

**FAIRFAX COUNTY
BOARD OF SUPERVISORS
October 20, 2015**

ADDENDUM

ACTION ITEMS

5

Endorsement of the Recommended Design Concept (Preferred Alternative) for Transforming I-66 Outside the Beltway (Braddock, Hunter Mill, Providence, Springfield and Sully Districts)

ACTION – 5

Endorsement of the Recommended Design Concept (Preferred Alternative) for Transforming I-66 Outside the Beltway (Braddock, Hunter Mill, Providence, Springfield and Sully Districts)

ISSUE:

Board of Supervisors endorsement of the Recommended Design Concept (Preferred Alternative) for Transforming I-66 Outside the Beltway, including comments on outstanding issues.

RECOMMENDATION:

The County Executive recommends that the Board endorse the Recommended Design Concept (Preferred Alternative) for Transforming I-66 Outside the Beltway, generally as presented at the Commonwealth Transportation Board (CTB) meeting on September 15, 2015, and reviewed by the Board Transportation Committee on October 13, 2015, with the following modifications, comments and requests for additional coordination as described in more detail in the attached letter to ensure that the project remains fully in conformance with the Fairfax County Comprehensive Plan and that impacts to County residents are minimized:

- Continue to minimize right-of-way impacts on adjacent residential properties, including consideration of the Recommended Design Concept as the maximum footprint (both horizontally and vertically) going forward,
- Preserve the ability to extend Metrorail,
- Allow for the completion of other future roadway improvements identified in the County's Comprehensive Plan,
- Support inclusion of portions of regional trail not within I-66 right-of-way,
- Address traffic impact areas within quarter-mile of corridor,
- Address other implementation Issues,
- Allow adequate time for the County to coordinate with VDOT on the Revised Environmental Assessment (EA) for the Preferred Alternative and continue to pursue coordination regarding previous stated concerns regarding: stormwater management strategies, heights of noise barriers, tree cover and replacement, impacts to Resource Protection Areas, Environmental Quality Corridors, and Watershed Management Plans; impacts to Parks, and impacts to historic properties and wildlife habitat.
- Emphasize the need for a strategy to coordinate implementation of improvements Inside and Outside the Beltway,
- Continue to minimize the heights of elevated ramps,
- Allow flexibility in Design so that alternative ways of addressing concerns can be considered,
- Identify future phasing and funding strategy,
- Refine phasing of Project to not preclude Metrorail extension,

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- Minimize and/or mitigate construction noise (especially at night),
- Work to ensure that through the relocation process, property owners secure properties with similar characteristics to their current properties, such as proximity to Metrorail,
- Maintain safe access to Metro and on pedestrian and bike facilities during construction,
- Consider traffic calming strategies during construction,
- Ensure that lane transitions, particularly at the end of the bridges are done safely with adequate signage, and
- Seek joint use park and ride lots east of the Fair Oaks area.

TIMING:

Board action is requested to act on October 20, 2015 so the CTB will have the Board's comments before they take action at their meeting on October 27, 2015.

BACKGROUND:

In May 2011, the Virginia Department of Transportation (VDOT), in cooperation with Department of Rail and Public Transportation (DRPT), initiated a study of the I-66 Corridor between the Capital Beltway (I-495) in Fairfax County and U.S. Route 15 in Prince William County. The Tier 1 Environmental Impact Statement (EIS) defined existing and future transportation conditions and needs within the 25 mile corridor. Tiering is a staged approach to preparing documents in compliance with the National Environmental Policy Act (NEPA) policy. The Tier 1 analysis examined potential impacts at a broad conceptual level.

The Tier 1 Record of Decision (ROD) was issued by the Federal Highway Administration (FHWA) in November 2013. It specified ten potential improvement concepts to advance to a Tier 2 EIS:

- General Purpose Lanes;
- Express Lanes;
- Metrorail Extension;
- Light Rail Transit;
- Bus Rapid Transit;
- Virginia Railway Express Extension;
- Improve Spot Locations/Chokepoints;
- Intermodal Connectivity;
- Safety Improvements; and
- Transportation Communication and Technology.

None of the concepts, as stand-alone concepts, fully satisfied the purpose and need. However, each improvement concept contributes to meeting the purpose and need and

would provide transportation benefits. FHWA advanced all ten concepts and allowed the Commonwealth of Virginia to identify Tier 2 projects for subsequent study.

A Tier 2 EA process was initiated by VDOT on July 17, 2014, with a proposed plan to provide the following on I-66 from Haymarket to the Beltway:

- Three regular general purpose lanes in each direction;
- Two express lanes in each direction based upon the conversion of the existing high-occupancy vehicle (HOV) lanes to an express lane and an additional new express lane constructed in each direction;
- Direct access between the express lanes and new or expanded commuter park-and-ride lots; and
- Significant increases in transit service along the corridor using the new express lanes.

The proposed improvements include an option to allow the extension of Metrorail in the I-66 corridor in the future.

In February 2015, the Board sent a compilation of County comments to Virginia's Secretary of Transportation subsequent to a series of VDOT Public Information Meetings on the proposed I-66 transportation improvements (Attachment 2). In June 2015, the Board sent another letter to the Secretary regarding the Draft EA released in May (Attachment 3). Detailed comments were also sent to the State as a follow-up to the Board's letter (Attachment 4). The emphasis in the June letter was to:

1. Minimize right-of-way impacts.
2. Preserve the ability to extend Metrorail.
3. Implement bike/ped projects identified in County Comprehensive Plan, including a regional trail roughly paralleling I-66 (portions of facility could be on parallel roadways) in I-66 project plans and cost.
4. Include funding for enhanced bus transit.
5. Address traffic impact areas within quarter-mile of corridor.
6. Ensure that Public Private Partnership allows flexibility for extension of Metrorail in the future.
7. Address other implementation issues –
 - a. Installing sound walls as the project develops
 - b. Addressing park impacts
 - c. Maintenance of traffic
 - d. Minimization of night construction
 - e. Maintenance of equipment and facilities
 - f. Landscaping and tree replacement plan
 - g. Minimization of disruption during construction
 - h. Maintenance of pedestrian access to Metrorail stations

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- i. Address environmental issues, including air and noise, historic properties, parks, recreation and open space and other natural resources
8. Allow adequate time for the County to coordinate with VDOT on Revised EA for the Preferred Alternative.
9. Emphasize the need for a strategy to coordinate implementation of improvements Inside and Outside the Beltway (e.g., conversion from HOV-2 to HOV-3, multimodal applications and continuity of both segments, directional signage).
10. Minimize height of elevated ramps
11. Allow flexibility in design

VDOT and the County have been working on many of these issues, and some have been addressed in the Recommended Design Concept (Preferred Alternative) recommended to the CTB on September 15, 2015, including:

- Reductions in the project footprint resulting in less right-of-way impacts and fewer possible relocations,
- Redesign of interchanges and access points resulting in reduced heights of elevated ramps,
- Incorporation of regional trail,
- Incorporation of additional transit services, and
- Coordination on Inside and Outside Beltway projects relative to the future conversion from HOV-2 to HOV-3 requirements.

The attached comment letter further highlights the previous issues that have not been fully addressed and includes additional issues relevant to the review of the Recommended Design Concept (Preferred Alternative) under consideration by the CTB.

Additional comments include:

12. There are a number of outstanding environmental issues that have yet to be presented in the final environment documents and necessitate continuing coordination leading up to the Design Public Hearings.
13. Identify future phasing and funding strategy of Recommended Design Concept (Preferred Alternative).

The CTB will vote whether or not to approve the Recommended Design Concept (Preferred Alternative) for Transforming I-66 Outside the Beltway at their October 27, 2015 meeting. Public meetings are also being held on October 19, 20 and 21, 2015 in the Corridor on the Recommended Design Concept (Preferred Alternative).

After the decisions by the CTB on October 27, 2015, the joint VDOT/DRPT effort will be following upcoming key milestones for the I-66 Transportation Improvement Project:

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Late 2015	Final Environmental Document
2016/2017	Design Public Hearing
2017	Construction Start
2021	Open to Traffic

FISCAL IMPACT:

There is no fiscal impact resulting from this action. Subsequent implementation of the I-66 project could result in fiscal impacts for the County. These potential impacts will be better defined as project-development proceeds.

ENCLOSED DOCUMENTS:

Attachment 1: Letter to Secretary Layne endorsing Transform I-66 outside the Beltway Project and the comments.

Attachment 2: February 2015 Comment Letter

Attachment 3: June 2015 Comment Letter

Attachment 4: June 2015 Staff Technical Comment Letter

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October 20, 2015

The Honorable Aubrey L. Layne, Jr.
Secretary of Transportation
1111 E. Broad Street, Room 3054
Richmond, Virginia 23219

Reference: Recommended Design Concept (Preferred Alternative) for Transforming I-66 Outside the Beltway

Dear Secretary Layne:

On October 20, 2015, the Fairfax County Board of Supervisors endorsed the Recommended Design Concept (Preferred Alternative) for Transforming I-66 Outside the Beltway as recommended and presented by VDOT to the Commonwealth Transportation Board (CTB) on September 15, 2015. The comments below regarding the Final Tier 2 Environmental Assessment of the Transforming I-66 Outside the Beltway project, the Preferred Alternative and the phasing of the Preferred Alternative were also approved by the County on October 20. As indicated in the Board's June 5, 2015, letter, I-66 is critically important to Fairfax County. The County continues to support the Commonwealth's efforts to address multimodal mobility in the I-66 Corridor and to move the most people as efficiently as possible.

Decisions made in this Corridor Improvement Project will have a significant impact on the daily lives of Fairfax County citizens and others who work and visit Fairfax County. They will also significantly affect the ability to implement future improvements in the I-66 corridor. Since the County transmitted comments to you in February and June, the Virginia Department of Transportation (VDOT) and the Virginia Department of Rail and Public Transportation (DRPT) have been working collaboratively towards addressing our concerns. We sincerely appreciate the extensive public outreach that has been conducted. The Board also appreciates the additional design work that has minimized the project's footprint and reduced the number of potential residential relocations that were initially presented earlier this year.

Tier 2 Environmental Assessment of the Transforming I-66 Outside the Beltway Project

The County understands that the final environmental documents will not be completed until after the CTB decides on the Recommended Design Concept (Preferred Alternative) on October 27, 2015. The County expects that the final documents will include supporting information regarding:

- VDOT's multimodal recommendation, based upon increased person throughput and reduced congestion and cut-through traffic in the corridor
- Responses to the County and other comments submitted to VDOT that were considered in the formulation of the recommendation
- Strategy for completing the future phases of the recommended design concept

Recommended Design Concept (Preferred Alternative)

With the presentation of the Recommended Design Concept (Preferred Alternative) by VDOT to the CTB on September 15, 2015, the County renews the following additional comments covering our earlier February and June letters as well as additional issues regarding the project funding and phasing.

- Right-of-Way
The Board appreciates the additional considerations given to minimizing right-of-way impacts to our residences, schools, businesses, parks and natural resources. Some of these reductions are based upon new designs and applications of stormwater management regulations. The County continues to be interested in reducing the right-of-way impacts and encourages additional efforts to minimize residential relocations. The County also requests that possible right-of-way reductions be considered at all crossings, as is being done with the phased reconstruction for the Cedar Lane crossing, and that reasonable design waivers be considered. As the next project phase considers alternative designs, the County requests further efforts to reduce the footprints and right-of-way impacts. The Preferred Alternative should be considered the maximum footprint (both horizontally and vertically) going forward.
- Not to Preclude Extension of Rail Service
The Board has supported the use of Typical Section 2A between the interchanges for the Transform I-66 Outside the Beltway project. This concept would provide a wider median to accommodate an extension of Metrorail to three stations west of Vienna as planned on the County's Comprehensive Plan. The Recommended Design Concept (Preferred Alternative) allows for this wider median in Fairfax County. However, the Phase 1 project does not include the wider median in Centreville from west of Route 28, through the Route 29 interchange and to the planned future rail station location, a distance of approximately 5,000 feet.

The County understands that reconstructed interchanges will be designed and built to accommodate the future extension of Metrorail. However, in some cases, most notably at the Monument Drive and Stringfellow Road crossings, a significant up-front cost savings can be achieved by using the existing structures and their HOV ramp connections until such time as a Metrorail extension is implemented. Alternative concept designs have been developed for building the more expensive configurations which would accommodate an extension of Metrorail service as part of this project. The more extensive designs would relocate the ramps to the north, and in Monument Drive's concept, shift the crossing to the west. The Preferred Alternative at Monument Drive should be redesigned to eliminate the encroachment on the County's property where the Public Safety Building is currently under construction. The County requests that the additional right-of-way needed, if any, for these ramp relocations and bridge relocations be acquired as part of this project, so as to not preclude the future extension of Metrorail through these locations or make these ramp relocations cost prohibitive in the future.

- Key Network Assumptions
As noted previously, there are a number of transportation network assumptions that are important to the conversion of a multimodal I-66 within the highway system serving the central part of Fairfax County. Some of these may be built at a later time period than the 'managed lanes' project on I-66; however, it is important to preserve the opportunity and not preclude the ability to build the following in the future. We are pleased that the Project Team has examined several options for the High Occupancy Vehicle (HOV) connection between I-66 and the Fairfax County Parkway, in particular, and that future HOV connections are not being precluded. The County continues to encourage the

consideration of these future projects included on Fairfax County's Comprehensive Plan in the design process:

- HOV lanes and future transit along Route 28 north of I-66,
- HOV lanes along the Fairfax County Parkway, and
- Additional southbound lane along Beltway from Route 7 in Tysons to I-66.

- Enhanced Transit

A clear advantage of the managed lanes is that they support more reliable and more efficient bus service in the corridor, and, therefore, facilitate moving more people in fewer vehicles. As part of the I-66 Corridor Improvement Project, a preliminary proposed new transit service plan has been put forward to be funded as part of the project. It is recommended that existing transit operators in the corridor operate the enhanced transit service and that no new operator be created to provide the new transit services. Branding of corridor service could still be an option.

- Bike/Pedestrian Facilities

Since transmitting our earlier comments in February, the I-66 Transportation Improvement Project Team has been working with the County regarding elements of Bike/Pedestrian Facilities:

- Crossings of I-66 –

We are pleased that VDOT is including bike and pedestrian facilities on the bridges it is rebuilding with this project. It is recommended that enhancements at the crossings be connected with the existing bike/pedestrian networks adjacent to the crossings and at the next intersection. The Board supports the designation of the proposed shared use path as shown through the Route 123 interchange in the north-south direction and as it connects with the I-66 Parallel Trail System.

- Parallel I-66 Regional Trail -

The Recommended Design Concept (Preferred Alternative) includes the major regional trail paralleling I-66 as indicated in the County's Comprehensive Plan. This element of the multimodal project will be a tremendous community amenity, serving both commuting and recreational bicyclists, as well as pedestrians. The Project Team has spent a significant amount of time on this issue; however, the identification and supporting documentation of a regional trail alongside of I-66 was very preliminary in the draft Tier 2 documents and additional detail has yet to be published for review. The County requests that this documentation be provided with sufficient time for review before the revised EA is finalized. The construction costs of the regional trail, including on-street and park sections (signage, striping, etc.) should also be included in the total Project costs.

- Traffic Impact Area Analyses

As part of the implementation of the Capital Beltway Express Lanes, a limited analysis of adjacent congested intersections was conducted. However, these efforts only minimally considered the nearby impacts of the new facilities on intersections adjacent to the Beltway and the related traffic congestion. It is recommended that prior to the implementation of a multimodal design along I-66, that cross-street traffic congestion resulting from this project (including during construction) be addressed within the nearby interconnecting roadway system within a quarter-mile of the I-66 corridor. It is the County's

understanding that the analysis of nearby intersections will not be available for review before the CTB decides upon the Recommended Design Concept (Preferred Alternative). These analyses are important to the mitigation of traffic impacts associated with the project and as part of the TMP prior to the start of the project.

