



COMMONWEALTH of VIRGINIA
DEPARTMENT OF TRANSPORTATION

87 Deacon Road
Fredericksburg, VA 22405

GREGORY A. WHIRLEY
COMMISSIONER

September 12, 2013

Re: Dominion Raceway
ST13-0015 - Review 2
Route 606 and Route FR-164
Spotsylvania County

Spotsylvania County
9019 Old Battlefield Blvd., Suite 320
Spotsylvania, VA 22553
Attn: Leon Hughes

Dear Mr. Hughes:

As requested, VDOT has reviewed the above-mentioned site plan and offers the following comments:

1. Please provide 12' lanes, or provide justification for the 11' lane width. 12' is used in the lane shift calculations. Dimension all lanes including Rt. 606 East of FR 164.
2. The storage lane for left turns into the site scales at approximately 75' as determined according to Figure 3-4 of Appendix F of the RDM (Road Design Manual). Please dimension the turn lane and state design assumptions including functional classification and turn lane length requirements. Per Figure 3-1, the minimum storage lane length for the rural functional classification is 100'. With an urban functional classification, the storage required per the traffic study could be used. Please show that the turning radius of west bound vehicle from the Shell entrance on Route 606 does not conflict with the left turn lane as shown.
3. Show the peak hour left turn volume into the site. Also, show the WB peak hour opposing volume and the EB peak hour advancing volume.
4. Please clarify the right turn peak hour volume and advancing peak hour volume. How were the storage length and taper derived?
5. As discussed on previous occasions, we need the following information prior to plan approval:
 - a. The turn lane improvements for the I-95 SB off-ramp must be provided. These improvements are not shown on the revised plan.
 - b. An analysis from the owner's traffic engineer of the allowable queuing for the I-95 off-ramps must be provided for review and approval prior to approval of this plan.
 - c. The proposed traffic signal design must be submitted and approved.
 - d. Engineering analysis of function of interchange pre- and post- project.Once we have received all required information, we will consult with FHWA.
6. The full intersection of Route 606 and the I-95 north-bound on- and off-ramps needs to be milled and overlaid to the start of the proposed lane transition taper to facilitate the proposed restriping and pavement widening.
7. On Sheet 4A, the pavement overlay must match the surface pavement on the remainder; i.e. 2" SM-12.5D.

8. In Sheet 67, Note #1 needs to be changed to read: "Proposed pavement markings within VDOT right-of-way must be Type B, Class 1 Thermoplastic."
9. The ingress/egress easement at the end of state maintenance of Route FR-164 must be dedicated to public use to allow this area to be used as a turn-around.
10. Guardrail comments:
 - a. The length of need calculations may be removed from the plan set as the retaining wall is outside of the clear zone as measured from the through lane. However, due to the nature of the hazard and its location in relation to the right turn lane, engineering judgment warrants the guardrail.
 - b. CG-7 curb cannot be installed flush with end terminals. Please refer to I&IM (Instructional and Informational Memorandum) 220.4, page 4 of 8 for guardrail terminals with curb. Please apply this to each end of the proposed guardrail within the right-of-way. For the GR-9 on Rt. 606 the curb and gutter should transition under the guardrail at the beginning of the GR-9 and run parallel to the GR-9 with an offset of 4'. The curb should end at the end of the GR-9 and transition back to the existing shoulder.
 - c. Be advised that the lateral offset referenced in the guardrail calculations is not the required clear zone. This is a "Clear Area", which is merely an offset used in urban areas to prevent vehicle mirrors and overhangs from snagging objects such as mailboxes, breakaway lamp posts, etc.
11. The proposed trailblazer sign within the site needs to be relocated so that it's no less than 200' from the STOP sign. Its current proposed location will block a driver's view of the STOP sign.
12. The responses for Comments #26 and #32 indicate that a WB-62 vehicle has been confirmed via AutoTurn to successfully navigate the right turn into and out of the site. A diagram of these movements must be shown on the plan. The designer also needs to verify that a WB-67 can stay in its lane for all turns at the NB on- and off-ramps to I-95.
13. The painted median between Mallard Rd. and the I-95 off ramp needs to have the west end "bull nosed".
14. The double yellow line on the west side of I-95 ramps needs to start to split; please label and dimension this. The double yellow mini skips across the ramp intersection may be eliminated.
15. As drafted the limits of construction exceed the limits of the right-of-way at station 107+00 – 109+00 left on the cross sections. A retaining wall is shown in plan view but should be represented on this sheet to illustrate the impact. Please revise cross-sections and ensure that all improvements can be constructed within the VDOT right-of-way.
16. Please provide culvert calculations and a profile for the 18" culvert to be extended under Rt. 606.
17. Please provide dimensions for the outlet protection at the outfall of the 18" culvert under Rt. 606.
18. Please re-establish the ditch line on the south side of Rt. 606 and east of the Shell Station entrance towards the 18" culvert under Rt. 606. Relocate the existing 15" RCP entrance culvert as necessary to accommodate the shoulder.
19. A ditch line on the north side of Route 606 west of the site entrance must be established and included in the drainage computations.
20. Virginia Department of Conservation and Recreation MS-19 channel adequacy calculations for the proposed drainage outfall improvements at the existing 18" RCP on the north side of State Route 606 must be provided.
21. The terminus of the limited access right-of-way lines along both sides of State Route 606 east of I-95 must be clearly delineated on all appropriate plan sheets.
22. The existing right-of-way and terminus of State Route FR-164 must be clearly delineated on all appropriate plan sheets.
23. The State Route Number for Mallard Road (FR-163) must be provided on all appropriate plan sheets.

Mr. Leon Hughes
September 12, 2013
Page Three

24. The proposed retaining wall to be located within state-maintained right-of-way along the north side of State Route 606 must be designed and constructed to current VDOT standards and specifications; please specify the VDOT standard under which the retaining wall is to be designed. Please show and label the retaining wall in the appropriate roadway typical sections.

Once the above comments have been addressed by the engineer, the revised plan (five (5) copies preferred), with appropriate responses from all concerned parties, must be re-submitted to this office for further review. You may contact Ken Martin at (540) 374-3343 if additional assistance is required.

Sincerely,



Angela N. Foroughi, PE
Transportation and Land Use Director
Fredericksburg District

cc: Dominion Raceway Holdings, LLC
Bowman Consulting Group