



DEPARTMENT OF THE ARMY  
US ARMY CORPS OF ENGINEERS  
NORFOLK DISTRICT  
FORT NORFOLK  
803 FRONT STREET  
NORFOLK VA 23510-1011

April 17, 2017

SUBJECT: Route 7 Widening, Fairfax County; NAO-2014-1572

Virginia Department of Transportation  
Mr. Bryan Campbell  
Water Resources Specialist  
4975 Alliance Drive  
Fairfax, VA 22030

Dear Mr. Campbell:

This letter is in response to your request for input from the Norfolk District Corps of Engineers (USACE) on the proposed widening of Route 7 from Reston Avenue to Jarret Valley Drive in Fairfax County, Virginia. Thank you for coordinating the Environmental Assessment (EA) prepared by the Federal Highway Administration (FHWA) and the Virginia Department of Transportation (VDOT). We are not commenting herein on the EA or its content, but rather on the current concept for the project. We have a number of concerns and questions regarding the project, which we outline below.

USACE regulates activities in waters of the United States pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403) and Section 404 of the Clean Water Act (Public Law 95-217). All of the alternatives you have looked at and presented to us will require USACE authorization. Our regulations require that we consider a full range of public interest factors and conduct an alternatives analysis in order to identify the least environmentally damaging practicable alternative (LEDPA), which is the only alternative we can authorize. In addition to wetland and waters impacts, we must consider factors such as land use (including displacements of homes and businesses), floodplain hazards and values, water supply and conservation, water quality, safety, cost, economics, threatened and endangered species, historic and cultural resources, and environmental justice.

You met with representatives of USACE and DEQ and other stakeholders in February 2016 to discuss the project. You acquired a verification of the limits of USACE jurisdiction in the project area in March 2017. USACE and the Virginia Department of Environmental Quality (DEQ) met with you on March 28, 2017 for an overview of the project and the alternatives that have been evaluated, and a discussion of the project schedule. You have indicated that this project will be further developed and constructed by a Design-Build contractor, who will also serve as the applicant for permits.

We are concerned that the project as presented is projected to impact wetlands and streams for stormwater management (SWM) facilities. If an application is submitted that includes such impacts, there must be a thorough analysis of other alternative locations and configurations for SWM that do not impact waters of the US. Alternative sites should include those not acquired or intended for acquisition for the project. We understand that the final analysis for noise walls has not been completed, but that it is anticipated that noise walls will be proposed. If the proposed locations of noise walls will impact wetlands, streams, or other waters of the US, then an analysis must also be conducted of alternative locations, designs (such as attaching the walls to pilings rather than on foundations in jurisdictional areas), and configurations for the walls. The applicant should recognize that USACE may or may not agree with their conclusions regarding the practicability of alternative locations and designs for SWM and noise walls; coordination with USACE is recommended once the applicant has conducted these comparative analyses.

Our primary concern in reviewing the information you provided at the March meeting and in the EA is the plan to relocate Colvin Run by moving it into an existing forested wetland. Based on the information, we do not see justification for the projected impacts of over four acres of wetlands at that location for that purpose. It does not appear that a preliminary LEDPA has yet been developed; missing in the analysis to date is a clear effort to balance impacts to the array of resources in the project area – historic and recreational as well as aquatic. The following additional analyses of alternatives and avoidance and minimization measures need to be conducted in order for us to consider the project further, and must be addressed if an application is submitted to USACE for the project:

1. Widen more to the north side: We understand that there are historic resources/Section 4f properties on the north side of Route 7 in the area of Colvin Run. Part of the information submitted notes that land cannot be taken from Section 4f resources unless the taking will have a de minimis impact or “There is no feasible and prudent avoidance alternative to the use of land and the action includes all possible planning to minimize harm to the property resulting from such use.” It should be recognized that if USACE cannot agree that a proposal is the LEDPA and thus cannot issue a permit for that proposal, the proposal is ergo not feasible. USACE may well determine that eliminating further widening to the north and proposing extensive impacts to the forested wetland on the south is not a permissible project.

The JMT Memorandum dated February 2016 states that Alternative 6, which would direct some of the Colvin Run flow to the north side of the road would result in “massive” impacts to the environment, and references are made to potential impacts to wetlands. These impacts are not quantified, and it is unknown whether impacts to aquatic resources would be more or less than those proposed on the south side for the relocation of Colvin Run. Slide 33 of the

March presentation suggests that wetlands are much more extensive on the south side of the road. Any comparative analysis of alternatives should include the estimated area of wetland impacts of options, not general references to wetland impacts. We disagree with the statement on Slide 52 that the impacts to the south cannot be avoided because shifting to the north would have impacts to existing waters of the US, as those impacts are not estimated as they are on the south of the road.