- Implementation Issues

County staff has been working with the VDOT Project Team in identifying elements of the TMP. These efforts are expected to continue to require substantial preparation and consideration for the implementation of the I-66 project. We continued communications to the County and community during project implementation and emphasize that these efforts continue and the following considerations be included:

- Ensuring that sound walls are provided in residential areas, on ramps elevated above sound walls adjoining residential neighborhoods and replaced rapidly after existing walls are removed,
- Minimizing park impacts,
- Developing an aggressive maintenance of traffic plan for roadway and existing Metrorail service,
- Minimizing night construction in areas adjacent to residential neighborhoods and using every effort to mitigate construction noise, including quieter equipment,
- Maintaining proper erosion, siltation and stormwater management equipment and facilities during construction,
- Developing an effective landscaping and tree replacement plan,
- Minimizing disruption during construction and considering traffic calming devices as necessary,
- Providing homeowners with relocation within community and with comparable access to Metro, schools and jobs; owners of partial property takings should be notified as soon as possible,
- Coordinating with the County on safe transition between new bridges and existing roadways, including access to existing streets,
- Instituting regular, frequent communication with the community throughout the project,
- Maintaining safe access to Metro and pedestrian facilities during construction,
- Minimizing construction that impacts bus services especially at peak times, Maintaining safe pedestrian and vehicular access with particular attention around Metrorail stations and schools,
- Seeking joint use park-and-ride lots east of the Fair Oaks area,
- Implementing improvements at the I-66/Route 28 interchange as early in the project as possible, and
- Enhancing wayfinding signs to park-and-ride lots.

- Development of a strategy to coordinate implementation of improvements Inside and Outside the Beltway

The County is participating in both the I-66 Inside the Beltway and I-66 Outside the Beltway projects. The projects are following different schedules, but have very important continuity and connectivity issues. There are major efforts underway for each project, and they both come under the heading of ‘Transform66’. However, an overall strategic plan for blending the implementation of elements from each has not been developed. The County requests that a Transform66 Strategic Plan be developed to assist with issues such as managed lane and tolling coordination, multimodal applications and

directional signage for the larger Corridor providing implementation continuity between both project segments.

- Heights of Elevated Ramps

Some flyover and interchange ramps in the Recommended Design Concept (Preferred Alternative) along the project have been designed with high elevations to allow for adequate clearances and connections between travel lanes. While an effort has been made to reduce the heights of the elevated ramps, the project team should encourage reconsiderations of design or ATCs (Alternative Technical Concepts) that would reduce the heights even further. Alternative concepts to the high elevation ramps should be evaluated and considered for minimizing noise, visual and right-of-way impacts upon nearby residential communities.

- Flexibility in Final Design

The Board recognizes that the Recommended Design Concept (Preferred Alternative) represent preliminary designs and that design public hearings will be held in the future. Regardless of whether the selected procurement process is a public-private partnership or a design-build process, the need exists to allow creativity in the final design to reduce costs, simplify maneuverability between systems, and further reduce impacts on the community.

- Environmental Issues

There are a number of outstanding environmental issues that were reviewed in the Draft Tier 2 EA, but limited information and changes to the Recommended Design Concept necessitates continuing coordination on these issues leading up to the Design Public Hearings. The Project Team has initiated contact with the County's Department of Public Works & Environmental Services (DPWES) regarding stormwater management in the corridor. However, a number of items as highlighted in the June 5, 2015, letter have not been addressed as related to Environmental Quality Corridors (EQCs) and Resource Protection Areas (RPAs). This continues to be a significant concern to the County. As the Project Team proceeds to the design phase of the project, the County considers that the stormwater management and the following items still need to be addressed:

- stormwater management strategies,
- heights of noise barriers,
- tree cover and tree replacement,
- impacts to:
 - Resource Protection Areas,
 - Environmental Quality Corridors,
 - Watershed Management Plans,
- impacts to Parks, and
- impacts to Historic Properties and wildlife habitat.

Comments from the Fairfax County Park Authority (FCPA) and the Department of Planning and Zoning (DPZ) containing more detailed comments regarding some of these issues were included, as Attachments to the June 5, 2015 letter.

- Project Funding Considerations
The County understands that the Virginia Office of Public-Private Partnerships has initiated a procurement process regarding the consideration of three delivery approaches to provide for Phase 1 of the Recommended Design Concept (Preferred Alternative). The County recommends that the Commonwealth's decision consider the balancing of public sector funding, risk, flexibility to allow the future extension of Metrorail and the ability to fund future phases of the Preferred Alternative. The County also requests that the funding provide continuing support for transit services within the Preferred Alternative and that the distribution of revenue from the express lanes under each delivery method be considered to support transit service. If a private partner agreement is developed, the County requests that flexibility be provided in the agreement to allow the extension of Metrorail before the concession term expires, and to draft any "non-compete" language in the agreement carefully.
- Phasing of Project
On September 15, 2015, VDOT presented a Recommended Design Concept (Preferred Alternative) for I-66 Outside the Beltway to the CTB that is represented as a multimodal project providing increased person throughput while reducing hours of congestion and impacts on local adjacent roads in the corridor. VDOT also recommended the project be implemented in phases in recognition of the cost and complexity of the proposed improvements. They submitted a Phase 1 portion of the Recommended Design Concept (Preferred Alternative) that is implementable by 2021. Portions of the new construction do not accommodate future Metrorail extensions, however. VDOT suggested that future phases to complete the Preferred Alternative could be implemented as funding becomes available. The County has a number of concerns regarding the elements described within Phase 1 as recommended by VDOT and the ability to complete the project in future phases that are undefined, unscheduled or have no expressed support for completion. The Board is particularly concerned about the section of I-66 between Route 28 to past Route 29.

The cost of construction has been used as a discriminator for reducing the design of the Monument Drive flyover for the express lanes, the Stringfellow Drive flyover for the express lanes, the continuation of the wider median to the west of Route 28. It is recommended that a refinement of these limitations in the design elements be conducted to include the completion of the critical flyover and the widened extension of the project west of Route 28 so that the future extension of Metrorail and connections to the three planned rail stations in the County are not precluded or are prohibitively infeasible from a design or funding perspective in the future.

It is unclear as to when and how the remainder of the Recommended Design Concept (Preferred Alternative) will be completed. The cost for completion of the Preferred Alternative in present dollars and the financing of the remainder should be developed for consideration in defining Phase 1 and subsequent phases.

Fairfax County appreciates the work that has been undertaken on this project to date and the opportunity to provide comments. We also look forward to working closely with the Commonwealth to develop a mutually beneficial project to County residents and the region.

The Honorable Aubrey Layne
October 20, 2015
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If you have any questions or need additional information, please contact Bob Kuhns of the Department of Transportation at Robert.Kuhns@fairfaxcounty.gov or 703-877-5600.

Sincerely,

Sharon Bulova
Chairman

cc: Members, Fairfax County Board of Supervisors
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February 26, 2015

The Honorable Aubrey L. Layne, Jr.
Secretary of Transportation
1111 E. Broad Street, Room 3054
Richmond, Virginia 23219

Reference: Fairfax County Comments on I-66 Tier 2 Corridor Improvement Project

Dear Secretary Layne:

On February 17, 2015, the Fairfax County Board of Supervisors approved the following comments regarding the Tier 2 I-66 Corridor Improvement Project. I-66 is critically important to Fairfax County. As the Tier 1 EIS demonstrated, most of the congested segments of the I-66 study corridor now and in the future, as well as most of the safety deficiencies, are in Fairfax County. In addition, I-66 is a critical link in Fairfax County's transportation system. Consequently, the County strongly supports the Commonwealth's efforts to improve multimodal mobility in this corridor to focus on moving the most people as efficiently as possible and appreciates your willingness to actively engage the County in the development of the project. Decisions made in this Corridor Improvement Project will have a significant impact on the daily lives of Fairfax County citizens and others who work and visit Fairfax County. They will also significantly affect the ability to implement future improvements in the I-66 corridor. Therefore, we believe there are a number of key items that need to be addressed as part of this process:

- Right-of-Way
 - One matter of utmost importance to the Board and our residents is the extent of right-of-way impacts to residences, businesses, parks and natural resources. While we recognize that a mobility-solution for the corridor will have impacts, we want to make sure that the mobility benefits of selected solutions warrant the resultant community and environmental impacts. We caution that the community is unlikely to support significant right-of-way expansion, particularly into established residential neighborhoods. Based upon the draft plans exhibited at the Public Information Meetings, the County is likely to request further design refinements and examinations related to the mainline, interchange and the new state stormwater management regulations to minimize the need for additional right-of-way. The County encourages VDOT to work with the Virginia Department of Environmental Quality (DEQ) in achieving possible innovative approaches such as underground detention to minimize the right-of-way impact due to the new stormwater management regulations and pursue reasonable design exceptions with the Federal Highway Administration to minimize right-of-way requirements. The existing mature trees along the corridor provide a buffer for homes as well as help to reduce stormwater run-off and should be preserved to the extent possible. In addition, extensive outreach efforts should be planned with affected communities.
- Not to Preclude Extension of Rail Service
 - As indicated in the previous Tier 1 broad conceptual analysis, the County stated in its July 9, 2013, letter, its interest in protecting the option of extending Metrorail service within the I-66

right-of-way in the future, as is included in the County's Comprehensive Plan. To preserve the future option of this extension, the County encourages the consideration of techniques used in other urban areas that require less right-of-way or restrictive geometrics within the median and minimize the impact on transportation infrastructure and adjacent properties.

Two typical sections are being considered for the accommodation of current and future modes on I-66. Typical Section 2A allows for an expanded median to accommodate an extension of rail service from its current terminus at the Vienna Metrorail Station. Typical Section 2B has no expanded median for rail service. There is a 40 foot difference in right-of-way between the two sections. As previously indicated, the County desires to protect the ability to extend rail service along I-66 in the future. While preserving the median provides the most expedient way to preserve the future rail option, we recognize that this will not be possible for the entire corridor and that the best aspects of each section should be considered in developing the final project design. We also encourage VDOT to be flexible and not limited to either option 2A or 2B, but seek creative solutions that do not make a future Metrorail extension cost prohibitive.

- Key Network Assumptions

- There are a number of transportation network assumptions that are important to the conversion of a multimodal I-66 within the highway system serving the central part of Fairfax County. Some of these may be built at a later time period than the 'managed lanes' on I-66; however it is important to preserve the opportunity and not preclude the ability to build the following in later years. Therefore, it is important to take into account these future projects included on Fairfax County's Comprehensive Plan in the design process:

- HOV lanes along Route 28 north of I-66,
- HOV lanes along the Fairfax County Parkway and interconnections with I-66, and
- Additional southbound lane along Beltway from Route 7 in Tysons to I-66.

We are pleased that the study team has identified several options for our HOV connection between I-66 and the Fairfax County Parkway, in particular.

- Enhanced Transit

- A clear advantage of the managed lanes is that they support more reliable and more efficient bus service in the corridor, and, therefore, facilitate moving more people in fewer vehicles. As part of the I-66 Corridor Improvement Project, a preliminary proposed new transit service plan has been put forward. A funding plan will be important as the project moves forward, because without funding, the transit service plan cannot be implemented and the benefits of the express lanes will not be fully realized. We would encourage the Commonwealth to incorporate mechanisms that allow project revenues to help fund the enhanced transit service for the corridor.

- Bike/Pedestrian Facilities

As was done with the construction of the Capital Beltway Managed Lanes project, this project presents an opportunity to provide improved bike/pedestrian facilities on rebuilt bridge crossings. We are pleased that VDOT is including bike and pedestrian facilities on the bridges it is rebuilding. Although the Blake Lane bridge is not expected to be rebuilt, it is recommended that enhancements regarding bike/pedestrian applications for Blake Lane be included within this I-66 Corridor Improvement Project. The County's Trail Plan and the recently adopted Bicycle Master Plan call for a Major Regional Trail along I-66 with a minimum width of eight feet. The I-66 Corridor Improvement Project will be the best opportunity in the foreseeable future to begin

implementation of such a trail. Therefore, the County requests consideration be given to serving the immediate vicinity of the I-66 mainline similar in concept and operations and interconnecting with the Custis Trail inside the Beltway. It is recognized that there may be difficulty in accommodating a trail within the I-66 right-of-way and that this regional trail may need to cross I-66 between north and south sides at other bridge crossings expected to be improved for bike/pedestrian enhancements as part of the I-66 Corridor Improvement Project. We also recognize that in some cases it will be more appropriate for this trail facility to be located on a parallel facility, and we request that you coordinate this aspect of the project closely with the County.

- Traffic Impact Area Analyses
 - As part of the implementation of the Capital Beltway Managed Lanes, a limited analysis of adjacent congested intersections was conducted. However, these efforts only minimally considered the nearby impacts of the new facilities on the Beltway and the related traffic congestion. It is recommended that prior to the implementation of a multimodal design along I-66, that cross-street traffic congestion resulting from this project be addressed within the nearby interconnecting roadway system within a quarter-mile of the I-66 corridor.

- Public-Private Partnership
 - The County recognizes that the capital costs and the annual operation and maintenance costs for this project are substantial, and that participation by the private sector is essential to the funding and implementation of the project. However, the County is concerned about the financial risks involved and understands that the Commonwealth will do further analysis to refine these risks. One concern is that the initial Term of Agreement should not prevent the extension of rail service when required. The Virginia Office of Public-Private Partnerships (VAP3) has suggested that the term of the agreement could be as much as 40 years. Fairfax County requests that flexibility be provided in the private partner agreements to consider the extension of rail service before the term expires and to also consider public-private opportunities for the rail service extension. As a result, any “non-compete” language in the agreement should be carefully drafted.

- Implementation Issues
 - While this process is still in the planning stages, it is also important to consider impacts during the construction period. Establishing a TMP (Transportation Management Plan) as has been done for the construction of other Northern Virginia megaprojects is desirable. Expedited construction and consideration towards the residents and businesses in the vicinity of the project should be prominent in the implementation program. These considerations should include:
 - Ensuring that sound walls are replaced rapidly after the existing walls are removed.
 - Minimizing park impacts.
 - Developing an aggressive maintenance of traffic plan for roadway and existing Metrorail service.
 - Minimizing night construction in areas adjacent to residential neighborhoods; where night construction is necessary, take steps necessary to minimize noise impacts such as considering the use of flagmen to avoid the need for audible back-up warning devices.
 - Maintaining proper erosion, siltation and stormwater management equipment and facilities during construction.

The Honorable Aubrey Layne
February 26, 2015
Page 4

- Developing an effective landscaping and tree replacement plan recognizing that many mature trees will be affected by the project.
- Ensuring maintenance of traffic and minimizing disruption to residential neighborhoods and businesses during construction.
- Maintaining pedestrian access across I-66 to the Dunn Loring and Vienna Metrorail Stations during construction.

Fairfax County appreciates the work that has been undertaken to date in this study and the opportunity to provide comments. We look forward to providing further comments as part of the upcoming NEPA Public Hearing scheduled in May 2015 and as part of subsequent implementation. We also look forward to working closely with the Commonwealth and developing a mutually beneficial project to County residents and the region.

If you have any questions or need additional information, please contact Robert Kuhns of the Department of Transportation at Robert.kuhns@fairfaxcounty.gov or 703-877-5600.

