

**Virginia Department of Transportation
Project Review & Comment Resolution Form**

VDOT Project No.: N/A
Locality Project No.: TBD

UPC No: TBD

Location: Loudoun and Fairfax Counties

Description: Route 28 and Dulles Greenway/Dulles Toll Road STARS Study

Phase: February 2021

Design Originator: Kimley-Horn Associates

Item	Sheet No.	Review Comment		Response		Final Disposition
		Name: Timothy Belcher, P.E., PMP Discipline: NOVA Location & Design Date: March 20, 2021 By VDOT Reviewer 1. Requirement 2. Recommendation 3. Clarification	Code	Name: Geoff Giffin & Ryan Sheran Discipline: Kimley-Horn Traffic Engineering & Roadway Design Date: March 24, 2021 By VDOT PM in Conjunction with Design Originator A. Agree with Comment (Document Will Be Revised) B. Comment To Be Evaluated (by Whom) C. Disagree with Comment (Provide Justification)	Code	Name: Abi Lerner, P.E. Discipline: VDOT PC Date: XX/XX/XXXX By the VDOT PM (for Virginia-Owned Roadways) By the Locality PM (for Locality-Owned Roadways)
1	Figure 7-4	Please note that the EB Route 606/NB Route 28 and Shaw Road Channelized Left Turn signals will need to be coordinated together instead of displaying the typical "full-time green" when there could be a red signal or traffic queue immediately following it. Consider potentially eliminating both the free-flow right turn and the channelized left and bring all right turn traffic to a coordinated signal.	2 / 3	These detail operational characteristics of the intersection geometrics and signalization are beyond the scope of this feasibility study. The design and operational details will be addressed during a future PE stage.	B	<i>Comment addressed adequately – Comment closed</i>
2	G	Previous Comment #2 does not apply to the Preferred Alternative.	3	Noted	A	<i>Comment addressed adequately – Comment closed</i>
3	G	Previous Comment #3 does not apply to the Preferred Alternative.	3	Noted	A	<i>Comment addressed adequately – Comment closed</i>
4	G	Previous Comment #4 does not apply to the Preferred Alternative.	3	Noted	A	<i>Comment addressed adequately – Comment closed</i>
5	G	Previous Comment #5 does not apply to the Preferred Alternative.	3	Noted	A	<i>Comment addressed adequately – Comment closed</i>
7	Figure 7-4	Previous Comment #7 is repeated that the proposed braided ramp bridge is only about 350' from the south gore and about 400' from the north gore of NB Route 28. This will not work vertically with an acceptable profile. If the south gore is held, the north gore needs to be moved to a point approximately 1000' from the proposed bridge or vice versa.	1	The design team has evaluated the proposed design based upon an existing terrain obtained from County GIS information. Ramp clearances have been found to be feasible. However, the engineer responsible for advancing the conceptual design to preliminary design will need to re-evaluate all ramp configurations, gore locations and vertical clearances once survey data is obtained.	A	<i>Comment addressed adequately – Comment closed</i>

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8	G	Previous Comment #8 does not apply to the Preferred Alternative.	3	Noted	A	<i>Comment addressed adequately – Comment closed</i>
9	G	Previous Comment #9 does not apply to the Preferred Alternative.	3	Noted	A	<i>Comment addressed adequately – Comment closed</i>
12	Figure 7-4	The proposed braided ramp bridge is only about 500' from the north gore and about 650' from the south gore of SB Route 28. This may not work vertically with an acceptable profile and needs to be verified.	3	The design team has evaluated the proposed design based upon an existing terrain obtained from County GIS information. Ramp clearances have been found to be feasible. However, the engineer responsible for advancing the conceptual design to preliminary design will need to re-evaluate all ramp configurations, gore locations and vertical clearances once survey data is obtained.	A	<i>Comment addressed adequately – Comment closed</i>
15	Figure 7-4	The proposed EB Dulles Toll Road ramp over Innovation Avenue/Dulles Greenway bridge is a third-level bridge when considering the proximity of the Innovation Avenue over Route 28 bridge. While it is acknowledged that the design was revised per Previous Comment #15 to provide sufficient distance from the SB Route 28 gore, the Pacific/Route 606 braided ramp bridge over it is only about 600' from the SB Route 28 gore and will not work vertically with an acceptable profile.	1	The design team has evaluated the proposed design based upon an existing terrain obtained from County GIS information. Ramp clearances have been found to be feasible. However, the engineer responsible for advancing the conceptual design to preliminary design will need to re-evaluate all ramp configurations, gore locations and vertical clearances once survey data is obtained.	A	<i>Comment addressed adequately – Comment closed</i>

