

## **SUMMARY OF COMMITMENTS**

### **NORTHFAX JV LLC**

#### **ZONING MAP AMENDMENT Z-20-00006**

**June 1, 2020**

Pursuant to Section 15.2-2303(a) of the *Code of Virginia*, 1950, as amended, and Section 6.4.10 of the Zoning Ordinance of the City of Fairfax, Virginia (the “Zoning Ordinance”), Northfax JV LLC, for itself, the owners, and successors and/or assigns (collectively, "the Applicant") in Z-20-00006 filed on property identified on the City of Fairfax tax map as 57-2-02-003, 57-2-02-005, 57-2-02-017, 57-2-02-018, 57-2-02-019, 57-2-02-020, 57-2-07-015-B, 57-2-08-005, 57-2-08-006, 57-2-08-007, 57-2-08-008, 57-2-08-010, 57-2-08-011, 57-2-08-012, 57-2-08-013, 57-2-08-014, 57-2-47-000-A, and portions of right-of-way to be vacated and/or abandoned (hereinafter collectively referred to as the "Application Property") hereby commits to the following, provided that the City Council approves a rezoning of the Application Property from the CR and RM Districts to the PD-M District in conjunction with a Master Development Plan for the development of up to fifty-six (56) townhouses as well as a senior living facility with up to two hundred (200) age-restricted units (the “Senior Living Building”). The Master Development Plan also includes an area designated as the “Future Development Parcel.” In the event this rezoning is denied by the City Council, these commitments shall immediately become null and void. At such time as the uses for the Future Development Parcel have been determined, the Applicant will request an amendment to the approved Master Development Plan for review and approval by the City Council.

1. MASTER DEVELOPMENT PLAN. Development of the Application Property shall be in substantial conformance with the Master Development Plan, prepared by Christopher Consultants, Ltd., consisting of thirty-five (35) sheets, dated January 3, 2020, as amended through June 1, 2020 (the “MDP”). Minor modifications to site design and improvements shown on the MDP based on final engineering and design may be permitted, subject to the approval of the Zoning Administrator.
2. PHASING. The Application Property will be developed in four phases as follows:
  - A. Phase One – Construction of a storm drainage culvert, utility relocations, the realignment of Orchard Street, and the following improvements on the Future Development Parcel as shown on the MDP: (i) a multi-use trail and temporary landscaping along Chain Bridge Road, including the replacement of light fixtures within the existing streetlight poles on the Application Property’s Chain Bridge Road frontage with LED lights, if not already replaced by others, and (ii) temporary landscaping to extend the linear park on the south side of Orchard Street across the frontage of the Future Development Parcel.

- B. Phase Two – Construction of 56 townhouses and associated infrastructure, including an eight-foot wide trail in the northwest portion of the Application Property, and a linear park on the north side of Orchard Street as shown on the MDP.
  - C. Phase Three – Construction of a senior living building, as defined below, and associated infrastructure, as shown on the MDP. Phase Three may precede, be concurrent with, or follow Phase Two.
  - D. Phase Four – Construction of the Future Development Parcel, which will require approval of an amendment to the MDP by the City Council. Said amendment to be submitted solely on the Future Development Parcel without any requirement for the consent or joinder of the owners of any portions of Phases One, Two and Three of the Application Property, unless the amendment to the MDP for Phase Four requires a modification to Phase Two and/or Phase Three, in which event the consent of the applicable property owner(s) will be required.
3. PHASE TWO AND PHASE THREE USES. The use of the Application Property shall be limited in Phase Two to townhouses, and in Phase Three to a Senior Living Building comprised of age-restricted independent living units, each with a full kitchen, assisted living units, and memory care units. The City of Fairfax Zoning Ordinance does not include independent living or memory care as defined uses, so these uses, as referenced in these Commitments, are classified as congregant living facility and assisted living, respectively.
4. RIGHT OF WAY VACATION AND DEDICATION. At time of final site plan approval and pursuant to an exhibit, titled “Parcel Consolidation, Proposed Right of Way Vacation, Right of Way Dedication, Easements Vacated, Created and to be Quitclaimed, and Subdivision,” prepared by Christopher Consultants, Ltd., the Applicant, with the consent of the City of Fairfax, shall vacate and/or abandon portions of existing right-of-way known as Orchard Street and the Applicant shall dedicate right-of-way for Orchard Street Realigned and the portion of Farr Avenue Extension located on the Application Property, consistent with the improvements shown on Sheets 4 and 4A of the MDP, subject to review and approval of the Director of the City of Fairfax Department of Public Works (the "DPW"). The Applicant reserves the right to make modifications to Orchard Street Realigned from what is shown on the MDP based upon and coordinated with the final design of the Northfax West Roadway Project/Farr Avenue Extension by the City of Fairfax. The dedication of the right-of-way for that portion of Farr Avenue Extension located on the Application Property will be coordinated with the City of Fairfax and the right-of-way requirements of the Northfax West Road Project.
5. FARR AVENUE EXTENSION. Farr Avenue Extension is shown on the MDP to be constructed by others. It is anticipated that the construction of the Farr Avenue Extension will be performed by the City of Fairfax as part of the Northfax West Roadway Project. In the event the proposed Farr Avenue Extension is not completed by the City of Fairfax or

others, the Applicant reserves the right to construct the Farr Avenue Extension located on the Application Property at its own cost and expense, as generally depicted on the MDP.

6. **PUBLIC IMPROVEMENT PLAN.** To implement Phase One of development as defined in Commitment 2.A., the Applicant will submit and receive approval of a Public Improvement Plan (the “PI Plan”) by DPW. The PI Plan will include easements and improvements as specified for Phase One as defined in Commitment 2.A. The Applicant will construct the improvements shown on the PI Plan prior to commencement of construction of any other improvements on the Application Property.
7. **ORCHARD STREET REALIGNED IMPROVEMENTS.** In coordination with DPW, the Applicant will design and construct Orchard Street Realigned to connect to the proposed Farr Avenue Extension that will be constructed by others, as shown on the MDP, and in accordance with the following:
  - A. The street design on the north side of Orchard Street Realigned will include a 6-foot wide concrete sidewalk, a 4-foot wide planting strip (including curb), an 8-foot wide strip for parallel parking with curb and gutter, a 5-foot wide bicycle lane, a 10-foot drive aisle, and LED streetlights as depicted on the MDP.
  - B. The street design on the south side of Orchard Street Realigned will include a 6-foot wide concrete sidewalk, a 4-foot wide planting strip (including curb), an 8-foot wide strip for parallel parking with curb and gutter, a 5-foot wide bicycle lane, a 10-foot drive aisle, and LED streetlights as depicted on the MDP.
  - C. Three (3) painted crosswalks mid-block on Orchard Street Realigned will be installed as shown on the MDP, including ADA curb ramps on all sides, as may be necessary.
  - D. Two (2) painted crosswalks on Orchard Street Realigned at the Farr Avenue Extension will be installed on the north and east sides of the intersection, as shown on the MDP, including ADA curb ramps on all sides, as may be necessary.
8. **LINEAR PARK.** Concurrent with Phase Two, as defined in Commitment 2.B., the Applicant will install an eight to nine foot wide linear park between the north side of Orchard Street Realigned right-of-way and the townhouses as shown on the MDP. Said linear park shall include plantings, benches, and stormwater management planter boxes, as shown on the MDP.
9. **CHAIN BRIDGE ROAD FRONTAGE IMPROVEMENTS.** Consistent with Commitment 2.A., the Applicant will install a multi-use trail along the Application Property’s Chain Bridge Road frontage, as shown on the MDP. As shown on the MDP, the multi-use trail shall generally be ten (10) feet in width that transitions to an existing six (6) foot wide sidewalk toward the southern end of the Application Property’s Chain Bridge Road frontage

and terminates at an existing curb cut toward the northern end of the Application Property's Chain Bridge Road frontage just south of Orchard Street.

10. UTILITIES. The Applicant will install all new on-site utilities underground that serve Phase Two and Phase Three. An overhead utility pole along the north side of Orchard Street in an existing easement or existing right-of-way of Orchard Street will be relocated by the Applicant to the southwestern corner of the adjacent office building property (3554 Chain Bridge Road) and maintained above ground, and a new terminal pole added off-site to serve the Application Property and the office building at 3554 Chain Bridge Road. Existing above ground utilities located on and/or serving existing structures on the Future Development Parcel will be maintained above ground until such time as the development of this parcel and the undergrounding of these utilities is addressed as part of the amendment to the MDP for Phase Four as defined in Commitment 2.D.
11. UMBRELLA OWNERS ASSOCIATION. In addition to a homeowners association (HOA) established for the townhouse community, the Applicant shall form an umbrella owners association (UOA) for the Application Property. The UOA shall be organized and governed in accordance with Virginia law. The members of the UOA shall be the HOA established for the townhouse community, the owner of the Senior Living Building, and the owner(s) of the Future Development Parcel, including any owners associations created in conjunction with future improvements built on the Future Development Parcel. Maintenance obligations shall be assigned to the HOA, the owner of the Senior Living Building, the owner(s) of the Future Development Parcel, associations created on the Future Development Parcel, or the UOA in accordance with applicable shared maintenance/cross easement agreements. Maintenance obligations include, but are not limited to, private streets, sidewalks, fencing, open space, landscaping, snow removal, and on-site stormwater management facilities. The Applicant shall notify all prospective purchasers of a townhouse, in writing, and prior to entry into a contract of sale, of the maintenance responsibilities and restrictions of the HOA and the UOA.
12. PRIVATE STREETS. The Applicant shall record among the land records a public ingress/egress easement, in a form as approved by the City attorney, over all private streets and adjacent sidewalks. The UOA established for the development shall be responsible for the maintenance of the private streets, sidewalks, and associated streetscape elements.
13. LANDSCAPING AND SCREENING.
  - A. Landscaping on the Application Property shall be in general conformance with the landscaping shown on the MDP, and consistent with the Certificate of Appropriateness. Final selection of landscape materials and layout shall be made at the time of site plan as approved by the Director of Community Development and Planning.
  - B. The Applicant shall install landscaping along Orchard Street Realigned, as generally shown on the MDP. The Applicant reserves the right to modify the landscape design



at the time of site plan based on final engineering, and as approved by the Director of Community Development and Planning.

- C. The Applicant will install temporary landscaping along the Application Property's Chain Bridge Road frontage with Phase One, as defined in Commitment 2.A., and as shown on the MDP. The Applicant will install street trees along the Application Property's Chain Bridge Road frontage with Phase Four, as defined in Commitment 2.D. The final number and location of street trees will be determined in accordance with the amendment to the MDP as required for Phase Four.
  - D. The Applicant shall screen any mechanical equipment at grade or located on the roof that is visible from the public right-of-way, except for at grade mechanical equipment in the rear privacy yards of any of the townhouses, which are not visible from a public right-of-way.
  - E. The UOA will be responsible for the maintenance of existing landscaping along the northern property line adjacent to The Assembly townhouses.
  - F. The two courtyards associated with the Senior Living Building will include a combination of landscaping and hardscape, as generally shown on the MDP, and as further described in the Certificate of Appropriateness. Final selection of materials and design shall be made at the time of site plan.
  - G. The Applicant shall use native species and native cultivars (as approved by the Director of Community Development and Planning) to the greatest extent feasible and non-invasive species for landscaping on the Application Property, including perennials and seed mixes. Plant lists identifying selected species will be submitted at the time of site plan and be consistent with the Certificate of Appropriateness.
14. **TREE PRESERVATION.** Tree preservation measures will be utilized for the trees outside the clearing limits that are identified on the MDP as being preserved. These measures may include, but are not limited to, the following: root pruning, crown pruning, mulching, and watering. Said measures shall be consistent with those shown on the MDP that detail how preservation measures will be implemented. In addition, the Applicant shall install the appropriate tree protection devices, such as tree protection fencing, based on site conditions and proposed construction activities.
15. **OPEN SPACE.** At time of site plan, the Applicant, at the option of the City, will either dedicate to the City of Fairfax or convey to the UOA the open space areas as identified on the MDP. The dedication or conveyance shall ensure permanent protection of the open space and the deed shall be in a form as approved by the City Attorney, and recorded among the land records. Approximately 1.0 acre of the open space located on the northwestern portion of the Application Property, as generally shown on the MDP, shall remain undisturbed except as qualified:

- A. Grading Improvements. The Applicant will grade an area to install a box culvert in connection with approved floodplain modifications. These improvements will be consistent with the MDP and in compliance with all applicable state and federal permits.
- B. Trail. The Applicant will construct an eight-foot wide trail, including a small refuge area for pedestrians and cyclists, to connect adjacent communities to Orchard Street Realigned, as shown on the MDP. Improvements will include a sign to identify the trail location. Prior to land disturbance related to the trail construction, the Applicant will obtain any required permits. In the event that the open space is owned by the UOA, the Applicant will record a public access easement, in a form approved by the City Attorney, over the trail and record the easement among the land records. If the open space is owned by the UOA, the trail will be privately maintained by the UOA.
- C. Vegetation. The Applicant shall remove dangerous and/or invasive trees and plants to improve the health and safety of existing vegetation. Any trees or invasive plants that need to be removed outside of the clearing limits will be done with minimal ground disturbance and under the supervision of a Virginia Certified Pesticide Applicator, where required. Any vegetation planted as a part of the Landscape Plan will be done with minimal ground disturbance. The Applicant will supplement existing vegetation with plantings to enhance the wooded environment.

16. SUSTAINABLE DESIGN.

- A. Townhouse Development. The proposed townhouses shall be constructed to achieve qualification in accordance with ENERGY STAR® for Homes. Such qualification will be demonstrated by the submission of documentation to the Department of Community Development and Planning from a home energy rater certified through the Residential Energy Services Network (RESNET) program which shows that the townhouses have attained the ENERGY STAR® for Homes qualification.
- B. Senior Living Building. The following sustainable building measures will be taken in conjunction with the construction of the proposed Senior Living Building, as depicted on the MDP:
  - (1) Green roofs on all areas visible to residents and adjacent building users, as generally depicted on the MDP. Design details of said green roofs will be determined at time of site plan;
  - (2) Low-flow plumbing fixtures;
  - (3) LED lighting throughout the community;
  - (4) Low VOC building materials and furniture; and

- (5) Energy Star rated or equivalent appliances and equipment.
17. UNIVERSAL DESIGN. Townhouse dwelling units shall be designed and constructed with a selection of universal design features and options as determined by the Applicant and at the sole cost of the purchaser. Said features may include, but are not be limited to, elevators, seat in master bath shower where possible, emphasis on lighting in stairs and entrances, lever door handles, slip resistant flooring, hand-held shower heads at tubs and showers, front loading washers and dryers, and rocker light switches.
18. SENIOR LIVING BUILDING TRASH COLLECTION. Trash and recycling receptacles shall be located in the structured parking garage and will not be visible from the public right-of-way. Such receptacles will be moved onto the Farr Avenue Extension for collection on scheduled trash or recycling days.
19. STORMWATER MANAGEMENT. Design and construction of stormwater management facilities shall comply with 4VAC50-60 Virginia Stormwater Management Program (VSMP) Permit Regulations, as may be amended, or other relevant standard in place at the time of the applicable site plan submission. At time of site plan, the Applicant shall consider low impact development techniques to the extent feasible which may include, but not be limited to, permeable pavers, infiltration, tree box filters, bio-retention and/or stormwater reuse (i.e. landscape irrigation, air conditioning unit makeup water, etc.).
20. CONSTRUCTION MANAGEMENT PLAN.
  - A. Subsequent to rezoning approval, but prior to site plan approval, the Applicant will submit a management plan for approval by the City Manager or designee for phasing and construction which will include the following information:
    - (1) Hours of operation;
    - (2) Truck routes to and from entrances;
    - (3) Location of parking areas for construction employees;
    - (4) Truck staging and cleaning areas;
    - (5) Storage areas;
    - (6) Temporary fencing as needed to screen on-site staging areas;
    - (7) Trailer and sanitary facility locations;
    - (8) Traffic control measures; and
    - (9) Maintenance of entrances.

- B. Prior to commencement of construction, the Applicant shall provide the Department of Community Development and Planning with the name and telephone number of a community liaison who will be available throughout the duration of construction on the Application Property.
- C. Prior to site plan approval, the Applicant shall provide a plan to DPW for temporary pedestrian and vehicular circulation during construction. This plan shall identify temporary sidewalks and any other features necessary to ensure safe pedestrian and vehicular travel around the Application Property during construction.
- D. Outdoor construction activity shall be limited to the hours of 7:00 A.M. to 6:00 P.M., weekdays and 8:30 A.M. to 5:00 P.M., Saturdays. No construction activity shall take place on Sundays.

21. PARKING.

- A. As shown on the MDP, the Applicant shall provide parking spaces on the Application Property as follows.
  - (1) Each townhouse shall include a two-car garage. Contract purchasers of townhouses shall be notified in writing prior to, or as a part of, entering a contract of sale of the restrictions in Commitment 28.
  - (2) In addition to the townhouse garage parking spaces, a minimum of 22 surface parking spaces shall be constructed in conjunction with the townhouse portion of the development.
  - (3) A minimum of 126 parking spaces shall be constructed in conjunction with Phase Three of the development. Parking shall consist of a minimum of 114 parking spaces in the garage that is part of the Senior Living Building, and twelve surface parking spaces, all as shown on the MDP. The Applicant reserves the right to evaluate the need for the surface parking spaces. The Applicant may request the removal of up to six surface parking spaces with the submission of a parking study to the Zoning Administrator that demonstrates that peak parking demand is met with the provision of 120 parking spaces. The Applicant may remove up to six surface parking spaces subject to the approval of the parking study by the Zoning Administrator.
  - (4) The Applicant shall provide a minimum of twenty-eight on-street parallel public parking spaces along Orchard Street Realigned within the public right-of-way. The number of public parking spaces to be constructed within Orchard Street Realigned is subject to change based upon the approved construction plans for the right-of-way by the City of Fairfax and/or the Virginia Department of Transportation.

- B. The operator of the Senior Living Building, within its sole discretion, may establish rules, regulations, and procedures for the structured parking garage, as shown on the MDP. The parking garage shall be available to future residents, residents' guests, employees, and other visitors to the Senior Living Building. The final number of garage parking spaces shall be determined at final site plan based on final design.
22. BICYCLE RACKS. The Applicant shall install a minimum of two inverted-U or similar style bicycle racks within the townhouse development, as generally depicted on the MDP. The Applicant will also install a minimum of eleven inverted-U or similar style bicycle racks in the structure parking garage of the Senior Living Building. Notwithstanding the locations indicated on the MDP, the final locations of the bicycle racks may be adjusted at the time of site plan.
23. ELECTRIC VEHICLE CHARGING STATIONS.
- A. Each townhouse dwelling unit shall have a pull-string ready conduit leading from the electric panel to a code compliant outlet (or access point to a future outlet) within the garage that will support future wiring for Level 2 electric vehicle charging.
  - B. The operator of the Senior Living Building may, within its sole discretion, partner with a third-party to install electric vehicle charging stations within the parking garage, as identified on the MDP.
24. TRANSPORTATION DEMAND MANAGEMENT. In an effort to reduce the number of vehicle trips generated by the proposed development, the Applicant shall implement a Transportation Demand Management ("TDM") program. The TDM Program will include, but shall not be limited to, the following measures:
- A. Townhouse community.
    - (1) Appointment of a representatives of the townhouse community to serve as a property transportation coordinator (PTC).
    - (2) At the time of the initial settlement of each townhouse, the distribution of an information package to initial townhouse purchasers that includes, but is not limited to, a description of bus routes and nearby bus stop locations, metro transit schedules, and ride share initiatives.
    - (3) Distribution to townhouse residents of any transit advertising information provided by the City and community information at set intervals agreed to by the City and the HOA, which will include links to websites for local transit opportunities.
    - (4) At the time of the initial settlement of each townhouse, the distribution to initial townhouse purchasers of one of the following items of their choice:

- a. SmarTrip card with \$50.00 fare loaded limited to two persons per townhouse, or
  - b. A one-year bike share membership, or
  - c. A one-year car share membership.
- (5) Identification by signs or pavement markings of a total of 22 visitor parking spaces.
  - (6) Resident transportation surveys conducted on an annual basis by the PTC to determine the success of the transportation program and submission of the surveys to the City. Said surveys to commence the year after the issuance of the final occupancy permit in Phase Two.

B. Senior Living Building.

- (1) Designation of an employee as a Transportation Management Plan (TMP) coordinator.
- (2) Installation of a transit information display in the lobby area of the Senior Living Building. Said display shall include information regarding Metrorail, Metro bus, CUE bus, ridesharing, and other relevant transit options available to employees and residents.
- (3) Display of the TMP coordinator's name and contact information in designated common areas, employee break areas, and on-line.
- (4) Annual events established by the TMP coordinator to provide communication regarding transit, target transit marketing, and support bicycling efforts.
- (5) Use of regular web-based resident and employee communication tools by the TMP coordinator to provide commuting information with links to external transit websites.
- (6) Distribution of a SmarTrip card with \$20.00 pre-loaded fare value and information regarding enrollment in a Smart Benefits pre-tax benefits program to employees upon initial hire. In addition, ride sharing marketing materials provided by the City and/or Commuter Connections will be included in employee welcome packages and displayed in employee break rooms.
- (7) Operation of a transportation service for residents of the Senior Living Building to formal activities/events and individual destinations, such as doctor's offices, community centers, places of worship, and shopping centers.

This service will be provided with a company-owned van and sedan that will be operated by employees of the senior living community.

- (8) Bi-annual surveys conducted by the TMP coordinator to determine the success of the transportation program. In addition to surveys, the TMD coordinator shall collect car counts and evaluate bicycle parking usage. The surveys and other information shall be submitted to the City. Said surveys to commence one year after the issuance of the final occupancy permit for Phase Three.
  - C. The final TDM Program for Phases Two and Three, consistent with this Commitment, will be reviewed and approved by City staff prior to site plan approval for each of those Phases of the development. The final TDM Program for Phases Two and Three will be consistent with the Northfax Development Phase 1 (Townhouses and Senior Living) TDM Program Guidelines dated April 15, 2020 prepared by Gorove/Slade, and submitted to City staff. The TDM Program is intended to result in a robust plan with incentives to reduce the number of vehicle trips generated by the development, as periodically reported to the City.
25. TEMPORARY SPECIAL USE PERMIT. On March 24, 2015, City Council approved Special Use Permits SU-14120068 and -69 to permit the temporary use of a vehicle storage lot on portions of the Application Property. The Applicant shall terminate the temporary use for vehicle storage and remove all vehicles prior to the commencement of construction associated with the PI Plan, or within twelve months of the approval of this application by City Council, whichever shall first occur, unless a separate Special Use Permit application for temporary vehicle storage is submitted by the Applicant and approved by the City Council prior to the occurrence of either of these events.
26. VAN DYCK PARK STREAM RESTORATION IMPROVEMENTS. The Applicant will complete stream restoration improvements on approximately 2,190 linear feet of the stream located within or adjacent to the boundaries of Van Dyck Park, as more particularly shown on Figure 1 (Bank Erosion Hazard Index Map) prepared by Apex Companies, LLC, dated April 10, 2019, and attached hereto as Exhibit A. (the "Stream Restoration Project") unless an alternative stream restoration project on property under City ownership and equal in length, accessibility and stream condition to the referenced Van Dyck Park stream is selected by the City and agreed upon by the Applicant within three months of the approval of this application by City Council (the "Alternative Stream Restoration Project"). The Stream Restoration Project or the Alternative Stream Restoration Project will be completed as a Nutrient Offset Trading Bank ("NOTB") project to be approved and permitted by the Virginia Department of Environmental Quality. The Applicant will be solely responsible for the preparation, submission, and processing of the permit applications, design drawings, and construction documents required to implement the Stream Restoration Project or the Alternative Stream Restoration Project. All such applications, drawings, and documents required to obtain approval of the Stream Restoration Project as an NOTB project will be

prepared and processed in accordance with an Agreement to be entered into between the Applicant and the City of Fairfax. The Agreement will provide for all permissions, authorizations, agreements, easements and/or covenants from the City of Fairfax as required for the approval, construction, and maintenance of the Stream Restoration Project or the Alternative Stream Restoration Project as an NOTB project, and in accordance with a schedule as mutually agreed to by the Applicant and the City. The Applicant shall diligently pursue the required approvals and shall commence construction of the Stream Restoration Project or the Alternative Stream Restoration Project no later than two years from the later to occur of the following: (i) approval of this application by City Council, or (ii) the selection and agreement upon the Alternative Stream Restoration Project by the City and the Applicant in accordance with the terms of this Commitment. Additional time to commence construction may be administratively approved by the Zoning Administrator should the required approvals be delayed through no fault of the Applicant.

27. FUTURE DEVELOPMENT PARCEL INTERIM IMPROVEMENTS AND USES.

- A. Improvements. Prior to the issuance of the first occupancy permit for either Phase Two or Phase Three as defined in Commitments 2.B. and 2.C., the Applicant shall install interim improvements on the Future Development Parcel to include, but not be limited to, seeding of all open areas and a temporary linear park and landscaping along the south side of Orchard Street across the frontage, as generally depicted on the MDP. Said interim improvements to be maintained by the Applicant and/or the UOA.
- B. Interim Uses. Prior to the development of improvements in accordance with the approval of an amendment to the MDP by the City Council, interim uses on the Future Development Parcel shall be subject to the following provisions:
  - (1) Continued use of the existing building located on Parcel 20 of the Application Property (also known as 3570 Chain Bridge Road) as a restaurant/food service facility, with associated parking, or as a sales, rental and/or management office related to the construction in Phases One, Two and/or Three, as defined in Commitments 2.A., 2.B., and 2.C.
  - (2) Special events, subject to the provisions of Section 3.5.6.J of the City of Fairfax Zoning Ordinance (the “Zoning Ordinance”).
  - (3) Temporary uses identified in Section 3.5.6.B.2, .4, .6 and 9. of the Zoning Ordinance, subject to the receipt of required approvals.
  - (4) Minor events and seasonal sales as more specifically described in Section 3.5.6.C.1(a) and (c) of the Zoning Ordinance.
  - (5) Temporary vehicle storage, but only subject to the provisions of Commitment 25.



28. **RESTRICTIVE COVENANTS.** Restrictive covenants for the Application Property shall be included in the HOA documents and shall include, but not be limited to, the following:
  - A. Conversion of townhouse garages that will preclude the parking of vehicles and the storage of trash and recycling containers within the garage will be prohibited. This shall not preclude the use of said garages as sales offices in model homes during marketing of the development, with the understanding the sales offices will be converted back to garages upon sale of the models.
  - B. Prohibition of the outside storage or parking of recreational vehicles on the Application Property.
29. **SCHOOL CONTRIBUTION.** Prior to the issuance of the final occupancy permit for Phase Two, the Applicant will contribute the sum of \$108,000.00 to the City of Fairfax to be utilized for capital improvements to Providence Elementary School.
30. **HISTORICAL MARKER.** For purposes of recognizing the former Electric Trolley Line that operated in the City, the Applicant shall fund the research, fabrication and installation of an interpretative marker on the Application Property in an amount not to exceed \$3,000.00. Said payment will be made no later than the issuance of the final occupancy permit for Phase Three, as defined in Commitment 2.C., to the City Office of Historic Resources (“Historic Resources”). The location of the interpretative marker shall be selected in coordination with Historic Resources. Future maintenance of the marker shall be performed by the UOA with input from Historic Resources. Should Historic Resources elect not to place a marker on the Application Property, this commitment shall become null and void, and of no further force and effect.
31. **RECIPROCAL EASEMENTS.** At the time of site plan approval, the Applicant shall create reciprocal easements along common residential property lines to provide future homeowners with reasonable rights of access to adjacent lots if needed to perform routine home maintenance functions.
32. **COUNTERPARTS.** These commitments may be executed in one or more counterparts, each of which when so executed and delivered shall be deemed an original document and all of which taken together shall constitute but one in same document.
33. **SUCCESSORS AND ASSIGNS.** These commitments shall bind and inure to the benefit of the Applicant and its successors and assigns.

[SIGNATURES ON NEXT PAGE]

APPLICANT/TITLE OWNER OF  
TAX MAP 57-2-02-020

NORTHFAX JV LLC

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By: John E. Napolitano  
Its: Manager

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By: Andrea Sylos-Labini  
Its: Manager

[SIGNATURES CONTINUE ON NEXT PAGE]

TITLE OWNER OF TAX MAP

57-2-08-010, 57-2-02-005, 57-2-08-005, 57-2-08-006, 57-2-08-007, 57-2-08-008, 57-2-02-003, 57-2-07-015-B, 57-2-47-000-A

ORCHARD RE INVESTMENTS, LLC

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By: John E. Napolitano

Its: Class A Member

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By: Andrea Sylos-Labini

Its: Class A Member

[SIGNATURES CONTINUE ON NEXT PAGE]

TITLE OWNER OF TAX MAP

57-2-02-017, 57-2-02-018, 57-2-02-019, 57-2-08-011, 57-2-08-012, 57-2-08-013, 57-2-08-014

A.R.G. II, L.L.C.

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By: John E. Napolitano  
Its: Operating Manager

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By: Andrea Sylos-Labini  
Its: Vice Operating Manager

[SIGNATURES CONTINUE ON NEXT PAGE]

CONTRACT PURCHASER

MHI-NORTHFAX, LLC

By: MADISON HOMES, INC., its manager

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By: Russell S. Rosenberger, Jr.  
Its: President

[SIGNATURES CONTINUE ON NEXT PAGE]

CONTRACT PURCHASER

BRIGHTVIEW SENIOR LIVING DEVELOPMENT LLC

By: BRIGHTVIEW GROUP, LP, its Manager

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By: David D. Carliner

Its: \_\_\_\_\_

[SIGNATURES END]

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10/20/2020 10:02:16 AM  
User: jsturgeon

GENERAL NOTES

1. THE PROPERTIES SHOWN HEREON ARE IDENTIFIED ON THE CITY OF FAIRFAX, VIRGINIA GEOGRAPHIC INFORMATION SYSTEM AS 57-02-02-017, 57-02-02-018, 57-02-02-019, 57-02-02-020, 57-02-08-011, 57-02-08-012, 57-02-08-013, 57-02-08-014, 57-02-08-010, 57-02-02-005, 57-02-08-005, 57-02-08-006, 57-02-02-007, 57-02-02-008, 57-02-02-003, 57-02-07-015B, 57-02-01-015B AND 57-02-47-000-A AND ARE ALL CURRENTLY ZONED COMMERCIAL RETAIL (CR) AND RESIDENTIAL MEDIUM (RM).
2. THE PROPERTIES SHOWN HEREON ARE NOW IN THE NAME OF ARG II, LLC AND ORCHARD RE INVESTMENTS, LLC, DEED BOOK 13408, PAGE 1070 AS CORRECTED IN DEED BOOK 15230, PAGE 1182 (PARCELS A, B, C & D), DEED BOOK 15339, PAGE 102 (PARCEL E & F), DEED BOOK 16739, PAGE 1026 (PARCEL G), DEED BOOK 18823, PAGE 1535 (PARCEL H), DEED BOOK 19218, PAGE 1148 (PARCEL I), DEED BOOK 17602, PAGE 631 (PARCEL J), DEED BOOK 19837, PAGE 1920 (PARCEL K), DEED BOOK 17434, PAGE 444 (PARCEL L), DEED BOOK 18388, PAGE 265 (PARCEL M), DEED BOOK 20080, PAGE 1218 (PARCEL N), DEED BOOK 23812, PAGE 493 (PARCEL O), DEED BOOK 23812, PAGE 479 (PARCEL P) AND NORTHFAX JV LLC DEED BOOK 25751, PAGE 1696 (PARCEL Q), ALL AMONG THE LAND RECORDS OF FAIRFAX COUNTY, VIRGINIA.
3. THE PHYSICAL IMPROVEMENTS AND TOPOGRAPHY SHOWN HEREON ARE BASED UPON AN ARIEAL TOPOGRAPHIC SURVEY PERFORMED BY MCKENZIE SNYDER, INC, FLOWN APRIL 6th, 2015 AND COMPILED NOVEMBER 14th, 2017. THIS DATA HAS BEEN SUPPLEMENTED BY CONVENTIONAL METHODS BY THIS FIRM BETWEEN THE DATES OF NOVEMBER 16th AND DECEMBER 5th, 2017 AND JANUARY 2nd AND JANUARY 3rd, 2018 AND FURTHER SUPPLEMENTED BETWEEN THE DATES OF APRIL 9th AND APRIL 17th, 2019 AND BETWEEN THE DATES OF OCTOBER 30th AND OCTOBER 31st, 2019.
4. HORIZONTAL DATUM SHOWN HEREON IS REFERENCED TO THE VIRGINIA COORDINATE SYSTEM (VCS) 1983 - NORTH AS ESTABLISHED FROM A GPS SURVEY.
5. NO GEOTECHNICAL, SUBSURFACE, FIELD REVIEWS, RESEARCH, AGENCY OR GOVERNMENTAL RECORD REVIEWS, OR OTHER INVESTIGATIONS HAVE BEEN MADE FOR THE PURPOSE OF LOCATING, OR DETERMINING THE EXISTENCE OF WETLANDS, HAZARDOUS MATERIALS, OR OTHER ENVIRONMENTAL CONCERNS ON SITE IN THE PERFORMANCE OF CHRISTOPHER CONSULTANTS, LTD SERVICES FOR THE PROJECT AS SHOWN HEREON.
6. THE PORTION OF ORCHARD STREET TO BE VACATED WAS ORIGINALLY DEDICATED AT DEED BOOK 407 AT PAGE 115.

FLOOD ZONE NOTE

THE AREA SHOWN HERON IS LOCATED ON THE FLOOD INSURANCE RATE MAPS (FIRM), COMMUNITY PANEL NO. 5155240002 D, WITH AN EFFECTIVE DATE OF JUNE 2nd, 2006.

BY GRAPHICAL DEPICTION ONLY, THE PROPERTY SHOWN HEREON IS SHOWN IN:

- FLOOD ZONE "AE" (SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT OT INUNDATION BY THE 1% ANNUAL CHANCE FLOOD - SHADED), BASE FLOOD ELEVATIONS DETERMINED.
- FLOOD ZONE "X" (OTHER FLOOD AREAS - SHADED), AREAS OF 0.2% ANNUAL CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.
- FLOOD ZONE "X" (OTHER AREAS), AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

A FIELD SURVEY WAS NOT PERFORMED TO DETERMINE THE FLOOD ZONES LISTED HEREON. AN ELEVATION CERTIFICATE MAY BE NEEDED TO VERIFY THIS DETERMINATION OR APPLY FOR A VARIANCE FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY.

REZONING AREA

EXISTING ZONE: RESIDENTIAL MEDIUM	386,183 SQ. FT. OR 8.86554 ACRES
EXISTING ZONE: COMMERCIAL RETAIL	99,629 SQ. FT. OR 2.28717 ACRES
PORTION OF ORCHARD STREET TO BE VACATED	13,433 SQ. FT. OR 0.30838 ACRES
TOTAL AREA TO BE REZONED TO PD-M	499,245 SQ. FT. OR 11.46109 ACRES

OWNERSHIP TABLE

MAP #57-2-02-017  
#3590 CHAIN BRIDGE ROAD  
**ARG II, LLC**  
D.B. 13408 PG. 1070  
D.B. 15230 PG. 1182  
ZONED: COMMERCIAL RETAIL

MAP #57-2-02-018  
#3580 CHAIN BRIDGE ROAD  
**ARG II, LLC**  
D.B. 13408 PG. 1070  
D.B. 15230 PG. 1182  
ZONED: COMMERCIAL RETAIL

MAP #57-2-02-019  
#10505 ORCHARD STREET  
**ARG II, LLC**  
D.B. 13408 PG. 1070  
D.B. 15230 PG. 1182  
ZONED: COMMERCIAL RETAIL

MAP #57-2-08-011  
#10507 ORCHARD STREET  
**ARG II, LLC**  
D.B. 13408 PG. 1070  
D.B. 15230 PG. 1182  
ZONED: RESIDENTIAL MEDIUM

MAP #57-2-08-012  
#10509 ORCHARD STREET  
**ARG II, LLC**  
D.B. 15339 PG. 102  
ZONED: RESIDENTIAL MEDIUM

MAP #57-2-08-013  
#10511 ORCHARD STREET  
**ARG II, LLC**  
D.B. 15339 PG. 102  
ZONED: RESIDENTIAL MEDIUM

MAP #57-2-08-014  
#10513 ORCHARD STREET  
**ARG II, LLC**  
D.B. 16739 PG. 1026  
ZONED: RESIDENTIAL MEDIUM

MAP #57-2-08-010  
#10515 ORCHARD STREET  
**ORCHARD RE INVESTMENTS**  
D.B. 18823 PG. 1535  
ZONED: RESIDENTIAL MEDIUM

MAP #57-2-02-005  
#10517 ORCHARD STREET  
**ORCHARD RE INVESTMENTS**  
D.B. 19218 PG. 1148  
ZONED: RESIDENTIAL MEDIUM

MAP #57-2-08-005  
#10508 ORCHARD STREET  
**ORCHARD RE INVESTMENTS**  
D.B. 17602 PG. 631  
ZONED: RESIDENTIAL MEDIUM

MAP #57-2-08-006  
#10510 ORCHARD STREET  
**ORCHARD RE INVESTMENTS**  
D.B. 19837 PG. 1921  
ZONED: RESIDENTIAL MEDIUM

MAP #57-2-08-007  
#10512 ORCHARD STREET  
**ORCHARD RE INVESTMENTS**  
D.B. 17434 PG. 444  
ZONED: RESIDENTIAL MEDIUM

MAP #57-2-08-008  
#10514 ORCHARD STREET  
**ORCHARD RE INVESTMENTS**  
D.B. 18388 PG. 265  
ZONED: RESIDENTIAL MEDIUM

MAP #57-2-02-003  
#10516 ORCHARD STREET  
**ORCHARD RE INVESTMENTS**  
D.B. 20080 PG. 1218  
ZONED: RESIDENTIAL MEDIUM

MAP #57-2-07-015B  
NO ADDRESS  
**ORCHARD RE INVESTMENTS**  
D.B. 23812 PG. 493  
ZONED: RESIDENTIAL MEDIUM

MAP #57-2-47-000A  
NO ADDRESS  
**ORCHARD RE INVESTMENTS**  
D.B. 23812 PG. 479  
ZONED: RESIDENTIAL MEDIUM

MAP #57-2-02-020  
#3570 CHAIN BRIDGE ROAD  
**NORTHFAX JV, LLC**  
D.B. 25751 PG. 1696  
ZONED: COMMERCIAL RETAIL

PORTION OF ORCHARD STREET TO BE VACATED  
**CITY OF FAIRFAX**  
D.B. 407 AT PAGE 115

MAP #57-2-18-001A  
THE ASSEMBLY THE ASSEMBLY  
D.B. 3161 PG. 508  
D.B. 3319 PG. 738  
ZONED: RESIDENTIAL TOWNHOUSE

MAP #57-2-08-004A  
ELE N.A., LLC  
D.B. 24268 PG. 1935  
ZONED: COMMERCIAL OFFICE

MAP #57-2-02-016  
CITY OF FAIRFAX  
D.B. 18684 PG. 857  
ZONED: COMMERCIAL RETAIL

MAP #57-2-02-015  
GLASCOCK & SONS, LP  
D.B. 9172 PG. 571  
ZONED: COMMERCIAL RETAIL

MAP #57-2-02-010  
SCHUHLING T. ALDINE, INC.  
D.B. 8871 PG. 1815  
ZONED: COMMERCIAL RETAIL

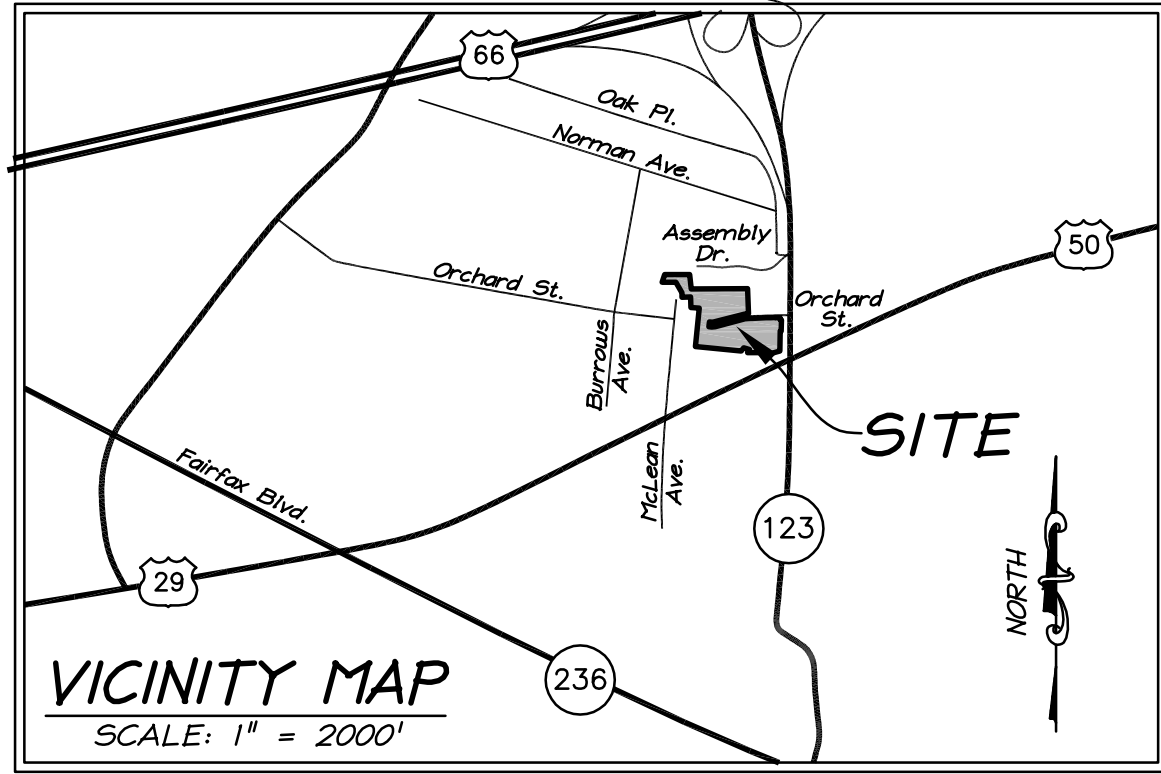
MAP #57-2-02-006  
BRANCH AVENUE ASSOCIATES, LLC  
D.B. 14796 PG. 1326  
ZONED: COMMERCIAL RETAIL

MAP #57-2-07-015A  
LOT 15R  
FAIRFAX ACRES  
D.B. 23803 PG. 185  
ZONED: RESIDENTIAL MEDIUM

MAP #57-2-47-001  
SANJAY BAJAJ  
D.B. 23803 PG. 185  
ZONED: RESIDENTIAL MEDIUM

MAP #57-1-05-22  
PETER & KATHLEEN TYSON  
D.B. 25960 PG. 1210  
ZONED: RESIDENTIAL LOW

MAP #57-2-02-001A  
RONALD & BARBARA FOWLER  
D.B. 5923 PG. 1416  
ZONED: RESIDENTIAL MEDIUM



RECEIVED  
04 / 13 / 2020  
Community Dev & Planning



Rev#	DATE	REVISION
1	04/08/20	ORCHARD ST VAC.

CERTIFIED PLAT  
ON THE PROPERTIES KNOWN AS

"NORTHFAX ASSEMBLAGE"

CITY OF FAIRFAX, VIRGINIA

PROJECT: 13139.005.00

SCALE: N/A

DATE: 01/02/2020

DRAWN: PGS  
CHECKED: WEB

SHEET No.

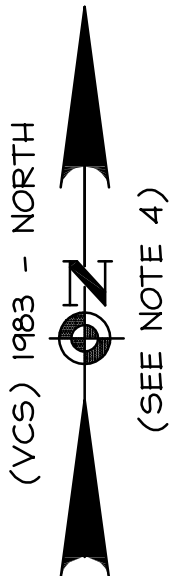
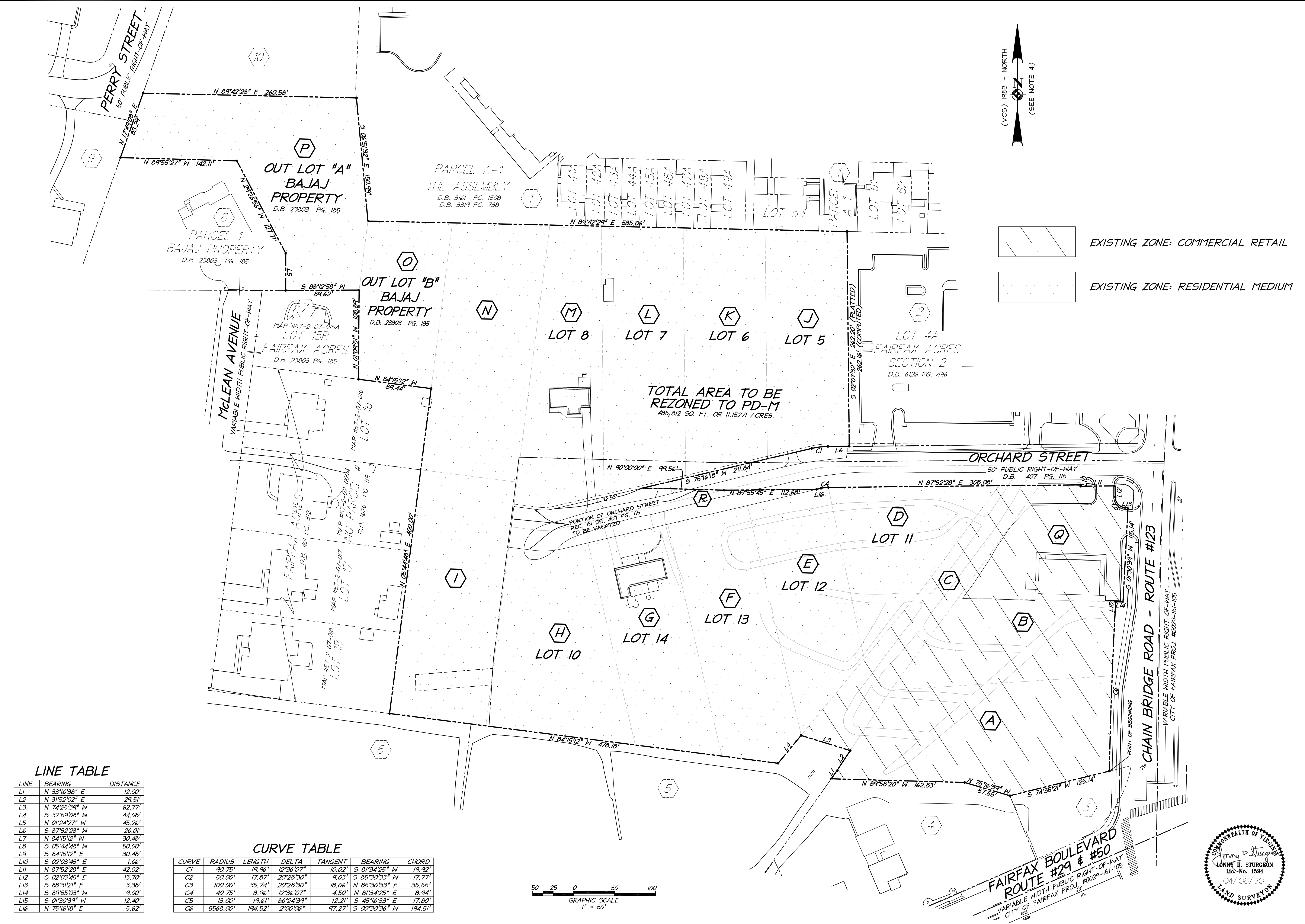
1 OF 2



christopher  
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phone 703.393.9887 · fax 703.273.6820



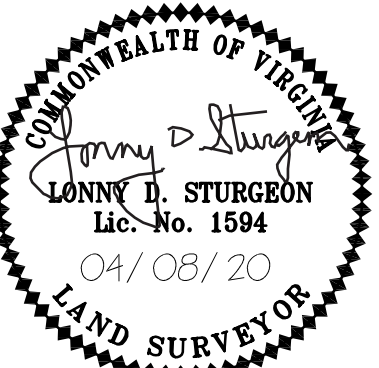
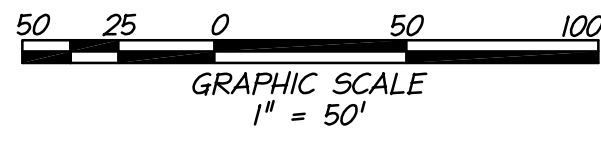


EXISTING ZONE: COMMERCIAL RETAIL

EXISTING ZONE: RESIDENTIAL MEDIUM

LINE TABLE		
LINE	BEARING	DISTANCE
L1	N 33°16'38" E	12.00'
L2	N 31°52'02" E	29.51'
L3	N 74°25'39" W	62.77'
L4	S 37°59'08" W	44.08'
L5	N 01°24'27" W	45.26'
L6	S 87°52'28" W	26.01'
L7	N 84°15'12" E	30.48'
L8	S 05°44'48" W	50.00'
L9	S 84°15'12" E	30.48'
L10	S 02°03'45" E	1.66'
L11	N 87°52'28" E	42.02'
L12	S 02°03'45" E	13.70'
L13	S 88°31'21" E	3.38'
L14	S 89°55'03" W	9.00'
L15	S 01°30'39" E	12.40'
L16	N 75°16'18" E	5.62'

CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	TANGENT	BEARING
C1	40.75'	19.96'	12°36'07"	10.02'	S 81°34'25" W
C2	50.00'	17.87'	20°28'30"	9.03'	S 85°30'33" W
C3	100.00'	35.74'	20°28'30"	18.06'	N 85°30'33" E
C4	40.75'	8.96'	12°36'07"	4.50'	N 81°34'25" E
C5	13.00'	19.61'	86°24'39"	12.21'	S 45°16'33" E
C6	5568.00'	194.52'	2°00'06"	97.27'	S 00°30'36" W



CERTIFIED PLAT  
ON THE PROPERTIES KNOWN AS

**"NORTHFAX ASSEMBLAGE"**

CITY OF FAIRFAX, VIRGINIA

**christopher consultants**  
9301 Innovation drive (suite 150) - manassas, va 20110  
phone 703.393.9887 · fax 703.273.6820

PROJECT: 13139.005.00

SCALE: 1" = 50'

DATE: 01/02/2020

DRAWN: PGS  
CHECKED: WEB

SHEET No.



## Major Water Quality Impact Assessment



Northfax West  
10510 Orchard Street  
Fairfax, Virginia 22030

PREPARED FOR:

Northfax JV LLC c/o The Lann Companies  
3900 Jermantown Route, Suite 300  
Fairfax, Virginia 22030

January 28, 2020

Apex Companies, LLC  
203 Wylderose Court  
Midlothian, Virginia 23113





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## FIGURES

**Figure 1 – Project Location Map**

**Figure 2 – Project Vicinity Map**

**Figure 3 – City of Fairfax RPA Map**

**Figure 4 - Northfax West RPA Map**

## APPENDICES

**Appendix A – WQIA Application Form**

**Appendix B – Agency Documentation**

**Appendix C – JPA Exhibits**

**Appendix D – Master Development Plan**

**Appendix E – BEHI and NBS Investigation**



## 1.0 Introduction

The City of Fairfax (the City) 2019 Zoning Ordinance documents Chesapeake Bay Preservation Area (CBPA) ordinances designed to protect local waterways in the Chesapeake Bay watershed from nonpoint source pollution generated from urban development. As with other municipalities in the watershed, the City's CBPA ordinance has been approved by the Virginia Department of Environmental Quality (DEQ) to implement the requirements of the Code of Virginia needed to comply with the federal Chesapeake Bay Preservation Act. Examples of CBPA features in the City include the Resource Protection Area (RPA) and the Resource Management Area (RMA). To better define the extent and location of these features, the City adopted a CBPA Map in November 25, 2003. The City ordinance codifies the regulations that apply to the CBPA in order to prevent development projects from compromising water quality.

Section 4.18 of the Zoning Ordinance mandates that a Water Quality Impact Assessment (WQIA) must be submitted for any proposed land disturbance, development or redevelopment within the RPA including any buffer area modification or reduction. The ordinance provides criteria for approving, denying or modifying requests to rezone, subdivide, use, develop and /or redevelop land in a CBPA. The City provides for two levels of water quality impact assessment: a minor assessment and a major assessment. Typically, a Major WQIA is required for developments that exceeds 5,000 square feet land disturbance or propose encroachment onto the waterward 50 feet of the 100-foot RPA buffer.

Based on the proposed development activities for the Northfax West project, Apex Companies LLC (Apex) performed a Major WQIA based on a request by and in accordance with the City's ordinance. The WQIA Application form is provided in Appendix A of this report. Information in the application is consistent with the Preliminary Jurisdiction Determination (PJD) issued by the U.S. Army Corps of Engineers (USACE) in 2018 and Section 401/404 Clean Water Act (CWA) permits authorized by the DEQ and USACE in 2019 (Appendix B). The report herein presents the purpose of the WQIA, the methods used by Apex to investigate hydrogeological and landscape elements of the assessment, and data documenting the results of the Major WQIA. The report meets the standards set forth in the City's Chesapeake Bay Preservation ordinance (Section 4.18) for a Major WQIA and is intended to supplement the project's site plan and be reviewed with the site plan during the application review process.

## 2.0 Purpose

The City's Chesapeake Bay Preservation ordinance states that the purpose of a WQIA is to identify the impacts of proposed development on water quality and lands within the City's approved RPA boundary. Moreover, in areas where redevelopment does take place within the RPA, a WQIA is needed to ensure project activities are located and implemented to be the least disruptive of the RPA's natural water quality functions. When the functions of the RPA must be disrupted, the WQIA is used to determine mitigation measures that address water quality protection and compensate for impacts approved by the City.

The Northfax West project as proposed will impact water quality and lands within the City's approved RPA. Therefore, the purpose of this Major WQIA is to identify the extent of those impacts, minimize disruptions to the natural water quality functions of the RPA, and outline compensatory mitigation for unavoidable impacts to the RPA and potential impacts to water quality.

## 3.0 Project Description

The Northfax West project is part of a comprehensive strategy for the growth and redevelopment of the Fairfax



Boulevard corridor through the City, as demonstrated by the City of Fairfax 2035 Comprehensive Plan. In accordance with this plan the project will create a mix of residential and commercial uses in a highly urbanized setting, serving the needs of the community, while attracting those who would otherwise just pass through the area. The project will occur in an area which has not seen significant improvement in many years and will allow residents to work near where they live, reducing traffic congestion on area roads. The project envisions the revitalization of the area through the construction of residential homes, potentially a mix of townhouses, condominiums and a senior living facility, to maximize living space, while also providing commercial space for businesses.

### 3.1 Location

The Northfax West project is located in the northwest quadrant at the intersection of Fairfax Boulevard (Route 50) and Chain Bridge Road (Route 123) (Figure 1). The project site consists of an assemblage of 17 parcels with an aggregate area of approximately 11.32 acres, which has historically been used for residential and commercial purposes. The project area is part of the Accotink Creek watershed and located within the Middle Potomac River drainage area identified by Hydrologic Unit Code (HUC) 02070010.

### 3.2 Existing Conditions


The existing conditions for the Northfax West project are presented on the project plans in Appendix C and Appendix D. The project area currently consists of two single family homes with mowed grass yards, two parking lots (approx. 3 acres) constructed of rolled stone over fabric, and approximately 4 acres of woods. Orchard Street is located within the project limits and dead ends in a cul-de-sac. The 4-acre wooded area is composed of a mixed hardwood vegetation community surrounding perennial and intermittent streams that flow through the site.

The perennial stream enters the site at the northwest corner and flows southeast before entering a culvert that conveys water under Route 123, near the intersection of Route 123 and Route 50. The intermittent stream begins at a culvert outlet near the southwest corner of the project site and flows easterly to its confluence with the perennial stream. The perennial stream is a culvert to culvert system with little connection to upstream or downstream components of a typical stream system (e.g. floodplain, buffers, or other stream corridor features).

A wetland delineation was performed in 2017 and a Preliminary Jurisdictional Determination (PJD) was issued by the USACE on February 5, 2018 (Appendix B). The PJD documented the limits of perennial and intermittent stream channels and the absence of non-tidal wetlands within the project boundaries. The flow regime of each stream was verified in 2017 in a site-specific RPA determination, the results of which concurred with the City's RPA map (Figure 3). Under USACE permit NAO-2014-1871 (Appendix B), the eastern extent of the perennial stream was later redirected to the north, into new 8-foot box culverts installed under Chain Bridge Road to improve drainage and reduce flooding. As a result, the RPA buffer associated with the stream also shifted to the north of its previous location, as shown in Figure 4.

## 4.0 Methods

Apex conducted a Major WQIA in accordance with Section 4.18 titled "Chesapeake Bay Preservation" of the City's ordinance for Site Development Standards (Chapter 110, Article 4). The City's Chesapeake Bay Preservation ordinance states that a Major WQIA is required for any development that exceeds 5,000 square feet land disturbance or that encroaches onto the seaward 50 feet of the 100-foot RPA buffer area; or is located in the RMA and is deemed necessary by the Zoning Administrator. The City's requirements for a Major WQIA application are provided as follows:

- 
- Location of the components of any RPA, including the 100-foot buffer area;
  - Location and nature of proposed improvements, including:
    - Type of paving material;
    - Areas of clearing or grading;
    - Location of any structures, drives, or other impervious cover; and
    - Sewage disposal systems or reserve drain field sites;
  - Type and location of proposed best management practices to meet the required general performance standards specified in §110-4.18.7;
  - Location of existing vegetation on site, including the number and type of trees and other vegetation to be removed to accommodate the encroachment or modification; and
  - A revegetation plan that supplements the existing buffer vegetation in a manner that provides for pollutant removal, erosion and runoff control.
  - Certification of all required information as complete and accurate by a Class IIIB certified land surveyor and professional wetlands delineator.
  - Hydrogeological element that describes
    - Existing topography;
    - Estimates of soil characteristics and potential for erosion;
    - Hydrology of the area;
    - Impacts on wetlands and streams;
    - Proposed mitigation measures; and
    - A listing of requisite permits with permit or application status.
  - Landscape element that fully describes:
    - Existing trees required to be identified as part of a Tree Management Plan in accordance with subsection §110-4.5.9.D.1;
    - Limits of clearing and grading;
    - Trees and indigenous vegetation that are to be preserved within the disturbed area;
    - Measures to be taken to protect vegetation, proposed plantings and other vegetative measures used to enhance water quality; and
    - A proposed construction schedule that includes all activities related to clearing, grading and proposed plantings.
  - Such other measures as deemed necessary by the Zoning Administrator to ensure the impact to water quality can be accurately predicted.

Information in the WQIA relies on previous investigations performed by Apex including a Waters of the U.S. (WOTUS) delineation and a site-specific RPA determination from 2017. These investigations were conducted using standard methods required by the USACE, DEQ, and the City. Results were provided as supporting documentation in the Joint Permit Application (JPA) submitted to regulatory agencies on June 22, 2018, which satisfied the terms and conditions contained in the USACE Norfolk District State Program General Permit (17-SPGP-01) and remains effective until May 31, 2022. DEQ found the JPA compliant with the Virginia Water Protection (VWP) Program and issued VWP Individual Permit Number 18-1003 on March 5, 2019, which remains effective until March 5, 2034. Other measures used to assess water quality included Bank Erosion Hazard Index (BEHI) and Near Bank Stress (NBS) investigations performed by Apex on December 16, 2019. The methods for these investigations are provided in Apex's BEHI and NBS report found in Appendix E.



## 5.0 Results

**Location of the components of any RPA:** The PJD issued by the USACE in 2018 (Appendix B) documented the limits of perennial and intermittent stream channels within the project area. The flow regime of each stream was verified in 2017 in a site-specific RPA determination that concurred with the City's CBPA map (Figure 3). Under USACE permit NAO-2014-1871 (Appendix B), the eastern extent of the perennial stream was later redirected to the north into new 8-foot box culverts installed under Chain Bridge Road. As a result, the RPA buffer associated with the perennial stream also shifted to the north of its previous location (Figure 4).

**Proposed improvements:** Construction of the Northfax West project will include the piping and redirection of stream channel flow using twin box culverts to reduce the risk of flooding and tie into the 8-foot box culverts previously installed by the City and the Virginia Department of Transportation (VDOT). In addition to reducing the risk of flooding and controlling stream flow, the Northfax West project will create a mix of residential and commercial uses that serves the needs of the community and the City of Fairfax 2035 Comprehensive Plan, providing revitalization of the area. The project is in an area that has lacked significant economic improvement and will create opportunities for residents to work near where they live and reduce traffic congestion on area roads. The Northfax West project proposes the development of residential homes with a mix of townhouses, condominiums, and a senior living facility, as well as commercial space for businesses and visitors.

The Master Development Plan filed with the City on January 6, 2020 as part of the project's rezoning application is provided in Appendix D.

**Best management practices:** USACE and DEQ permit conditions require best management practices that protect water quality during and after construction. Permit conditions are included in the agency documentation provided in Appendix B.

**Location and type of existing vegetation on site:** The project area currently consists of two single family homes with mowed grass yards, two parking lots (approx. 3 acres) constructed of rolled stone over fabric, and approximately 4 acres of woodlands along the western project boundary (Figure 2). The 4-acre wooded area is composed of a mixed hardwood vegetation community located on upland landforms along existing stream channels. Native vegetation in the forest overstory includes tulip tree (*Liriodendron tulipifera*), red maple (*Acer rubrum*), eastern red cedar (*Juniperus virginiana*), and American sycamore (*Platanus occidentalis*). Understory species include American elm (*Ulmus americana*), American holly (*Ilex opaca*), spice bush (*Lindera benzoin*), and immature trees from the canopy. The understory is also infested with populations of non-native invasive species including Tatarian honeysuckle (*Lonicera tatarica*), multiflora rose (*Rosa multiflora*), Chinese privet (*Ligustrum sinense*), Oriental bittersweet (*Celastrus orbiculatus*), Japanese honeysuckle (*Lonicera japonica*), and English ivy (*Hedera helix*), among others.

The specific location and type of existing trees on the site was documented in the Tree Management Plan submitted as part of the project's Master Development Plan (Appendix D), which was officially filed with the City on January 6, 2020 as part of the owner's rezoning application.

**Revegetation plan:** Project improvements require that woodlands in the western portion of the project area be removed in order to support the purpose and need of the project. No revegetation within the onsite CBPA features is being proposed, because compensatory mitigation will be provided for stream and riparian buffer impacts via the purchase of 1,675 stream credits or 4,761 Stream Condition Units from a DEQ approved mitigation bank and/or in-lieu fee fund. The stream credits include a 100-foot riparian buffer that extends from the banks of the stream being credited as compensation for this project. Therefore, no net loss of RPA functions, values or area will occur. In

addition, the plans will adhere to the Total Maximum Daily Load (TMDL) requirements, where a development project's post-development nutrient loading cannot exceed its pre-development nutrient loading.