Sincerely,



Sharon Bulova
Chairman

cc: Members, Fairfax County Board of Supervisors
Edward L. Long Jr., County Executive
Robert A. Stalzer, Deputy County Executive
Catherine A. Chianese, Assistant County Executive
Tom Biesiadny, Director, Department of Transportation
Helen Cuervo, District Administrator, VDOT, Northern Virginia
Renee Hamilton, Deputy District Administrator, VDOT, Northern Virginia
Susan Shaw, Megaprojects Director, VDOT
Young Ho Chang, Project Manager



SHARON BULOVA
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June 5, 2015

The Honorable Aubrey L. Layne, Jr.
Secretary of Transportation
1111 E. Broad Street, Room 3054
Richmond, Virginia 23219

Reference: Fairfax County Comments on I-66 Tier 2 Draft Environmental Assessment

Dear Secretary Layne:

On June 2, 2015, the Fairfax County Board of Supervisors approved the following comments regarding the Tier 2 I-66 Draft Environmental Assessment. As indicated in the Board's February 2015 letter, I-66 is critically important to Fairfax County. The County continues to support the Commonwealth's efforts to address multimodal mobility in the I-66 Corridor and to move the most people as efficiently as possible.

Decisions made in this Corridor Improvement Project will have a significant impact on the daily lives of Fairfax County citizens and others who work and visit Fairfax County. They will also significantly affect the ability to implement future improvements in the I-66 corridor. Since the County transmitted comments to you in February the Virginia Department of Transportation (VDOT) and the Virginia Department of Rail and Transportation (DRPT) have been working extensively towards addressing our concerns. Our compliments are extended for the extensive public outreach that has been provided, and the Board appreciates the additional design work that has reduced the right-of-way impacts that were initially presented at Public Information Meetings in January and February of this year.

With the release of the I-66 Tier 2 Draft Environmental Assessment on May 12, 2015, the County offers the following additional comments covering our earlier February comments as well as additional issues regarding the Tier 2 EA. More technical comments on the numerous reports and plan sheets will also be sent to VDOT by County staff before the end of the comment period.

- Right-of-Way
 - The Board appreciates the additional considerations given to minimizing right-of-way impacts to our residences, businesses, parks, schools and natural resources. Some of these reductions are based upon new designs and applications of stormwater management regulations. The County continues to be interested in reducing the right-of-way impacts. The County encourages additional efforts to minimize, if not eliminate residential relocations. The County also requests that possible right-of-way reductions be considered at all crossings, as is being done with the phased reconstruction for the Cedar Lane crossing, and that reasonable design waivers be considered.
- Not to Preclude Extension of Rail Service
 - The Board supports the use of Typical Section 2A between the interchanges for the I-66 Transportation Improvement project. This will provide a wider median to accommodate a possible extension of Metrorail. The County understands that reconstructed interchanges will be designed and built to accommodate the future extension of Metrorail. However, in some

cases, most notably at the Monument Drive and Stringfellow Road crossings, a significant up-front cost savings can be achieved by using the existing structures and their HOV ramp connections until such time as a Metrorail extension is implemented. Alternative concept designs have been developed for building the more expensive configurations which would accommodate an extension of Metrorail service as part of this project. The more extensive designs would relocate the ramps to the north, and in Monument Drive's concept, shift the crossing to the west. Option 2A at Monument Drive will need to be redesigned to eliminate the encroachment on the County's property where the Public Safety Building is currently under construction. The County requests that the additional right-of-way needed, if any, for these ramp relocations and bridge relocations be acquired as part of this project, so as to not preclude the future extension of Metrorail through these locations or make them cost prohibitive in the future.

- Key Network Assumptions

- As noted previously, there are a number of transportation network assumptions that are important to the conversion of a multimodal I-66 within the highway system serving the central part of Fairfax County. Some of these may be built at a later time period than the 'managed lanes' project on I-66; however, it is important to preserve the opportunity and not preclude the ability to build the following in the future. We are pleased that the Project Team has examined several options for the High Occupancy Vehicle (HOV) connection between I-66 and the Fairfax County Parkway, in particular, and that future HOV connection is not being precluded. The County continues to encourage the consideration of these future projects included on Fairfax County's Comprehensive Plan in the design process:

- HOV lanes along Route 28 north of I-66,
- HOV lanes along the Fairfax County Parkway,
- Interconnections with I-66, and
- Additional southbound lane along Beltway from Route 7 in Tysons to I-66.

- Enhanced Transit

- A clear advantage of the managed lanes is that they support more reliable and more efficient bus service in the corridor, and, therefore, facilitate moving more people in fewer vehicles. As part of the I-66 Corridor Improvement Project, a preliminary proposed new transit service plan has been put forward. Refinements to the transit service plans are likely needed and comments will be detailed in the separate document from County staff.

- Bike/Pedestrian Facilities

- Since transmitting our earlier comments in February, the I-66 Transportation Improvement Project Team has been working with the County regarding elements of Bike/Pedestrian Facilities:

- Crossings of I-66 –

We are pleased that VDOT is including bike and pedestrian facilities on the bridges it is rebuilding with this project. Although the Blake Lane Bridge is not expected to be rebuilt, the County continues to recommend that enhancements regarding bike/pedestrian applications for Blake Lane be included within this I-66 Corridor Improvement Project. It is also recommended

that the enhancements at the crossings be connected with the existing bike/pedestrian networks adjacent to the crossings. The proposed shared use path at the Route 123 interchange redesign dead-ends north of the interchange and does not connect with any existing bike/pedestrian network. The shared use path should be extended to connect to a logical terminus on the north side of I-66, either adjacent to Route 123, or connecting to the I-66 Parallel Trail System along Rosehaven Street. All existing pedestrian connections across I-66 should be maintained during construction or a reasonable interim alternative should be provided.

- **Parallel I-66 Regional Trail -**

This project presents a unique opportunity to provide county residents with a major regional trail paralleling I-66, which would be a tremendous community amenity, serving both commuting and recreational bicyclists, as well as pedestrians. The Project Team has spent a significant amount of time on this issue; however, the identification and supporting documentation of a regional trail alongside of I-66 is very preliminary and needs additional input before the revised EA and Preferred Alternative are finalized. The regional trail should be part of this Project fulfilling a key element of the multimodal character of the facility. The construction costs of the regional trail, including on-street sections (signage, striping, etc.) should also be included in the total Project costs. Due to the significant concerns that have been raised regarding the parallel trail, the Board requests that VDOT continue to work closely with the County to determine a reasonable alignment. .

- **Traffic Impact Area Analyses**

- As part of the implementation of the Capital Beltway Express Lanes, a limited analysis of adjacent congested intersections was conducted. However, these efforts only minimally considered the nearby impacts of the new facilities on intersections near the Beltway and the related traffic congestion. It is recommended that prior to the implementation of a multimodal design along I-66, that cross-street traffic congestion resulting from this project be addressed within the nearby interconnecting roadway system within a quarter-mile of the I-66 corridor.

- **Implementation Issues**

- Since the transmittal of the Board's February letter the TMP process has begun and considers four categories and working groups: Transit/TDM, Traffic Operations; Communications and Outreach; and Traffic Engineering. These efforts are expected to provide substantial opportunity for input and consideration for the implementation of the I-66 project. We emphasize that these efforts continue and the following considerations be included:
 - Ensuring that sound walls are replaced rapidly after the existing wall are removed
 - Minimizing park impacts
 - Developing an aggressive maintenance of traffic plan for roadway and existing Metrorail service
 - Minimizing night construction in areas adjacent to residential neighborhoods and using equipment that minimizes noise impacts
 - Maintaining proper erosion, siltation and stormwater management equipment and facilities during construction
 - Developing an effective landscaping and tree replacement plan – see attachment
 - Minimizing disruption during construction
 - Minimizing construction that impacts bus services especially at peak times
 - Maintaining pedestrian access to Metrorail stations

- Environmental Issues
 - There are a number of environmental issues that have been reviewed in the Draft Tier 2 EA but limited information related to the issues necessitates continuing coordination on these issues leading up to the Design Public Hearings. Additional information that is desired by the County will be summarized and sent by County staff in more detailed technical comments by the June 18, 2015 deadline. As the Project Team proceeds to the design phase of the project, the County considers the following of significant concern:
 - stormwater management strategies
 - heights of noise barriers,
 - tree cover
 - impacts to Resource Protection Areas,
 - Environmental Quality Corridors,
 - Watershed Management Plans,
 - impacts to Parks, and
 - impacts to Historic Properties and wildlife habitat.

Comments from the Fairfax County Park Authority (FCPA) and the Department of Planning and Zoning (DPZ) containing more detailed comments regarding some of these issues are included, as Attachments A and B to this letter.

Additional Review Comments Regarding the Draft Environmental Assessment, Tier 2 EA

- Need for adequate time for County to coordinate with VDOT on Revised EA of Preferred Alternative

The 'mix and match' features of the Tier 2 EA which include alternate typical sections, interchange concepts and access points to/from the proposed managed lanes, the considerations and responses to review comments received by FHWA, VDOT and DRPT, and the incomplete documentation of bike/pedestrian elements, necessitate continued coordination between VDOT and the County in the preparation of the Revised EA of the Preferred Alternative. This project has been progressing at a rapid pace. A voluminous amount of materials has been produced for these public hearings. Some design options were produced after the original public hearing materials were published. It is difficult for the public and local officials to absorb this quantity of information in such a short time. Fairfax County requests that adequate time be made available for County officials to work together with VDOT to evaluate the new alternative and analyses in developing the Final Environmental Document. In addition, an appropriate public forum should be scheduled to allow the public to also understand any new alternatives and be able to comment on them, before a final recommendation is agreed upon.
- Development of a strategy to coordinate implementation of improvements Inside and Outside the Beltway

The County is participating in both the I-66 Inside the Beltway and I-66 Outside the Beltway projects. They are following different schedules but have very important continuity and connectivity issues. There are major efforts underway for each project and they both come under the heading of 'Transform66'. However, an overall strategic plan for blending the implementation of elements from each has not been developed. The County requests that a Transform66 Strategic Plan be developed to assist with issues such as the conversion from HOV-2 to HOV-3, managed lane and tolling coordination, multimodal

applications and directional signage for the larger Corridor providing implementation continuity between both project segments.

- Heights of Elevated Ramps
 - Some flyover and interchange ramps along the project have been designed in this Tier 2 EA with high elevations to allow for adequate clearances and connections between travel lanes. Alternative concepts to the high elevation ramps should be evaluated and considered for minimizing noise, visual and right-of-way impacts upon nearby residential communities. This is a special concern regarding the ramp from the northbound I-495 general purpose lanes to westbound I-66.
- Flexibility in Final Design
 - The Board recognizes that the design concepts presented in the EA represent preliminary designs. Regardless of whether the selected procurement process is a public-private partnership or a design-build process, the need exists to allow creativity in the final design to reduce costs, simplify maneuverability of systems, and further reduce impacts on the community.

Project Funding Considerations

The subject of the NEPA public hearings and the purpose of these comments is to address the design options presented, including all the supporting analytical material. Selecting a financing mechanism for the project is not directly related to the design options presented in the public hearings. However, to obtain a Record of Decision, funding must be in place for the next phase of the project. Moreover, in the Citizen Information Meetings held in January 2015, VDOT presented that this project would be constructed as a Public-Private Partnership, similar to the I-495 Capital Beltway and I-95 Express Lanes. Project officials stated that approximately \$1 billion of the total capital investment could be expected to come from the private sector partner. On May 19, 2015, Secretary Layne presented initial results of the Commonwealth's analysis of procurement options for the I-66 project to the Commonwealth Transportation Board (CTB). According to the analysis, a design-build option, rather than a P3 procurement, could result in additional \$500 million to \$1.1 billion in savings and toll revenues, which could be reinvested in the transportation system. The County would like to see the full analysis supporting the May 19 report to the CTB and any subsequent financial analyses prepared to assist with the selection of a procurement method. The County looks forward to reviewing these financial assumptions and recommendations on the procurement method when presented to the Transportation Public-Private Partnership Advisory Committee in July and prior to the CTB making a final decision.

Using a design-build procurement option could address a number of County concerns, several of which were noted in the county's February 2015 letter. Concerns that might be addressed by the design-build option are noted below:

One of the County concerns is that this project not place any impediments, physical or financial, in the way of a future extension of Metrorail. In the February letter, the county requested that flexibility be provided in the private partner agreement to allow the extension of Metrorail before the concession term expired, and to draft any "non-compete" language in the agreement carefully. Under a design-build option, this would likely not be an issue.

Enhanced transit on the managed lanes is an integral aspect of this project. In the February letter, the Board noted the importance of a funding plan for the transit service being promoted as part of the project. The letter stated: "We would encourage the Commonwealth to incorporate mechanisms that allow project revenues to help fund the enhanced transit services for the corridor." Based on the Commonwealth's assessment that a design-

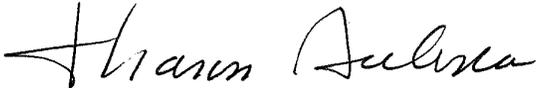
The Honorable Aubrey Layne
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Page 6

build option could generate \$200 million to \$500 million in excess revenues, it would appear that a design-build option could be a promising mechanism for funding enhanced transit in the corridor, including costs of transit capital purchases and operations and maintenance.

Fairfax County appreciates the work that has been undertaken to date in this study and the opportunity to provide comments. We also look forward to working closely with the Commonwealth and developing a mutually beneficial project to County residents and the region.

If you have any questions or need additional information, please contact Robert Kuhns of the Department of Transportation at Robert.kuhns@fairfaxcounty.gov or 703-877-5600.

Sincerely,



Sharon Bulova
Chairman

cc: Members, Fairfax County Board of Supervisors
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Susan Shaw, Megaprojects Director, VDOT
Young Ho Chang, Project Manager
Fred R. Selden, Director, Department of Planning & Zoning
Kirk W. Kincannon, Director, Fairfax County Park Authority



FAIRFAX COUNTY PARK AUTHORITY



MEMORANDUM

TO: Leonard Wolfenstein, Chief
Transportation Planning Division
Fairfax County Department of Transportation

FROM: Sandy Stallman, Manager
Park Planning Branch, PDD
Fairfax County Park Authority

DATE: May 20, 2015

SUBJECT: Route I-66 Tier 2 Draft EA – May 2015
Tax Map(s): All adjacent parcels to Route 66 Corridor

Thank you for including the Park Authority in the review of the Tier 2 Draft Environmental Assessment for I-66. This document states that the proposed construction would consist of building an additional (HOV) lane with additional entrance lanes and park and ride lots (page 3-1). The Draft Environmental Assessment identifies three Fairfax County Park Authority parks adjacent to Interstate 66 that would be impacted by one or more of the proposed concepts: Cub Run Stream Valley, Ellanor C Lawrence, and Random Hills, Congressman Gerry Connolly Cross County Trail (GCCCT), as well as Northern Virginia Regional Park Authority's (NVRPA) Washington & Old Dominion (WO&D) Trail. The plan sets for the three concepts shows the project limits extending to the ROW / Property lines adjacent to Bull Run Regional Park, Briarwood Park, Random Hills Park, Cub Run Stream Valley Park, and Rocky Run Stream Valley Park. Additional parks within the study area that could potentially be impacted if the project area were expanded to accommodate engineering, grading, staging, stormwater, or expanded construction requirements, include Arrowhead, East Blake Lane, Lane's Mill, Center Ridge North, Idylwood, Heartland Green, and Long Branch Stream Valley Park all of which contain sensitive environmental and cultural features.

The Fairfax County Park Authority staff has reviewed the above referenced plan and provides the following comments:

1. Any or all of these parks could experience direct impacts of lost parkland, recreation facilities, vegetation, and habitat, increased storm water discharge, invasive species, as well as wildlife impacts. Therefore, we would like to review all future documents and plans as the project progresses.
2. The I-66 corridor was subjected to cultural resources review which indicates that the corridor contains numerous Native American, historical, and Civil War sites, with a high potential to contain additional sites. Since this project requires Federal permitting and funding it triggers Section 106, requiring VDOT to consult with VDHR by Federal Regulation. Since VDOT has already performed a Phase I archaeological survey, staff

recommends a Phase II study followed by avoidance or Phase III data recovery on all significant sites found during Phase I surveying or that previously exist in the study corridor or areas of impact.

