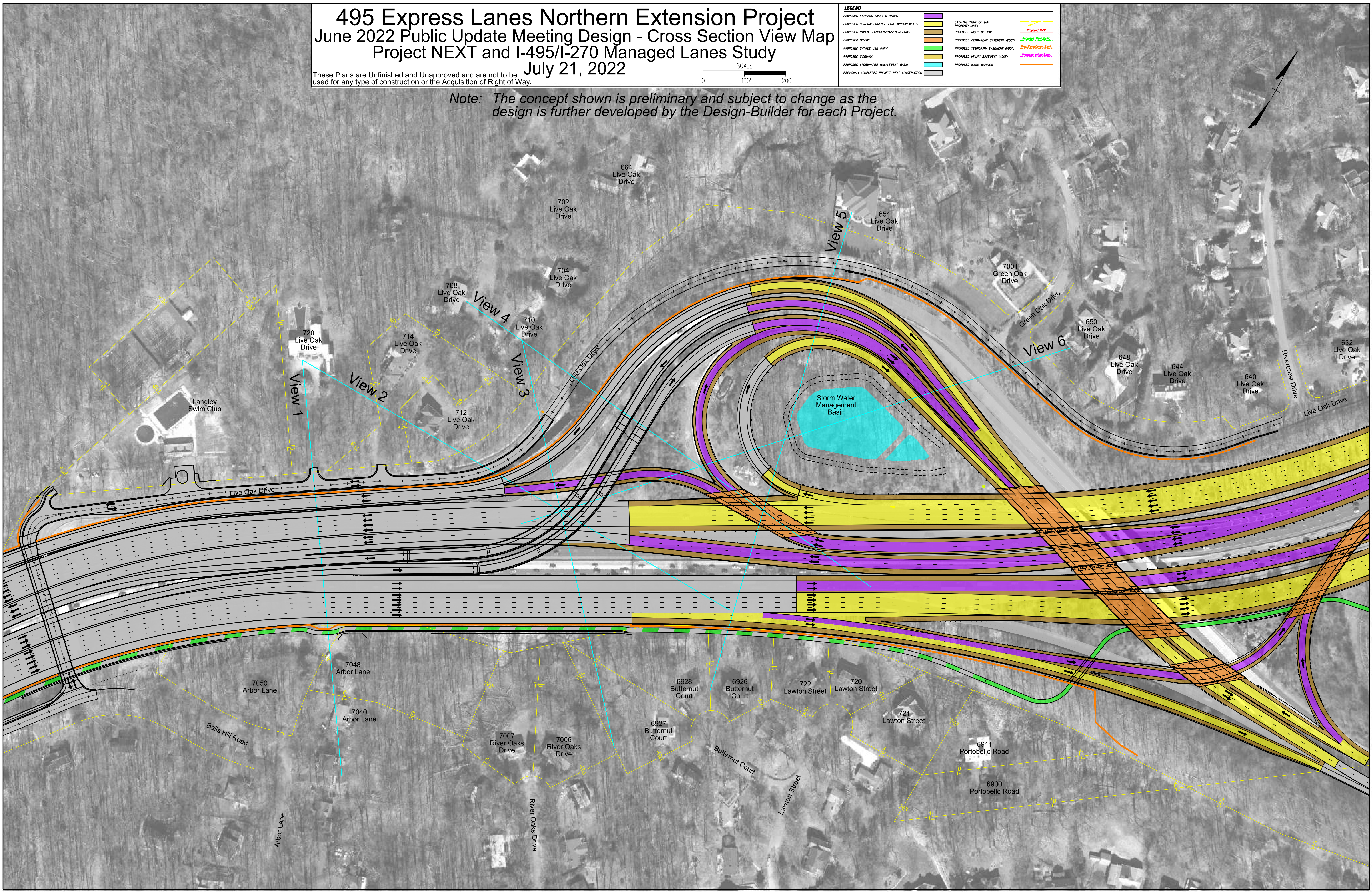
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PROPOSED BRIDGE	PROPOSED TEMPORARY EASEMENT (WO?)
PROPOSED SHARED USE PATH	PROPOSED UTILITY EASEMENT (WO?)
PROPOSED SIDEWALK	PREVIOUSLY COMPLETED PROJECT NEXT CONSTRUCTION
PROPOSED STORMWATER MANAGEMENT BASIN	

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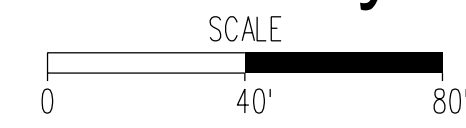
495 Express Lanes Northern Extension Project

June 2022 Public Update Meeting Design - Cross Section Views

Project NEXT and I-495/I-270 Managed Lanes Study

July 21, 2022

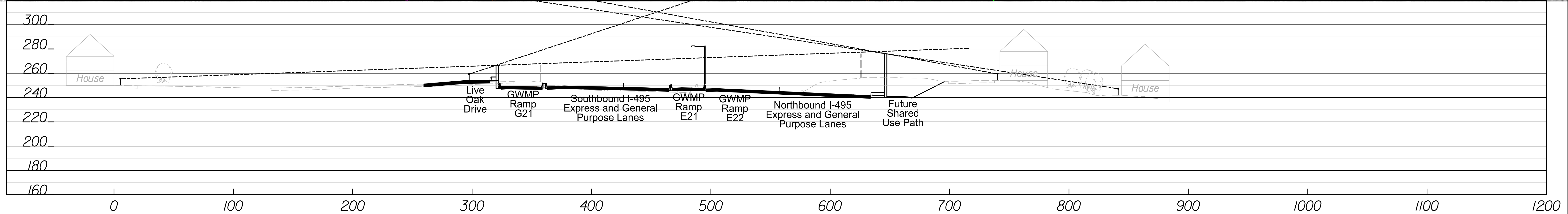
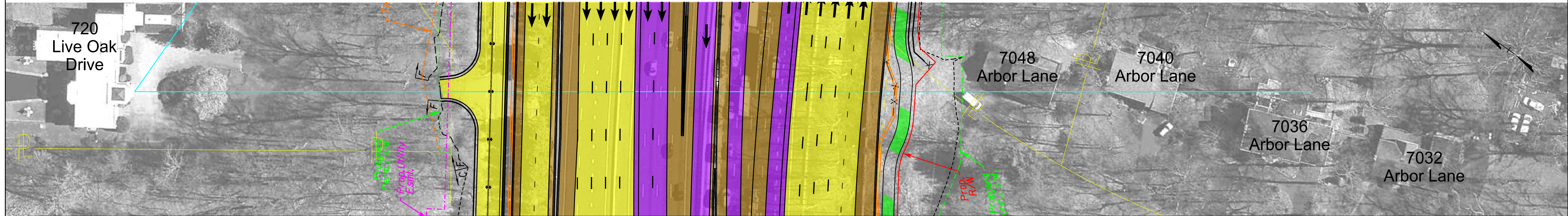
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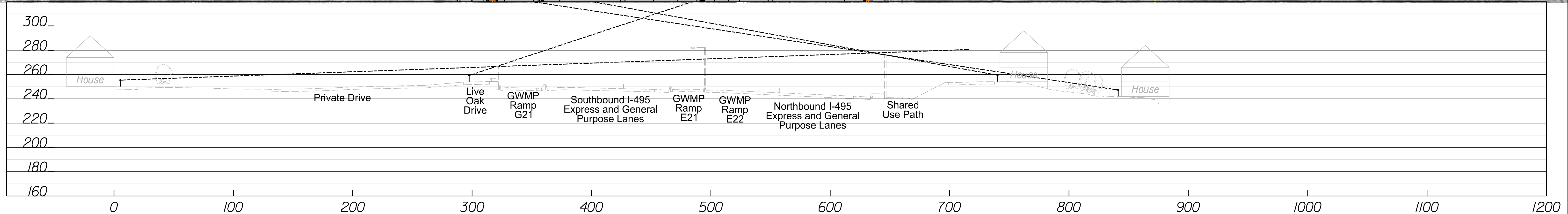
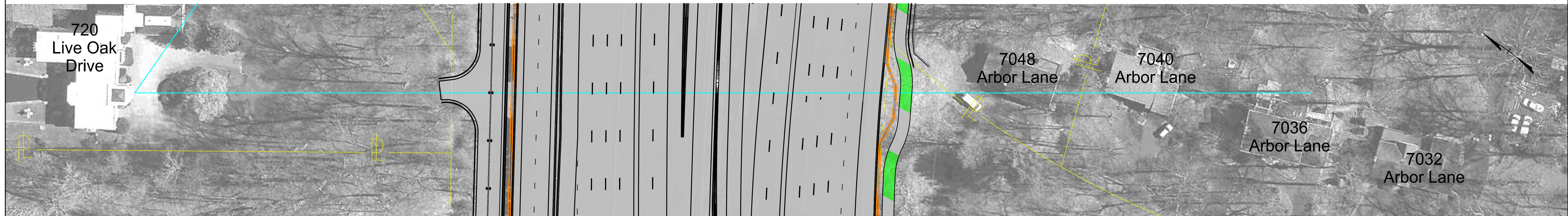
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PROPOSED GENERAL PURPOSE LANE IMPROVEMENTS	PROPERTY LINES
PROPOSED PAVED SHOULDER/PAVED MEDIANS	PROPOSED RIGHT OF WAY
PROPOSED BRIDGE	PROPOSED PERMANENT EASEMENT (V2001)
PROPOSED SHARED USE PATH	PROPOSED TEMPORARY EASEMENT (V2001)
PROPOSED SIDEWALK	PROPOSED UTILITY EASEMENT (V2001)
PROPOSED GRADING AND GRAVEL TRAIL FOR FUTURE SHARED USE PATH BY OTHERS	PROPOSED MOSE BARRIER
PROPOSED STORMWATER MANAGEMENT BASIN	PREVIOUSLY COMPLETED PROJECT NEXT CONSTRUCTION