**Certifications:** Information has been determined complete and accurate by a Class IIIB certified land surveyor and professional wetlands delineator. Certification information for the project is provided below.

- Certified Land Surveyor: Christopher Consultants; Christopher Fillmore, LS; License Number # 2607
- Professional Wetland Delineator: Apex Companies, LLC; John H. Brooks, III, PWD; Certification # 3402000003

## 5.1 Hydrogeologic Elements

**Existing Topography:** As shown on Figure 1, the topography within the project area generally slopes to the southeast and along an unnamed tributary of Accotink Creek. Undeveloped portions of the project area that surround the tributary slope gradually toward the tributary. Developed areas are mostly flat due to asphalt pavement in parking lots. Existing topographic contours and elevations are also shown on project plans in Appendix C and Appendix D.

**Soil Characteristics and Potential for Erosion:** As stated in the *Description and Interpretive Guide to Soils in Fairfax County* (2013), erosion potential is a metric that applies to soils under construction site conditions and includes ratings of low, moderate, and high. Soil characteristics related to erosion potential are summarized below:

- Low: Soils are not highly erodible except on steep unprotected cuts. Erosion of less than 0.05 inches from sheet-flow runoff can be expected on unprotected soils during a severe storm.
- Moderate: Soils are moderately erodible on B slopes and highly erodible on C slopes or greater. Erosion of 0.05 to 0.25 inches from sheet-flow runoff plus rill and shallow gully erosion can be expected on unprotected soils during a severe storm.
- High: Soils which are highly erodible even on B slopes. Soil loss in excess of 0.25 inches from sheet-flow runoff erosion and the formation of numerous gullies can be expected on unprotected soils in a severe storm.

The Soil Survey of the City of Fairfax, accessed through the Web Soil Survey on the Natural Resources Conservation Service (NRCS) website, shows five soil maps units within the project area. Each soil map unit and its corresponding erosion potential are depicted in Table 1.

**Table 1: Northfax West Project Soil Erosion Potential Summary**

Map Unit	Map Unit Name	Erosion Potential
95	Urban Land	NA
101	Urban land – Wheaton complex	High
103A	Wheaton-Cordorus complex, 0-2% slopes	Low
105B	Wheaton-Glenelg complex, 2-7% slopes	High
107B	Wheaton-Meadow complex, 2-7% slopes	Medium

Source: Description and Interpretive Guide to Soils in Fairfax County (2013)

The results of site-specific assessments for stream bank erosion potential conducted by Apex using the BEHI protocol are presented in Section 5.3.

**Hydrology of the Area:** Evidence of hydrologic activity is confined primarily to the banks of the stream channels on site. The primary drainage through the site is to the southeast in an unnamed tributary of Accotink Creek. One other



channel along the south side of the site carries flow from a storm drain system to the primary channel. Overland runoff and groundwater discharge provide a minimal amount of input. Two streams were identified as containing potentially jurisdictional waters. Stream "A" (perennial) is centrally located on the property and carries flow in a southeasterly direction. Stream "B" (intermittent) is located along the southern property boundary and has an onsite confluence with Stream "A".

The site has a history of flooding near the intersection of Fairfax Boulevard (Route 50) and Chain Bridge Road (Route 123) caused by undersized culverts and increased impervious area from offsite development. The drainage area reported in the JPA for the Northfax West project was 260.2 acres. Maps depicting stream locations and watershed hydrology are provided in Appendix C.

**Impacts on Wetlands and Streams:** No wetlands were identified within the project area, and stream impacts permitted by the USACE and DEQ are listed in Table 2.

**Table 2: Permitted Impacts to Surface Waters for the Northfax West Project**

Impact #	Impact Type	Stream Type	Impact Amount
A1	Permanent – Fill	R3 (Perennial)	797 LF (11,096 SF/0.25 Ac)
A2	Permanent – Fill	R3 (Perennial)	312 LF (3,780 SF/0.09 Ac)
A3	Permanent – Fill	R3 (Perennial)	295 LF (2,989 SF/0.07 Ac)
B1	Permanent – Fill	R4 (Intermittent)	345 LF (4,488 SF/0.10 Ac)
		<b>Total:</b>	<b>1,749 LF (22,353 SF/0.51 Ac)</b>


Each impact area is visually depicted on project plans found in Appendix C and summarized below:

- Impact A1, from the upstream end down to the confluence with Segment B1, will result in redirection of the perennial stream from its current location into twin 8-foot box culverts. The culverts will traverse the site as shown on the attached grading plan and join with existing twin 8-foot box culverts on the west side of Route 123. Fill material will be placed in the abandoned stream channel.
- Impact A2, from the confluence with Segments A1/B1, will result in redirection of the perennial stream from its current location into twin 8-foot box culverts. The culverts will traverse the site as shown on the attached grading plan and join with existing twin 8-foot box culverts on the west side of Route 123. Fill material will be placed in the abandoned stream channel.
- Impact A3, will result in removal of the newly constructed riprap inlet structure prior to joining the proposed twin 8-foot box culverts to the existing culverts. Fill material will be placed in the abandoned channel.
- Impact B1 will result in connecting the existing 42-inch RCP with a proposed 72-inch RCP that will discharge into the proposed box culverts. Fill material will be placed in the abandoned stream channel.

**Proposed Mitigation Measures.** According to the JPA and agency permits (Appendix B), lack of suitable buffer area for preservation prevents the reduction of required mitigation through onsite preservation. As such, the DEQ permit states that the permittee will "compensate for permanent stream impacts through the purchase of 1,675 stream credits or 4,761 Stream Condition Units from a DEQ approved mitigation bank, in-lieu fee fund, or a combination thereof that is authorized and approved by DEQ to sell credits in the area in which the impacts will occur and has credits available (as released by DEQ)." The purchase of stream credits provides mitigation for the impacts to the stream, as well as impacts to the riparian buffer (including the RPA buffer).

**Existing Permits:** A Joint Permit Application was submitted on June 22, 2018. The Northfax West project was permitted via VWP Individual Permit Number 18-1003 from the DEQ on March 5, 2019, and satisfied the terms and





conditions contained in the USACE's, Norfolk District State Program General Permit (17-SPGP-01), which remains effective until May 31, 2022. The Site Plan Application, Virginia Stormwater Management Program (VSMP) application, and Tree Removal Permit Application are in the process of being submitted. Agency documentation for state and federal permits is provided in Appendix B.

## 5.2 Landscape Elements

**Existing Trees and Tree Management:** The woodlands onsite can be characterized as an early successional tulip tree forest association with a mixed overstory composition of tulip tree, red maple, and American elm. Understory species include tulip tree, American elm, eastern red cedar, spice bush, Tatarian honeysuckle, multiflora rose, and Chinese privet. Tree and shrubs are also commonly found with woody vine populations composed of dense infestations of invasive species such as oriental bittersweet, Japanese honeysuckle, and English ivy.

Per the JPA submitted in June 2018 and the resulting USACE and DEQ permits, the preservation of existing trees was considered infeasible to meet the purpose and need of the project. However, compensatory mitigation will be provided for all stream and riparian buffer impacts via the purchase of stream and buffer credits from an approved mitigation bank. The stream credits include a 100-foot riparian buffer that extends from the banks of the stream being credited as compensation for this project. Therefore, no net loss of RPA functions, values, or area will occur.

The Tree Management Plan from the project's Master Development Plan is included in Appendix D. The plan shows trees proposed for preservation and removal throughout the project area. Invasive species management will be achieved through the removal of non-native invasive shrub and vine species found in existing woodlands onsite.

**Limits of Clearing and Grading:** Project plans (Appendix C and Appendix D) depict the limits of clearing and grading for the proposed project.

**Trees and indigenous Vegetation Preservation:** The Tree Management Plan for the Northfax West project is provided on Sheet 3 through Sheet 3D of the Master Development Plan (Appendix D). The plan identifies all trees proposed for preservation and removal, a tree management schedule, and details for standard tree protection. Invasive species management will be achieved through the removal of non-native invasive shrub and vine species found throughout the existing woodlands onsite.

**Vegetative Measures Used to Enhance Water Quality:** New plantings will occur as part of the proposed development in accordance with City landscaping requirements.

**Construction Schedule:** A proposed construction schedule that includes all activities related to clearing, grading and proposed plantings will accompany the site plan application for the Northfax West project. Additional details of project construction are shown on the project plans (Appendix C and Appendix D).

## 5.3 Other Measures

Apex performed a BEHI and NBS study on December 16, 2019 for the streams in the project area. The full results of the study, including maps of stream locations and assessment points, is provided in Appendix E. For BEHI assessment each stream bank was evaluated for the degree of erosion potential (e.g., extreme, very high, high, moderate, or low). Table 3 provides a summary of the BEHI results for Stream A1 and Stream A2.

**Table 3: Summary of BEHI Results for the Northfax West Project**

Stream ID	Erosion Hazard Potential			
	Extreme	Very High	High	Low
<b>Stream A1</b>	321 LF	1,192 LF	434 LF	735 LF
<b>Stream A2</b>	217 LF	311 LF	290 LF	0 LF
<b>Total</b>	538 LF	1,503 LF	724 LF	735 LF


The NBS data collected for each stream was assessed to predict potential sediment and nutrient loading caused by near bank stress associated with the BEHI assessed bank conditions. Apex estimated the potential for approximately 3,036 tons/year (or 6,072,860 lbs/year) of Total Suspended Sediment (TSS), 0.13 tons/year (or 260 lbs/year) of Total Nitrogen (TN), and 0.12 tons/year (or 240 lbs/year) of Total Phosphorus (TP) caused by stream erosion. Apex anticipates that the sediment and nutrient loads resulting from the stream bank erosion will continue to occur until action is taken to reduce the flow and the associated NBS. The redirection of flow and piping of the base flow and stormwater associated with the stream will eliminate the stream bank erosion and thus the associated sediment and nutrient inputs.

## 6.0 Conclusions and Recommendations

Based on the City's Chesapeake Bay Preservation ordinance, this report satisfies the City's review and evaluation requirements in Section 4.18 of the Zoning Ordinance for a Major WQIA. Upon the completed review of a WQIA application, the City's Zoning Administrator will determine if the Northfax West development is consistent with the purpose and intent of Section 4.16 of the Zoning Ordinance based upon the following criteria:

- The disturbance of any wetlands is minimized;
- The development will not result in significant disruption of the hydrology of the site;
- The development will not result in significant degradation to aquatic life;
- The development will not result in unnecessary destruction of plant materials on site;
- Proposed erosion and sediment control concepts are adequate to achieve the reductions in runoff and prevent off site sedimentation;
- Proposed stormwater-management measures are adequate to control the stormwater runoff to achieve the required performance standard for pollutant control;
- Proposed revegetation of disturbed areas will provide optimum erosion and sediment control benefits;
- The development, as proposed, is consistent with the purpose and intent of §4.16;
- The cumulative impact of the proposed development, when considered in relation to other development in the vicinity, both existing and proposed, will not result in a significant degradation of water quality.

In summary, the Northfax West project proposes to impact perennial and intermittent streams by piping them under the proposed mixed-use development to tie into the existing twin box culverts near Route 123 (installed by the City and VDOT). Based on Apex's onsite assessments to determine erosion potential, the Northfax West project pipe system will eliminate potential sources of stream bank erosion to include the extreme and very high erosion along existing stream channels. The pipe system will also help to control flooding and reduce the adverse effects of uncontrolled stormwater discharge including a reduction of TSS, TN, and TP transported from the project area to downstream waters within the Chesapeake Bay watershed. Due to the compensatory mitigation provided under USACE and DEQ permits, no net loss of RPA functions, values, or area will occur. In addition, the plans will adhere to the Total Maximum Daily Load (TMDL) requirements, where a development project's post-development nutrient loading cannot exceed its pre-development nutrient loading.

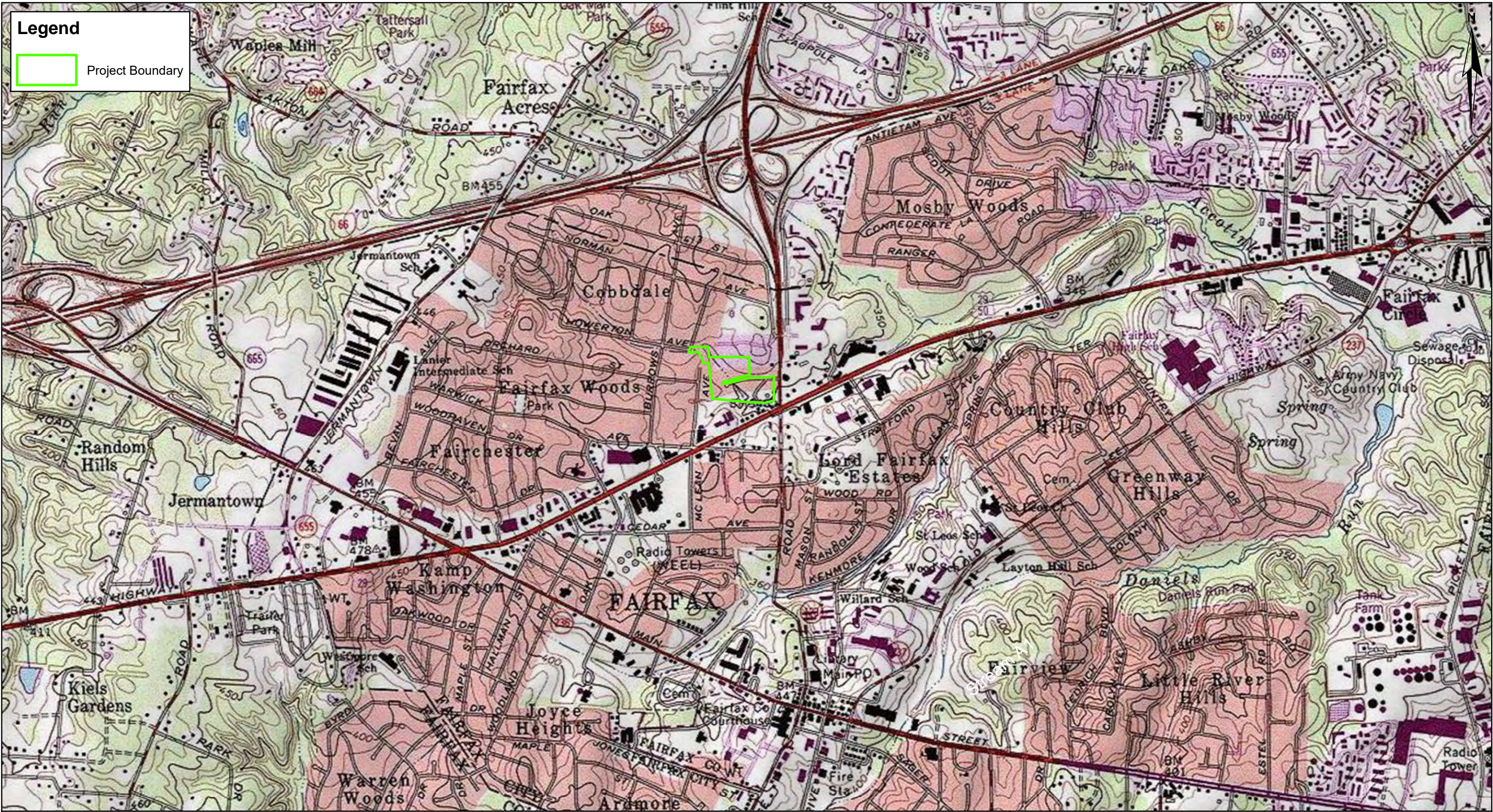


The completed WQIA Application provided in Appendix A documents that each of the City's criteria for a Major WQIA have been satisfied. Considering the water quality investigations conducted by Apex for the Northfax West project, the Section 404/401 water quality permits authorized by the USACE and DEQ, and the results presented in this WQIA report, it is Apex's opinion that the Northfax West project will improve water quality in the Chesapeake Bay.



## Figures





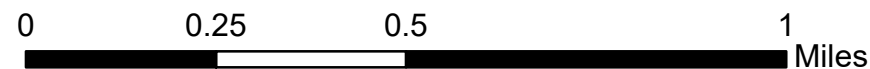
Apex Companies, LLC  
203 Wylderose Ct, Midlothian, VA 23113  
Phone: 804-897-2718  
www.apexcos.com

**Northfax West  
City of Fairfax, Virginia**

**Figure 1  
Project Location Map**

Drawn By: Rob LaPosa  
01/16/2020

Service Layer Credits: Copyright© 2013 National  
Geographic Society, i-cubed



38°5'33.44"N  
77°18'36.93"W



**Legend**

 Project Boundary



Apex Companies, LLC  
203 Wylderose Ct, Midlothian, VA 23113  
Phone: 804-897-2718  
[www.apexcos.com](http://www.apexcos.com)

**Northfax West**  
**City of Fairfax, Virginia**

**Figure 2**  
**Project Vicinity Map**

0 0.025 0.05 0.1  
Miles

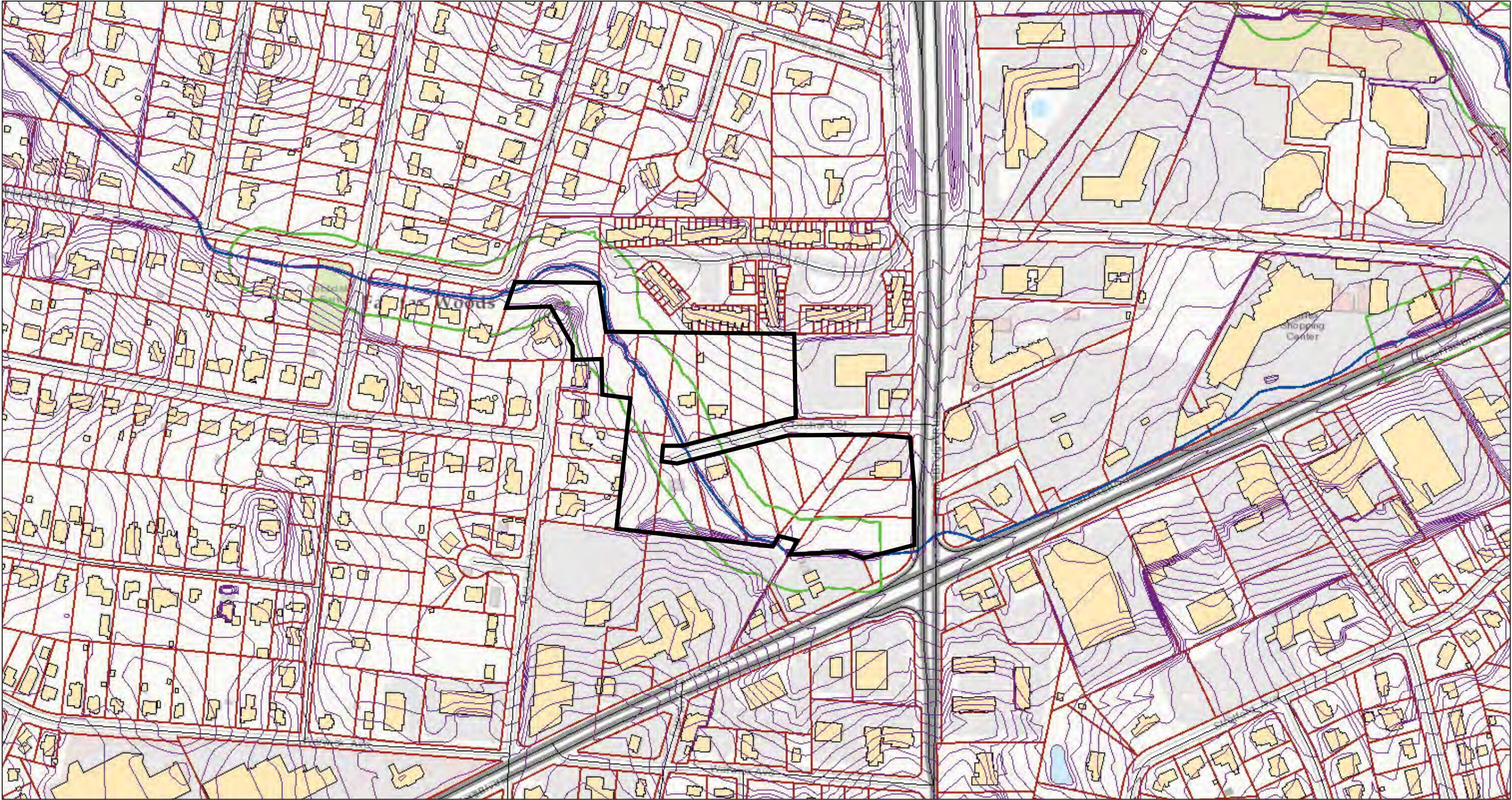
Drawn By: Rob LaPosa  
01/16/2020

Service Layer Credits: Esri, HERE, Garmin, (c)  
OpenStreetMap contributors, and the GIS user  
community  
Source: Esri, DigitalGlobe, GeoEye, Earthstar  
Geographics, CNES/Airbus DS, USDA, USGS,  
AeroGRID, IGN, and the GIS User Community

38°5'33.44"N  
77°18'36.93"W



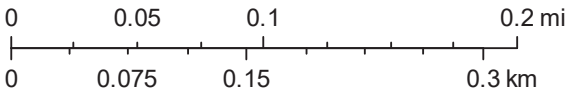
Figure 3: City of Fairfax RPA Map



October 25, 2016

1:4,514

- Contour Lines (2 foot intervals)
- Streets
- Streams
- Buildings
- Resource Protection Areas
- City Limits
- Parcels



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



**Legend**

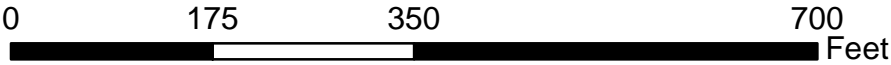
- 100-ft buffer
- Perennial Stream
- Intermittent Stream
- Project Area



Apex Companies, LLC  
203 Wylderose Ct, Midlothian, VA 23113  
Phone: 804-897-2718  
www.apexcoss.com

Northfax West  
City of Fairfax, Virginia

Figure 4  
Resource Protection Area Map



Drawn By: Rob LaPosa (01/17/2020)  
Reviewed By: John Brooks (1/28/2020)

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

38°5'33.44"N  
77°18'36.93"W





## Appendices



## Appendix A – WQIA Application



Application #: \_\_\_\_\_

## **WATER QUALITY IMPACT ASSESSMENT (WQIA) APPLICATION**

☐ Single Family Residential \$ 115.00 / ☐ Other: \$ 350.00

- NON REFUNDABLE FEE -

### **1. JOB LOCATION INFORMATION:**

Job Location Address 10510 Orchard St. Fairfax, Virginia 22030

Project Name Northfax Project

Tax Map # See attached document for list of tax map #'s

### **2. APPLICANT INFORMATION:**

Name Northfax JV LLC c/o The Lann Companies

Address 3900 Jermantown Rd., Suite 300, Fairfax VA, 22030

Phone (703) 934-4600 Email john@lann.com

### **3. PROPERTY OWNER INFORMATION: (Same as Applicant ☐)**

Name Northfax JV, LLC c/o The Lann Companies

Address 3900 Jermantown Rd., Suite 300, Fairfax VA, 22030

Phone (703) 934-4600 Email john@lann.com

### **4. LAND SURVEYOR: (Same as Applicant ☐)**

Name Christopher Consultants; Attn: Christopher Fillmore, LS; License No. 2607

Address 9900 Main St., Suite 400, Fairfax, VA, 22031

Phone (703) 273-6820 Email chrisfillmore@ccl-eng.com

### **5. WETLANDS EXPERT: (Same as Applicant ☐)**

Name Apex Companies, LLC; Attn: John Brooks, III, PWD; Certification No. 3402000003

Address 203 Wylderoose Ct., Midlothian, VA 23113

Phone (804) 897-2718 Email John.Brooks@apexcos.com

-Continued on Next Page-

*The City of Fairfax is committed to the letter and spirit of the Americans with Disabilities Act. To request a reasonable accommodation for any type of disability, please call 703-385-7930, (TTY 711)*

The Water Quality Impact Assessment is conducted to identify the impacts of proposed development on water quality and lands within resource protection and resource management areas; to ensure that where development does take place it is located on those portions of a site and in a manner that is least disruptive to the natural functions of the land and to specify mitigation measures to address water quality protection.

The applicant shall submit a WQIA in accordance with §110-4.18.8.B for:

1. Any proposed land disturbance , development or redevelopment within a resource protection area including any buffer area modification or reduction as provided for in §110-4.18.7; or
2. Any proposed development or redevelopment in the resource management area that may significantly impact water quality due to the unique characteristics of the site or intensity of the proposed use or development, as determined by the zoning administrator in accordance with §110-4.18 and §110-4.18.4.D

#### **I. Development Characteristics**

*You must submit either a minor or major WQIA for your project unless you receive a waiver. The below conditions will determine whether you submit a major or minor WQIA.*

Submit a **Minor WQIA** if you answer “Yes” to either of these development characteristics (§110-4.18.8.C)

\_\_\_\_\_ 5,000 square feet of disturbance or less

\_\_\_\_\_ Encroachment onto the landward 50 feet of the 100-foot buffer area (**Skip to**

#### **Section III, Minor WQIA Requirements**

Submit a **Major WQIA** if you answer “Yes” to any of these development characteristics (§110-4.18.8.D)

YES Over 5,000 square feet of disturbance

YES Encroachment onto the seaward 50 feet of the 100-foot RPA buffer area

\_\_\_\_\_ Location in the resource management area and is deemed necessary by the Zoning Administrator.

**(Skip to Section IV, Major WQIA Requirements)**

## **II. WQIA Waivers**

\_\_\_\_\_ Check here if you plan to submit a WQIA waiver request.

To submit a WQIA waiver request, attach a report detailing how the proposed development or redevelopment does not significantly impact water quality.

## **III. Minor WQIA Requirements (§110-4.18.8.C)**

The minor WQIA calculations will demonstrate that the remaining buffer area and best management practices will result in removal of no less than 75 percent of sediments and 40 percent of nutrients from post development stormwater runoff.

Requirements for a minor WQIA scaled site drawing include:

- 1) Location of the components of any RPA, including the 100 foot buffer area;
- 2) Location and nature of proposed improvements, including:
  - a. Type of paving material;
  - b. Areas of clearing or grading;
  - c. Location of any structures, drives, or other impervious cover; and
  - d. Sewage disposal systems or reserve drain field sites;
- 3) Type and location of proposed best management practices to meet the required general performance standards specified in §110-4.18.7;
- 4) Location of existing vegetation on site, including the number and type of trees and other vegetation to be removed to accommodate the encroachment or modification; and
- 5) A revegetation plan that supplements the existing buffer vegetation in a manner that provides for pollutant removal, erosion and runoff control.
- 6) Certification of all required information as complete and accurate by a Class IIIB certified land surveyor and professional wetlands delineator.

## **IV. Major WQIA Requirements (§110-4.18.8.D)**

Requirements for a major WQIA include:

- 1) All of the information required in a minor WQIA (Section III above);
- 2) Hydrological element that describes:
  - a. Existing topography;
  - b. Estimates of soil characteristics and potential for erosion;
  - c. Hydrology of the area;
  - d. Impacts on wetlands and streams;
  - e. Proposed mitigation measures; and
  - f. A listing of requisite permits with permit or application status.

- 3) Landscape element that fully describes:
  - a. Existing trees required to be identified as part of a Tree Management Plan in accordance with subsection §110-4.5.9.D.1;
  - b. Limits of clearing and grading;
  - c. Trees and indigenous vegetation that are to be preserved within the disturbed area;
  - d. Measures to be taken to protect vegetation, proposed plantings and other vegetative measures used to enhance water quality; and
  - e. A proposed construction schedule that includes all activities related to clearing, grading and proposed plantings.
- 4) Such other measures as deemed necessary by the Zoning Administrator to ensure the impact to water quality can be accurately predicted; and
- 5) Certification of all required information as complete and accurate by a Class IIIB certified land surveyor and professional wetlands delineator.

**V. Evaluation Procedure (§110-4.18.8.F)**

**Minor WQIA**

*The Zoning Administrator shall determine if any proposed modification or reduction to the buffer area is consistent with the provisions of this division and make a finding based upon the following criteria:*

4.18.8.F.1	Minor WQIA Criteria	Satisfied (Y/N)
a.	The proposed encroachment is necessary and there is no other location on site to place improvements without disturbing the buffer area.	
b.	The impervious surface is minimized.	
c.	The proposed best management practices, where required, achieve the requisite reductions in pollutant loadings.	
d.	The development, as proposed, meets the purpose and intent of §110-4.18	
e.	The cumulative impact of the proposed development, when considered in relation to other development in the vicinity, both existing and proposed, will not result in a significant degradation of water quality.	
f.	Any other information deemed necessary by the Zoning Administrator.	

**Major WQIA**

*The Zoning Administrator shall determine if the proposed development is consistent with the purpose and intent of this division and make a finding based upon the following criteria:*

4.18.8.F.2	Major Water Quality Criteria	Satisfied (Y/N)
a.	The disturbance of any wetlands is minimized.	Y
b.	The development will not result in significant disruption of the hydrology of the site.	Y
c.	The development will not result in significant degradation to aquatic life.	Y
d.	The development will not result in unnecessary destruction of plant materials on site.	Y
e.	Proposed erosion and sediment control concepts are adequate to achieve the reductions in runoff and prevent off site sedimentation.	Y
f.	Proposed stormwater-management measures are adequate to control the stormwater runoff to achieve the required performance standard for pollutant control.	Y
g.	Proposed revegetation of disturbed areas will provide optimum erosion and sediment control benefits.	Y
h.	The design and location of any proposed drain field will be in accordance with the general performance standards outlined in §110-4.18.7.	N/A
i.	The development, as proposed, is consistent with the purpose and intent of §110-4.16.	Y
j.	The cumulative impact of the proposed development, when considered in relation to other development in the vicinity, both existing and proposed, will not result in a significant degradation of water quality.	Y

\*\*\*OFFICE USE ONLY\*\*\*

Receipt # \_\_\_\_\_ ☐ \$115.00 ☐ \$350.00

\*\*\* OFFICE APPROVAL SIGNATURE\*\*\*

This Application is Approved By \_\_\_\_\_ Date \_\_\_\_\_  
Special Projects Engineer

## Tax Map #'s

57 2 08 005  
57 2 08 006  
57 2 08 007  
57 2 08 008  
57 2 08 010  
57 2 08 011  
57 2 08 012  
57 2 08 013  
57 2 08 014  
57 2 07 015 B  
57 2 47 000 A  
57 2 02 003  
57 2 02 005  
57 2 02 017  
57 2 02 018  
57 2 02 019  
57 2 02 020





## Appendix B – Agency Documentation



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

February 5, 2018

**PRELIMINARY JURISDICTIONAL DETERMINATION**

Northern Virginia Regulatory Section  
NAO-2017-02192 (Northfax Project)

Northfax JV LLC  
c/o The Lann Companies  
Attn: Mr. John Napolitano  
3900 Jermantown Road, Suite 300  
Fairfax, Virginia 22030

Dear Mr. Napolitano:

This letter is in regard to your request for a verification of a preliminary jurisdictional determination for waters of the U.S. (including wetlands) on property known as the Northfax Project, located on 16 parcels on approximately 10.3 acres, northwest quadrant at the intersection of Chain Bridge Road (Route 123) and Fairfax Boulevard (U.S. Routes 29/50) in the City of Fairfax, Virginia.

The map entitled "Northfax Project", by Christopher Consultants and submitted by Apex Companies, LLC dated December 4, 2017 and revised January 19, 2018 (*copy enclosed*) provides the location of waters and/or wetlands on the property listed above. The basis for this delineation includes the presence of an ordinary high water mark. This letter is not confirming the Cowardin classifications of these aquatic resources.

Discharges of dredged or fill material, including those associated with mechanized landclearing, into waters and/or wetlands on this site may require a Department of the Army permit and authorization by state and local authorities including a Virginia Water Protection Permit from the Virginia Department of Environmental Quality (DEQ), a permit from the Virginia Marine Resources Commission (VMRC) and/or a permit from your local wetlands board. This letter is a confirmation of the Corps preliminary jurisdiction for the waters and/or wetlands on the subject property and does not authorize any work in these areas. Please obtain all required permits before starting work in the delineated waters/wetland areas.

This is a preliminary jurisdictional determination and is therefore not a legally binding determination regarding whether Corps jurisdiction applies to the waters or wetlands in question. Accordingly, you may either consent to jurisdiction as set out in this preliminary jurisdictional determination and the attachments hereto if you agree with the determination, or you may request and obtain an approved jurisdictional determination.

"This preliminary jurisdictional determination and associated wetland delineation map may be submitted with a permit application."

Enclosed is a copy of the "Preliminary Jurisdictional Determination Form". Please review the document, sign, and return one copy to Ms. Theresita Crockett-Augustine either via email ([theresita.m.crockett-augustine@usace.army.mil](mailto:theresita.m.crockett-augustine@usace.army.mil)) or via standard mail to US Army Corps of Engineers, Northern Virginia Field Office at 18139 Triangle Plaza, Suite 213, Dumfries, Virginia 22026 within 30 days of receipt and keep one for your records. This delineation of waters and/or wetlands is valid for a period of five years from the date of this letter unless new information warrants revision prior to the expiration date.

If you have any questions, please contact Ms. Theresita Crockett-Augustine at (703) 221-9736 or [theresita.m.crockett-augustine@usace.army.mil](mailto:theresita.m.crockett-augustine@usace.army.mil).

Sincerely,



Theresita Crockett-Augustine  
Environmental Scientist  
Northern Virginia Regulatory Section

Enclosures

AUGUSTINE.THERESITA.  
CROCKETT.1230827040

Digitally signed by  
AUGUSTINE.THERESITA.CROCKETT.1230827040  
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI,  
ou=USA,  
cn=AUGUSTINE.THERESITA.CROCKETT.1230827040  
Date: 2018.02.05 16:42:10 -05'00'

## Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

### BACKGROUND INFORMATION:

A. REPORT COMPLETION DATE FOR PJD: February 5, 2018

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:

Northfax JV LLC  
c/o The Lann Companies  
Attn: Mr. John Napolitano  
3900 Jermantown Road, Suite 300  
Fairfax, Virginia 22030

DISTRICT OFFICE, FILE NAME, AND NUMBER: NAO, Northfax Project, 2017-02192

C. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:  
(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State: VIRGINIA County/parish/borough: Fairfax City: Fairfax

Center coordinates of site (lat/long in degree decimal format):

Latitude: 38.859 ° N Longitude: -77.309 ° W

Universal Transverse Mercator:

Name of nearest waterbody: UT to Accotink Creek

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:

☒ Field Determination. Date(s): 01/19/18

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO  
REGULATORY JURISDICTION.

Site Number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
1			2,064 LF	RPW	Section 404
2					
3					

1. The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.
2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre- construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there "may be" waters of the U.S. and/or that there "may be" navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

**SUPPORTING DATA:** Data reviewed for preliminary JD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items.

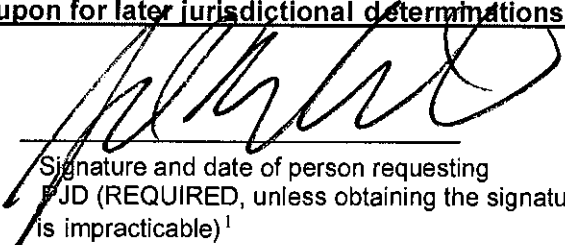
- ☒ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:  
Map:
- ☒ Data sheets prepared/submitted by or on behalf of the PJD requestor.
- ☒ Office concurs with data sheets/delineation report.
- ☐ Office does not concur with data sheets/delineation report. Rationale:
- ☐ Data sheets prepared by the Corps:
- ☐ Corps navigable waters' study:
- ☐ U.S. Geological Survey Hydrologic Atlas: USGS
- ☐ NHD data.
- ☐ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name:
- ☒ Natural Resources Conservation Service Soil Survey. Citation:
- ☒ National wetlands inventory map(s). Cite name:
- ☒ State/Local wetland inventory map(s):
- ☐ FEMA/FIRM maps:
- ☐ 100-year Floodplain Elevation: (National Geodetic Vertical Datum of 1929)
- ☒ Photographs ☒ Aerial (Name & Date):
- or ☒ Other (Name & Date):
- ☐ Previous determination(s):
- File no. and date of response letter:
- ☐ Other information (please specify):

**IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.**

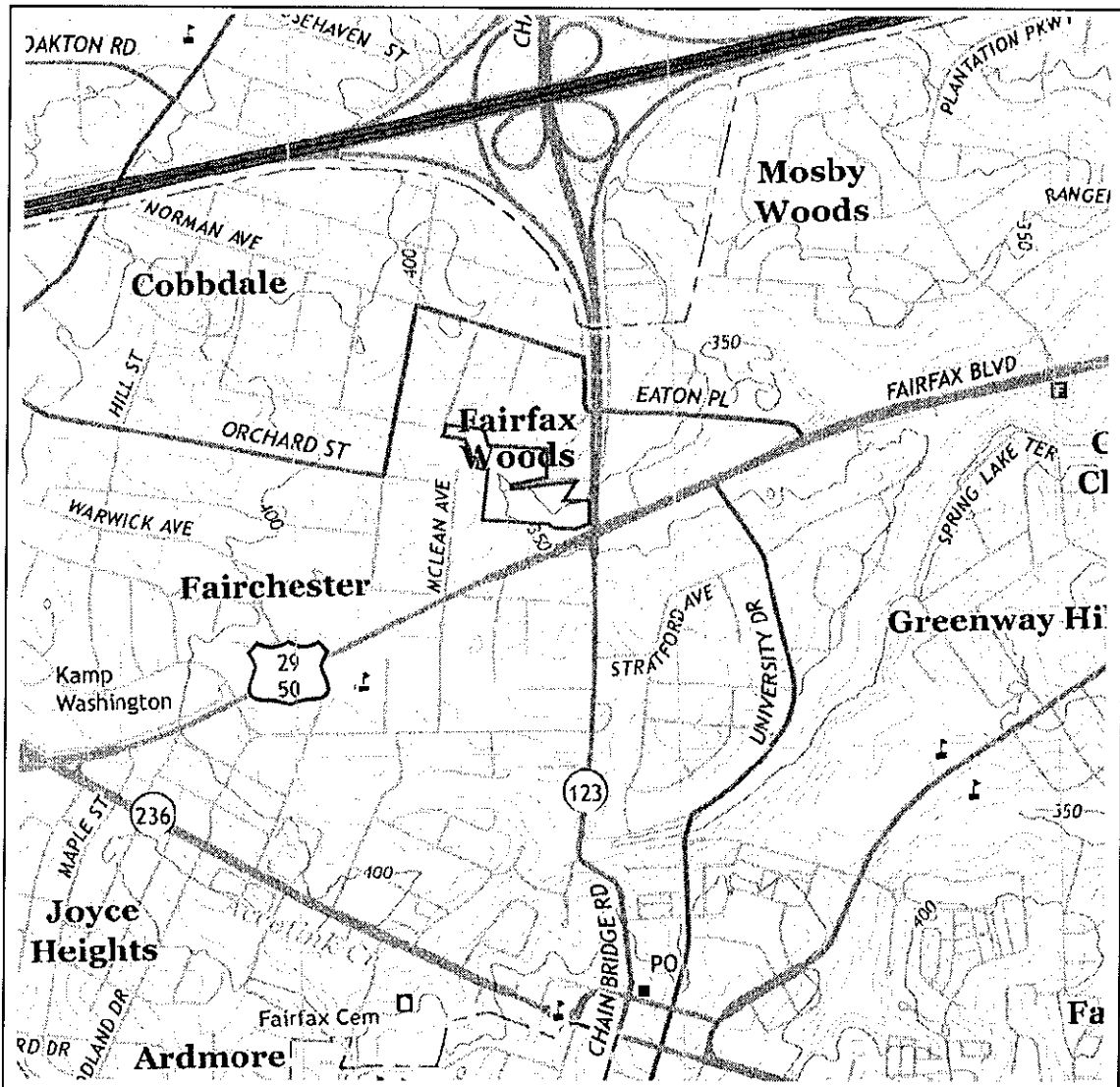
AUGUSTINE.THERESITA.  
CROCKETT.1230827040

Digitally signed by  
AUGUSTINE.THERESITA.CROCKETT.1230827040  
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA,  
cn=AUGUSTINE.THERESITA.CROCKETT.1230827040  
Date: 2018.02.05 16:41:37 -05'00'

Signature and date of  
Regulatory staff member  
completing PJD

  
Signature and date of person requesting  
PJD (REQUIRED, unless obtaining the signature  
is impracticable)<sup>1</sup>

<sup>1</sup> Districts may establish timeframes for requester to return signed PJD forms. If the requester does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.



Scale: Not to Scale

Date: USGS Quadrangle 2013

**Apex Companies LLC.**  
8854 Rixlew Lane  
Manassas, VA 20109



© Apex Companies LLC

**USGS Quadrangle Map**  
**Northfax**  
38.859309 N -77.310054 W  
Fairfax USGS Quadrangle  
Fairfax County, VA

**Prepared for:**  
Northfax JV LLC c/o The Lann Companies  
3900 Jermantown Road - Suite 300  
Fairfax, VA 22030



Scale: North Arrow

Date: USGS Quadrangle 2013

**Apex Companies LLC**  
8854 Ridge Lane  
Manassas, VA 20108



© Apex Companies LLC

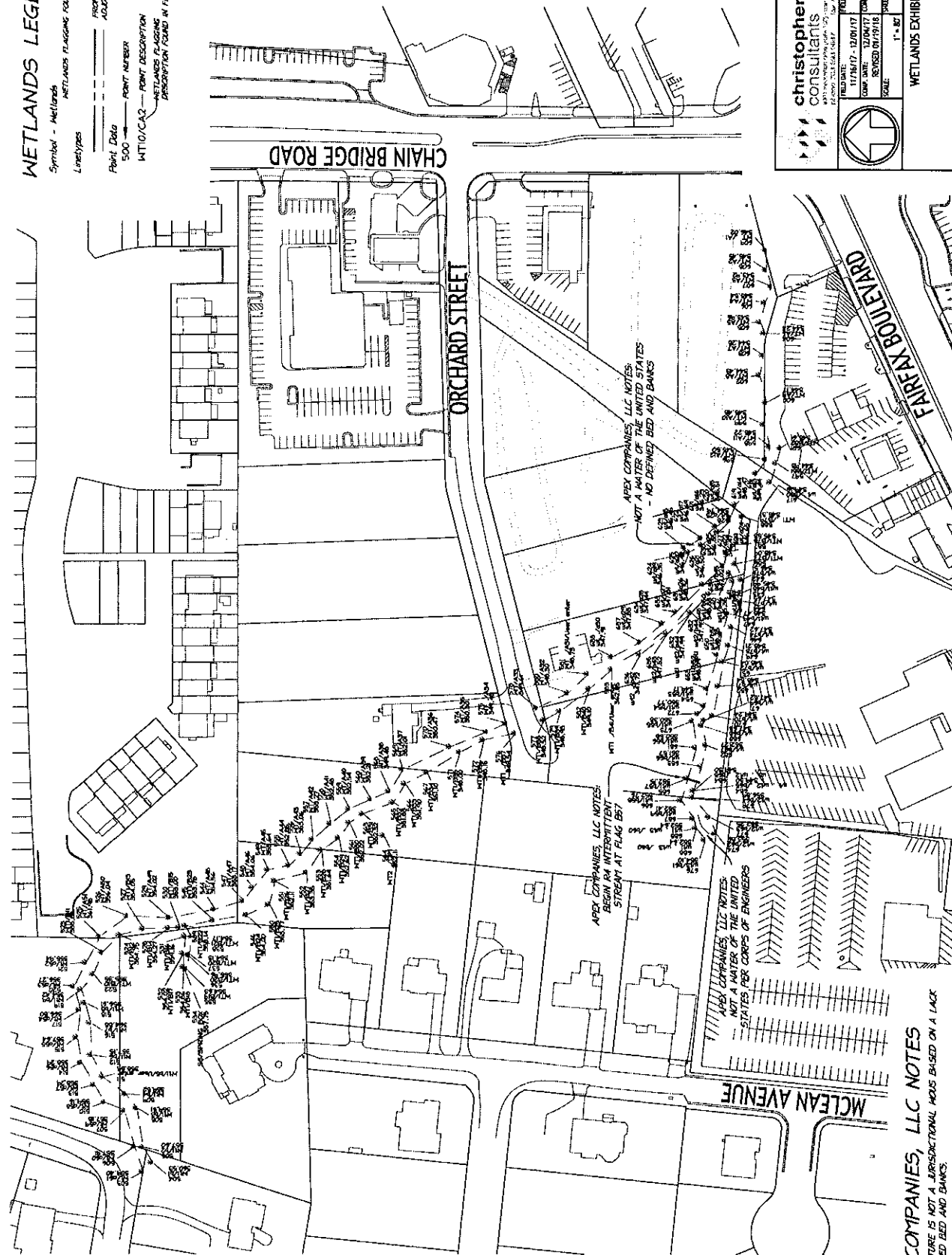
**USGS Aerial Map**  
**Northfax**  
18,000' x 10,000' W  
Fishes USGS Quadrangle  
Fishes County, VA

**Prepared For:**  
Northfax JV LLC c/o The Lane Companies  
P.O. Box 1000000 Road - Suite 300  
Fishes, VA 22033



## WETLANDS LEGEND

Symbol - Wetlands  
 Wetlands Flagging Found  
 Line Types  
 Point Data  
 500 ——— POINT NUMBER  
 W10/CA3 ——— POINT DESCRIPTION  
 Wetlands Flagging  
 Description Found in Field

christopher  
consultants

EX-01

FIELD DATE:	11/16/17 - 12/01/17	FIELD CREW:	W. OSBURN
COMP. DATE:	12/04/17	COMP. BY:	M. SMITH
REVISED ON/19/18			R. CEDERICK
SCALE:		SHEET:	4 of 4

WETLANDS EXHIBIT

NORTHFAX

CITY OF FAIRFAX, VIRGINIA

APEX COMPANIES, LLC NOTES

1. THIS FEATURE IS NOT A JURISDICTIONAL HOLE BASED ON A LACK OF DEFINED BED AND BANKS;
2. STREAM A2 DOES NOT SHOW UP ON THE 1966 FAIRFAX COUNTY SOIL SURVEY AND IT IS SUSPECTED THAT THE CHANNEL WAS CUT BY STORMWATER RUNOFF DISCHARGED BY THE CITY STORMWATER SYSTEM.

<p><b>LEGEND</b></p> <p>STANDARD POINT LOCATION (SEE STAINED POINT LEGEND BELOW)</p> <p>6000 STAINED POINT NUMBER (DESCRIPTION)</p> <p>3000 STAINED POINT ELEVATION (SEE STAINED POINT LEGEND BELOW)</p> <p>6010 STAINED POINT DESCRIPTION</p>	<p>THIS POINT IS FOR GRAPHICALLY IDENTIFYING THE STAGNANT LOCATIONS ONLY.</p> <p>THIS POINT MAY NOT SHOW ALL DESIGN INFORMATION.</p> <p>PLEASE REFERENCE THE FOLLOWING CONSTRUCTION PLAN FOR ALL POINTS. DESIGN INFORMATION CONTAINED ON THIS CONSTRUCTION PLAN MAY VARY FROM THE CONSTRUCTION PLAN ATTACHED ON R/A.</p> <p>DESIGNED BY: JEFF CHAMBERS, LLC</p>
--	---



*Commonwealth of Virginia*

*VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY*

NORTHERN REGIONAL OFFICE  
13901 Crown Court, Woodbridge, Virginia 22193  
(703)583-3800  
[www.deq.virginia.gov](http://www.deq.virginia.gov)

Matthew J. Strickler  
Secretary of Natural Resources

David K. Paylor  
Director  
(804) 698-4000

Thomas A. Faha  
Regional Director

March 5, 2019

Mr. John E. Napolitano, Manager  
Northfax JV LLC  
3900 Jermantown Road, Suite 300  
Fairfax, Virginia 22030

**SENT VIA E-MAIL: [john@lann.com](mailto:john@lann.com)**  
**RECEIPT CONFIRMATION REQUESTED**

RE: State Program General Permit (17-SPGP-01) Authorization  
Permit Number: 18-1003  
Northfax, City of Fairfax, Virginia

Dear Mr. Napolitano:

The Virginia Department of Environmental Quality (DEQ) has received and completed technical review of your application request dated June 22, 2018, and received June 25, 2018. Based on DEQ's technical review, DEQ has determined the proposed project satisfies the terms and conditions contained in the USACE's, Norfolk District State Program General Permit (17-SPGP-01). You are required to adhere to all terms and conditions contained within the attached 17-SPGP-01 and any Special Conditions listed below. Your 17-SPGP-01 verification is effective as of the date on this letter and remains effective until **May 31, 2022**.

The impacts are associated with the construction of a mixed-use development and associated infrastructure on an approximately 10.6 acre development site.

The applicant is hereby authorized to permanently impact 0.50 acre (1,646 linear feet) of stream channel.

The conceptual mitigation plan submitted with your application indicated that mitigation will include the purchase of 1,675 stream credits or 4,761 Stream Condition Units. This mitigation shall be completed and documentation shall be submitted to DEQ prior to commencement of project impacts.

This letter shall serve as verification to proceed with the project as proposed. The permittee shall be responsible for contacting DEQ to revise this verification, including provisions for compensatory mitigation, if the location or amount of the impacts changes.

Northfax JV LLC  
Mr. John E. Napolitano  
Permit No. 18-1003  
March 5, 2019  
Page 2 of 2

Please contact Wynn Prusaczyk by phone at (703) 583-3871 or email at Wynn.Prusaczyk@deq.virginia.gov if you have any questions or concerns regarding the information contained herein.

Respectfully,



Trisha M. Beasley, Regional VWPP Program Manager

Attachments: 17-SPGP-01

Cc (via E-mail):

Mr. Jason Franti, Apex Companies, LLC

Mr. Jim Irre, Apex Companies, LLC

Ms. Theresita Crockett-Augustine, USACE, Northern VA Field Office



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

CENAO-WRR STATE PROGRAMMATIC GENERAL PERMIT 17-SPGP-01

Effective Date: June 29, 2017      Expiration Date: May 31, 2022

I. **AUTHORITIES:**

- A. 17-SPGP-01 authorizes the discharge of dredged or fill material in non-tidal waters, of the United States, including wetlands, associated with certain residential, commercial, and institutional developments and linear transportation projects within the geographical limits of the Commonwealth of Virginia and under the regulatory jurisdiction of the U.S. Army Corps of Engineers, Norfolk District (Corps or Norfolk District). These projects must have no more than minimal individual and cumulative impacts and must meet all the terms and conditions outlined herein. The use of 17-SPGP-01 is restricted to those projects that have avoided and minimized impacts to waters of the U.S., including wetlands, to the maximum extent practicable.
- B. The people of the Commonwealth of Virginia (Virginia or "the Commonwealth") are hereby authorized by the Secretary of the Army and the Chief of Engineers, under Section 404 of the Clean Water Act (CWA) (33 U.S.C. § 1344), to perform the aforementioned work in non-tidal waters and wetlands of the Commonwealth as described herein. The Corps' authority and guidance to develop general permits is contained in 33 U.S.C. § 1344(e), 33 C.F.R. § 325.2(e)(2), 33 C.F.R. § 325.3(b), and Corps Regulatory Guidance Letter (RGL) 83-7.

II. **PROCEDURES:**

- A. Delineation Confirmations: Prior to the submission of an application for any Residential, Commercial, or Institutional Development Activity or Linear Transportation Activity covered by 17-SPGP-01, a proponent must first obtain a Corps confirmed delineation that is approved for use with a permit application (Preliminary JD) or a confirmed jurisdictional determination that includes the limits of all waters of the U.S., including wetlands that are located within the project boundaries (Approved JD). The applicant will contact the Corps to obtain a delineation confirmation/jurisdictional determination. When appropriate, a separate delineation confirmation may also be required from the Environmental Protection Agency (EPA).
- B. Application: The application must be submitted to the Virginia Marine Resource Commission (VMRC) and clearly marked 17-SPGP-01. The following information must be submitted as part of the complete application package:
  - 1) A completed and signed Standard Joint Permit Application (JPA). The applicant must utilize the most recent version.

<http://www.nao.usace.army.mil/Missions/Regulatory/>

- 2) A completed SPGP Complete Application Checklist. The applicant must utilize the most recent version.
- 3) A Corps confirmed delineation that is approved for use with a permit application OR a confirmed jurisdictional determination that includes the limits of all waters of the U.S., including wetlands that are located within the project boundaries.

This information listed above will be required to render an application complete for 17-SPGP-01 purposes. The application package must be submitted to the Virginia Marine Resource Commission (VMRC) and clearly marked 17-SPGP-01. The VMRC will forward a copy of the application to the applicable VDEQ office. Once the VDEQ has deemed the application complete the VDEQ will forward the complete application to the appropriate federal agency when coordination is required.

For purposes of 17-SPGP-01, the VDEQ is the agency responsible for ensuring permit applications meet the informational and technical requirements of 17-SPGP-01 and for issuance of 17-SPGP-01 verification letters for qualifying Residential, Commercial, and Institutional and Linear Transportation projects.

C. State Approvals: In order for 17-SPGP-01 to be valid, permittees must obtain the following state approvals prior to commencement of work in waters of the U.S.:

- 1) Virginia Department of Environmental Quality (VDEQ) Virginia Water Protection (VWP) permit
- 2) VMRC permit, when required
- 3) VDEQ informal resolution, letter of agreement, executive compliance agreement or consent order when the 17-SPGP-01 is utilized for resolution of non-compliance and/or enforcement (at Corps discretion).

The 17-SPGP-01 may also be used for activities excluded from State VWP permitting when those activities are associated with a larger residential, commercial, institutional development and/or linear transportation project that requires state approval..

### III. **DEFINITIONS:**

- A. Loss of waters of the United States: Waters of the United States (WOUS), including wetlands that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage/linear footage of the loss of WOUS is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for 17-SPGP-01; it is not a net threshold that is



calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services.

- 1) The loss of stream bed includes the linear feet of stream bed that is filled or excavated. WOUS temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of WOUS. Impacts resulting from activities eligible for exemptions under Section 404(f) of the Clean Water Act are not considered when calculating the loss of WOUS.
  - 2) Per Norfolk District Pipe Repair Guidelines: pipe repair and replacement is considered a permanent impact
  - 3) The length of any box culvert, pipe, or bridge that is being removed and replaced, whether in the same location or not, is considered a permanent impact. However, if a pipe/culvert/bridge is left in place and is extended or rip-rapped, then only the length and area of the extension or rip-rap is considered a permanent impact. [Based on Norfolk District letter guidance May 5, 2009 to VDOT]
- B. Natural stream design: a stream channel design that mimics the dimension, pattern, and profile of a representative reference stream reach.
- C. Permittee: the responsible party in receipt of the 17-SPGP-01 verification from the VDEQ. The permittee will be the responsible party for complying with all 17-SPGP-01 general conditions as well as any additional special conditions required of each project.
- D. Residential developments: construction or expansion of a multiple unit residential development or a residential subdivision including the construction of building foundations, building pads and attendant features that are necessary for the use of the residence or residential development. Attendant features may include but are not limited to roads, parking lots, garages, yards, utility lines, storm water management facilities, septic fields, and recreation facilities such as playgrounds, playing fields, and golf courses (provided the golf course is an integral part of the residential development).
- E. Commercial and Institutional Developments: construction or expansion of commercial and institutional building foundations, building pads, and attendant features that are necessary for the use and maintenance of the structures. Attendant features may include, but are not limited to, roads, parking lots, garages, yards, utility lines, storm water management facilities, and recreation facilities such as playgrounds and playing fields. Examples of commercial developments include retail stores, industrial facilities, restaurants, business parks, and shopping centers. Examples of institutional developments include schools, fire stations, government office buildings, judicial buildings, public works buildings, libraries, hospitals, and places of worship.

- F. Linear transportation: the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxi ways).

#### IV. AUTHORIZED ACTIVITIES

A. Residential, Commercial, and Institutional Development Activities Eligibility Criteria:

- 1) Activities are subject to Corps regulations;
- 2) Activities involve the discharge of dredged/fill material associated with residential, commercial, and institutional projects and propose:
  - a. the TOTAL permanent loss of not more than 1 acre of non-tidal waters of the US, to include stream channel, wetlands and open waters.  
AND
  - b. the permanent loss of not more than 2,000 linear feet of stream channel;
- 3) Activities meet the general and special conditions of 17-SPGP-01 listed in this document and any special conditions required of each project-specific verification;
- 4) Compensatory mitigation is provided in accordance with the mitigation standards and general conditions listed in this document.
- 5) Activities have received and completed all applicable federal review as listed in the general conditions of this document.

**\*\*The following activities are NOT authorized under the 17-SPGP-01:**

- The Construction of one stand-alone single family home and/or its attendant features.
- Golf courses that are not an integral part of a residential development.
- The construction of new ski areas.

B. Linear Transportation Activities Eligibility Criteria:

- 1) Activities are subject to Corps regulations;
- 2) Activities involve the discharge of dredged/ fill material associated with the construction, expansion, modification, or improvement of linear transportation projects that are single and complete with independent utility and propose:

- a. the TOTAL permanent loss of not more than ½ acre of non-tidal waters of the US, to include stream channel, wetlands and open waters  
AND
  - b. the permanent loss of not more than 1,000 linear feet of stream channel at any single impact site with independent utility.
- 3) Activities meet all general conditions of 17-SPGP-01 listed in this document and any special conditions required of each project-specific verification;
- 4) Compensatory mitigation is provided in accordance with the mitigation standards and general conditions listed in this document.
- 5) Activities have received and completed all applicable federal review as listed in the general conditions of this document.
- 6) Construction and/or relocation of utility lines by the applicant and within the right-of- way/easements of the project and performed in direct relation with the project are included in the project impact totals.

#### **V. GENERAL CONDITIONS:**

The following conditions apply to all activities authorized under 17-SPGP-01. Work that does not meet one or more of the terms or general conditions of 17-SPGP-01, including work that has been determined to be more than minimal in nature (at any impact level), will require consideration under a different type of Corps permit.

- 1) Other permits: Authorization does not obviate the need to obtain other Federal, state, or local authorizations required by law or to comply with all Federal, state, or local laws.
- 2) Minimal effects: Projects authorized shall have no more than minimal individual or cumulative adverse environmental impacts.
- 3) Discretionary authority: The Corps District Commander retains discretionary authority to require processing of an individual permit based on concerns for the aquatic environment or for any other factor of the public interest (33 C.F.R. § 320.4(a)). This authority is exercised on a case-by-case basis.
- 4) Single and complete projects: The activity must be a single and complete project.
  - a. For non-linear projects: the term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other



association of owners/developers. A single and complete non-linear project must have independent utility (see "independent utility" as defined in these general conditions). Single and complete non-linear projects may not be "piecemealed" to avoid the limits in a 17-SPGP-01 authorization.

- b. For linear transportation: For projects with multiple crossings or encroachments a determination of "single and complete" will typically apply to each crossing or encroachment of waters that occurs (i.e., single waterbody and/or wetlands) at separate and distinct locations and with independent utility. However, in cases where there are many crossings in close proximity, numerous crossings of the same waterbody, multiple crossings, or multiple encroachments that otherwise may have more than minimal individual or cumulative impacts; the Corps has the discretion to consider all the crossings cumulatively as one single and complete project.
- 5) Independent utility: A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. A phase of a project that would be constructed even if the other phases were not built can be considered as a separate, single and complete project with independent utility. For a linear transportation project, separate impact areas on a new location roadway are not considered to have independent utility and thus impacts would be considered cumulatively and eligible for a single 17-SPGP-01 verification. However, separate impact areas on a roadway that is being widened or where pipes are being replaced at multiple crossings are considered to have independent utility, and each crossing would be considered eligible for a separate 17-SPGP-01 verification. Although such impacts are not considered cumulatively for permitting purposes, they are considered cumulatively when assessing the need for federal review.
- 6) Multiple general permit authorizations.: The 17-SPGP-01 may be combined with other Corps general permits (including Nationwide, Regional or Letters of Permission) as long as the impacts are considered cumulatively and do not exceed the acreage limit or linear footage limits of the 17-SPGP-01. Two separate activities (e.g. Residential and Linear, within 17-SPGP-01, may be combined as long as they do not exceed the acreage or linear footage threshold of the activity with the highest specified acreage or linear footage threshold).
- 7) Permit on-site: The permittee shall ensure that a copy of 17-SPGP-01 and the accompanying authorization letter are at the work site at all times. These copies must be made available to any regulatory representative upon request. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be expected to comply with all conditions of any 17-SPGP-01 verification.

- 8) **Historic Properties:** In cases where the Corps determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the District Engineer with the appropriate documentation to demonstrate compliance with those requirements. The District Engineer will review the documentation and determine whether it is sufficient to address section 106 compliance for the 17-SPGP-01 activity or whether additional section 106 consultation is necessary.

Non-federal permittees shall not begin work on the activity until Section 106 review and/or coordination has been completed AND they have received their 17-SPGP verification letter from the VDEQ.

Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such permit or assistance despite the adverse effect created or allowed by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

**Discovery of Previously Unknown Remains and Artifacts:** If a permittee discovers any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, the permittee must immediately notify the District Engineer of what has been found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The District Engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

Tribal Rights: No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

- 9) Federal Lands: Authorized activities shall not impinge upon the value of any National Wildlife Refuge, National Forest, National Park, or any other area administered by the United States Fish and Wildlife Service (USFWS), U.S. Forest Service, or National Park Service unless approval from the applicable land management agency is provided with the permit application.
- 10) Endangered Species: No activity is authorized under any 17-SPGP-01 which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any 17-SPGP-01 which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the District Engineer with the appropriate documentation to demonstrate compliance with those requirements. The District Engineer will review the documentation and determine whether it is sufficient to address ESA compliance for the 17-SPGP-01 activity, or whether additional ESA consultation is necessary.

Non-federal permittees shall not begin work on the activity until Section 7 review and/or consultation has been completed AND they have received their 17-SPGP verification letter from the VDEQ.

Authorization of an activity by a 17-SPGP-01 does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the USFWS or the National Marine Fisheries Service (NMFS), The Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the USFWS and NMFS or their World Wide Web



pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.noaa.gov/fisheries.html> respectively.