3. The Park Authority has reviewed the Phase I report entitled, “*Phase I Archaeological Survey of the Interstate 66 Corridor Improvements for the Tier 2 Environmental Assessment From US 15 in Prince William County to Interstate 495 in Fairfax County, Virginia.*” Staff concurs with most of the report’s findings, including the two sites found eligible for inclusion onto the National Register of Historic Places.

However, this report by Dove Tail neglected to describe site 44FX1556, and neglected to record a civil war earth work located just north of Braddock Road and west of Route 28, directly adjacent to the current right of way. Thus was not listed or considered in the Tier 2 Draft Environmental Assessment for I-66. This earthwork is significant, being roughly 300 feet (north to south) by approximately 475 feet (east to west) and was likely part of Joseph Johnson’s 1861 fortification of Centreville. Little remains of these fortifications, so it should be avoided by construction, its preservation would be an important cultural resource for Fairfax County. Staff requests that this oversight be corrected in the *Phase I Archaeological Survey of the Interstate 66 Corridor Improvements for the Tier 2 Environmental Assessment From US 15 in Prince William County to Interstate 495 in Fairfax County, Virginia* as well as the *Tier 2 Draft Environmental Assessment for I-66*.

4. Under section 4.8 Historic Properties on page 4-45, the Draft Environmental Assessment states “Finally, a survey to locate and document the boundaries and any previously undocumented battlefield features of all Civil War battlefields defined by the American Battlefield Protection Program (ABPP) was conducted within the APE for the project. The APE for potential visual effects to battlefields is 500 feet on either side of the VDOT right of way. Each battlefield in the APE was assessed based on the Potential National Register (PotNR) boundaries as defined by the ABPP.” However, the known and documented major Civil War earthwork mentioned in comment #3 above, was not listed. Staff requests that it be added to this section.
5. The Draft Environmental Assessment states that right-of-way expansion with takings will be necessary from Ellanor C. Lawrence Park in Figure 4-1 on page 4-17, and page 4-18. Page 4-42 of the Draft Environmental Assessment lists Ellanor C. Lawrence Park as a 4f site that will have permanent takings and impacts, while pages 4-43 to 4-44 also lists the park under section 6f Land and Water Conservation Fund lands, for which “Alternative 2A and Alternative 2B would both require direct and permanent use of land from one Section 6(f) resource, Ellanor C. Lawrence Park. If the Section 6(f) resource is impacted ... suitable land replacement will be identified, acquired, and conveyed in coordination with the park owner(s), the Virginia Department of Conservation (VDCR), and DOI.” Additionally, page 20 of the Draft Section 4(f) Evaluation describes the impacts to Ellanor C. Lawrence Park from Alternative 2A would be approximately 2.7 acres of land. This section then states that Alternative 2B would require approximately 3.6 acres of land from Ellanor C. Lawrence Park. This same section then states that Alternative 2C (which is only another variation for the I-66/28 interchange that can be used with 2A or 2B) would provide “a more compact three-level interchange” that “would not use land from

Ellanor C. Lawrence Park”. Page 32 of the Draft Section 4(f) Evaluation also states that “Alternative 2C would avoid use of land from Ellanor C. Lawrence Park.” However, the plan sets clearly shows that for all three alternatives, including 2C, the project limits extending onto Ellanor C. Lawrence Park along Route 28, with ROW / property takings to make room for this interchange. Staff requests that pages 4-44 of the Draft Environmental Assessment and pages 20 and 32 of the Draft Section 4(f) Evaluation be corrected to include the impacts and parkland necessary for “Alternative 2C” be shown on the plan set.

6. As stated on page 20 of Draft Section 4(f) Evaluation, mitigation for use of parkland would include conveyance to the Fairfax County Park Authority of excess right of way (up to approximately 3.8 acres) in the vicinity of Braddock Road west of the current at-grade intersection of Braddock Road and VA 28. Additionally, reforestation of the existing entrance location could be undertaken. Because Land and Water Conservation Funds were used for this park, Section 6(f) of the Land and Water Conservation Act also would apply. Coordination would need to be carried out with the Fairfax County Park Authority, the Virginia Department of Conservation and Recreation, and DOI to approve any conversions and the suitability of substitute lands that would be necessary to offset the conversion.” This “excess right of way in the vicinity of Braddock Road west of the current at-grade intersection of Braddock Road and VA 28” should include the entirety of the Civil War earthworks located in this section, described above in comment #3.
7. Pages 26-28 of the Draft Section 4(f) Evaluation, Figure 16, does not reflect the concurrently proposed design for a new entrance to the Ellanor C. Lawrence Park ballfields from the north, which is shown in Figure 17. However, it is not clear whether the new park entrance road (shown in white in Figure 17) will be a park road or a VDOT road. It is being constructed to accommodate this project on Rt. 28 and I-66, but is also being described as a park road to reduce legal conflicts. If VDOT is going to maintain the new entrance road, should right-of-way be officially granted? Please clarify on all documents the intended ownership and maintenance of the replacement park entrance road.
8. While Figure 4-1, on page 4-21 of the Draft Environmental Assessment shows a potential impact to Random Hills Park, page 4-43 lists Random Hills Park as a 4(f) site that will have permanent takings and impacts, as do pages 15 & 20 of the Draft Section 4(f) Evaluation, stating that Alternative 2A would use approximately 0.03 acres of land from Random Hills Park. This plan set also shows this proposed ROW taking. Please update page 4-21 to be consistent with the conditions shown on page 4-43, the Draft Section 4(f) Evaluation, and plan set.
9. Page 4-43 of the Draft Environmental Assessment lists the Congressman Gerry Connolly Cross County Trail (GCCCT) as being impacted under Section 4(f) review. Potential impacts to Northern Virginia Regional Park Authority’s Washington and Old Dominion Trail (W & OD) are listed in Figure 4-1 on page 4-25. Page 4-43 states that the trail will be impacted under 4(f), while pages 4-45 to 4-46 list it as a Determined Eligible Architectural Resources. The plan sets for both Concept 2A and 2B show the project

limits extending onto W & OD with ROW / property takings. More information provided at time of engineering will be needed to effectively evaluate these impacts.

10. While pages 3-12 to 3-14 discuss pedestrian and bicycle enhancements related to the I-66 project being planned by the end of 2015, comprehensive data on the extent of these enhancements is not provided. Other pedestrian and park trails will also be impacted and should be strategically reviewed as an alternative transportation mode in consideration of future improvements since they provide important connectivity for commuting and recreation. Pedestrian crossings, over, under, or along the Route 66 corridor should be consistent with the adopted Countywide Trail Plan (CWTP) and Bicycle Master Plan. The W & OD Trail is a major regional trail that supports non-vehicle commuters and is located just beyond the project limits inside the Beltway. However, connections to this major trail system within the project area should be evaluated. Other planned and existing trail networks to be evaluated for potential connectivity include the Sully Woodlands Trail Plan (SWTP) and Gerry Connolly Cross County Trail (GCCCT). Pedestrian connections and I-66 overpasses to be considered that will support connectivity to these major trail systems include the following:
 - Route 123- The Route 123 overpass for Route 66 needs to accommodate pedestrians (CWTP, CCT upgrade route).
 - The Jermantown Road overpass for I-66 needs to accommodate pedestrians as shown on the CWTP, as well as providing connection to the CCT route.
 - The Route 28 and Braddock Road overpasses needs to accommodate pedestrians, as shown on both the CWTP and SWTP.
 - The highway bridge over Route 29 needs to accommodate pedestrians crossing underneath the highway along Route 29 as specified on the CWTP and SWTP.
 - The highway bridge over Compton Road needs to accommodate pedestrians crossing underneath the highway along Compton Road as per the CWTP and SWTP.
 - At Cub Run the Park Authority would like to continue the Cub Run Stream Valley trail underneath Route 66 to connect to Bull Run Regional Park as recommended by the SWTP.

11. Page 4-63 of the Draft Environmental Assessment states: “The proposed project would result in removal of wildlife habitat, including forest areas. As noted in Table 4-2, the potential impacts to forests within proposed right of way for Alternative 2A and Alternative 2B are 74.47 acres and 55.23 acres, respectively. In addition, there are 76.61 acres of forest within the existing VDOT right of way, which may potentially be impacted by either Build Alternative. A more detailed analysis of impacts based on proposed limits of grading for the preferred alternative will be conducted during project design. The effects of the proposed project on wildlife habitat would not be substantial regardless of the alternative selected. Habitat loss would generally occur within small isolated habitat patches or along edges of habitats that are already considerably fragmented. No potential movement corridors would be substantially disrupted because impacts would take place along the existing I-66 roadway.” The actual total forested habitat loss for this project ranges from 131-150 acres within the existing and proposed rights of way, by staffs calculations. This loss should not be categorized as insubstantial, as the ongoing, cumulative loss of canopy and habitat fragments impacts regional wildlife populations.

12. Section 4.10.2 of the Draft Environmental Assessment discusses several existing wetlands, without locational information. At which parks do these wetlands occur or are they mainly in the existing ROW? Please provide a map of the WOUS, cross-referenced with public lands.
13. Section 4.10.3 of the Draft Environmental Assessment, states that stormwater management facilities will be an important component of this project to address expected increases in sedimentation and pollution from the widening of I-66. This is particularly important in regards to existing impaired waterways such as Accotink Creek, where I-66 traverses the headwaters.
14. Page 4-63 of the Draft Environmental Assessment, Section 4.14 Natural Heritage Resources lists potential impacts to Cub Run Slopes Conservation Site, Ellanor C. Lawrence Conservation Site, Big Rocky Run above Rt. 28 Stream Conservation Unit (SCU), and Long Branch SCU.” While the Ellanor C Lawrence Conservation Site should not be affected by this project, efforts should be made to reduce potential impacts to Cub Run Slopes Natural Heritage Area, as well as the Natural Heritage Stream Conservation Units at Big Rocky Run above Rt. 28 and Long Branch, at site design. Most stream impacts from this project will occur in the existing ROW.
15. The plan set for Concept 2A shows the proposed roadbed realignment of Monument Drive being shifted onto the new Public Safety Building currently under construction at the corner of Random Hills Road (where the consultant’s ortho photo is showing a diamond field). Even if this alignment did not hit the building, it is certainly within the 50’ security standoff for the new building. Staff recommends shifting the intersection to the east using more of the existing parking lot to accommodate the proposed ramps.
16. The plan set for both Concept 2A and 2B shows the project limits extending to the ROW / property lines adjacent to Bull Run Regional Park, Briarwood Park, Random Hills Park, Cub Run Stream Valley Park, and Rocky Run Stream Valley Park. These parks could potentially be impacted by the project if the required area were expanded to accommodate engineering, grading, staging, stormwater, or expanded construction requirements. Provisions to deal with such circumstances should be made within this Draft Environmental Assessment in case they are needed.
17. As noted previously in the Park Authority’s comments on the Tier 1 EIS, more detailed study is needed once engineering plans have been created, including pedestrian and park trails. The Park Authority would be pleased to assist with planning efforts in this regard. Of particular concern are the W & OD Trail, Sully Woodlands Trail System, Gerry Connolly Cross County Trail (GCCCT), Cub Run Stream Valley Trail, as well as the overpasses at Route 123, Jermantown Road, Route 28, Route 29, and Compton Road.
18. Though land acquisition would occur later in the improvement process, we want to place in the comment record, that requests for land rights on Park Authority owned property are necessary in order to perform any surveying, clearing, or grading, even within an easement of any sort. Before performing, any activity on parkland, a Right of Entry

License, Easement, and / or Construction Permit is required and can be requested from the Easement Coordinator, Fairfax County Park Authority, Planning and Development Division, 12055 Government Center Parkway, Suite 406, Fairfax, Virginia 22035. The main telephone number is (703) 324-8741. This includes surveying, test boring, wetland flagging, utility relocations, construction, or any other related activities. Please advise any contractors and subcontractors of this requirement.

Thank you for the opportunity to comment on this Tier 2 EA. We look forward to participating in this project as it moves forward. Our point of contact for this project is Andy Galusha, Landscape Architect / Park Planner who can be reached at 703-324-8755 or Andrew.Galusha@fairfaxcounty.gov.

Copy: Sandy Stallman, Manager, Park Planning Branch, PDD
Robert Kuhns, Transportation Planning Division, FCDOT
Cindy Walsh, Director, Resource Management Division
Liz Crowell, Manager, Cultural Resource Management & Protection Section
Brian Williams, Manager, Land Acquisition & Management Branch
Chron Binder
File Copy

Tier 2 Draft Environmental Assessment, I-66 Corridor Improvements
General comments—DPZ-Environment and Development Review in coordination with DPWES-Stormwater
May 2015

Tree Cover

- The EA does not provide information about the loss of tree cover beyond an overall identification of a potential loss of tree cover of 74.47 acres for Alternative 2A and 55.23 acres for Alternative 2B. There are no maps identifying where tree canopy will be lost and nothing to indicate how the project designers and construction crews will attempt to minimize clearing. Nor is there anything that addresses the visual impacts of tree loss (i.e., how many existing residences along the corridor will be adversely affected from a visual perspective due to tree loss) or replacement through landscaping. The draft EA does not allow us to fully understand the implications of the potential impacts to tree cover.
- The project team should be encouraged to look closely at design details to identify opportunities that may be available in places to reduce the extent of tree clearing that will be needed through a reduced project footprint.
- The EA does not indicate the extent to which landscaping will be pursued to mitigate the loss of tree cover and associated visual impacts to neighboring residences. To what extent will landscaping be pursued? We recommend that landscaping efforts incorporate only noninvasive species that are native to the area.

Stormwater Management

- It is our view that the EA does not provide information sufficient to allow us to offer substantive comments on potential water quality and quantity impacts beyond the general comments we are offering here. The draft Environmental Assessment states: “Stormwater management measures, such as detention basins, vegetative controls, and other measures, will be implemented in accordance with Federal, state, and local regulations to minimize on-site and downstream water quality impacts. These measures will reduce or detain discharge volumes and remove sediments and other pollutants, thus avoiding substantial further degradation of impaired water bodies in the project vicinity.” However, no information is provided, either in the EA or the Natural Resources technical report, to allow us to understand how this will be done. Proposed stormwater management facility locations are identified on the conceptual plans, but additional information is lacking. Further, while it is our understanding that the project has been grandfathered from the new state stormwater management regulations, the EA does not note what specific requirements will be followed. Clarification is needed.
- In comparing the two sets of conceptual plans available from the project website (the May/June public hearing exhibits and the Preliminary Alternatives Maps from earlier in 2015), it is clear that the extent of the proposed system of stormwater management facilities has been reduced considerably, both in terms of numbers and sizes of facilities proposed. It is our understanding that this is a result of the state’s determination that the project will be grandfathered from the new state stormwater management regulations. The effect has been to reduce the overall stormwater management facility footprint, resulting in a reduction in the number of residences that would need to be taken in support of this project. While we commend the project team for reducing the extent of residential relocations that would be needed, and while we do not suggest that the number of such relocations should be increased

in order to support strengthened stormwater management efforts, we are concerned about implications of this reduced stormwater management effort to aquatic resources along and downstream of the project area.

We feel that an emphasis is needed at this time on the identification of opportunities to maximize stormwater management efforts. Consideration should be given to both VDOT's and Fairfax County's MS4 permit requirements, including mitigating water quality impacts of prior developed lands. This includes addressing any present (and future local) TMDLs (Total Maximum Daily Loads) through enhanced stormwater measures as a part of this project's construction. Simply designing a stormwater management system to previous standards would not adequately address any shortcomings in the existing stormwater management system resulting from design and construction efforts that occurred before more stringent requirements for stormwater management were established. The recently adopted state stormwater management regulations, which were adopted in Fairfax County, now seek to address stormwater management deficiencies of the previous requirements, which are being perpetuated by an adherence to the old design standard for this project. In addition, such an approach would not be supportive of the county's watershed management plans, which have served to document the overall conditions of watersheds and provide a framework to improve the ecological conditions in the county's streams. Nor would it be consistent with the level of stormwater management enhancements achieved on the completed I-495 Express Lane project. It is also not clear from the information provided that there would not be additional degradation of streams resulting from the additional impervious surfaces that would result from this project.