- Notes:
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 - Existing house and tree heights, elevations, and depictions are approximate.

Project NEXT



Project NEXT and I-495/I-270 Managed Lanes Study (Maryland Project)



495 Express Lanes Northern Extension Project

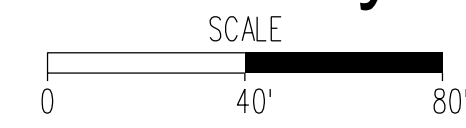
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Project NEXT and I-495/I-270 Managed Lanes Study

July 21, 2022

Cross Section View 2

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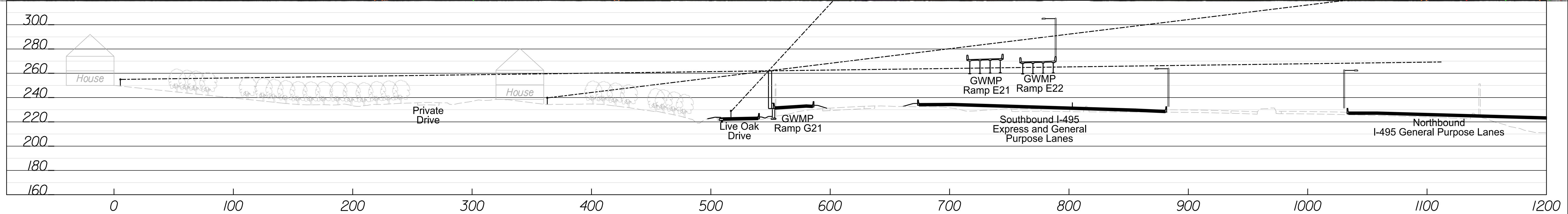
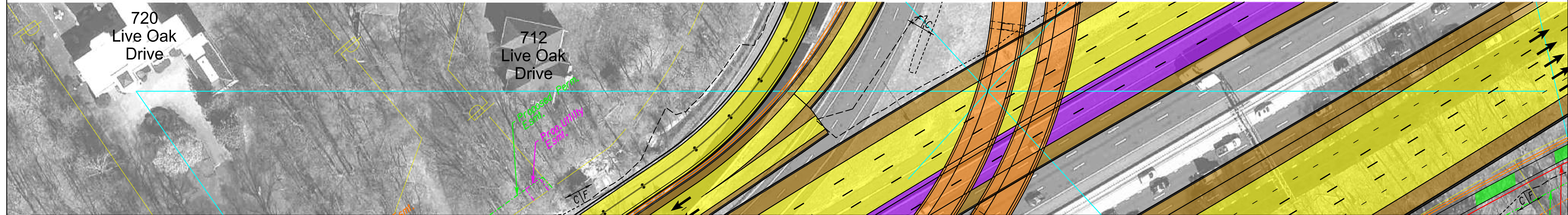


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PROPOSED GENERAL PURPOSE LANE IMPROVEMENTS	PROPOSED RIGHT OF WAY
PROPOSED PAVED SHOULDER/Raised MEDIAN	PROPOSED PERMANENT EASEMENT (VDOT)
PROPOSED BRIDGE	PROPOSED TEMPORARY EASEMENT (VDOT)
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PROPOSED SIDEWALK	PROPOSED MOOSE BARRIER
PROPOSED GRADING AND GRAVEL TRAIL FOR FUTURE SHARED USE PATH BY OTHERS	PREVIOUSLY COMPLETED PROJECT NEXT CONSTRUCTION

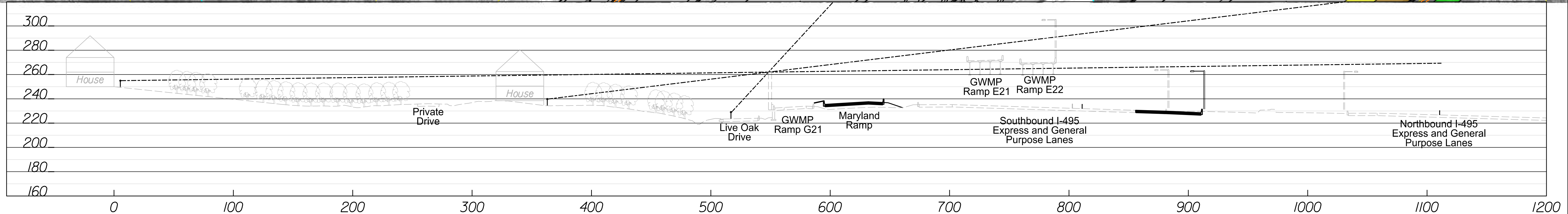
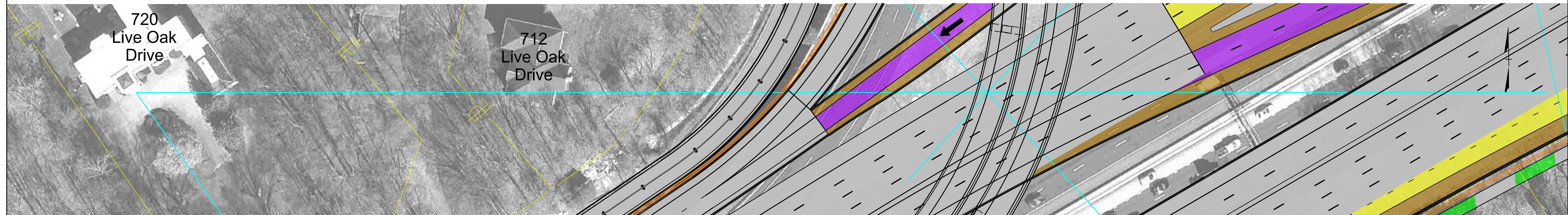
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Project NEXT