- 11) Migratory Birds and Bald and Golden Eagles: The permittee is responsible for obtaining any "take" permits required under the USFWS regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the USFWS to determine if such "take" permits are required for a particular activity. As of the issuance date of the 17-SPGP the current contact, concerning this matter, is at the U.S. Fish and Wildlife Service, Thomas Wittig at 413-253-8577 or [Thomas\\_wittig@fws.gov](mailto:Thomas_wittig@fws.gov). Information on active bald eagle nests in the project area can be obtained via The Center for Conservation Biology (CCB) Virginia Eagles Nest Locator: <http://www.ccb-wm.org/virginiaeagles/index.htm>.
- 12) Wild and Scenic Rivers: Currently, there are no designated Wild and Scenic Rivers in Virginia. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system, while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river has determined, in writing, that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service (NPS), U.S. Forest Service (USFS), Bureau of Land Management (BLM), USFWS). Impacts that occur in these resource areas will require coordination with the appropriate Federal agency.
- 13) Department of Defense (DOD) Siting Clearinghouse Coordination: For all commercial and institutional development projects that include the construction of wind energy generating structures, solar towers, or overhead powerlines the VDEQ must notify the DOD Clearinghouse of the permitted project. The VDEQ will send a copy of the joint permit application and SPGP verification letter to the following address: DoD Clearinghouse, Attn: David Blalock, 101 Marietta St. NW, Suite 3120, Atlanta, Georgia 30303 or [david.c.blalock2.civ@mail.mil](mailto:david.c.blalock2.civ@mail.mil)
- 14) Navigation: No authorized activity may cause more than a minimal adverse effect on navigation.

The permittee understands and agrees that if future operations by the United States require the removal, relocation, or other alteration of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his/her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United

States. No claim shall be made against the United States on account of any such removal or alteration.

- 15) Floodplains: The activity must comply with applicable FEMA-approved state or local floodplain management requirements.
- 16) 408 Certification: Under 33 USC 408, no activity may temporarily or permanently alter or make use of a U.S. Army Corps of Engineers civil works project unless reviewed and permitted by the Secretary of the Army. The Corps may grant this permission if the work does not impair the usefulness of the project and is not injurious to the public interest.
- 17) Environmental justice: Activities authorized under 17-SPGP-01 must comply with Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations".
- 18) Federal liability: In issuing 17-SPGP-01, the Federal government does not assume any liability for the following: (a) damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes; (b) damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest; (c) damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by 17-SPGP-01; (d) design or construction deficiencies associated with the permitted work; (e) damage claims associated with any future modification, suspension, or revocation of this permit.
- 19) Avoidance and minimization: Except as provided under section 404(b)(2), no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences. ( 40 CFR 230.10(a)-(d) Section 404 (b)(1) Guidelines).
- 20) Compensatory Mitigation: Mitigation will be required for all permanent impacts, on a project site, once the compensatory mitigation threshold has been exceeded for waters OR wetland impacts.
  - a. Wetland mitigation: will generally be required for all residential, commercial, and institutional development projects where the total permanent impacts exceed 1/10 acre AND for all wetland impacts on linear transportation projects that are funded in part or in total by local, state or federal funds.

Generally, the minimum required wetland mitigation ratios will be as follows:

- 2:1 for forested wetlands
- 1.5:1 for scrub-shrub wetlands
- 1:1 for herbaceous emergent wetlands
- 0.5:1 for permanent loss of open waters
- 1:1 for conversion of forested wetlands to herbaceous emergent wetlands.

Compensatory mitigation may be required on a case-by-case basis to ensure impacts are minimal for:

- permanent or temporary conversion of one wetland type to another
- wetland impacts totaling less than 1/10 acre
- at mitigation ratios beyond the generally recommend ratios

All wetland mitigation will comply with the Mitigation Rule [Corps-EPA Compensatory Mitigation for Losses of Aquatic Resources, dated April 10, 2008, 33 CFR 325 and 332/40 CFR 230].

- b. Stream mitigation: will generally be required for all residential, commercial, institutional developments AND linear transportation projects where the total permanent stream channel impacts exceed 300 linear feet.

Minimum stream mitigation requirements will be determined using the current Corps and VDEQ endorsed assessment methodology.

Stream mitigation that exceeds the assessment methodology recommendation and mitigation for impacts totaling less the 300 linear feet may be required on a case-by-case basis to ensure impacts are minimal.

All stream mitigation will comply with Mitigation Rule [Corps-EPA Compensatory Mitigation for Losses of Aquatic Resources dated April 10, 2008 33 CFR 325 and 332; 40 CFR 230].

Where local zoning ordinances provide for riparian and floodplain protection pursuant to the Chesapeake Bay Preservation Act (Virginia Code 10.1-2100 et seq.) and the Chesapeake Bay Preservation Area Designation and Management Regulations (9 VAC 1-20 et seq.), the use of buffers as a form of compensatory mitigation shall be allowed only:

- where the extent of the buffer exceeds the lateral extent already required by local ordinances pursuant to the Act and the regulations
- where the quality of the existing protected buffer area is enhanced to provide greater water quality protection benefits
- where the proposed compensatory mitigation is undertaken in



compliance with the Mitigation Rule [Corps-EPA Compensatory Mitigation for Losses of Aquatic Resources: Final Rule dated April 10, 2008 33 CFR 332.4(c)(2)-(14) and 33 CFR 332.3(h)]

- 21) Heavy Equipment: Heavy equipment working in wetlands must be placed on mats, or other measures must be taken to minimize soil disturbance.
- 22) Temporary fills: All temporarily disturbed waters and wetlands must be restored to their pre-construction contours within 12 months of commencing the temporary impact's construction. Impacts that will not be restored within 12 months (calculated from the start of the temporary impacts construction) will be considered permanent unless otherwise approved by the Corps, and compensatory mitigation may be required. Once restored to their natural contours, soil in these temporarily disturbed areas must be mechanically loosened to a depth of 12 inches and wetland areas must be seeded or sprigged with appropriate native vegetation.
- 23) Sedimentation and erosion control: Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.
- 24) Countersinking of Pipes and Culverts: Following consultation with the Virginia Department of Game and Inland Fisheries (VDGIF), the Norfolk District assumes there are fish and other aquatic organisms present in any stream being crossed, in the absence of site-specific evidence to the contrary. Although prospective permittees have the option of providing such evidence, extensive efforts to collect such information is not encouraged, since countersinking will in most cases be required except as outlined in the conditions below:
  - a. All pipes and culverts placed in streams will be countersunk at both the inlet and outlet ends, unless indicated otherwise by the VDEQ on a case-by-case basis (see below). Pipes that are 24" or less in diameter shall be countersunk 3" below the natural stream bottom. Pipes that are greater than 24" in diameter shall be countersunk at least 6" below the natural stream bottom. The countersinking requirement does not apply to bottomless pipes/culverts or pipe arches. All single pipes or culverts (with bottoms) shall be depressed (countersunk) below the natural streambed at both the inlet and outlet of the structure. In sets of multiple pipes or culverts (with bottoms) at least one pipe or culvert shall be depressed (countersunk) at both the inlet and outlet to convey low flows.
  - b. When countersinking culverts, permittees must ensure reestablishment of a surface water channel (within 15 days post

construction) that allows for the movement of aquatic organisms and maintains the same hydrologic regime that was present pre-construction (i.e. the depth of surface water through the permit area should match the upstream and downstream depths). This may require the addition of finer materials to choke the larger stone and/or placement of riprap to allow for a low flow channel.

- c. Exemption for extensions and certain maintenance: The requirement to countersink does not apply to extensions of existing pipes or culverts that are not countersunk, or to maintenance to pipes/culverts that does not involve replacing the pipe/culvert (such as repairing cracks, adding material to prevent/correct scour, etc.).
- d. Floodplain pipes: The placement of pipes/culverts above ordinary high water, such as those placed to allow for flood plain flows, is not jurisdictional (provided no fill is discharged into wetlands).
- e. Hydraulic opening: Pipes should be adequately sized to allow for the passage of ordinary high water with the countersinking and invert restrictions taken into account.
- f. Pipes on bedrock or above existing utility lines: Different procedures will be followed for pipes or culverts to be placed on bedrock or above existing buried utility lines where it is not practicable to relocate the lines, depending on whether the work is for replacement of an existing pipe/culvert or a new pipe/culvert:
  - i. Replacement of an existing pipe/culvert: Countersinking is not required provided the elevations of the inlet and outlet ends of the replacement pipe/culvert are no higher above the stream bottom than those of the existing pipe/culvert. Documentation (photographic or other evidence) must be maintained in the permittee's records showing the bedrock condition and the existing inlet and outlet elevations. That documentation will be available to the Norfolk District upon request, but notification or coordination with the Norfolk District is not otherwise required.
  - ii. A pipe/culvert is being placed in a new location: If the prospective permittee determines that bedrock or an existing buried utility line that is not practicable to relocate prevents countersinking, they should evaluate the use of a bottomless pipe/culvert, bottomless utility vault, span (bridge) or other bottomless structure to cross the waterway, and also evaluate alternative locations for the new pipe/culvert that will allow for countersinking. If the prospective permittee determines that neither a bottomless structure nor an alternative location is practicable, then they must submit supporting documentation in the JPA. The prospective permittee must provide documentation of measures evaluated to minimize disruption of the movement of aquatic



life as well as documentation of the cost, engineering factors, and site conditions that prohibit countersinking the pipe/culvert. Options that must be considered include partial countersinking (such as less than 3" of countersinking, or countersinking of one end of the pipe), and constructing stone step pools, low rock weirs downstream, or other measures to provide for the movement of aquatic organisms. The permit application must also include photographs documenting site conditions. The prospective permittee may find it helpful to contact his/her regional fishery biologist for the VDGIF, for recommendations about the measures to be taken to allow for fish movements. When seeking advice from VDGIF, the prospective permittee should provide the VDGIF biologist with all available information such as location, flow rates, stream bottom features, description of proposed pipe(s), slopes, etc. Any recommendations from VDGIF should be included in the JPA. The VDEQ will notify the prospective permittee whether the proposed work qualifies for the 17-SPGP-01. NOTE: Blasting of stream bottoms through the use of explosives is not acceptable as a means of providing for countersinking of pipes on bedrock.

- g. Pipes on steep terrain: Pipes being placed on steep terrain (slope of 5% or greater) must be countersunk in accordance with the conditions above. It is recommended that on slopes greater than 5%, a larger pipe than required be installed to allow for the passage of ordinary high water in order to increase the likelihood that natural velocities can be maintained. There may be situations where countersinking both the inlet and outlet may result in a slope in the pipe that results in flow velocities that cause excessive scour at the outlet and/or prohibit some fish movement. This type of situation could occur on the side of a mountain where falls and drop pools occur along a stream. Should this be the case, or should the prospective permittee not want to countersink the pipe/culvert for other reasons, they must provide documentation of measures evaluated to minimize disruption of the movement of aquatic life as well as documentation of the cost, engineering factors, and site conditions that prohibit countersinking the pipe/culvert. The prospective permittee should design the pipe to be placed at a slope as steep as stream characteristics allow, countersink the inlet 3-6", and implement measures to minimize any disruption of fish movement. These measures can include constructing a stone step/pool structure, preferably using river rock/native stone rather than riprap, constructing low rock weirs to create a pool or pools, or other structures to allow for fish movements in both directions. Stone structures should be designed with sufficient-sized stone to prevent

erosion or washout and should include keying-in as appropriate. These structures should be designed both to allow for fish passage and to minimize scour at the outlet. The quantities of fill discharged below ordinary high water necessary to comply with these requirements (i.e., the cubic yards of stone, riprap or other fill placed below the plane of ordinary high water) must be included in project totals. The prospective permittee may find it helpful to contact the regional fishery biologist for the VDGIF, for recommendations about the measures to be taken to allow for fish movements. When seeking advice from VDGIF, the applicant should provide the VDGIF biologist with all available information such as location, flow rates, stream bottom features, description of proposed pipe(s), slopes, etc. Any recommendations from DGIF should be included in the permit application. The VDEQ will notify the prospective permittee whether the proposed work qualifies for the 17-SPGP-01.

- h. Problems encountered during construction: When a pipe/culvert is being replaced, and the design calls for countersinking at both ends of the pipe/culvert, and during construction it is found that the streambed/banks are on bedrock, a utility line, or other documentable obstacle, then the permittee must stop work and contact the VDEQ (contact by telephone and/or email is acceptable). The permittee must provide the VDEQ with specific information concerning site conditions and limitations on countersinking. The VDEQ will work with the permittee to determine an acceptable plan, taking into consideration the information provided by the permittee, but the permittee should recognize that the VDEQ and/or Corps could determine that the work will not qualify for a 17-SPGP-01 authorization.
- i. Emergency pipe replacements: In the case of an emergency situation, such as when a pipe/culvert washes out during a flood, a permittee is encouraged to countersink the replacement pipe at the time of replacement, in accordance with the conditions above. However, if conditions or timeframes do not allow for countersinking, then the pipe can be replaced as it was before the washout, but the permittee will have to come back and replace the pipe/culvert and countersink it in accordance with the guidance above. In other words, the replacement of the washed out pipe is viewed as a temporary repair, and a countersunk replacement should be made at the earliest possible date. The VDEQ must be notified of all pipes/culverts that are replaced without countersinking at the time that it occurs, and must provide the permittee's planned schedule for installing a countersunk replacement (it is acceptable to submit such notification by email). The permittee should anticipate whether bedrock or steep terrain will limit countersinking and, if so, should follow the procedures outlined in (g) and/or (h) above.

- 25) Discharge of pollutants: All authorized activities involving any discharge of pollutants into waters of the United States shall be consistent with applicable water quality standards, effluent limitations, standards of performance, prohibitions, and pretreatment standards and management practices established pursuant to the CWA (33 U.S.C. § 1251 et seq.) and applicable state and local laws.
- 26) Suitable Material: No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).
- 27) Obstruction of high flows: Discharges of dredged or fill material must not permanently restrict or impede the passage of normal or expected high flows.
- 28) Aquatic Life Movements: No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species.
- 29) Spawning Areas: Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.
- 30) Migratory Bird Breeding Areas: Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.
- 31) Native trout and anadromous fishes: Authorizations for discharges of dredged or fill material into native trout waters or anadromous fish spawning areas are conditioned to limit in-stream work within the timeframes recommended by the DGIF. <http://206.16.194.16/environmental-programs/files/VDGIF-Time-of-Year-Restrictions-Table.pdf>
- 32) Water supply intakes: No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization
- 33) Invasive Species: Plant species on the most current Virginia Department of Conservation and Recreation's Invasive Plant Species List shall not be used for replanting activities authorized by the SPGP. The list of invasive plants in Virginia

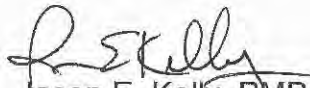


may be found at: <http://www.dcr.virginia.gov/natural-heritage/document/nh-invasive-plant-list-2014.pdf>

- 34) Inspections: The permittee understands and agrees that the Corps and/or the VDEQ are permitted and allowed to make periodic inspections at any time the Corps or VDEQ deems necessary in order to assure that the activities being performed under authority of this permit are in accordance with the terms and conditions prescribed herein. The Corps reserves the right to require post-construction engineering drawings and/or surveys of any work authorized under 17-SPGP-01, as deemed necessary on a case-by-case basis.
- 35) Maintenance: The permittee shall maintain the work authorized herein in good condition and in conformance with all terms and conditions of this permit. All fills shall be properly maintained to ensure public safety.
- 36) Property rights: 17-SPGP-01 does not convey any property rights, either in real estate or material, or convey any exclusive privileges, nor does it authorize any injury to property or invasion of rights or any infringement of Federal, state, or local laws or regulations. If real estate rights are needed from the Corps, you must contact the Corps Real Estate Office at (757) 201-7735 or at the address listed on the front page of this permit.
- 37) Suspension and revocation: 17-SPGP-01 and individual verifications under 17-SPGP-01 maybe either suspended or revoked in whole or in part pursuant to the policies and procedures of 33 C.F.R. § 325.7. Any such action shall not be the basis for any claim for damages against the United States.
- 38) Restoration directive: The permittee, upon receipt of a restoration directive, shall restore the waters of the United States to their former conditions without expense to the United States and as directed by the Secretary of the Army or his/her authorized representative. If the permittee fails to comply with such a directive, the Secretary or his/her designee, may restore the waters of the United States to their former conditions, by contract or otherwise, and recover the cost from the permittee.
- 39) Special conditions: The Corps may impose other special conditions on a project verified pursuant to 17-SPGP-01 that are determined necessary to minimize adverse navigational and/or environmental effects or based on any other factor of the public interest. Failure to comply with all conditions of the authorization/verification, including special conditions, constitutes a permit violation and may subject the permittee, or his/her contractor, to criminal, civil, or administrative penalties and/or restoration.
- 40) False or incomplete information: In granting authorization pursuant to this permit, the Corps has relied upon information and data provided by the permittee. If,

subsequent to notification by the Corps or the VDEQ that a project qualifies for this permit, such information and data prove to be materially false or materially incomplete, the Corps may suspend or revoke authorization, in whole or in part, and/or the United States or Corps may institute appropriate legal proceedings.

- 41) Abandonment: If the permittee decides to abandon the activity authorized under 17-SPGP-01, unless such abandonment is merely the transfer of property to a third party, they may be required to restore the area to the satisfaction of the Corps.
- 42) Transfer of verification: In order to transfer verification under 17-SPGP-01, the transferee and permittee must supply the Corps and the VDEQ with a written and signed, by all appropriate parties, request to make such a transfer. Such transfer is not effective until written approval has been granted by the Corps or the VDEQ.
- 43) Binding effect. The provisions of the permit authorization shall be binding on any assignee or successor in interest of the original permittee.
- 44) Expiration of 17-SPGP-01: Unless further suspended or revoked the 17-SPGP-01 will be in effect until May 31, 2022. Activities which have commenced (i.e., are under construction) or are under contract to commence construction in reliance upon 17-SPGP-01 will remain authorized provided the activity is completed within twelve months of the date of this 17-SPGP-01's expiration of May 31, 2022, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 CFR 325.7(a-e).

  
Jason E. Kelly, PMP  
Colonel, U.S. Army  
Commanding

March 5, 2019

**FACT SHEET**

Virginia Water Protection Individual Permit No. 18-1003

Northfax, City of Fairfax

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DEQ has reviewed the application for the Virginia Water Protection (VWP) Individual Permit Number 18-1003 and has determined that the project qualifies for an individual permit.

The following details the application review process and summarizes relevant information for developing the Part I - Special Conditions for permit issuance.

**1. Contact Information:**

**Permittee Legal Name and Address:**

Northfax JV LLC  
3900 Jermantown Road, Suite 300  
Fairfax, Virginia 22030  
Mr. John E. Napolitano, Manager  
703-934-4600

**Agent Legal Name and Address:**

Apex Companies, LLC c/o  
9700 Capital Court, Suite 100  
Manassas, Virginia 20110  
Mr. Jason Franti  
703-396-6730

**2. Processing Dates:**

Received Application:	June 25, 2018
Received VMRC Number:	June 25, 2018
Application Complete:	September 12, 2018
Permit Fee Deposited by Accounting:	August 27, 2018
Application Suspended:	September 26, 2018
Application Reinstated:	December 11, 2018
Processing Deadline (120 days from Complete Application):	March 27, 2019
1 <sup>st</sup> Request for Additional Information Sent:	July 3, 2018
Final Request for Additional Information Received:	September 12, 2018
Section 106 SPGP Coordination Initiated:	August 13, 2018
Section 7 SPGP Coordination Initiated:	August 13, 2018
Request for comments sent to USACE, USEPA and USFWS:	August 13, 2018
Completion of SPGP coordination:	October 31, 2018
Notification of JPA sent to Local Government(s):	June 28, 2018
Commissioner of Revenue Contacted:	N/A
Request for comments sent to VDH, VDGIF, VDCR, VMRC:	June 28, 2018
Letters sent to Riparian Land Owners:	July 11, 2018
Draft Permit Package Issued:	January 2, 2019
Copy of Public Notice sent to DEQ Central Office:	January 2, 2019
Copy of Public Notice sent to Local Gov't and Planning District:	January 2, 2019
Application Suspended Pending Public Notice:	January 17, 2019
Public Notice Published:	January 18, 2019
Application Reinstated:	January 18, 2019
End of 30-Day Public Comment Period:	February 18, 2019
Received Verification of Publication:	January 22, 2019
Permit Issued:	March 5, 2019

**3. Project Location:**

The project site is located northeast of the intersection of Chain Bridge Road (VA-123) and Fairfax Boulevard (US-50) in the City of Fairfax, Virginia.

City/County:	City of Fairfax
Waterbody:	Accotink Creek, UT
Basin:	Potomac
Subbasin:	Middle Potomac
Section:	7
Class:	III
Special Standards:	b
HUC:	02070010
Latitude & Longitude:	38.859417, -77.309689
U.S.G.S. Quadrangle:	Fairfax
State Watershed No.:	VAN-A15R

#### **4. Project Description:**

The permittee proposes to construct a mixed-use development with associated infrastructure, on an approximately 10.6 acre development site, known as “Northfax.”

#### **5. Avoidance and Minimization Efforts:**

Avoidance and minimization efforts have been documented by the applicant in the JPA as well as subsequent submittals. The purpose and need of the project is a mixed-use development. However, the purpose and need cannot be met without flood control. A perennial stream channel bisects the property and the development site has been known historically to flood. Complete and partial avoidance was considered by the applicant, however due to the flood conditions and the location of surface waters onsite, completely avoiding or partially piping the channel would result in minimizing the developable area to around fifty-percent of the original design with flooding concerns further minimizing the developable area.

Complete avoidance was considered and deemed infeasible to meet the projects purpose and need as it would reduce the developable land to 4.40 acres thus reducing the Annualized Cost on Return (IRR) to well below the target. In addition, the flood elevations would still render approximately fifty-percent of the developable land area in an unusable condition due to the presence of RPA and flood zones. A historic trolley bridge is located just off-site over the intermittent channel, downstream of the confluence of the two channels, which causes back watering due to its limiting size. Discharge at the confluence of the stream channels during the 100-year storm creates a significant back-water situation thus further limiting developable area due to flood concerns.

A partial stream piping scenario was also considered, in which approximately 500 linear feet of stream channel would be piped leaving most of the perennial stream and all the intermittent stream intact. In this scenario Orchard Road would be still constructed in order to access the western portion of the property. As the stream channel bisects the 10.6 acre development site, the use of Orchard Road would necessitate significant alteration to the flood zones through the installation of a culverted road crossing, thus constricting flood flows and increasing flooding to the northern portion of the property. The back-water flooding associated with the historic trolley bridge would still be a limiting factor for developable land. Flood elevations will allow development of approximately fifty-percent of the total developable area rendering the IRR for the alternative well below the target, thus this alternative was deemed infeasible to meet the projects purpose and need.

For additional information, see page 4-5 of the JPA dated June 22, 2018, the additional information response dated August 10, 2018, and the response to EPA comments dated October 16, 2018.



Based upon staff review, the applicant has demonstrated that the proposed plan represents the least environmentally damaging and practicable alternative and all unavoidable permanent impacts will be adequately mitigated through the proposed compensation plan.

## **6. Project Impacts:**

This permit authorizes the total permanent impact to 0.50 acre (1,646 linear feet) of stream channel. Authorized surface water impacts shall be as depicted on the impacts map entitled Stream Impact Exhibit dated August 9, 2018, with latest revision date of August 21, 2018, and received September 12, 2018.

## **7. Compensation for Unavoidable Impacts:**

The permittee shall compensate for permanent stream impacts through the purchase of 1,675 stream credits or 4,761 Stream Condition Units from a DEQ approved mitigation bank, in-lieu fee fund, or a combination thereof that is authorized and approved by DEQ to sell credits in the area in which the impacts will occur and has credits available (as released by DEQ). The credit sale shall be in accordance with the approved Mitigation Banking Instrument for the mitigation bank. Purchase of required mitigation credits shall occur first through the purchase of available released credits followed by the purchase of advance credits.

The compensation package conforms with the preference hierarchy of the 2008 Compensatory Mitigation Rule issued by the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers (USACE) and DEQ's Guidance Memorandum No. 09-2004 (Applying Compensatory Mitigation Preferences Provided in the EPA Mitigation Rule to Virginia Water Protection Permitting).

## **8. Site Inspection:**

A site visit was conducted on July 23, 2018. The site visit confirmed the site description provided in the applications materials accurately characterized the surface waters on the site. A summary of the site inspection is located in VWP Permit File No. 18-1003.

## **9. Relevant Regulatory Agency Comments:**

As part of the application review process, DEQ contacted the appropriate state regulatory agencies and coordinated with various federal regulatory agencies, including the U.S. Army Corps of Engineers (USACE). No comments received required a change to VWP individual permit Part I - Special Conditions. Therefore, the staff anticipates no adverse effect on water quality and fish and wildlife resources provided the applicant adheres to the permit conditions.

### **a. Summary of State Agency Comments and Actions**

By email/letter dated June 28, 2018, comments were requested from the following state agencies: Virginia Department of Game and Inland Fisheries (DGIF), Virginia Department of Conservation and Recreation (DCR), Virginia Marine Resources Commission (VMRC), and

Virginia Department of Health (VDH). Failure to provide comments within 45 calendar days of the DEQ request for comments infers that the agency has no comments on the project activities.

#### DCR

DCR provided the following comments in a memorandum dated and transmitted by email on August 10, 2018:

- Recommends the implementation of the following USFWS voluntary measures for the conservation of the Rusty patched bumble bee (*Bombus affinis*): avoid pesticide use, avoid herbicide use, and plant native flowers that bloom throughout the spring and summer to support pollinator habitat.

*The measures will not be included in the permit as they are listed as voluntary.*

#### DGIF

DGIF provided comments to DEQ by email dated August 10, 2018.

- Recommended conducting any in-stream activities during low or no-flow conditions, using non-erodible cofferdams or turbidity curtains to isolate the construction area, blocking no more than 50% of the streamflow at any given time, stockpiling excavated material in a manner that prevents reentry into the stream, restoring original streambed and streambank contours, revegetating barren areas with native vegetation, and implementing strict erosion and sediment control measures.

*The special conditions of the permit address these activities.*

- Recommend coordination with DCR's Department of Natural Heritage as the project is located within 2 miles of a documented occurrence of a state or federal threatened or endangered plant or insect species and/or other Natural Heritage coordination species.

*Staff requested comments from DCR on the proposed project on June 28, 2018.*

- Recommend that the permittee avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable to minimize overall impacts to wildlife and our natural resources. DGIF also recommended maintaining undisturbed naturally vegetated buffers of at least 100 feet in width around all on-site wetlands and on both sides of all perennial and intermittent streams.

*Staff reviewed the proposed impacts to surface waters and determined those proposed have been minimized to the maximum extent practicable.*

- Recommended that the stormwater controls for this project be designed to replicate and maintain the hydrographic condition of the site prior to the change in landscape.

*Oversight of stormwater management and erosion and sediment control measures is the responsibility of DEQ-Stormwater Management or the locality, if such responsibility has*

*been delegated. Any such requirements will be implemented under the oversight of that program.*

- Recommended that all tree removal and ground clearing adhere to a time of year restriction protective of resident and migratory songbird nesting from March 15 through August 15 of any year.

*This time of year restriction was not included in the permit as it's not associated with a threatened or endangered species. The recommendation was forwarded to the permittee for their consideration.*

- Recommended adherence to erosion and sediment controls during ground disturbance.

*Oversight of stormwater management and erosion and sediment control measures is the responsibility of DEQ-Stormwater Management or the locality, if such responsibility has been delegated. Any such requirements will be implemented under the oversight of that program.*

#### VDH

VDH provided comments in a memorandum dated July 12, 2018, and received on July 16, 2018, that no public raw water intakes were found, in the commonwealth, downstream from the proposed construction site.

#### VMRC

VMRC provided comments in a letter dated and transmitted by email on August 7, 2018, stating that the project is not within the purview of the agency and the Commission has no objection to DEQ's issuance of a VWP individual permit. A "No Permit Necessary" letter was issued on June 6, 2018.

#### b. Summary of Federal Agency Comments and Actions

The project is being reviewed by DEQ for a State Programmatic General Permit (SPGP). By letter dated July 13, 2018, comments were requested from the following federal agencies: Environmental Protection Agency (EPA), U.S. Army Corps of Engineers (USACE), and U.S. Fish and Wildlife (FWS).

#### Section 106

USACE provided comments to DEQ by email transmitted October 30, 2018 stating the Department of Historic Resources concurs with the Corps' determination that there will be "No Historic Properties Affected" by the proposed project.

#### Section 7

FWS responded to the request for Section 7 comments by email transmitted on August 14, 2018 requesting a Self-Certification Letter. DEQ responded on August 24, 2018, with the Self-Certification Letter. No response was received within 30 days of the latest transmittal.

### Federal Review

EPA responded to the request for Federal Review by email transmitted on August 28, 2018, requesting more information on avoidance and minimization. The applicant responded to the comments, and the response was forwarded to EPA on October 16, 2018. No response was received within 15 days of the latest transmittal. No project comments were received from FWS or USACE.

### **10. Riparian Landowner Notification:**

Staff notified riparian landowners located adjacent to the impact area by letter dated July 11, 2018. The impacted stream channel is piped starting at the edge of the property continuing offsite, therefore downstream landowners were not notified.

Notifications of riparian and adjacent landowners were conducted in accordance with DEQ's Guidance Memorandum No. 11-2005 (Revised Local Government, Riparian Property Owner, Adjacent Property Owner or Resident, and General Public Notification Procedures for VPDES, VPSA and VWP Permit Applications and Draft Permits).

No significant responses were received.

### **11. Changes in Permit Part I - Special Conditions Due to Public Comments:**

The public notice was published in Fairfax County Times Friday-Sunday, January 18-20, 2019, on January 18, 2019. The public comment period ran from January 19, 2019, to February 18, 2019.

One public comment letter was received. However, no substantial or disputed issues were presented that warranted revisions to the draft conditions of the permit.

### **12. Special Conditions:**

The following conditions were developed to protect instream beneficial uses, to ensure compliance with applicable water quality standards, to prevent significant impairment of state waters or fish and wildlife resources, to provide for no net loss of wetland acreage, and to provide no net loss of functions in all surface waters through compensatory mitigation and monitoring and reporting.

#### ***Section A      Authorized Activities***

Nos. 1-3 addresses the activities authorized by this permit, including impact types and limits.

#### ***Section B      Permit Term***

Nos. 1-2 addresses the permit term and re-issuance process to ensure that all permit conditions are completed.



***Section C      Standard Project Conditions***

- No. 1 addresses the requirement for the minimization of adverse impacts to instream beneficial uses.
- No. 2 ensures that the project will be executed in a manner that limits the disruption of the movement of aquatic life.
- No. 3 ensures that downstream flows will be maintained to protect both instream and off-stream beneficial uses
- No. 4 ensures the minimization of adverse effects on navigation.
- No. 5 ensures the passage of high flows.
- No. 6 requires maintenance of continuous flow of perennial springs for the protection of instream beneficial use.
- No. 7 ensures that dredging and filling operations will minimizes stream bottom disturbances and turbidity.
- No. 8 requires instream activities to be conducted during low-flow conditions to protect instream beneficial uses.
- Nos. 9 through 11 provide requirements and limitations on the entry of various materials (including concrete, fill, construction and waste material, fuels, lubricants, and untreated stormwater runoff) into state waters.
- Nos. 12 and 13 limit the use of machinery and equipment in surface waters to protect beneficial uses
- Nos. 14 through 18 require temporary disturbances to surface waters during construction to be avoided and minimized to the maximum extent practicable and the restoration of such temporary disturbances.
- No. 19 prohibits the violation of Water Quality Standards in surface waters as a result of project activities
- No. 20 requires the identification of all non-impacted surface waters in the vicinity of the proposed activity to prevent unpermitted impacts
- Nos. 21 through 25 set forth all reporting requirements concerning construction, monitoring, compensation, and restoration as required by current law and regulations.

***Section D      Stream Modifications, Including Intake/Outfall Structures***

- No. 1 prohibits the use of stream substrate for erosion control to avoid additional impacts to state waters.
- No. 2 requires upland disposal of material removed from stream substrate to avoid unpermitted impacts to surface waters.
- No. 3 ensures riprap placement conforms to current law and regulation.
- Nos. 4 and 5 direct the placement and contents of materials for the construction of submerged structures, and on-bank storage and staging of materials, to protect water quality and fish and wildlife resources.

***Section E      Installation of Utilities***

- No. 1 requires the minimization of disturbance to surface waters and restoration to preconstruction conditions following utility line installation.

No. 2 sets a 90-day time limit for temporary sidecasting during trench excavation to minimize impacts to surface waters.

No. 3 provides the requirements for trench construction to avoid the drainage of surface waters.

#### ***Section F Road Crossings***

No. 1 provides specifications for access road construction to minimize adverse effects to surface waters.

No. 2 ensures pipes and culvert construction is conducted in the dry to protect water quality and wildlife habitat.

No. 3 requires that temporary impacts be restored immediately following construction to minimize impacts to water quality and fish and wildlife resources.

No. 4 summarizes requirements for pipe and culvert placement and countersinking to provide for the re-establishment of a natural stream bottom and low flow channel to maintain instream beneficial uses

No. 5 requires measurement of stream bottom elevations at road crossings to ensure for the re-establishment of a natural stream bottom and low flow channel to maintain instream beneficial uses. The intent of this condition is to maintain a hydrologic connection and enable the stream bottom to reestablish in the culvert. The stream crossing(s) to which this condition pertains is identified in the condition.

#### ***Section G Stormwater Management Facilities***

No. 1 defines the general requirements for stormwater management facility construction to minimize adverse effects to aquatic resources and provide for long-term aquatic resources protection and enhancement.

No. 2 provides limits and guidance for maintenance excavation to avoid unpermitted impacts to surface waters.

#### ***Section H Project Construction Monitoring and Submittals (Impact Site)***

Nos. 1 through 6 address monitoring and submittals required for pre-construction, during construction and post-construction for the impact areas on site.

#### ***Section I Compensatory Mitigation***

No. 1 describe the compensatory mitigation required to mitigate for the permitted impacts.

No. 2 describes the documentation requirement for the purchase of the required amount of credits.

### **13. General Conditions:**

The general conditions specified in the effective VWP Permit Program Regulation 9VAC25-210 apply to all VWP individual permits.

### **14. General Criteria (9VAC25-260-20 A):**

State waters, including wetlands, shall be free from substances attributable to sewage, industrial waste, or other waste in concentrations, amounts, or combinations which contravene established standards or interfere directly or indirectly with designated uses of such water or which are inimical or harmful to human, animal, plant, or aquatic life.

Specific substances to be controlled include, but are not limited to: floating debris, oil, scum, and other floating materials; toxic substances (including those which bioaccumulate); substances that produce color, tastes, turbidity, odors, or settle to form sludge deposits; and substances which nourish undesirable or nuisance aquatic plant life. Effluents which tend to raise the temperature of the receiving water will also be controlled. Conditions within mixing zones established according to 9VAC25-260-20 B do not violate the provisions of this subsection.

#### **15. Staff Findings and Recommendations:**

- In compliance with § 401 of the Clean Water Act, as amended (33 USC § 1341) and the State Water Control Law and regulations adopted pursuant thereto, the board has determined that there is a reasonable assurance that this VWP permit, if complied with, will protect instream beneficial uses, will not violate applicable water quality standards, and will not cause or contribute to a significant impairment of state waters or fish and wildlife resources. In issuing this VWP permit, the board has not taken into consideration the structural stability of any proposed activities.
- The proposed permit conditions address no net loss of wetland acreage and no net loss of functions in all surface waters, through the avoidance and minimization of wetland impacts to the maximum extent practicable; compensatory mitigation; and compensation monitoring and reporting. Permitted wetland impacts have been inventoried in evaluating this proposed permit.
- The draft permit reflects the required consultation with and full consideration of the written recommendations of VMRC, VDH, DCR and DGIF.

Staff recommends VWP Individual Permit Number 18-1003 be issued as proposed.



*Commonwealth of Virginia*

*VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY*

NORTHERN REGIONAL OFFICE  
13901 Crown Court, Woodbridge, Virginia 22193  
(703)583-3800  
[www.deq.virginia.gov](http://www.deq.virginia.gov)

Matthew J. Strickler  
Secretary of Natural Resources

David K. Paylor  
Director  
(804) 698-4000

Thomas A. Faha  
Regional Director

March 5, 2019

By e-mail: [john@lann.com](mailto:john@lann.com)  
**Receipt Confirmation Requested**

Mr. John E. Napolitano, Manager  
Northfax JV LLC  
3900 Jermantown Road, Suite 300  
Fairfax, Virginia 22030

Re: Virginia Water Protection (VWP) Individual Permit Number 18-1003  
Northfax, City of Fairfax, Virginia  
Final VWP Individual Permit

Dear Mr. Napolitano:

Pursuant to the VWP Permit Program Regulation 9 VAC 25-210 and § 401 of the Clean Water Act Amendments of 1977, Public Law 95-217, the Department of Environmental Quality has enclosed the VWP Individual Permit for the "Northfax" project.

This permit is valid for 15 years from the date of issuance. An extension of the permit may not occur as the permit term cannot exceed the maximum of 15 years. A new permit may be necessary if any portion of the authorized activities or any permit requirement (including compensatory mitigation provisions) is not complete at the end of the 15 year permit term.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have **30 calendar days** from the date of service (the date you actually received this decision or the date it was e-mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period. Refer to Part 2A of the Rules of the Supreme Court of Virginia for additional requirements governing appeals from administrative agencies.

Alternatively, an owner may request a formal hearing for the formal taking of evidence upon relevant fact issues under Section 2.2-4020 of the Administrative Process Act. A petition for a formal hearing must meet the requirements set forth in 9VAC25-230 of the Virginia Administrative Code. In cases involving



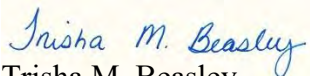
Mr. John E. Napolitano  
VWP Individual Permit No. 18-1003  
March 5, 2019  
Page 2 of 2

actions of the board, such petition must be filed within 30 calendar days after notice of such action is sent to such owner by certified mail.

The work authorized by this permit also satisfies the terms and conditions contained in the Norfolk District, Corps of Engineers' State Program General Permit (17-SPGP-01) and the special conditions, if any, attached to 17-SPGP-01. No additional authorization from the Corps is required. Your 17-SPGP-01 authorization is effective as of the date on this letter and remains effective until May 31, 2022.

If you have any questions, please contact Wynn Prusaczyk by phone at (703) 583-3871 or by email at [Wynn.Prusaczyk@deq.virginia.gov](mailto:Wynn.Prusaczyk@deq.virginia.gov).

Respectfully,



Trisha M. Beasley  
Regional VWPP Program Manager

Enclosures: Permit Cover Page, Part I - Special Conditions, Part II - General Conditions, Monthly VWP Permit Inspection Checklist, VWP Permit Construction Status Update Form, 17-SPGP-01 Verification Letter, and 17-SPGP-01

Cc (by e-mail):

Mr. Jason Franti, Apex Companies, LLC  
Mr. Jim Irre, Apex Companies, LLC  
Ms. Theresita Crockett-Augustine, U.S. Army Corps of Engineers, Northern VA Field Office



# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF ENVIRONMENTAL QUALITY

**VWP Individual Permit Number 18-1003**

**Effective Date: March 5, 2019**

**Expiration Date: March 4, 2034**

### **VIRGINIA WATER PROTECTION PERMIT ISSUED PURSUANT TO THE STATE WATER CONTROL LAW AND SECTION 401 OF THE CLEAN WATER ACT**

In compliance with § 401 of the Clean Water Act, as amended (33 USC § 1341) and the State Water Control Law and regulations adopted pursuant thereto, the board has determined that there is a reasonable assurance that this VWP permit, if complied with, will protect instream beneficial uses, will not violate applicable water quality standards, and will not cause or contribute to a significant impairment of state waters or fish and wildlife resources. In issuing this VWP permit, the board has not taken into consideration the structural stability of any proposed activities.

**Permittee:** Northfax JV LLC

**Address:** 3900 Jermantown Road, Suite 300, Fairfax, Virginia 22030

**Activity Location:** The project is located northeast of the intersection of Chain Bridge Road (VA-123) and Fairfax Boulevard (US-50) in the City of Fairfax, Virginia.

**Activity Description:** The permittee proposes to construct a mixed-use development and associated infrastructure on an approximately 10.6 acre development area known as "Northfax." Permitted activities shall be conducted as described in the Joint Permit Application dated June 22, 2018, received on June 25, 2018, and supplemental materials, revisions and clarifications received through December 11, 2018.

#### **Authorized Surface Water Impacts:**

This permit authorizes the total permanent impact of 0.50 acre (1,646 linear feet) of stream channel. Authorized surface water impacts shall be as depicted on the impacts map entitled *Stream Impact Exhibit* dated August 9, 2018, with latest revision date of August 21, 2018, and received September 12, 2018.

#### **Approved Compensation:**

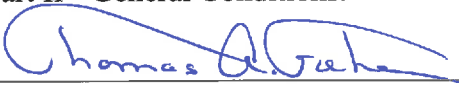
The permittee shall compensate for the authorized surface water impacts through the following:


1. Compensation for permanent stream impacts shall be provided through the purchase of 1,675 stream credits or 4,761 Stream Condition Units from a DEQ approved mitigation bank, in-lieu fee

fund, or a combination thereof that is authorized and approved by DEQ to sell credits in the area in which the impacts will occur and has credits available (as released by DEQ).

2. Mitigation bank credits shall be purchased prior to the purchase of in-lieu fee program credits in accordance with 9VAC25-210-116.C.2.
3. The credit sale shall be in accordance with the approved Mitigation Banking Instrument for the mitigation bank.

The permitted activity shall be in accordance with this Permit Cover Page, Part I - Special Conditions, and Part II - General Conditions.

  
\_\_\_\_\_  
Thomas A. Faha, Regional Director

  
\_\_\_\_\_  
Date

## Part I – Special Conditions

### A. Authorized Activities

1. This permit authorizes the total impact permanent impact of 0.50 acre (1,646 linear feet) of stream channel. Authorized surface water impacts described under this condition shall be as depicted on the impacts map entitled *Stream Impact Exhibit* dated August 9, 2018, with latest revision date of August 21, 2018, and received September 12, 2018.
2. The permittee shall conduct authorized activities as described in the Joint Permit Application dated June 22, 2018, and received June 25, 2018, and supplemental materials, revisions and clarifications received through December 11, 2018. Any changes to the authorized activities or impacts map that affect permitted areas shall be submitted to DEQ immediately upon determination that changes are necessary, and DEQ approval shall be required prior to implementing the changes.
3. The permittee shall notify the DEQ of any changes in authorized impacts to surface waters or any changes to the design or type of construction activities in surface waters authorized by this permit. DEQ approval shall be required prior to implementing the changes. Any additional impacts, modifications, or changes shall be subject to individual permit review and/or modification of this permit.

### B. Permit Term

1. This permit is valid for **fifteen (15) years** from the date of issuance. A new permit may be necessary for the continuance of the authorized activities, or any permit requirement that has not been completed, including compensation provisions.
2. The permittee shall notify DEQ in writing at least 120 calendar days prior to the expiration of this permit if reissuance will be requested.

### C. Standard Project Conditions

1. The activities authorized by this permit shall be executed in such a manner that any impacts to beneficial uses are minimized. As defined in § 62.1-10(b) of the Code, "beneficial use" means both instream and offstream uses. Instream beneficial uses include, but are not limited to, the protection of fish and wildlife habitat, maintenance of waste assimilation, recreation, navigation, and cultural and aesthetic values. The preservation of instream flows for purposes of the protection of navigation, maintenance of waste assimilation capacity, the protection of fish and wildlife resources and habitat, recreation, cultural and aesthetic values is an instream beneficial use of Virginia's waters. Offstream beneficial uses include, but are not limited to, domestic uses (including public water supply), agricultural uses, electric power generation, commercial uses, and industrial uses. Public water supply uses for human consumption shall be considered the highest priority.



2. No activity shall substantially disrupt the movement of aquatic life indigenous to the water body, including those species which normally migrate through the area, unless the primary purpose of the activity is to impound water.
3. Flows downstream of the project area shall be maintained to protect all uses.
4. No activity shall cause more than minimal adverse effect on navigation, and no activity shall block more than half of the width of the stream at any given time.
5. The activity shall not impede the passage of normal or expected high flows, and any associated structure shall withstand expected high flows.
6. Continuous flow of perennial springs shall be maintained by the installation of spring boxes, French drains, or other similar structures.
7. All excavation, dredging, or filling in surface waters shall be accomplished in a manner that minimizes bottom disturbance and turbidity.
8. All in-stream activities shall be conducted during low-flow conditions whenever practicable.
9. All construction, construction access, and demolition activities associated with this project shall be accomplished in a manner that minimizes construction materials or waste materials from entering surface waters, unless authorized by this permit. Wet, excess, or waste concrete shall be prohibited from entering surface waters.
10. All fill material placed in surface waters shall be clean and free of contaminants in toxic concentrations or amounts in accordance with all applicable laws and regulations.
11. Measures shall be employed at all times to prevent and contain spills of fuels, lubricants, or other pollutants into surface waters.
12. Machinery or heavy equipment in temporarily impacted wetlands shall be placed on mats or geotextile fabric, or other suitable means shall be implemented, to minimize soil disturbance to the maximum extent practical. Mats, fabrics, or other measures shall be removed as soon as the work is complete in the temporarily impacted wetland.
13. Stream channel restoration activities shall be conducted in the dry or during low flow conditions. When site conditions prohibit access from the streambank or upon prior authorization from the Department of Environmental Quality, heavy equipment may be authorized for use within the stream channel. The equipment shall be stationed on cobble bars.
14. Temporary disturbances to wetlands, stream channels, and/or stream banks during project construction activities shall be avoided and minimized to the maximum extent practicable.
15. All temporarily disturbed wetland areas shall be restored to preconstruction conditions within 30 calendar days of completing work in the areas, which shall include re-establishing pre-

construction contours, and planting or seeding with appropriate wetland vegetation according to cover type (emergent, scrub/shrub, or forested), except for invasive species identified on DCR's Virginia Invasive Plant Species List. The permittee shall take all appropriate measures to promote and maintain the revegetation of temporarily disturbed surface waters through the second year post-disturbance.

16. All temporarily impacted streams and stream banks shall be restored to their original elevations and contours within 30 calendar days following the construction at that stream segment, and the banks shall be seeded or planted with the same vegetative cover type originally present along the banks, including supplemental erosion control grasses if necessary but not including invasive species identified on DCR's Virginia Invasive Plant Species List.
17. All materials (including fill, construction debris, excavated materials, and woody materials, that are temporarily placed in wetlands, in stream channels, or on stream banks) shall be placed on mats or geotextile fabric, shall be immediately stabilized to prevent the material or leachate from entering surface waters, and shall be entirely removed within 30 calendar days following completion of that construction activity. After removal, disturbed areas shall be returned to original contours, shall be stabilized, and shall be restored to the original vegetated state within 30 calendar days.
18. Temporary in-stream construction features such as cofferdams shall be made of non-erodible materials.
19. Virginia Water Quality Standards shall not be violated in any surface waters as a result of the project activities.
20. All non-impacted surface waters that are within the project or right-of-way limits, and that are within fifty feet of any project activities, shall be clearly flagged or demarcated for the life of the construction activity within that area. The permittee shall notify all contractors and subcontractors that *no activities are to occur in these marked areas*.
21. All required notifications and submittals shall include project name and permit number and be submitted electronically to [vwp.nro@deq.virginia.gov](mailto:vwp.nro@deq.virginia.gov) or mailed to the DEQ office stated below, to the attention of the VWP permit manager, unless directed in writing by DEQ subsequent to the issuance of this permit: Department of Environmental Quality- Northern Regional Office, 13901 Crown Court, Woodbridge, Virginia 22193.
22. All reports required by this permit and other information requested by DEQ shall be signed by the permittee or a person acting in the permittee's behalf, with the authority to bind the permittee. A person is a duly authorized representative only if *both* criteria below are met. If a representative authorization is no longer valid because of a change in responsibility for the overall operation of the facility, a new authorization shall be immediately submitted to DEQ.
  - a. The authorization is made in writing by the permittee.

- b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, superintendent, or position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position.

23. All submittals shall contain the following signed certification statement:

*"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*

24. Any fish kills or spills of fuels or oils shall be reported to DEQ immediately upon discovery at (703) 583-3800. If DEQ cannot be reached, the spill shall be reported to the Virginia Department of Emergency Management (DEM) at 1-800-468-8892 or the National Response Center (NRC) at 1-800-424-8802.
25. DEQ shall be notified in writing within 24 hours or as soon as possible on the next business day when potential environmentally threatening conditions are encountered which require debris removal or involve potentially toxic substances. Measures to remove the obstruction, material, or toxic substance or to change the location of any structure are prohibited until approved by DEQ.

#### **D. Stream Modifications, Including Intake/Outfall Structures**

1. Redistribution of existing stream substrate for erosion control purposes is prohibited.
2. Material removed from the stream bottom shall not be deposited into surface waters unless otherwise authorized in this permit.
3. Riprap apron for all outfalls shall be designed in accordance with Virginia Erosion and Sediment Control Handbook, Third Edition, 1992, or the most recent version in effect at the time of construction.
4. For streambank protection activities, structures and backfill shall be placed as close to the streambank as practical, while still avoiding and minimizing impacts to surface waters to the maximum extent practical. No material shall be placed in excess of the minimum necessary for erosion protection.
5. Asphalt and materials containing asphalt or other toxic substances shall not be used in the construction of submerged sills, breakwaters, dams, or weirs.

## E. Installation of Utilities

1. All utility line work in surface waters shall be performed in a manner that minimizes disturbance in each area. Temporarily disturbed surface waters shall be restored in accordance with Part I.C.15, C.16, and C.17, unless otherwise authorized by this permit.
2. Material resulting from trench excavation may be temporarily sidecast into wetlands not to exceed a total of 90 calendar days, provided the material is not placed in a manner such that it is dispersed by currents or other forces.
3. The trench for a utility line cannot be constructed in a manner that drains wetlands (e.g., backfilling with extensive gravel layers creating a French drain effect).

## F. Road Crossings

1. Access roads authorized by this permit shall be constructed to minimize the adverse effects on surface waters to the maximum extent practicable and to follow as near as possible pre-construction contours and elevations.
2. Installation of pipes and road crossings shall occur in the dry via the implementation of cofferdams, sheetpiling, stream diversions or other similar structures.
3. All surface waters temporarily affected by a road crossing shall be restored to their original elevations immediately following the removal of that particular temporary crossing. Temporary access roads shall be removed entirely following activity completion.
4. At crossings of streams, pipes and culverts must be installed to maintain low flow conditions and shall be countersunk at both inlet and outlet ends of the pipe or culvert, unless otherwise specifically approved by the Department of Environmental Quality on a case-by-case basis, and as follows: The requirement to countersink does not apply to extensions or maintenance of existing pipes and culverts that are not countersunk, floodplain pipes and culverts being placed above ordinary high water, pipes and culverts being placed on bedrock, or pipes and culverts required to be placed on slopes 5.0% or greater. Bedrock encountered during construction must be identified and approved in advance of a design change where the countersunk condition cannot be met. Pipes and culverts 24 inches or less in diameter shall be countersunk three inches below the natural stream bed elevations, and pipes and culverts greater than 24 inches shall be countersunk at least six inches below the natural stream bed elevations. Hydraulic capacity shall be determined based on the reduced capacity due to the countersunk position. In all stream crossings appropriate measures shall be implemented to minimize any disruption of aquatic life movement.
5. Stream bottom elevations at road crossings shall be measured at the inlet and outlet of the proposed structure and recorded prior to construction and within one week after the completion of construction to ensure that the design elevations were met. This information shall be recorded on the *Monthly VWP Permit Inspection Checklist (Attachment 2)* completed after the crossing is installed.



## G. Stormwater Management Structures

1. The outfall and overflow structure shall be constructed and maintained to prevent downstream sediment deposition, erosion, or scour that may be associated with normal flow and any expected storm flows. Construction shall include the use of an appropriately sized riprap outlet protection apron at the outfall site.
2. Draining of a stormwater management facility shall be performed by a method that prevents downstream sediment deposition, erosion, or scour.

## H. Project Construction Monitoring and Submittals (Impact Sites)

1. The permittee shall submit written notification at least **ten (10) calendar days** prior to the initiation of land disturbance or construction activities in permitted areas. The notification shall include a projected schedule for initiating and completing work at each permitted impact area.
2. Site inspections shall be conducted **once every calendar month** and recorded on the *Monthly VWP Permit Inspection Checklist (Attachment 2)* by the permittee or the permittee's qualified designee during active construction within authorized surface water impact areas. Monthly inspections shall be conducted in the following areas: all authorized permanent and temporary impact areas; all avoided surface waters, including wetlands, stream channels, and open water; surface water areas within 50 feet of any land disturbing activity; and all on-site areas designated for permanent preservation. The *Monthly VWP Permit Inspection Checklist (Attachment 2)* shall be completed in its entirety for each monthly inspection and shall be kept on-site and made available for review by DEQ staff upon request during normal business hours.
3. The *VWP Permit Construction Status Update Form (Attachment 1)* enclosed with this permit shall be completed in June and December of every year for the duration of this permit. The *VWP Permit Construction Status Update Form (Attachment 1)* shall include reference to the VWP permit authorization number and one of the following statements for each authorized surface water impact location:
  - a. Construction activities not yet started;
  - b. Construction activities started;
  - c. Construction activities started but are currently inactive, or;
  - d. Construction activities complete.
4. The *VWP Permit Construction Status Update Form (Attachment 2)* shall be submitted and must be received by DEQ no later than January 10 and July 10 of every year.
5. The permittee shall notify DEQ within 24 hours of discovering impacts to surface waters including wetlands, stream channels, and open water that are not authorized by this permit. The

notification shall include photographs, estimated acreage and/or linear footage of impacts, and a description of the impacts.

6. The permittee shall submit written notification of completion within 30 calendar days after the completion of all activities in all permitted impact areas authorized under this permit.

#### **I. Compensatory Mitigation**

1. The permittee shall compensate for permanent stream impacts through the purchase of 1,675 stream credits or 4,761 Stream Condition Units (SCUs) from a DEQ approved mitigation bank, in-lieu fee fund, or a combination thereof that is authorized and approved by DEQ to sell credits in the area in which the impacts will occur and has credits available (as released by DEQ). Mitigation bank credits shall be purchased prior to the purchase of in-lieu fee program credits in accordance with 9VAC25-210-116.C.2. The credit sale shall be in accordance with the approved Mitigation Banking Instrument for the mitigation bank.
2. The permittee shall submit documentation to DEQ prior to initiating work in permitted impact areas that 1,675 stream credits or 4,761 SCUs were acquired and debited from the ledger of a DEQ approved mitigation bank, in-lieu fee fund, or a combination thereof to satisfy the requirement of Part I.I.1.

## **Part II – General Conditions**

### **A. Duty to Comply**

The permittee shall comply with all conditions and limitations of the VWP permit. Nothing in this chapter shall be construed to relieve the permittee of the duty to comply with all applicable federal and state statutes, regulations, toxic standards, and prohibitions. Any VWP permit violation or noncompliance is a violation of the Clean Water Act and State Water Control Law and is grounds for enforcement action, VWP permit termination, VWP permit revocation, VWP permit modification, or denial of an application for a VWP permit extension or reissuance.

Nothing in this VWP permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

### **B. Duty to Cease or Confine Activity**

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the activity for which a VWP permit has been granted in order to maintain compliance with the conditions of the VWP permit.

### **C. Duty to Mitigate**

The permittee shall take all reasonable steps to minimize or prevent any impacts in violation of the VWP permit that may have a reasonable likelihood of adversely affecting human health or the environment.

### **D. VWP Permit Actions**

A VWP permit may be modified in whole or in part, revoked and reissued, extended, transferred, or terminated in accordance with 9 VAC 25-210-180.

1. During the drafting and authorization of a permit modification, only those conditions to be modified shall be addressed with preparing a draft modified permit. VWP permit terms and conditions of the existing permit shall remain in full force and effect during the modification of the permit.
2. This VWP permit may be modified upon the request of the permittee or upon board initiative when any of the following developments occur:
  - a. When new information becomes available about the project or activity covered by the VWP permit, including project additions or alterations, that was not available at VWP permit issuance and would have justified the application of different VWP permit conditions at the time of VWP permit issuance;

- b. When a change is made in the promulgated standards or regulations on which the VWP permit was based;
  - c. When changes occur that are subject to "reopener clauses" in the VWP permit; or
  - d. When developments applicable to surface water withdrawals as specified in 9VAC25-210-380 occur.
3. When this VWP permit authorizes surface water withdrawals, it may be modified when any of the following developments occur:
- a. When the board determines that minimum instream flow levels resulting directly from the permittee's withdrawal of surface water are detrimental to the instream beneficial use, existing at the time of permit issuance, and the withdrawal of surface water should be subject to further net limitations or when an area is declared a surface water management area pursuant to §§ 62.1-242 through 62.1-253 of the Code of Virginia, during the term of the VWP permit.
  - b. Significant changes to the location of the surface water withdrawal system are proposed such that the Department of Environmental Quality determines a new review is warranted due to the potential effect of the surface water withdrawal to existing beneficial uses of the new location.
  - c. Changes to the permitted project or the surface water withdrawal, including increasing the storage capacity for the surface water withdrawal, that propose an increase in the maximum permitted withdrawal volumes or rate of withdrawal or that cause more than a minimal change to the instream flow requirements with potential to result in a detrimental effect to existing beneficial uses.
  - d. A revision to the purpose of the surface water withdrawal that proposes to include a new use or uses that were not identified in the permit application or a modification of the existing authorized use or uses such that the use description in the permit application and permit is no longer applicable. Examples of uses include, but are not limited to agricultural irrigation, golf course irrigation, public water supply, manufacturing, and electricity generation.
4. When the permittee has submitted a timely and complete application for reissuance of an existing VWP individual permit, but through no fault of the permittee, the board does not reissue or reissue with conditions a VWP individual permit or the board does not provide notice of its tentative decision to deny the application before an existing VWP individual permit expires, the conditions of the expiring VWP individual permit shall be administratively continued in full force and effect until the effective date of a reissued permit or the date on which the board denies the application. Timely application shall be a minimum of 180 days for an individual permit or a minimum of 270 days for an individual permit for a surface water withdrawal, unless otherwise specified in the existing permit.
5. Any permittee desiring to continue a previously permitted activity after the expiration date of this VWP permit shall apply for and obtain a new permit or, if applicable, shall request an extension in



accordance with 9VAC25-210-180. Any permittee with an effective VWP permit for an activity that is expected to continue after the expiration date of the VWP permit, without any change in the activity authorized by the VWP permit other than as may be allowed under 9VAC25-210-180, shall submit written notification requesting an extension. The permittee must file the request 90 days prior to the expiration date of the VWP permit. VWP permit modifications shall not be used to extend the term of a VWP permit beyond 15 years from the date of original issuance. When a permit term, other than that of an Emergency Virginia Water Protection Permit, is less than 15 years, an extension of the permit terms and conditions may be granted in accordance with 9VAC25-210-180. Emergency Virginia Water Protection Permits shall not exceed a duration of one year or shall expire upon the issuance of a regular Virginia Water Protection Permit, whichever comes first.

6. This VWP permit may be transferred to a new permittee only by modification to reflect the transfer, by revoking and reissuing the permit, or by automatic transfer. Automatic transfer to a new permittee shall occur if the current permittee: a) Notifies the board of the proposed transfer of the permit and provides a written agreement between the current and proposed permittees containing the date of transfer of VWP permit responsibility, authorization, and liability to the new permittee; and b) the board does not within 15 days notify the existing permittee of its intent to modify the VWP permit.
7. After notice and opportunity for a formal hearing pursuant to § 62.1-44.15:02 of the Code of Virginia, a VWP permit can be terminated for cause. Reasons for termination for cause are as follows:
  - a. Noncompliance by the permittee with any condition of the VWP permit;
  - b. The permittee's failure in the application or during the VWP permit process to disclose fully all relevant facts or the permittee's misrepresentation of any relevant facts at any time;
  - c. The permittee's violation of a special or judicial order;
  - d. A determination by the board that the permitted activity endangers human health or the environment and can be regulated to acceptable levels by VWP permit modification or termination;
  - e. A change in any condition that requires either a temporary or permanent reduction or elimination of any activity controlled by the VWP permit; and
  - f. A determination that the permitted activity has ceased and that the compensation for unavoidable adverse impacts has been successfully completed.
8. The board may terminate this permit without cause when the permittee is no longer a legal entity due to death, dissolution, or when a company is no longer authorized to conduct business in the Commonwealth. The termination shall be effective 30 days after notice of the proposed

termination is sent to the last known address of the permittee or registered agent, unless the permittee objects within that time. If the permittee does object during that period, the board shall follow the applicable procedures for termination under § 62.1-44.15:25 of the Code of Virginia and 9VAC25-230.

9. This VWP permit may be terminated by consent, as initiated by the permittee. The permittee shall submit a request for termination by consent within 30 days of completing or canceling all permitted activities and all required compensatory mitigation requirements. When submitted for project completion, the request for termination by consent shall constitute a notice of project completion. The director may accept this termination on behalf of the board. The permittee shall submit the following information:
  - a. Name, mailing address, and telephone number;
  - b. Name and location of the activity;
  - c. The VWP permit number; and
  - d. One of the following certifications:
    - i. For project completion: "I certify under penalty of law that all activities and any required compensatory mitigation authorized by a VWP permit have been completed. I understand that by submitting this notice of termination that I am no longer authorized to perform activities in surface waters in accordance with the VWP permit, and that performing activities in surface waters is unlawful where the activity is not authorized by a VWP permit, unless otherwise excluded from obtaining a permit. I also understand that the submittal of this notice does not release me from liability for any violations of this VWP permit."
    - ii. For project cancellation: "I certify under penalty of law that the activities and any required compensatory mitigation authorized by this VWP permit will not occur. I understand that by submitting this notice of termination that I am no longer authorized to perform activities in surface waters in accordance with the VWP permit, and that performing activities in surface waters is unlawful where the activity is not authorized by a VWP permit, unless otherwise excluded from obtaining a permit. I also understand that the submittal of this notice does not release me from liability for any violations of this VWP permit, nor does it allow me to resume the permitted activities without reapplication and issuance of another permit."
    - iii. For events beyond permittee control, the permittee shall provide a detailed explanation of the events, to be approved by DEQ, and the following certification statement: "I certify under penalty of law that the activities or the required compensatory mitigation authorized by this VWP permit have changed as the result of events beyond my control (see attached). I understand that by submitting this notice of termination that I am no longer authorized to perform activities in surface waters in accordance with the VWP permit, and that

performing activities in surface waters is unlawful where the activity is not authorized by a VWP permit, unless otherwise excluded from obtaining a permit. I also understand that the submittal of this notice does not release me from liability for any violations of this VWP permit, nor does it allow me to resume the permitted activities without reapplication and issuance of another permit.