We understand that the project is in the earliest stages of design and therefore feel that there may be opportunities to explore whether stormwater management measures above and beyond the required minimums could be incorporated into the project design without necessitating additional residential relocations. We recommend that the project team explore stormwater management strategies and outfall treatments that would minimize the potential for stream erosion downstream of the project and correct any existing deficiencies while minimizing clearing that would be needed. The Stormwater Planning Division of the Department of Public Works and Environmental Services played an integral role previously during the implementation of the I-495 Express Lanes and is again available to partner with this project team in order to identify such opportunities within the Fairfax County portion of the project. Efforts that should be considered should include retrofits of existing stormwater management facilities within and near the project area, underground stormwater management within the proposed project right-of-way and/or implementation of projects from applicable watershed management plans.

- There are a number of proposed stormwater management facilities shown on the conceptual plans that may be problematic as they relate to past zoning approvals, the county's Environmental Quality Corridor policy, and/or conservation easements. Specifics are provided in our detailed comments.
- There will need to be considerable clearing of tree cover for construction of a number of the proposed stormwater management facilities. While we commend the project team for focusing the locations of stormwater facilities within highway interchanges, there would be some cases where clearing would have adverse visual impacts on nearby residences. Stormwater management strategies should be developed in a manner that will achieve water quality and quantity control goals while minimizing clearing. Might alternative approaches to stormwater management be available that would have more limited impacts on clearing/land disturbance?

- The legends for the conceptual plans have a symbol for “Potential Manufactured BMP,” but we see no potential sites identified on the plans, at least within the Fairfax County portion of the project area. Where might these facilities be provided? What will they be designed to control?

Stream and wetland impacts and mitigation

- The draft EA indicates that the use of credits from approved stream and wetlands mitigation banks or payments to the Virginia Aquatic Resources Trust Fund would be the anticipated form of stream/wetlands mitigation for the project. While consistent with the wetland and stream compensation hierarchy set forth by the state, as described in the Waters of the U.S. Technical Report, it would probably result in mitigation efforts far from the areas experiencing the wetland impacts. We encourage the project team to seek opportunities to pursue compensation efforts close to the areas of impact. Incorporation of wetland features within the designs of stormwater management facilities should be considered, as should be the pursuit of projects identified in the county’s approved watershed management plans.
- In the discussion of stream impacts on page 4-54, the EA (referencing Table 4-16) notes that estimated stream impacts “are based on an assumption that each stream crossing would be a permanent impact rather than spanned by a bridge. A more detailed assessment of stream impacts and avoidance and minimization efforts will be performed during the design phase.” Further, in the discussion of indirect effects on page 4-76, the EA states: “. . . while it is reasonable to predict that direct impacts to water quality may occur at stream crossings of I-66, there is not enough information to determine how far downstream such impacts would actually occur.” We feel that these impacts should be assessed as soon as possible and, consistent with our earlier comments addressing stormwater management, we recommend that stormwater management measures above and beyond minimum requirements should be pursued where necessary to ensure that there will not be adverse downstream impacts resulting from stormwater runoff from the highway. BMP selection for linear projects presents unique challenges, and as the I-66 corridor approaches build-out conditions, stormwater management for the expanded I-66 corridor should involve careful planning and the use of innovative as well as traditional stormwater management strategies and technologies. We again note that the Stormwater Planning Division is available to partner with VDOT’s project team in order to identify and maximize opportunities for enhanced stormwater treatments and alternative measures within the Fairfax County portion of the project.
- In the county’s review of the Tier 1 Environmental Impact Statement, we requested clarification as to whether or not the estimates of stream impacts were only considering streams crossed by the corridor, or if impacts to streams paralleling the corridor but not crossed (i.e., Big Rocky Run and Cub Run west of the Lee Highway interchange) were also considered. The EA does not address this question.
- The last paragraph on page 4-56 of the EA states that no TMDLs have been approved for the impaired stream segments within one mile of the project corridor. Additionally, Table 4-19 on page 4-57 identifies impaired water bodies located within one mile of the project corridor—specifically, impairments for *E. coli* in Cub Run and Holmes Run, PCBs in Bull Run, and benthic macroinvertebrate impairments in Big Rocky Run, Little Rocky Run, Accotink Creek and Holmes Run are noted. It is not

clear why the discussion is limited to the area within one mile of the project corridor, as any construction and post-construction requirements that may be triggered by TMDLs addressing impairments further downstream would apply to the portions of the affected watersheds within the project area.

- The EA notes that TMDLs have been approved for impaired waters that are more than one mile from the project corridor but that are downstream of the corridor. There is no specific mention, though, of the existing TMDLs for sediment in Bull Run and Difficult Run. Additionally, the EA does not discuss the pending pollutant-based TMDL for upper and lower Accotink Creek (and we note that the upper portion of the impaired stream crosses through the project area).

Resource Protection Areas and Environmental Quality Corridors

- The Environmental Assessment does not identify impacts to Resource Protection Areas that would be associated with the alternatives that have been identified. Both Prince William County and Fairfax County have designated Resource Protection Areas pursuant to Virginia's Chesapeake Bay Preservation Act, yet these areas are not addressed in the draft EA. They should be.
- Similarly, the EA provides a brief mention of Fairfax County's Environmental Quality Corridor policy (on page 4-81) but does not identify impacts to areas that would likely meet the EQC designation criteria as established in the county's Comprehensive Plan. While some EQC and RPA impacts cannot be avoided given the nature of the project, some impacts could perhaps be avoided or reduced (e.g., disturbance of stream valley areas for stormwater management facilities). Efforts should be pursued to minimize adverse impacts to areas that would qualify for EQC designation.

Watershed management plans

- Page 4-58 of the EA references the Accotink Creek Watershed Management Plan but does not identify the other watershed management plans that have been approved for watersheds within the project area. Specifically, the following watershed management plans also apply to the project area: Cub Run/Bull Run; Little Rocky Run/Johnny Moore Creek; Difficult Run; and Cameron Run. The Lower Occoquan Watershed Management Plans referenced on page 4-59 do not address watershed areas within the project area, but they do identify projects that would serve to improve the quality of streams upstream of the Occoquan Reservoir, which is, as noted in the EA, also located downstream of a considerable portion of the project area. Opportunities for implementation of watershed management plan projects should be considered in conjunction with the development of stormwater management plans for the highway project.

Noise

- The draft EA states: "Final decisions at that time on whether to provide noise abatement measures will take into account design feasibility, cost, and the opinions of property owners impacted by the noise." With respect to opinions of residences, we note that page 40 of the Preliminary Noise Analysis document, as well as Section 7.3.10.1 of VDOT's Highway Traffic Noise Impact Analyses Guidance Manual, specify that fifty percent or more of the respondents to surveys of benefited receptors (e.g., a

resident who would benefit from the proposed noise barrier construction) must favor the construction of the barrier for the barrier construction to be considered reasonable (with some weighting of the votes as set forth in the manual). While we do not anticipate that there would be an impacted community within which more than half of the affected residents would object to a barrier, we are concerned that, if such a scenario was to develop and if a noise barrier was not constructed as a result, future residents of the community might not share the objections of current residents. If such a scenario was to develop, we recommend that provisions should be made for the eventual construction of a noise barrier if/when the affected community would support it.

- VDOT's Highway Traffic Noise Impact Analysis Guidance Manual indicates that the heights of noise barriers that will be considered for construction for highway projects will not exceed 30 feet. This is consistent with the Preliminary Noise Analysis, which does not model barriers higher than 30 feet. The manual also states: "When an existing noise barrier is physically impacted and/or relocated as part of a Type I project, the same level of protection must be provided." There is at least one noise barrier in the project corridor that is higher than 30 feet (in Common Noise Environment area AC), and we feel that VDOT should ensure, consistent with the excerpt from the manual, that, if such barriers need to be relocated as a result of the highway project, the replacement barriers will not reduce the extent of noise mitigation provided by the existing barriers. This should include a consideration of impacts to upper levels of residences (even where balconies are absent)—in the case of CNE AC, the existing barrier was constructed in part to reduce noise exposures at upper level building facades.
- We have a few questions regarding locations of possible noise barriers that will be considered further during the design process (and whether there may be gaps in some of the barrier systems)—please see our detailed comments.



County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

June 18, 2015

The Honorable Aubrey L. Layne, Jr.
 Secretary of Transportation
 1111 E. Broad Street, Room 3054
 Richmond, Virginia 23219

Reference: Fairfax County 'Detailed Technical' Comments on I-66 Tier 2 draft Environmental Assessment

Dear Secretary Layne:

This is the second of two sets of review comments on the Tier 2 I-66 Draft Environmental Assessment (EA). The first set, dated June 5, 2015, from Chairman Bulova summarized broad positions of the Board of Supervisors on the Tier 2 EA. The letter was organized to address the following key issues:

- Right-of-way
- Not to Preclude Extension of Rail Service
- Key Network Assumptions
- Enhanced Transit
- Bike/Pedestrian Facilities
- Traffic Impact Area analyses
- Implementation Issues
- Environmental Issues
- Need for adequate time for County to coordinate with VDOT on Revised EA of Preferred Alternative
- Development of a strategy to coordinate implementation of improvements Inside and Outside the Beltway
- Heights of Elevated Ramps
- Flexibility in Final Design
- Project Funding Consideration

The letter included two attachments with additional comments from the Fairfax County Park Authority (FCPA) and the Department of Planning and Zoning (DPZ).

This second set of comments transmitted herein is a more detailed technical review by staff from multiple County agencies that specifically refers to reports, exhibits and plan sheets that have been examined. The detailed technical review comments cover the reports posted on-line by VDOT on May 12, 2015 for the I-66 Tier 2 EA.

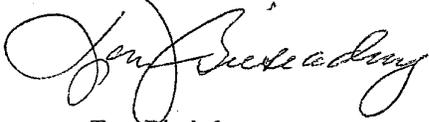
Fairfax County Department of Transportation
 4050 Legato Road, Suite 400
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 Fax: (703) 877-5723
www.fairfaxcounty.gov/fcdot



The Honorable Aubrey Layne
June 18, 2015
Page 2 of 2

If you have any questions or would like additional information, please call Bob Kuhns at 703-877-5667.

Sincerely,

A handwritten signature in black ink, appearing to read "Tom Biesiadny". The signature is fluid and cursive, with a large initial "T" and "B".

Tom Biesiadny
Director

cc: Members, Fairfax County Board of Supervisors
Edward L. Long Jr., County Executive
Robert A. Stalzer, Deputy County Executive
Catherine A. Chianese, Assistant County Executive
Renee Hamilton, Deputy District Administrator, VDOT, Northern Virginia
Susan Shaw, Megaprojects Director, VDOT

Project Review Comments			Review Phase: <u>Draft Environmental Assessment (May 12, 2015)</u>
Project Title: I-66 Tier 2 Corridor Improvements Project (VDOT/DRPT) FCDOT Project Coordinator: Bob Kuhns		Reviewing Agency: FCDOT, DPZ, Health Department, DPWES Reviewer: Various Date: 06/18/2015	
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NOTE: Fairfax County has sent initial comments to the Virginia Secretary of Transportation that address broad policy items and more detailed review comments. The following comments are supplementary to the previous transmittal from the County presented in the letter from Chairman Bulova to Secretary Layne, dated June 5, 2015.

1.	Tier 2 Draft Environmental Assessment (plus related text in the Natural Resources Technical Report)	Pages 4-51 through 4-62	Previous comments have been transmitted regarding stormwater management, stream/wetland impacts and mitigation, Resource Protection Areas/Environmental Quality Corridors and watershed management plans. Each of these comments should be addressed. The county's Stormwater Planning Division is available to partner with the project team in order to identify opportunities within the Fairfax County portion of the project for stormwater management improvements and to identify approaches that would serve to minimize tree clearing. There is a need to emphasize the identification of such opportunities at this time. Limiting stormwater management strategies to the minimum needed to meet previous requirements needs to be considered in light of shortcomings in the existing stormwater management system, the county's and VDOT's respective MS4 permit requirements and stream impairments (and associated TMDL development) near and downstream from the project area. The project team should seek opportunities to pursue stream and wetland compensation efforts close to the areas of impact; the implementation of projects identified in the county's watershed management plans may support such efforts.
2.	Tier 2 Draft Environmental Assessment (plus related text in the Natural Resources Technical Report)	Page 4-63	Previous county comments have noted the need for better information regarding the locations of losses of tree cover and for a better understanding of the implications of these impacts. Previous estimates by the county mistakenly represented the magnitude of the impacts, as the impacts identified (74.7 acres for Alternative 2A and 55.23 acres for Alternative 2B) only for areas within the proposed additional right-of-way. These impacts would be in addition to as much as 76.61 acres of clearing within the existing right-of-way. Regardless of the acreage figure, the draft EA does not allow the county to fully understand the implications of the potential impacts to tree cover, the extent to which there may be opportunities to reduce clearing through design changes, the extent to which alternative stormwater management strategies may be available to further reduce clearing, the extent to which landscaping will be pursued to mitigate the loss of tree cover and associated visual impacts, and the extent to which landscaping efforts will incorporate native species.
3.	Tier 2 Draft Environmental Assessment (plus related text in the Natural Resources	Pages 4-63 through 4-69	The Fairfax County Park Authority has indicated that the northern long-eared bat has recently been listed as threatened under the federal Endangered Species Act. While this species is not known to exist in the project area, all of Fairfax County is in the potential range of this species, and potential habitat may exist within or near the project area.

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	Technical Report)		
4.	Tier 2 Draft Environmental Assessment	2-4	Table 2-1: A note should be added to make it clear that this table includes or does not include the shoulder lane volume
5.	Tier 2 Draft Environmental Assessment	2-5, 1 st Para.	Second last sentence: "...in the westbound direction during the PM peak." Should this not be the AM peak?
6.	Tier 2 Draft Environmental Assessment	2-9, 2.4.5	It is recommended that the crash rate be compared with other freeways not only with other parts of I-66 to really assess if the rate is high for a freeway in general, not just high for I-66.
7.	Tier 2 Draft Environmental Assessment	2-15, Fig. 2-10	There should be at least some mention made about the "demand" (blue line) in terms of how constrained or unconstrained the assignment is.
8.	Tier 2 Draft Environmental Assessment	3-2, second bullet	Since "rapid bus service" is a new name for a bus service, it should at least be defined in terms of how it differs from the terms in common use presently to define a type of bus service (local, express, BRT).
9.	Tier 2 Draft Environmental Assessment	Page 2-16 Figure 2-11	"% Demand Unserved" is inconsistent with the corresponding Figure 6.61 on page 6-81 of the Transportation Technical Report.
10.	Tier 2 Draft Environmental Assessment	Page 2-17 Figure 2-12	Travel time for segment between US 29 (need to clarify which Route 29 crossing) to US 50 is lower for 2040 condition than that of the existing condition which appears to be unreasonable.
11.	Tier 2 Draft Environmental Assessment	Page 3-5 Third paragraph	In the first sentence, need to reference "PM peak period" as well.

