



January 23, 2024

Mr. David Donahue, P.E.
Deputy Director of Public Works
Town of Vienna
127 Center Street South
Vienna, VA 22180

Re: Nutley Street Culvert Replacement Project

Dear Mr. Donahue:

WRA is pleased to present this proposal for finalizing the Nutley Street Replacement Culvert Project design. The Nutley Street storm water culvert system includes an existing triple barrel, 36-inch diameter stormwater culvert that crosses under 7 traffic lanes (2 northbound, 3 south bound and 2 turn lanes) near the intersection with Virginia Center Boulevard and Marshall Street. Flow in the culvert is from east to west and the culvert outfalls into Hunter's Branch of Accotink Creek. WRA prepared a preliminary design for a twin 10-foot by 5-foot replacement culvert in 2014, but that design was not finalized.

The intent of this project is to complete the design so that it can be advertised for public bidding. The completed design will be coordinated, to the extent possible, with 3 other infrastructure projects currently under design at this location: the Accotink Gravity Sewer (Fairfax County), a new shared use path on the west side of Hunters Branch and the Hunters Branch Stream Restoration project. For purposes of this proposal, it is assumed that information and data from the 3 projects will not be available for use on the Nutley Street Culvert Replacement Project.

The 2014 design included twin 10-foot span by 5-foot rise precast concrete box culverts. WRA will utilize VDOT standard 10-foot by 6-foot culverts instead of the previously proposed 5-foot rise culverts. Using the 6-foot rise culverts will allow the use of VDOT standard details for the culvert and will ensure that the system meets several VDOT and Federal Highway Administration (FHA) requirements for conformance with National Bridge Inspection Standards (NBIS).

A hydrologic and hydraulic (H&H) will be conducted to replace the 2014 H&H analysis. The new H&H study will incorporate changes (dredging) to the stormwater pond south of Virginia Center Boulevard and will confirm the applicability of the 6-foot rise culverts. The H&H analysis will not incorporate future stream improvements to Hunter's Branch unless updated plans for the stream become available.

Traffic Control Plans (TCP) will be developed to replace the 2014 TCP. The new TCP will include temporary signalization plans for the control of traffic, northbound and southbound on Nutley Street including Virginia Center Boulevard and the new intersection at I-66. A temporary signalization analysis and design will be included for maintaining traffic from the VDOT section of Nutley street south of Virginia Center Boulevard.

Two temporary construction easement plats will be created for properties adjoining the eastern side of the culvert. The properties are 717 Marshall Road SW and 714 Kingsley Road SW. No temporary easements are assumed to be necessary on the west side (outfall into Hunter's Branch) of the culvert.

WRA will utilize existing survey and CAD files for developing the updated design drawings. Additional topographic survey is not expected to be required. WRA will use existing soil borings for geotechnical information.

SCOPE OF WORK

WRA will develop a new culvert replacement design to include the following:

- Hydrologic and hydraulic (H&H) analysis of the proposed culvert system.
- Maintenance of traffic (MOT) plans.
- Temporary signalization plans.
- Erosion & Sediment Control (E&SC) plans and details.
- Civil details.
- Culvert structural plans:
 - Plan and section
 - Quantities
 - Sequence of construction including maintenance of stream flow
 - Transverse culvert section
 - Moment slab
 - Miscellaneous structural details
 - Reinforcing details
- Updated Project Technical Specifications:
 - Division 1 Specifications (General Requirements)
 - Division 2 Specifications (Site Work)
 - Division 3 Specifications (Concrete)
 - WRA will review the Town's Division 0 specifications (Procurement and Contracting Requirements) for consistency with the Technical Specifications.
- WRA will prepare and submit a Joint Permit Application (JPA) to the Virginia Marine Resources Commission (VMRC):
 - A field visit will be conducted by WRA environmental specialists to map environmental features such as wetlands and streams
 - WRA will query Commonwealth and Federal databases to determine if threatened and/or endangered species or cultural resources could be impacted by the project. The results of the database queries will be incorporated into the JPA
 - The JPA will be circulated by the VMRC among Commonwealth and Federal regulatory agencies
 - It is expected that a Corps of Engineers (COE) Nationwide 3 Permit (Maintenance) will be issued for the project through the JPA process
- WRA will create a Storm Water Pollution Prevention Plan (SWPPP) for use in the Town's stormwater management permit.
- WRA will create a project construction cost estimate.
- Two temporary construction easement plats, for 717 Marshall Road SW and 714 Kingsley Road SW (west side of culvert).

DELIVERABLES

- WRA will provide updated plans, specifications, and cost estimate at the 50%, 95% and Bid Ready Phase.
- WRA will submit the JPA to the VMRC on behalf of the Town of Vienna.
- The SWPPP prepared by WRA will be utilized by the Town for the self-administered stormwater management permitting.
- WRA will provide 2 temporary construction easement plats for the residential properties that abut the east side of the culvert at Nutley Road.
- Design review meetings will be held, virtually, after WRA delivers the updated 50%, 95% and Bid Ready documents to the Town.

ASSUMPTIONS

- Data from the AGS project, Hunter's Branch Stream Restoration Project, and the Shared Use Path project will not be available for use in this project.
- VDOT Road and Bridge Standards for Double Box Culverts (Section 1000) will be used as the basis of design for the replacement structure.



- The Town will provide the latest Division 0 Specifications for WRA's review, commentary and incorporation into the bid documents.
- The Town will review and provide commentary on the design documents.
- The Town will review and provide commentary on the JPA and SWPPP documents.
- No new topographic survey will be conducted.
- The Town of Vienna will assist in obtaining Town issued construction permits.
- The Town will participate in meetings with VDOT and other regulatory agencies.
- The Town will provide notification to property owners, as needed.

SCHEDULE

- WRA will deliver 50% design documents within 12 weeks of Notice to Proceed.
- WRA will deliver 95% design documents within 8 weeks of
- The design review meeting will be held within 3 weeks of delivery of the revised design documents.
- WRA will provide final documents within 3 weeks of receipt of all comments.

FEE

The estimated fee for this project is \$230,937. The tasks, hours and associated labor rates are included in the enclosed Attachment A.

Very truly yours,

Whitman, Requardt and Associates, LLP

Dean C. Westman
Associate

Enclosures