#### **E. Inspection and Entry**

Upon presentation of credentials, the permittee shall allow the board or any duly authorized agent of the board, at reasonable times and under reasonable circumstances, to conduct the actions listed in this section. For the purpose of this section, the time for inspection shall be deemed reasonable during regular business hours. Nothing contained herein shall make an inspection time unreasonable during an emergency.

1. Enter upon any permittee's property, public or private, and have access to, inspect and copy any records that must be kept as part of the VWP permit conditions;
2. Inspect any facilities, operations or practices (including monitoring and control equipment) regulated or required under the VWP permit; and
3. Sample or monitor any substance, parameter, or activity for the purpose of ensuring compliance with the conditions of the VWP permit or as otherwise authorized by law.

#### **F. Duty to Provide Information**

The board may request (i) such plans, specifications, and other pertinent information as may be necessary to determine the effect of an applicant's discharge on the quality of state waters or (ii) such other information as may be necessary to accomplish the purposes of this chapter. Any owner, permittee, or person applying for a VWP permit or general permit coverage shall provide the information requested by the board.

#### **G. Monitoring and Records Requirements**

1. Monitoring of parameters, other than pollutants, shall be conducted according to approved analytical methods as specified in the VWP permit. Analysis of pollutants will be conducted according to 40 CFR Part 136 (2000), Guidelines Establishing Test Procedures for the Analysis of Pollutants.
2. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
3. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart or electronic recordings for continuous monitoring instrumentation, copies of all reports required by the VWP permit, and records of all data used to

complete the application for the VWP permit, for a period of at least three years from the date of permit expiration. This period may be extended by request of the board at any time.

4. Records of monitoring information shall include:

- a. The date, exact place and time of sampling or measurements;
- b. The name of the individuals who performed the sampling or measurements;
- c. The date and time the analyses were performed;
- d. The name of the individuals who performed the analyses;
- e. The analytical techniques or methods supporting the information such as observations, readings, calculations and bench data used;
- f. The results of such analyses; and
- g. Chain of custody documentation.

## **H. Property rights**

The issuance of a VWP permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize injury to private property or any invasion of personal rights or any infringement of federal, state or local laws or regulations.

## **I. Reopener**

This VWP permit may be reopened for the purpose of modifying the conditions of the VWP permit to meet new regulatory standards duly adopted by the board. Cause for reopening VWP permits includes, but is not limited to when the circumstances on which the previous VWP permit was based have materially and substantially changed, or special studies conducted by the board or the permittee show material and substantial change, since the time the VWP permit was issued and thereby constitute cause for VWP permit modification or revocation and reissuance.

## **J. Compliance with State and Federal Law**

As to the permitted activity(ies), compliance with a VWP permit constitutes compliance with the VWP permit requirements of the Law and regulations. .

## **K. Severability**

The provisions of this VWP permit are severable.

**L. Oil and Hazardous Substance Liability**

Nothing in this VWP permit shall be construed to preclude the institution of legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under § 311 of the Clean Water Act or §§ 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

**M. Unauthorized Discharge of Pollutants**

Except in compliance with a VWP permit, unless the activity is otherwise exempted or excluded, no person shall dredge, fill, or discharge any pollutant into, or adjacent to surface waters; withdraw surface water; otherwise alter the physical, chemical, or biological properties of state waters regulated under this chapter and make them detrimental to the public health, to animal or aquatic life, or to the uses of such waters for domestic or industrial consumption, for recreation, or for other uses; excavate in wetlands; or on or after October 1, 2001, conduct the following activities in a wetland:

1. New activities to cause draining that significantly alters or degrades existing wetland acreage or functions;
2. Filling or dumping;
3. Permanent flooding or impounding; or
4. New activities that cause significant alteration or degradation of existing wetland acreage or functions.





## Attachment 1: VWP PERMIT CONSTRUCTION STATUS UPDATE FORM

Attached to VWP Individual Permit Number 18-1003

Permit Issuance March 5, 2019

Date (check one):

☐ June \_\_\_\_, \_\_\_\_

☐ December \_\_\_\_, \_\_\_\_

VWP Individual Permit Number: 18-1003

Project Name and Location: Northfax, City of Fairfax

Status within each authorized surface water impact location, as identified on *Stream Impact Exhibit*, dated August 9, 2018, with latest revision date of August 21, 2018, and received September 12, 2018: (check one of the following status options for each impact number/location. Attach additional sheet(s) if needed.)

Authorized impact number	Construction activities not started	Construction activities started	Construction activities started but currently not active	Does this impact involve culvert(s) <sup>1</sup> ?	Construction activities complete <sup>2</sup>
A1					
B1					
A2					
C1					

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violation.

Authorized Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Phone: \_\_\_\_\_

Date: \_\_\_\_\_ Email: \_\_\_\_\_

<sup>1</sup> Provide spot elevations of the stream bottom within the thalweg at the beginning and end of the pipe or culvert, extending to a minimum of 10 feet beyond the limits of the impact, with completion of all culvert installations.

<sup>2</sup> If all construction activities and compensatory mitigation requirements are complete, the permittee completes and signs the Termination Agreement section below within 30 days of last authorized activity and/or compensation completion. A completed and signed Agreement serves as Notice of Project Completion (9VAC25-210-130 F).

TERMINATION AGREEMENT BY CONSENT – PROJECT COMPLETION

Permittee Name: \_\_\_\_\_

Permittee Mailing Address: \_\_\_\_\_

Permittee Phone: \_\_\_\_\_

I hereby consent to the termination of coverage for VWP Individual Permit Number 18-1003.

"I certify under penalty of law that all activities and any required compensatory mitigation authorized by a VWP permit have been completed. I understand that by submitting this notice of termination that I am no longer authorized to perform activities in surface waters in accordance with the VWP permit, and that performing activities in surface waters is unlawful where the activity is not authorized by a VWP permit, unless otherwise excluded from obtaining a permit. I also understand that the submittal of this notice does not release me from liability for any violations of this VWP permit."

Permittee Signature: \_\_\_\_\_



## Attachment 2: MONTHLY VWP PERMIT INSPECTION CHECKLIST

An inspection of all permitted impact areas, avoided waters and wetlands, and permanently preserved waters, wetlands and upland areas must be conducted at least once every month during active construction activities. Maintain this record on-site and available for inspection by DEQ staff.

<b>Project Name</b>	Northfax	<b>VWP Permit #</b>	18-1003	<b>Inspection Date</b>	
<b>Inspector Name &amp; Affiliation</b>		<b>Phone # &amp; Email Address</b>			
<p><b>Based on reading of VWP permit No. 18-1003 including authorized impacts map entitled "Stream Impact Exhibit" dated August 9, 2018, with latest revision date of August 21, 2018, and received September 12, 2018, and my inspection on the date referenced above, to the best of my knowledge this project ( ___ is in compliance / ___ is not in compliance) with the VWP Permit.</b></p>					
<p>I certify that the information contained in this report is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.</p>					
<p>_____ Signature of Inspector</p>			<p>_____ Date</p>		
<b>REVIEWED DURING SITE INSPECTION</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Notes &amp; Corrective Action Taken / Date Completed (use back of page if necessary)</b>	
Unauthorized impacts to surface waters, including wetlands, or upland preservation areas <b>have occurred</b> . <sup>*</sup> (This includes sedimentation impacts due to inadequate or failed erosion controls.)	<input type="checkbox"/>	<input type="checkbox"/>			
Non-impacted wetlands, streams and preservations areas within 50 feet of construction are clearly marked to prevent unpermitted impacts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Temporary impacts are being restored to original contours, stabilized, and allowed to re-establish with wetland vegetation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Construction activities are <b>not</b> substantially disrupting aquatic life movement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
E&S controls are present, properly maintained, and functioning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
In-stream work is being performed in the dry with the appropriate use of cofferdams, sheetpiling, etc., to minimize stream bottom disturbance and turbidity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Pipes and/or culverts for road crossings are countersunk to provide for the re-establishment of low flow fish passage and/or a natural stream bottom, unless otherwise authorized.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Time-of-year restrictions regarding impacts to surface waters are being adhered to.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Water quality monitoring is being conducted during stream impacts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Streams and wetlands are free from any sheen or discoloration that may indicate a spill of oil, lubricants, concrete or other pollutants. <sup>**</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Heavy equipment is placed on mats or geotextile fabric when working in wetlands.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Exposed slopes/stream banks are stabilized immediately upon completion of work in each impact area.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

<sup>\*</sup> If unauthorized impacts have occurred, you **must** email or fax a copy of this report to DEQ within 24 hours of discovery. Email:

vwp.nro@deq.virginia.gov Fax: 703-583-3821

<sup>\*\*</sup> Any fish kills, or spills of fuels or oils must be reported to DEQ **immediately upon discovery** at 703-583-3864. If DEQ cannot be reached, the spill or fish kill shall be reported to the Virginia Department of Emergency Management (VDEM) at 1-800-468-8892 or the National Response Center (NRC) at 1-800-424-8802. Any spill of oil as defined in § 62.1-44.34:14 of the Code of Virginia that is less than 25 gallons and that reaches, or that is expected to reach, land only is not reportable, if recorded per § 62.1-44.34:19.2 of the Code of Virginia and if properly cleaned up.

## Notes



DEPARTMENT OF THE ARMY  
US ARMY CORPS OF ENGINEERS  
NORFOLK DISTRICT  
FORT NORFOLK  
803 FRONT STREET  
NORFOLK VA 23510-1096

NOVEMBER 24, 2014

Reply to  
Attention of

Special Projects Regulatory Section  
NAO-2014-1871 (N. Fk. Accotink Creek)

City of Fairfax  
ATTN: Ms. Wendy Block-Sandford  
Transportation Department  
10455 Armstrong Street, Room 200A  
Fairfax, VA 22030

Dear Ms. Block-Sandford:

This is in regard to your Department of the Army permit application number NAO-2014-1871 to impact approximately 2147 linear feet of stream. You propose to make improvements to the Route 123/50/29 intersection, including widening of portions of Route 123 and Route 29/50 and improving the drainage system, along with some realignment of Route 123. As part of the work, you will construct a new 2,101 linear foot, twin 8 foot by 8 foot box culvert to convey the North Fork Accotink Creek; approximately 1,564 linear feet of the stream is already contained within an existing culvert which will be replaced with the new culvert. You will also install riprap in an additional 46 linear feet of channel. The work will occur at the City of Fairfax, Virginia. These impacts are detailed on the enclosed drawings entitled "Nationwide Permit PCN, Route 29.50/123 Intersection, Proposed Roadway & Drainage Improvements," dated June 2012 and date stamped as received by this office on October 3, 2014, prepared and submitted on behalf of the applicant by Rinker Design Associates, P.C. (attached).

Your proposed work as outlined above satisfies the criteria contained in the Corps Nationwide Permits 23, attached. The Corps Nationwide Permits were published in the February 21, 2012 Federal Register notice (77 FR 10184) and the regulations governing their use can be found in 33 CFR 330 published in Volume 56, Number 226 of the Federal Register dated November 22, 1991.

This nationwide permit verification is contingent upon the following project specific condition:

You have indicated that mitigation for the proposed impacts would be accomplished by purchasing credits from an approved mitigation bank that includes the impact area in its geographic service area. As compensation for impacting 583 linear feet of stream, a total of 343 credits (based on the application of the Unified Stream Methodology) will be debited from an approved bank. Prior to purchasing the credits, you must submit to the Corps of Engineers (USACE) your proposed mitigation bank for acceptance. Once USACE has agreed to your proposed bank, you may proceed to acquire the



required credits. Evidence that you have purchased these credits must be provided to USACE prior to commencing the authorized activities in jurisdictional waters.

Provided the project specific condition (above) and the Nationwide Permit General Conditions (enclosed) are met, an individual Department of the Army Permit will not be required. *You should note Regional Condition 9 which requires countersinking of culverts and insure compliance with this condition.*

In addition, the Virginia Department of Environmental Quality has provided an unconditional §401 Water Quality Certification for Nationwide Permit Number 23. A permit may be required from the Virginia Marine Resources Commission and/or your local wetlands board, and this verification is not valid until you obtain their approval, if necessary. This authorization does not relieve your responsibility to comply with local requirements pursuant to the Chesapeake Bay Preservation Act (CBPA), nor does it supersede local government authority and responsibilities pursuant to the Act. Before you begin work, you should find out how the CBPA applies to your project.

Enclosed is a "compliance certification" form, which must be signed and returned within 30 days of completion of the project, including any required mitigation. Your signature on this form certifies that you have completed the work in accordance with the nationwide permit terms and conditions.

This verification is valid until the NWP is modified, reissued, or revoked. All of the existing NWPs are scheduled to be modified, reissued, or revoked prior to March 18, 2017. It is incumbent upon you to remain informed of changes to the NWPs. We will issue a public notice when the NWPs are reissued. Furthermore, if you commence or are under contract to commence this activity before the date that the relevant nationwide permit is modified or revoked, you will have twelve (12) months from the date of the modification or revocation of the NWP to complete the activity under the present terms and conditions of this nationwide permit unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 CFR 330.4(e) and 33 CFR 330.5 (c) or (d). Project specific conditions listed in this letter continue to remain in effect after the NWP verification expires, unless the district engineer removes those conditions. Activities completed under the authorization of an NWP which was in effect at the time the activity was completed continue to be authorized by that NWP.

If you have any questions, please contact Alice Allen-Grimes at (757) 201-7219 or [alice.w.allen-grimes@usace.army.mil](mailto:alice.w.allen-grimes@usace.army.mil).

Sincerely,



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

Enclosures

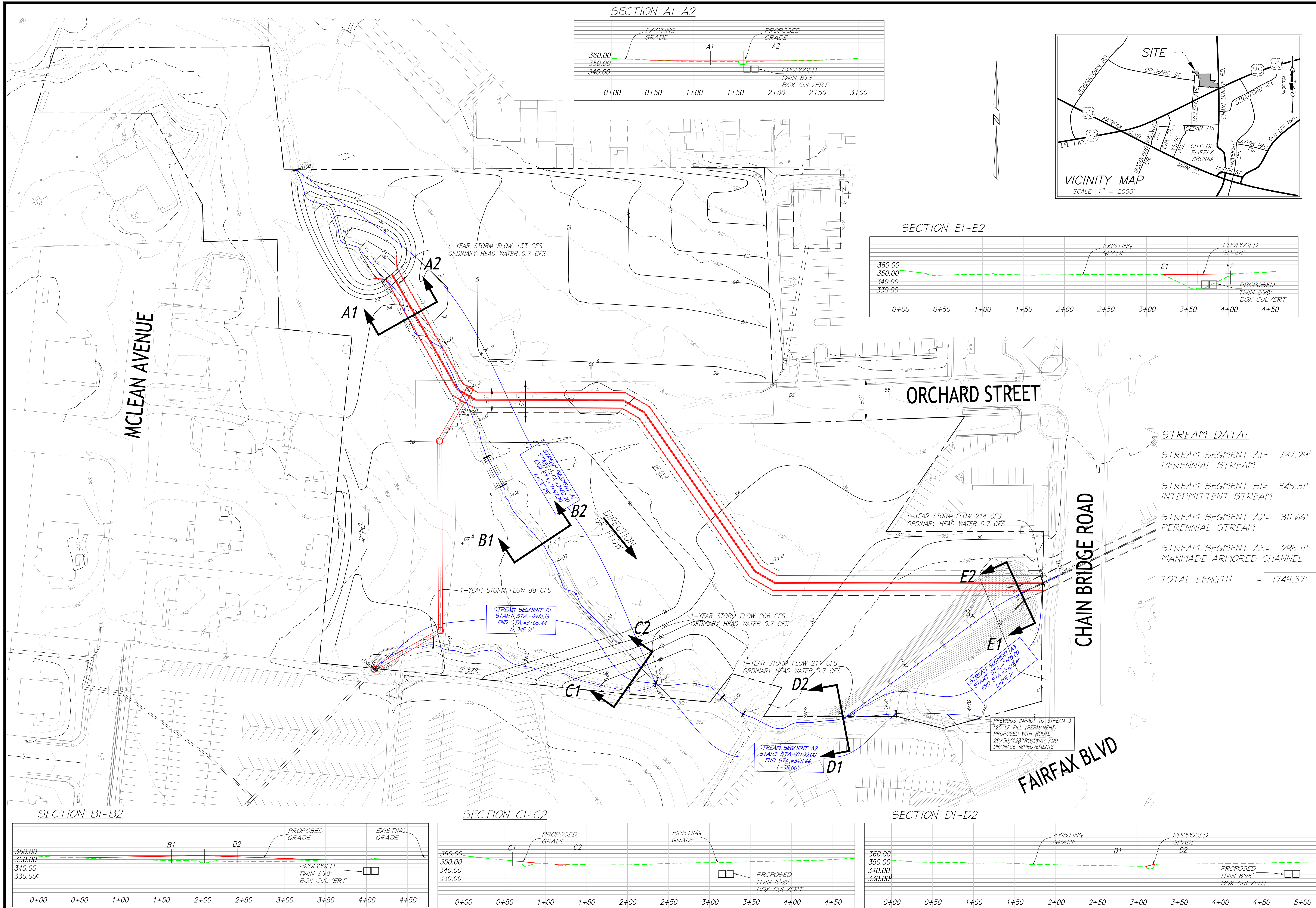
Copies furnished (w/o encl.):

Virginia Marine Resources Commission, Newport News  
Rinker Design Associates, PC, Manassas

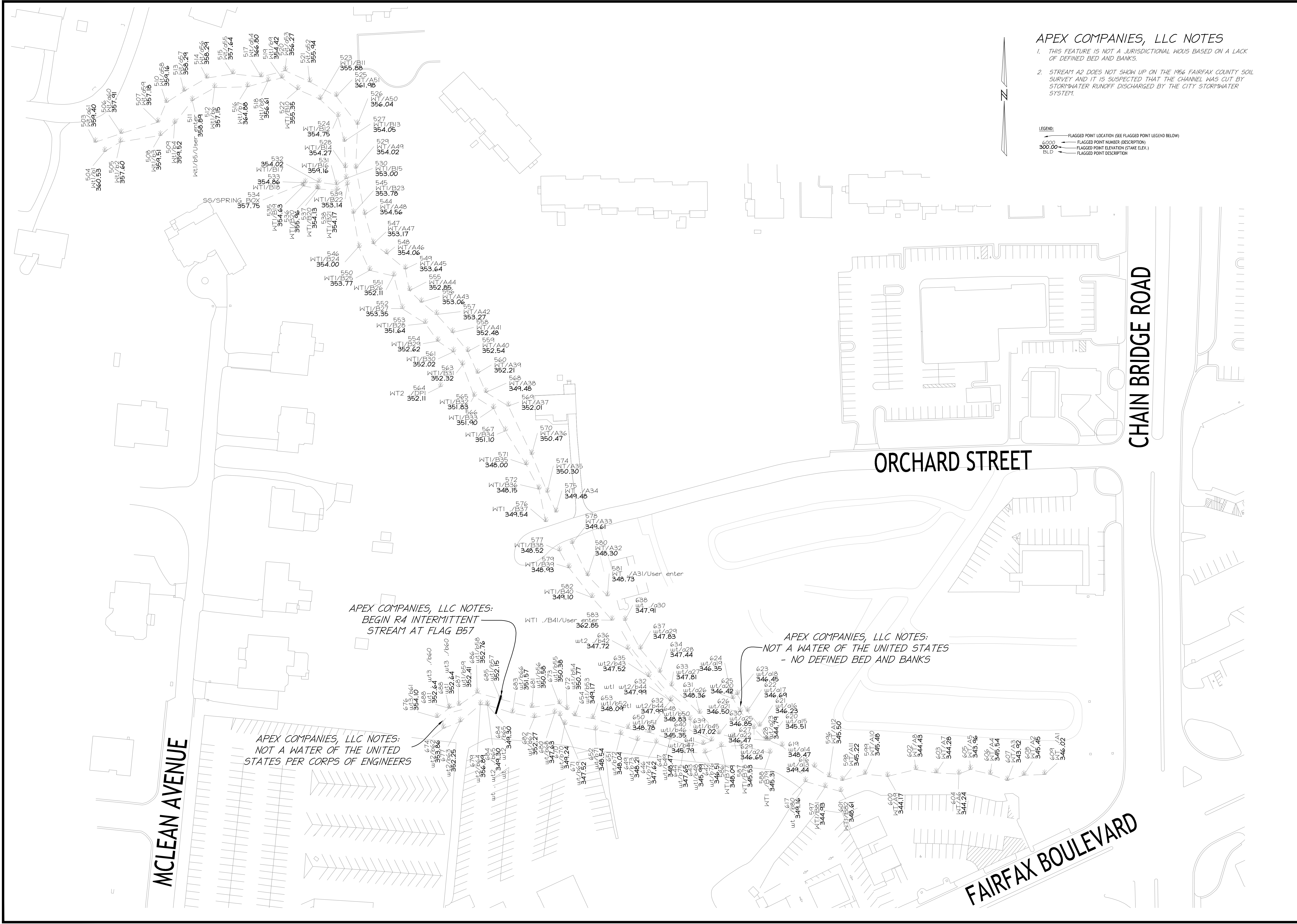


## Appendix C – JPA Exhibits

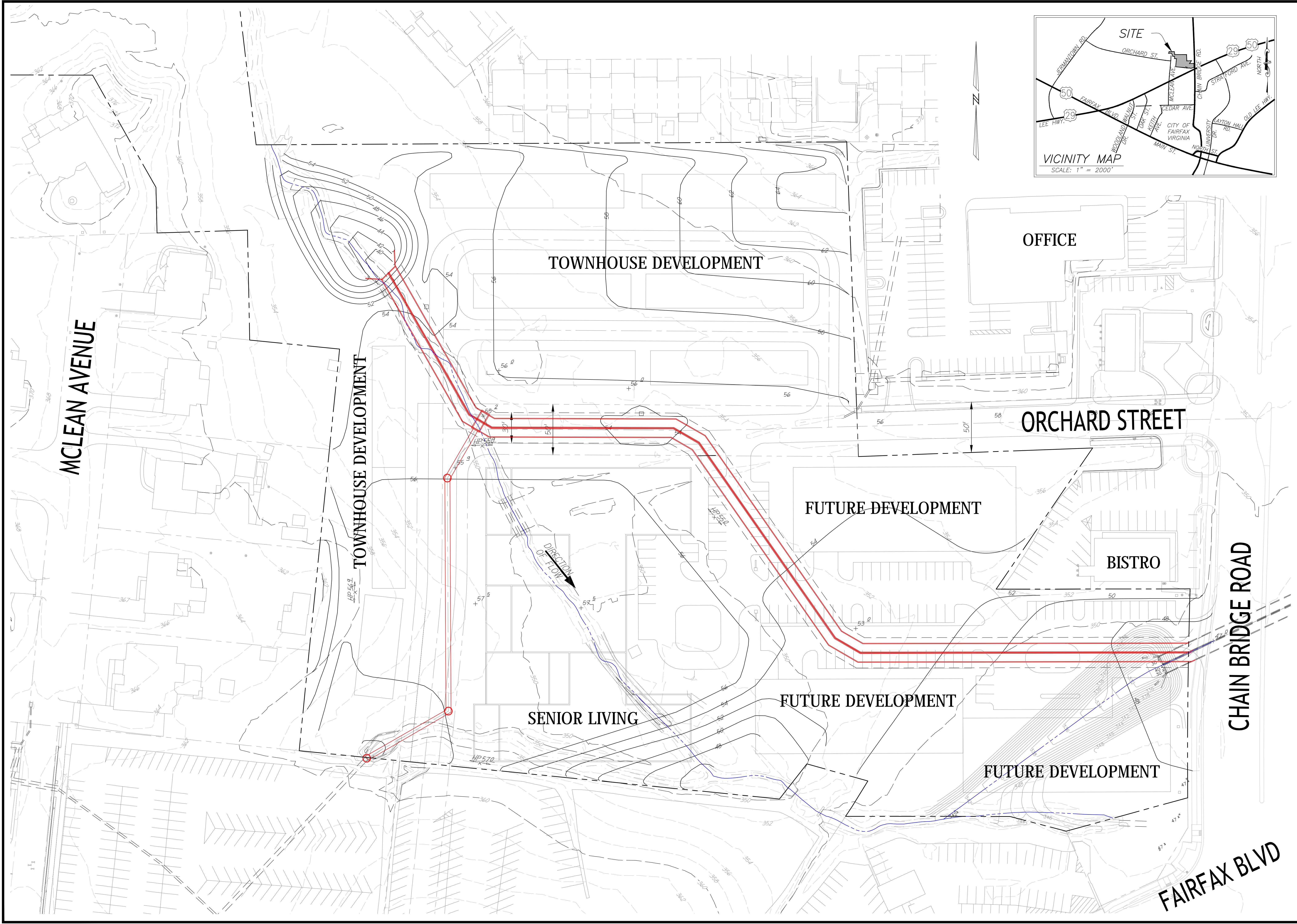


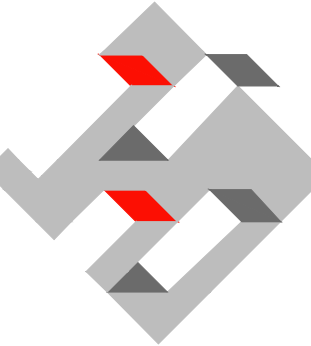












**christopher**  
consultants

9900 main street (suite 400) · fairfax, va 22031  
phone 703.273.6820 · fax 703.273.6820

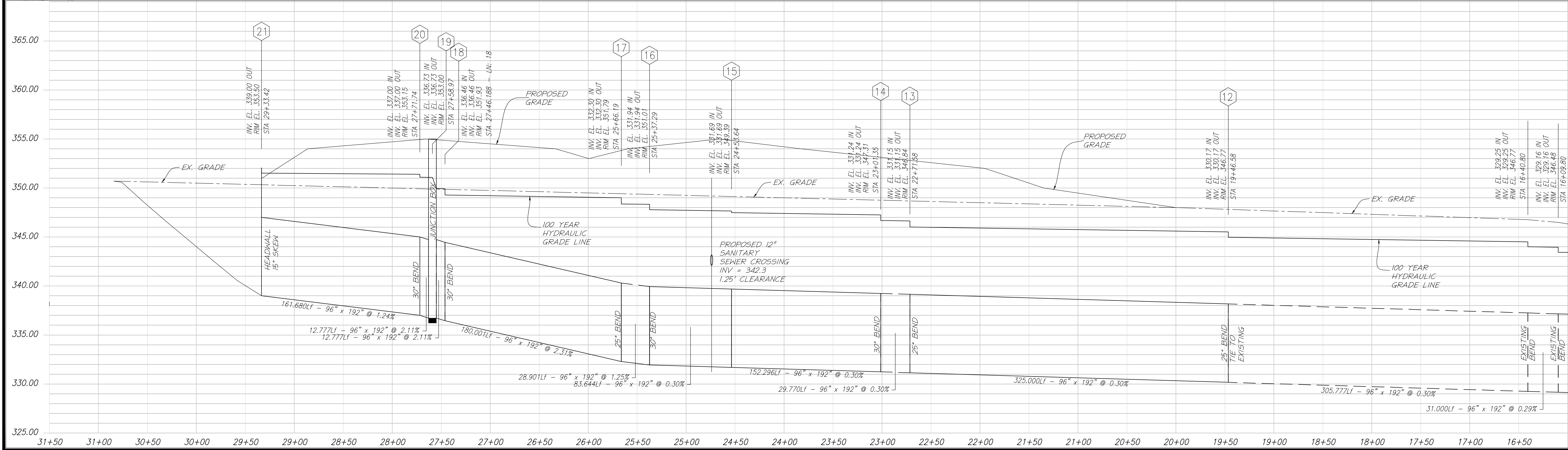
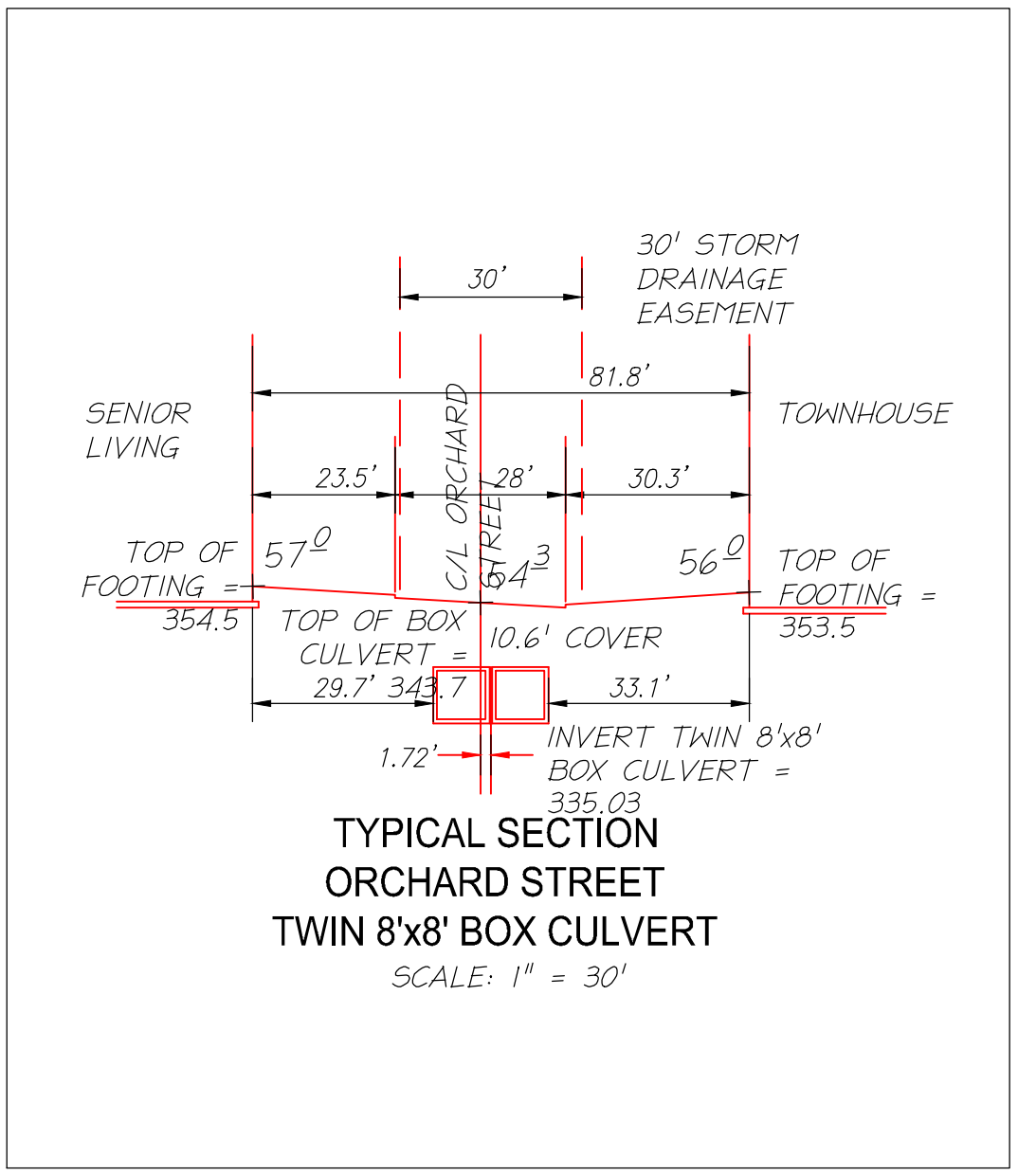
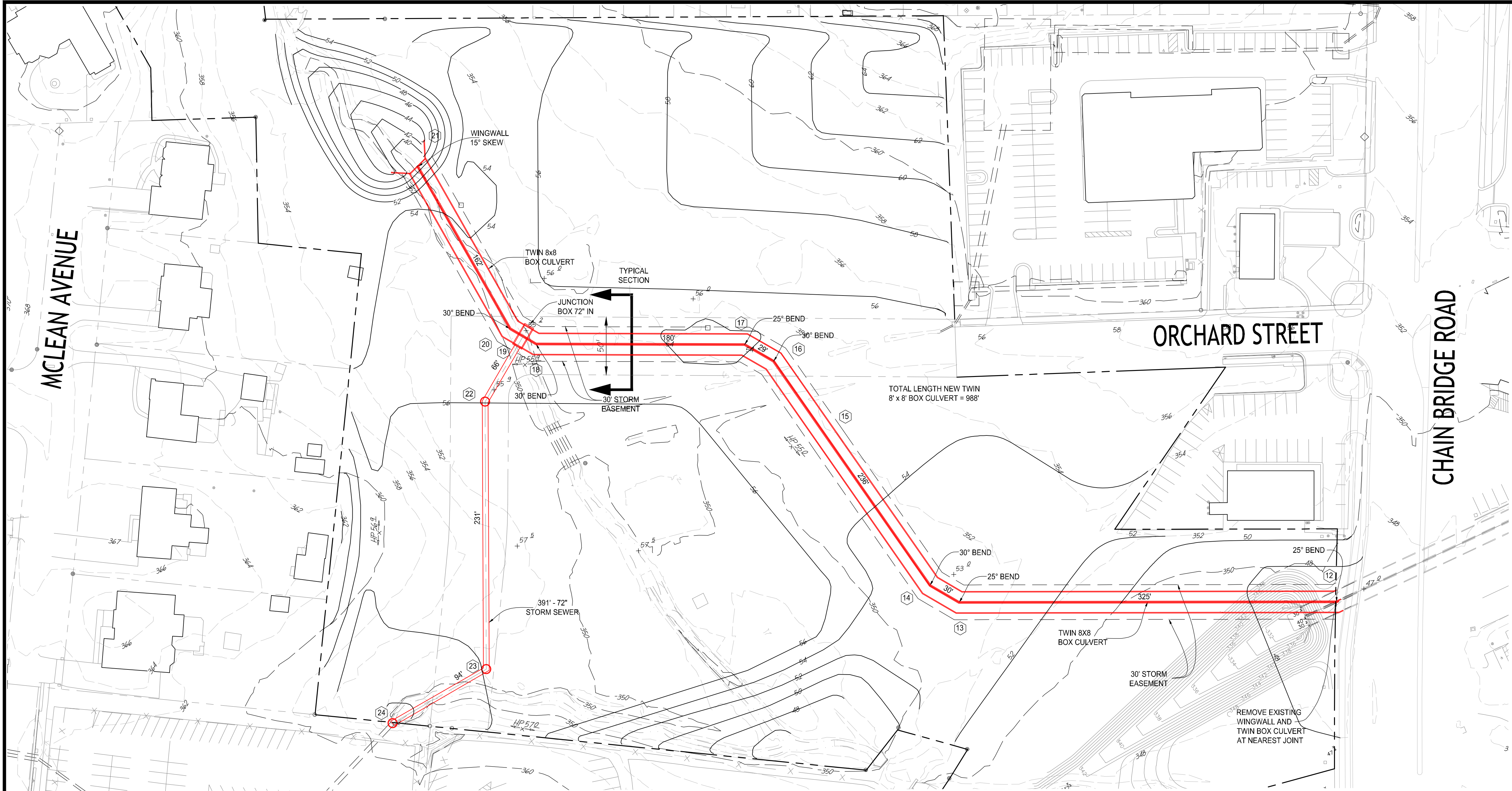
GRADING EXHIBIT

NORTHFAX AREA  
CITY OF FAIRFAX

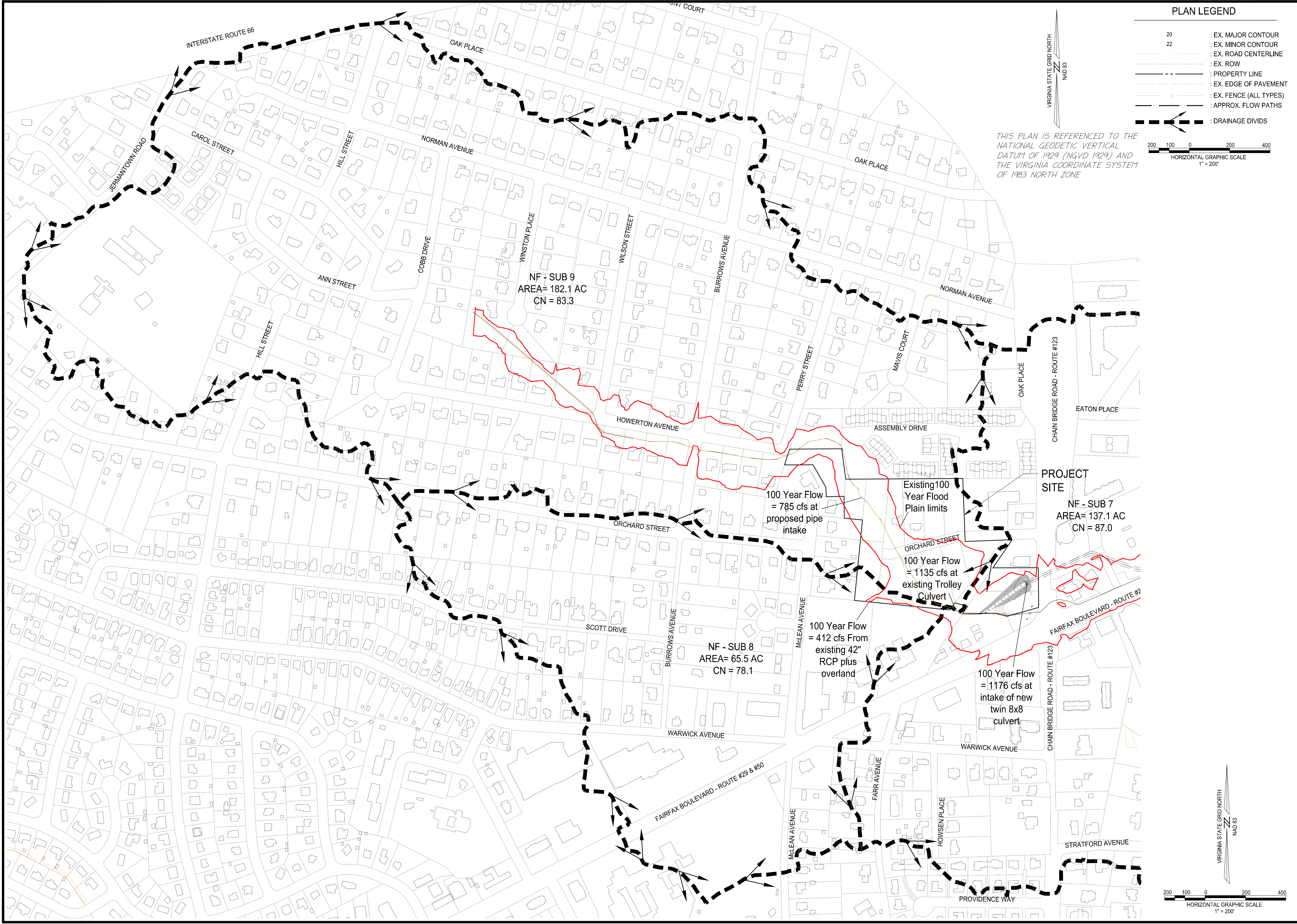
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SCALE: 1"=40'  
DATE: 06/15/2018  
DESIGN: EJ  
DRAWN: JS  
CHECKED: KMW  
SHEET No.  
3 of 5

108133









9900 main street (suite 400) · fairfax, va 22031  
phone 703.273.6820 · fax 703.273.6820

DRAINAGE EXHIBIT

NORTHFAX AREA  
CITY OF FAIRFAX

PROJECT NO: 13139.004.00  
SCALE: 1"=200'  
DATE: 06/15/2018  
DESIGN: EJ  
DRAWN: JS  
CHECKED: KMW  
SHEET No.  
5 of 5



STORM SEWER DESIGN  
COMPUTATIONS

NORTHFAX  
PROPOSED STORM COMPUTATIONS

06/12/2018 EJ

FROM POINT	TO POINT	DRAIN. AREA ACRES	RUNOFF COEFF. C	CA		INLET TIME MIN.	RAINFALL INTENSITY IN./HR.	RUNOFF Q100yr C.F.S.	INVERT		LENGTH ft	SLOPE ft/ft	DIA. IN.	n	CAPACITY	VELOCITY	FLOW TIME				NOTES	
				INCREM.	ACCUM.				ELEVATIONS (ft)						C.F.S.	FPS	SEC.	Q/Qfull	V/Vfull	Vfull		
									UPPER	LOWER												
24	23	100 YEAR RUNOFF PER FEMA EFFECTIVE HYDROLOGIC MODEL							411.69	346.50	344.72	93.40	0.0191	72	0.013	584.66	22.2	4.2	0.70	1.07	20.68	PROP. 72" RCP STORM
23	22								411.69	344.47	340.04	231.01	0.0192	72	0.013	586.47	22.2	10.4	0.70	1.07	20.74	PROP. 72" RCP STORM
22	21								411.69	339.79	338.54	65.43	0.0191	72	0.013	585.36	22.2	2.9	0.70	1.07	20.70	PROP. 72" RCP STORM
21	20	100 YEAR RUNOFF PER FEMA EFFECTIVE HYDROLOGIC MODEL							785.80	339.00	337.00	161.68	0.0124	146.5	0.013	3131.33	22.2	7.3	0.25	0.83	26.75	PROP. TWIN 8"x 8" BOX CULVERT
20	19								785.80	337.00	336.73	12.78	0.0211	146.5	0.013	4092.70	26.1	0.5	0.19	0.75	34.96	PROP. TWIN 8"x 8" BOX CULVERT
19	18								1135.30	336.73	336.46	12.78	0.0211	146.5	0.013	4092.70	29.9	0.4	0.28	0.86	34.96	PROP. TWIN 8"x 8" BOX CULVERT
18	17								1135.30	336.46	332.30	180.00	0.0231	146.5	0.013	4280.08	30.4	5.9	0.27	0.83	36.56	PROP. TWIN 8"x 8" BOX CULVERT
17	16								1163.96	332.30	331.97	28.90	0.0114	146.5	0.013	3008.45	23.7	1.2	0.39	0.92	25.70	PROP. TWIN 8"x 8" BOX CULVERT
16	15								1163.96	331.97	331.71	83.64	0.0031	146.5	0.013	1569.68	14.7	5.7	0.74	1.09	13.41	PROP. TWIN 8"x 8" BOX CULVERT
15	14								1167.48	331.71	331.24	152.30	0.0031	146.5	0.013	1564.04	14.6	10.4	0.75	1.09	13.36	PROP. TWIN 8"x 8" BOX CULVERT
14	13								1167.78	331.24	331.15	29.77	0.0030	146.5	0.013	1548.01	14.5	2.1	0.75	1.09	13.22	PROP. TWIN 8"x 8" BOX CULVERT
13	12								1175.85	331.15	330.17	325.00	0.0030	146.5	0.013	1546.02	14.5	22.5	0.76	1.09	13.21	PROP. TWIN 8"x 8" BOX CULVERT

THE PIPE CAPACITIES SHOWN ARE BASED ON GRAVITY FLOW. THIS SYSTEM WILL OPERATE UNDER PRESSURE FLOW BASED ON DOWNSTREAM HYDRAULIC CONDITIONS.



## Appendix D – Master Development Plan



GENERAL NOTES:

1. THE SUBJECT PROPERTY SHOWN HEREON IS RECORDED IN THE LAND RECORDS OF FAIRFAX CITY, VIRGINIA AS FOLLOWS:

PARCEL ID	OWNER	ADDRESS	ACREAGE	EXISTING ZONING
57-02-02-017	ARG II, LLC	3580 CHAIN BRIDGE ROAD	0.92	CR (COMMERCIAL RETAIL)
57-02-02-018	ARG II, LLC	3580 CHAIN BRIDGE ROAD	0.59	CR (COMMERCIAL RETAIL)
57-02-02-019	ARG II, LLC	10505 ORCHARD STREET	0.41	CR (COMMERCIAL RETAIL)
57-02-02-020	NORTHFAX JV LLC	3570 CHAIN BRIDGE ROAD	0.54	CR (COMMERCIAL RETAIL)
57-02-08-011	ARG II, LLC	10507 ORCHARD STREET	0.51	RM (RESIDENTIAL MEDIUM)
57-02-08-012	ARG II, LLC	10509 ORCHARD STREET	0.57	RM (RESIDENTIAL MEDIUM)
57-02-08-013	ARG II, LLC	10511 ORCHARD STREET	0.69	RM (RESIDENTIAL MEDIUM)
57-02-08-014	ARG II, LLC	10513 ORCHARD STREET	0.82	RM (RESIDENTIAL MEDIUM)
57-02-08-010	ORCHARD RE INVESTMENTS, LLC	10515 ORCHARD STREET	0.73	RM (RESIDENTIAL MEDIUM)
57-02-02-025	ORCHARD RE INVESTMENTS, LLC	10517 ORCHARD STREET	0.82	RM (RESIDENTIAL MEDIUM)
57-02-09-005	ORCHARD RE INVESTMENTS, LLC	10508 ORCHARD STREET	0.82	RM (RESIDENTIAL MEDIUM)
57-02-08-006	ORCHARD RE INVESTMENTS, LLC	10510 ORCHARD STREET	0.67	RM (RESIDENTIAL MEDIUM)
57-02-08-007	ORCHARD RE INVESTMENTS, LLC	10512 ORCHARD STREET	0.73	RM (RESIDENTIAL MEDIUM)
57-02-08-008	ORCHARD RE INVESTMENTS, LLC	10514 ORCHARD STREET	0.68	RM (RESIDENTIAL MEDIUM)
57-02-02-003	ORCHARD RE INVESTMENTS, LLC	10516 ORCHARD STREET	0.84	RM (RESIDENTIAL MEDIUM)
57-02-07-015B	ORCHARD RE INVESTMENTS, LLC	NONE	0.45	RM (RESIDENTIAL MEDIUM)
57-02-47-000-A	ORCHARD RE INVESTMENTS, LLC	NONE	0.93	RM (RESIDENTIAL MEDIUM)
TOTAL = 11.32				

2. THIS MOP SUBMISSION IS AN APPLICATION TO REZONE THE SUBJECT PROPERTIES FROM CR (COMMERCIAL RETAIL) AND RM (RESIDENTIAL MEDIUM) TO PD (PLANNED DEVELOPMENT) MIXED USE DISTRICT. THE CURRENT SITE CONSISTS OF 17 PARCELS THAT WILL BE CONSOLIDATED AND THEN SUBDIVIDED INTO THREE PARCELS FOR DEVELOPMENT. THE THREE PARCELS WILL CONSIST OF A PARCEL FOR TOWNHOUSES, A PARCEL FOR A SENIOR LIVING BUILDING AND A FUTURE DEVELOPMENT PARCEL WITH USES THAT HAVE YET TO BE DETERMINED. THIS MOP SUBMISSION SERVES AS A PRELIMINARY PLAT AND IS IN CONFORMANCE WITH ZONING ORDINANCE SECTION 8.6.5.B. AND THE SUBDIVISION ORDINANCE.

3. THE BOUNDARY AND PHYSICAL IMPROVEMENTS SHOWN HEREON ARE BASED UPON AN AERIAL TOPOGRAPHIC SURVEY PERFORMED BY MCKENZIE SNYDER, INC. FLOWN APRIL 6, 2015 AND COMPILED NOVEMBER 14, 2017. THIS DATA HAS BEEN SUPPLEMENTED BY CONVENTIONAL METHODS BY THIS FIRM BETWEEN THE DATES OF NOVEMBER 16 AND DECEMBER 5, 2017 AND JANUARY 2 AND JANUARY 3, 2018 AND FURTHER SUPPLEMENTED BETWEEN THE DATES OF APRIL 9 AND APRIL 17, 2019. CONTOUR INTERVAL FOR TOPOGRAPHIC SURVEY IS 2 FEET.

4. THE FOLLOWING DATUM WERE USED:  
A. HORIZONTAL DATUM SHOWN HEREON IS REFERENCED TO THE VIRGINIA COORDINATE SYSTEM (VCS) 1983 - NORTH AS ESTABLISHED FROM A GPS SURVEY.  
B. THE VERTICAL DATUM SHOWN HEREON IS REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29) AS ESTABLISHED FROM A CURRENT GPS SURVEY.

5. THE AREA SHOWN HEREON IS LOCATED ON THE FLOOD INSURANCE RATE MAPS (FIRM), COMMUNITY PANEL NO. 5155240002 D, WITH AN EFFECTIVE DATE OF JUNE 2, 2006.

BY GRAPHICAL DEPICTION ONLY, THE PROPERTY IS SHOWN IN:

- FLOOD ZONE "A" (SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD); BASE FLOOD ELEVATIONS DETERMINED.

A FIELD SURVEY HAS BEEN PERFORMED TO DETERMINE THE FLOOD ZONES LISTED HEREON. A CLOMR (PLAN # 18-03-2238R) HAS BEEN SUBMITTED AND APPROVED BY THE CITY OF FAIRFAX AND FEMA TO ADJUST THE FLOODPLAIN BOUNDARIES AROUND THE PROPERTY BASED ON THE PROPOSED SITE IMPROVEMENTS. REFER TO SHEET 18 FOR THE PRE-DEVELOPED FLOODPLAIN BOUNDARY AND SHEET 18A FOR THE POST-DEVELOPED FLOOD PLAIN BOUNDARY.

6. A TITLE REPORT WAS PROVIDED BY FIRST AMERICAN TITLE INSURANCE COMPANY, COMMITMENT NO. A1401113-TD WITH AN EFFECTIVE DATE OF NOVEMBER 18, 2014 AND REVISED JANUARY 6, 2015. ALL EASEMENTS, SERVITUDES AND OTHER MATTERS OF TITLE REFERENCED THEREIN ARE SHOWN ON THIS PLAN.

7. THE SUBJECT PROPERTY IS CURRENTLY SERVED BY PUBLIC WATER AND PUBLIC SEWER PROVIDED BY CITY OF FAIRFAX AND FAIRFAX WATER.

8. DURING THE PROCESS OF THE PHYSICAL SURVEY CONDUCTED BY CHRISTOPHER CONSULTANTS, LTD. NO INDICATIONS OF A CEMETERY WERE FOUND. NO FURTHER INSPECTION OF THESE PROPERTIES HAVE BEEN MADE FOR POSSIBLE CEMETERIES. THE SUBJECT PROPERTY IS NOT LISTED UNDER THE NATIONAL REGISTER OF HISTORIC PLACES.

9. NO GEOTECHNICAL FIELD REVIEWS, RESEARCH, GOVERNMENTAL RECORD REVIEWS, OR OTHER INVESTIGATIONS HAVE BEEN MADE FOR THE PURPOSE OF LOCATING, OR DETERMINING THE EXISTENCE OF HAZARDOUS MATERIALS, OR OTHER ENVIRONMENTAL CONCERNS ON THIS SITE. A PRELIMINARY JURISDICTIONAL DETERMINATION HAS BEEN SUBMITTED TO THE ARMY CORPS OF ENGINEERS TO DELINEATE THE RPA.

10. THIS DEVELOPMENT PROPOSAL IS COMPATIBLE WITH THE EXISTING DEVELOPMENT IN THE VICINITY OF THIS SITE. NO ADVERSE EFFECTS TO NEIGHBORING PROPERTIES ARE ANTICIPATED WITH THIS PROJECT.

11. NOTWITHSTANDING THE IMPROVEMENTS AND TABULATIONS SHOWN ON THIS PLAN, THE APPLICANT RESERVES THE RIGHT TO MAKE MODIFICATIONS TO THE FINAL DESIGN TO COMPLY WITH FINAL ENGINEERING AND NEW CRITERIA AND REGULATIONS WHICH MAY BE ADOPTED BY THE CITY OF FAIRFAX SUBSEQUENT TO THE SUBMISSION OF THIS APPLICATION, PROVIDED THAT SUCH MODIFICATIONS ARE SUBSTANTIALLY CONSISTENT WITH THE APPROVED DEVELOPMENT PLAN.

12. THE PROPOSED BUILDING FOOTPRINTS AND SITE IMPROVEMENTS SHOWN HEREIN ARE PRELIMINARY. THE PROPOSED SQUARE FOOTAGE FOR THE PROPOSED BUILDINGS IS APPROXIMATE ONLY AND MAY BE SUBJECT TO REVISIONS AT THE TIME OF SITE PLAN, SUBJECT TO MARKET CONDITIONS, BUT SUBSTANTIALLY CONSISTENT WITH THE APPROVED DEVELOPMENT PLAN.

13. ALL EXISTING UTILITY EASEMENTS HAVING A WIDTH GREATER THAN 25 FEET ARE SHOWN ON THE EXISTING CONDITIONS PLAN.

14. SITE LIGHTING WITHIN THE PROJECT SITE AREA (I.E. ALONG SIDEWALKS AND PATHWAYS) WILL BE DETERMINED DURING FINAL SITE PLAN REVIEW AND SHALL BE IN GENERAL CONFORMANCE WITH SECTION 4.8 OF THE ZONING ORDINANCE AND SECTION 2.10 OF THE PUBLIC FACILITIES MANUAL.

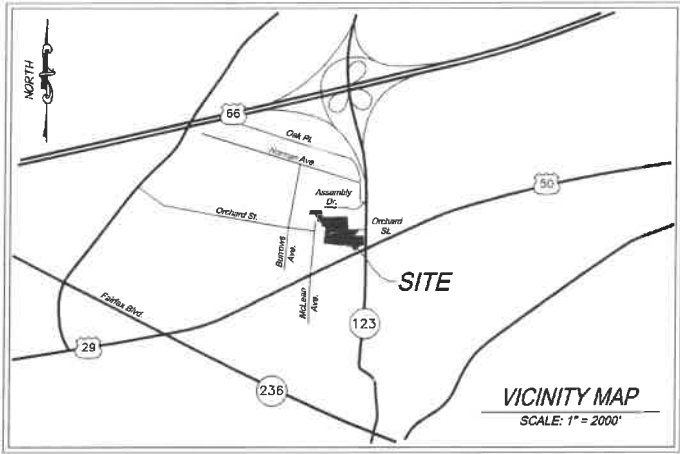
15. ONSITE STORMWATER MANAGEMENT AND BEST MANAGEMENT PRACTICES SHALL BE PROVIDED AS REQUIRED BY CITY REGULATIONS AT THE TIME OF FINAL SITE PLAN. DETENTION TO PROVIDE THE REQUIRED STORMWATER QUANTITY CONTROLS AND ONSITE BEST MANAGEMENT PRACTICES (BMPs) TO MEET THE STORMWATER QUALITY REQUIREMENTS ARE SHOWN ON SHEETS 4 AND 4A.

16. ALL SIGNAGE WILL BE IN CONFORMANCE WITH SECTION 4.6 OF THE ZONING ORDINANCE.

17. TO THE BEST KNOWLEDGE OF THE ENGINEER AND APPLICANT, THIS DEVELOPMENT PLAN CONFORMS TO ALL APPLICABLE ORDINANCES, REGULATIONS AND ADOPTED STANDARDS, WITH THE FOLLOWING MODIFICATIONS, WAIVERS, AND SPECIAL USE PERMIT:

- A MODIFICATION HAS BEEN REQUESTED OF SECTION 4.5.5.C.2.d.2. OF THE ZONING ORDINANCE FOR THE PERIMETER BUFFER TRANSITIONAL YARD (TY3).
- A MODIFICATION HAS BEEN REQUESTED OF SECTION 4.5.6.B. OF THE ZONING ORDINANCE FOR THE STREET TREE SPACING. THE APPLICANT PROPOSES NO STREET TREES ALONG ALL PRIVATE ALLEYS.
- SUPPORT FOR A WAIVER HAS BEEN REQUESTED OF SECTION 4.01-01 OF THE FAIRFAX PFM FOR THE TYPICAL CURB AND GUTTER STREET SECTION ON PRIVATE ACCESSWAYS THAT ARE LESS THAN 30 FEET FROM FACE OF CURB TO FACE OF CURB OR EDGE OF PAVEMENT.
- SUPPORT FOR A WAIVER HAS BEEN REQUESTED OF SECTION 2.4.5.3 THAT BLOCKS SHALL NOT BE LESS THAN 300 FEET IN LENGTH.
- A MODIFICATION HAS BEEN REQUESTED OF SECTION 4.5.7.D. OF THE ZONING ORDINANCE FOR INTERIOR PARKING LANDSCAPE ISLANDS.
- A MODIFICATION HAS BEEN REQUESTED OF SECTION 4.4.4.A.1. OF THE ZONING ORDINANCE. THE APPLICANT PROPOSES NO SIDEWALKS ALONG ALL PRIVATE ALLEYS.
- A MODIFICATION HAS BEEN REQUESTED OF SECTION 3.5.1.C.2. OF THE ZONING ORDINANCE THAT REQUIRES NO MORE THAN ONE OF ANY THREE TO FIVE ABUTTING DWELLING UNITS HAVE THE SAME FRONT YARD SETBACKS.
- A MODIFICATION HAS BEEN REQUESTED OF SECTION 4.2.3.E. OF THE ZONING ORDINANCE FOR THE PARKING RATIO REQUIREMENTS.
- A SPECIAL USE PERMIT HAS BEEN REQUESTED OF SECTION 4.15.7.C. OF THE ZONING ORDINANCE FOR DISTURBANCE IN THE FLOODPLAIN.

# MASTER DEVELOPMENT PLAN/ PRELIMINARY PLAT NORTHFAX WEST CITY OF FAIRFAX, VIRGINIA



PROJECT TEAM:

OWNER / APPLICANT  
**NORTHFAX JV LLC c/o THE LANN COMPANIES**  
3990 JERMANTOWN ROAD, SUITE 300  
FAIRFAX, VA 22030

CONTRACT PURCHASERS  
**MHI-NORTHFAX, LLC c/o MADISON HOMES, INC.**  
1950 OLD GALLOWAY ROAD, SUITE 200  
TYSONS CORNER, VA 22181

**BRIGHTVIEW SENIOR LIVING DEVELOPMENT, LLC**  
218 N. CHARLES STREET, SUITE 220  
BALTIMORE, MD 21201

ATTORNEY  
**WALSH COLUCCI LUBELEY & WALSH, P.C.**  
2200 CLARENDON BOULEVARD, SUITE 1300  
ARLINGTON, VA 22201

ARCHITECTS  
**DEVEREAUX & ASSOCIATES, P.C. (for MADISON HOMES)**  
1477 CHAIN BRIDGE ROAD  
MCLEAN, VA 22101

**SK&I ARCHITECTURAL DESIGN GROUP, LLC (for BVSL)**  
4800 EAST WEST HIGHWAY, SUITE 700  
BETHESDA, MD 20814

ENGINEER  
**christopher consultants**  
9900 MAIN STREET, SUITE 400  
FAIRFAX, VA 22031

TRANSPORTATION ENGINEER  
**GOROVE / SLADE**  
1140 CONNECTICUT AVE. NW, SUITE 600  
WASHINGTON, DC 20036

ENVIRONMENTAL AND GEOTECH CONSULTANTS  
**APEX COMPANIES, LLC**  
9700 CAPITAL COURT, SUITE 100  
MANASSAS, VA 20110

**HILLIS-CARNES ENGINEERING ASSOCIATES, INC.**  
14155 SULLYFIELD CIRCLE, SUITE A  
CHANTILLY, VA 20151

SHEET INDEX

1	COVER SHEET
2	EXISTING CONDITIONS PLAN
2A	EXISTING CONDITIONS PLAN
3	TREE MANAGEMENT PLAN
3A	TREE MANAGEMENT PLAN
3B	TREE MANAGEMENT SCHEDULE
3C	TREE MANAGEMENT SCHEDULE
3D	TREE MANAGEMENT NOTES & DETAILS
4	MASTER DEVELOPMENT PLAN
4A	MASTER DEVELOPMENT PLAN
4B	STREET SECTIONS AND TYPICAL TOWNHOUSE YARDS
5	PRELIMINARY GRADING PLAN
5A	PRELIMINARY GRADING PLAN
6	CONCEPTUAL LANDSCAPE PLAN
6A	CONCEPTUAL LANDSCAPE PLAN
7	OPEN SPACE PLAN
8	SANITARY SEWER OFF-SITE MAP
9	SANITARY SEWER ANALYSIS
10-15	SIGHT DISTANCE
16	TURNING MOVEMENTS
17	FIRE SERVICE PLAN
18	FLOODPLAIN AND RPA PRE-DEVELOPED
18A	FLOODPLAIN AND RPA POST-DEVELOPED

**christopher consultants**  
9900 main st  
suite 400  
fairfax, va 22031  
p 703.273.6820  
engineering surveying land planning



NORTHFAX WEST  
MASTER DEVELOPMENT PLAN  
CITY OF FAIRFAX, VIRGINIA

PROJECT No.: 13139.005.00

DRAWING No.: 109532

DATE: 11-21-2019

DESIGN: EG

DRAWN: JS

CHECKED: KMW

SHEET TITLE:

COVER SHEET

SHEET No.