Project NEXT and I-495/I-270 Managed Lanes Study (Maryland Project)



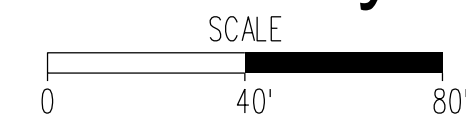
495 Express Lanes Northern Extension Project

June 2022 Public Update Meeting Design - Cross Section Views

Project NEXT and I-495/I-270 Managed Lanes Study

July 21, 2022

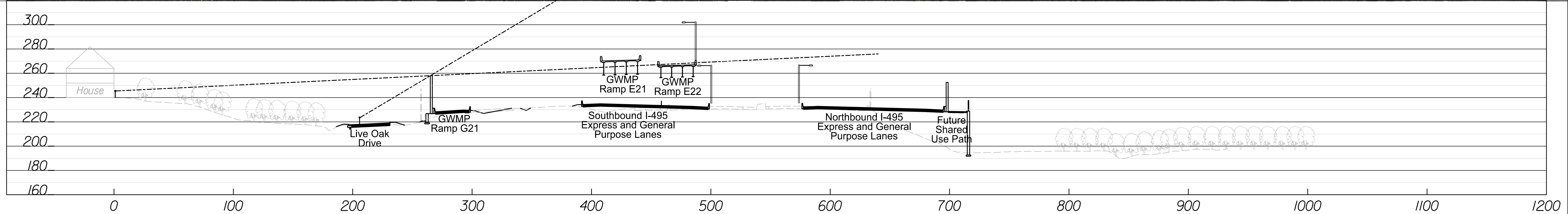
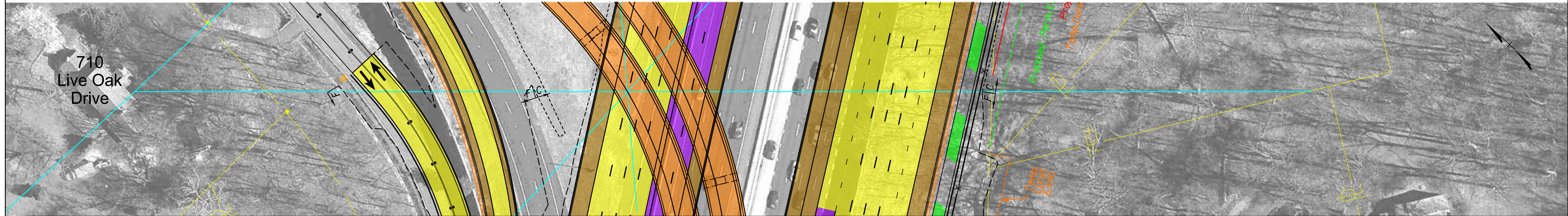
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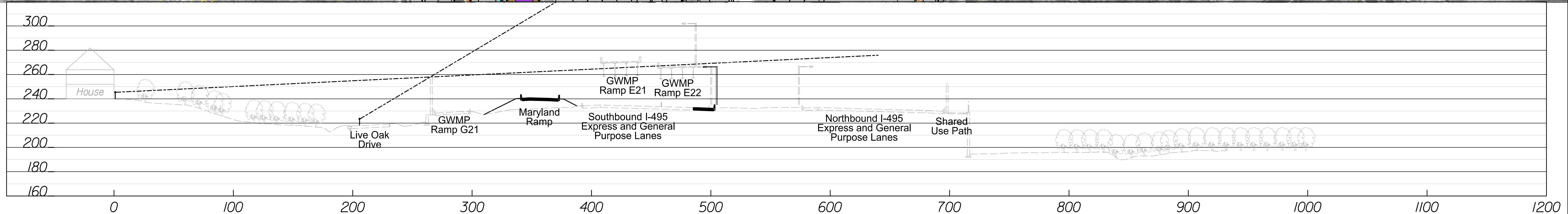
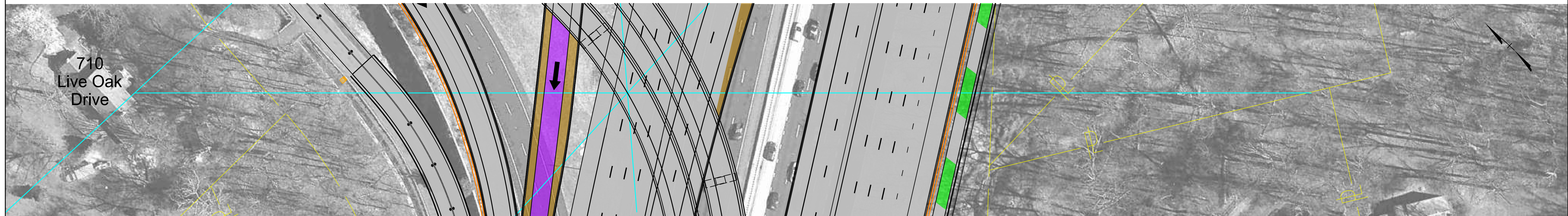
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PROPOSED GENERAL PURPOSE LANE IMPROVEMENTS	PROPOSED RIGHT OF WAY
PROPOSED PAVED SHOULDER/PARKED MEDIAN	PROPOSED PERMANENT EASEMENT (VDOT)
PROPOSED BRIDGE	PROPOSED TEMPORARY EASEMENT (VDOT)
PROPOSED SHARED USE PATH	PROPOSED UTILITY EASEMENT (VDOT)
PROPOSED SIDEWALK	PROPOSED MOOSE BARRIER
PROPOSED GRAZING AND GRAVEL TRAIL FOR FUTURE SHARED USE PATH BY OTHERS	PREVIOUSLY COMPLETED PROJECT NEXT CONSTRUCTION

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Project NEXT



Project NEXT and I-495/I-270 Managed Lanes Study (Maryland Project)



495 Express Lanes Northern Extension Project

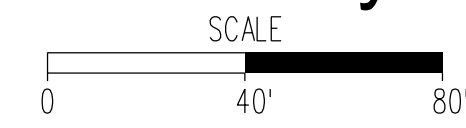
June 2022 Public Update Meeting Design - Cross Section Views