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16	Figure 7-4, Page 207	Previous Comment #16 is repeated that the Dulles Greenway has either completed or is close to completing construction on a third Eastbound lane onto the Dulles Toll Road. The preferred alternative completely disregards that there is a third lane coming from the Dulles Greenway. If the third lane is terminated, will the previous bottleneck situation be reintroduced?	1	The project team acknowledges the recently constructed third eastbound lane, however the projected traffic volumes for traffic continuing east from the Dulles Greenway to the Dulles Toll Road does not warrant 3 lanes. The bottleneck is created due to the large number of weaving movements and closely spaced entry/exit points between the Dulles Greenway and Centreville Road. The proposed design eliminates weaving movements and reduces the number of entry and exit points. The project team has submitted the conceptual design and traffic analyses to the Dulles Greenway for their review and comment. The Dulles Greenway has not expressed concern with the proposed configuration.	C	<i>Comment addressed adequately – Comment closed</i>	
18	Figure 7-4	Previous Comment #18 is repeated that the optional lane exit proposed for NB Route 28 to Route 606 appears to exceed the 2°-5° divergence angle allowed by AASHTO Chapter 10 and RDM Appendix C.	1	The intent of the conceptual design is to provide feasible conceptual design for traffic analysis. As certain elements of conceptual design are advanced to preliminary design, the engineer will be responsible for reviewing the concepts and further developing them to meet all AASHTO standards or obtain a design exception or waiver.	B	<i>Comment addressed adequately – Comment closed</i>	

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19	Figure 7-4	The proposed four-lane EB Dulles Toll Road section is in conflict with the UPC 114098 Davis Drive Study. Please coordinate with Chris Barksdale.	1	The project team has coordinated with Chris Barksdale and received the latest design files and design alternatives dated January 22, 2020. The Davis Drive design files were overlaid into the Preferred Alternative during development of the four-lane EB Dulles Toll Road segment. Continued coordination will take place as the Davis Drive Study advances and as the Preferred Alternative is prioritized and projects are advanced to Preliminary Design. The design team has confirmed there is sufficient width available for four lanes to pass underneath the Davis Drive bridge.	A	<i>Comment addressed adequately – Comment closed</i>	
20	G	Previous Comment #20 does not apply to the Preferred Alternative.	3	Noted	A	<i>Comment addressed adequately – Comment closed</i>	
21	G	Previous Comment #21 does not apply to the Preferred Alternative.	3	Noted	A	<i>Comment addressed adequately – Comment closed</i>	
22	Figure 7-4	Previous Comment #22 is repeated that the optional lane exit proposed for SB Route 28 to Route 606 appears to exceed the 2°-5° divergence angle allowed by AASHTO Chapter 10 and RDM Appendix C.	1	The intent of the conceptual design is to provide feasible conceptual design for traffic analysis. As certain elements of conceptual design are advanced to preliminary design, the engineer will be responsible for reviewing the concepts and further developing them to meet all AASHTO standards or obtain a design exception or waiver.	A	<i>Comment addressed adequately – Comment closed</i>	
25	G	Previous Comment #25 does not apply to the Preferred Alternative.	3	Noted	A	<i>Comment addressed adequately – Comment closed</i>	