1

SCALE: 1"=30'

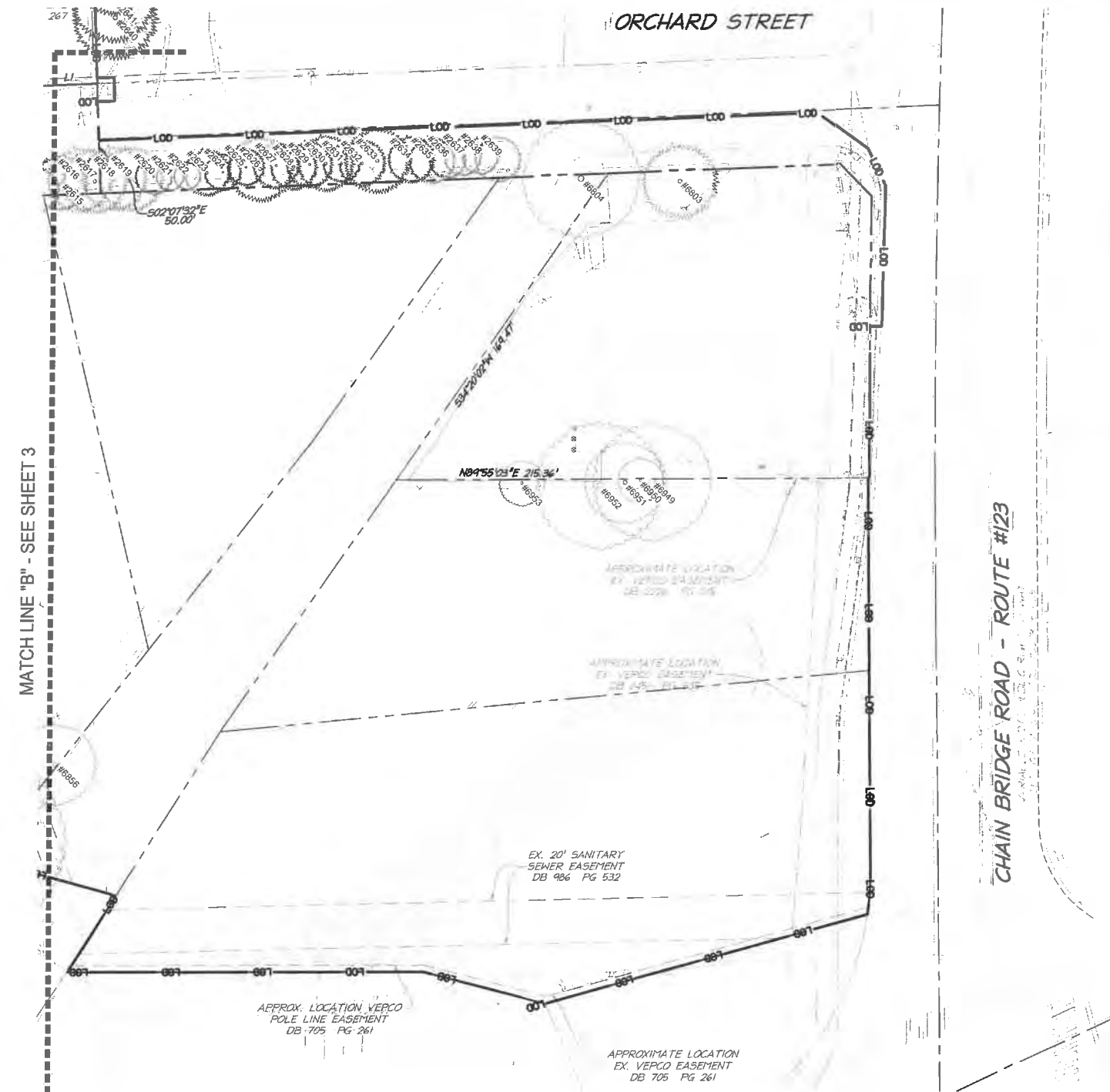
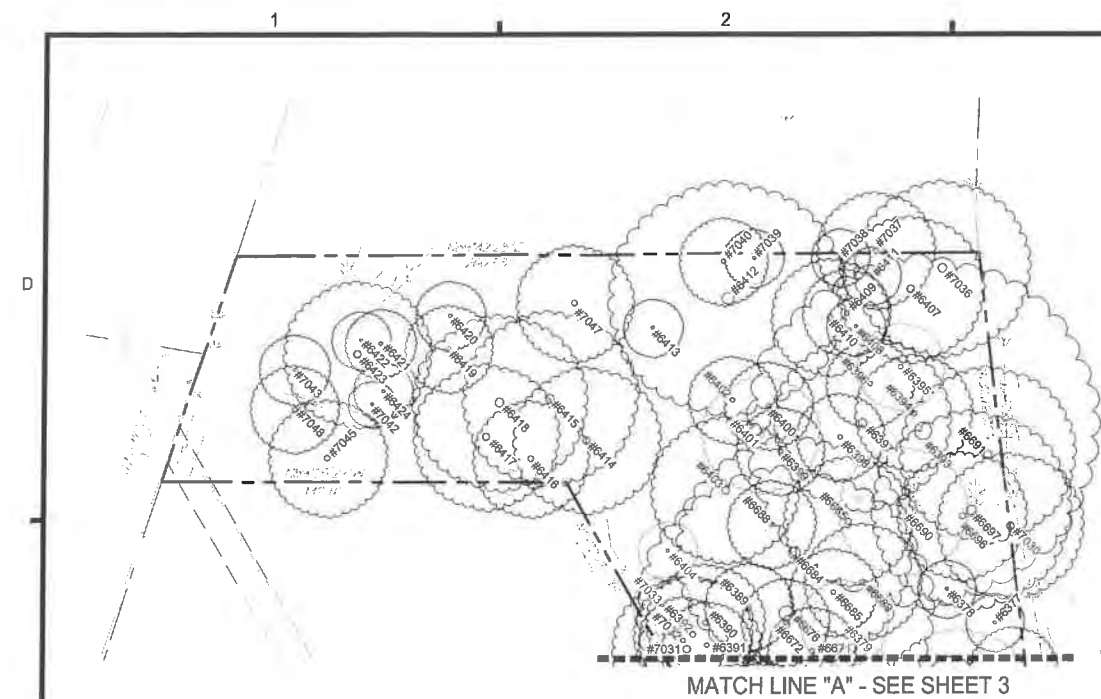








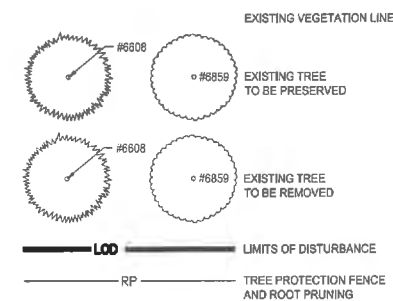




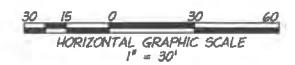
## NOTES

- NOTES
1. SEE SHEETS 3B AND 3C - TREE MANAGEMENT SCHEDULE.
  2. SEE SHEET 3D - TREE MANAGEMENT NOTES & DETAILS.

### LEGEND



VIRGINIA STATE GRID NORTH  
NAD 83



ALL CONSTRUCTION SHALL CONFORM TO  
THE CURRENT CITY OF FAIRFAX  
STANDARDS AND SPECIFICATIONS

PROJECT No.: 13139.005,00  
DRAWING No.: 109632  
DATE: 11-21-2019  
DESIGN: LBD  
DRAWN: LBD  
CHECKED: LBD

SHEET TITLE:

## TREE MANAGEMENT PLAN

SHEET No. \_\_\_\_\_

3A

SCALE: 1"=30'

NORTHFAX WEST  
MASTER DEVELOPMENT PLAN

CITY OF FAIRFAX, VIRGINIA

1

2

3

4

5

6

## TREE MANAGEMENT SCHEDULE

TREE #	BOTANICAL NAME	COMMON NAME	CRITICAL ROOT ZONE RADIUS (FEET)	TRUNK DIAMETER (INCHES)	CONDITION RATING	PROCEDURE
1974	THUJA SPP.	ARBORVITAE	10	8	75	PRESERVE
1975	THUJA SPP.	ARBORVITAE	10	8	75	REMOVE
1976	THUJA SPP.	ARBORVITAE	12	10	74	REMOVE
1977	THUJA SPP.	ARBORVITAE	10	8	78	REMOVE
1978	THUJA SPP.	ARBORVITAE	10	8	78	REMOVE
1979	THUJA SPP.	ARBORVITAE	10	8	78	REMOVE
1980	THUJA SPP.	ARBORVITAE	10	8	74	REMOVE
1981	THUJA SPP.	ARBORVITAE	10	8	72	REMOVE
1982	THUJA SPP.	ARBORVITAE	10	8	72	REMOVE
1984	THUJA SPP.	ARBORVITAE	12	10	74	REMOVE
1985	THUJA SPP.	ARBORVITAE	12	10	73	REMOVE
1986	THUJA SPP.	ARBORVITAE	12	10	72	REMOVE
1987	THUJA SPP.	ARBORVITAE	12	10	72	REMOVE
1988	THUJA SPP.	ARBORVITAE	12	10	72	REMOVE
1989	THUJA SPP.	ARBORVITAE	12	10	73	REMOVE
1990	THUJA SPP.	ARBORVITAE	12	10	74	REMOVE
1991	THUJA SPP.	ARBORVITAE	12	10	74	REMOVE
1992	THUJA SPP.	ARBORVITAE	12	10	78	REMOVE
1993	THUJA SPP.	ARBORVITAE	12	10	78	REMOVE
1994	THUJA SPP.	ARBORVITAE	12	10	75	REMOVE
1995	THUJA SPP.	ARBORVITAE	12	10	73	REMOVE
1996	THUJA SPP.	ARBORVITAE	12	10	73	REMOVE
1997	THUJA SPP.	ARBORVITAE	12	10	73	REMOVE
1998	THUJA SPP.	ARBORVITAE	12	10	73	REMOVE
1999	THUJA SPP.	ARBORVITAE	12	10	73	REMOVE
2000	THUJA SPP.	ARBORVITAE	12	10	78	REMOVE
2001	THUJA SPP.	ARBORVITAE	12	10	78	REMOVE
2002	THUJA SPP.	ARBORVITAE	12	10	78	REMOVE
2003	THUJA SPP.	ARBORVITAE	12	10	78	REMOVE
2005	ACER RUBRUM	RED MAPLE	40	36	65	REMOVE
2006	ACER RUBRUM	RED MAPLE	8	6	72	REMOVE
2007	FRAXINUS PENNSYLVANICA	GREEN ASH	20	16	0	REMOVE
2008	ACER RUBRUM	RED MAPLE	20	16	72	REMOVE
2009	ACER RUBRUM	RED MAPLE	18	14	67	REMOVE
2010	ACER RUBRUM	RED MAPLE	10	8	56	REMOVE
2011	UNIDENTIFIED	DEAD TREE	8	6	0	REMOVE
2012	FRAXINUS PENNSYLVANICA	GREEN ASH	22	18	0	REMOVE
2014	LIRIODENDRON TULIPIFERA	TULIP POPLAR	14	10	72	REMOVE
2015	CATALPA SPECIOSA	NORTHERN CATALPA	16	12	50	REMOVE
2016	ACER RUBRUM	RED MAPLE	8	6	66	REMOVE
2018	MORUS ALBA	WHITE MULBERRY	8	6	68	REMOVE
2019	MORUS ALBA	WHITE MULBERRY	20	16	50	REMOVE
2020	ROBINIA PSEUDOACACIA	BLACK LOCUST	8	6	50	REMOVE
2612	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	8	70	REMOVE
2615	THUJA SPP.	ARBORVITAE	12	10	72	REMOVE
2616	THUJA SPP.	ARBORVITAE	14	10	75	REMOVE
2617	THUJA SPP.	ARBORVITAE	14	10	72	REMOVE
2618	THUJA SPP.	ARBORVITAE	14	10	75	REMOVE
2619	THUJA SPP.	ARBORVITAE	14	10	72	REMOVE
2620	THUJA SPP.	ARBORVITAE	8	6	72	REMOVE
2621	THUJA SPP.	ARBORVITAE	8	4	68	REMOVE
2622	THUJA SPP.	ARBORVITAE	6	4	75	REMOVE
2623	THUJA SPP.	ARBORVITAE	10	8	68	REMOVE
2624	THUJA SPP.	ARBORVITAE	8	6	72	REMOVE
2625	THUJA SPP.	ARBORVITAE	8	6	67	REMOVE
2626	THUJA SPP.	ARBORVITAE	14	10	72	REMOVE
2627	THUJA SPP.	ARBORVITAE	10	8	88	REMOVE
2628	THUJA SPP.	ARBORVITAE	10	8	72	REMOVE
2629	THUJA SPP.	ARBORVITAE	10	8	68	REMOVE
2630	THUJA SPP.	ARBORVITAE	12	10	72	REMOVE
2631	THUJA SPP.	ARBORVITAE	8	6	67	REMOVE
2632	THUJA SPP.	ARBORVITAE	10	8	72	REMOVE
2633	THUJA SPP.	ARBORVITAE	14	10	68	REMOVE
2634	THUJA SPP.	ARBORVITAE	10	8	69	REMOVE
2635	THUJA SPP.	ARBORVITAE	10	8	67	REMOVE
2636	THUJA SPP.	ARBORVITAE	8	6	69	REMOVE
2637	THUJA SPP.	ARBORVITAE	8	6	88	REMOVE
2638	THUJA SPP.	ARBORVITAE	8	6	72	REMOVE
2639	THUJA SPP.	ARBORVITAE	10	8	68	REMOVE
2640	THUJA SPP.	ARBORVITAE	18	14	72	PRESERVE
2641	THUJA SPP.	ARBORVITAE	16	14	73	PRESERVE
2642	THUJA SPP.	ARBORVITAE	14	12	72	PRESERVE
2643	THUJA SPP.	ARBORVITAE	14	12	68	PRESERVE
2644	THUJA SPP.	ARBORVITAE	14	12	69	PRESERVE
2645	THUJA SPP.	ARBORVITAE	14	12	70	PRESERVE
2646	THUJA SPP.	ARBORVITAE	14	12	69	PRESERVE
2647	THUJA SPP.	ARBORVITAE	14	12	70	PRESERVE
2648	THUJA SPP.	ARBORVITAE	12	10	69	PRESERVE
2649	THUJA SPP.	ARBORVITAE	14	10	68	PRESERVE
2650	THUJA SPP.	ARBORVITAE	14	10	66	PRESERVE
2651	THUJA SPP.	ARBORVITAE	8	6	67	PRESERVE
2652	THUJA SPP.	ARBORVITAE	12	10	68	PRESERVE
2653	THUJA SPP.	ARBORVITAE	14	10	70	PRESERVE
2654	THUJA SPP.	ARBORVITAE	14	10	66	PRESERVE
2655	THUJA SPP.	ARBORVITAE	14	10	65	PRESERVE
2656	THUJA SPP.	ARBORVITAE	14	10	66	PRESERVE
2657	THUJA SPP.	ARBORVITAE	14	10	70	PRESERVE
2658	THUJA SPP.	ARBORVITAE	14	10	53	PRESERVE
2659	THUJA SPP.	ARBORVITAE	14	10	71	PRESERVE
2660	THUJA SPP.	ARBORVITAE	14	10	69	PRESERVE
2661	THUJA SPP.	ARBORVITAE	14	10	73	PRESERVE
2662	THUJA SPP.	ARBORVITAE	14	10	75	PRESERVE
2663	THUJA SPP.	ARBORVITAE	14	10	73	PRESERVE
2664	THUJA SPP.	ARBORVITAE	14	10	75	PRESERVE
2665	THUJA SPP.	ARBORVITAE	10	8	69	PRESERVE
6056	ACER RUBRUM	RED MAPLE	15	10	53	REMOVE
6301	PRUNUS SEROTINA	BLACK CHERRY	10	12	69	REMOVE
6302	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	20	66	REMOVE
6303	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	12	72	REMOVE
6304	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	15	72	REMOVE
6305	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	20	70	REMOVE
6306	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	15	72	REMOVE
6307	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	20	75	REMOVE
6308	ACER RUBRUM	RED MAPLE	15	15	73	REMOVE
6309	FRAXINUS PENNSYLVANICA	GREEN ASH	10	14	0	REMOVE
6310	LIRIODENDRON TULIPIFERA	TULIP POPLAR	5	6	72	REMOVE
6311	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	20	71	REMOVE
6312	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	26	75	REMOVE
6313	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	26	72	REMOVE
6314	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	18	68	REMOVE
6315	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	15	70	REMOVE
6316	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	24	72	REMOVE
6317	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	15	72	REMOVE
6318	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	15	69	REMOVE
6319	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	36	70	REMOVE
6320	ACER RUBRUM	RED MAPLE	25	12	50	REMOVE
6321	ACER RUBRUM	RED MAPLE	15	10	60	REMOVE

## TREE MANAGEMENT SCHEDULE

			CRITICAL ROOT ZONE RADIUS	TRUNK DIAMETER	CONDITION RATING	PROCEDURE
TREE #	BOTANICAL NAME	COMMON NAME	(FEET)	(INCHES)		
6322	ACER RUBRUM	RED MAPLE	35	24	63	REMOVE
6323	ACER RUBRUM	RED MAPLE	10	12	0	REMOVE
6324	ACER RUBRUM	RED MAPLE	25	24	47	REMOVE
6325	PRUNUS SEROTINA	BLACK CHERRY	10	12	68	REMOVE
6326	PRUNUS SEROTINA	BLACK CHERRY	10	6	44	REMOVE
6327	ACER RUBRUM	RED MAPLE	10	6	86	REMOVE
6328	ACER RUBRUM	RED MAPLE	20	24	75	REMOVE
6329	ACER RUBRUM	RED MAPLE	15	15	67	REMOVE
6330	ACER RUBRUM	RED MAPLE	15	24	66	REMOVE
6331	ACER RUBRUM	RED MAPLE	20	14	67	REMOVE
6332	ACER RUBRUM	RED MAPLE	30	24	66	REMOVE
6333	ACER RUBRUM	RED MAPLE	10	8	72	REMOVE
6334	QUERCUS RUBRA	NORTHERN RED OAK	25	24	69	REMOVE
6335	ACER RUBRUM	RED MAPLE	15	10	69	REMOVE
6336	ACER RUBRUM	RED MAPLE	20	24	63	REMOVE
6337	ACER RUBRUM	RED MAPLE	15	12	70	REMOVE
6338	PRUNUS SEROTINA	BLACK CHERRY	10	10	60	REMOVE
6339	ACER RUBRUM	RED MAPLE	25	24	65	REMOVE
6340	FRAXINUS PENNSYLVANICA	GREEN ASH	25	24	0	REMOVE
6341	FRAXINUS PENNSYLVANICA	GREEN ASH	15	15	0	REMOVE
6342	MORUS ALBA	WHITE MULBERRY	50	24	44	REMOVE
6343	ACER RUBRUM	RED MAPLE	15	5	68	REMOVE
6344	ACER RUBRUM	RED MAPLE	15	5	72	REMOVE
6345	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	10	68	REMOVE
6346	FRAXINUS PENNSYLVANICA	GREEN ASH	15	15	0	REMOVE
6347	PRUNUS SEROTINA	BLACK CHERRY	15	10	71	REMOVE
6348	FRAXINUS PENNSYLVANICA	GREEN ASH	25	18	0	REMOVE
6349	PRUNUS SEROTINA	BLACK CHERRY	20	12	68	REMOVE
6350	FRAXINUS PENNSYLVANICA	GREEN ASH	25	36	40	REMOVE
6351	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	15	67	REMOVE
6352	LIRIODENDRON TULIPIFERA	TULIP POPLAR	30	28	69	REMOVE
6353	ACER RUBRUM	RED MAPLE	30	36	65	REMOVE
6354	ACER RUBRUM	RED MAPLE	25	24	72	REMOVE
6355	ACER RUBRUM	RED MAPLE	10	12	50	REMOVE
6356	ACER RUBRUM	RED MAPLE	36	26	53	REMOVE
6357	ACER RUBRUM	RED MAPLE	20	24	55	REMOVE
6359	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	10	70	REMOVE
6360	ULMUS AMERICANA	AMERICAN ELM	20	24	41	REMOVE
6361	ULMUS AMERICANA	AMERICAN ELM	10	8	50	REMOVE
6362	ULMUS AMERICANA	AMERICAN ELM	10	12	50	REMOVE
6363	ACER RUBRUM	RED MAPLE	16	24	60	REMOVE
6364	JUGLANS NIGRA	BLACK WALNUT	25	28	69	PRESERVE
6366	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	12	66	REMOVE
6367	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	8	67	REMOVE
6368	JUGLANS NIGRA	BLACK WALNUT	10	6	66	REMOVE
6369	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	8	69	PRESERVE
6370	ACER RUBRUM	RED MAPLE	30	30	72	PRESERVE
6372	LIRIODENDRON TULIPIFERA	TULIP POPLAR	5	8	75	PRESERVE
6373	CARYA CORDIFORMIS	BITTERNUT HICKORY	10	10	70	PRESERVE
6374	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	10	72	PRESERVE
6376	LIRIODENDRON TULIPIFERA	TULIP POPLAR	25	18	66	PRESERVE
6378	CARYA CORDIFORMIS	BITTERNUT HICKORY	15	15	25	PRESERVE
6377	ULMUS AMERICANA	AMERICAN ELM	10	8	40	PRESERVE
6378	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	10	53	PRESERVE
6379	MORUS ALBA	WHITE MULBERRY	15	5	45	REMOVE
6381	MORUS ALBA	WHITE MULBERRY	10	6	60	REMOVE
6382	PRUNUS SEROTINA	BLACK CHERRY	20	10	56	PRESERVE
6383	PRUNUS SEROTINA	BLACK CHERRY	10	10	65	PRESERVE
6384	PRUNUS SEROTINA	BLACK CHERRY	15	5	75	PRESERVE
6385	ALBIZIA JULIBRISIN	MIMOSA	10	7	50	PRESERVE
6386	CATALPA SPECIOSA	NORTHERN CATALPA	20	12	68	PRESERVE
6387	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	18	45	PRESERVE
6388	ACER RUBRUM	RED MAPLE	15	12	66	PRESERVE
6389	NYSSA SYLVATICA	BLACK GUM	15	8	65	PRESERVE
6390	QUERCUS RUBRA	NORTHERN RED OAK	20	15	56	PRESERVE
6391	QUERCUS RUBRA	NORTHERN RED OAK	15	10	56	PRESERVE
6392	ULMUS AMERICANA	AMERICAN ELM	20	6	63	PRESERVE
6393	ACER RUBRUM	RED MAPLE	60	40	56	PRESERVE
6394	PRUNUS SEROTINA	BLACK CHERRY	20	10	25	PRESERVE
6395	ACER PLATANOIDES	NORWAY MAPLE	15	6	70	REMOVE
6396	QUERCUS ALBA	WHITE OAK	15	15	56	PRESERVE
6397	LIRIODENDRON TULIPIFERA	TULIP POPLAR	30	36	68	PRESERVE
6398	PRUNUS SEROTINA	BLACK CHERRY	15	6	68	PRESERVE
6399	ULMUS AMERICANA	AMERICAN ELM	15	6	72	PRESERVE
6400	FAGUS GRANDIFOLIA	AMERICAN BEECH	15	8	59	PRESERVE
6401	MORUS ALBA	WHITE MULBERRY	20	15	67	REMOVE
6402	ACER RUBRUM	RED MAPLE	15	6	63	PRESERVE
6403	LIRIODENDRON TULIPIFERA	TULIP POPLAR	25	24	70	PRESERVE
6404	MORUS ALBA	WHITE MULBERRY	10	8	66	REMOVE
6407	ACER RUBRUM	RED MAPLE	25	24	72	PRESERVE
6408	ACER RUBRUM	RED MAPLE	10	10	63	PRESERVE
6409	ACER RUBRUM	RED MAPLE	15	8	65	PRESERVE
6410	ULMUS AMERICANA	AMERICAN ELM	20	10	68	PRESERVE
6411	ACER RUBRUM	RED MAPLE	10	10	63	PRESERVE
6412	QUERCUS RUBRA	NORTHERN RED OAK	40	48	53	PRESERVE
6413	QUERCUS RUBRA	NORTHERN RED OAK	10	10	68	PRESERVE
6414	QUERCUS RUBRA	NORTHERN RED OAK	25	38	69	PRESERVE
6415	LIRIODENDRON TULIPIFERA	TULIP POPLAR	30	50	72	PRESERVE
6416	FAGUS GRANDIFOLIA	AMERICAN BEECH	20	24	68	PRESERVE
6417	QUERCUS RUBRA	NORTHERN RED OAK	25	40	50	PRESERVE
6418	QUERCUS RUBRA	NORTHERN RED OAK	30	40	56	PRESERVE
6419	ACER RUBRUM	RED MAPLE	15	12	70	PRESERVE
6420	PRUNUS SEROTINA	BLACK CHERRY	12	8	72	PRESERVE
6421	QUERCUS RUBRA	NORTHERN RED OAK	12	10	74	PRESERVE
6422	ACER RUBRUM	RED MAPLE	10	12	75	PRESERVE
6423	QUERCUS RUBRA	NORTHERN RED OAK	25	24	73	PRESERVE
6424	QUERCUS RUBRA	NORTHERN RED OAK	10	6	72	PRESERVE
6504	ACER SACCHARUM	SUGAR MAPLE	10	6	75	PRESERVE
6505	FRAXINUS PENNSYLVANICA	GREEN ASH	12	8	25	REMOVE
6509	MORUS ALBA	WHITE MULBERRY	22	18	68	PRESERVE
6511	ACER RUBRUM	RED MAPLE	18	14	25	REMOVE
6512	FRAXINUS PENNSYLVANICA	GREEN ASH	18	14	40	REMOVE
6513	LIRIODENDRON TULIPIFERA	TULIP POPLAR	44	48	68	REMOVE
6514	ACER SACCHARUM	SUGAR MAPLE	7	5	53	REMOVE
6515	FRAXINUS PENNSYLVANICA	GREEN ASH	20	16	30	REMOVE
6516	CARYA TOMENTOSA	MOCKERNUT HICKORY	12	8	69	REMOVE
6517	LIRIODENDRON TULIPIFERA	TULIP POPLAR	18	14	80	REMOVE
6518	CATALPA SPECIOSA	NORTHERN CATALPA	28	24	64	REMOVE
6519	CATALPA SPECIOSA	NORTHERN CATALPA	16	12	80	REMOVE
6520	LIRIODENDRON TULIPIFERA	TULIP POPLAR	24	20	66	REMOVE
6521	MORUS ALBA	WHITE MULBERRY	40	36	55	REMOVE
6522	PRUNUS SEROTINA	BLACK CHERRY	8	6	65	REMOVE
6523	JUGLANS NIGRA	BLACK WALNUT	12	8	66	REMOVE
6524	ACER RUBRUM	RED MAPLE	8	6	59	REMOVE
6525	ACER RUBRUM	RED MAPLE	18	12	65	REMOVE
6526	ROBINIA PSEUDOACACIA	BLACK LOCUST	18	14	56	REMOVE
6527	ACER RUBRUM	RED MAPLE	20	16	67	REMOVE



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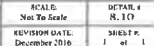
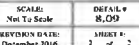
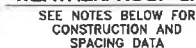
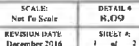
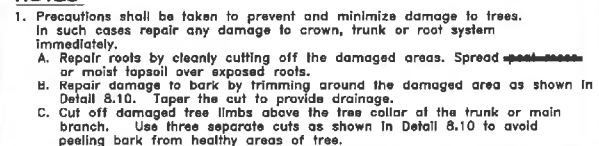
## TREE MANAGEMENT SCHEDULE

TREE #	BOTANICAL NAME	COMMON NAME	CRITICAL ROOT ZONE RADIUS (FEET)	TRUNK DIAMETER (INCHES)	CONDITION RATING	PROCEDURE
6845	ACER RUBRUM	RED MAPLE	11	7	72	REMOVE
6846	ACER RUBRUM	RED MAPLE	18	12	72	REMOVE
6847	ACER RUBRUM	RED MAPLE	12	8	69	REMOVE
6848	ULMUS AMERICANA	AMERICAN ELM	12	8	41	REMOVE
6849	FRAXINUS PENNSYLVANICA	GREEN ASH	16	12	30	REMOVE
6850	ACER RUBRUM	RED MAPLE	20	16	72	REMOVE
6851	ACER RUBRUM	RED MAPLE	12	8	50	REMOVE
6852	ULMUS AMERICANA	AMERICAN ELM	12	8	68	REMOVE
6853	LIRIODENDRON TULIPIFERA	TULIP POPLAR	7	5	72	REMOVE
6854	ACER RUBRUM	RED MAPLE	7	12	69	REMOVE
6855	ACER RUBRUM	SILVER MAPLE	30	26	71	REMOVE
6857	ACER RUBRUM	RED MAPLE	34	30	71	REMOVE
6858	ACER RUBRUM	RED MAPLE	20	16	72	REMOVE
6859	ACER RUBRUM	RED MAPLE	16	12	75	REMOVE
6861	UNIDENTIFIED	DEAD TREE	8	6	0	REMOVE
6862	ACER RUBRUM	RED MAPLE	20	16	72	REMOVE
6863	UNIDENTIFIED	DEAD TREE	18	14	0	REMOVE
6864	PRUNUS SEROTINA	BLACK CHERRY	10	8	68	PRESERVE
6865	LIRIODENDRON TULIPIFERA	TULIP POPLAR	22	18	68	PRESERVE
6866	LIRIODENDRON TULIPIFERA	TULIP POPLAR	8	5	75	REMOVE
6867	FRAXINUS PENNSYLVANICA	GREEN ASH	14	10	0	REMOVE
6868	FRAXINUS PENNSYLVANICA	GREEN ASH	14	10	0	REMOVE
6869	LIRIODENDRON TULIPIFERA	TULIP POPLAR	5	5	70	REMOVE
6870	QUERCUS RUBRA	NORTHERN RED OAK	34	30	72	REMOVE
6871	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	10	66	PRESERVE
6872	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	8	68	PRESERVE
6873	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	12	50	PRESERVE
6874	ACER SACCHARINUM	SILVER MAPLE	40	36	72	REMOVE
6875	UNIDENTIFIED	DEAD TREE	16	12	0	REMOVE
6876	QUERCUS ALBA	WHITE OAK	50	40	68	PRESERVE
6877	ACER RUBRUM	RED MAPLE	38	32	63	PRESERVE
6878	ULMUS AMERICANA	AMERICAN ELM	7	5	72	REMOVE
6879	ACER RUBRUM	RED MAPLE	24	20	70	REMOVE
6880	FRAXINUS PENNSYLVANICA	GREEN ASH	28	24	0	REMOVE
6881	ULMUS AMERICANA	AMERICAN ELM	8	6	55	PRESERVE
6882	LIRIODENDRON TULIPIFERA	TULIP POPLAR	8	6	68	REMOVE
6883	LIRIODENDRON TULIPIFERA	TULIP POPLAR	6	6	68	REMOVE
6884	QUERCUS ALBA	WHITE OAK	40	36	58	PRESERVE
6885	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	12	68	PRESERVE
6886	FRAXINUS PENNSYLVANICA	GREEN ASH	24	20	40	REMOVE
6887	LIRIODENDRON TULIPIFERA	TULIP POPLAR	5	5	68	REMOVE
6888	QUERCUS RUBRA	NORTHERN RED OAK	15	6	75	PRESERVE
6889	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	20	68	PRESERVE
6890	FRAXINUS PENNSYLVANICA	GREEN ASH	22	18	0	REMOVE
6891	ACER RUBRUM	RED MAPLE	30	30	65	PRESERVE
6892	FRAXINUS PENNSYLVANICA	GREEN ASH	28	22	0	REMOVE
6893	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	8	72	REMOVE
6895	ACER RUBRUM	RED MAPLE	8	6	55	REMOVE
6896	LIRIODENDRON TULIPIFERA	TULIP POPLAR	22	18	69	PRESERVE
6897	LIRIODENDRON TULIPIFERA	TULIP POPLAR	34	30	68	PRESERVE
6898	MORUS ALBA	WHITE MULBERRY	20	15	34	REMOVE
6899	ACER RUBRUM	RED MAPLE	12	8	71	REMOVE
6900	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	10	75	REMOVE
6903	CEDRUS ATLANTICA	ATLAS CEDAR	16	14	70	REMOVE
6904	QUERCUS PALUSTRIS	PIN OAK	28	22	74	REMOVE
6907	THUJA SPP.	ARBORVITAE	10	8	76	REMOVE
6908	THUJA SPP.	ARBORVITAE	10	8	72	REMOVE
6909	THUJA SPP.	ARBORVITAE	10	8	74	REMOVE
6910	THUJA SPP.	ARBORVITAE	12	10	75	REMOVE
6911	THUJA SPP.	ARBORVITAE	12	10	75	REMOVE
6912	THUJA SPP.	ARBORVITAE	12	10	75	REMOVE
6913	THUJA SPP.	ARBORVITAE	10	8	75	REMOVE
6915	THUJA SPP.	ARBORVITAE	12	10	75	REMOVE
6916	THUJA SPP.	ARBORVITAE	10	8	75	REMOVE
6917	THUJA SPP.	ARBORVITAE	10	8	70	REMOVE
6918	THUJA SPP.	ARBORVITAE	10	8	69	REMOVE
6919	THUJA SPP.	ARBORVITAE	10	8	76	REMOVE
6920	THUJA SPP.	ARBORVITAE	10	8	71	REMOVE
6921	THUJA SPP.	ARBORVITAE	10	8	71	REMOVE
6922	THUJA SPP.	ARBORVITAE	10	8	72	REMOVE
6923	THUJA SPP.	ARBORVITAE	10	8	74	REMOVE
6924	JUNIPERUS VIRGINIANA	EASTERN REDCEDAR	18	12	66	REMOVE
6925	JUNIPERUS VIRGINIANA	EASTERN REDCEDAR	16	12	74	REMOVE
6926	FRAXINUS PENNSYLVANICA	GREEN ASH	20	16	65	REMOVE
6927	PICEA ABIES	NORWAY SPRUCE	26	22	72	REMOVE
6928	JUNIPERUS VIRGINIANA	EASTERN REDCEDAR	8	6	72	REMOVE
6929	JUNIPERUS VIRGINIANA	EASTERN REDCEDAR	7	5	74	REMOVE
6930	JUNIPERUS VIRGINIANA	EASTERN REDCEDAR	12	10	78	REMOVE
6931	JUNIPERUS VIRGINIANA	EASTERN REDCEDAR	12	10	71	REMOVE
6932	JUNIPERUS VIRGINIANA	EASTERN REDCEDAR	10	8	76	REMOVE
6933	JUNIPERUS VIRGINIANA	EASTERN REDCEDAR	12	10	76	REMOVE
6934	CARYA CORDIFORMIS	BITTERNUT HICKORY	28	22	71	REMOVE
6935	ACER RUBRUM	RED MAPLE	28	22	68	REMOVE
6936	FRAXINUS PENNSYLVANICA	GREEN ASH	8	6	68	REMOVE
6937	ACER RUBRUM	RED MAPLE	20	16	72	REMOVE
6938	ACER RUBRUM	RED MAPLE	14	10	63	REMOVE
6939	ACER RUBRUM	RED MAPLE	12	8	70	REMOVE
6940	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	18	72	REMOVE
6941	ACER RUBRUM	RED MAPLE	22	18	70	REMOVE
6942	ACER RUBRUM	RED MAPLE	28	24	69	REMOVE
6943	ACER RUBRUM	RED MAPLE	20	16	75	REMOVE
6944	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	12	75	REMOVE
6945	UNIDENTIFIED	DEAD TREE	1	8	0	REMOVE
6946	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	15	63	REMOVE
6947	ACER RUBRUM	RED MAPLE	15	8	68	REMOVE
6948	LIRIODENDRON TULIPIFERA	TULIP POPLAR	30	27	59	REMOVE
6949	ACER RUBRUM	RED MAPLE	26	24	68	REMOVE
6950	ACER RUBRUM	RED MAPLE	10	12	30	REMOVE
6951	ACER RUBRUM	RED MAPLE	18	14	70	REMOVE
6952	ULMUS AMERICANA	AMERICAN ELM	28	24	60	REMOVE
6953	ACER RUBRUM	RED MAPLE	10	6	60	REMOVE
6954	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	18	69	REMOVE
6955	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	15	70	REMOVE
6956	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	21	69	REMOVE
6957	ACER RUBRUM	RED MAPLE	10	5	45	REMOVE
6958	LIRIODENDRON TULIPIFERA	TULIP POPLAR	5	8	68	REMOVE
6959	LIRIODENDRON TULIPIFERA	TULIP POPLAR	5	8	68	REMOVE
6960	ACER RUBRUM	RED MAPLE	15	12	28	REMOVE
6961	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	8	75	REMOVE
6965	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	12	70	REMOVE
6966	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	10	72	REMOVE
6967	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	27	72	REMOVE
6968	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	24	63	REMOVE
6969	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	15	72	REMOVE
6970	FRAXINUS PENNSYLVANICA	GREEN ASH	22	18	0	REMOVE
6971	ACER RUBRUM	RED MAPLE	14	10	65	REMOVE
6972	FRAXINUS PENNSYLVANICA	GREEN ASH	14	10	0	REMOVE
6973	FRAXINUS PENNSYLVANICA	GREEN ASH	7	5	30	REMOVE
6974	LIRIODENDRON TULIPIFERA	TULIP POPLAR	34	30	66	REMOVE
6975	LIRIODENDRON TULIPIFERA	TULIP POPLAR	3	12	73	REMOVE
6976	LIRIODENDRON TULIPIFERA	TULIP POPLAR	12	8	72	REMOVE
6977	LIRIODENDRON TULIPIFERA	TULIP POPLAR	48	44	72	REMOVE
6978	JUGLANS NIGRA	BLACK WALNUT	16	12	66	REMOVE
6979	CATALPA SPECIOSA	NORTHERN CATALPA	14	10	40	REMOVE
6980	MORUS ALBA	WHITE MULBERRY	18	14	50	REMOVE
6982	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	24	69	REMOVE
6983	PINUS VIRGINIANA	VIRGINIA PINE	26	24	70	REMOVE
6984	CATALPA SPECIOSA	NORTHERN CATALPA	8	6	72	REMOVE
6985	ACER RUBRUM	RED MAPLE	40	36	65	REMOVE
6986	PRUNUS SEROTINA	BLACK CHERRY	12	8	63	REMOVE
6987	QUERCUS PALUSTRIS	PIN OAK	38	32	71	REMOVE
6988	PRUNUS SEROTINA	BLACK CHERRY	14	10	59	REMOVE
6989	ACER RUBRUM	RED MAPLE	12	8	67	REMOVE
6990	ACER RUBRUM	RED MAPLE	25	12	66	REMOVE
6991	LACERSTROEMIA SPP.	GREPE MYRTLE	24	20	70	REMOVE
6992	QUERCUS PALUSTRIS	PIN OAK	12	8	72	REMOVE
6993	ACER RUBRUM	RED MAPLE	12	10	70	REMOVE
6994	ILEX OPACA	AMERICAN HOLLY	28	24	70	REMOVE
6995	ULMUS AMERICANA	AMERICAN ELM	8	6	53	REMOVE
6997	FRAXINUS PENNSYLVANICA	GREEN ASH	24	20	50	REMOVE
6998	ACER RUBRUM	RED MAPLE	30	26	63	REMOVE
7000	LIRIODENDRON TULIPIFERA	TULIP POPLAR	26	20	38	REMOVE
7002	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	15	75	REMOVE
7003	LIRIODENDRON TULIPIFERA	TULIP POPLAR	28	27	73	REMOVE
7004	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	24	72	REMOVE
7005	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	24	66	REMOVE
7008	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	8	69	REMOVE
7007	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	30	67	REMOVE
7008	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	24	75	REMOVE
7009	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	15	72	REMOVE
7010	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	10	68	REMOVE

## TREE MANAGEMENT SCHEDULE

TREE #	BOTANICAL NAME	COMMON NAME	CRITICAL ROOT ZONE RADIUS (FEET)	TRUNK DIAMETER (INCHES)	CONDITION RATING	PROCEDURE
6877	ACER RUBRUM	RED MAPLE	20	18	68	REMOVE
6878	ACER RUBRUM	RED MAPLE	26	22	69	REMOVE
6880	ACER RUBRUM	RED MAPLE	26	22	72	REMOVE
6881	LIRIODENDRON TULIPIFERA	TULIP POPLAR	28	24	72	REMOVE
6882	LIRIODENDRON TULIPIFERA	TULIP POPLAR	40	36	72	REMOVE
6883	PRUNUS SEROTINA	BLACK CHERRY	24	20	65	REMOVE
6884	LIRIODENDRON TULIPIFERA	TULIP POPLAR	28	24	69	REMOVE
6886	ACER RUBRUM	RED MAPLE	28	24	66	REMOVE
6887	QUERCUS PALUSTRIS	PIN OAK	18	14	50	REMOVE
6888	ACER RUBRUM	RED MAPLE	7	5	66	REMOVE
6889	LIRIODENDRON TULIPIFERA	TULIP POPLAR	46	40	55	REMOVE
6890	ACER RUBRUM	RED MAPLE	16	12	63	REMOVE
6891	ACER RUBRUM	RED MAPLE	20	16	68	REMOVE
6892	PRUNUS SEROTINA	BLACK CHERRY	20	16	63	REMOVE
6893	ACER RUBRUM	RED MAPLE	12	8	60	REMOVE
6894	LIRIODENDRON TULIPIFERA	TULIP POPLAR	26	22	75	REMOVE
6895	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	16	70	REMOVE
6896	ACER RUBRUM	RED MAPLE	14	10	63	REMOVE
6897	ACER RUBRUM	RED MAPLE	14	10	70	REMOVE
6898	ACER RUBRUM	RED MAPLE	20	16	63	REMOVE
6899	PICEA ABIES	NORWAY SPRUCE	18	14	70	REMOVE
6900	LIRIODENDRON TULIPIFERA	TULIP POPLAR	28	24	68	REMOVE
6901	LIRIODENDRON TULIPIFERA	TULIP POPLAR	18	14	67	REMOVE
6902	UNIDENTIFIED	DEAD TREE	14	10	31	REMOVE
6903	ACER RUBRUM	RED MAPLE	18	14	40	REMOVE
6904	LIRIODENDRON TULIPIFERA	TULIP POPLAR	40	36	75	REMOVE
6905	LIRIODENDRON TULIPIFERA	TULIP POPLAR	34	30	69	REMOVE
6907	ACER RUBRUM	RED MAPLE	24	20	45	REMOVE
6908	QUERCUS RUBRA	NORTHERN RED OAK	40	36	66	REMOVE
6909	MAGNOLIA GRANDIFLORA	SOUTHERN MAGNOLIA	16	12	60	REMOVE
6910	ILEX OPACA	AMERICAN HOLLY	12	10	51	REMOVE
6911	PICEA ABIES	NORWAY SPRUCE	12	8	65	REMOVE
6912	ACER RUBRUM	RED MAPLE	22	18	28	REMOVE
6913	PINUS STROBUS	WHITE PINE	12	8	50	REMOVE
6914	ACER RUBRUM	RED MAPLE	34	30	66	REMOVE
6915	ACER RUBRUM	RED MAPLE	26	22	65	REMOVE
6916	ACER RUBRUM	RED MAPLE	20	16	59	REMOVE
6917	ACER RUBRUM	RED MAPLE	26	22	30	REMOVE
6918	JUGLANS NIGRA	BLACK WALNUT	20	18	50	REMOVE
6919	LIRIODENDRON TULIPIFERA	TULIP POPLAR	34	30	69	REMOVE
6921	JUGLANS NIGRA	BLACK WALNUT	22	18	67	REMOVE
6925	ACER RUBRUM	RED MAPLE	5	5	30	REMOVE
6926	ACER RUBRUM	RED MAPLE	10	8	59	REMOVE
6927	UNIDENTIFIED	DEAD TREE	15	12	0	REMOVE
6928	ACER RUBRUM	RED MAPLE	15	8	69	REMOVE
6929	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	24	72	REMOVE
6932	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	15	60	REMOVE
6933	PINUS VIRGINIANA	VIRGINIA PINE	18	14	60	REMOVE
6934	ACER RUBRUM	RED MAPLE	10	5	63	REMOVE
6935	PRUNUS SEROTINA	BLACK CHERRY	30	30	60	REMOVE
6936	CATALPA SPECIOSA	NORTHERN CATALPA	10	5	69	REMOVE
6937	LIRIODENDRON TULIPIFERA	TULIP POPLAR	25	30	71	REMOVE
6939	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	18	72	REMOVE
6940	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	18	71	REMOVE
6941	ACER RUBRUM	RED MAPLE	10	10	70	REMOVE
6942	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	24	74	REMOVE
6943	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	24	73	REMOVE
6944	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	12	75	REMOVE
6945	UNIDENTIFIED	DEAD TREE	1	8	0	REMOVE
6946	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	15	63	REMOVE
6947	ACER RUBRUM	RED MAPLE	15	8	65	REMOVE
6948	LIRIODENDRON TULIPIFERA	TULIP POPLAR	30	27	59	REMOVE
6949	ACER RUBRUM	RED MAPLE	26	24	66	REMOVE
6950	ACER RUBRUM	RED MAPLE	10	12	30	REMOVE
6951	ACER RUBRUM	RED MAPLE	18	14	70	REMOVE
6952	ULMUS AMERICANA	AMERICAN ELM	28	24	60	REMOVE
6953	ACER RUBRUM	RED MAPLE	10	6	60	REMOVE
6954	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	18	69	REMOVE
6955	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	15	70	REMOVE
6956	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	21	69	REMOVE
6957	ACER RUBRUM	RED MAPLE	10	5	45	REMOVE
6958	LIRIODENDRON TULIPIFERA	TULIP POPLAR	5	8	69	REMOVE
6959	LIRIODENDRON TULIPIFERA	TULIP POPLAR	5	8	66	REMOVE
6960	ACER RUBRUM	RED MAPLE	15	12	28	REMOVE
6964	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	8	70	REMOVE
6965	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	12	70	REMOVE
6966	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	10	72	REMOVE
6967	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	27	72	REMOVE
6968	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	24	63	REMOVE
6969	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	15	72	REMOVE
6970	FRAXINUS PENNSYLVANICA	GREEN ASH	22	18	0	REMOVE
6971	ACER RUBRUM	RED MAPLE	14	10	65	REMOVE
6972	FRAXINUS PENNSYLVANICA	GREEN ASH	14	0	30	REMOVE
6973	FRAXINUS PENNSYLVANICA	GREEN ASH	7	5	30	REMOVE
6974	LIRIODENDRON TULIPIFERA	TULIP POPLAR	34	30	66	REMOVE
6975	LIRIODENDRON TULIPIFERA	TULIP POPLAR	3	12	73	REMOVE
6976	LIRIODENDRON TULIPIFERA	TULIP POPLAR	12	8	72	REMOVE
6977	LIRIODENDRON TULIPIFERA	TULIP POPLAR	48	44	72	REMOVE
6978	JUGLANS NIGRA	BLACK WALNUT	16	12	66	REMOVE
6979	CATALPA SPECIOSA	NORTHERN CATALPA	14	10	40	REMOVE
6980	MORUS ALBA	WHITE MULBERRY	18	14	50	REMOVE
6982	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	24	69	REMOVE
6983	PINUS VIRGINIANA	VIRGINIA PINE	26	20	60	REMOVE
6984	CATALPA SPECIOSA	NORTHERN CATALPA	8	8	72	REMOVE
6985	ACER RUBRUM	RED MAPLE	40	36	65	REMOVE
6986	PRUNUS SEROTINA	BLACK CHERRY	12	8	63	REMOVE
6987	QUERCUS PALUSTRIS	PIN OAK	38	32	71	REMOVE
6988	PRUNUS SEROTINA	BLACK CHERRY	14	10	59	REMOVE
6989	ACER RUBRUM	RED MAPLE	12	8	67	REMOVE
6990	ACER RUBRUM	RED MAPLE	25	12	96	REMOVE
6991	LAGERSTROEMIA SPP.	CREPE MYRTLE	24	20	70	REMOVE
6992	QUERCUS PALUSTRIS	PIN OAK	12	8	72	REMOVE
6993	ACER RUBRUM	RED MAPLE	12	8	70	REMOVE
6994	ILEX OPACA	AMERICAN HOLLY	28	24	70	REMOVE
6996	ULMUS AMERICANA	AMERICAN ELM	8	6	53	REMOVE
6997	FRAXINUS PENNSYLVANICA	GREEN ASH	24	20	50	REMOVE
6998	ACER RUBRUM	RED MAPLE	30	26	63	REMOVE
7000	LIRIODENDRON TULIPIFERA	TULIP POPLAR	26	20	38	REMOVE
7002	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	15	75	REMOVE
7003	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	27	73	REMOVE
7004	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	24	72	REMOVE
7005	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	8	70	REMOVE
7006	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	8	69	REMOVE
7007	LIRIODENDRON TULIPIFERA	TULIP POPLAR	15	30	67	REMOVE
7008	LIRIODENDRON TULIPIFERA	TULIP POPLAR	20	24	75	REMOVE
7009	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	15	72	REMOVE
7010	LIRIODENDRON TULIPIFERA	TULIP POPLAR	10	10	66	REMOVE

1. Install tree protection fence and signage prior to calling for the initial on site inspection by the City of Fairfax Inspector.
2. Warning signs shall be made of durable, weatherproof material.
3. Letters shall be 3" high minimum, clearly legible and spaced as detailed.
4. Signs shall be placed no greater than 50' on center or as approved.
5. For tree protection areas less than 200' in perimeter, provide no less than three signs per protected area.
6. Attach signs securely to fence posts and fabric.
7. Maintain tree protection fence throughout duration of project.
8. Additional signs may be required by City of Fairfax inspections based on actual field conditions.
9. No activity shall occur within the protected area including material storage, stockpiling, parking or any activity that may compact the ground or damage the trees.
10. The City reserves the right to require a 4' to 6' height chain link fencing for identified trees, such as specimen or champion trees, to maximize the protection of the tree and its critical root zone.



ALL CONSTRUCTION SHALL CONFORM TO  
THE CURRENT CITY OF FAIRFAX  
STANDARDS AND SPECIFICATIONS

PLAN PREPARED BY LAURIE BETH DONNACHIE  
ISA CERTIFIED ARBORIST NO. MA-5723A

SIGNATURE: Levi B. Donald DATE: 2020-01-03

**NORTHFAX WEST  
MASTER DEVELOPMENT PLAN**

CITY OF FAIRFAX, VIRGINIA

[illegible]

PROJECT No.: 13139.005.00  
DRAWING No.: 109632  
DATE: 11-21-2019  
DESIGN: LBD  
DRAWN: LBD  
CHECKED: LBD

SHEET TITLE:

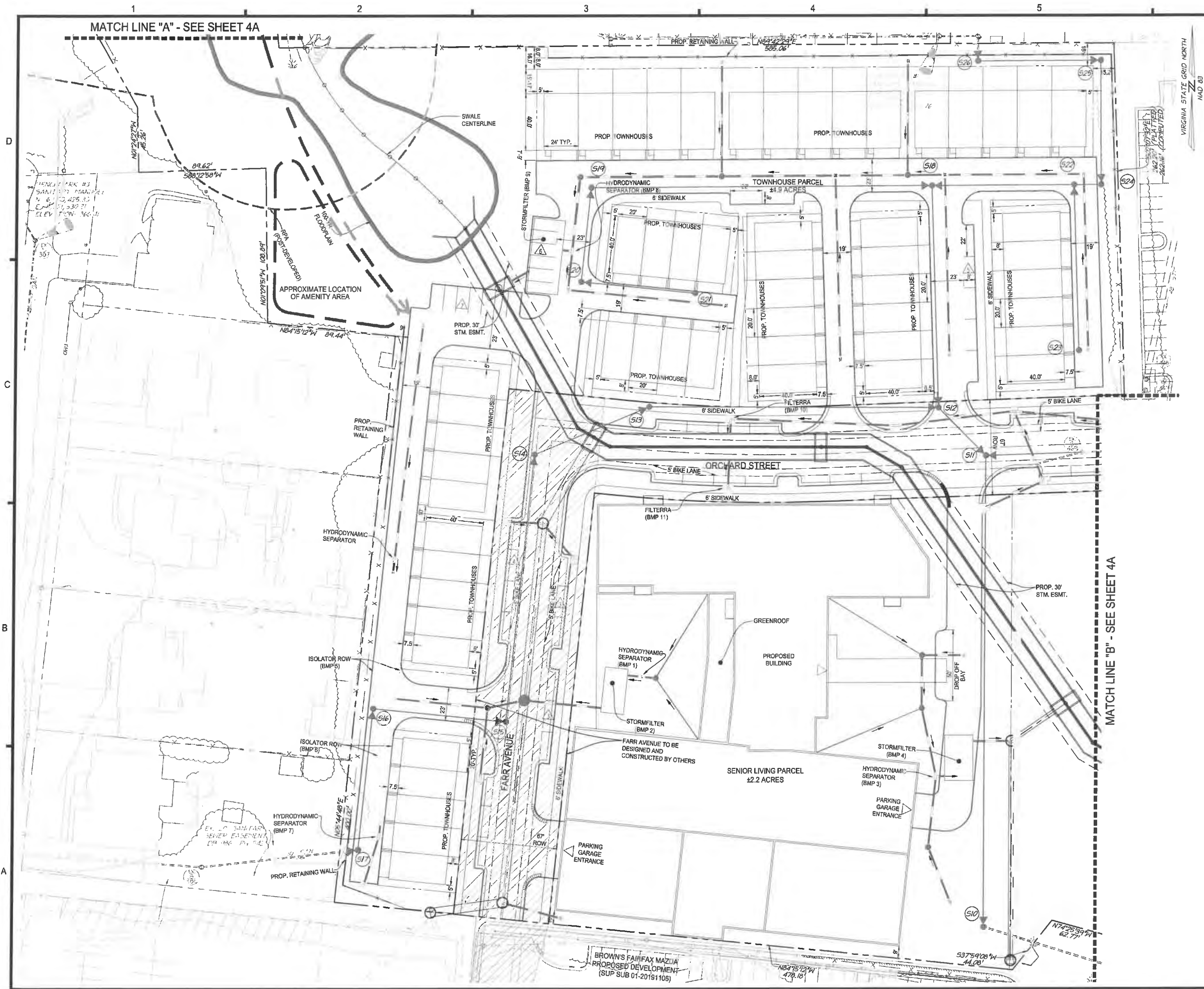
## TREE MANAGEMENT NOTES & DETAILS

SHEET No.

### 3D

SCALE: N/A





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9900 main st  
suite 400  
fairfax va 22031  
p 703.273.6820  
engineering surveying land planning

COMMONWEALTH OF VIRGINIA  
ELI GOLDMAN  
Lic. No. 55868  
01/03/2020  
PROFESSIONAL ENGINEER

**NORTHFAX WEST  
MASTER DEVELOPMENT PLAN**  
CITY OF FAIRFAX, VIRGINIA

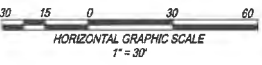
MARK	DATE	DESCRIPTION

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DATE: 11-21-2019  
DESIGN: EG  
DRAWN: IS  
CHECKED: KMW  
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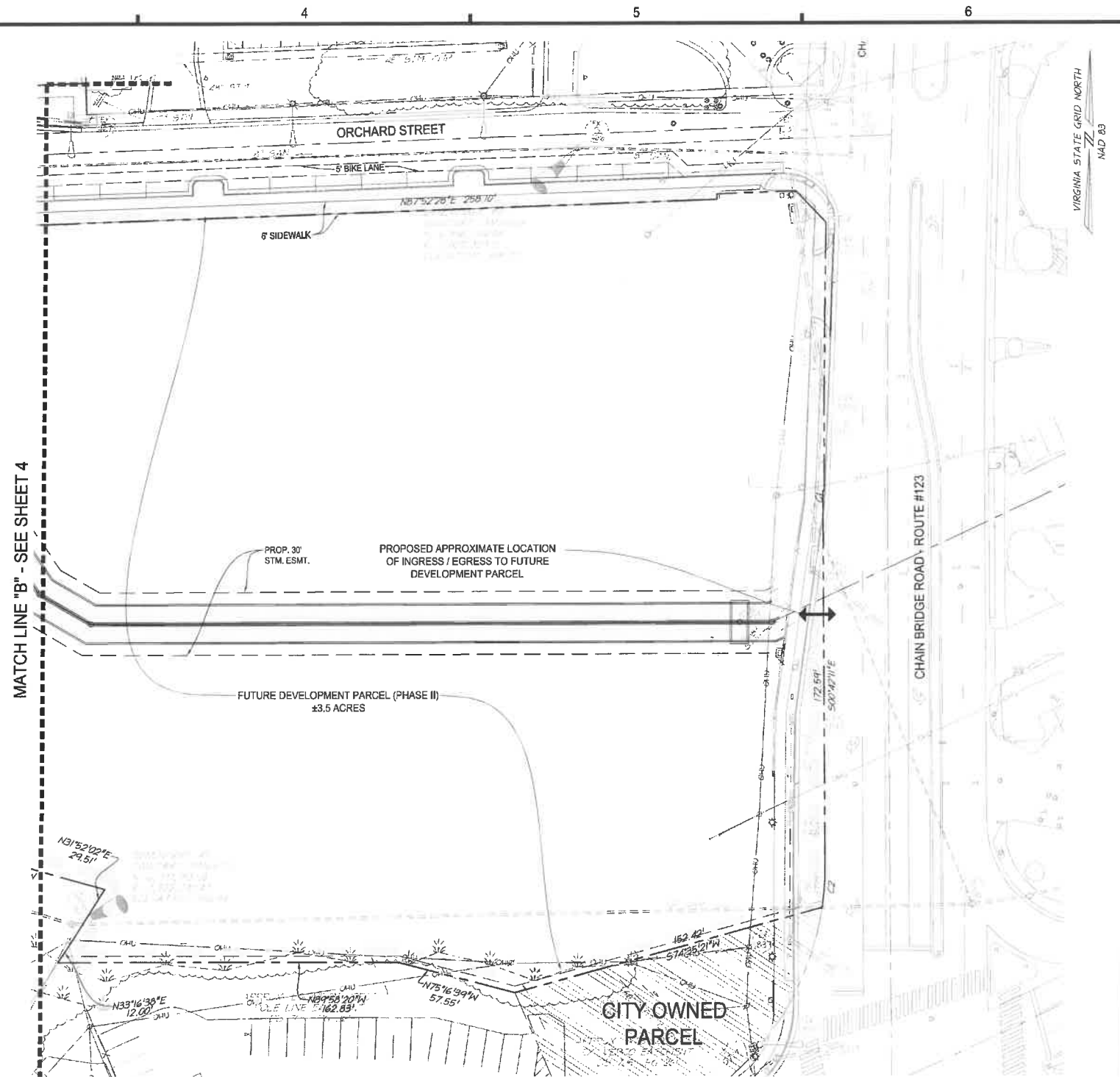
**MASTER  
DEVELOPMENT  
PLAN**

SHEET No.  
**4**

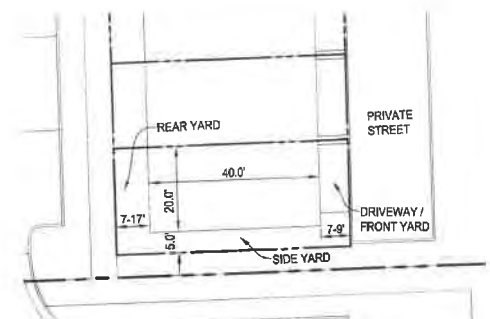
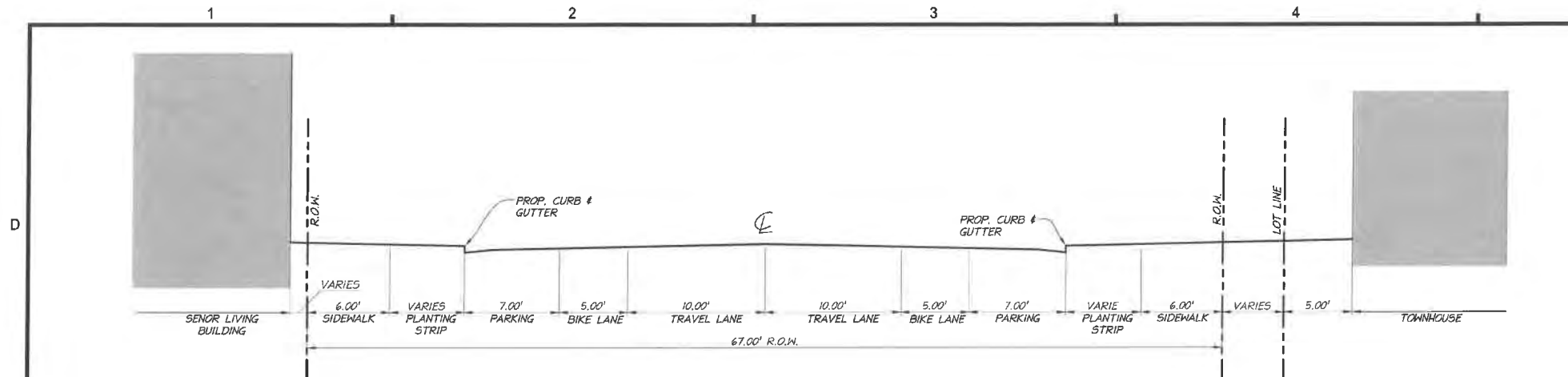
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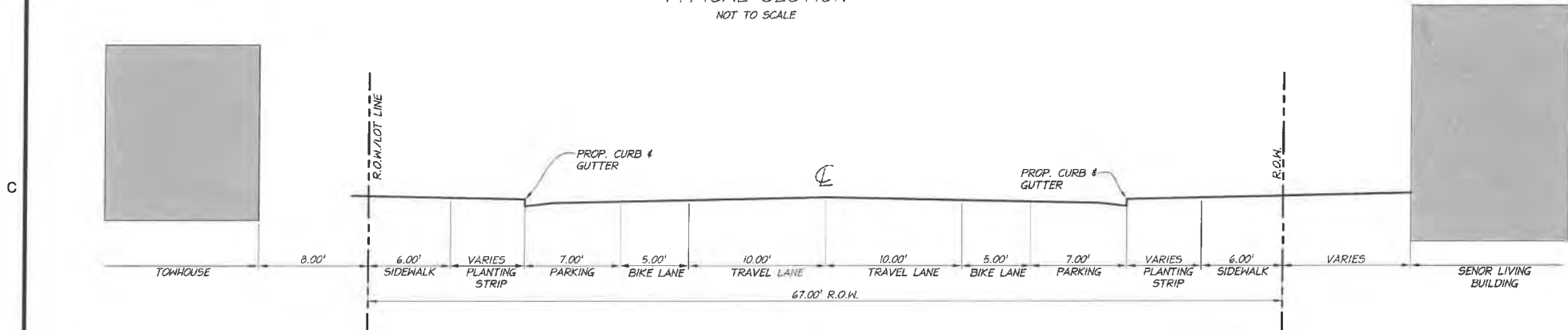
ALL CONSTRUCTION SHALL CONFORM TO  
THE CURRENT FAIRFAX CITY STANDARDS  
AND SPECIFICATIONS



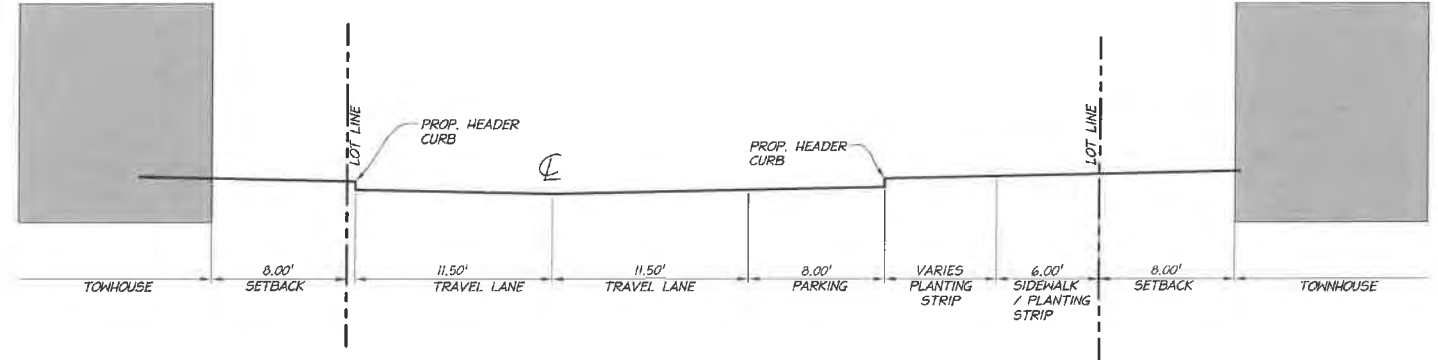
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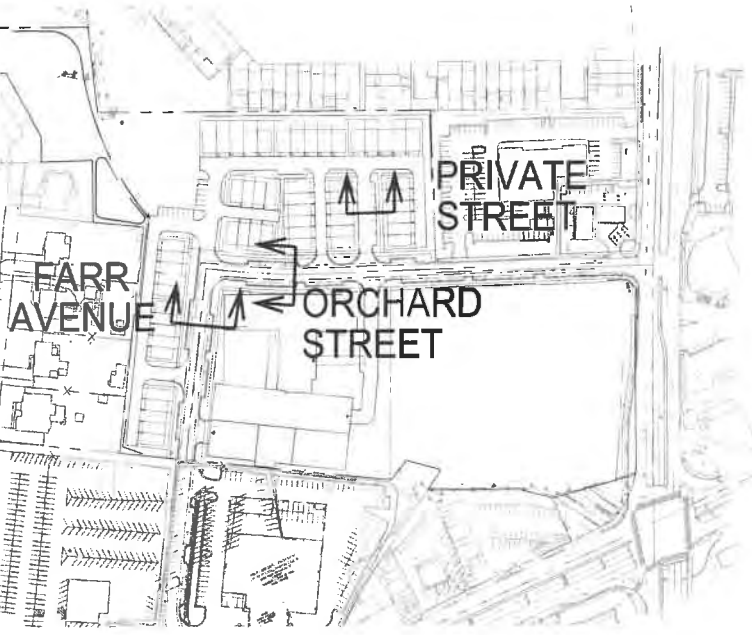
TYPICAL TOWNHOUSE LOT DETAILS  
SCALE: 1" = 20'



FARR AVENUE  
TYPICAL SECTION  
NOT TO SCALE



PRIVATE STREET  
TYPICAL SECTION  
NOT TO SCALE



KEY MAP  
NOT TO SCALE

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engineering surveying land planning

COMMONWEALTH OF VIRGINIA  
ELI GOLDMAN  
Lic. No. 55868  
01/03/2020  
PROFESSIONAL ENGINEER

NORTHFAX WEST  
MASTER DEVELOPMENT PLAN  
CITY OF FAIRFAX, VIRGINIA

MARK	DATE	DESCRIPTION

PROJECT No.: 13139.005.00  
DRAWING No.: 109632  
DATE: 11-21-2019  
DESIGN: EG  
DRAWN: JS  
CHECKED: KMW

SHEET TITLE:  
**STREET SECTIONS  
AND TYPICAL  
TOWNHOUSE  
YARDS**

SHEET No.:  
**4B**

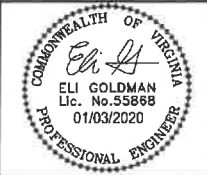
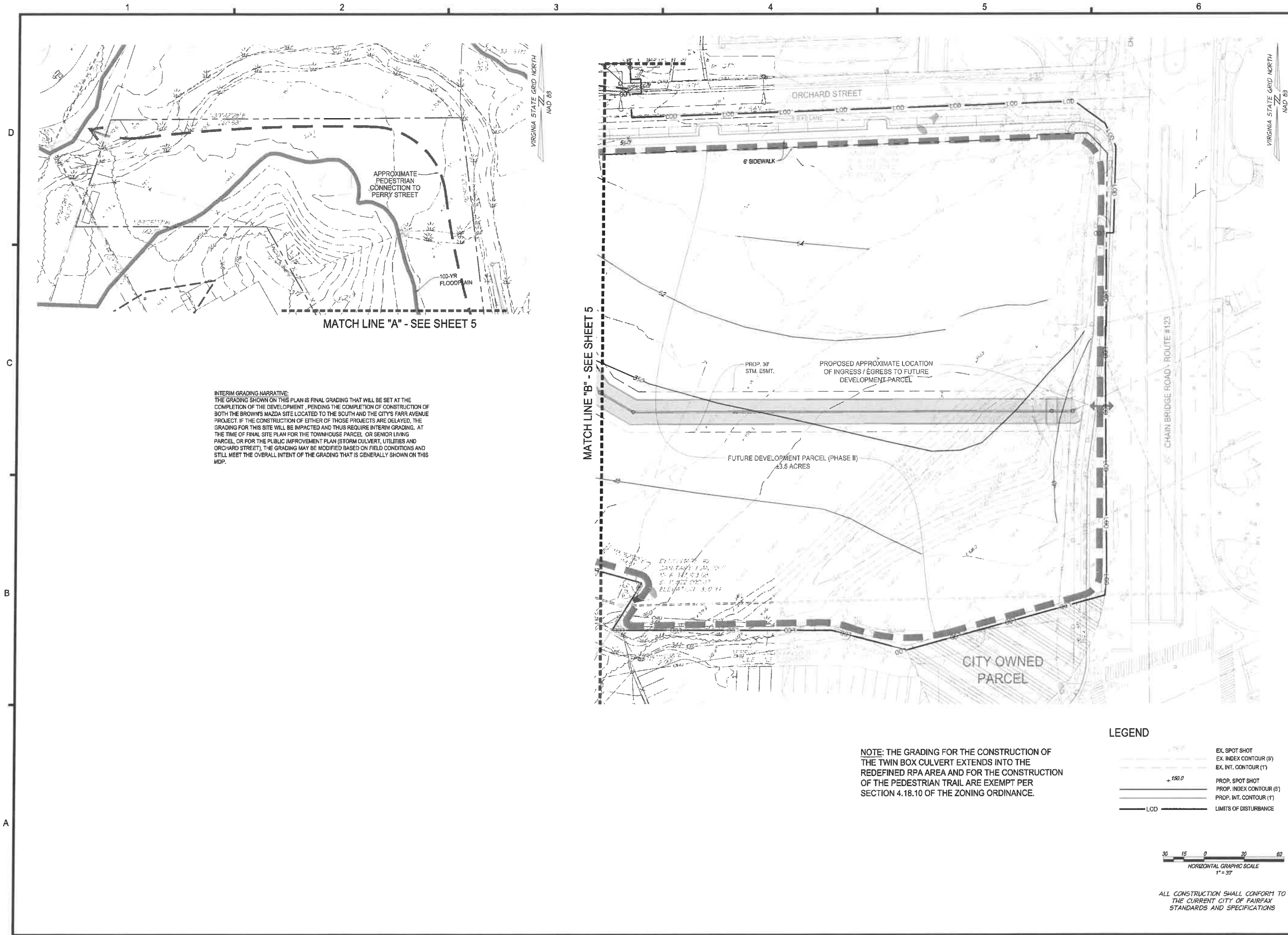
SCALE: SEE DWGS.