Project NEXT and I-495/I-270 Managed Lanes Study

July 21, 2022

Cross Section View 4

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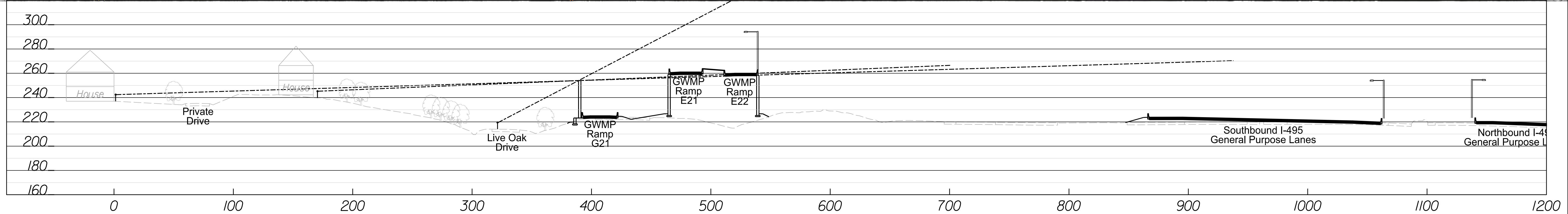
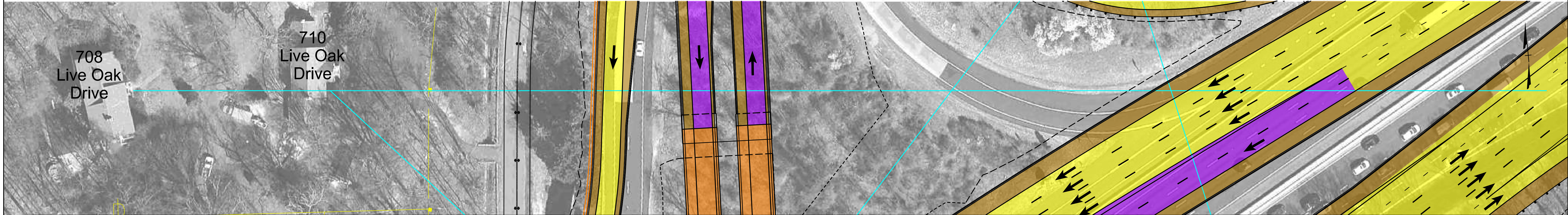
LEGEND

PROPOSED EXPRESS LANES & RAMP	EXISTING RIGHT OF WAY	PROPOSED RAMP
PROPOSED GENERAL PURPOSE LANE IMPROVEMENTS	PROPOSED RIGHT OF WAY	PROPOSED PERMANENT EASEMENT (V2001)
PROPOSED PAVED SHOULDER/PARKED MEDIAN	PROPOSED TEMPORARY EASEMENT (V2001)	PROPOSED UTILITY EASEMENT (V2001)
PROPOSED BRIDGE	PROPOSED MOOSE BARRIER	PREVIOUSLY COMPLETED PROJECT NEXT CONSTRUCTION
PROPOSED SHARED USE PATH		
PROPOSED SIDEWALK		
PROPOSED GRADING AND GRAVEL TRAIL FOR FUTURE SHARED USE PATH BY OTHERS		
PROPOSED STORMWATER MANAGEMENT BASIN		

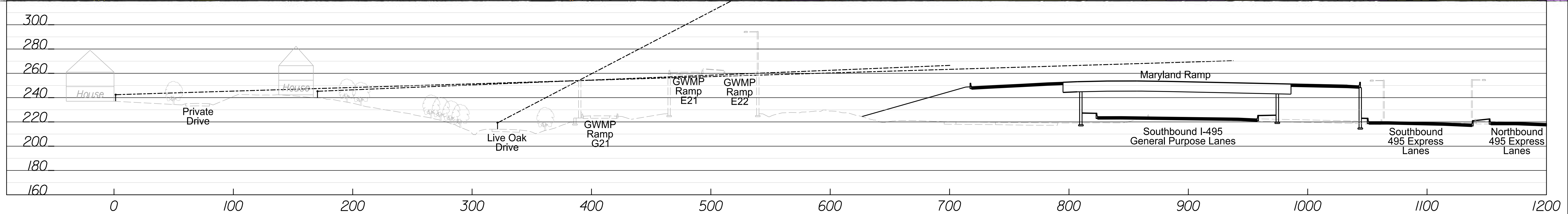
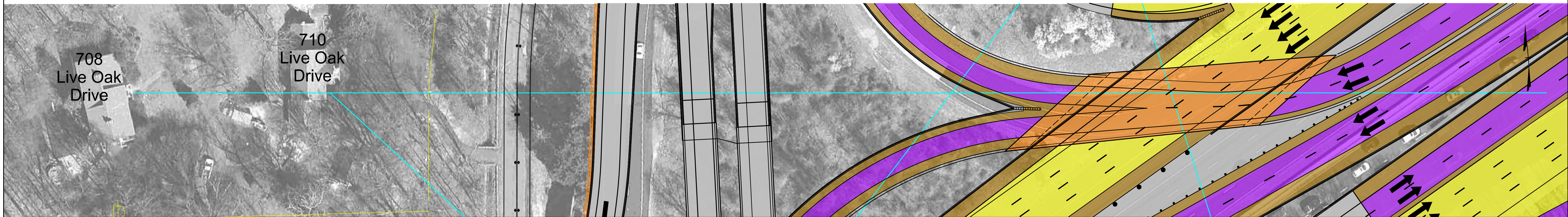
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Project NEXT



Project NEXT and I-495/I-270 Managed Lanes Study (Maryland Project)



495 Express Lanes Northern Extension Project

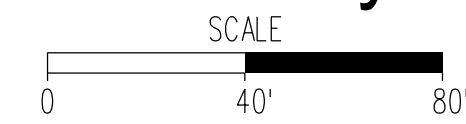
June 2022 Public Update Meeting Design - Cross Section Views

Project NEXT and I-495/I-270 Managed Lanes Study

July 21, 2022

Cross Section View 5

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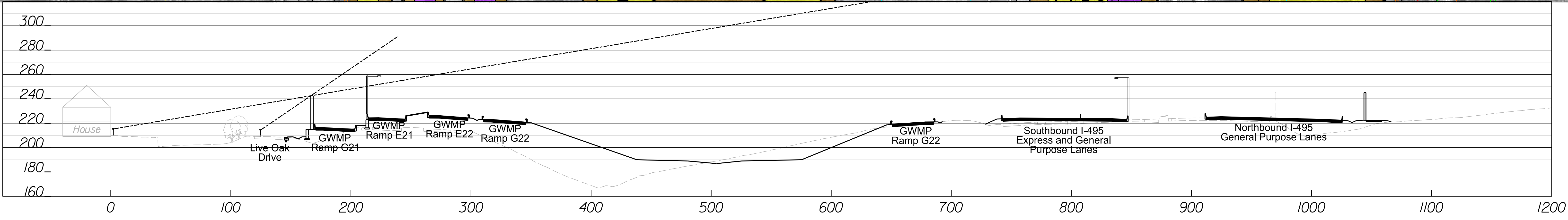
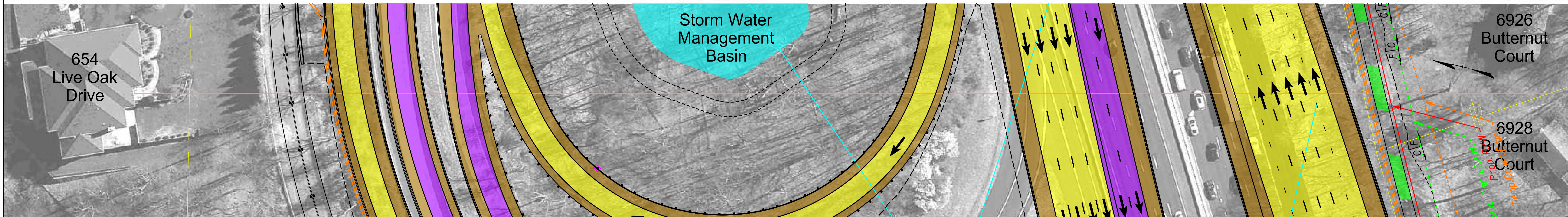