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26	G	Previous Comment #26 does not apply to the Preferred Alternative.	3	Noted	A	<i>Comment addressed adequately – Comment closed</i>	
27	G	Previous Comment #27 does not apply to the Preferred Alternative.	3	Noted	A	<i>Comment addressed adequately – Comment closed</i>	
28	G	Previous Comment #28 does not apply to the Preferred Alternative.	3	Noted	A	<i>Comment addressed adequately – Comment closed</i>	
29	G	Previous Comment #29 does not apply to the Preferred Alternative.	3	Noted	A	<i>Comment addressed adequately – Comment closed</i>	
32	Figure 7-4	Previous Comment #32 is repeated that the relocated left exit to the WB Dulles Greenway in Option 2 or the reuse of the existing left exit in Option 3 does not meet driver expectancy. Please consider methods to drivers exit towards the Dulles Greenway from the right side.	1 / 2	Several options were considered to move the exit to the right side but there was not space to do so. A C-D Road was added to minimize mainline exits and improve ramp spacing.	C	<i>Comment addressed adequately – Comment closed</i>	
33	Figure 7-4	Please ensure that the approximate 1400' long weaving section on NB Route 28 is operationally adequate.	3	The operational analysis shows that this area performs acceptably under forecasted 2045 traffic volumes.	A	<i>Comment addressed adequately – Comment closed</i>	
37	Figure 7-4	Please note that the proposed new Frying Pan ramp and SB Route 28 acceleration lane are close to the airport fueling facility which has the potential to introduce hazardous material and airport security challenges.	3	This is beyond the scope of this feasibility study. The design, environmental, and security details will be addressed during a future PE stage. The proposed concept has been reviewed by MWAAs representatives and they have not expressed any concern about this.		<i>Comment addressed adequately – Comment closed</i>	

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38	G	Previous Comment #38 does not apply to the Preferred Alternative.	3	Noted	A	<i>Comment addressed adequately – Comment closed</i>	
39	G	Previous Comment #39 does not apply to the Preferred Alternative.	3	Noted	A	<i>Comment addressed adequately – Comment closed</i>	
40	G	Previous Comment #40 does not apply to the Preferred Alternative.	3	Noted	A	<i>Comment addressed adequately – Comment closed</i>	
41	G	Previous Comment #41 does not apply to the Preferred Alternative.	3	Noted	A	<i>Comment addressed adequately – Comment closed</i>	
42	G	Previous Comment #42 does not apply to the Preferred Alternative.	3	Noted	A	<i>Comment addressed adequately – Comment closed</i>	
43	G	Previous Comment #43 does not apply to the Preferred Alternative.	3	Noted	A	<i>Comment addressed adequately – Comment closed</i>	
New Comments – 3/2021							
44	Figure 2-1, Figure 2-2	Please double check that these graphics correctly reflect Route 28 construction that was completed last year.	3	The project graphics and existing conditions were prepared before construction was complete. Notes have been added to clarify the recent Route 28 widening.	A	<i>Comment addressed adequately – Comment closed</i>	

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45	Figure 2-3, Figure 2-4	In conjunction with Previous Comment #16 above, the lane configuration graphic does not accurately reflect the additional (third) Eastbound Dulles Greenway travel lane between the toll plaza and Centreville Road that was completed last year.	1	The project graphics and existing conditions were prepared before construction was complete. Notes have been added to clarify the recent Dulles Greenway widening.	A	<i>Comment addressed adequately – Comment closed</i>	
46	Table 2-10	Please add the vertical clearance for the Silver Line Metro bridge over Centreville Road.	1	The design team has obtained the as-built drawings from MWAA and the vertical clearance from existing Centreville Road to the Silver Line Metro bridge is 18'-0". The vertical clearance has been added to Table 2-10 as requested.	A	<i>Comment addressed adequately – Comment closed</i>	
47	Table 2-11	There was a Design Exception approved in 2018 for Eastbound Dulles Greenway reduced shoulder width on the bridge over the DTR/DIAAH/Metro by VDOT Structure & Bridge. Please add this to Table 2-11.	1	The Design Exception has been added to Table 2-11 as requested.	A	<i>Comment addressed adequately – Comment closed</i>	
48	Figure 7-4	Please note on the exhibit and quantify in the cost estimate that the existing WB Dulles Toll Road/Dulles Greenway bridge has to be replaced due to the widening of Route 28 underneath it. Per the approved Design Exception, the new bridge shall have standard lane and shoulder widths.	1	It is not the intent of the Preferred Alternative to replace the WB Dulles Toll Road/Dulles Greenway bridge. The conceptual design utilizes the entire width of the opening underneath the bridge and a design waiver for the shoulder width on the northbound CD Road has been identified.	C	<i>Comment addressed adequately – Comment closed</i>	