P:\FA\Projects\13139\0500\109632\_Northfax MDP\5A PRELIMINARY GRADING PLAN.dwg, 1/12/2020 3:13:17 PM, DWG To PDF Merge.pc3



**NORTHFAX WEST  
MASTER DEVELOPMENT PLAN**

CITY OF FAIRFAX, VIRGINIA

PROJECT No.: 13139.005.00  
DRAWING No.: 109632  
DATE: 11-21-2019  
DESIGN: EG  
DRAWN: JS  
CHECKED: KMW

SHEET TITLE:

**PRELIMINARY  
GRADING PLAN**

SHEET No.

**5A**

SCALE: 1"=30'

engineering surveying land planning

9900 main st  
suite 400  
fairfax, va 22031

**christopher  
consultants**

p 703.273.6820





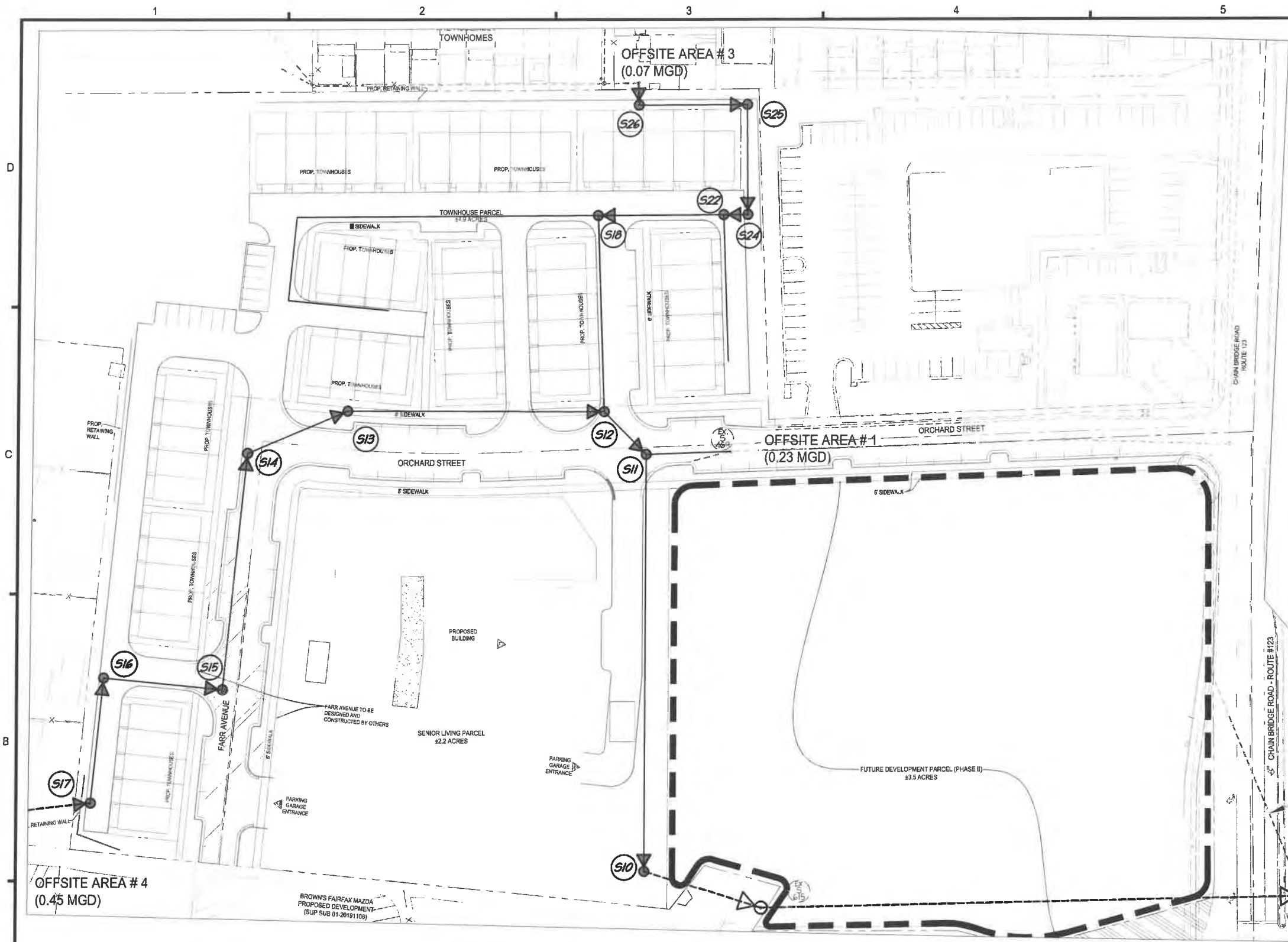




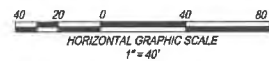


HORIZONTAL GRAPHIC SCALE  
1" = 300'

SCALE: 1"=300'



ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT CITY OF FAIRFAX STANDARDS AND SPECIFICATIONS



SANITARY SEWER ANALYSIS

THE PURPOSE OF THIS ANALYSIS IS TO DEMONSTRATE THE CAPACITY AND HYDRAULIC ADEQUACY OF THE DOWN STREAM SANITARY SEWER MAIN.

EXISTING CONDITIONS:  
CURRENTLY, THE EXISTING SITE CONSISTS OF TWO (2) 1-STORY BRICK & FRAME BUILDINGS, ONE (1) 4-STORY OFFICE BUILDING, AND ONE GASOLINE STATION WITH CONVENIENCE STORE. THE TWO (2) 1-STORY BRICK & FRAME BUILDINGS CONNECT TO EXISTING SANITARY LINE AT ORCHARD STREET. WHILE THE OFFICE BUILDING AND GASOLINE STORE CONNECT TO EXISTING SANITARY MAIN AT CHAIN BRIDGE ROAD AND ENTER INTO ORCHARD STREET (INTO THE PROJECT SITE). THE EXISTING SANITARY SEWER CONTINUE TOWARDS THE SOUTH INTO EXISTING MANHOLE S615 AND RUNS ACROSS THE CHAIN BRIDGE ROAD TO A 12-INCH SEWER MAIN INTO EXISTING MANHOLE S1008.

THE UPSTREAM FOR THIS SEWER-SHEED IS SHOWN ON SHEET 8, DESIGNATED AS ESTIMATED FLOW #1, #3 AND #4.

PROPOSED CONDITIONS:  
THE ON-SITE LATERALS WILL BE DEMOLISHED TO MAKE ROOM FOR THE NEW BUILDING. NEW LATERALS AND SANITARY MAIN WILL BE CONSTRUCTED. EXISTING SANITARY MAIN FROM THE WEST WILL BE REROUTED TO EX. S469. ALSO THE EXISTING SANITARY LINE FROM THE NORTH SIDE WILL BE REROUTED TO CONNECT TO THE PROPOSED MANHOLE S22.

CAPACITY AND HYDRAULIC ANALYSIS:  
THE SANITARY SEWER WAS ANALYZED FROM THE ON-SITE 10-INCH AND 12-INCH SEWER TO EXISTING MANHOLE S469 AND THEN TO THE OUTFALL TO EXISTING MANHOLE S-S1.

THE VOLUME OF FLOW USED IN THIS ANALYSIS HAS BEEN COMPUTED IN ACCORDANCE WITH STATE CODE 9VAC25-790-480 AND 9VAC25-790-310. SEE COMPUTATIONS ON THIS SHEET.

CONCLUSION:  
IT IS OUR CONCLUSION THAT THE PROPOSED ON-SITE 10-INCH AND 12-INCH SEWER AND EXISTING DOWNSTREAM 12-INCH SEWER HAS CAPACITY AND HYDRAULIC ADEQUACY WITH THE ADDED REDEVELOPMENT FLOWS.

A SEPARATE SANITARY SEWER ANALYSIS WILL BE COMPLETED FOR THE FUTURE DEVELOPMENT PARCEL ONCE THE PROGRAM IS KNOWN.

LEGEND

- PROPOSED SANITARY MANHOLE AND FLOW DIRECTION
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY STRUCTURE NUMBER
- EXISTING SANITARY MANHOLE AND FLOW DIRECTION
- EX. SANITARY SEWER
- EX. SANITARY STRUCTURE NUMBER

SANITARY SEWER IS CURRENTLY FLOWING EMPTY AND MAY BE USED FOR THE FUTURE DEVELOPMENT PARCEL

CONTRIBUTING SEWAGE FLOW ESTIMATE:

Contributing Sewage Flow Estimate

Discharge Facility	No. of Units	No. of People	No. of Dwellings	Average Flow for Dwellings (100 gpd/person)	Average Flow per Bed (200 gpd/bed)	Ultimate Floor Space	Average Flow per 1000 sf (2.50 gpd/1,000sf)	Total Incremental Flow (gpd)	Total Cumulative Flow (gpd)	Sanitary From	Sanitary To
Townhouses	5	5	25	2500				2,500	2,500	S17	S16
Townhouses	8	5	40	4000				4,000	6,500	S15	S14
Townhouses	3	5	15	1500				1,500	8,000	S14	S13
Townhouses	3	5	15	1500				1,500	1,500	S13	S12
Townhouses	37	5	185	18500				18,500	18,500	S12	S11
Senior Living					200	40,000		40,200	40,200	S11	S10
Future Development						114,000	28500	114,000	114,000	EX-S615	EX-S1008

SANITARY COMPUTATION:

FROM	TO	UPPER INV	LOWER INV	L (FT)	SLOPE [%]	DIA (IN)	MATERIAL	N	CAPACITY (cfs)	CAPACITY (MGD)	DESIGN FLOW (cfs)	DESIGN FLOW (MGD)	V (ft/s)	Assumptions	Inc (MGD)	Peak Flow Factor	Design Inc (MGD)
EX. S385	S17	351.91	350.95	110.02	0.87	10	PVC	0.011	2.39	1.54	0.70	0.450	3.4	PEAK FLOW FROM OFFSITE AREA #4 = 0.45 MGD	0.002	4.0	0.450
S17	S16	350.85	349.95	99.85	0.90	10	PVC	0.011	2.43	1.57	0.71	0.458	3.4				0.450
S16	S15	349.85	349.05	94.00	0.85	10	PVC	0.011	2.39	1.54	0.71	0.458	4.3				0.008
S15	S14	348.95	347.21	188.74	0.92	10	PVC	0.011	2.46	1.59	0.73	0.470	5.7		0.003	4.0	0.012
S14	S13	347.11	346.51	86.68	0.69	12	PVC	0.011	3.50	2.26	0.73	0.474	6.7		0.001	4.0	0.005
S13	S12	346.41	343.75	203.14	1.31	12	PVC	0.011	4.82	3.12	0.74	0.479	6.7		0.001	4.0	0.005
S12	S11	343.65	342.85	47.82	1.67	12	PVC	0.011	5.44	3.52	0.93	0.604	5.7	PEAK FLOW FROM OFFSITE AREA #3 = 0.07 MGD	0.014	4.0	0.126
S11	S10	342.75	340.29	331.34	0.74	12	PVC	0.011	3.62	2.34	1.48	0.955	3.8	PEAK FLOW FROM OFFSITE AREA #1 = 0.23 MGD	0.030	4.0	0.351
S10	EX. S615	339.22	337.15	97.14	2.13	12	RCP	0.015	6.14	3.97	1.48	0.955	4.0				0.000
EX. S615	EX. S1008	336.89	332.59	430.00	1.00	12	RCP	0.015	3.30	2.13	2.01	1.297	4.3		0.086	4.0	0.342

- Notes:
- See contributing sewage flow estimates on sheet 8.
  - All velocities shown are calculated per a partial flow analysis.
  - A peak factor of 4.0 was used on all flows.
  - The lower invert of EX. S1008 is an assumed elevation and will need to be surveyed.



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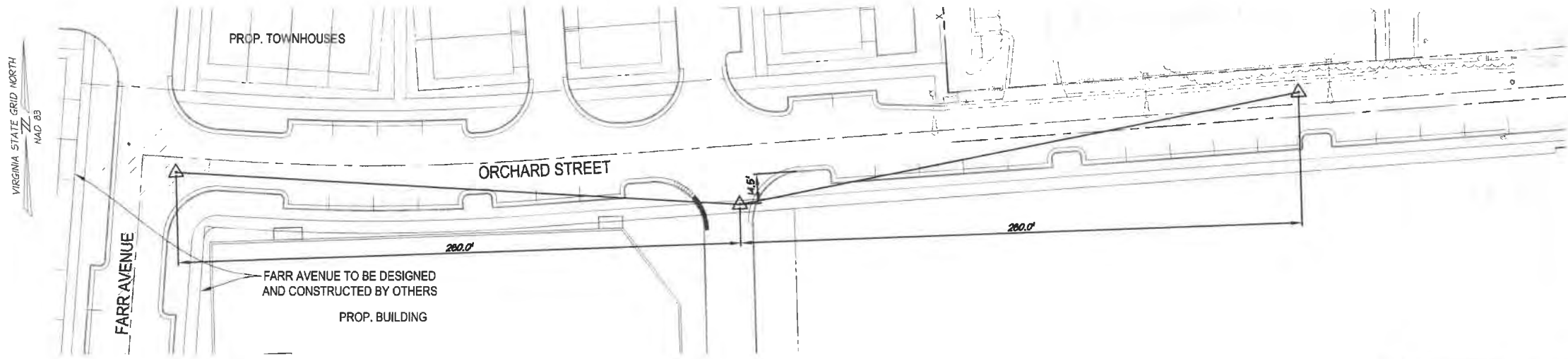
NORTHFAX WEST  
MASTER DEVELOPMENT PLAN  
CITY OF FAIRFAX, VIRGINIA

PROJECT No.: 13139.005.00  
DRAWING No.: 109632  
DATE: 11-21-2019  
DESIGN: EG  
DRAWN: JS  
CHECKED: KRW

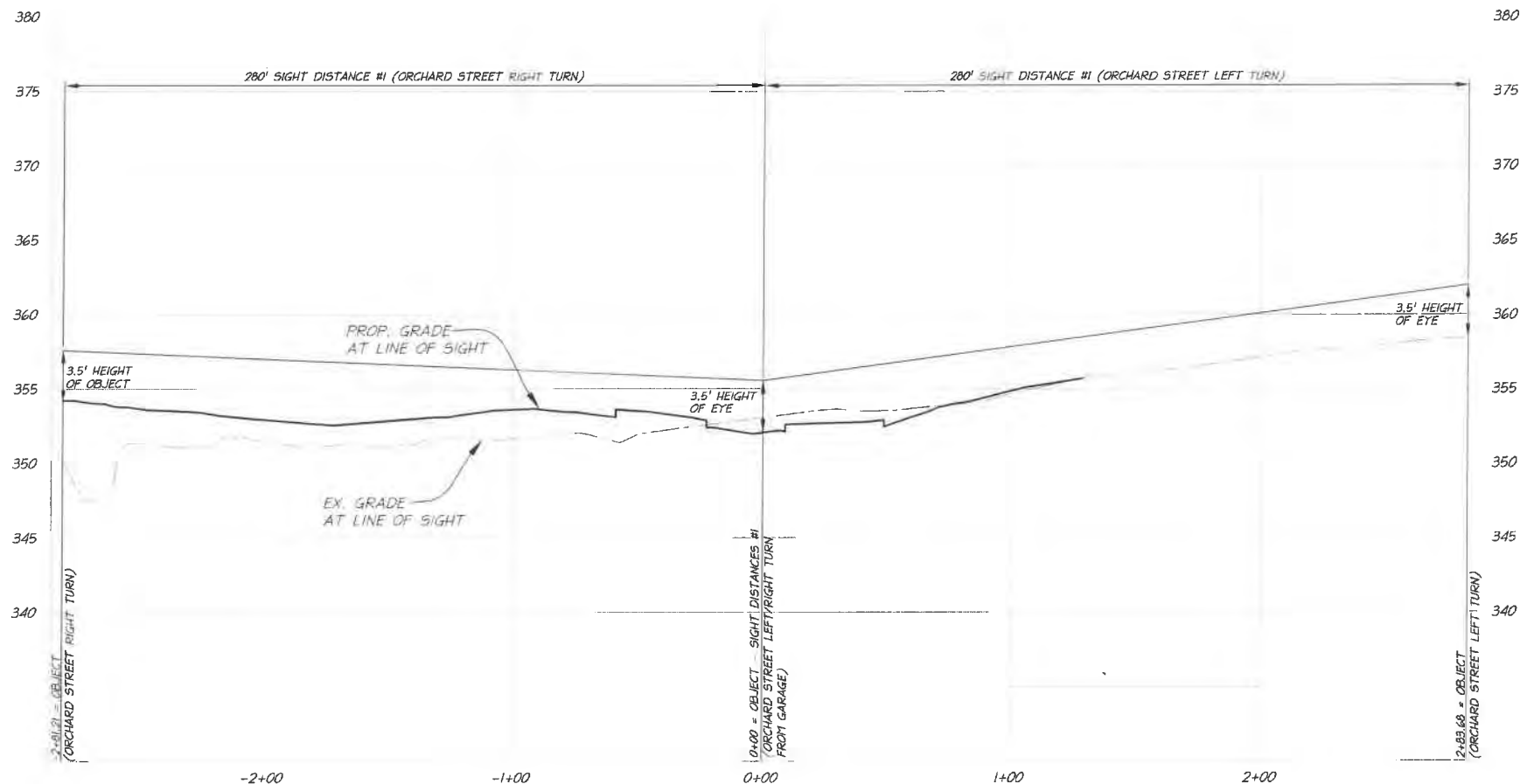
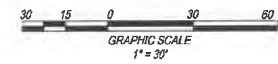
SHEET TITLE:  
**SANITARY SEWER ANALYSIS**

SHEET No.  
**9**

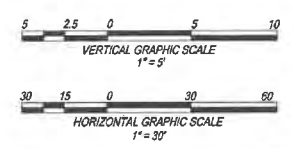
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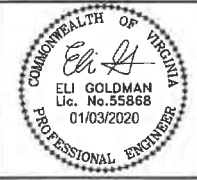
ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT FAIRFAX CITY AND VIRGINIA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS



ORCHARD STREET SIGHT DISTANCE #1 (FROM PRIVATE STREET)  
POSTED SPEED: 25 MPH



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FAIRFAX CITY, VIRGINIA

MARK	DATE	DESCRIPTION

PROJECT No.: 13139.005.00  
DRAWING No.: 106632  
DATE: 11-21-2019  
DESIGN: EG  
DRAWN: JS  
CHECKED: KMW

SHEET TITLE:

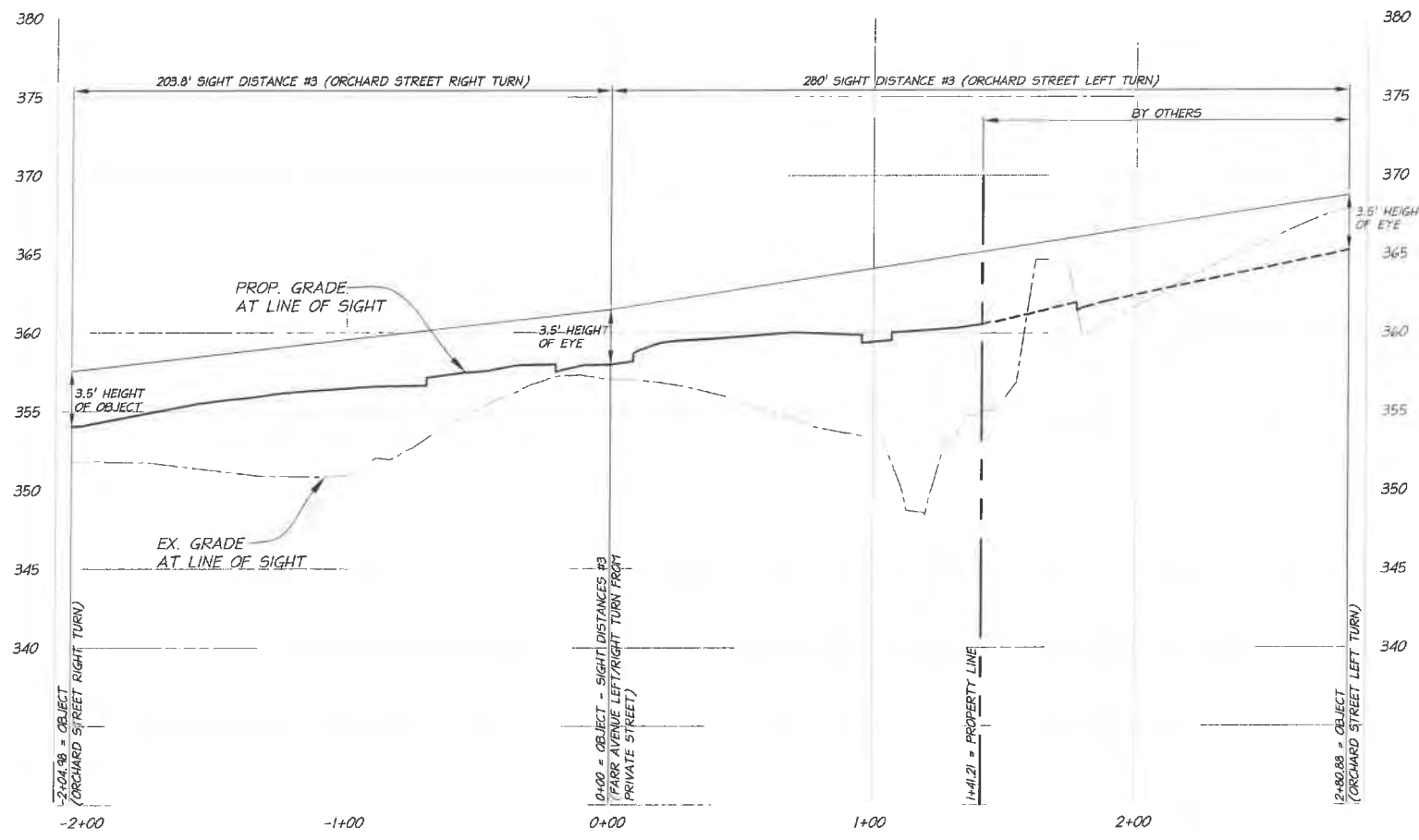
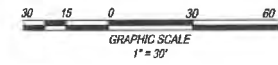
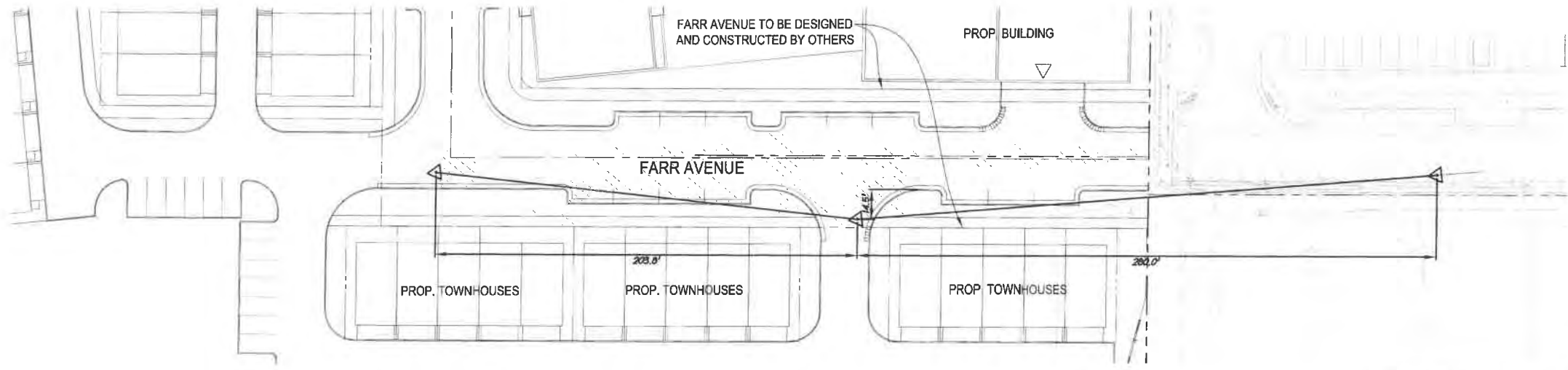
**SIGHT DISTANCE**

SHEET No.  
**10**

SCALE: SEE DWGS.

VIRGINIA STATE GRID NORTH  
NAD 83

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FARR AVENUE SIGHT DISTANCE #3 (FROM PRIVATE STREET)  
POSTED SPEED: 25 MPH



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CITY OF FAIRFAX, VIRGINIA

PROJECT No.: 13138.005.00  
DRAWING No.: 109632  
DATE: 11-21-2019  
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CHECKED: KMW

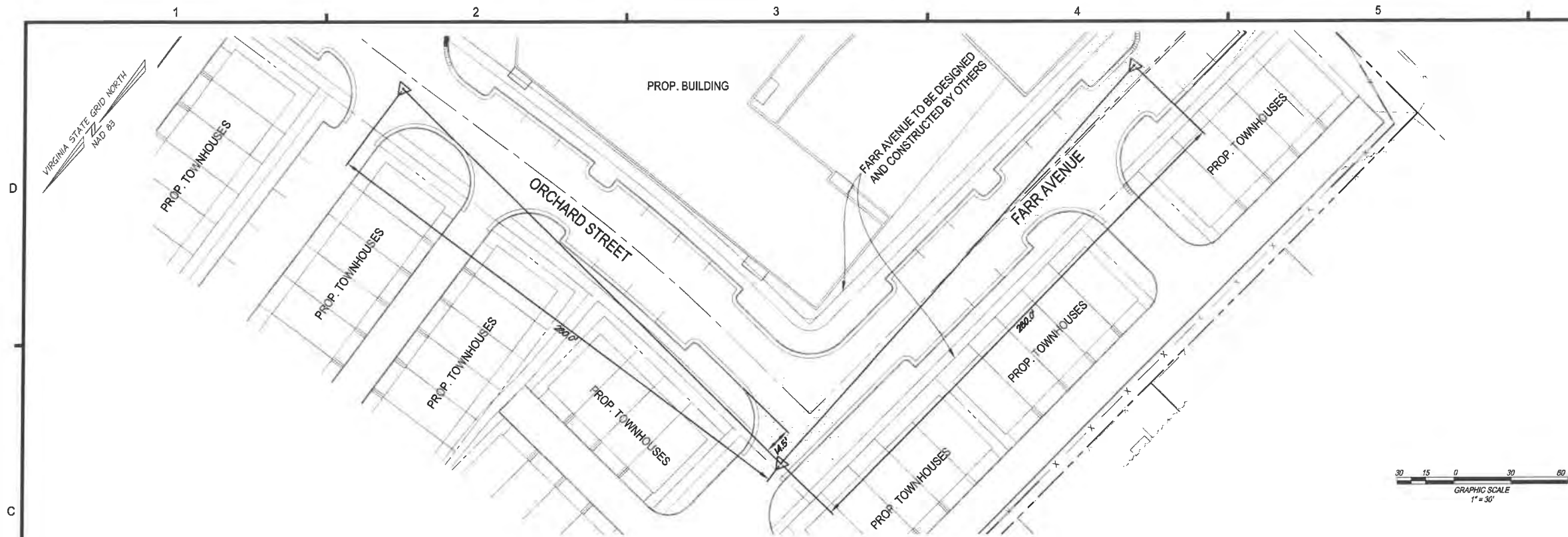
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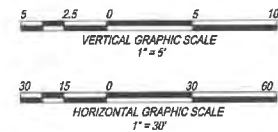
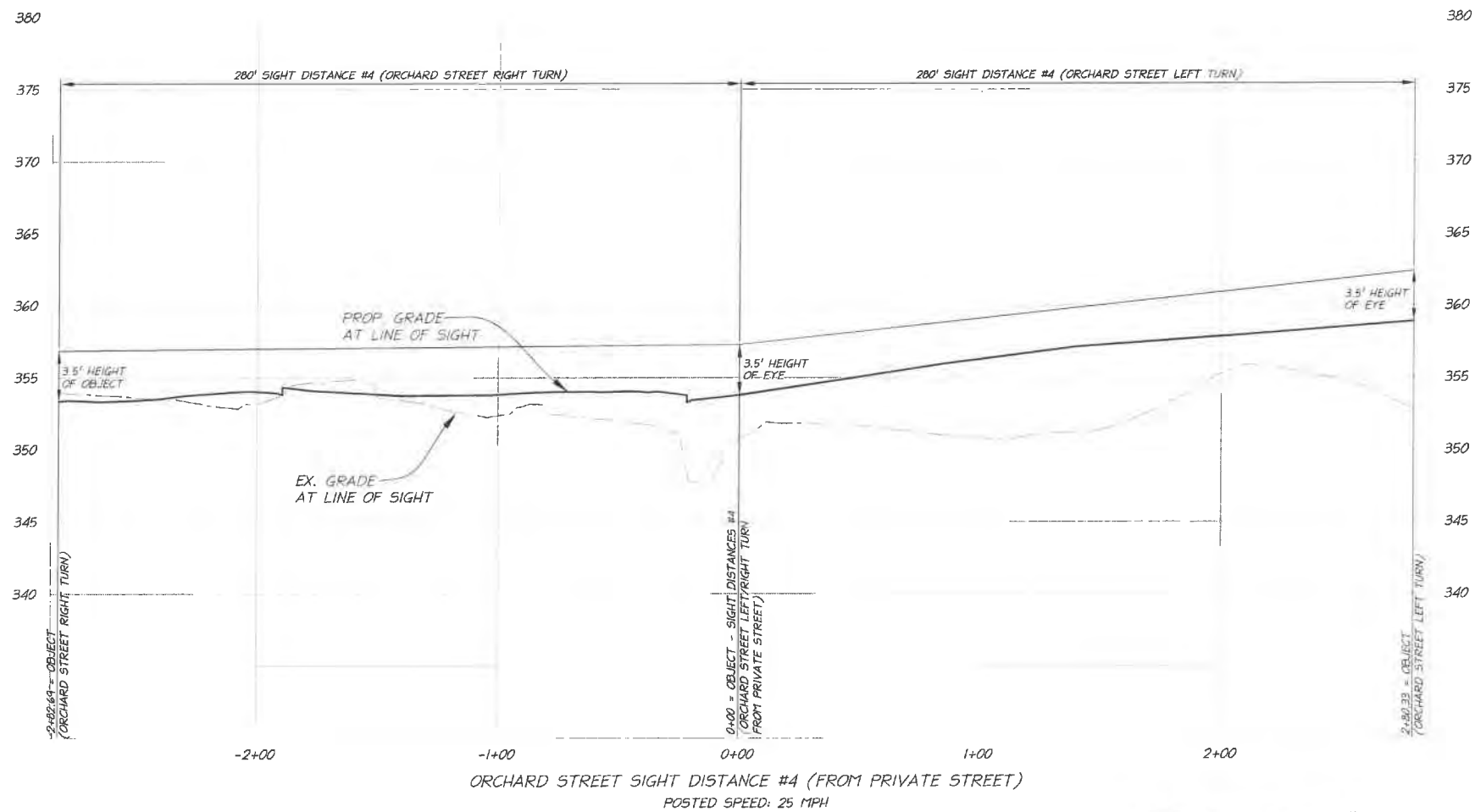
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**11**

SCALE: SEE DWGS.





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MARK	DATE	DESCRIPTION

PROJECT No.: 13139.005.00  
DRAWING No.: 106532  
DATE: 11-21-2018  
DESIGN: EG  
DRAWN: JS  
CHECKED: KMW

SHEET TITLE:

SIGHT DISTANCE

SHEET No.  
12

SCALE: SEE DWGS.





VIRGINIA STATE GRID NORTH  
ZZ  
NAD 83

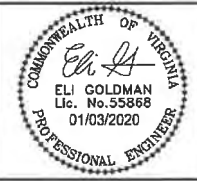
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STANDARDS AND SPECIFICATIONS

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MASTER DEVELOPMENT PLAN**  
CITY OF FAIRFAX, VIRGINIA

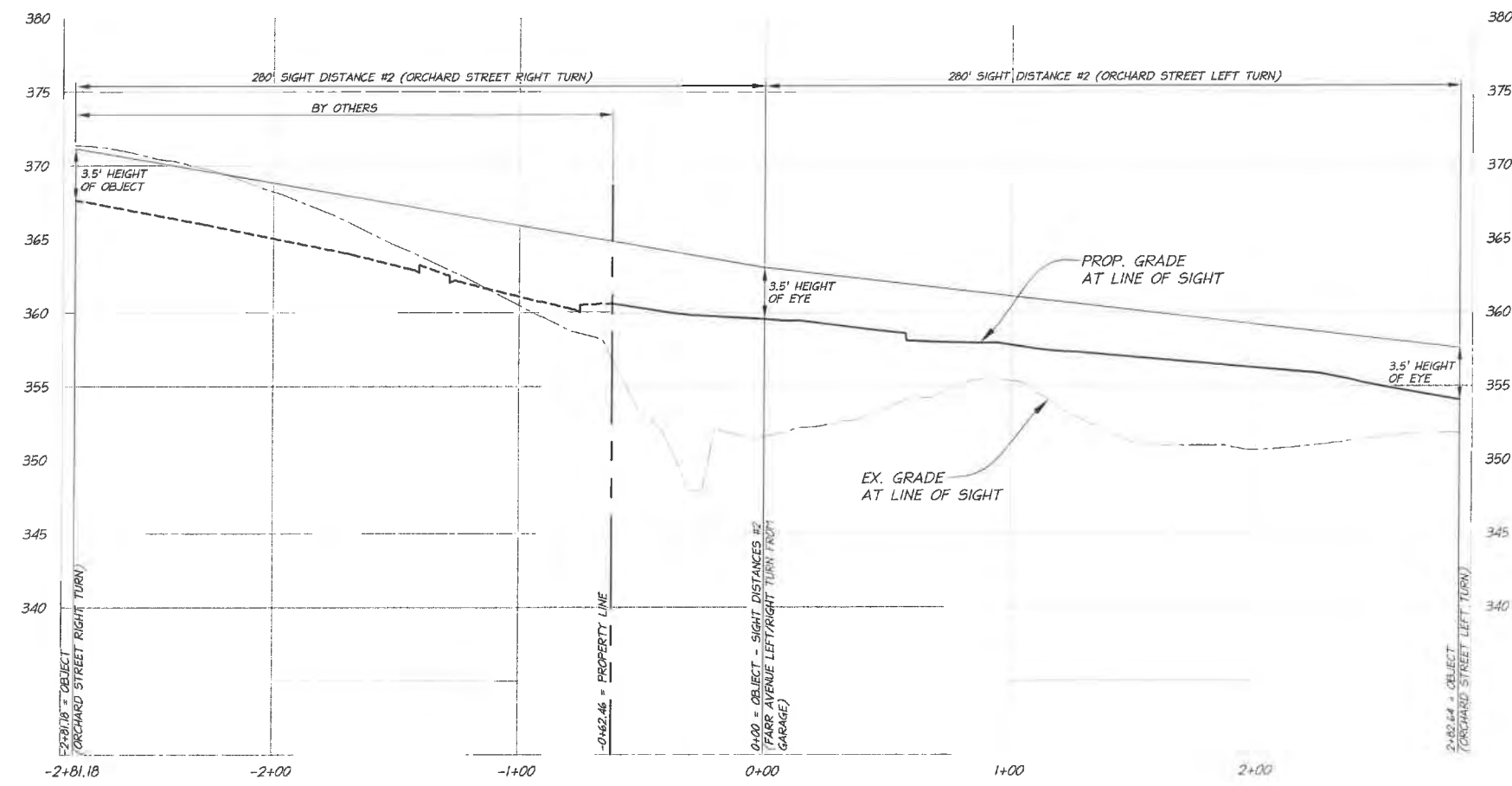
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DRAWN: JS  
CHECKED: KMW

SHEET TITLE:

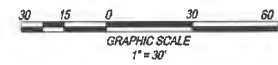
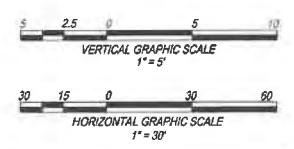
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SHEET No.  
**15**

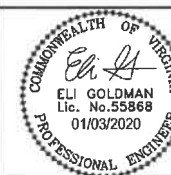
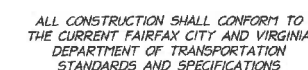
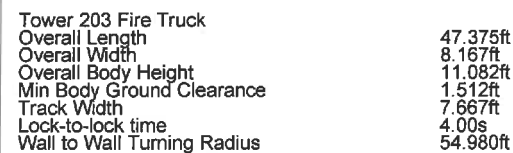
SCALE: SEE DWGS.



FARR AVENUE SIGHT DISTANCE #2 (FROM GARAGE)  
POSTED SPEED: 25 MPH







**NORTHFAX WEST  
MASTER DEVELOPMENT PLAN**

**CITY OF FAIRFAX, VIRGINIA**

[illegible]

PROJECT No.: 13139.005.00  
DRAWING No.: 109632  
DATE: 11-21-2019  
DESIGN: EG  
DRAWN: JS  
CHECKED: KMW

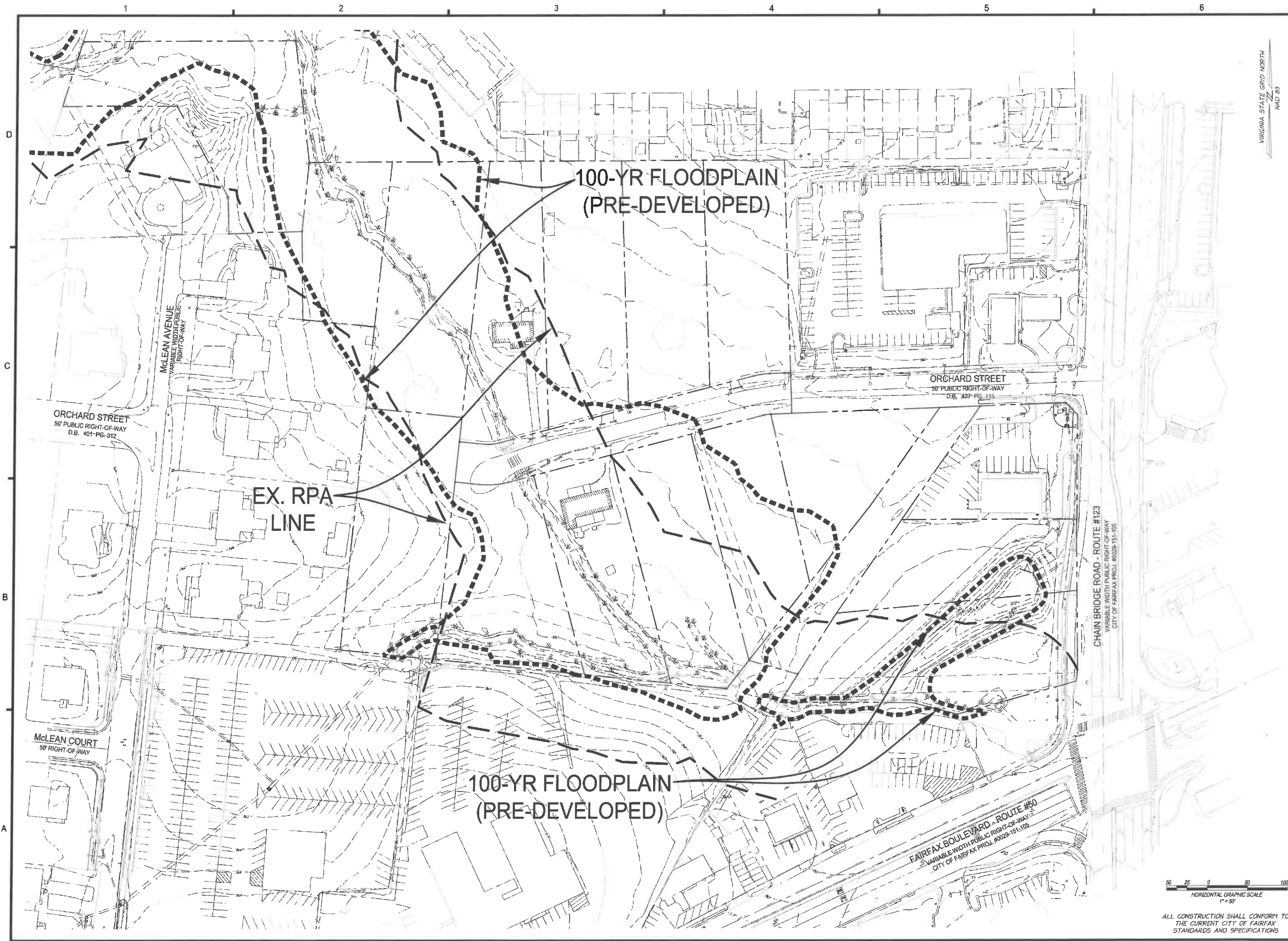
## TURNING MOVEMENTS

SHEET No.

16

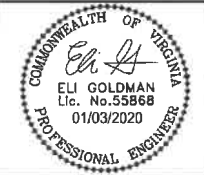
SCALE: 1"=40'





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NAD 83

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MASTER DEVELOPMENT PLAN**  
CITY OF FAIRFAX, VIRGINIA

MARK	DATE	DESCRIPTION

PROJECT No.: 13139.005.00  
DRAWING No.: 109632  
DATE: 11-21-2019  
DESIGN: EG  
DRAWN: JS  
CHECKED: KMN

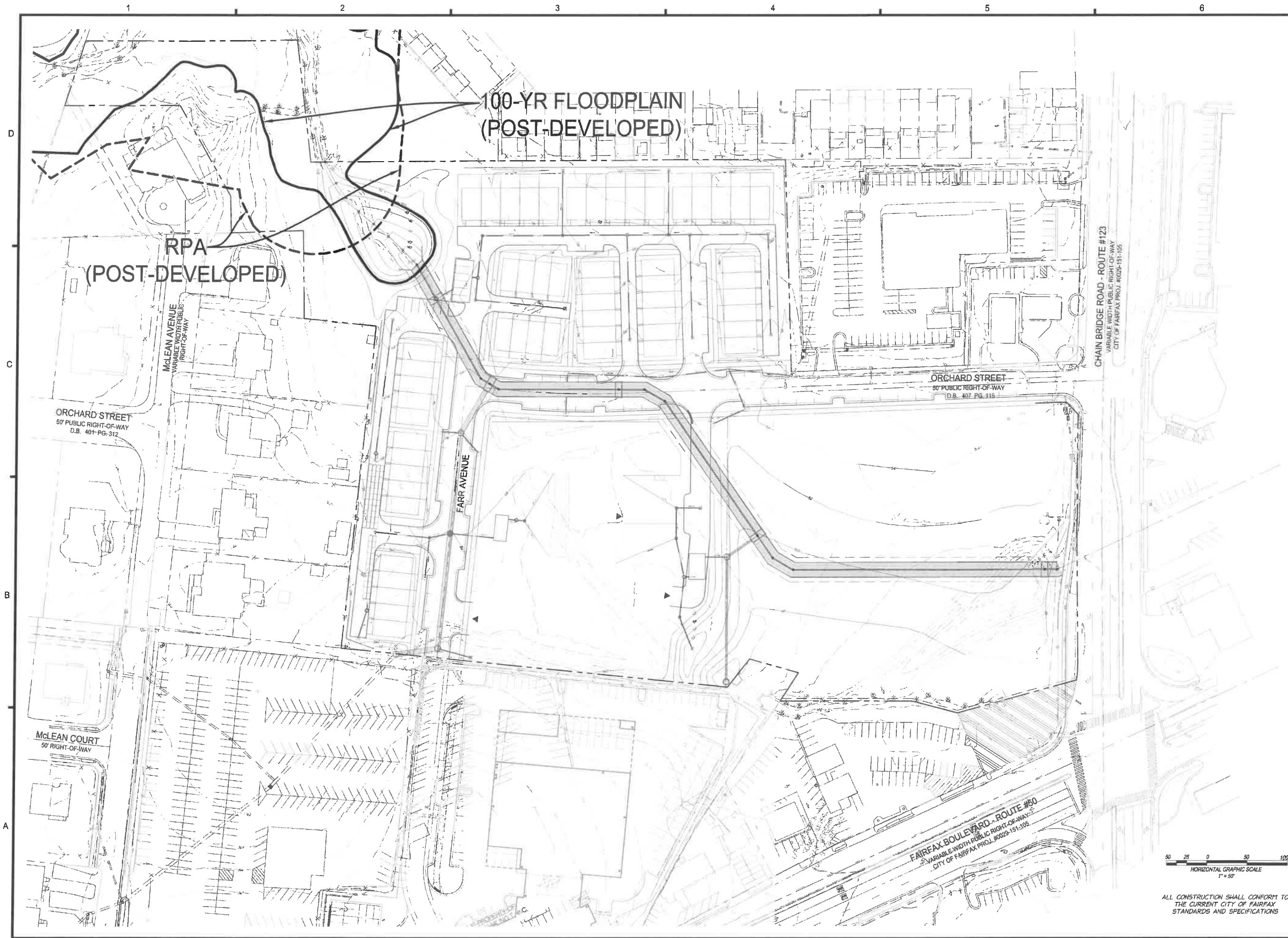
SHEET TITLE:

**FLOODPLAIN AND  
RPA  
(PRE-DEVELOPED)**

SHEET No.  
**18**

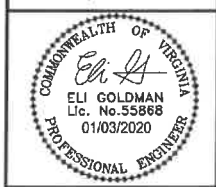
SCALE: 1"=50'

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COMMONWEALTH OF VIRGINIA  
ELI GOLDMAN  
Lic. No. 55868  
01/03/2020  
PROFESSIONAL ENGINEER

**NORTHFAX WEST  
MASTER DEVELOPMENT PLAN**  
CITY OF FAIRFAX, VIRGINIA

MARK	DATE	DESCRIPTION

PROJECT No.: 13139.005.00  
DRAWING No.: 109632  
DATE: 11-21-2019  
DESIGN: EG  
DRAWN: JS  
CHECKED: KMW

SHEET TITLE:  
**FOODPLAIN AND  
RPA  
(POST-DEVELOPED)**

SHEET No.:  
**18A**

SCALE: 1"=50'





## Appendix E – BEHI and NBS Study



## Northfax Project - Bank Erosion Hazard Index and Near Bank Stress Assessment

The following Bank Erosion Hazard Index (BEHI) and Near Bank Stress (NBS) study was conducted for two streams (A1 & A2) located on the Northfax Project in the City of Fairfax, Virginia. Stream A1 and A2 are approximately 5 to 6 feet wide with banks ranging from 1 to 6 feet high, and are bordered by riparian woodlands, residential development, and commercial property. The project area is located within the Middle Potomac-Anacostia-Occoquan watershed (HUC 02070010) and the Accotink Creek subwatershed (HUC 020700100402).

On December 16, 2019, Apex Companies, LLC (Apex) conducted a site visit to analyze potential for stream bank erosion on an approximately 1,750 linear feet (LF) of stream channel within the project area. Apex used the BEHI rating system to evaluate the bank characteristics and NBS to assess the flow distribution and risk ratings based on multiple erosional processes. Factors which affect the risk rating for a stream bank include bank-height ratio, root-depth ratio, weighted root density, bank angle, surface protection, bank material, and stratification of bank substrate. Using these factors stream banks were assigned ratings of very low, low, moderate, high, very high, or extreme erosion potential. NBS was evaluated to determine Total Suspended Sediment (TSS), Total Nitrogen (TN) and Total Phosphorus (TP) using methods discussed in *Recommendations of the Expert Panel to Define Removal Rates for Individual Stream Restoration Projects* (Schueler, T., Stack, B. 2013).

The study resulted in five (5) assessment points to document bank characteristics and collect data BEHI and NBS evaluations (Figure 1: Site Location and BEHI Map). Table 1 summarizes the following results of the BEHI assessment across all streams onsite.

**Table 1: Summary of BEHI Assessment Results for the Northfax Project**

Stream ID	Erosion Hazard Potential				
	Extreme	Very High	High	Moderate	Low
<b>Stream A1</b>	321 LF	1,192 LF	434 LF	0 LF	735 LF
<b>Stream A2</b>	217 LF	311 LF	290 LF	0 LF	0 LF
<b>Total</b>	538 LF	1,503 LF	724 LF	0 LF	735 LF

The NBS data collected for each stream were assessed to predict potential sediment loading for the streams caused by near bank stress. Apex estimated the potential for approximately 3,036 tons/year of TSS caused by near bank stress and erosion for Stream A1 and Stream A2. Further, approximately 0.13 tons/year of TN and 0.12 tons/year of TP were also estimated to result from near bank stress.

Attachment 1 provides a Site Location and BEHI Map (Figure 1) and a Photograph Location Map (Figure 2) to accompany the results of Apex's assessment. The photograph log in Attachment 2 shows existing conditions along Stream A1 and A2, including the assessment points used to collect BEHI and NBS data. BEHI and NBS data collected by Apex is provided in Attachment 3 and 4, respectively.



## **Attachment 1: Figures**





Apex Companies, LLC  
203 Wylderoose Ct, Midlothian, VA 23113  
Phone: 804-897-2718  
[www.apexcos.com](http://www.apexcos.com)

**Northfax Project  
Fairfax, Virginia**

**Figure 1.  
Site Location and BEHI Map**

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community





Apex Companies, LLC  
203 Wylderose Ct, Midlothian, VA 23113  
Phone: 804-897-2718  
www.apexcos.com

**Northfax Project  
Fairfax, Virginia**

**Figure 2  
Photograph Location Map**

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



## **Attachment 2: Photograph Log**



**Photo 1**

Stream A1 – Very high erosion potential on right bank and high erosion potential on left bank with low erosion potential open bottom stone culvert



**Photo 2**

Stream A1 – high erosion potential on right bank



**Photo 3**

Stream A1 – very high erosion potential on left bank





**Photo 4**

Stream A1 – collapsing culverts under road



**Photo 5**

Stream A2 – extreme erosion potential



**Photo 6**

Stream A2 – extreme erosion potential





**Photo 7**

Stream A1 – extreme erosion potential  
on east bank



**Photo 8**

Stream A2 – high erosion potential



**Photo 9**

Stream A1 – high erosion potential





**Photo 10**

Stream A1 – very high erosion potential on both banks



**Photo 11**

Stream A2 – high erosion potential on right bank



**Photo 12**

Stream A1 – low erosion potential due to riprap on east bank





**Photo 13**

Stream A1 – low erosion potential due to riprap



**Photo 14**

Stream A1 – low erosion potential due to riprap



**Photo 15**

Stream A1 – very high erosion potential on both banks





**Photo 16**

Stream A1 – very high erosion potential on east bank and extreme erosion potential on west bank



**Photo 17**

Stream A1 – very high erosion potential on east bank and extreme erosion potential on west bank







### **Attachment 3: BEHI Data**

Stream: <b>Stream A1, High 1</b>				Location:	
Station:				Observers:	
Date: <b>12/16/19</b>		Stream Type:		Valley Type:	

<b>Study Bank Height / Bankfull Height ( C )</b>					BEHI Score (Fig. 5-19)
Study Bank Height (ft) =	1.5 (A)	Bankfull Height (ft) =	0.51 (B)	( A ) / ( B ) = 2.94 (C)	
<b>Root Depth / Study Bank Height ( E )</b>					2.5
Root Depth (ft) =	0.7 (D)	Study Bank Height (ft) =	0.85 (A)	( D ) / ( A ) = 0.824 (E)	
<b>Weighted Root Density ( G )</b>					6.5
Root Density as % =	30% (F)			( F ) x ( E ) = 24.71 (G)	
<b>Bank Angle ( H )</b>					7
		Bank Angle as Degrees =	85 (H)		
<b>Surface Protection ( I )</b>					9
		Surface Protection as % =	10% ( I )		

<b>Bank Material Adjustment:</b> Bedrock (Overall Very Low BEHI) Boulders (Overall Low BEHI) Cobble (Subtract 10 points if uniform medium to large cobble) Gravel or Composite Matrix (Add 5–10 points depending on percentage of bank material that is composed of sand) Sand (Add 10 points) Silt/Clay (no adjustment)	<b>Bank Material Adjustment</b>  <b>Stratification Adjustment</b> Add 5–10 points, depending on position of unstable layers in relation to bankfull stage
--	--

Very Low	Low	Moderate	High	Very High	Extreme	<b>Adjective Rating and Total Score</b>
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50	

34

Stream: <b>Stream A1, High 2</b>	Location:
Station:	Observers:
Date: <b>12/16/19</b>	Valley Type:

Study Bank Height / Bankfull Height ( C )						BEHI Score (Fig. 5-19)
Study Bank Height (ft) =	2.5 (A)	Bankfull Height (ft) =	0.51 (B)	( A ) / ( B ) =	4.9 (C)	10
Root Depth / Study Bank Height ( E )						
Root Depth (ft) =	0.75 (D)	Study Bank Height (ft) =	2.5 (A)	( D ) / ( A ) =	0.3 (E)	5.5
Weighted Root Density ( G )						
Root Density as % =	10% (F)			( F ) x ( E ) =	3.00 (G)	9
Bank Angle ( H )						
		Bank Angle as Degrees =			40 (H)	3
Surface Protection ( I )						
		Surface Protection as % =			10% (I)	9
Bank Material Adjustment:						
<b>Bedrock</b> (Overall Very Low BEHI) <b>Boulders</b> (Overall Low BEHI) <b>Cobble</b> (Subtract 10 points if uniform medium to large cobble) <b>Gravel or Composite Matrix</b> (Add 5–10 points depending on percentage of bank material that is composed of sand) <b>Sand</b> (Add 10 points) <b>Silt/Clay</b> (no adjustment)						<b>Bank Material Adjustment</b>
						<b>Stratification Adjustment</b> Add 5–10 points, depending on position of unstable layers in relation to bankfull stage

Very Low	Low	Moderate	High	Very High	Extreme	Adjective Rating and Total Score
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50	36.5

Stream: <b>Stream A1, Extreme 1</b>	Location:
Station:	Observers:
Date: <b>12/16/19</b>	Stream Type:      Valley Type:

<b>Study Bank Height / Bankfull Height ( C )</b>						<b>BEHI Score (Fig. 5-19)</b>
Study Bank Height (ft) =	<b>4</b> (A)	Bankfull Height (ft) =	<b>0.51</b> (B)	( A ) / ( B ) =	<b>7.8</b> (C)	
<b>Root Depth / Study Bank Height ( E )</b>						<b>7</b>
Root Depth (ft) =	<b>0.8</b> (D)	Study Bank Height (ft) =	<b>4</b> (A)	( D ) / ( A ) =	<b>0.2</b> (E)	
<b>Weighted Root Density ( G )</b>						<b>9.5</b>
Root Density as % =	<b>20%</b> (F)	( F ) × ( E ) =			<b>4</b> (G)	
<b>Bank Angle ( H )</b>						<b>8.5</b>
Bank Angle as Degrees =	<b>110</b> (H)					
<b>Surface Protection ( I )</b>						<b>10</b>
Surface Protection as % =	<b>5%</b> (I)					
<b>Bank Material Adjustment:</b>						<b>10</b>
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>Bedrock</b> (Overall Very Low BEHI)</p> <p><b>Boulders</b> (Overall Low BEHI)</p> <p><b>Cobble</b> (Subtract 10 points if uniform medium to large cobble)</p> <p><b>Gravel or Composite Matrix</b> (Add 5–10 points depending on percentage of bank material that is composed of sand)</p> <p><b>Sand</b> (Add 10 points)</p> <p><b>Silt/Clay</b> (no adjustment)</p> </div> <div style="width: 45%; border-left: 1px solid black; padding-left: 10px;"> <p style="text-align: center;"><b>Bank Material Adjustment</b></p> <hr/> <p style="text-align: center;"><b>Stratification Adjustment</b></p> <p>Add 5–10 points, depending on position of unstable layers in relation to bankfull stage</p> </div> </div>						

Very Low	Low	Moderate	High	Very High	Extreme	<b>Adjective Rating and Total Score</b>
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50	



Stream: <b>Stream A2, Very High 1</b>				Location:	
Station:				Observers:	
Date: <b>12/16/19</b>		Stream Type:		Valley Type:	

<b>Study Bank Height / Bankfull Height ( C )</b>					<b>BEHI Score (Fig. 5-19)</b>
Study Bank Height (ft) =	6 (A)	Bankfull Height (ft) =	0.51 (B)	( A ) / ( B ) = 11.8 (C)	
<b>Root Depth / Study Bank Height ( E )</b>					
Root Depth (ft) =	2 (D)	Study Bank Height (ft) =	6 (A)	( D ) / ( A ) = 0.33 (E)	
<b>Weighted Root Density ( G )</b>					
Root Density as % =	50% (F)		( F ) x ( E ) =	16.67 (G)	
<b>Bank Angle ( H )</b>					
Bank Angle as Degrees =	120 (H)				
<b>Surface Protection ( I )</b>					
Surface Protection as % =	30% (I)				
<b>Bank Material Adjustment:</b>					
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="width: 45%;"> <p><b>Bedrock</b> (Overall Very Low BEHI)</p> <p><b>Boulders</b> (Overall Low BEHI)</p> <p><b>Cobble</b> (Subtract 10 points if uniform medium to large cobble)</p> <p><b>Gravel or Composite Matrix</b> (Add 5–10 points depending on percentage of bank material that is composed of sand)</p> <p><b>Sand</b> (Add 10 points)</p> <p><b>Silt/Clay</b> (no adjustment)</p> </div> <div style="width: 5%; text-align: center;"> </div> <div style="width: 45%;"> <p style="text-align: center;"><b>Bank Material Adjustment</b></p> <hr/> <p style="text-align: center;"><b>Stratification Adjustment</b></p> <p style="text-align: center;">Add 5–10 points, depending on position of unstable layers in relation to bankfull stage</p> </div> </div>					
					10
					6
					8
					10
					6
					5

Very Low	Low	Moderate	High	Very High	Extreme	<b>Adjective Rating and Total Score</b>
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50	
						45

Stream: <b>Stream A2, Extreme 2</b>			Location:		
Station:			Observers:		
Date: <b>12/16/19</b>		Stream Type:		Valley Type:	

**Study Bank Height / Bankfull Height ( C )**

Study Bank Height (ft) =	4	(A)	Bankfull Height (ft) =	0.51	(B)	( A ) / ( B ) =	7.8	(C)
--------------------------	---	-----	------------------------	------	-----	-----------------	-----	-----

**Root Depth / Study Bank Height ( E )**

Root Depth (ft) =	0.5	(D)	Study Bank Height (ft) =	4	(A)	( D ) / ( A ) =	0.125	(E)
-------------------	-----	-----	--------------------------	---	-----	-----------------	-------	-----

**Weighted Root Density ( G )**

Root Density as % =	15%	(F)	( F ) × ( E ) =	1.88	(G)
---------------------	-----	-----	-----------------	------	-----

**Bank Angle ( H )**

Bank Angle as Degrees =	90	(H)
-------------------------	----	-----

**Surface Protection ( I )**

Surface Protection as % =	10%	(I)
---------------------------	-----	-----

**BEHI Score  
(Fig. 5-19)**

10
8
9.5
7
8.5

**Bank Material Adjustment:**

**Bedrock** (Overall Very Low BEHI)

**Boulders** (Overall Low BEHI)

**Cobble** (Subtract 10 points if uniform medium to large cobble)

**Gravel or Composite Matrix** (Add 5–10 points depending on percentage of bank material that is composed of sand)

**Sand** (Add 10 points)

**Silt/Clay** (no adjustment)

**Bank Material Adjustment**

	5
--	---

**Stratification Adjustment**

Add 5–10 points, depending on position of unstable layers in relation to bankfull stage

--	--

Very Low	Low	Moderate	High	Very High	Extreme	
						<b>Adjective Rating and Total Score</b>
5 – 9.5	10 – 19.5	20 – 29.5	30 – 39.5	40 – 45	46 – 50	48



## **Attachment 4: NBS Data**



### NBS Data

Table 1: Near-Bank Stress (NBS) Data

Location	Bank Depth (ft)	Bank-full Depth (ft.)	Bank Depth / Bank-full Depth	NBS Rating	Bank Erosion Rate	Length of Bank	Study Bank Height	Erosion Rate (ft <sup>3</sup> /yr.)
Low	5	0.51	9.80	Extreme (6)	1.3218	735	5	4857.60
Moderate	1	0.51	1.96	High (4)	0.4203	0	1	0.00000
High	2	0.51	3.92	Extreme (6)	1.3218	724	2	1913.96
Very High	4	0.51	7.84	Extreme (6)	1.3218	1503	4	7946.64
Extreme	5	0.51	9.80	Extreme (6)	17.973	538	5	48346.27
<b>Total Erosion Rate</b>								
								ft <sup>3</sup> /yr.
								63064.48
								yd <sup>3</sup> /yr.
								2335.72
								tons/yr.
								3036.43
								tons/yr./ft
								0.87

Table 1.5: Converting Values to Near-Bank Stress Rating

NBS Rating	Bank Depth / Bank-full Depth
Very Low	<1.00
Low	1.00 – 1.50
Moderate	1.51 – 1.80
High	1.81 – 2.50
Very High	2.51 – 3.00
Extreme	>3.00

Table 2: Total Nitrogen

Linear Feet of Stream Bank	TN Rate (lbs/ft/yr)	TN (lb/yr)	TN (tons/yr)
3500	0.075	262.5	0.13125

Table 3: Total Phosphorus

Linear Feet of Stream Bank	TP Rate (lbs/ft/yr)	TP (lb/yr)	TP (tons/yr)
3500	0.068	238	0.119



## Resource Protection Area Site-specific Study



Northfax West  
10510 Orchard Street  
Fairfax, Virginia 22030

PREPARED FOR:

Northfax JV LLC c/o The Lann Companies  
3900 Jermantown Route, Suite 300  
Fairfax, Virginia 22030

February 26, 2020

Apex Companies, LLC  
203 Wylderose Court  
Midlothian, Virginia 23113





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Appendix B – 2018 Preliminary Jurisdictional Determination

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## 1.0 Introduction

The City of Fairfax (the City) 2019 Zoning Ordinance documents Chesapeake Bay Preservation Area (CBPA) regulations designed to protect local waterways in the Chesapeake Bay watershed from nonpoint source pollution generated from urban development. As with other municipalities in the watershed, the City's CBPA ordinance has been approved by the Virginia Department of Environmental Quality (DEQ) to implement the requirements of the Code of Virginia needed to comply with the federal Chesapeake Bay Preservation Act. Examples of CBPA features in the City include the Resource Protection Area (RPA) and the Resource Management Area (RMA). To better define the extent and location of these features, the City adopted a CBPA Map in November 25, 2003. The City ordinance codifies the regulations that apply to the CBPA in order to prevent development projects from compromising water quality.