LEGEND	
PROPOSED EXPRESS LANES & RAMP	EXISTING RIGHT OF WAY
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PROPOSED STORMWATER MANAGEMENT BASIN	PREVIOUSLY COMPLETED PROJECT NEXT CONSTRUCTION

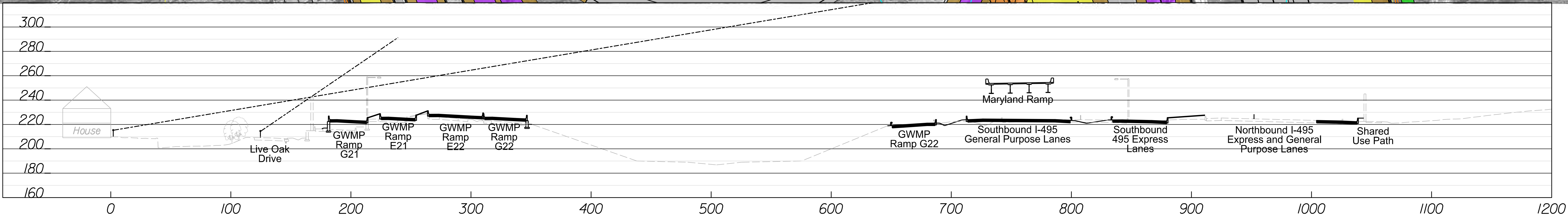
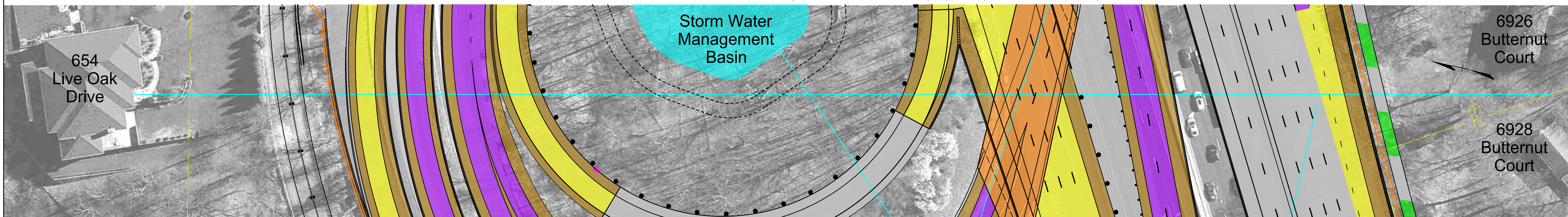
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Project NEXT



Project NEXT and I-495/I-270 Managed Lanes Study (Maryland Project)



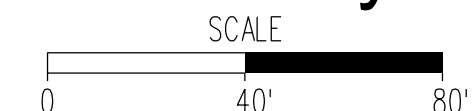
495 Express Lanes Northern Extension Project

June 2022 Public Update Meeting Design - Cross Section Views

Project NEXT and I-495/I-270 Managed Lanes Study

July 21, 2022

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LEGEND

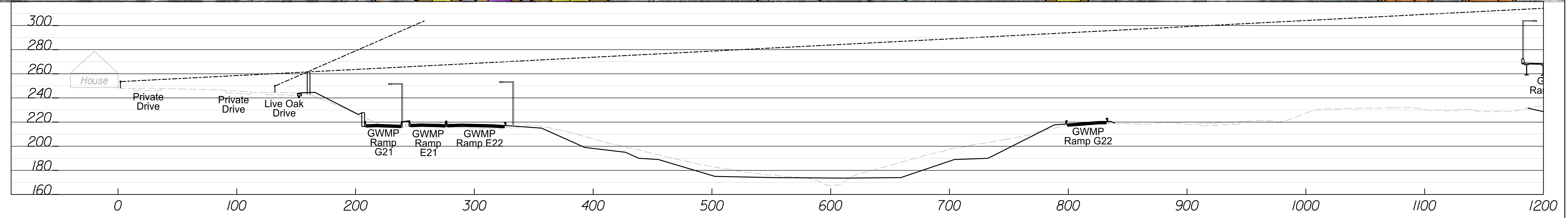
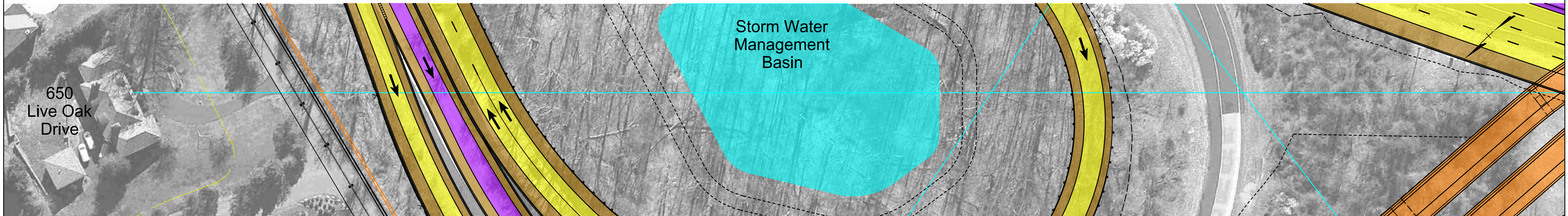
PROPOSED EXPRESS LANES & RAMP	EXISTING RIGHT OF WAY	PROPOSED PERMANENT EASEMENT (V2021)
PROPOSED GENERAL PURPOSE LANE IMPROVEMENTS	PROPERTY LINES	PROPOSED TEMPORARY EASEMENT (V2021)
PROPOSED PAVED SHOULDER/PAVED MEDIANS	PROPOSED RIGHT OF WAY	PROPOSED UTILITY EASEMENT (V2021)
PROPOSED BRIDGE	PROPOSED PERMANENT EASEMENT (V2021)	PROPOSED STORMWATER MANAGEMENT BASIN
PROPOSED SHOULDER	PROPOSED TEMPORARY EASEMENT (V2021)	PREVIOUSLY COMPLETED PROJECT NEXT CONSTRUCTION
PROPOSED SHARED USE PATH	PROPOSED PERMANENT EASEMENT (V2021)	
PROPOSED SIDEWALK	PROPOSED TEMPORARY EASEMENT (V2021)	
PROPOSED GRAZING AND GRAVEL TRAIL FOR FUTURE SHARED USE PATH BY OTHERS	PROPOSED UTILITY EASEMENT (V2021)	
	PROPOSED NOISE BARRIER	

Notes:

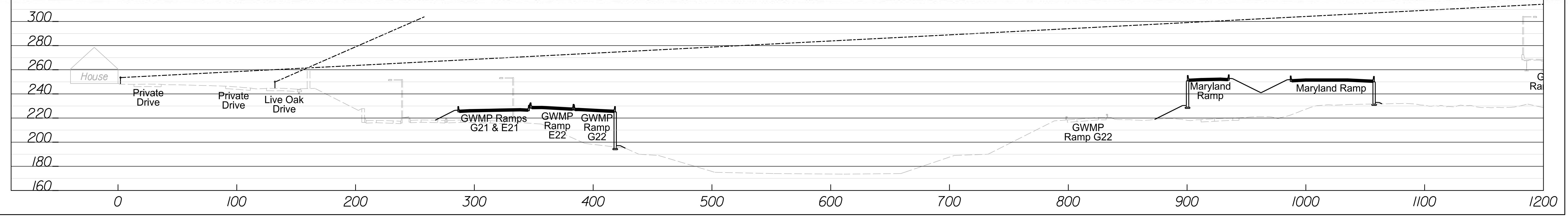
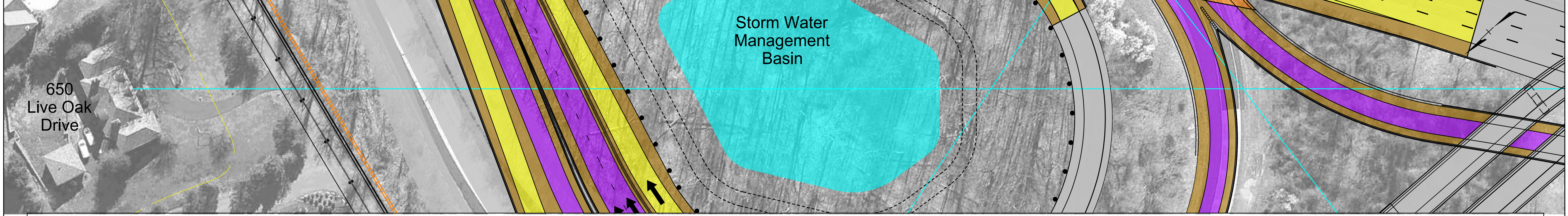
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Cross Section View 6

Project NEXT



Project NEXT and I-495/I-270 Managed Lanes Study (Maryland Project)



Attachment 3

TECHNICAL MEMORANDUM

495 NEXT Modifications to Project Configuration Since NEPA Study
Completion

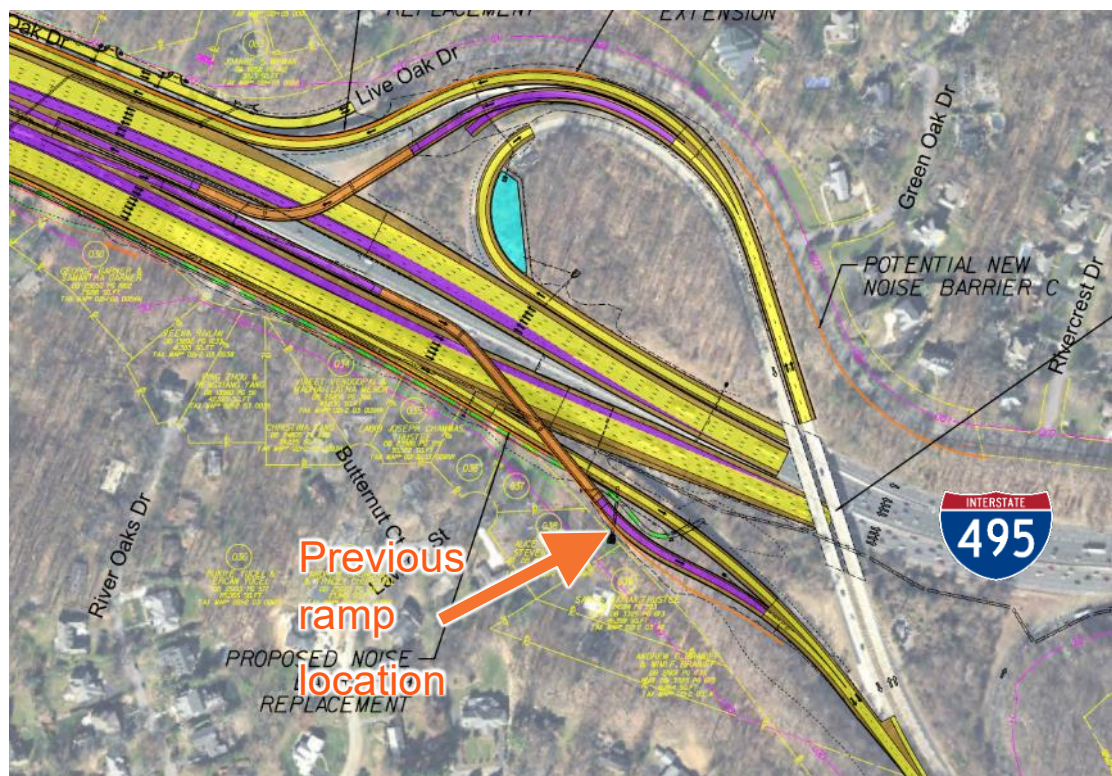
TECHNICAL MEMORANDUM

I-495 Express Lanes Northern Extension (495 NEXT) Project Modifications to Project Configuration Since NEPA Study Completion

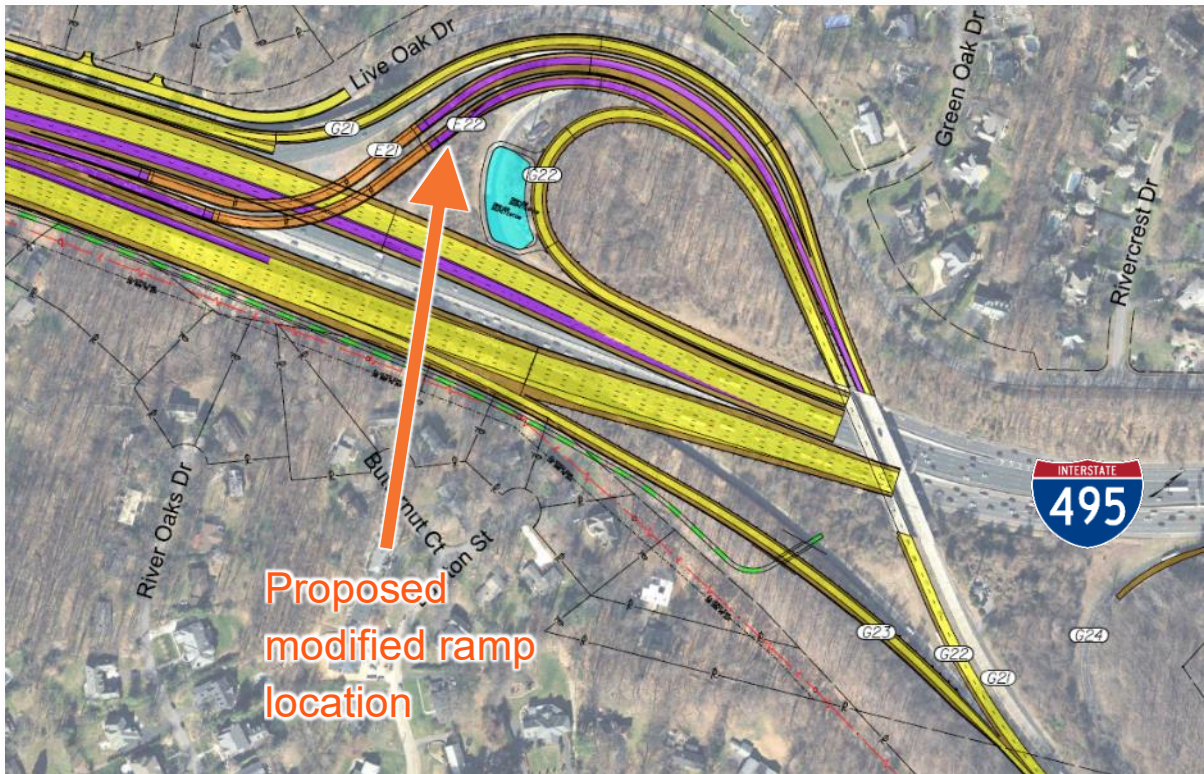
The purpose of this memorandum is to document updates to the 495 NEXT Project configuration since it was studied in the May 2021 Revised Environmental Assessment (EA) and the June 2021 Federal Highway Administration's (FHWA) Finding of No Significant Impact (FONSI), as well as to address the consideration of what impacts to environmental resources, if any, are anticipated to have changed as a result. Since completion of the FONSI, VDOT – in coordination with the concessionaire (Capital Beltway Express or CBE), and their design-build contractor – have continued to progress the design of the project through final design in preparation for right of way acquisition and construction. Some design refinements were made as a result of continuing engagement with the public or in coordination with Maryland to align the two separate projects. Notable design changes to date include:

GEORGE WASHINGTON MEMORIAL PARKWAY INTERCHANGE

- Re-alignment of the off-ramp from northbound I-495 express lanes to the George Washington Memorial Parkway (GW Parkway).
 - Previous Configuration: The northbound express lanes exit ramp was originally proposed to fly over the northbound I-495 general purpose lanes and tie into the GW Parkway east of I-495, just west of the National Park Service (NPS) property boundary, as shown in the exhibit below.



- Current Proposed Configuration:** The northbound express lanes exit ramp is now proposed to fly over the southbound I-495 express lanes and general purpose lanes and follow inside the alignment of the previously-proposed on-ramp from eastbound GW Parkway to the southbound I-495 express lanes. This configuration is referred as the “nested loop ramp” configuration. The proposed ramp will merge with off-ramp from the southbound I-495 general purpose lanes to GW Parkway and then cross all lanes of I-495 to enter the GW Parkway. The modified configuration, as shared in the September 29, 2021 Public Information Meeting, is shown below.



- Re-alignment of the off-ramp from northbound I-495 general purpose lanes to GW Parkway, to tie into the existing ramp closer to I-495.
- Re-alignment of the off-ramp southbound I-495 general purpose lanes to GW Parkway, to shift the physical gore point further north and to merge with the newly proposed northbound I-495 express lanes nested off-ramp.

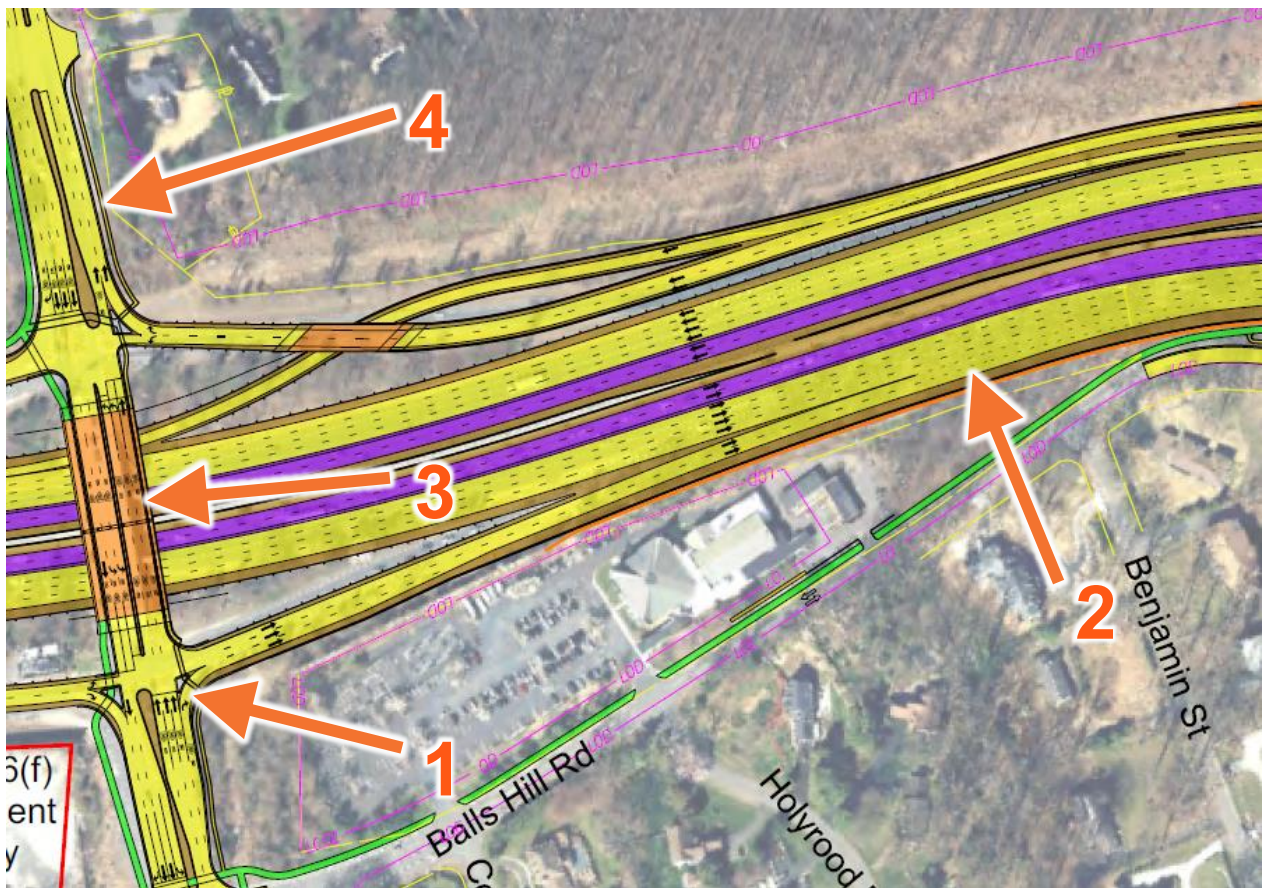
LIVE OAK DRIVE BRIDGE

- The updated design configuration includes shifting the proposed Live Oak Bridge over I-495 from the north side of the existing bridge to the south side, in order to reduce impacts to the adjacent section of Live Oak Drive.