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12.	Tier 2 Draft Environmental Assessment	Pages 3-16, Figure 3-6	<p>This figure shows the anticipated speed improvements for each of the build alternatives based on the simulated analysis. The corresponding throughput in terms of vehicles from the simulation results for each segments as well as the conversion to the anticipated changes in the person trips and the associated assumptions used in developing the person trips need to be provided to fully assess the project impact for each of the build alternatives when compared to that of the no build conditions.</p> <p>There appears to be an abnormal speed pattern near segment 234 for Build 2A alternative.</p> <p>The corresponding speed map will need to be prepared for any follow up alternatives that were or are to be developed as well as the impact of changes to the forecast volume with the planned changes inside the Beltway along I-66.</p>
13.	Tier 2 Draft Environmental Assessment	Pages 3-17, Figure 3-7	<p>This figure shows the anticipated speed improvements for each of the build alternatives based on the simulated analysis. The corresponding throughput in terms of vehicles from the simulation results for each segments as well as the conversion to the anticipated changes in the person trips and the associated assumptions used in developing the person trips need to be provided.</p> <p>The corresponding speed map will need to be prepared for any future alternatives that are to be developed as well as the impact of changes to the forecast volume with the planned changes inside the Beltway along I-66.</p>
14.	Tier 2 Draft Environmental Assessment	Page 4-4, Table 4-2-	Provide clarification as to what is attributing to the higher impact in terms of floodplains for Build 2A when compare to Build 2B
15.	Air Quality Analysis Technical Report and Appendices		See also comments provided by the County in June 5, 2015 letter to Secretary Layne.
16.	Alternatives Development Technical	3-2/1	I-495 to US 50 – It should be clarified that there are four vehicular travel lanes in the peak direction including the HOV lanes and the shoulder.

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	Report and Appendices		
17.	Alternatives Development Technical Report and Appendices	6-13 and 6.4.3.15	Route 50 - Demand volumes should be explored further
18.	Alternatives Development Technical Report and Appendices	6-4 and 6.4.3.19	Nutley Street – Text implies that direct managed lane access is included in Alternatives A and B.
19.	Architectural Survey Management Summary		
20.	Existing Conditions Technical Report and Appendices; Figure 4.9	P4-20	The PM Peak Period should include time period from 7:00 to 7:30 PM.

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21.	Existing Conditions Technical Report and Appendices	P4-41	Change memorandum to report.
22.	Existing Conditions Technical Report and Appendices; Figure 4.9	P4-20	The PM Peak Period should include time period from 7:00 to 7:30 PM.
23.	Hazardous Materials Technical Memorandum	Page 10 Paragraph 2	Additional sites with natural asbestos spoils buried along I-66 are: Nutley Street with I-66 and US 29 and I-66
24.	Hazardous Materials Technical Memorandum	Page 10 Paragraph 2	Soil maps do exist and are available on the Fairfax County GIS & Mapping website http://www.fairfaxcounty.gov/maps/
25.	Hazardous Materials Technical Memorandum	Page 10 Paragraph Last	Fairfax County Health Department does not have an abatement program and a compliance plan. The Department only recommends planning to limit fiber release.

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26.	Natural Resources Technical Report		Bull Run and Cub Run are the only two significant streams in the study area that are actually crossed by I-66. To facilitate the passage of wildlife along the stream valleys, and to help minimize wildlife wandering on to the highway, it is recommended that the stream crossings be provided with suitable wildlife crossing features (i.e., "critter crossings".) The Federal Highway Administration has quite a bit of information on these facilities at: http://www.fhwa.dot.gov/environment/critter_crossings/
27.	Natural Resources Technical Report		<u>Reforestation/Landscaping:</u> The proposed construction will remove a substantial amount of existing tree cover and other vegetation. Even though much of this vegetation is on VDOT right-of-way, it's removal will still affect nearby homes and communities. It is recommended that VDOT commit to a landscaping and reforestation program in order to mitigate this loss of vegetation.
28.	Preliminary Noise Analysis and Appendices	General comment	There are numerous flyover ramps that would be constructed under either build alternative. It is not clear from the report narrative if noise associated with traffic using these ramps was a consideration in the noise modeling exercise or if noise generated by traffic on any of these ramps would generate noise impacts above the Noise Abatement Criteria. Could you please clarify? If noise from any of these ramps would exceed the Noise Abatement Criteria, would noise mitigation measures be feasible?
29.	Preliminary Noise Analysis and Appendices	Page 7	Please explain the monitoring result for receptor site M15. If this monitor was situated behind the existing noise barrier, what would explain the high result that was recorded (71.1 dB)?
30.	Preliminary Noise Analysis and Appendices and Conceptual Plans	Figure 2-15	The location of Barrier T on Figure 2-15 does not follow the alignment of the barrier as shown on the conceptual plans (in the area of the I-66/Route 28 interchange). Further, it is not clear why the barrier that was modeled was not extended southward along Route 28 to connect with an existing barrier identified on Figure 2-15 between Route 28 and Lotus Lane. Will there be a gap in the barrier system in this area?
31.	Preliminary Noise Analysis and Appendices and Conceptual	Figures 2-13, 2-15, 2-16 and	Potential noise barrier AB&X is shown as being continuous along the northern side of I-66 between Heron Drive and the Fair Lakes retail center. However, the conceptual plans do not identify a continuous barrier along the entirety of this portion of the highway. There are notable gaps in the area near Eames Avenue and the area near Audrey Drive and Fox Meadow Court. Would the noise barrier be continuous in this area or would there be gaps? If the latter, why would there be gaps?

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	Plans	2-17	
32.	Preliminary Noise Analysis and Appendices and Conceptual Plans	Figure 2-13	Will there be a gap in barrier Y in the area of Wharton Park Court? If so, why? For Alternative 2B, will there be a gap in this barrier where the flyover lane bridge is being proposed near Lawrence Mill Lane?
33.	Preliminary Noise Analysis and Appendices	Page 22 and Figure 2-18	The existing noise barrier within CNE AC would be impacted by Build Alternative 2A. This barrier was constructed to provide protection to both ground level recreational areas and upper level facades of dwelling units; the barrier height is particularly noteworthy in this area and may exceed the 30-foot maximum barrier height referenced in the Preliminary Noise Analysis. Any new noise barrier in this area should be constructed to a height that would be sufficient to provide at least the equivalent extent of upper level noise mitigation as the existing barrier, even if there would not be balconies in need of protection in this area—the existing noise barrier was constructed, in part, to reduce noise exposures at upper level building facades. If there are other similarly designed existing barriers that are greater than 30 feet in height, the full set of benefits of those barriers (including reduction of impacts to upper levels of residences, even where balconies are absent) should be replaced.
34.	Preliminary Noise Analysis and Appendices	Page 40	If a noise barrier would not be constructed because fifty percent or more of the respondents to a survey of benefitted receptors would not favor the construction of the barrier, provisions should be established for the eventual construction of a noise barrier if/when the affected community would support it.
35.	Preliminary Noise Analysis and Appendices	Page 50	The analysis document indicates that barrier AQ&AR has been determined to be feasible but not reasonable due to its failure to meet the cost-effectiveness criterion. We note, though that the barrier would pass through large areas with little or no impacted residential development. Before the entirety of this barrier is eliminated from consideration, smaller components of it should be analyzed for cost-effectiveness. Might it be possible that a shorter barrier in the area of CNE AQ (along with the area near the heavily impacted houses at AR1 and AR6) would meet the cost-effectiveness criterion? Smaller segments of this barrier should be tested in the area of AR12 and AR21 in light of the high projected noise impacts for these residential receivers.
36.	Preliminary Noise Analysis and Appendices and Conceptual	Page 51 and Figure 2-23	The Preliminary Noise Analysis notes that a western extension of the barrier for CNE AY was considered and found to be feasible but not reasonable due to its failure to meet the cost-effectiveness criterion. Figure 2-23 identifies a Barrier AY1 and Barrier AY2 that are both identified as being feasible and reasonable, yet the conceptual plans do not identify barrier construction in the area closest to Blake Lane. Clarification is needed. In light of the particularly high impact projected for receiver site AY6, if the

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	Plans		entirety of the western extension area is confirmed to be not reasonable, can a smaller component of this barrier (Barrier AY1 or a smaller portion of it) be considered independently?
37.	Preliminary Noise Analysis and Appendices and Conceptual Plans	Page 54 and Figure 2-27	The Preliminary Noise Analysis indicates that Barrier BK would not be reasonable, yet Figure 2-27 identifies this barrier as being feasible and reasonable, and the barrier is identified on the conceptual plans. Clarification is needed.
38.	Preliminary Noise Analysis and Appendices	Appendix H, Figure 2 and related text	Do the sound level tables present projected noise impacts at multiple levels of residences with balconies that are/would be exposed to highway noise (with the number after the hyphen in the "Name" column reflecting the particular building story being evaluated)? If so, how would a residence be classified (impacted or not impacted) if the ground level noise impact would be below the Noise Abatement Criteria but upper level noise would exceed the NAC? For example, in CAN AG, there appear to be seven receiver sites that have been identified on Figure 2-18 as "not impacted" for which the noise level would exceed the NAC at one or more of the upper levels. Why would these sites not be considered to be impacted? All of these sites have been identified in the Appendix I "Noise Barrier Feasibility Table," so it does not appear that this issue would have affected the determination of feasibility or reasonableness of a new noise barrier in this area.
39.	Preliminary Noise Analysis and Appendices	Appendix H, CNE AG, receivers 3 and 16	If no new noise barrier would be constructed for this CNE, why would the build alternative noise impacts be so much less than the no-build noise levels for this receiver? For receiver 16, why is the existing noise level so much higher than the levels associated with any of the three alternatives?
40.	Preliminary Noise Analysis and Appendices	Page 5	The references in the first paragraph in section IV to Figures 2-1 through 2-6 and nine noise monitoring sites are incorrect, as there are many more related figures and many more noise monitoring sites.
41.	Preliminary Noise Analysis and Appendices	Page 8	The second reference to columns 6 and 7 in the first full paragraph appear to be erroneous. Should the references instead be columns 9/10 and columns 12/13?

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42.	Preliminary Noise Analysis and Appendices	Page 8	The reference to the "Draft I-95 IMR" is confusing. What is the intent of this reference, and how does it relate to I-66?
43.	Preliminary Noise Analysis and Appendices	Page 10	Reference is made to an "Alternative 5." What is this alternative?
44.	Preliminary Noise Analysis and Appendices	Page 23	For CNE AG, the document indicates both that the existing barrier system will remain in place under Alternative 2B and that the noise barrier would be impacted under both build alternatives. These statements are conflicting.
45.	Preliminary Noise Analysis and Appendices	Page 42	The reference to Appendix H towards the top of the page should be Appendix I.
46.	Preliminary Noise Analysis and Appendices	Pages 44-45	The sentence on the bottom of page 44 and top of page 45 makes no sense.
47.	Operations Concept Technical Report and Appendices	Table 2.1	Reorder Monument Drive and Fairfax County Parkway interchange sequence; specify difference between two Route 29 interchanges on I-66
48.	Operations Concept Technical Report and Appendices	Page 4, second bullet	Median changes from grass to paved in section; should specify what median includes as in first bullet. This is a key point to preserving median for extension of rail service.

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49.	Operations Concept Technical Report and Appendices	Figure 2.1	Show Metro as west of Nutley not at Nutley.
50.	Operations Concept Technical Report and Appendices	3.1.2	Text indicates that 'many' transit services are shown in Figure 2.2. Not true. Only two are shown and they are incomplete. No bus service is shown. No park-and-rides are shown, etc.
51.	Operations Concept Technical Report and Appendices	Page 6, three bullets	Metrorail write-up talks about passenger trips, bus write-up talks about bus trips and park-and-ride write-up talks about 90 percent utilization; non-parallel discussion contrasting persons and vehicles; needs to be rewritten
52.	Operations Concept Technical Report and Appendices	Figure 2.2	VRE station inside Beltway is shown but Metro stations inside Beltway and along Silver Line are not shown; revise for consistency.
53.	Operations Concept Technical Report and Appendices	3.1.3	Some of the 2014 CLRP projects have been completed. It is suggested that those be highlighted. Also, bullet five should specify how many lanes in each direction to avoid confusion.
54.	Operations Concept	3.2, third sentence	There are three principal differences between the two alternatives: cross-section, access points and interchanges. This is repeatedly stated at HOA briefings and other community presentations.

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	Technical Report and Appendices		
55.	Operations Concept Technical Report and Appendices	3.2.3	I-66 Tier 2 Alternatives Development Technical Report.
56.	Operations Concept Technical Report and Appendices	3.2.4	All Park-and-Ride Facilities in Fairfax County should reference improvements of access, not just the Vienna Metrorail station. The services and elements recommended at the existing and proposed park-and-ride facilities also references direct or nearly direct access to/from I-66 managed lanes via new ramps (see next to last bullet). This assumes that the new ramps are actually part of the park-and-ride facilities, yet the report says no improvements are being added to the Stringfellow location (see Alternative 2B).
57.	Operations Concept Technical Report and Appendices	3.2.5	Revise reference destination of Fair Lakes to Fairfax Center Area (FCA). The FCA covers Fair Lakes, the Fair Oaks Mall, Fairfax Corner and the County Government Center. Use either the FCA or the Fairfax Corner/Government Center designation.
58.	Operations Concept Technical Report and Appendices	5.4	From this point on it appears that a potential concessionaire is expected and necessary . Alternative language is suggested that does not simply specify what a concessionaire should or should not do.
59.	Operations Concept Technical Report and	6.7	Clearly distinguish between the benefits and dis-benefits of using the shoulder lane as a general purpose lane.

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	Appendices		
60.	Operations Concept Technical Report and Appendices	6.8	Reference need to maintain non-motorized travel during construction, especially around Metrorail stations and park-and-ride facilities.
61.	Operations Concept Technical Report and Appendices	6.9	Will HOV-3 be implemented before 2020 inside Beltway? Then the language should be revised accordingly.
62.	Socioeconomics and Land Use Technical Memorandum		See also comments provided by the County in June 5, 2015 letter to Secretary Layne.
63.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 2	Summary of key findings. Fifth bullet. Another part of this travel pattern shift is DOD related employment growth in the Springfield and Alexandria area due to base realignment under BRAC.

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64.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 4	Figure ES-1: Add a note to indicate that the bus volumes between the routes shown crossing I-66 do not necessarily reflect travel for the entire distance between those routes.
65.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 4	Figure ES-2: Add a note to indicate that the passenger volumes between the routes shown crossing I-66 do not necessarily reflect travel for the entire distance between those routes.
66.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 9	Figure ES-3: Add existing Connector service that travels directly between the Stone Road Park-and-Ride Lot and the Vienna Metrorail Station.
67.	Transit and Transportation Demand Management	Page 9	Figure ES-3: Eliminate the diamond symbol at the Monument Park-and-Ride Lot on the Haymarket to Downtown DC service. This route is not identified in Table ES.2 as stopping at the Monument Park-and-Ride Lot.

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	(TDM) Technical Report and Appendices		
68.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 10	Park-and-Ride Facilities: The parking lot at the corner of Monument Drive and Government Center Parkway is not currently a park-and-ride lot, and should not be identified as such. The existing park-and-ride lot in the area is at the corner of Government Center Parkway and Post Forest Drive.
69.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 10	Figure ES-4: The parking lot on Monument Drive across from Fairfax Corner is not currently a park-and-ride lot. Change the symbol for this facility to show it as a "New" facility. See text (Park-and-Ride Facilities, page 1-9) identifying the Monument Drive/Fairfax Corner site as a new facility.
70.	Transit and Transportation Demand Management (TDM) Technical Report and	Page 12	Figure ES-5: In the "Transit" section, the initial transit vehicle purchase (38 vehicles as shown in Table ES.2) is shown in the Pre-Project/TMP period. However, no further bus purchases are shown, even though service expansions are programmed for 2025 (14 additional buses), 2030 (13 additional buses), 2035 (12 additional buses), and 2040 (3 additional buses). In addition, replacement of the initial 38 buses (at least) will be needed between 2035 and 2040. These continuing bus purchases need to be shown.