The Memorandum says that diverting flow to the north side of the road would flood the stream valley 5000-6000 feet upstream. It also states that diverting the flow would "likely" result in "major" flooding of Route 674 and present a "serious" threat to surrounding properties. However, it is unclear the extent to which such effects have been evaluated or are likely.

We are not suggesting that all or a majority of the widening be on the north side of Route 7; however, it appears that there is more opportunity to balance impacts by shifting more of the widening to the north.

2. Reduce width and/or combine shared use paths and Cross Country Trail: The typical section indicates a 10' wide shared use path on both sides along the widened Route 7. In addition, in the vicinity of Colvin Run, there is a Cross Country Trail, which is shown as 20' wide. In order to better balance impacts to resources, there needs to be an analysis of reducing the width of both paths and the trail through areas of aquatic resources, particularly in the area of Colvin Run. The necessity for all three pathways through this area also needs to be evaluated. One measure to reduce impacts would be to combine the path and the trail on the south side of Route 7. We understand that the plan is for the path to go on top of the new Difficult Run Bridge and the trail to go under it. That plan could still go forward, with the combined path/trail diverging into separate pathways as it approaches the bridge. Again, any part of the paths that can be more narrow or combined to reduce the total footprint will serve to allow more space for the relocated Colvin Run channel closer to the road and reduce wetland impacts, better balancing impacts.
3. Reduce the median: The typical section in the EA indicates a median that "varies 16'-42'." It is not clear what is the proposed width of the median in the area of Colvin Run. The applicant needs to evaluate reducing the median in width through such measures as using a concrete barrier with shoulders. Consideration should be given both to options that would not require a waiver or exemption from FHWA and those that would.
4. Place the Trail on the ground above the box culvert: We note that the typical section for Alternative 5 does not show the trail on top of box culvert. Placing the trail and/or the trail/path on top of the box culvert should be evaluated to reduce

the footprint of impacts. If there are engineering or structural reasons for not doing so, then they should be clearly identified.

5. Place the relocated stream in a riprap-lined channel: In early coordination, USACE suggested verbally to VDOT that they assess placing the relocated stream in a more-or-less straight channel and in a box culvert, to reduce impacts to the forested wetlands. VDOT and their consultant evaluated these options as Alternatives 4, and 5. However, in looking at a channel, only a concrete-lined channel was evaluated. There should be an analysis of a rip-rap lined channel, which was the suggestion of USACE. Compared to a concrete channel, a riprap channel may be less costly and easier to maintain, provide better sediment capacity, better serve to slow higher flows in storm events, and create more opportunity for micro-habitats for some aquatic organisms.
6. Assess a combination of open channel, riprap-lined channel, and box culvert: On the south side, in order to relocate the channel as needed for the widening and to accommodate any required path/trail, we need to see a detailed, thorough analysis of a combination alternative in order to minimize impacts to the forested wetlands adjacent to Colvin Run. To develop this option, the applicant needs to evaluate including some open channel, some riprap-lined channel, and a box culvert, with the path/trail located on top of the box culvert where feasible to further reduce the footprint. Site constraints (including the existing wetlands), roadway geometric requirements, and trail/path requirements should all be considered in developing this option. An option that keeps the channel as close to Route 7 as practicable will reduce not only the direct effects to the wetlands, but also indirect effects to the hydrology of this perched system. Based on the information provided, an alternative that incorporates these measures for channel relocation as well as widening more to the north side than currently proposed appears to offer the best alternative for balancing impacts to all resources while reducing costs over a box culvert for the full length of the relocated channel.

In order to compare the alternatives, we need more detailed information. For some of the comparisons provided to date, general statements are made about environmental impacts being “extremely high” or “wide-scale,” “likely” flooding problems, utilities that “may” need to be relocated and the “potential” cost of such relocations, without information to support those statements. We can agree that if an alternative is clearly not practicable for a specific reason, then we do not need details about all the other reasons it might also not be practicable. However, general descriptions about impacts that might occur are not sufficient to make a practicability determination or to reasonably compare alternatives. We also need illustrations that clearly show the location of all resources addressed in an alternatives analysis. For example, using all of the information provided to date, including the EA, the limits of historic and Section 4f properties in the area north of Route 7 near Colvin Run is not obvious, which complicates our ability to consider the analysis.