GEORGETOWN PIKE INTERCHANGE

- The interchange at Georgetown Pike (Route 193) has several minor revisions to improve capacity and safety, based on input from the residential community and as shown in the graphic below:

- Revised Georgetown Pike interchange ramps configuration:
 1. Added channelized free-flow right-turn from westbound Georgetown Pike to northbound I-495
 2. Additional acceleration and merge lane with increased merge distance on northbound I-495 on-ramp
- Revised Georgetown Pike overpass typical section:
 3. Widened bridge by 6.5 feet (105.5 feet total) to add a 6-foot-wide sidewalk on north side of bridge
 4. Added trail connection to Scotts Run Nature Preserve



REVISED IMPACTS NEAR GEORGE WASHINGTON MEMORIAL PARKWAY INTERCHANGE

- The previous proposed northbound flyover ramp alignment – as shown at October 2020 Public Hearing – for the off-ramp from the northbound Express Lanes to the eastbound GWMP, was 40 feet above the northbound I-495 general purpose lanes, measured from the top of main roadway to top of pavement on ramp. The new configuration under the updated design concept removes that proposed ramp from original alignment in southeast quadrant on interchange, and shifts it to the west side of I-495, where it will be same height as the proposed converse movement from the

GWMP to the southbound Express Lanes that has consistently been shown there – also 40 feet high compared with the I-495 mainline lanes – and still within VDOT right-of-way.

- The proposed flyover ramp from the northbound Express Lanes to the GWMP will not be visible over top of proposed noise barriers along Live Oak Drive – it will be same height as proposed southbound Express Lanes ramp shown at previous public hearing and public information meetings.
- The new alignment provides a benefit to previously-impacted residential properties near the GWMP. The distance of ramps and impacts from homes in the southeast quadrant of the GWMP interchange changes as follows:
 - Roadway elements and noise walls (i.e. the general purpose ramp from northbound I-495 to the GWMP) will now be 50' or more further away from houses along Lawton Street, and the ramp is also at a much lower elevation than the previous proposed northbound Express Lanes ramp.
 - The proposed new northbound Express Lanes ramp alignment will be tucked in parallel to the southbound Express Lanes ramp alignment, and slightly lower height than SB Express ramp, so no additional impacts to right-of-way or visual impacts along Live Oak Drive are anticipated with the revised alignment.
- The new configuration of these ramps will bring Live Oak Drive approximately 10 feet *closer* to Beltway between the GWMP ramps and the new Live Oak Bridge, compared with previous alignment shown at Public Hearing – this has the end result of moving the roadway *further* from adjacent properties on Live Oak Drive.
- Proposed right-of-way needs and proposed temporary construction easements are roughly equivalent between the two concepts – there is no significant difference based on the latest design by the design-build contractor.
- Utility impacts are the same between the two designs.
- Tree clearing limits are approximately the same between the two designs with no appreciable difference.
- Noise barrier heights are anticipated to be similar between the two designs, to be confirmed by the Final Design Noise Report and corresponding detailed noise analysis.

In evaluating the need for additional NEPA documentation, the limits of disturbance (LOD) were used as the basis for making environmental resource impact conclusions. The design changes since the Finding of No Significant Impact (FONSI) have not resulted in proposed physical impacts outside of the LOD. These changes are anticipated to result in a larger distance between the Parkview Hills neighborhood in the southeast quadrant of the GWMP interchange and the proposed interstate facilities. On the west side of the interchange, near Live Oak Drive, proposed changes include realignment of the adjacent ramps, with only a minor shift in the project ramp westward towards Live Oak Drive and the existing residences (still within the LOD and VDOT right-of-way). However, since the northbound I-495 express lanes off-ramp to the GWMP would be realigned to this side of the interchange, the change would introduce an additional ramp in the area, which will be evaluated in the Final Design Noise Study underway, to confirm that there are no adverse changes in noise characteristics or traffic volume levels

compared with the design studied in the EA and selected in the FONSI.

The following analyses were considered, and do not require a reevaluation or supplement NEPA document:

- Visualizations from the Parkview Hills neighborhood viewpoints (in the southeast quadrant of the interchange) are not recommended at this time, since the roadway is proposed to be shifted further away from these vantage points, which would further reduce the previously-assessed viewshed impacts.
 - An additional preliminary noise analysis is not warranted at this phase in the design of the project, as any changes since the completion of the FONSI are being addressed in the ongoing Final Noise Abatement Design Report and corresponding detailed noise impact analysis being conducted by the design-build contractor and reviewed by VDOT and FHWA.
 - An evaluation of changes to stormwater impacts will be addressed by the design-build contractor as part of the detailed design phase during the production of design plans and supporting stormwater impact analysis reports.
 - No additional analyses associated with the relocated utility tower are recommended since the new location is within the previously studied LOD. In addition, no Section 106 effects are anticipated to any architectural or cultural resources, since the surrounding homes within the Parkview Hills neighborhood were evaluated and determined not historic.
 - An evaluation of the change in tree loss due to the proposed design changes will be addressed in the planned tree inventory, which was previously committed by VDOT as part of the EA and FONSI. VDOT's commitment to perform tree planting as mitigation has not changed.
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Attachment 4
Landscaping Elements from the Technical Requirements

3.12 Landscaping

- A. Prior to commencing any land disturbance activities, the Design-Builder shall complete a survey and prepare an inventory of wooded areas within the anticipated limits of construction (including areas adjacent to communities within the VDOT right-of-way). This survey shall identify the number, caliper and species of trees that are 12-inch caliper or larger and the types and locations of existing trees shall be depicted on a Tree Inventory Roll Plan submitted for approval. This inventory shall form the basis for replacement tree plantings required per Section 3.12.C.
 - B. The Design-Builder shall re-establish existing grass areas following completion of construction activities with low growing, native and non-competitive grasses prior to Final Completion, and properly maintain these areas for the duration of the Warranty Period. All plant materials shall be indigenous to the area and be able to adapt and survive in roadside environments.
 - C. Following completion of construction activities, the Design-Builder shall re-establish trees on the remainder of any existing wooded areas that were disturbed and are not used for any Project elements or facilities. Replacement tree plantings are not required on the roadway side of any sound barrier walls or retaining walls. A Tree Replacement Roll Plan shall be prepared and submitted for approval prior to any re-plantings. New plantings shall meet the following minimums: a) Shade trees - two (2)-inch caliper stock trees planted twenty (20) to thirty (30) feet on center and b) evergreen and flowering trees planted ten (10) to twenty (20) feet on center. Two replacements trees are required for any removed trees which are twelve (12)-inch or greater caliper. Where remaining wooded areas are too small or steep for adequate tree growth, the Design-Builder shall provide densely planted shrubs. All tree planting areas shall be stabilized with low growing, native, and non-competitive grasses. Any plants used shall conform to the American Standard for Nursery Stock (ANSI-Z60.1-2004), container grown or balled and burlapped. Trees and plant materials shall be indigenous to the area and be able to adapt and survive in roadside environments. The Design-Builder is to establish the new trees and properly maintain these areas for the duration of the Warranty Period. Locations where damages have been paid to private property owners for tree removal shall be exempt from these replanting requirements.
 - D. In areas where only grading for future shared-use paths shown in the RFP Conceptual Plans, such areas shall be seeded with low growing, native and non-competitive grasses prior to Final Completion, and the Design-Builder properly maintain these areas for the duration of the Warranty Period. All plant materials shall be indigenous to the area and be able to adapt and survive in roadside environments.
 - E. The Design-Builder shall provide the plantings and/or landscaping to meet environmental mitigation commitments specified in Section 3.3.10. prior to Final Completion, and properly maintain these areas for the duration of the Warranty Period. All plant materials shall be indigenous to the area and be able to adapt and survive in roadside environments.
 - F. Any plantings or landscaping required to stabilize disturbed areas during construction to maintain permit conditions or meet requirements of Governmental Authorities shall be the Design-Builder's responsibility.
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