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	Appendices		
71.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 1-4	Table 1.1: Fairfax County Parkway should be listed between Stringfellow Road and Monument Drive.
72.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 1-10	1.3.2.4 Park-and-Ride Facilities. Services and elements. Interconnecting transit service bullet should also reference VRE. One of the sites being considered for the Haymarket Park & Ride is near the location for a future VRE station that will be developed as part of the Haymarket VRE extension. Development of a joint parking and transit center serving commuter rail, commuter bus, local bus, and carpool/vanpool should be encouraged at Haymarket, assuming this is consistent with Prince William County's vision for these facilities.
73.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 1-10	Figure 1.5: The parking lot on Monument Drive across from Fairfax Corner is not currently a park-and-ride lot. Change the symbol for this facility to show it as a "New" facility. See text (Park-and-Ride Facilities, page 1-9) identifying the Monument Drive/Fairfax Corner site as a new facility.
74.	Transit and Transportation	Page 2-21	Figure 2.13: Check the label for the first pie chart. Should it be "US 15 to Route 234 Bypass", rather than "US 15 to Route 28"?

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	Demand Management (TDM) Technical Report and Appendices		
75.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 2-25	Figure 2.15: Show Manassas Park in or adjacent to Prince William County, not in Fairfax County.
76.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 2-25	Figure 2.15: Zone 2: Under “Metro/Commuter Rail Service”, change “No Service” to “Metrorail Orange Line”. Nearly all of the bus service in this zone serves the Vienna Metrorail Station.
77.	Transit and Transportation Demand Management (TDM) Technical	Page 2-25	Figure 2.15: Zone 3: Under “Primary Bus Provider”, change “Metrobus” to “Fairfax Connector”: <ul style="list-style-type: none"> • Metrobus Routes in Zone 3: 2T, 3T, 5A, 15K, 15L, 15M, 23A, 23T, 28A, 28X. Connector Routes in Zone 3: 401, 402, 422, 426, 424, 432, 461, 462, 463, 551, 553, 557, 559, 585, 605, 621, 622, 650, 651, 652, 924, 926, 927, 929, 937, 950, 951, 980, 981, 983, 985, RIBS 1, RIBS 2, RIBS 3.

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	Report and Appendices		
78.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 2-25	Figure 2.15: Zone 4: Under "Primary Bus Provider", change "Fairfax Connector" to "Metrobus": <ul style="list-style-type: none"> Connector Routes in Zone 4: 401, 402. Metrobus Routes in Zone 3: 1A, 1B, 1F, 1Z, 1C. 2A, 2B, 3A, 3T, 4A, 4B, 5A, 15M, 26A, 28A, 28X, 29C, 29G, 29K, 29N, 29W.
79.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 2-27	Figure 2.16: Check the average frequency for the segment of I-66 between the Occoquan River and US-29 in Centreville. How do we have a change in frequency where there is no interchange?
80.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 2-27	Figure 2.16: In several locations where routes with 5 minute frequencies cross, the crossing area shows as having 6-15 minute frequency. This is not logical.
81.	Transit and	Page 2-27	Figure 2.16: Several segments are showing levels of service that appear very high. Supporting data should be provided.

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	Transportation Demand Management (TDM) Technical Report and Appendices		
82.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 2-28	Figure 2.17: Check the average frequency for the segment of I-66 between the Occoquan River and US-29 in Centreville. How does frequency change where there is no interchange?
83.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 2-28	Figure 2.17: Several segments are showing levels of service that appear too high.
84.	Transit and Transportation Demand Management (TDM)	Page 2-29	Figure 2.18: Add a note to indicate that the bus volumes between the routes shown crossing I-66 do not necessarily reflect travel for the entire distance between those routes.

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	Technical Report and Appendices		
85.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 2-29	Figure 2.19: Add a note to indicate that the passenger volumes between the routes shown crossing I-66 do not necessarily reflect travel for the entire distance between those routes.
86.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 2-30	Figure 2.20: Add a note to indicate that the bus volumes between the routes shown crossing I-66 do not necessarily reflect travel for the entire distance between those routes.
87.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 2-30	Figure 2.21: Add a note to indicate that the passenger volumes between the routes shown crossing I-66 do not necessarily reflect travel for the entire distance between those routes.

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88.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 2-43	Figure 2.26: Correct line for Route 621, which does not stop at Fair Oaks Mall.
89.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 2-44	Figure 2.27: Change “Springfield Mall” to read “Springfield Town Center”.
90.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 2-46	Table 2.14: <ul style="list-style-type: none"> • Change the table title to “Metrobus Route Descriptions”. • Change the name of Route 15M to “George Mason University-Tysons Corner Line”. Change the name of Route 1B to “Wilson Blvd Line”.
91.	Transit and Transportation Demand Management	Page 2-50	Figure 2.29: <ul style="list-style-type: none"> • Add line for “Annandale”. • Add line for “East Falls Church Metro Station”. • Route 3A serves the East Falls Church Metro Station.

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	(TDM) Technical Report and Appendices		Route 29N serves Annandale.
92.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 2-58	Table 2.26: Reverse order of “McLean” and “Tysons Corner” rows to reflect their relative positions on the Silver Line.
93.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 2-59	Table 2.27: Revise order of station rows to match revised order in Table 2.26.
94.	Transit and Transportation Demand Management (TDM) Technical Report and	Page 2-62	Table 2.28: Revise order of station rows to match bullet point list in the text preceding the table.

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	Appendices		
95.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 2-68	Figure 2.35: Eliminate Site #6; there is no park-and-ride lot at this location. Renumber all subsequent sites.
96.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 2-69	Table 2.33 (general notes): <ul style="list-style-type: none"> List both bus providers and bus routes in a consistent order. Renumber all rows below Fair Ridge Drive.
97.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 2-69	Table 2.33 (specific notes): <ul style="list-style-type: none"> East Falls Church Metrorail Station: In "Bus Route(s)" column, eliminate these routes: MN-R, GV-R. West Falls Church Metrorail Station: <ul style="list-style-type: none"> In "Bus Provider(s)" column, eliminate "PRTC". In "Bus Route(s)" column, eliminate these routes: MN-R, GV-R. Dunn Loring-Merrifield Metrorail Station: <ul style="list-style-type: none"> In "Bus Provider(s)" column, eliminate "PRTC". In "Bus Route(s)" column, eliminate these routes: L-MD, M-MD, MN-R, GV-R. Vienna Metrorail Station: <ul style="list-style-type: none"> In "Bus Provider(s)" column, eliminate "PRTC".

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			<ul style="list-style-type: none"> • In "Bus Route(s)" column, eliminate these routes: L-MD, M-MD, MN-R, GV-R. • Fairfax County Government Center: <ul style="list-style-type: none"> • In "Bus Provider(s)" column, eliminate "PRTC". • In "Bus Route(s)" column, keep only these routes: 1C, 2B, 605, 621, 623. Eliminate all other routes. • Fair Ridge Drive: Eliminate this entire row from the table. There is no park-and-ride lot at this location. • Poplar Tree Park: <ul style="list-style-type: none"> • In "Bus Provider(s)" column, eliminate "PRTC". • In "Bus Route(s)" column, keep only these routes: 605, 632, 640. Eliminate all other routes. • Greenbriar Park: <ul style="list-style-type: none"> • In "Bus Provider(s)" column, eliminate "PRTC". <p>In "Bus Route(s)" column, keep only these routes: 605, 632, 640. Eliminate all other routes.</p>
98.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 2-69	<p>Table 2.33 (specific notes - continued):</p> <ul style="list-style-type: none"> • Autumn Willow Park: <ul style="list-style-type: none"> • In "Bus Provider(s)" column, replace "Fairfax Connector, PRTC" with "None". • In "Bus Route(s)" column, replace route list with "None". • St. Paul Chung Catholic Church: <ul style="list-style-type: none"> • In "Bus Provider(s)" column, eliminate "PRTC". • In "Bus Route(s)" column, keep only these routes: 632, 640. Eliminate all other routes. • Stringfellow Road: <ul style="list-style-type: none"> • In "Bus Provider(s)" column, eliminate "PRTC". • In "Bus Route(s)" column, keep only these routes: 630, 631, 632. Eliminate all other routes. AMF Centreville Lanes: <ul style="list-style-type: none"> • In "Bus Provider(s)" column, eliminate "PRTC". • In "Bus Route(s)" column, keep only these routes: 630, 631. Eliminate all other routes. • Centreville United Methodist Church: <ul style="list-style-type: none"> • In "Bus Provider(s)" column, eliminate "PRTC". • In "Bus Route(s)" column, keep only these routes: 630, 641. Eliminate all other routes. • Sully Station:

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			<ul style="list-style-type: none"> • In “Bus Provider(s)” column, eliminate “PRTC”. • In “Bus Route(s)” column, keep only these routes: 640, 642. Eliminate all other routes. • Stone Road – US 29: <ul style="list-style-type: none"> • In “Bus Provider(s)” column, eliminate “PRTC”. <p>In “Bus Route(s)” column, keep only these routes: 640, 642, 644. Eliminate all other routes.</p>
99.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Chapter 3	Vienna Station: Bus bay capacity at the Vienna Metrorail station may need to be increased to handle additional corridor service serving the station, to include modifying south side bus bay access to allow buses from and to the west to access the eastern bay array via Vaden Drive and Saintsbury Drive, and the future Vaden Drive bus ramp.
100.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 3-5	3.1.3.3 Conclusions. The survey results, in part reflects the service type on the west side of Fairfax County which is primarily focused on peak period work trips.
101.	Transit and Transportation Demand Management (TDM) Technical Report and	Page 5-4	Figure 5.1: Transit Service Origins & Destinations. Map should include the Pentagon as a destination. Alternative would be to serve the Rosslyn Metro station to avoid a two train trip to the Pentagon.

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	Appendices		
102.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 5-5	Table 5.2: Service days add up to 356, nine days short of the 365 days in a calendar year. Are the missing nine days assumed to be holidays? Will there be service on holidays?
103.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 5-6	5.5.2 Existing Service: Route 605 operates north-south, not “along the I-66 corridor”. It should be removed from the list of routes that do so.
104.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 6-7	6.4 Initial Transit Service Scenario C. Commuter bus should include a Centreville to Arlington route.
105.	Transit and Transportation	Page 7-3	Table 7.1: The Gainesville-Reston route should serve one of the stations west of the Wiehle-Reston East Station. The main bus facility at the Wiehle-Reston East Metrorail Station is not suitable for the type of bus envisioned for the commuter services, while

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	Demand Management (TDM) Technical Report and Appendices		the current bus facility on the eastbound Dulles Toll Road off-ramp to Wiehle Avenue is slated to be removed when Phase 2 of the Silver Line enters revenue service. Also, terminating the route at one of the western stations would be a more cost-effective operation, and would provide service to more employment centers than would be served at the Wiehle-Reston East Metrorail Station.
106.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 7-3	Table 7.1: The Gainesville-Herndon/Monroe route should serve the Herndon Metrorail Station (current Hendon-Monroe Park-and-Ride) first. This would be a more cost-effective operation, as well as more attractive to riders. The Innovation Center Metrorail Station is not easily accessible from either the Toll Road or VA-28, while the existing direct access to the Dulles Toll Road at the Herndon Station will remain open. However, the Innovation Center Station could be served after Herndon Station in the morning and before Herndon Station in the afternoon.
107.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 7-3	Table 7.1: The Manassas-Reston route should serve only the Reston Town Center Metrorail Station. The main bus facility at the Wiehle-Reston East Metrorail Station is not suitable for type of bus envisioned for the commuter services, while the current bus facility on the eastbound Dulles Toll Road off-ramp to Wiehle Avenue is slated to be removed when Phase 2 of the Silver Line enters revenue service. Also, terminating the route at the Reston Town Center Station would be a more cost-effective operation, and would provide service to more employment centers than would be served at the Wiehle-Reston East Metrorail Station.
108.	Transit and Transportation Demand Management (TDM) Technical	Page 7-3	Table 7.1: A route linking the Centreville United Methodist Church Park-and-Ride Lot with the Reston Town Center Metrorail Station should be added to the Preferred Transit Plan.

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	Report and Appendices		
109.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 7-3	Table 7.1: A route linking the Centreville United Methodist Church Park-and-Ride Lot with the Herndon Metrorail Station should be added to the Preferred Transit Plan. This route could be extended to serve the Innovation Center Metrorail Station in a manner similar to that proposed for the Gainesville-Herndon route.
110.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 7-3	Table 7.1: A route linking the Saint Paul Chung Catholic Church and Stringfellow Park-and-Ride Lots to the Pentagon and the Mark Center should be added to the Preferred Transit Plan.
111.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 7-3	Table 7.1: The Monument-Westfields route should be extended to the Vienna Metrorail Station. This would benefit both employers and residents in Westfields by providing a transit connection to the entire National Capital Region.
112.	Transit and	Page 7-3	Table 7.1: A route linking the Monument Park-and-Ride Lot and Downtown DC should be added to the Preferred Transit Plan.

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	Transportation Demand Management (TDM) Technical Report and Appendices		
113.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 7-4	Figure 7.1: Add existing Connector service that travels directly between the Stone Road Park-and-Ride Lot and the Vienna Metrorail Station.
114.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 7-5	Figure 7.2: Add existing Connector service that travels directly between the Stone Road Park-and-Ride Lot and the Vienna Metrorail Station.
115.	Transit and Transportation Demand Management (TDM)	Page 7-9	Opening Year Draft Preferred Transit Service Plan - Should add commuter routes from Centreville Park & Ride to Pentagon, and Stringfellow Park & Ride to Pentagon, otherwise you are forcing a two train transfer for riders accessing Metrorail at Ballston.

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	Technical Report and Appendices		
116.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 7-24	Location and Size (Haymarket (US 15) Park-and-Ride) This lot would be in the vicinity of the planned VRE extension to Haymarket. Development of a shared park & ride facility serving local bus, commuter bus and commuter rail should be explored.
117.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 7-23	Figure 7.8: The parking lot on Monument Drive across from Fairfax Corner is not currently a park-and-ride lot. Change the symbol for this facility to show it as a "New" facility. See text (Park-and-Ride Facilities, page 1-9) identifying the Monument Drive/Fairfax Corner site as a new facility.
118.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 7-33	7.2.2 Elements of Park-and-Ride Facilities. Real-time parking availability information. Both at the site and on I-66 via DMS signs so drivers can make a decision to exit to access the facility before leaving I-66.

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119.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 7-34	7.2.2.1 Bus Facility Design Guidance (include the following in the bullets) Signalized transit center access to allow for controlled bus movements into and out of the facility. Especially important where buses are turning left onto a thoroughfare when exiting the facility.
120.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 7-34	For passengers, bus facilities (and park-and-ride facilities) should offer: (add following bullet) Covered bike racks or bike cage.
121.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 7-35	7.2.2.3 Park-and-Ride Parking Area Facility Design Guidance. (add the following bullet) Some provision for fare sales at location or provision of information that identifies nearby fare vendors.
122.	Transit and Transportation Demand Management	Page 7-36	7.2.4.1 Bus Bay Capacity at Metrorail Stations. Discussion should include Vienna Metro Station. Feeding Vienna Metro with the planned commuter network would avoid the capacity issues at Ballston. Adding additional capacity at Vienna would be easier than undertaking a similar capacity improvement at Ballston, where adding bus bays would have a negative impact on adjacent land uses.

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	(TDM) Technical Report and Appendices		
123.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 7-37	7.3 TDM Strategies - TDM strategies should also include working with employers to develop and implement flexible hours and telework options for employees. Might also want to look at developing a public/private partnership to develop satellite, shared use office space that would allow employees to work remotely for part of the week ("office share").
124.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 7-38	7.3.1 Marketing and Advertising Campaign – also consider social media and transit blogs to push the message.
125.	Transit and Transportation Demand Management (TDM) Technical Report and	Page 7-41	7.3.2 Commuter Incentives – consider the feasibility of implementing HOV 3+ for TDM. Consider extending HOV to all travel lanes from Route 50 interchange to Beltway during construction to provide an additional incentive to carpool, vanpool, and use alternative modes to help manage construction related congestion in the corridor during peak travel periods.