Section 4.18 of the Zoning Ordinance mandates that a RPA Site-specific Study must be submitted for any proposed land disturbance, development, or redevelopment within the RPA. Based on the proposed activities for the Northfax West project, Apex Companies LLC (Apex) performed a RPA Site-specific Study to supplement the Northfax West Major Water Quality Impact Assessment (WQIA) previously submitted to the City (dated January 28, 2020). The City's application form for the RPA Site-specific Study is provided as Appendix A, and the report herein presents the methods used by Apex to investigate potential RPA features and data documenting the results of the study. The report meets the standards set forth in the City's Chesapeake Bay Preservation ordinance (Section 4.18) for a RPA Site-specific Study.

## 2.0 Purpose

To comply with the City's ordinance, development of property that has an RPA depicted on the City's CBPA Map must include a site-specific determination showing the boundaries of RPA components. As such, the primary purpose of this study was to investigate the existing, pre-development conditions within the Northfax West project area and delineate the extent of potential RPA components. Secondly, this study also assessed the post-development extent of RPA components based on the Northfax West Master Development Plan submitted to the City.

## 3.0 Project Description

The Northfax West project is part of a comprehensive strategy for the growth and redevelopment of the Fairfax Boulevard corridor through the City, as demonstrated by the City of Fairfax 2035 Comprehensive Plan. In accordance with this plan the project will create a mix of residential and commercial uses in a highly urbanized setting, serving the needs of the community, while attracting those who would otherwise just pass through the area. The project will occur in an area which has not seen significant improvement in many years and will allow residents to work near where they live, reducing traffic congestion on area roads. The project envisions the revitalization of the area through the construction of residential homes, potentially a mix of townhouses, condominiums and a senior living facility, to maximize living space, while also providing commercial space for businesses.

### 3.1 Location

The Northfax West project is located in the northwest quadrant at the intersection of Fairfax Boulevard (Route 50) and Chain Bridge Road (Route 123) (Figure 1). The project site consists of an assemblage of 17 parcels with an aggregate area of approximately 11.32 acres, which has historically been used for residential and commercial purposes. The project area is part of the Accotink Creek watershed and located within the Middle Potomac River drainage area identified by Hydrologic Unit Code (HUC) 02070010.



## 3.2 Existing Conditions

The project area currently consists of two single family homes with mowed grass yards, two parking lots (approx. 3 acres) constructed of rolled stone over fabric, and approximately 4 acres of woods. Orchard Street is located within the project limits and dead ends in a cul-de-sac. The 4-acre wooded area is composed of a mixed hardwood vegetation community surrounding a perennial and two intermittent streams that flow through the site from west to east. The perennial stream enters the site at the northwest corner of the project area and flows southeast before eventually entering a twin, 8-foot box culvert that conveys water under Route 123. The two intermittent streams flow into the perennial stream from the west. One of the intermittent streams begins at a culvert outlet near the southwest corner of the project area, while the other intermittent stream originates from a concrete spring box close to the bank of the perennial channel.

A delineation of Waters of the U.S. (WOTUS) was performed in 2017 and a Preliminary Jurisdictional Determination (PJD) was issued by the U.S. Army Corps of Engineers (USACE) on February 5, 2018 (Appendix B). The PJD documented the limits of perennial and intermittent stream channels and the absence of non-tidal wetlands within the project boundaries. The flow regime of each stream was investigated in 2017 in a site-specific perennial stream determination, the results of which concurred with the City's RPA map (Figure 3). Since then, the eastern extent of the perennial stream has been redirected to the north into 8-foot box culverts, installed by the City under Route 123 to improve drainage and reduce flooding. As a result, the RPA buffer associated with the perennial stream shifted to the north, as shown on Figure 4 and on Sheet 1 of Appendix E.

## 4.0 Methods

Apex conducted a RPA Site-specific Study in accordance with Section 4.18 of the City's Zoning Ordinance titled "Chesapeake Bay Preservation," as shown below:

- Delineation by applicant
  - For any property that is depicted on the city's Chesapeake Bay preservation area map as a resource protection area, the applicant shall determine the site-specific boundaries of the RPA components through the performance of a RPA site-specific study. The Chesapeake Bay preservation area map shall be used only as a guide to the general location of resource protection areas within the city.
- Where conflict arises over delineation
  - Where the applicant has provided a site-specific delineation of the resource protection area, the zoning administrator shall review and verify the accuracy of the boundary delineation. In determining the site-specific resource protection area boundary, the zoning administrator may render adjustments to the applicant's boundary delineation based on the RPA site-specific study features required in §6.13.2. B.

Apex's RPA study was conducted using the results of the WOTUS delineation and a perennial stream determination completed in 2017 and verified in 2019. The WOTUS delineation was completed using the methods and technical criteria outlined in the *1987 Corps of Engineers Wetland Delineation Manual* and the *2010 Regional Supplement to the USACE Wetland Delineation Manual: Eastern Mountains and Piedmont Region (Version 2.0)*. The PJD issued by the USACE in 2018 is provided in Appendix B. The perennial stream determination was completed using the 2003 Fairfax County Perennial Stream Field Identification Protocol. A data sheet from the protocol was completed for two stream reaches to confirm the presence of perennial or intermittent flow. An additional reach was assessed with ephemeral flow and was consequently removed by the USACE from the PJD. The main channel flowing through the project area was previously documented by the City as perennial; therefore, in concurrence with the City's assessment no additional



data was collected on the perennial reach.

## 5.0 Results

The results of the 2017 perennial stream determination and 2019 verification indicate that the project area has one perennial stream and two intermittent streams. The results are summarized in Table 1 followed by a description of each stream assessment reach. The location of each reach is shown on Sheet 1 of Appendix E.

**Table 1: Summary of Perennial Stream Determination Results**

Reach ID	Score using Data Sheet from Perennial Stream Field Identification Protocol	Intermittent or Perennial
A1	N/A (Previously mapped perennial)	Perennial
A2	12.5	Intermittent
A3	Non-jurisdictional*	N/A*
A4	2.5	Intermittent

\*Stream was determined to be non-jurisdictional, as verified under the USACE jurisdictional determination (NAO-2017-02192).

**Reach A1 (Perennial):** This perennial stream originates offsite to the northwest of the property, where it enters the site via culverts. The onsite channel's bed and banks are very well defined with an average depth of 3-6 feet and an average width of 10-15 feet. The channel is moderately sinuous with a well-defined riffle/pool sequence and strong substrate sorting. Gravel and large cobble are found in riffles and pools typically have sand and other fine material. Small schools of fish were observed in several areas of the channel.

**Reach A2 (Intermittent):** This intermittent stream is a secondary channel that carries flow from a storm-sewer system in an easterly direction to its confluence with Stream A1. The channel originates at the terminus of a 36-inch storm-sewer pipe, where the outfall has been severely degraded from high volume flow and the resulting reversal flow eddies. Banks are 6 feet deep or more in some locations. Standing water was observed in pools at some locations in the channel, but continuous flow was absent.


**Reach A3 (Non-jurisdictional):** This non-jurisdictional feature is an ephemeral scour that carries overland flow to the perennial stream from Lots 5 and 6. Soil material is similar to adjacent upland with no rock/gravelly substrate. Based on the lack of bed and banks this feature was not considered a potential WOTUS.

**Reach A4 (Intermittent):** A short intermittent stream that originates at a concrete spring box and carries flow to the perennial channel. It is located on Lots 15/16 and observed with poorly defined bed and bank characteristics. The channel bed has some deposition of sand and silt, but no gravel or rock bed material.

The data sheets completed in 2017 are provided in Appendix C and representative photographs are provided in Appendix D. Apex reviewed the data recorded in 2017 during a site visit on December 16<sup>th</sup>, 2019 and verified that no significant changes have occurred since the time of the original investigation.

## 6.0 Conclusions

Apex performed a RPA Site-specific Study to supplement the Northfax West Major WQIA previously submitted to the City (dated January 28, 2020). The results of the study document the presence of a perennial stream and two intermittent streams within the project area. The perennial stream is included in the onsite RPA, as well as the 100-foot buffer adjacent and landward of the perennial stream (see Sheet 1 of Appendix E). The intermittent streams were determined to be non-RPA features due to unnatural channel conditions resulting from adjacent development.



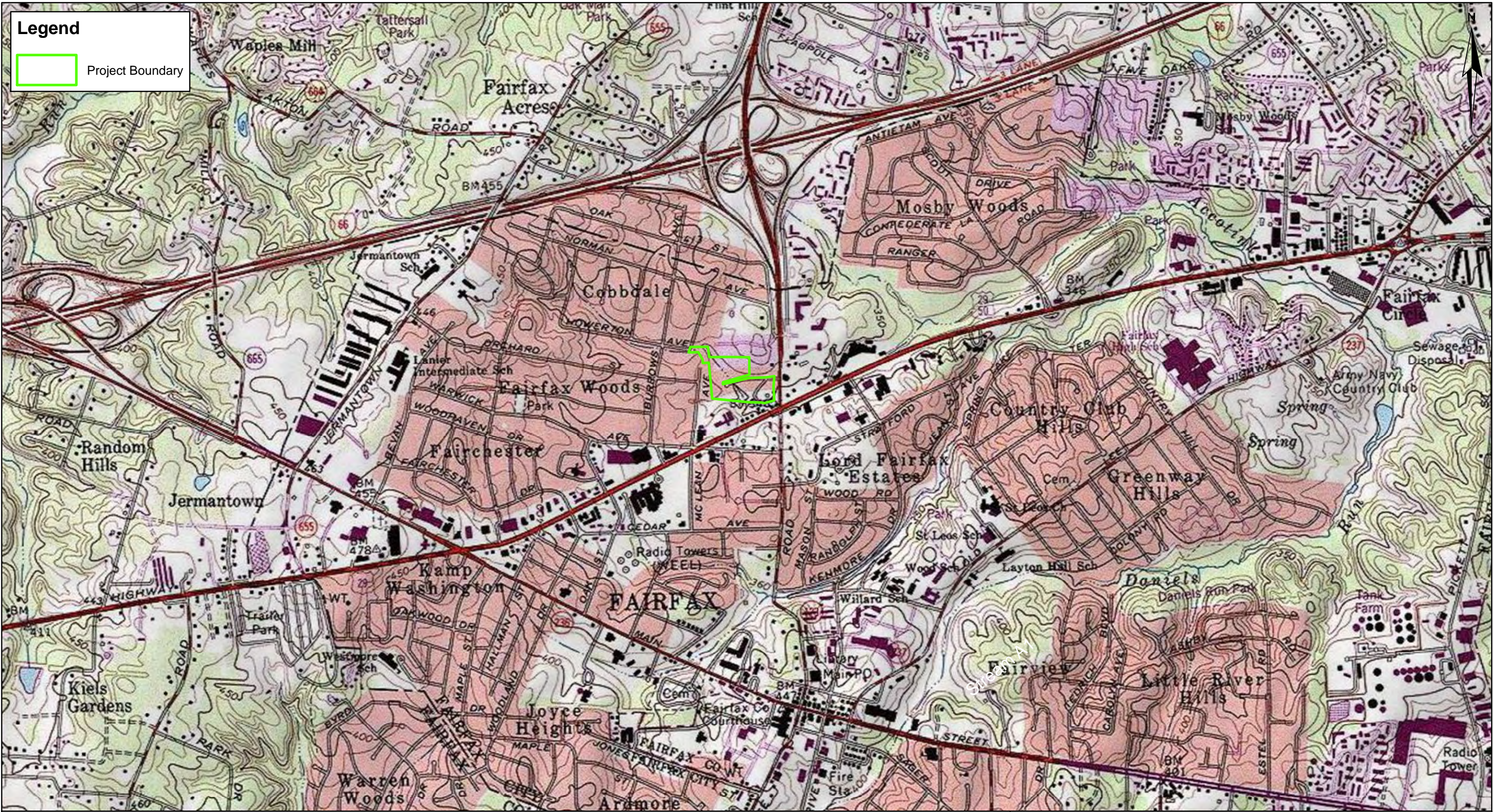
These results concur with the City's CBPA mapping adopted November 25, 2003 (Figure 3); however, since the 2003 CBPA mapping was adopted, the eastern extent of the perennial stream was redirected to the north into 8-foot box culverts installed by the City under Route 123. As a result, the RPA buffer associated with the perennial stream has also shifted to the north. The 100-foot RPA Buffer based on the existing conditions is depicted on Figure 4 and on Sheet 1 of Appendix E. In accordance with the Northfax West Master Development Plan (MDP) and Major WQIA currently under review at the City, the Post-development RPA exhibit (Sheet 2 of Appendix E) shows the anticipated change to the RPA once the proposed activities are complete.

On behalf of Northfax JV LLC (c/o The Lann Companies), Apex respectfully requests that the City's Zoning Office review the application provided in Appendix A of this report and the other supporting figures and appendices. If the City has questions or comments prior to approval of the application, please contact Chris Senfield via email at [chris.senfield@apexcoss.com](mailto:chris.senfield@apexcoss.com).



## Figures





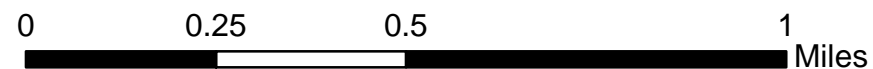
Apex Companies, LLC  
203 Wylderose Ct, Midlothian, VA 23113  
Phone: 804-897-2718  
www.apexcos.com

**Northfax West  
City of Fairfax, Virginia**

**Figure 1  
Project Location Map**

Service Layer Credits: Copyright:© 2013 National Geographic Society, i-cubed

Drawn By: Rob LaPosa  
01/16/2020



38°5'33.44"N  
77°18'36.93"W



**Legend**

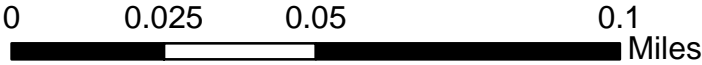
Project Boundary



Apex Companies, LLC  
203 Wylderose Ct, Midlothian, VA 23113  
Phone: 804-897-2718  
[www.apexcoss.com](http://www.apexcoss.com)

**Northfax West**  
**City of Fairfax, Virginia**

**Figure 2**  
**Project Vicinity Map**



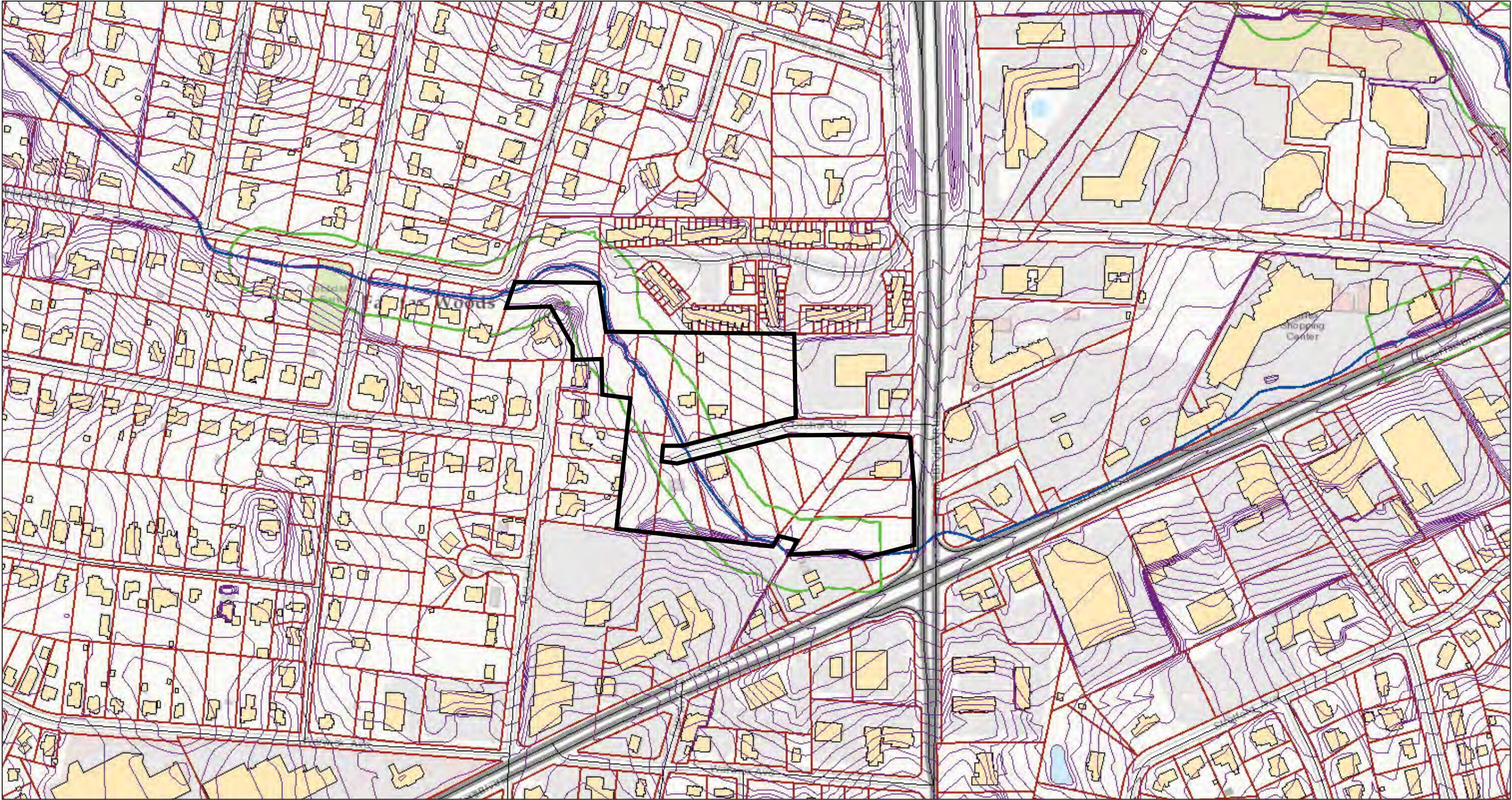
Drawn By: Rob LaPosa  
01/16/2020

Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community  
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

38°5'33.44"N  
77°18'36.93"W



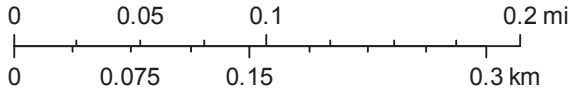
Figure 3: City of Fairfax RPA Map



October 25, 2016

1:4,514

- Contour Lines (2 foot intervals)
- Streets
- Streams
- Buildings
- Resource Protection Areas
- City Limits
- Parcels



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



Legend

Perennial Stream

Intermittent Stream

100-ft buffer

Project Area

Apex Companies, LLC  
 203 Wylderose Ct, Midlothian, VA 23113  
 Phone: 804-897-2718  
[www.apexcoss.com](http://www.apexcoss.com)

Northfax West  
 City of Fairfax, Virginia

Figure 4  
 Resource Protection Area Map

Drawn By: Rob LaPosa (01/17/2020)  
 Reviewed By: John H. Brooks III(1/28/2020)

Service Layer Credits: Source: Esri, DigitalGlobe,  
 GeoEye, Earthstar Geographics, CNES/Airbus DS,  
 USDA, USGS, AeroGRID, IGN, and the GIS User  
 Community

38°5'33.44"N  
 77°18'36.93"W





## Appendices





## Appendix A – Application Form



Application #: \_\_\_\_\_

**RESOURCE PROTECTION AREA (RPA)**

**SITE-SPECIFIC STUDY**

- \$290.00 NON REFUNDABLE FEE -

**1. JOB LOCATION INFORMATION:**

Job Location Address 10510 Orchard St. Fairfax, Virginia 22030

Project Name Northfax West

Tax Map # See Attached List

**2. APPLICANT INFORMATION:**

Name Northfax JV LLC c/o The Lann Companies

Address 3900 Jermantown Rd., Suite 300, Fairfax VA, 22030

Phone (703) 934-4600 Email john@lann.com

**3. PROPERTY OWNER INFORMATION: (Same as Applicant ☒)**

Name \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_

**4. ENGINEER, SURVEYOR or LANDSCAPE ARCHITECT: (Same as Applicant ☐)**

Name Christopher Consultants; Attn: Christopher Fillmore, LS; License No. 2607

Address 9900 Main St., Suite 400, Fairfax, VA, 22031

Phone (703) 273-6820 Email chrisfillmore@ccl-eng.com

**5. WETLANDS EXPERT: (Same as Applicant ☐)**

Name Apex Companies, LLC; Attn: John Brooks, III, PWD; Certification No. 3402000003

Address 203 Wylderose Ct., Midlothian, VA 23113

Phone (804) 897-2718 Email john.brooks@apexc.com

\*\*\*OFFICE USE ONLY\*\*\*

Receipt # \_\_\_\_\_

Fee Paid \_\_\_\_\_

\*\*\*ZONING OFFICE APPROVAL SIGNATURE\*\*\*

This Application is Approved By \_\_\_\_\_ Date \_\_\_\_\_  
Zoning Official

*The City of Fairfax is committed to the letter and spirit of the Americans with Disabilities Act. To request a reasonable accommodation for any type of disability, please call 703-385-7930, (TTY 711)*

- I. RPA Delineation Elements** – The RPA site-specific study shall be drawn to the same scale as the site plan or subdivision plan and shall be certified as complete and accurate by a class IIIB certified land surveyor and a professional wetlands expert. The study should clearly delineate the RPA components. Wetland delineations shall be performed consistent with the procedures specified in the Federal Manual for Identifying and Delineating Jurisdictional Wetlands.

Mark below which features are included in your RPA Site-Specific Study:

<b>Present (Y/N)</b>	<b>Resource Protection Area Elements §110-4.18.2</b>
N	a) Tidal Wetlands
N	b) Nontidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow
N	c) Tidal shores
N	d) Intermittent streams that remain largely in a natural condition and that have not been significantly impacted by adjacent development
Y	e) Water bodies with perennial flow
Y	f) A 100-foot vegetated buffer area located adjacent to and landward of the above components and expanded to include noncontiguous wetlands within the floodplain that are partially located within the buffer, along both sides of any water body with perennial flow. The full buffer area shall be designated as the landward component of the resource protection area notwithstanding the presence of permitted uses, encroachments or permitted vegetation clearing in compliance with the performance criteria of this division.

## II. Site Information

Total Parcel(s) Area: 493,099.2 sf

Total Delineated RPA: 250,966.5 sf

Will you be developing in an RPA? (Circle one) **Yes** No

If Yes, check the type of development:

- ☒ Redevelopment (see §110-4.18.7.C) and §110-4.18.7.D
- ☐ Roadway or driveway meeting the requirements of §110-4.18.4.B.2
- ☐ Flood control or stormwater management facility meeting the requirements of §110-4.18.4.B.3
- ☒ New Development (see §110-4.18.4.B.4)



**RPA Study Summary**



I hereby certify that the RPA Site-Specific Study does not conflict with the City of Fairfax Chesapeake Bay Area Preservation Map (adopted November 25, 2003).



I hereby certify that the RPA Site-Specific Study does conflict with the City of Fairfax Chesapeake Bay Area Preservation map. The Zoning Administrator will review and consider the inconsistencies in order to determine whether or not the City's map should be adjusted.

*Describe conflicting features:*

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

  
Signature of Applicant or Authorized Agent

CO-OPERATING  
Title or Relationship

DATE

MAR. 3-2-2020

## Northfax West Tax Map #'s

57 2 08 005  
57 2 08 006  
57 2 08 007  
57 2 08 008  
57 2 08 010  
57 2 08 011  
57 2 08 012  
57 2 08 013  
57 2 08 014  
57 2 07 015 B  
57 2 47 000 A  
57 2 02 003  
57 2 02 005  
57 2 02 017  
57 2 02 018  
57 2 02 019  
57 2 02 020



## **Appendix B – 2018 Preliminary Jurisdictional Determination**





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

February 5, 2018

**PRELIMINARY JURISDICTIONAL DETERMINATION**

Northern Virginia Regulatory Section  
NAO-2017-02192 (Northfax Project)

Northfax JV LLC  
c/o The Lann Companies  
Attn: Mr. John Napolitano  
3900 Jermantown Road, Suite 300  
Fairfax, Virginia 22030

Dear Mr. Napolitano:

This letter is in regard to your request for a verification of a preliminary jurisdictional determination for waters of the U.S. (including wetlands) on property known as the Northfax Project, located on 16 parcels on approximately 10.3 acres, northwest quadrant at the intersection of Chain Bridge Road (Route 123) and Fairfax Boulevard (U.S. Routes 29/50) in the City of Fairfax, Virginia.

The map entitled "Northfax Project", by Christopher Consultants and submitted by Apex Companies, LLC dated December 4, 2017 and revised January 19, 2018 (*copy enclosed*) provides the location of waters and/or wetlands on the property listed above. The basis for this delineation includes the presence of an ordinary high water mark. This letter is not confirming the Cowardin classifications of these aquatic resources.

Discharges of dredged or fill material, including those associated with mechanized landclearing, into waters and/or wetlands on this site may require a Department of the Army permit and authorization by state and local authorities including a Virginia Water Protection Permit from the Virginia Department of Environmental Quality (DEQ), a permit from the Virginia Marine Resources Commission (VMRC) and/or a permit from your local wetlands board. This letter is a confirmation of the Corps preliminary jurisdiction for the waters and/or wetlands on the subject property and does not authorize any work in these areas. Please obtain all required permits before starting work in the delineated waters/wetland areas.

This is a preliminary jurisdictional determination and is therefore not a legally binding determination regarding whether Corps jurisdiction applies to the waters or wetlands in question. Accordingly, you may either consent to jurisdiction as set out in this preliminary jurisdictional determination and the attachments hereto if you agree with the determination, or you may request and obtain an approved jurisdictional determination.

"This preliminary jurisdictional determination and associated wetland delineation map may be submitted with a permit application."

Enclosed is a copy of the "Preliminary Jurisdictional Determination Form". Please review the document, sign, and return one copy to Ms. Theresita Crockett-Augustine either via email ([theresita.m.crockett-augustine@usace.army.mil](mailto:theresita.m.crockett-augustine@usace.army.mil)) or via standard mail to US Army Corps of Engineers, Northern Virginia Field Office at 18139 Triangle Plaza, Suite 213, Dumfries, Virginia 22026 within 30 days of receipt and keep one for your records. This delineation of waters and/or wetlands is valid for a period of five years from the date of this letter unless new information warrants revision prior to the expiration date.

If you have any questions, please contact Ms. Theresita Crockett-Augustine at (703) 221-9736 or [theresita.m.crockett-augustine@usace.army.mil](mailto:theresita.m.crockett-augustine@usace.army.mil).

Sincerely,



Theresita Crockett-Augustine  
Environmental Scientist  
Northern Virginia Regulatory Section

Enclosures

AUGUSTINE.THERESITA.  
CROCKETT.1230827040

Digitally signed by  
AUGUSTINE.THERESITA.CROCKETT.1230827040  
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI,  
ou=USA,  
cn=AUGUSTINE.THERESITA.CROCKETT.1230827040  
Date: 2018.02.05 16:42:10 -05'00'

## Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

### BACKGROUND INFORMATION:

A. REPORT COMPLETION DATE FOR PJD: February 5, 2018

B. NAME AND ADDRESS OF PERSON REQUESTING PRELIMINARY JD:

Northfax JV LLC  
c/o The Lann Companies  
Attn: Mr. John Napolitano  
3900 Jermantown Road, Suite 300  
Fairfax, Virginia 22030

DISTRICT OFFICE, FILE NAME, AND NUMBER: NAO, Northfax Project, 2017-02192

C. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:  
(USE THE ATTACHED TABLE TO DOCUMENT MULTIPLE WATERBODIES AT DIFFERENT SITES)

State: **VIRGINIA** County/parish/borough: Fairfax City: Fairfax

Center coordinates of site (lat/long in degree decimal format):

Latitude: 38.859 ° N Longitude: -77.309 ° W

Universal Transverse Mercator:

Name of nearest waterbody: UT to Accotink Creek

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☐ Office (Desk) Determination. Date:

☒ Field Determination. Date(s): 01/19/18

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site Number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
1			2,064 LF	RPW	Section 404
2					
3					



1. The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.
2. In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre- construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there "may be" waters of the U.S. and/or that there "may be" navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

**SUPPORTING DATA:** Data reviewed for preliminary JD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items.

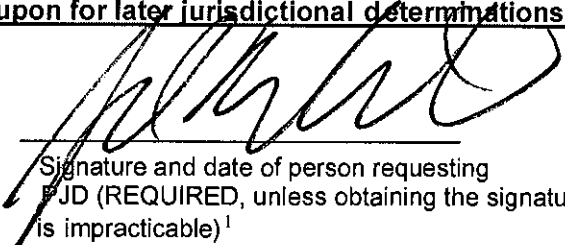
- ☒ Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:  
Map:
- ☒ Data sheets prepared/submitted by or on behalf of the PJD requestor.
- ☒ Office concurs with data sheets/delineation report.
- ☐ Office does not concur with data sheets/delineation report. Rationale:
- ☐ Data sheets prepared by the Corps:
- ☐ Corps navigable waters' study:
- ☐ U.S. Geological Survey Hydrologic Atlas: USGS
- ☐ NHD data.
- ☐ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name:
- ☒ Natural Resources Conservation Service Soil Survey. Citation:
- ☒ National wetlands inventory map(s). Cite name:
- ☒ State/Local wetland inventory map(s):
- ☐ FEMA/FIRM maps:
- ☐ 100-year Floodplain Elevation: (National Geodetic Vertical Datum of 1929)
- ☒ Photographs ☒ Aerial (Name & Date):
- or ☒ Other (Name & Date):
- ☐ Previous determination(s):
- File no. and date of response letter:
- ☐ Other information (please specify):

**IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.**

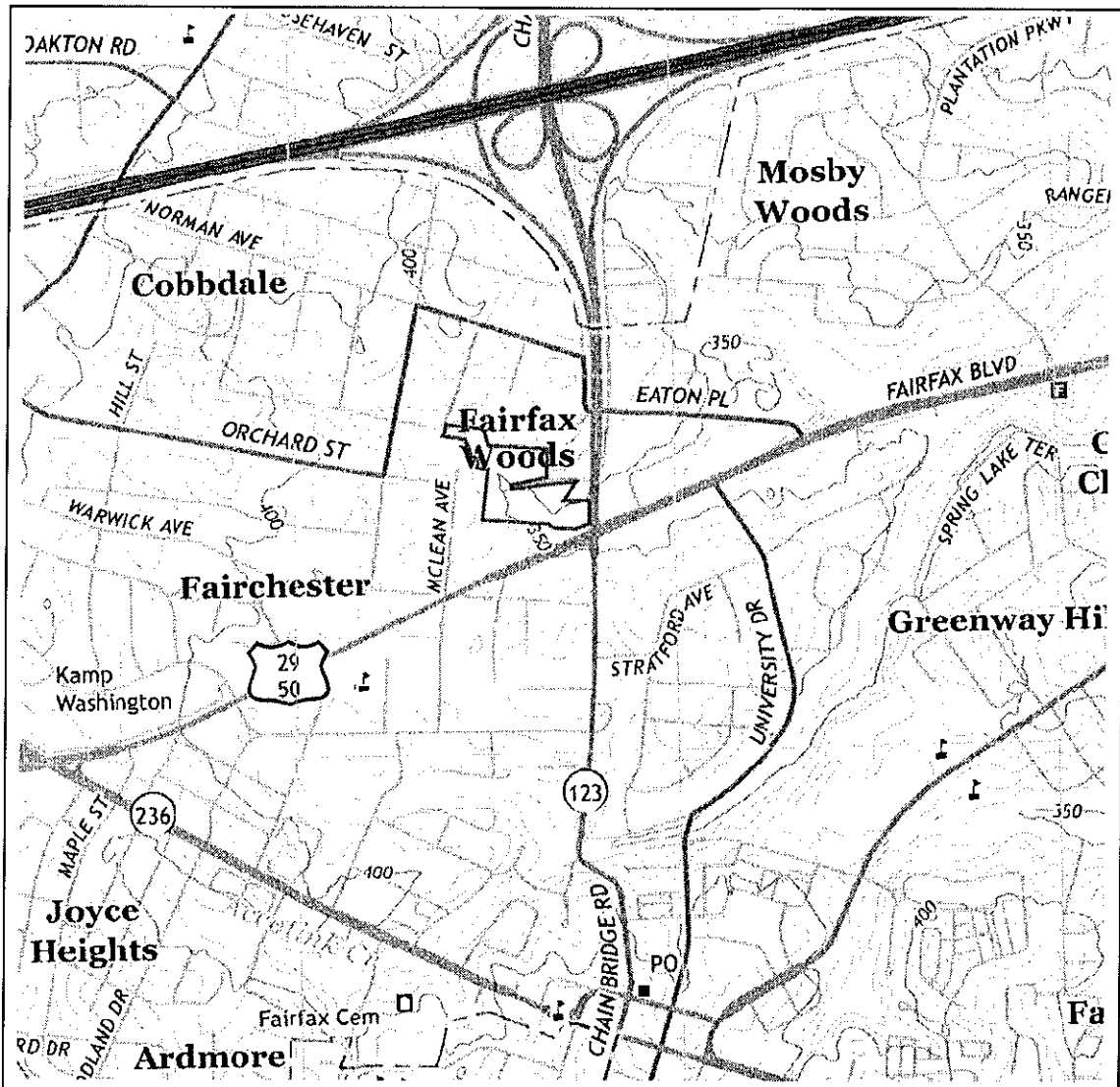
AUGUSTINE.THERESITA.  
CROCKETT.1230827040

Digitally signed by  
AUGUSTINE.THERESITA.CROCKETT.1230827040  
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USA,  
cn=AUGUSTINE.THERESITA.CROCKETT.1230827040  
Date: 2018.02.05 16:41:37 -05'00'

Signature and date of  
Regulatory staff member  
completing PJD

  
Signature and date of person requesting  
PJD (REQUIRED, unless obtaining the signature  
is impracticable)<sup>1</sup>

<sup>1</sup> Districts may establish timeframes for requester to return signed PJD forms. If the requester does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.



Scale: Not to Scale

Date: USGS Quadrangle 2013

**Apex Companies LLC.**  
8854 Rixlew Lane  
Manassas, VA 20109



© Apex Companies LLC

**USGS Quadrangle Map**  
**Northfax**  
38.859309 N -77.310054 W  
Fairfax USGS Quadrangle  
Fairfax County, VA

**Prepared for:**  
Northfax JV LLC c/o The Lann Companies  
3900 Jermantown Road - Suite 300  
Fairfax, VA 22030





Scale: North Arrow

Date: USGS Quadrangle 2013

**Apex Companies LLC**  
8854 Ridge Lane  
Manassas, VA 20108



© Apex Companies LLC

**USGS Aerial Map**  
**Northfax**  
18,00000 N 07,00000 W  
Fishes USGS Quadrangle  
Fishes County, VA

**Prepared For:**  
Northfax JV LLC c/o The Lane Companies  
200 Commonwealth Road - Suite 300  
Fishes, VA 22033





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

FEBRUARY 5, 2018

**Supplemental Preapplication Information**

Project Number: NAO-2017-02192 (Northfax Project)  
Applicant: Northfax JV LLC  
Project Location: City of Fairfax

1. A search of the Virginia Department of Historic Resources data revealed the following:

- ☐ No known historic properties are located on the property.
- ☒ The following known architectural resources are located on the property:

DHR ID	Address	Restricted	Property Names
151-5468	10500 Orchard Street	Unrestricted	Trolley Bed, 10500 Orchard Street (Function/Location), Washington, Arlington and Falls Church Electric Railway (Historic)
029-5470	Arlington Boulevard - Alt Route 50	Unrestricted	Washington and Virginia Railway Company (Historic), Washington, Arlington and Falls Church Electric Railway (Historic)

- ☐ The following known archaeological resources are located on the property:
- ☐ The following known historic resources are located in the vicinity of the property (potential for effects to these resources from future development):

**NOTE:**

- The information above is for planning purposes only. In most cases, the property has not been surveyed for historic resources. Undiscovered historic resources may be located on the subject property or adjacent properties and this supplemental information is not intended to satisfy the Corps' requirements under Section 106 of the National Historic Preservation Act (NHPA).*
- Prospective permittees should be aware that Section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant.*

2. A search of the data supplied by the U.S. Fish & Wildlife Service, the Virginia Department of Conservation and Recreation and the Virginia Department of Game and Inland Fisheries revealed the following:

- ☒ No known populations of threatened or endangered species are located on or within the vicinity of the subject property.
- ☐ The following federally-listed species may occur within the vicinity of the subject property. See attached.
- ☐ The following state-listed (or other) species may occur within the vicinity of the subject property:

***Please note this information is being provided to you based on the preliminary data you submitted to the Corps relative to project boundaries and project plans. Consequently, these findings and recommendations are subject to change if the project scope changes or new information becomes available and the accuracy of the data.***





## Appendix C – Perennial Stream Identification Protocol Data Sheets

Site ID: Northfax - A2	Total Score: 12.5
------------------------	-------------------

Watershed: Accotink Creek

Recorder: J. Irre

Date: 11/6/17

Time: 1409

Evaluators: J. Irre

### Field Indicators:

#### I.) Streamflow and Hydrology

	Absent	Weak	Moderate	Strong
1.) Presence or absence of flowing water and > 48 hrs since last rainfall	0 <input type="radio"/>	1 <input checked="" type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
2.) Presence of high groundwater table or seeps and springs	0 <input checked="" type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
3.) Leaf litter in streambed	1.5 <input type="radio"/>	1 <input checked="" type="radio"/>	0.5 <input type="radio"/>	0 <input type="radio"/>
4.) Drift lines	0 <input type="radio"/>	0.5 <input checked="" type="radio"/>	1 <input type="radio"/>	1.5 <input type="radio"/>
5.) Sediment on debris or plants	0 <input checked="" type="radio"/>	0.5 <input type="radio"/>	1 <input type="radio"/>	1.5 <input type="radio"/>

Total Streamflow and Hydrology Points: 2.5

#### II.) Geomorphology

	Absent	Weak	Moderate	Strong
1.) Riffle-pool sequence	0 <input type="radio"/>	1 <input checked="" type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
2.) USDA texture in streambed	0 <input type="radio"/>	1 <input type="radio"/>	2 <input checked="" type="radio"/>	3 <input type="radio"/>
3.) Natural Levees	0 <input checked="" type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
4.) Sinuosity	0 <input type="radio"/>	1 <input checked="" type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
5.) Active or Relic Floodplain	0 <input type="radio"/>	1 <input checked="" type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
6.) Braided Channel	0 <input checked="" type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
7.) Recent Alluvial Deposits	0 <input checked="" type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
8.) Bankfull Bench present	0 <input type="radio"/>	1 <input checked="" type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
9.) Continuous Bed and Bank	0 <input type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input checked="" type="radio"/>
10.) 2nd order or greater channel present	Yes = 3 <input type="radio"/>		No = 0 <input checked="" type="radio"/>	

Total Geomorphology Points: 9

#### III.) Streambed Soils

1.) Redoximorphic features present in sides of channel or head cut.	Present = 0 <input checked="" type="radio"/>	Absent = 1.5 <input type="radio"/>
2.) Chroma	gleyed = 3 <input type="radio"/> 1 = 2 <input type="radio"/> 2 = 1 <input checked="" type="radio"/> > 2 = 0 <input type="radio"/>	

Total Streambed Soils Points: 1

#### IV.) Vegetation

	Absent	Weak	Moderate	Strong
1.) Rooted AQUATIC Plants in Streambed	0 <input checked="" type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
2.) Presence of Periphyton/green algae	0 <input checked="" type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
3.) Iron Oxidizing Bacteria/Fungus	0 <input checked="" type="radio"/>	0.5 <input type="radio"/>	1 <input type="radio"/>	1.5 <input type="radio"/>
4.) Wetland Plants in Streambed (Skip if no plants present in streambed)				
	SAV = 3 <input type="radio"/> Mostly OBL = 1.5 <input type="radio"/> Mostly FACW = 1 <input type="radio"/> Mostly FAC = 0.5 <input type="radio"/> Mostly FACU, UPL, or None = 0 <input checked="" type="radio"/>			

Total Vegetation Points: 0

Comments:

Front Page Total 612.5 points

V.) Benthic Macroinvertebrates	Absent	Weak	Moderate	Strong
1.) Benthic Macroinvertebrates	0 <input checked="" type="radio"/>	0.5 <input type="radio"/>	1 <input type="radio"/>	1.5 <input type="radio"/>
2.) Bivalves	0 <input checked="" type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
3.) EPT taxa	<b>Present = 3</b> <input type="radio"/>			<b>Absent = 0</b> <input checked="" type="radio"/>

**Total Benthic Macroinvertebrates Points:** 0

VI.) Vertebrates	Absent	Weak	Moderate	Strong
1.) Fish	0 <input checked="" type="radio"/>	0.5 <input type="radio"/>	1 <input type="radio"/>	1.5 <input type="radio"/>
2.) Amphibians	0 <input checked="" type="radio"/>	0.5 <input type="radio"/>	1 <input type="radio"/>	1.5 <input type="radio"/>

**Total Vertebrates Points:** 0

**Total Score: 12.5**

**Benthics/Amphibians Found:**

None

**Weather**

Rain Gauge NOAA.GOV Date of Last Rainfall 11/5/17 Rainfall Amount 0.10" at Dulles

**Reach Description**

Upstream: Trib ☐ Headout ☐ Grade Control ☒ Structure ☐ Other: storm-drain outfall  
Downstream: Trib ☒ Headout ☐ Grade Control ☐ Structure ☐ Other: \_\_\_\_\_

**Comments:**

**Storm Network Connections and Watershed Observations**

input from city storm-sewer system and uncontrolled runoff from adjacent impervious areas.

**Riparian Buffers Width**

**LB:** Distance >25 feet ☐ 26-50 ☒ 51-75 ☐ 76-100 ☐ 100+ ☐  
Cover type: Tree ☒ Shrub ☐ Herbaceous ☐ Lawn ☐ Other: ☐  
Dominant Species: Tulip Tree, Black Cherry, Black Walnut

**RB:** Distance >25 feet ☐ 26-50 ☐ 51-75 ☐ 76-100 ☐ 100+ ☒  
Cover type: Tree ☒ Shrub ☐ Herbaceous ☐ Lawn ☐ Other: ☐  
Dominant Species: Same as left buffer

**Riparian Buffer Comments**

buffer in very poor condition from past disturbance

**Other Observations and Comments:**

stream reach is highly disturbed from past storm events.

Is the reach perennial? YES ☐ NO ☒

Photo #	Direction (US, DS, LB, RB)	Notes
18	US	facing west looking at storm-drain outfall
19	DS	facing east looking downstream

<b>Site ID:</b> Northfax - A3	<b>Total Score:</b> 2.5
-------------------------------	-------------------------

Watershed: Accotink Creek

Recorder: J. Irre

Date: 11/6/17

Time: 1435

Evaluators: J. Irre

**Field Indicators:**

**I.) Streamflow and Hydrology**

	Absent	Weak	Moderate	Strong
1.) Presence or absence of flowing water and > 48 hrs since last rainfall	0 <input checked="" type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
2.) Presence of high groundwater table or seeps and springs	0 <input checked="" type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
3.) Leaf litter in streambed	1.5 <input type="radio"/>	1 <input type="radio"/>	0.5 <input checked="" type="radio"/>	0 <input type="radio"/>
4.) Drift lines	0 <input checked="" type="radio"/>	0.5 <input type="radio"/>	1 <input type="radio"/>	1.5 <input type="radio"/>
5.) Sediment on debris or plants	0 <input checked="" type="radio"/>	0.5 <input type="radio"/>	1 <input type="radio"/>	1.5 <input type="radio"/>

**Total Streamflow and Hydrology Points:** 0.5

**II.) Geomorphology**

	Absent	Weak	Moderate	Strong
1.) Riffle-pool sequence	0 <input checked="" type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
2.) USDA texture in streambed	0 <input checked="" type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
3.) Natural Levees	0 <input checked="" type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
4.) Sinuosity	0 <input checked="" type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
5.) Active or Relic Floodplain	0 <input checked="" type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
6.) Braided Channel	0 <input checked="" type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
7.) Recent Alluvial Deposits	0 <input checked="" type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
8.) Bankfull Bench present	0 <input checked="" type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
9.) Continuous Bed and Bank	0 <input type="radio"/>	1 <input type="radio"/>	2 <input checked="" type="radio"/>	3 <input type="radio"/>
10.) 2nd order or greater channel present	<b>Yes = 3</b> <input type="radio"/>		<b>No = 0</b> <input checked="" type="radio"/>	

**Total Geomorphology Points:** 2

**III.) Streambed Soils**

1.) Redoximorphic features present in sides of channel or head cut.	<b>Present = 0</b> <input type="radio"/>	<b>Absent = 1.5</b> <input checked="" type="radio"/>
2.) Chroma	gleyed = 3 <input type="radio"/> 1 = 2 <input type="radio"/> 2 = 1 <input type="radio"/> > 2 = 0 <input checked="" type="radio"/>	

**Total Streambed Soils Points:** 1.5

**IV.) Vegetation**

	Absent	Weak	Moderate	Strong
1.) Rooted AQUATIC Plants in Streambed	0 <input checked="" type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
2.) Presence of Periphyton/green algae	0 <input checked="" type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
3.) Iron Oxidizing Bacteria/Fungus	0 <input checked="" type="radio"/>	0.5 <input type="radio"/>	1 <input type="radio"/>	1.5 <input type="radio"/>
4.) Wetland Plants in Streambed (Skip if no plants present in streambed)	SAV = 3 <input type="radio"/> Mostly OBL = 1.5 <input type="radio"/> Mostly FACW = 1 <input type="radio"/> Mostly FAC = 0.5 <input type="radio"/> Mostly FACU, UPL, or None = 0 <input checked="" type="radio"/>			

**Total Vegetation Points:** 0

**Comments:**

Front Page Total 2.5 points



V.) Benthic Macroinvertebrates	Absent	Weak	Moderate	Strong
1.) Benthic Macroinvertebrates	0 <input checked="" type="radio"/>	0.5 <input type="radio"/>	1 <input type="radio"/>	1.5 <input type="radio"/>
2.) Bivalves	0 <input checked="" type="radio"/>	1 <input type="radio"/>	2 <input type="radio"/>	3 <input type="radio"/>
3.) EPT taxa	Present = 3 <input type="radio"/>			Absent = 0 <input checked="" type="radio"/>

Total Benthic Macroinvertebrates Points: 0

VI.) Vertebrates	Absent	Weak	Moderate	Strong
1.) Fish	0 <input checked="" type="radio"/>	0.5 <input type="radio"/>	1 <input type="radio"/>	1.5 <input type="radio"/>
2.) Amphibians	0 <input checked="" type="radio"/>	0.5 <input type="radio"/>	1 <input type="radio"/>	1.5 <input type="radio"/>

Total Vertebrates Points: 0

Total Score: 2.5

Benthics/Amphibians Found:

None

Weather

Rain Gauge NOAA.GOV Date of Last Rainfall 11/5/17 Rainfall Amount 0.10" at Dulles

Reach Description

Upstream: Trib ☐ Headout ☐ Grade Control ☐ Structure ☒ Other: upland  
Downstream: Trib ☒ Headout ☐ Grade Control ☐ Structure ☐ Other: \_\_\_\_\_

Comments:

Storm Network Connections and Watershed Observations

Riparian Buffers Width

LB: Distance >25 feet ☐ 26-50 ☐ 51-75 ☐ 76-100 ☐ 100+ ☒

Cover type: Tree ☒ Shrub ☐ Herbaceous ☐ Lawn ☐ Other: ☐

Dominant Species: Tulip Tree, Black Cherry, Black Walnut, Red Maple

RB: Distance >25 feet ☐ 26-50 ☐ 51-75 ☐ 76-100 ☒ 100+ ☐

Cover type: Tree ☒ Shrub ☐ Herbaceous ☐ Lawn ☐ Other: ☐

Dominant Species: Same as left buffer

Riparian Buffer Comments

buffer in very poor condition from past disturbance

Other Observations and Comments:

Is the reach perennial? YES ☐ NO ☒

Photo #	Direction (US, DS, LB, RB)	Notes
3	US	looking upstream in ephemeral stream
4	DS	looking at head of ephemeral stream



## Appendix D – Representative Photographs



**Photo 1 – Facing east looking at old concrete bridge along main stream A1**



**Photo 2 – Facing west looking upstream from same location as previous photo**





**Photo 3 – Facing NW, looking upstream at Reach A3 (removed by the USACE and called non-jurisdictional)**





**Photo 4 – Facing NW, looking upstream in Stream A1 on Lot 7**



**Photo 5 – Facing SE, looking downstream in Stream A1 on Lot 7**





**Photo 6 – Looking at concrete structure on Lot 15**



**Photo 7 – Looking downstream from concrete structure at Stream A4**



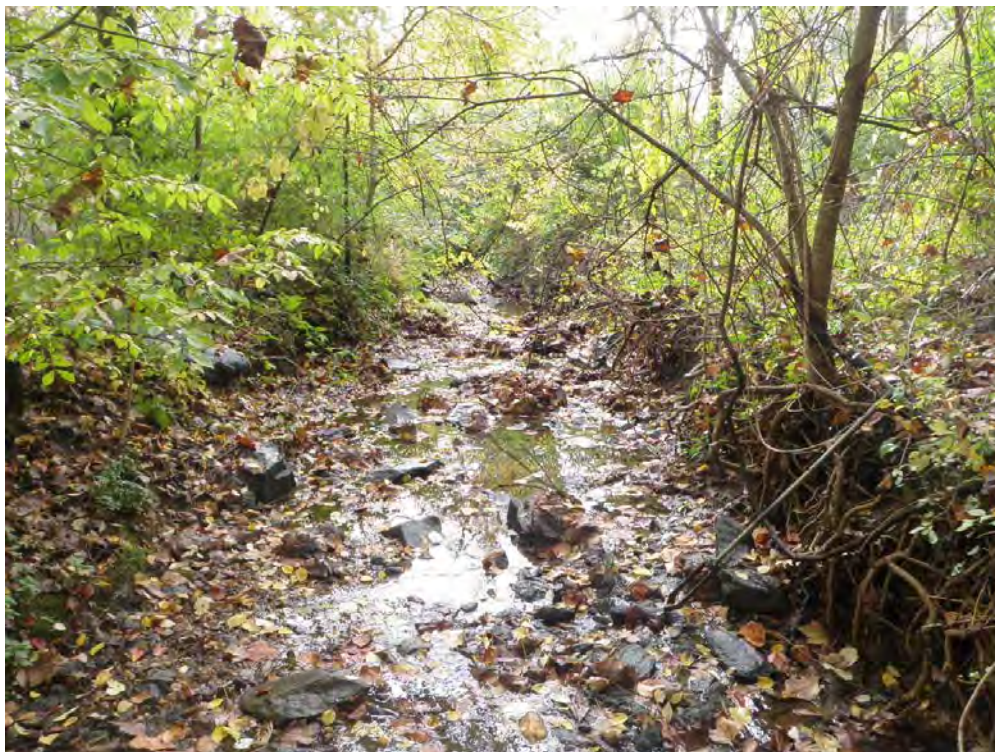


**Photo 8 – Facing E, looking at confluence of Stream A1 and Stream A4**



**Photo 9 – Facing NW, looking upstream in Stream A1 from same location as previous photo**





**Photo 10 – Facing SE, looking downstream in Stream A1**



**Photo 11 – Forested upland riparian area adjacent to Stream A1**





**Photo 12 – Representative soil profile in upland buffer**



**Photo 13 – Facing NW, looking upstream in Stream A1 on Lot 12/13 boundary**





**Photo 14 – Facing SE, looking downstream in Stream A1 from Lot 12/13 boundary**



**Photo 15 – Facing W, looking at City storm-drain outfall in Stream A2**





**Photo 16 – Facing E, looking downstream from same location as previous photo**



**Photo 17 – Facing E, looking at 2017 location of downstream extent of Stream A1**





**Photo 18 – Facing NE, looking downstream along Stream A1 at current location toward box culverts under Route 123**



**Photo 19 – Facing SW, looking upstream along Stream A1 at current location, away from box culverts under Route 123**



## Appendix E –RPA Exhibits







**NORTHFAX WEST**  
**RPA SITE-SPECIFIC STUDY**  
**CITY OF FAIRFAX, VIRGINIA**

[illegible]

PROJECT No.: 13139.005.00  
DRAWING No.: 109821  
DATE: 02-20-2020  
DESIGN: EG  
DRAWN: JS  
CHECKED: KMW

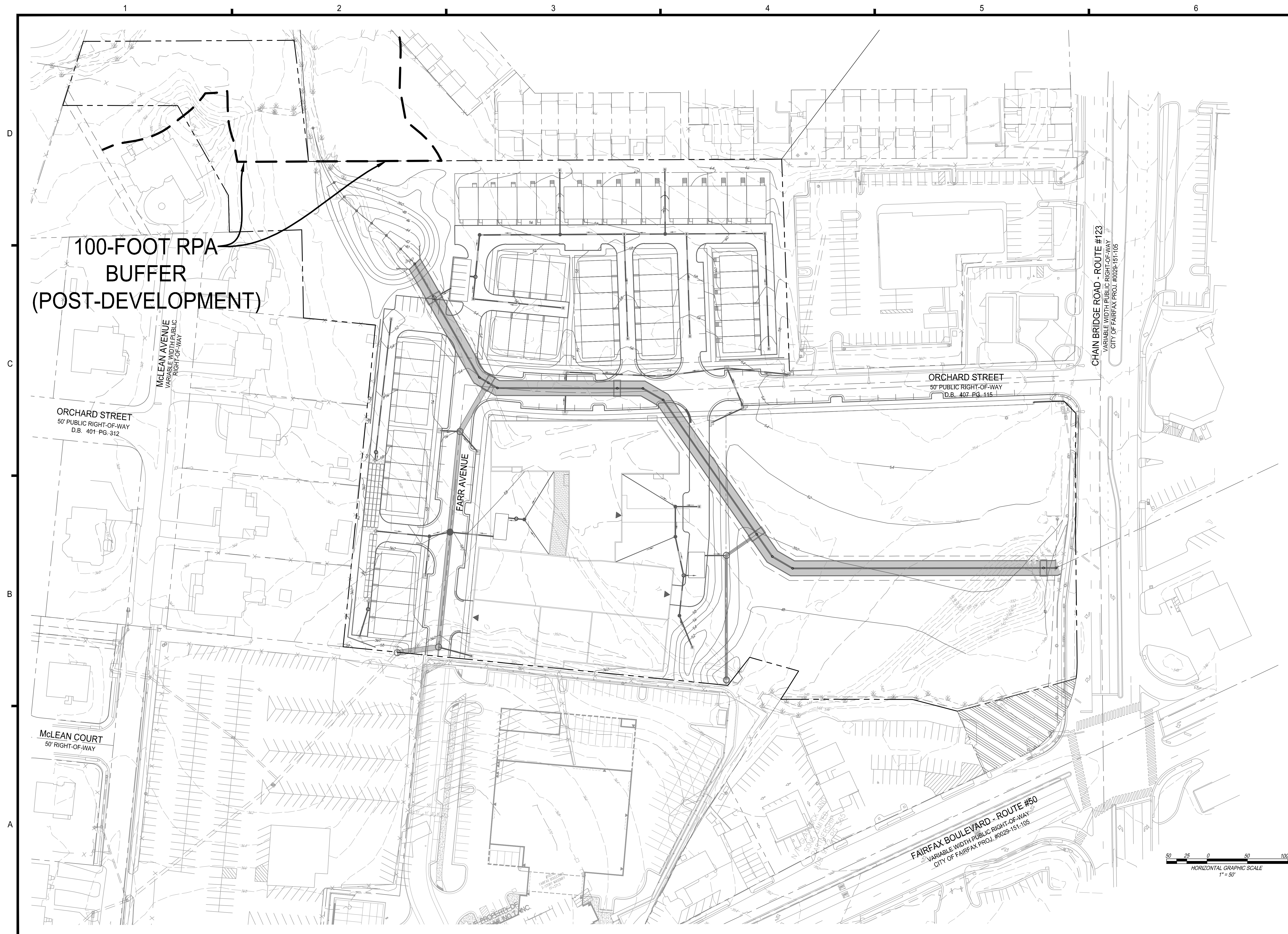
SHEET TITLE:

RPA MAP  
(POST-DEVELOPMENT)

SHEET No.