Regardless of the option that moves forward, if the Cross Country Trail is available for equestrian uses, then a plan for containing runoff must be incorporated unless Colvin Run is located in a box culvert. Even if Colvin Run is in a box culvert, there is concern about the same polluting effect to Difficult Run with the trail located under the bridge and across that stream. Because of the potential for water pollution resulting from horse droppings, some sort of containment system needs to be in place.

As suggested above, we have concerns about indirect effects to the forested wetlands on the south side of Route 7. VDOT has indicated that this is a perched wetland system, and that a stream relocation can incorporate clay liners or similar measures to minimize impacts to the hydrology of that system. However, the effectiveness of such an approach would be questionable, as buffers would be planted with woody vegetation. Roots of trees and shrubs in the buffer may well puncture the liner, and over time, any liner may become completely ineffective due to multiple punctures. Future activities, such as any necessary utility additions or maintenance, could also impact such a liner. It would be very difficult to predict the extent to which drainage of the perched wetland could occur. If any proposal goes forward that encroaches into that wetland, USACE may well require additional wetland compensation for potential extensive impacts to the wetland hydrology.

Regarding mitigation, we question the statement made with regard to certain options in the alternatives analysis that they “would not meet the intent of the project to mitigate for permanent impacts to jurisdictional waters” or do not “meet” mitigation requirements. We do not see anything in the project purpose that suggests that part of the “intent” of the project is to restore or create any wetlands or streams for mitigation purposes. While that may be a goal for economic reasons, it does not appear to be an intent of the project. Relocation options were considered in light of how well they meet the USFWS Stream Functional Pyramid or targeted benefits for stream restoration. The widening of Route 7 is not a stream restoration project. The site of Colvin Run along Route 7 would almost certainly not be approved for an independent stream restoration mitigation project, such as a mitigation bank, because of the extent of impacts to the existing forested wetlands to implement a design. While we understand the importance of reconnecting a stream with a floodplain and incorporating natural channel design to the extent practicable in a stream restoration project, this roadway project is not a stream restoration project. What is important is to identify an option that minimizes any relocation of streams, and that minimizes impacts for any unavoidable stream relocation. Given the extent of forested wetland impacts that would occur if the channel is relocated, and given that the wetlands are a “perched” system that could experience extensive indirect impacts to hydrology even with a carefully engineered design for the new channel/floodplain, it appears unlikely that USACE will agree that attempting a natural channel design relocation on the south side of Route 7 (similar to what is depicted in Alternatives 1 & 2) will be acceptable. There may be some opportunity for partial “self-mitigation” credit as part of a design that better balances impacts to all

resources, but that will have to be assessed once an acceptable alternative has been identified. USACE gives priority to the purchase of credits from mitigation banks for providing required compensatory mitigation.

The minutes of the February meeting include a statement by VDOT's consultant that for permittee-responsible mitigation, such as a self-mitigating stream relocation, "a bond is typically not required on VDOT projects...VDOT has not been required to post bonds on other compensation projects." Perhaps the consultant was unaware that the project would be developed as a Design-Build project with the contractor as the applicant/permittee. Financial assurances are required for construction, monitoring and maintenance, and long-term management when the applicant/permittee is anyone other than VDOT, regardless of the extent to which VDOT is involved in funding or other aspects of a project prior to submittal of an application. See the "Memorandum of Agreement (MOA) Between the Norfolk District Corps of Engineers (USACE) and the Virginia Department of Transportation (VDOT) to Document Actions Followed on VDOT Compensatory Mitigation Sites to Comply with Long term Management Requirements (33 CFR 332.7(d))" signed in 2015 for further explanation. The Design-Build contractor should be made aware of these requirements and address them when considering compensatory mitigation options and costs.

Thank you for the opportunity to provide comments and recommendations. We are happy to meet with VDOT and/or the Design-Build contractor to discuss the alternatives analysis. Please contact Alice Allen-Grimes at [alice.w.allen-grimes@usace.army.mil](mailto:alice.w.allen-grimes@usace.army.mil) or telephone 757-201-7219 if you have any questions.

Sincerely,



Kimberly A. Prisco-Baggett, MBA  
Chief, Special Projects  
Regulatory Section

cc:

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