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	Appendices		
126.	Transit and Transportation Demand Management (TDM) Technical Report and Appendices	Page 7-45	In the "Transit" section, the initial transit vehicle purchase (38 vehicles as shown in Table ES.2) is shown in the Pre-Project/TMP period. However, no further bus purchases are shown, even though service expansions are programmed for 2025 (14 additional buses), 2030 (13 additional buses), 2035 (12 additional buses), and 2040 (3 additional buses). In addition, replacement of the initial 38 buses (at least) will be needed between 2035 and 2040. These continuing bus purchases need to be shown.
127.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)		Has any traffic analysis been conducted for the opening year?
128.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)		Please provide a section on the assumptions and the process of person-trips calculation for each alternative in detail.
129.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)		Route 28 remains a congestion hot spot on the southbound direction during PM Peak Period for both Build alternatives. The traffic operation is less satisfactory given the level of improvement efforts planned for both I-66 and Route 28 corridors.

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130.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	ES-43	Section title should include PM.
131.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	P6-12	The report text says 2020 and 2030 while Figure 6.9 and 6.10 shows 2025. The forecast years need to be consistent.
132.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	P6-21	It should be Employment Growth instead of Population Growth in the legend.
133.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Figure 6.36; P6-32 to P6-37 P6-98 to P6-103 P6-180 to 185	Traffic volumes are unreadable due to low resolution even after zoomed in using electronic file.
134.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	P6-38 P6-104 P6-186	Are the volume adjustments included in the traffic volumes graphics (Figure 6.36, 6.71, and 6.113)? Are the volume adjustments consistent among different alternatives?

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135.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	P6-41	The travel time only increases by 1 minute on the westbound direction for the entire corridor under No-Build condition compared to existing conditions. The future travel time seems to be too good given the demand growth on the corridor.
136.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	P6-53	The eastbound direction should be from west of the US 29 (Gainesville) interchange to Route 28. Need to provide brief definitions of various freeway segments, particularly ramp links.
137.	Existing Conditions Technical Report and Appendices	P6-61	Why is HOV travel time greater than existing conditions for these segments <u>except between Route 243 (Nutley Street) and US 50?</u>
138.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	P6-106	The unit for the travel times should be added to the table.
139.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	P6-107	The travel time savings between US 50 and Route 243 for Build 2A should be 1 minute compared to the No-Build.
140.	Transportation Technical	P6-113	Should be Build 2A instead of 2B.

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	Report (TTR) and Appendices (Volumes 1 & 2)		
141.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	P164-167	The footer should be P6-164 to P6-167
142.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	P166	Add the number of intersections next to the percentage information for the intersections operating at LOS E or F.
143.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	P6-170	Add the explanation on the locations which queuing condition under Build 2A is worse than the No-Build. Any related to I-66 traffic conditions?
144.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	P6-175	What's the existing condition at the intersection of Route 123 and Rose Forest Drive? Is the weaving pattern the same between Build 2A and Existing Conditions?
145.	Transportation Technical Report (TTR) and Appendices	P6-175	There is a major operation failure in the westbound direction at the interchange of Route 28 and Fairfax County Parkway in terms of congestion spilling back onto the C-D road then onto northbound Fairfax County Parkway. Any solutions?

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	(Volumes 1 & 2)		
146.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	P6-175	“PM Operational Deficiencies and Major Points of Congestion” section is missing.
147.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	ES 11	Third last bullet point: The Fairfax County Parkway is planned to be widened to 6 lanes not 8.
148.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page ES-20, Section ES.2.4	Need to specify whether the volume summarized in these figures are based on the demand or throughput.
149.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page ES-20, Figures ES.11 & 12 Page ES-29, Figures ES.17 & 18	These figures indicate that majority of the net volume increase will occur at the express lane facility. Additional details are needed as to how the Express Lane volume would consist of HOV, HOT, and transit vehicles. Also, changes in total person trips need to be specified.
150.	Transportation Technical Report (TTR) and Appendices	Page ES-38 through ES-46. Section 2.5	The traffic operational impact for the future build alternatives need to be assessed in comparison with the no build conditions to clearly identify any mitigation measures that will be required as part of the I-66 project. Also, are there justifications as to why the interim year analysis was not performed? The traffic analysis just includes year 2040 conditions.

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	(Volumes 1 & 2)		
151.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page ES-38 through ES-46. Section 2.5	I-66 Inside the Beltway Managed Lane implementation needs to be fully considered in the I-66 outside the Beltway analysis and the impact to I-66 Outside the Beltway Project needs to be fully reassessed. For this purpose, the revised traffic forecast to be developed with the I-66 Inside the Beltway Managed Lane assumption will need to be fully assessed to determine the anticipated impact to the I-66 outside the Beltway. The preferred option that may be combinations of Alternative 2A, 2B and 2C, will need to be fully assessed and verified based on the revised forecast and analyses results considering the I-66 Inside the Beltway Managed Lane assumptions. The Environmental Assessment will need to be verified as well based on changes in these assumptions.
152.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page ES-39 Travel Time Section	Although travel time for Build 2B is shorter than Build 2A for GP lane along I-66 EB between US 50 to Route 243, there needs to be an explanation as to why travel time along Express Lane is shorter for Build 2A than 2B along the same segment. In the last sentence, change Route 234 to Route 243.
153.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page ES-43 Section ES.2.5.2	Section ES.2.5.2 needs to be labeled as PM Peak Period.
154.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	1-4	Construction on Stringfellow Road is finishing up and is now a 4-lane divided facility north of I-66.
155.	Transportation Technical Report (TTR) and Appendices	5-41	Considering that VDOT has a policy to not include left on- and off-ramps on their freeways, and that left on- and off-ramps are included in design of the alternatives, there should be an expanded explanation of why this exception is justified. The safety implications should be addressed as part of this explanation.

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	(Volumes 1 & 2)		
156.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page 6-20 & 6-21, Figures 6.22 and 6.23	Figures 6.22 and 6.23 seem to be identical. Figure 6.23 needs to reflect employment growth and not population growth.
157.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page 6-22 Figure 6.24	Figure 6.24 shows a declining AADT for the last 7 years; which may be due to economic downturn. An explanation for the decline may be helpful to the reader.
158.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page 6-54 Figure 6.44	Is there a similar figure prepared for the existing condition that can be provided
159.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page 6-56 Figure 6.45	Refer to the comments made to the Tier 2 Draft EA document on Page 2-13, related to Figure 2-8.
160.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page 6-76 Figure 6.58	Refer to the comments made to the Tier 2 Draft EA document on Page 2-14, related to Figure 2-9.

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161.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page 6-81 Figure 6.61	“% Demand Unserved” is inconsistent with the corresponding Figure 2.11 on page 2-16 of the Tier 2 Draft EA.
162.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page 6-118 Figure 6.78c	Need to clarify why the I-66 WB GP segment for Build 2A is deteriorating for segment between Stringfellow Road and Route 28 when compared to 2040 No Build conditions.
163.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page 6-130 Figure 6.84 Page 6-132 Figure 6.86	Additional details are needed as to how the Express Lane volume breaks down into HOV, HOT, and transit vehicles. Also, total person trip changes need to be specified.
164.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page 6-132	Similar to the Table 6.11 prepared for the AM condition, include a travel time comparison table for PM condition as well.
165.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page 6-146 Figure 6.94c Page 6-151 Figure 6.95c	Need to clarify why the I-66 WB GP segment for Build 2A is deteriorating for segment in the vicinity and west of Route 28 when compared to 2040 No Build conditions.
166.	Transportation Technical	Page 6-158 Figure	It appears that 2040 Build 2A still is not effective in reducing the % of unserved demand for the segments west of US 29. Would there be any additional improvement measures to reduce this percentage?

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	Report (TTR) and Appendices (Volumes 1 & 2)	6.101	
167.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page 6-156 Figure 6.102 Page 6-161 Figure 6.104	Additional details are needed as to how the Express Lane volume breaks down into HOV, HOT, and transit vehicles. Also, total person trip changes need to be specified.
168.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page 6-166, Figure 6.107	The percentage breakdown for 2040 No Build condition is inconsistent with that reported in Figure 6.65 on Page 6-86. Also, page number formatting is changed on page 6-164.
169.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page 6-106, Table 6.11	Why are there travel time reductions for I-66 EB segment between US 29 to US 50 for 2040 No Build condition when compared to that of the existing for both the GP and HOV lane?
170.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page 6-199 Figure 6.120c	Why is density increasing during late peak period along I-66 EB between Route 28 and Route 123?
171.	Transportation Technical Report (TTR)	Page 6-203 Figure 6.121c	Why is density increasing during late peak period along I-66 EB in the vicinity of US 50?

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	and Appendices (Volumes 1 & 2)		
172.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page 6-205 Figure 6.122	When comparing the performance of the ramp segments of the GP lane, 2040 Build 2B deteriorates more than the condition anticipated for 2040 No Build condition as depicted on Figure 6.44, page 6-54. There needs to be improvement measures to mitigate this negative impact.
173.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page 6-211 Figure 6.126 Page 6-213 Figure 6.128	Additional details are needed as to how the Express Lane volume breaks down into HOV, HOT, and transit vehicles. Also, total person trip changes need to be specified.
174.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page 6-216	Similar to the Table 6.19 prepared for the AM condition, include a travel time comparison table for PM condition as well.
175.	Transportation Technical Report (TTR) and Appendices (Volumes 1 & 2)	Page 6-231 Figure 137c	Need to clarify why the I-66 WB GP segment for Build 2A is deteriorating in the vicinity and west of Route 28 when compared to 2040 No Build conditions.
176.	Transportation Technical Report (TTR) and Appendices	Page 6-237, Figure 6.143	It appears that 2040 Build 2B is not effective in reducing the % of unserved demand for the segments west of US 29. Would there be any additional improvement measures to reduce this percentage?

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	(Volumes 1 & 2)		
177.	Concept Plans: Build Alternatives 2A and 2B for I-66 Corridor and additional interchange Build Alternatives 2C	Segment 2 Sheet 2 of 6	<p>There are four proposed stormwater management facility locations identified north of I-66 and west of Stringfellow Road. Each of these proposed sites may be problematic relative to past zoning approvals, the county’s Environmental Quality Corridor policy, and/or conservation easements, as follows:</p> <p>1 - The two facilities proposed in the area a short distance west of the Stringfellow Park and Ride lot would be located within areas that were identified and protected as Environmental Quality Corridors in conjunction with a rezoning application that was approved in 1998 (RZ 1998-SU-008). The approved proffers for the application establish that “the EQC area shall not be disturbed except for the removal of dead, dying or diseased vegetation and except for the installation of utilities if deemed necessary.” Further, Fairfax County’s comprehensive plan does not support the provision of stormwater management facilities within EQCs unless they are either: (1) consistent with recommendations of a Board of Supervisors-adopted watershed management plan; or (2) would be: (a) more effective in protecting streams and supporting watershed management plan goals, or contributing to achieving pollutant reduction in support of bringing impaired waters into compliance with state water quality standards or into compliance with an MS4 permit than approaches that would be pursued outside of EQCs; and (b) designed to replace, enhance and/or be provided along with other efforts to compensate for any of the purposes of the EQC policy that would be affected by the facilities.</p> <p>2 - The two facilities farther west would each be located within open space areas that were identified on a development plan that was approved in 1993 in conjunction with rezoning application RZ 92-Y-018, although the development plan did identify a possible stormwater management area dry pond within a portion of the area proposed for the westernmost of these two ponds. Both pond locations are, however, located within areas that have been placed into a conservation easement. For Alternative 2A, it is not clear whether or not the westernmost of these two facilities would encroach into the EQC that was identified along the stream in this area. The plans for Alternative 2B indicate that the pond would be located largely within the EQC.</p> <p>In addition, it can be anticipated that substantial clearing of tree cover would be required for the construction of any of these facilities, with an associated adverse visual impact to neighboring residences.</p> <p>The potential construction of each of these proposed stormwater management facilities should be reevaluated in light of the above</p>

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			information. Might alternative approaches to stormwater management be available that would have more limited impacts on clearing/land disturbance in this area? If one or more of these facilities will need to be constructed, efforts should be taken to design it/them to minimize tree clearing and to restore tree cover to areas that must be disturbed, to the extent possible. Consideration should be given to incorporating design concepts that will restore/enhance ecological values in this/these areas (e.g., wetland designs; planting of native species of plants with high habitat values within the cleared areas).
178.	Concept Plans: Build Alternatives 2A and 2B for I-66 Corridor and additional interchange Build Alternatives 2C	Segment 1 Sheet 13 of 15	For both build alternatives, two stormwater management facilities are identified in the eastern quadrant of the interchange of I-66 and Lee Highway in the Centreville area. A Resource Protection Area (RPA) is associated with the stream that flows between these two facilities. Efforts should be taken to avoid encroachments into the RPA to the extent possible and to compensate for any necessary encroachments. Consideration should be given to incorporating design concepts that will restore/enhance ecological values in this area.
179.	Concept Plans: Build Alternatives 2A and 2B for I-66 Corridor and additional interchange Build Alternatives 2C	Segment 2 Sheet 5 of 6	For both build alternatives, the exit ramp for eastbound I-66 to westbound Route 50 would be extended eastward slightly from its current alignment, with a stormwater management facility to be built in the area inside the cloverleaf. The eastward extension would cause the ramp to encroach into a Resource Protection Area (RPA) associated with the perennial stream that flows through this area. Can this exit ramp be designed to avoid or reduce the RPA impact?
180.	Concept Plans: Build Alternatives 2A and 2B for I-66 Corridor and	Segment 3 Sheet 3 of 7	For both build alternatives, three stormwater management facilities are identified along Bushman Drive (east of the Route 123 interchange). The central and easternmost of these facilities would be constructed near a Resource Protection Area (RPA). Each of the stormwater management facilities would require clearing of tree cover. Efforts should be taken to avoid encroachments into the RPA to the extent possible, to compensate for any necessary encroachments, to minimize clearing and to restore tree cover in this area to the extent possible. Consideration should be given to incorporating design concepts that will restore/enhance

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	additional interchange Build Alternatives 2C		ecological values in this area.
181.	Concept Plans: Build Alternatives 2A and 2B for I-66 Corridor and additional interchange Build Alternatives 2C	Segment 3 Sheet 6 of 7	For both build alternatives, a stormwater management facility is identified to the southwest of a cul-de-sac along Wesleyan Street (west of Gallows Road). A Resource Protection Area (RPA) is associated with the stream that flows to the west of where the facility would be constructed. In addition, construction of this facility would require clearing of tree cover. Efforts should be taken to avoid encroachments into the RPA to the extent possible, to compensate for any necessary encroachments, to minimize clearing and to restore tree cover in this area to the extent possible. Consideration should be given to incorporating design concepts that will restore/enhance ecological values in this area.
182.	Trails, Feasibility Study		Add shared use path on Bull Run Drive.
183.	Trails, Feasibility Study		Pursuant to the Board's action as documented in the June 5, 2015 letter to the Secretary, the County looks forward to working with the I-66 Project Team in determining a reasonable alignment for a parallel regional trail that is compatible with the guidance in our Comprehensive Plan and is included with the I-66 Outside the Beltway Improvement Project.
184.	Archaeological Survey Management Summary and Appendices		See also comments provided by the County in June 5, 2015 letter to Secretary Layne.

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185.	Indirect and Cumulative Effects Technical Memorandum		See also comments provided by the County in June 5, 2015 letter to Secretary Layne.
186.			
187.			