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49	Figure 7-4	Please extend the two ramp lanes past the gore onto EB Innovation Avenue per 2018 AASHTO Figure 10-76B on Page 10-145.	1	The operational analysis did not show any queuing or spillback from this lane drop. The exact configuration of the Innovation Avenue and Shaw Road intersection is not finalized at this time. It is possible the lane will become a right-turn only lane into a proposed entrance/continue to the proposed signal or carry through the intersection as a through-lane. The final configuration will be developed in coordination with the developer during the PE phase.	B	<i>Comment addressed adequately – Comment closed</i>	
50	Figure 7-4	Where is the replacement toll gantry for removal of the EB Dulles Toll Road toll plaza for traffic leaving the airport? Is it the intent that these riders not pay a toll?	3	Correct, airport patrons are not required to pay a toll. Airport patrons currently use the DIAAH lanes and then merge onto the Dulles Toll Road via a slip lane.	C	<i>Comment addressed adequately – Comment closed</i>	
51	Figure 7-4	Will there be sufficient sight distance around the Centreville Road bridge abutment for the WB and EB Dulles Toll Road on-ramps?	3	The sight distance appears to be adequate. The concept design included full width shoulders and curb and gutter to provide as much sight distance as possible. In preliminary engineering sight distance will be checked based upon the preliminary design of the ramp and if sight distance is not adequate the bridge abutment could be adjusted (increasing the length of the bridge slightly) to allow for adequate sight distance.	B	<i>Comment addressed adequately – Comment closed</i>	
52	Figure 7-4	Due to the extent of the overpass bridges, sufficient and adjustable lighting will be required to ensure that driver's eye pupil will not be adjusting in the area of the proposed crosswalk making pedestrians harder to see.	3	This lighting detail is beyond the scope of this feasibility study. The design and lighting details will be addressed during a future PE stage.	B	<i>Comment addressed adequately – Comment closed</i>	
53	Figure 7-4	There is only about 600' of weaving distance between the NB Centreville Road/Elden Street free-flow right and the Worldgate Drive intersection. Is that sufficient based on the volume or should the movement be signal controlled?	3	This matches the existing condition. The design and operational details will be addressed during a future PE stage.	B	<i>Comment addressed adequately – Comment closed</i>	

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54	Figure 7-4	WB Dulles Toll Road access to Dulles Airport after Centreville Road/before Route 28 is not shown.	1	The existing ramp is shown in the aerial imagery on the Preferred Alternative graphic and is anticipated to remain in the existing configuration.	A	<i>Comment addressed adequately – Comment closed</i>	
55	Figure 7-4	The horizontal geometry for ramp to the EB Dulles Toll Road between the Dulles Greenway and Route 28 bridges does not seem to have adequate design speed. Please consider that drivers will be traveling at increased speeds due to the long stretch of flatter geometry prior to these proposed reverse curves at the proposed toll gantry.	1	The project team design the ramp and its horizontal curvature with a design speed of 30 mph, meeting the VDOT and AASHTO criteria. The configuration of the ramp and its exact geometry will need to be reviewed by the engineer during preliminary design.	B	<i>Comment addressed adequately – Comment closed</i>	
56	Figure 7-4	Would there be operational benefit to extend a fourth leg of the Pacific/ramp intersection westward onto the WB Dulles Greenway? This would provide for movement in all directions per the FHWA Policy Point in the future Interchange Access Report.	2	This connection was considered part of the alternatives. Because the forecasted traffic demand was very low, the connection was not carried forward to the recommended alternative. The connection provides access to the new Pacific Boulevard and is not intended to provide access to the Dulles Toll Road or Dulles Greenway. This connection is not precluded and could be evaluated in the future.	B	<i>Comment addressed adequately – Comment closed</i>	
57	200	Were work restrictions for the bridge widenings in the middle of active WMATA tracks factored into the cost estimate?	3	Yes, the design team used a higher unit price (\$/SY) for bridges that are proposed to be constructed adjacent to WMATA facilities.	A	<i>Comment addressed adequately – Comment closed</i>	
58	201	Overhead signs are not part of the PCES signage contingency. Given that there will be a lot of them at a significant cost, please quantify and estimate them separately.	1	Overhead sign structures were quantified separately in the PCES spreadsheets as necessary. Each ramp and/or decision point was assumed to need 3 cantilever or overhead sign structures.	A	<i>Comment addressed adequately – Comment closed</i>	