2 OF 2

SCALE: 1"=50'





# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF ENVIRONMENTAL QUALITY

### NORTHERN REGIONAL OFFICE

13901 Crown Court, Woodbridge, Virginia 22193

(703) 583-3800

[www.deq.virginia.gov](http://www.deq.virginia.gov)

Matthew J. Strickler  
Secretary of Natural Resources

David K. Paylor  
Director

Thomas A. Faha  
Regional Director

January 2, 2019

City of Fairfax City Council  
City Hall  
10455 Armstrong Street  
Fairfax, Virginia 22030

**SENT VIA EMAIL:** [Mayor&Council@fairfaxva.gov](mailto:Mayor&Council@fairfaxva.gov)

RE: Joint Permit Application Number 18-1003  
Northfax, City of Fairfax, Virginia  
Notification of Public Notice of Draft Permit

To Whom It May Concern:

The Department of Environmental Quality (DEQ) has received an application for a Virginia Water Protection (VWP) individual permit for the above-referenced project. Attached is a copy of the Public Notice for the proposed permit action for your review pursuant to Section 62.1-44.15:01 of the Code of Virginia. Notice of the proposed action will also be published in a newspaper circulated in the vicinity of the project site. The publication will establish a 30-calendar day public comment period for this proposal. If you wish to comment on this proposed action, please respond to DEQ at the above address.

If no response is received within the 30-day public comment period, DEQ will assume that you have no objections to the proposed action. If you have any questions, please contact me by phone at 703-583-3871 or by email at [Wynn.Prusaczyk@deq.virginia.gov](mailto:Wynn.Prusaczyk@deq.virginia.gov).

Respectfully,

A handwritten signature in black ink, appearing to read 'Wynn Prusaczyk'.

Wynn Prusaczyk  
VWP Permit Writer

Enclosure: Public Notice

## Public Notice – Environmental Permit

**PURPOSE OF NOTICE:** To seek public comment on a draft permit from the Department of Environmental Quality that will allow the filling of a stream for a mixed-use development in City of Fairfax, Virginia.

**PUBLIC COMMENT PERIOD:** For 30 days, starting from the day after the notice is in the newspaper: MONTH DAY, YEAR to MONTH DAY, YEAR

**PERMIT NAME:** Virginia Water Protection Permit issued by DEQ, under the authority of the State Water Control Board

**APPLICANT NAME, ADDRESS AND PERMIT NUMBER:** Northfax JV LLC; 3900 Jermantown Road, Suite 300, Fairfax, Virginia 22030; VWPP No. 18-1003

**PROJECT DESCRIPTION:** Northfax JV LLC has applied for a new permit for the Northfax development. The project is located northeast of the intersection of Chain Bridge Road (VA-123) and Fairfax Boulevard (US-50) in the City of Fairfax. The permit will allow the applicant to pipe a stream channel. The proposed activity would affect 1,646 linear feet of stream channel. The activity proposed in the permit will affect unnamed tributaries in the Accotink Creek watershed. A watershed is the land area drained by a river and its incoming streams. To compensate for the affected area, the applicant would purchase 1,675 stream credits or 4,761 Stream Condition Units from a DEQ approved mitigation bank. DEQ's preliminary decision is to issue the permit.

**HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING:** DEQ accepts comments and requests for public hearing by e-mail, hand delivery, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requestor, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. A public hearing may be held, including another comment period, if public response is significant, based on individual requests for a public hearing, and there are substantial, disputed issues relevant to the permit.

**CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION:** Wynn Prusaczyk; Northern Regional Office, 13901 Crown Court, Woodbridge, Virginia 22193; Phone: (703) 583-3871; E-mail: [Wynn.Prusaczyk@deq.virginia.gov](mailto:Wynn.Prusaczyk@deq.virginia.gov); Fax: (703) 583-3821. The public may review the draft permit and application at the DEQ office named above by appointment or may request copies of the documents from the contact person listed below.





# COMMONWEALTH of VIRGINIA

## DEPARTMENT OF ENVIRONMENTAL QUALITY

**VWP Individual Permit Number 18-1003**

**Effective Date: March 5, 2019**

**Expiration Date: March 4, 2034**

### **VIRGINIA WATER PROTECTION PERMIT ISSUED PURSUANT TO THE STATE WATER CONTROL LAW AND SECTION 401 OF THE CLEAN WATER ACT**

In compliance with § 401 of the Clean Water Act, as amended (33 USC § 1341) and the State Water Control Law and regulations adopted pursuant thereto, the board has determined that there is a reasonable assurance that this VWP permit, if complied with, will protect instream beneficial uses, will not violate applicable water quality standards, and will not cause or contribute to a significant impairment of state waters or fish and wildlife resources. In issuing this VWP permit, the board has not taken into consideration the structural stability of any proposed activities.

**Permittee:** Northfax JV LLC

**Address:** 3900 Jermantown Road, Suite 300, Fairfax, Virginia 22030

**Activity Location:** The project is located northeast of the intersection of Chain Bridge Road (VA-123) and Fairfax Boulevard (US-50) in the City of Fairfax, Virginia.

**Activity Description:** The permittee proposes to construct a mixed-use development and associated infrastructure on an approximately 10.6 acre development area known as "Northfax." Permitted activities shall be conducted as described in the Joint Permit Application dated June 22, 2018, received on June 25, 2018, and supplemental materials, revisions and clarifications received through December 11, 2018.

#### **Authorized Surface Water Impacts:**

This permit authorizes the total permanent impact of 0.50 acre (1,646 linear feet) of stream channel. Authorized surface water impacts shall be as depicted on the impacts map entitled *Stream Impact Exhibit* dated August 9, 2018, with latest revision date of August 21, 2018, and received September 12, 2018.

#### **Approved Compensation:**

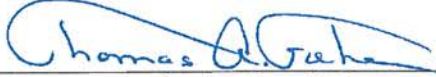
The permittee shall compensate for the authorized surface water impacts through the following:

1. Compensation for permanent stream impacts shall be provided through the purchase of 1,675 stream credits or 4,761 Stream Condition Units from a DEQ approved mitigation bank, in-lieu fee

fund, or a combination thereof that is authorized and approved by DEQ to sell credits in the area in which the impacts will occur and has credits available (as released by DEQ).

2. Mitigation bank credits shall be purchased prior to the purchase of in-lieu fee program credits in accordance with 9VAC25-210-116.C.2.
3. The credit sale shall be in accordance with the approved Mitigation Banking Instrument for the mitigation bank.

The permitted activity shall be in accordance with this Permit Cover Page, Part I - Special Conditions, and Part II - General Conditions.



Thomas A. Faha, Regional Director

March 5, 2019

Date

## **Part I – Special Conditions**

### **A. Authorized Activities**

1. This permit authorizes the total impact permanent impact of 0.50 acre (1,646 linear feet) of stream channel. Authorized surface water impacts described under this condition shall be as depicted on the impacts map entitled *Stream Impact Exhibit* dated August 9, 2018, with latest revision date of August 21, 2018, and received September 12, 2018.
2. The permittee shall conduct authorized activities as described in the Joint Permit Application dated June 22, 2018, and received June 25, 2018, and supplemental materials, revisions and clarifications received through December 11, 2018. Any changes to the authorized activities or impacts map that affect permitted areas shall be submitted to DEQ immediately upon determination that changes are necessary, and DEQ approval shall be required prior to implementing the changes.
3. The permittee shall notify the DEQ of any changes in authorized impacts to surface waters or any changes to the design or type of construction activities in surface waters authorized by this permit. DEQ approval shall be required prior to implementing the changes. Any additional impacts, modifications, or changes shall be subject to individual permit review and/or modification of this permit.

### **B. Permit Term**

1. This permit is valid for **fifteen (15) years** from the date of issuance. A new permit may be necessary for the continuance of the authorized activities, or any permit requirement that has not been completed, including compensation provisions.
2. The permittee shall notify DEQ in writing at least 120 calendar days prior to the expiration of this permit if reissuance will be requested.

### **C. Standard Project Conditions**

1. The activities authorized by this permit shall be executed in such a manner that any impacts to beneficial uses are minimized. As defined in § 62.1-10(b) of the Code, "beneficial use" means both instream and offstream uses. Instream beneficial uses include, but are not limited to, the protection of fish and wildlife habitat, maintenance of waste assimilation, recreation, navigation, and cultural and aesthetic values. The preservation of instream flows for purposes of the protection of navigation, maintenance of waste assimilation capacity, the protection of fish and wildlife resources and habitat, recreation, cultural and aesthetic values is an instream beneficial use of Virginia's waters. Offstream beneficial uses include, but are not limited to, domestic uses (including public water supply), agricultural uses, electric power generation, commercial uses, and industrial uses. Public water supply uses for human consumption shall be considered the highest priority.



2. No activity shall substantially disrupt the movement of aquatic life indigenous to the water body, including those species which normally migrate through the area, unless the primary purpose of the activity is to impound water.
3. Flows downstream of the project area shall be maintained to protect all uses.
4. No activity shall cause more than minimal adverse effect on navigation, and no activity shall block more than half of the width of the stream at any given time.
5. The activity shall not impede the passage of normal or expected high flows, and any associated structure shall withstand expected high flows.
6. Continuous flow of perennial springs shall be maintained by the installation of spring boxes, French drains, or other similar structures.
7. All excavation, dredging, or filling in surface waters shall be accomplished in a manner that minimizes bottom disturbance and turbidity.
8. All in-stream activities shall be conducted during low-flow conditions whenever practicable.
9. All construction, construction access, and demolition activities associated with this project shall be accomplished in a manner that minimizes construction materials or waste materials from entering surface waters, unless authorized by this permit. Wet, excess, or waste concrete shall be prohibited from entering surface waters.
10. All fill material placed in surface waters shall be clean and free of contaminants in toxic concentrations or amounts in accordance with all applicable laws and regulations.
11. Measures shall be employed at all times to prevent and contain spills of fuels, lubricants, or other pollutants into surface waters.
12. Machinery or heavy equipment in temporarily impacted wetlands shall be placed on mats or geotextile fabric, or other suitable means shall be implemented, to minimize soil disturbance to the maximum extent practical. Mats, fabrics, or other measures shall be removed as soon as the work is complete in the temporarily impacted wetland.
13. Stream channel restoration activities shall be conducted in the dry or during low flow conditions. When site conditions prohibit access from the streambank or upon prior authorization from the Department of Environmental Quality, heavy equipment may be authorized for use within the stream channel. The equipment shall be stationed on cobble bars.
14. Temporary disturbances to wetlands, stream channels, and/or stream banks during project construction activities shall be avoided and minimized to the maximum extent practicable.
15. All temporarily disturbed wetland areas shall be restored to preconstruction conditions within 30 calendar days of completing work in the areas, which shall include re-establishing pre-

construction contours, and planting or seeding with appropriate wetland vegetation according to cover type (emergent, scrub/shrub, or forested), except for invasive species identified on DCR's Virginia Invasive Plant Species List. The permittee shall take all appropriate measures to promote and maintain the revegetation of temporarily disturbed surface waters through the second year post-disturbance.

16. All temporarily impacted streams and stream banks shall be restored to their original elevations and contours within 30 calendar days following the construction at that stream segment, and the banks shall be seeded or planted with the same vegetative cover type originally present along the banks, including supplemental erosion control grasses if necessary but not including invasive species identified on DCR's Virginia Invasive Plant Species List.
17. All materials (including fill, construction debris, excavated materials, and woody materials, that are temporarily placed in wetlands, in stream channels, or on stream banks) shall be placed on mats or geotextile fabric, shall be immediately stabilized to prevent the material or leachate from entering surface waters, and shall be entirely removed within 30 calendar days following completion of that construction activity. After removal, disturbed areas shall be returned to original contours, shall be stabilized, and shall be restored to the original vegetated state within 30 calendar days.
18. Temporary in-stream construction features such as cofferdams shall be made of non-erodible materials.
19. Virginia Water Quality Standards shall not be violated in any surface waters as a result of the project activities.
20. All non-impacted surface waters that are within the project or right-of-way limits, and that are within fifty feet of any project activities, shall be clearly flagged or demarcated for the life of the construction activity within that area. The permittee shall notify all contractors and subcontractors that *no activities are to occur in these marked areas*.
21. All required notifications and submittals shall include project name and permit number and be submitted electronically to [vwp.nro@deq.virginia.gov](mailto:vwp.nro@deq.virginia.gov) or mailed to the DEQ office stated below, to the attention of the VWP permit manager, unless directed in writing by DEQ subsequent to the issuance of this permit: Department of Environmental Quality- Northern Regional Office, 13901 Crown Court, Woodbridge, Virginia 22193.
22. All reports required by this permit and other information requested by DEQ shall be signed by the permittee or a person acting in the permittee's behalf, with the authority to bind the permittee. A person is a duly authorized representative only if *both* criteria below are met. If a representative authorization is no longer valid because of a change in responsibility for the overall operation of the facility, a new authorization shall be immediately submitted to DEQ.
  - a. The authorization is made in writing by the permittee.

- b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, superintendent, or position of equivalent responsibility. A duly authorized representative may thus be either a named individual or any individual occupying a named position.

23. All submittals shall contain the following signed certification statement:

*"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."*

24. Any fish kills or spills of fuels or oils shall be reported to DEQ immediately upon discovery at (703) 583-3800. If DEQ cannot be reached, the spill shall be reported to the Virginia Department of Emergency Management (DEM) at 1-800-468-8892 or the National Response Center (NRC) at 1-800-424-8802.
25. DEQ shall be notified in writing within 24 hours or as soon as possible on the next business day when potential environmentally threatening conditions are encountered which require debris removal or involve potentially toxic substances. Measures to remove the obstruction, material, or toxic substance or to change the location of any structure are prohibited until approved by DEQ.

#### **D. Stream Modifications, Including Intake/Outfall Structures**

1. Redistribution of existing stream substrate for erosion control purposes is prohibited.
2. Material removed from the stream bottom shall not be deposited into surface waters unless otherwise authorized in this permit.
3. Riprap apron for all outfalls shall be designed in accordance with Virginia Erosion and Sediment Control Handbook, Third Edition, 1992, or the most recent version in effect at the time of construction.
4. For streambank protection activities, structures and backfill shall be placed as close to the streambank as practical, while still avoiding and minimizing impacts to surface waters to the maximum extent practical. No material shall be placed in excess of the minimum necessary for erosion protection.
5. Asphalt and materials containing asphalt or other toxic substances shall not be used in the construction of submerged sills, breakwaters, dams, or weirs.



**E. Installation of Utilities**

1. All utility line work in surface waters shall be performed in a manner that minimizes disturbance in each area. Temporarily disturbed surface waters shall be restored in accordance with Part I.C.15, C.16, and C.17, unless otherwise authorized by this permit.
2. Material resulting from trench excavation may be temporarily sidecast into wetlands not to exceed a total of 90 calendar days, provided the material is not placed in a manner such that it is dispersed by currents or other forces.
3. The trench for a utility line cannot be constructed in a manner that drains wetlands (e.g., backfilling with extensive gravel layers creating a French drain effect).

**F. Road Crossings**

1. Access roads authorized by this permit shall be constructed to minimize the adverse effects on surface waters to the maximum extent practicable and to follow as near as possible pre-construction contours and elevations.
2. Installation of pipes and road crossings shall occur in the dry via the implementation of cofferdams, sheetpiling, stream diversions or other similar structures.
3. All surface waters temporarily affected by a road crossing shall be restored to their original elevations immediately following the removal of that particular temporary crossing. Temporary access roads shall be removed entirely following activity completion.
4. At crossings of streams, pipes and culverts must be installed to maintain low flow conditions and shall be countersunk at both inlet and outlet ends of the pipe or culvert, unless otherwise specifically approved by the Department of Environmental Quality on a case-by-case basis, and as follows: The requirement to countersink does not apply to extensions or maintenance of existing pipes and culverts that are not countersunk, floodplain pipes and culverts being placed above ordinary high water, pipes and culverts being placed on bedrock, or pipes and culverts required to be placed on slopes 5.0% or greater. Bedrock encountered during construction must be identified and approved in advance of a design change where the countersunk condition cannot be met. Pipes and culverts 24 inches or less in diameter shall be countersunk three inches below the natural stream bed elevations, and pipes and culverts greater than 24 inches shall be countersunk at least six inches below the natural stream bed elevations. Hydraulic capacity shall be determined based on the reduced capacity due to the countersunk position. In all stream crossings appropriate measures shall be implemented to minimize any disruption of aquatic life movement.
5. Stream bottom elevations at road crossings shall be measured at the inlet and outlet of the proposed structure and recorded prior to construction and within one week after the completion of construction to ensure that the design elevations were met. This information shall be recorded on the *Monthly VWP Permit Inspection Checklist (Attachment 2)* completed after the crossing is installed.

### G. Stormwater Management Structures

1. The outfall and overflow structure shall be constructed and maintained to prevent downstream sediment deposition, erosion, or scour that may be associated with normal flow and any expected storm flows. Construction shall include the use of an appropriately sized riprap outlet protection apron at the outfall site.
2. Draining of a stormwater management facility shall be performed by a method that prevents downstream sediment deposition, erosion, or scour.

### H. Project Construction Monitoring and Submittals (Impact Sites)

1. The permittee shall submit written notification at least **ten (10) calendar days** prior to the initiation of land disturbance or construction activities in permitted areas. The notification shall include a projected schedule for initiating and completing work at each permitted impact area.
2. Site inspections shall be conducted **once every calendar month** and recorded on the *Monthly VWP Permit Inspection Checklist (Attachment 2)* by the permittee or the permittee's qualified designee during active construction within authorized surface water impact areas. Monthly inspections shall be conducted in the following areas: all authorized permanent and temporary impact areas; all avoided surface waters, including wetlands, stream channels, and open water; surface water areas within 50 feet of any land disturbing activity; and all on-site areas designated for permanent preservation. The *Monthly VWP Permit Inspection Checklist (Attachment 2)* shall be completed in its entirety for each monthly inspection and shall be kept on-site and made available for review by DEQ staff upon request during normal business hours.
3. The *VWP Permit Construction Status Update Form (Attachment 1)* enclosed with this permit shall be completed in June and December of every year for the duration of this permit. The *VWP Permit Construction Status Update Form (Attachment 1)* shall include reference to the VWP permit authorization number and one of the following statements for each authorized surface water impact location:
  - a. Construction activities not yet started;
  - b. Construction activities started;
  - c. Construction activities started but are currently inactive, or;
  - d. Construction activities complete.
4. The *VWP Permit Construction Status Update Form (Attachment 2)* shall be submitted and must be received by DEQ no later than January 10 and July 10 of every year.
5. The permittee shall notify DEQ within 24 hours of discovering impacts to surface waters including wetlands, stream channels, and open water that are not authorized by this permit. The

notification shall include photographs, estimated acreage and/or linear footage of impacts, and a description of the impacts.

6. The permittee shall submit written notification of completion within 30 calendar days after the completion of all activities in all permitted impact areas authorized under this permit.

#### **I. Compensatory Mitigation**

1. The permittee shall compensate for permanent stream impacts through the purchase of 1,675 stream credits or 4,761 Stream Condition Units (SCUs) from a DEQ approved mitigation bank, in-lieu fee fund, or a combination thereof that is authorized and approved by DEQ to sell credits in the area in which the impacts will occur and has credits available (as released by DEQ). Mitigation bank credits shall be purchased prior to the purchase of in-lieu fee program credits in accordance with 9VAC25-210-116.C.2. The credit sale shall be in accordance with the approved Mitigation Banking Instrument for the mitigation bank.
2. The permittee shall submit documentation to DEQ prior to initiating work in permitted impact areas that 1,675 stream credits or 4,761 SCUs were acquired and debited from the ledger of a DEQ approved mitigation bank, in-lieu fee fund, or a combination thereof to satisfy the requirement of Part I.I.1.



## **Part II – General Conditions**

### **A. Duty to Comply**

The permittee shall comply with all conditions and limitations of the VWP permit. Nothing in this chapter shall be construed to relieve the permittee of the duty to comply with all applicable federal and state statutes, regulations, toxic standards, and prohibitions. Any VWP permit violation or noncompliance is a violation of the Clean Water Act and State Water Control Law and is grounds for enforcement action, VWP permit termination, VWP permit revocation, VWP permit modification, or denial of an application for a VWP permit extension or reissuance.

Nothing in this VWP permit shall be construed to relieve the permittee from civil and criminal penalties for noncompliance.

### **B. Duty to Cease or Confine Activity**

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the activity for which a VWP permit has been granted in order to maintain compliance with the conditions of the VWP permit.

### **C. Duty to Mitigate**

The permittee shall take all reasonable steps to minimize or prevent any impacts in violation of the VWP permit that may have a reasonable likelihood of adversely affecting human health or the environment.

### **D. VWP Permit Actions**

A VWP permit may be modified in whole or in part, revoked and reissued, extended, transferred, or terminated in accordance with 9 VAC 25-210-180.

1. During the drafting and authorization of a permit modification, only those conditions to be modified shall be addressed with preparing a draft modified permit. VWP permit terms and conditions of the existing permit shall remain in full force and effect during the modification of the permit.
2. This VWP permit may be modified upon the request of the permittee or upon board initiative when any of the following developments occur:
  - a. When new information becomes available about the project or activity covered by the VWP permit, including project additions or alterations, that was not available at VWP permit issuance and would have justified the application of different VWP permit conditions at the time of VWP permit issuance;

- b. When a change is made in the promulgated standards or regulations on which the VWP permit was based;
  - c. When changes occur that are subject to "reopener clauses" in the VWP permit; or
  - d. When developments applicable to surface water withdrawals as specified in 9VAC25-210-380 occur.
3. When this VWP permit authorizes surface water withdrawals, it may be modified when any of the following developments occur:
- a. When the board determines that minimum instream flow levels resulting directly from the permittee's withdrawal of surface water are detrimental to the instream beneficial use, existing at the time of permit issuance, and the withdrawal of surface water should be subject to further net limitations or when an area is declared a surface water management area pursuant to §§ 62.1-242 through 62.1-253 of the Code of Virginia, during the term of the VWP permit.
  - b. Significant changes to the location of the surface water withdrawal system are proposed such that the Department of Environmental Quality determines a new review is warranted due to the potential effect of the surface water withdrawal to existing beneficial uses of the new location.
  - c. Changes to the permitted project or the surface water withdrawal, including increasing the storage capacity for the surface water withdrawal, that propose an increase in the maximum permitted withdrawal volumes or rate of withdrawal or that cause more than a minimal change to the instream flow requirements with potential to result in a detrimental effect to existing beneficial uses.
  - d. A revision to the purpose of the surface water withdrawal that proposes to include a new use or uses that were not identified in the permit application or a modification of the existing authorized use or uses such that the use description in the permit application and permit is no longer applicable. Examples of uses include, but are not limited to agricultural irrigation, golf course irrigation, public water supply, manufacturing, and electricity generation.
4. When the permittee has submitted a timely and complete application for reissuance of an existing VWP individual permit, but through no fault of the permittee, the board does not reissue or reissue with conditions a VWP individual permit or the board does not provide notice of its tentative decision to deny the application before an existing VWP individual permit expires, the conditions of the expiring VWP individual permit shall be administratively continued in full force and effect until the effective date of a reissued permit or the date on which the board denies the application. Timely application shall be a minimum of 180 days for an individual permit or a minimum of 270 days for an individual permit for a surface water withdrawal, unless otherwise specified in the existing permit.
5. Any permittee desiring to continue a previously permitted activity after the expiration date of this VWP permit shall apply for and obtain a new permit or, if applicable, shall request an extension in

accordance with 9VAC25-210-180. Any permittee with an effective VWP permit for an activity that is expected to continue after the expiration date of the VWP permit, without any change in the activity authorized by the VWP permit other than as may be allowed under 9VAC25-210-180, shall submit written notification requesting an extension. The permittee must file the request 90 days prior to the expiration date of the VWP permit. VWP permit modifications shall not be used to extend the term of a VWP permit beyond 15 years from the date of original issuance. When a permit term, other than that of an Emergency Virginia Water Protection Permit, is less than 15 years, an extension of the permit terms and conditions may be granted in accordance with 9VAC25-210-180. Emergency Virginia Water Protection Permits shall not exceed a duration of one year or shall expire upon the issuance of a regular Virginia Water Protection Permit, whichever comes first.

6. This VWP permit may be transferred to a new permittee only by modification to reflect the transfer, by revoking and reissuing the permit, or by automatic transfer. Automatic transfer to a new permittee shall occur if the current permittee: a) Notifies the board of the proposed transfer of the permit and provides a written agreement between the current and proposed permittees containing the date of transfer of VWP permit responsibility, authorization, and liability to the new permittee; and b) the board does not within 15 days notify the existing permittee of its intent to modify the VWP permit.
7. After notice and opportunity for a formal hearing pursuant to § 62.1-44.15:02 of the Code of Virginia, a VWP permit can be terminated for cause. Reasons for termination for cause are as follows:
  - a. Noncompliance by the permittee with any condition of the VWP permit;
  - b. The permittee's failure in the application or during the VWP permit process to disclose fully all relevant facts or the permittee's misrepresentation of any relevant facts at any time;
  - c. The permittee's violation of a special or judicial order;
  - d. A determination by the board that the permitted activity endangers human health or the environment and can be regulated to acceptable levels by VWP permit modification or termination;
  - e. A change in any condition that requires either a temporary or permanent reduction or elimination of any activity controlled by the VWP permit; and
  - f. A determination that the permitted activity has ceased and that the compensation for unavoidable adverse impacts has been successfully completed.
8. The board may terminate this permit without cause when the permittee is no longer a legal entity due to death, dissolution, or when a company is no longer authorized to conduct business in the Commonwealth. The termination shall be effective 30 days after notice of the proposed



termination is sent to the last known address of the permittee or registered agent, unless the permittee objects within that time. If the permittee does object during that period, the board shall follow the applicable procedures for termination under § 62.1-44.15:25 of the Code of Virginia and 9VAC25-230.

9. This VWP permit may be terminated by consent, as initiated by the permittee. The permittee shall submit a request for termination by consent within 30 days of completing or canceling all permitted activities and all required compensatory mitigation requirements. When submitted for project completion, the request for termination by consent shall constitute a notice of project completion. The director may accept this termination on behalf of the board. The permittee shall submit the following information:
  - a. Name, mailing address, and telephone number;
  - b. Name and location of the activity;
  - c. The VWP permit number; and
  - d. One of the following certifications:
    - i. For project completion: "I certify under penalty of law that all activities and any required compensatory mitigation authorized by a VWP permit have been completed. I understand that by submitting this notice of termination that I am no longer authorized to perform activities in surface waters in accordance with the VWP permit, and that performing activities in surface waters is unlawful where the activity is not authorized by a VWP permit, unless otherwise excluded from obtaining a permit. I also understand that the submittal of this notice does not release me from liability for any violations of this VWP permit."
    - ii. For project cancellation: "I certify under penalty of law that the activities and any required compensatory mitigation authorized by this VWP permit will not occur. I understand that by submitting this notice of termination that I am no longer authorized to perform activities in surface waters in accordance with the VWP permit, and that performing activities in surface waters is unlawful where the activity is not authorized by a VWP permit, unless otherwise excluded from obtaining a permit. I also understand that the submittal of this notice does not release me from liability for any violations of this VWP permit, nor does it allow me to resume the permitted activities without reapplication and issuance of another permit."
    - iii. For events beyond permittee control, the permittee shall provide a detailed explanation of the events, to be approved by DEQ, and the following certification statement: "I certify under penalty of law that the activities or the required compensatory mitigation authorized by this VWP permit have changed as the result of events beyond my control (see attached). I understand that by submitting this notice of termination that I am no longer authorized to perform activities in surface waters in accordance with the VWP permit, and that

performing activities in surface waters is unlawful where the activity is not authorized by a VWP permit, unless otherwise excluded from obtaining a permit. I also understand that the submittal of this notice does not release me from liability for any violations of this VWP permit, nor does it allow me to resume the permitted activities without reapplication and issuance of another permit.

#### **E. Inspection and Entry**

Upon presentation of credentials, the permittee shall allow the board or any duly authorized agent of the board, at reasonable times and under reasonable circumstances, to conduct the actions listed in this section. For the purpose of this section, the time for inspection shall be deemed reasonable during regular business hours. Nothing contained herein shall make an inspection time unreasonable during an emergency.

1. Enter upon any permittee's property, public or private, and have access to, inspect and copy any records that must be kept as part of the VWP permit conditions;
2. Inspect any facilities, operations or practices (including monitoring and control equipment) regulated or required under the VWP permit; and
3. Sample or monitor any substance, parameter, or activity for the purpose of ensuring compliance with the conditions of the VWP permit or as otherwise authorized by law.

#### **F. Duty to Provide Information**

The board may request (i) such plans, specifications, and other pertinent information as may be necessary to determine the effect of an applicant's discharge on the quality of state waters or (ii) such other information as may be necessary to accomplish the purposes of this chapter. Any owner, permittee, or person applying for a VWP permit or general permit coverage shall provide the information requested by the board.

#### **G. Monitoring and Records Requirements**

1. Monitoring of parameters, other than pollutants, shall be conducted according to approved analytical methods as specified in the VWP permit. Analysis of pollutants will be conducted according to 40 CFR Part 136 (2000), Guidelines Establishing Test Procedures for the Analysis of Pollutants.
2. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
3. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart or electronic recordings for continuous monitoring instrumentation, copies of all reports required by the VWP permit, and records of all data used to

complete the application for the VWP permit, for a period of at least three years from the date of permit expiration. This period may be extended by request of the board at any time.

4. Records of monitoring information shall include:

- a. The date, exact place and time of sampling or measurements;
- b. The name of the individuals who performed the sampling or measurements;
- c. The date and time the analyses were performed;
- d. The name of the individuals who performed the analyses;
- e. The analytical techniques or methods supporting the information such as observations, readings, calculations and bench data used;
- f. The results of such analyses; and
- g. Chain of custody documentation.

**H. Property rights**

The issuance of a VWP permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize injury to private property or any invasion of personal rights or any infringement of federal, state or local laws or regulations.

**I. Reopener**

This VWP permit may be reopened for the purpose of modifying the conditions of the VWP permit to meet new regulatory standards duly adopted by the board. Cause for reopening VWP permits includes, but is not limited to when the circumstances on which the previous VWP permit was based have materially and substantially changed, or special studies conducted by the board or the permittee show material and substantial change, since the time the VWP permit was issued and thereby constitute cause for VWP permit modification or revocation and reissuance.

**J. Compliance with State and Federal Law**

As to the permitted activity(ies), compliance with a VWP permit constitutes compliance with the VWP permit requirements of the Law and regulations. .

**K. Severability**

The provisions of this VWP permit are severable.



**L. Oil and Hazardous Substance Liability**

Nothing in this VWP permit shall be construed to preclude the institution of legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under § 311 of the Clean Water Act or §§ 62.1-44.34:14 through 62.1-44.34:23 of the State Water Control Law.

**M. Unauthorized Discharge of Pollutants**

Except in compliance with a VWP permit, unless the activity is otherwise exempted or excluded, no person shall dredge, fill, or discharge any pollutant into, or adjacent to surface waters; withdraw surface water; otherwise alter the physical, chemical, or biological properties of state waters regulated under this chapter and make them detrimental to the public health, to animal or aquatic life, or to the uses of such waters for domestic or industrial consumption, for recreation, or for other uses; excavate in wetlands; or on or after October 1, 2001, conduct the following activities in a wetland:

1. New activities to cause draining that significantly alters or degrades existing wetland acreage or functions;
2. Filling or dumping;
3. Permanent flooding or impounding; or
4. New activities that cause significant alteration or degradation of existing wetland acreage or functions.



# Attachment 1: VWP PERMIT CONSTRUCTION STATUS UPDATE FORM

Attached to VWP Individual Permit Number 18-1003

Permit Issuance March 5, 2019

Date (check one):

☐ June \_\_\_\_, \_\_\_\_

☐ December \_\_\_\_, \_\_\_\_

VWP Individual Permit Number: 18-1003

Project Name and Location: Northfax, City of Fairfax

Status within each authorized surface water impact location, as identified on *Stream Impact Exhibit*, dated August 9, 2018, with latest revision date of August 21, 2018, and received September 12, 2018: (check one of the following status options for each impact number/location. Attach additional sheet(s) if needed.)

Authorized impact number	Construction activities not started	Construction activities started	Construction activities started but currently not active	Does this impact involve culvert(s) <sup>1</sup> ?	Construction activities complete <sup>2</sup>
A1					
B1					
A2					
C1					

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violation.

Authorized Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

Phone: \_\_\_\_\_

Date: \_\_\_\_\_ Email: \_\_\_\_\_

<sup>1</sup> Provide spot elevations of the stream bottom within the thalweg at the beginning and end of the pipe or culvert, extending to a minimum of 10 feet beyond the limits of the impact, with completion of all culvert installations.

<sup>2</sup> If all construction activities and compensatory mitigation requirements are complete, the permittee completes and signs the Termination Agreement section below within 30 days of last authorized activity and/or compensation completion. A completed and signed Agreement serves as Notice of Project Completion (9VAC25-210-130 F).

TERMINATION AGREEMENT BY CONSENT – PROJECT COMPLETION

Permittee Name: \_\_\_\_\_

Permittee Mailing Address: \_\_\_\_\_

Permittee Phone: \_\_\_\_\_

I hereby consent to the termination of coverage for VWP Individual Permit Number 18-1003.

"I certify under penalty of law that all activities and any required compensatory mitigation authorized by a VWP permit have been completed. I understand that by submitting this notice of termination that I am no longer authorized to perform activities in surface waters in accordance with the VWP permit, and that performing activities in surface waters is unlawful where the activity is not authorized by a VWP permit, unless otherwise excluded from obtaining a permit. I also understand that the submittal of this notice does not release me from liability for any violations of this VWP permit."

Permittee Signature: \_\_\_\_\_





## Attachment 2: MONTHLY VWP PERMIT INSPECTION CHECKLIST

An inspection of all permitted impact areas, avoided waters and wetlands, and permanently preserved waters, wetlands and upland areas must be conducted at least once every month during active construction activities. Maintain this record on-site and available for inspection by DEQ staff.

<b>Project Name</b>	Northfax		<b>VWP Permit #</b>	18-1003	<b>Inspection Date</b>	
<b>Inspector Name &amp; Affiliation</b>			<b>Phone # &amp; Email Address</b>			
Based on reading of VWP permit No. 18-1003 including authorized impacts map entitled "Stream Impact Exhibit" dated August 9, 2018, with latest revision date of August 21, 2018, and received September 12, 2018, and my inspection on the date referenced above, to the best of my knowledge this project ( ___ is in compliance / ___ is not in compliance) with the VWP Permit.						
I certify that the information contained in this report is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.						
Signature of Inspector			Date			
<b>REVIEWED DURING SITE INSPECTION</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>	<b>Notes &amp; Corrective Action Taken / Date Completed (use back of page if necessary)</b>		
Unauthorized impacts to surface waters, including wetlands, or upland preservation areas <b>have occurred</b> . <sup>*</sup> (This includes sedimentation impacts due to inadequate or failed erosion controls.)	<input type="checkbox"/>	<input type="checkbox"/>				
Non-impacted wetlands, streams and preservation areas within 50 feet of construction are clearly marked to prevent unpermitted impacts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Temporary impacts are being restored to original contours, stabilized, and allowed to re-establish with wetland vegetation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Construction activities are <b>not</b> substantially disrupting aquatic life movement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
E&S controls are present, properly maintained, and functioning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
In-stream work is being performed in the dry with the appropriate use of cofferdams, sheetpiling, etc., to minimize stream bottom disturbance and turbidity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Pipes and/or culverts for road crossings are countersunk to provide for the re-establishment of low flow fish passage and/or a natural stream bottom, unless otherwise authorized.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Time-of-year restrictions regarding impacts to surface waters are being adhered to.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Water quality monitoring is being conducted during stream impacts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Streams and wetlands are free from any sheen or discoloration that may indicate a spill of oil, lubricants, concrete or other pollutants. <sup>**</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Heavy equipment is placed on mats or geotextile fabric when working in wetlands.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Exposed slopes/stream banks are stabilized immediately upon completion of work in each impact area.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			

<sup>\*</sup> If unauthorized impacts have occurred, you **must** email or fax a copy of this report to DEQ within 24 hours of discovery. Email: vwp.nro@deq.virginia.gov Fax: 703-583-3821

<sup>\*\*</sup> Any fish kills, or spills of fuels or oils must be reported to DEQ **immediately upon discovery** at 703-583-3864. If DEQ cannot be reached, the spill or fish kill shall be reported to the Virginia Department of Emergency Management (VDEM) at 1-800-468-8892 or the National Response Center (NRC) at 1-800-424-8802. Any spill of oil as defined in § 62.1-44.34:14 of the Code of Virginia that is less than 25 gallons and that reaches, or that is expected to reach, land only is not reportable, if recorded per § 62.1-44.34:19.2 of the Code of Virginia and if properly cleaned up.

Notes

March 5, 2019

**FACT SHEET**

Virginia Water Protection Individual Permit No. 18-1003

Northfax, City of Fairfax

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DEQ has reviewed the application for the Virginia Water Protection (VWP) Individual Permit Number 18-1003 and has determined that the project qualifies for an individual permit.

The following details the application review process and summarizes relevant information for developing the Part I - Special Conditions for permit issuance.

**1. Contact Information:**

**Permittee Legal Name and Address:**

Northfax JV LLC  
3900 Jermantown Road, Suite 300  
Fairfax, Virginia 22030  
Mr. John E. Napolitano, Manager  
703-934-4600

**Agent Legal Name and Address:**

Apex Companies, LLC c/o  
9700 Capital Court, Suite 100  
Manassas, Virginia 20110  
Mr. Jason Franti  
703-396-6730



**2. Processing Dates:**

Received Application:	June 25, 2018
Received VMRC Number:	June 25, 2018
Application Complete:	September 12, 2018
Permit Fee Deposited by Accounting:	August 27, 2018
Application Suspended:	September 26, 2018
Application Reinstated:	December 11, 2018
Processing Deadline (120 days from Complete Application):	March 27, 2019
1 <sup>st</sup> Request for Additional Information Sent:	July 3, 2018
Final Request for Additional Information Received:	September 12, 2018
Section 106 SPGP Coordination Initiated:	August 13, 2018
Section 7 SPGP Coordination Initiated:	August 13, 2018
Request for comments sent to USACE, USEPA and USFWS:	August 13, 2018
Completion of SPGP coordination:	October 31, 2018
Notification of JPA sent to Local Government(s):	June 28, 2018
Commissioner of Revenue Contacted:	N/A
Request for comments sent to VDH, VDGIF, VDCR, VMRC:	June 28, 2018
Letters sent to Riparian Land Owners:	July 11, 2018
Draft Permit Package Issued:	January 2, 2019
Copy of Public Notice sent to DEQ Central Office:	January 2, 2019
Copy of Public Notice sent to Local Gov't and Planning District:	January 2, 2019
Application Suspended Pending Public Notice:	January 17, 2019
Public Notice Published:	January 18, 2019
Application Reinstated:	January 18, 2019
End of 30-Day Public Comment Period:	February 18, 2019
Received Verification of Publication:	January 22, 2019
Permit Issued:	March 5, 2019

**3. Project Location:**

The project site is located northeast of the intersection of Chain Bridge Road (VA-123) and Fairfax Boulevard (US-50) in the City of Fairfax, Virginia.

City/County:	City of Fairfax
Waterbody:	Accotink Creek, UT
Basin:	Potomac
Subbasin:	Middle Potomac
Section:	7
Class:	III
Special Standards:	b
HUC:	02070010
Latitude & Longitude:	38.859417, -77.309689
U.S.G.S. Quadrangle:	Fairfax
State Watershed No.:	VAN-A15R

#### **4. Project Description:**

The permittee proposes to construct a mixed-use development with associated infrastructure, on an approximately 10.6 acre development site, known as “Northfax.”

#### **5. Avoidance and Minimization Efforts:**

Avoidance and minimization efforts have been documented by the applicant in the JPA as well as subsequent submittals. The purpose and need of the project is a mixed-use development. However, the purpose and need cannot be met without flood control. A perennial stream channel bisects the property and the development site has been known historically to flood. Complete and partial avoidance was considered by the applicant, however due to the flood conditions and the location of surface waters onsite, completely avoiding or partially piping the channel would result in minimizing the developable area to around fifty-percent of the original design with flooding concerns further minimizing the developable area.

Complete avoidance was considered and deemed infeasible to meet the projects purpose and need as it would reduce the developable land to 4.40 acres thus reducing the Annualized Cost on Return (IRR) to well below the target. In addition, the flood elevations would still render approximately fifty-percent of the developable land area in an unusable condition due to the presence of RPA and flood zones. A historic trolley bridge is located just off-site over the intermittent channel, downstream of the confluence of the two channels, which causes back watering due to its limiting size. Discharge at the confluence of the stream channels during the 100-year storm creates a significant back-water situation thus further limiting developable area due to flood concerns.

A partial stream piping scenario was also considered, in which approximately 500 linear feet of stream channel would be piped leaving most of the perennial stream and all the intermittent stream intact. In this scenario Orchard Road would be still constructed in order to access the western portion of the property. As the stream channel bisects the 10.6 acre development site, the use of Orchard Road would necessitate significant alteration to the flood zones through the installation of a culverted road crossing, thus constricting flood flows and increasing flooding to the northern portion of the property. The back-water flooding associated with the historic trolley bridge would still be a limiting factor for developable land. Flood elevations will allow development of approximately fifty-percent of the total developable area rendering the IRR for the alternative well below the target, thus this alternative was deemed infeasible to meet the projects purpose and need.

For additional information, see page 4-5 of the JPA dated June 22, 2018, the additional information response dated August 10, 2018, and the response to EPA comments dated October 16, 2018.

Based upon staff review, the applicant has demonstrated that the proposed plan represents the least environmentally damaging and practicable alternative and all unavoidable permanent impacts will be adequately mitigated through the proposed compensation plan.

## **6. Project Impacts:**

This permit authorizes the total permanent impact to 0.50 acre (1,646 linear feet) of stream channel. Authorized surface water impacts shall be as depicted on the impacts map entitled Stream Impact Exhibit dated August 9, 2018, with latest revision date of August 21, 2018, and received September 12, 2018.

## **7. Compensation for Unavoidable Impacts:**

The permittee shall compensate for permanent stream impacts through the purchase of 1,675 stream credits or 4,761 Stream Condition Units from a DEQ approved mitigation bank, in-lieu fee fund, or a combination thereof that is authorized and approved by DEQ to sell credits in the area in which the impacts will occur and has credits available (as released by DEQ). The credit sale shall be in accordance with the approved Mitigation Banking Instrument for the mitigation bank. Purchase of required mitigation credits shall occur first through the purchase of available released credits followed by the purchase of advance credits.

The compensation package conforms with the preference hierarchy of the 2008 Compensatory Mitigation Rule issued by the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers (USACE) and DEQ's Guidance Memorandum No. 09-2004 (Applying Compensatory Mitigation Preferences Provided in the EPA Mitigation Rule to Virginia Water Protection Permitting).

## **8. Site Inspection:**

A site visit was conducted on July 23, 2018. The site visit confirmed the site description provided in the applications materials accurately characterized the surface waters on the site. A summary of the site inspection is located in VWP Permit File No. 18-1003.

## **9. Relevant Regulatory Agency Comments:**

As part of the application review process, DEQ contacted the appropriate state regulatory agencies and coordinated with various federal regulatory agencies, including the U.S. Army Corps of Engineers (USACE). No comments received required a change to VWP individual permit Part I - Special Conditions. Therefore, the staff anticipates no adverse effect on water quality and fish and wildlife resources provided the applicant adheres to the permit conditions.

### **a. Summary of State Agency Comments and Actions**

By email/letter dated June 28, 2018, comments were requested from the following state agencies: Virginia Department of Game and Inland Fisheries (DGIF), Virginia Department of Conservation and Recreation (DCR), Virginia Marine Resources Commission (VMRC), and



Virginia Department of Health (VDH). Failure to provide comments within 45 calendar days of the DEQ request for comments infers that the agency has no comments on the project activities.

#### DCR

DCR provided the following comments in a memorandum dated and transmitted by email on August 10, 2018:

- Recommends the implementation of the following USFWS voluntary measures for the conservation of the Rusty patched bumble bee (*Bombus affinis*): avoid pesticide use, avoid herbicide use, and plant native flowers that bloom throughout the spring and summer to support pollinator habitat.

*The measures will not be included in the permit as they are listed as voluntary.*

#### DGIF

DGIF provided comments to DEQ by email dated August 10, 2018.

- Recommended conducting any in-stream activities during low or no-flow conditions, using non-erodible cofferdams or turbidity curtains to isolate the construction area, blocking no more than 50% of the streamflow at any given time, stockpiling excavated material in a manner that prevents reentry into the stream, restoring original streambed and streambank contours, revegetating barren areas with native vegetation, and implementing strict erosion and sediment control measures.

*The special conditions of the permit address these activities.*

- Recommend coordination with DCR's Department of Natural Heritage as the project is located within 2 miles of a documented occurrence of a state or federal threatened or endangered plant or insect species and/or other Natural Heritage coordination species.

*Staff requested comments from DCR on the proposed project on June 28, 2018.*

- Recommend that the permittee avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable to minimize overall impacts to wildlife and our natural resources. DGIF also recommended maintaining undisturbed naturally vegetated buffers of at least 100 feet in width around all on-site wetlands and on both sides of all perennial and intermittent streams.

*Staff reviewed the proposed impacts to surface waters and determined those proposed have been minimized to the maximum extent practicable.*

- Recommended that the stormwater controls for this project be designed to replicate and maintain the hydrographic condition of the site prior to the change in landscape.

*Oversight of stormwater management and erosion and sediment control measures is the responsibility of DEQ-Stormwater Management or the locality, if such responsibility has*

*been delegated. Any such requirements will be implemented under the oversight of that program.*

- Recommended that all tree removal and ground clearing adhere to a time of year restriction protective of resident and migratory songbird nesting from March 15 through August 15 of any year.

*This time of year restriction was not included in the permit as it's not associated with a threatened or endangered species. The recommendation was forwarded to the permittee for their consideration.*

- Recommended adherence to erosion and sediment controls during ground disturbance.

*Oversight of stormwater management and erosion and sediment control measures is the responsibility of DEQ-Stormwater Management or the locality, if such responsibility has been delegated. Any such requirements will be implemented under the oversight of that program.*

#### VDH

VDH provided comments in a memorandum dated July 12, 2018, and received on July 16, 2018, that no public raw water intakes were found, in the commonwealth, downstream from the proposed construction site.

#### VMRC

VMRC provided comments in a letter dated and transmitted by email on August 7, 2018, stating that the project is not within the purview of the agency and the Commission has no objection to DEQ's issuance of a VWP individual permit. A "No Permit Necessary" letter was issued on June 6, 2018.

#### b. Summary of Federal Agency Comments and Actions

The project is being reviewed by DEQ for a State Programmatic General Permit (SPGP). By letter dated July 13, 2018, comments were requested from the following federal agencies: Environmental Protection Agency (EPA), U.S. Army Corps of Engineers (USACE), and U.S. Fish and Wildlife (FWS).

#### Section 106

USACE provided comments to DEQ by email transmitted October 30, 2018 stating the Department of Historic Resources concurs with the Corps' determination that there will be "No Historic Properties Affected" by the proposed project.

#### Section 7

FWS responded to the request for Section 7 comments by email transmitted on August 14, 2018 requesting a Self-Certification Letter. DEQ responded on August 24, 2018, with the Self-Certification Letter. No response was received within 30 days of the latest transmittal.

Federal Review

EPA responded to the request for Federal Review by email transmitted on August 28, 2018, requesting more information on avoidance and minimization. The applicant responded to the comments, and the response was forwarded to EPA on October 16, 2018. No response was received within 15 days of the latest transmittal. No project comments were received from FWS or USACE.

**10. Riparian Landowner Notification:**

Staff notified riparian landowners located adjacent to the impact area by letter dated July 11, 2018. The impacted stream channel is piped starting at the edge of the property continuing offsite, therefore downstream landowners were not notified.

Notifications of riparian and adjacent landowners were conducted in accordance with DEQ's Guidance Memorandum No. 11-2005 (Revised Local Government, Riparian Property Owner, Adjacent Property Owner or Resident, and General Public Notification Procedures for VPDES, VPSA and VWP Permit Applications and Draft Permits).

No significant responses were received.

**11. Changes in Permit Part I - Special Conditions Due to Public Comments:**

The public notice was published in Fairfax County Times Friday-Sunday, January 18-20, 2019, on January 18, 2019. The public comment period ran from January 19, 2019, to February 18, 2019.

One public comment letter was received. However, no substantial or disputed issues were presented that warranted revisions to the draft conditions of the permit.

**12. Special Conditions:**

The following conditions were developed to protect instream beneficial uses, to ensure compliance with applicable water quality standards, to prevent significant impairment of state waters or fish and wildlife resources, to provide for no net loss of wetland acreage, and to provide no net loss of functions in all surface waters through compensatory mitigation and monitoring and reporting.

***Section A      Authorized Activities***

Nos. 1-3 addresses the activities authorized by this permit, including impact types and limits.

***Section B      Permit Term***

Nos. 1-2 addresses the permit term and re-issuance process to ensure that all permit conditions are completed.



***Section C      Standard Project Conditions***

- No. 1 addresses the requirement for the minimization of adverse impacts to instream beneficial uses.
- No. 2 ensures that the project will be executed in a manner that limits the disruption of the movement of aquatic life.
- No. 3 ensures that downstream flows will be maintained to protect both instream and off-stream beneficial uses
- No. 4 ensures the minimization of adverse effects on navigation.
- No. 5 ensures the passage of high flows.
- No. 6 requires maintenance of continuous flow of perennial springs for the protection of instream beneficial use.
- No. 7 ensures that dredging and filling operations will minimize stream bottom disturbances and turbidity.
- No. 8 requires instream activities to be conducted during low-flow conditions to protect instream beneficial uses.
- Nos. 9 through 11 provide requirements and limitations on the entry of various materials (including concrete, fill, construction and waste material, fuels, lubricants, and untreated stormwater runoff) into state waters.
- Nos. 12 and 13 limit the use of machinery and equipment in surface waters to protect beneficial uses
- Nos. 14 through 18 require temporary disturbances to surface waters during construction to be avoided and minimized to the maximum extent practicable and the restoration of such temporary disturbances.
- No. 19 prohibits the violation of Water Quality Standards in surface waters as a result of project activities
- No. 20 requires the identification of all non-impacted surface waters in the vicinity of the proposed activity to prevent unpermitted impacts
- Nos. 21 through 25 set forth all reporting requirements concerning construction, monitoring, compensation, and restoration as required by current law and regulations.

***Section D      Stream Modifications, Including Intake/Outfall Structures***

- No. 1 prohibits the use of stream substrate for erosion control to avoid additional impacts to state waters.
- No. 2 requires upland disposal of material removed from stream substrate to avoid unpermitted impacts to surface waters.
- No. 3 ensures riprap placement conforms to current law and regulation.
- Nos. 4 and 5 direct the placement and contents of materials for the construction of submerged structures, and on-bank storage and staging of materials, to protect water quality and fish and wildlife resources.

***Section E      Installation of Utilities***

- No. 1 requires the minimization of disturbance to surface waters and restoration to preconstruction conditions following utility line installation.

No. 2 sets a 90-day time limit for temporary sidecasting during trench excavation to minimize impacts to surface waters.

No. 3 provides the requirements for trench construction to avoid the drainage of surface waters.

#### ***Section F Road Crossings***

No. 1 provides specifications for access road construction to minimize adverse effects to surface waters.

No. 2 ensures pipes and culvert construction is conducted in the dry to protect water quality and wildlife habitat.

No. 3 requires that temporary impacts be restored immediately following construction to minimize impacts to water quality and fish and wildlife resources.

No. 4 summarizes requirements for pipe and culvert placement and countersinking to provide for the re-establishment of a natural stream bottom and low flow channel to maintain instream beneficial uses

No. 5 requires measurement of stream bottom elevations at road crossings to ensure for the re-establishment of a natural stream bottom and low flow channel to maintain instream beneficial uses. The intent of this condition is to maintain a hydrologic connection and enable the stream bottom to reestablish in the culvert. The stream crossing(s) to which this condition pertains is identified in the condition.

#### ***Section G Stormwater Management Facilities***

No. 1 defines the general requirements for stormwater management facility construction to minimize adverse effects to aquatic resources and provide for long-term aquatic resources protection and enhancement.

No. 2 provides limits and guidance for maintenance excavation to avoid unpermitted impacts to surface waters.

#### ***Section H Project Construction Monitoring and Submittals (Impact Site)***

Nos. 1 through 6 address monitoring and submittals required for pre-construction, during construction and post-construction for the impact areas on site.

#### ***Section I Compensatory Mitigation***

No. 1 describe the compensatory mitigation required to mitigate for the permitted impacts.

No. 2 describes the documentation requirement for the purchase of the required amount of credits.

### **13. General Conditions:**

The general conditions specified in the effective VWP Permit Program Regulation 9VAC25-210 apply to all VWP individual permits.

### **14. General Criteria (9VAC25-260-20 A):**

State waters, including wetlands, shall be free from substances attributable to sewage, industrial waste, or other waste in concentrations, amounts, or combinations which contravene established standards or interfere directly or indirectly with designated uses of such water or which are inimical or harmful to human, animal, plant, or aquatic life.

Specific substances to be controlled include, but are not limited to: floating debris, oil, scum, and other floating materials; toxic substances (including those which bioaccumulate); substances that produce color, tastes, turbidity, odors, or settle to form sludge deposits; and substances which nourish undesirable or nuisance aquatic plant life. Effluents which tend to raise the temperature of the receiving water will also be controlled. Conditions within mixing zones established according to 9VAC25-260-20 B do not violate the provisions of this subsection.

#### **15. Staff Findings and Recommendations:**

- In compliance with § 401 of the Clean Water Act, as amended (33 USC § 1341) and the State Water Control Law and regulations adopted pursuant thereto, the board has determined that there is a reasonable assurance that this VWP permit, if complied with, will protect instream beneficial uses, will not violate applicable water quality standards, and will not cause or contribute to a significant impairment of state waters or fish and wildlife resources. In issuing this VWP permit, the board has not taken into consideration the structural stability of any proposed activities.
- The proposed permit conditions address no net loss of wetland acreage and no net loss of functions in all surface waters, through the avoidance and minimization of wetland impacts to the maximum extent practicable; compensatory mitigation; and compensation monitoring and reporting. Permitted wetland impacts have been inventoried in evaluating this proposed permit.
- The draft permit reflects the required consultation with and full consideration of the written recommendations of VMRC, VDH, DCR and DGIF.

Staff recommends VWP Individual Permit Number 18-1003 be issued as proposed.



*Commonwealth of Virginia*

***VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY***

NORTHERN REGIONAL OFFICE  
13901 Crown Court, Woodbridge, Virginia 22193  
(703)583-3800  
[www.deq.virginia.gov](http://www.deq.virginia.gov)

Matthew J. Strickler  
Secretary of Natural Resources

David K. Paylor  
Director  
(804) 698-4000

Thomas A. Faha  
Regional Director

March 5, 2019

Mr. John E. Napolitano, Manager  
Northfax JV LLC  
3900 Jermantown Road, Suite 300  
Fairfax, Virginia 22030

**SENT VIA E-MAIL: [john@lann.com](mailto:john@lann.com)  
RECEIPT CONFIRMATION REQUESTED**

RE: State Program General Permit (17-SPGP-01) Authorization  
Permit Number: 18-1003  
Northfax, City of Fairfax, Virginia

Dear Mr. Napolitano:

The Virginia Department of Environmental Quality (DEQ) has received and completed technical review of your application request dated June 22, 2018, and received June 25, 2018. Based on DEQ's technical review, DEQ has determined the proposed project satisfies the terms and conditions contained in the USACE's, Norfolk District State Program General Permit (17-SPGP-01). You are required to adhere to all terms and conditions contained within the attached 17-SPGP-01 and any Special Conditions listed below. Your 17-SPGP-01 verification is effective as of the date on this letter and remains effective until **May 31, 2022**.

The impacts are associated with the construction of a mixed-use development and associated infrastructure on an approximately 10.6 acre development site.

The applicant is hereby authorized to permanently impact 0.50 acre (1,646 linear feet) of stream channel.

The conceptual mitigation plan submitted with your application indicated that mitigation will include the purchase of 1,675 stream credits or 4,761 Stream Condition Units. This mitigation shall be completed and documentation shall be submitted to DEQ prior to commencement of project impacts.

This letter shall serve as verification to proceed with the project as proposed. The permittee shall be responsible for contacting DEQ to revise this verification, including provisions for compensatory mitigation, if the location or amount of the impacts changes.



Northfax JV LLC  
Mr. John E. Napolitano  
Permit No. 18-1003  
March 5, 2019  
Page 2 of 2

Please contact Wynn Prusaczyk by phone at (703) 583-3871 or email at Wynn.Prusaczyk@deq.virginia.gov if you have any questions or concerns regarding the information contained herein.

Respectfully,

  
Trisha M. Beasley, Regional VWPP Program Manager

Attachments: 17-SPGP-01

Cc (via E-mail):

Mr. Jason Franti, Apex Companies, LLC  
Mr. Jim Irre, Apex Companies, LLC  
Ms. Theresita Crockett-Augustine, USACE, Northern VA Field Office



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

CENAO-WRR STATE PROGRAMMATIC GENERAL PERMIT 17-SPGP-01

Effective Date: June 29, 2017      Expiration Date: May 31, 2022

I. **AUTHORITIES:**

- A. 17-SPGP-01 authorizes the discharge of dredged or fill material in non-tidal waters, of the United States, including wetlands, associated with certain residential, commercial, and institutional developments and linear transportation projects within the geographical limits of the Commonwealth of Virginia and under the regulatory jurisdiction of the U.S. Army Corps of Engineers, Norfolk District (Corps or Norfolk District). These projects must have no more than minimal individual and cumulative impacts and must meet all the terms and conditions outlined herein. The use of 17-SPGP-01 is restricted to those projects that have avoided and minimized impacts to waters of the U.S., including wetlands, to the maximum extent practicable.
- B. The people of the Commonwealth of Virginia (Virginia or "the Commonwealth") are hereby authorized by the Secretary of the Army and the Chief of Engineers, under Section 404 of the Clean Water Act (CWA) (33 U.S.C. § 1344), to perform the aforementioned work in non-tidal waters and wetlands of the Commonwealth as described herein. The Corps' authority and guidance to develop general permits is contained in 33 U.S.C. § 1344(e), 33 C.F.R. § 325.2(e)(2), 33 C.F.R. § 325.3(b), and Corps Regulatory Guidance Letter (RGL) 83-7.

II. **PROCEDURES:**

- A. Delineation Confirmations: Prior to the submission of an application for any Residential, Commercial, or Institutional Development Activity or Linear Transportation Activity covered by 17-SPGP-01, a proponent must first obtain a Corps confirmed delineation that is approved for use with a permit application (Preliminary JD) or a confirmed jurisdictional determination that includes the limits of all waters of the U.S., including wetlands that are located within the project boundaries (Approved JD). The applicant will contact the Corps to obtain a delineation confirmation/jurisdictional determination. When appropriate, a separate delineation confirmation may also be required from the Environmental Protection Agency (EPA).
- B. Application: The application must be submitted to the Virginia Marine Resource Commission (VMRC) and clearly marked 17-SPGP-01. The following information must be submitted as part of the complete application package:
  - 1) A completed and signed Standard Joint Permit Application (JPA). The applicant must utilize the most recent version.

<http://www.nao.usace.army.mil/Missions/Regulatory/>

- 2) A completed SPGP Complete Application Checklist. The applicant must utilize the most recent version.
- 3) A Corps confirmed delineation that is approved for use with a permit application OR a confirmed jurisdictional determination that includes the limits of all waters of the U.S., including wetlands that are located within the project boundaries.

This information listed above will be required to render an application complete for 17-SPGP-01 purposes. The application package must be submitted to the Virginia Marine Resource Commission (VMRC) and clearly marked 17-SPGP-01. The VMRC will forward a copy of the application to the applicable VDEQ office. Once the VDEQ has deemed the application complete the VDEQ will forward the complete application to the appropriate federal agency when coordination is required.

For purposes of 17-SPGP-01, the VDEQ is the agency responsible for ensuring permit applications meet the informational and technical requirements of 17-SPGP-01 and for issuance of 17-SPGP-01 verification letters for qualifying Residential, Commercial, and Institutional and Linear Transportation projects.

C. State Approvals: In order for 17-SPGP-01 to be valid, permittees must obtain the following state approvals prior to commencement of work in waters of the U.S.:

- 1) Virginia Department of Environmental Quality (VDEQ) Virginia Water Protection (VWP) permit
- 2) VMRC permit, when required
- 3) VDEQ informal resolution, letter of agreement, executive compliance agreement or consent order when the 17-SPGP-01 is utilized for resolution of non-compliance and/or enforcement (at Corps discretion).

The 17-SPGP-01 may also be used for activities excluded from State VWP permitting when those activities are associated with a larger residential, commercial, institutional development and/or linear transportation project that requires state approval..

### III. DEFINITIONS:

- A. Loss of waters of the United States: Waters of the United States (WOUS), including wetlands that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage/linear footage of the loss of WOUS is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for 17-SPGP-01; it is not a net threshold that is

calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services.

- 1) The loss of stream bed includes the linear feet of stream bed that is filled or excavated. WOUS temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of WOUS. Impacts resulting from activities eligible for exemptions under Section 404(f) of the Clean Water Act are not considered when calculating the loss of WOUS.
  - 2) Per Norfolk District Pipe Repair Guidelines: pipe repair and replacement is considered a permanent impact
  - 3) The length of any box culvert, pipe, or bridge that is being removed and replaced, whether in the same location or not, is considered a permanent impact. However, if a pipe/culvert/bridge is left in place and is extended or rip-rapped, then only the length and area of the extension or rip-rap is considered a permanent impact. [Based on Norfolk District letter guidance May 5, 2009 to VDOT]
- B. Natural stream design: a stream channel design that mimics the dimension, pattern, and profile of a representative reference stream reach.
- C. Permittee: the responsible party in receipt of the 17-SPGP-01 verification from the VDEQ. The permittee will be the responsible party for complying with all 17-SPGP-01 general conditions as well as any additional special conditions required of each project.
- D. Residential developments: construction or expansion of a multiple unit residential development or a residential subdivision including the construction of building foundations, building pads and attendant features that are necessary for the use of the residence or residential development. Attendant features may include but are not limited to roads, parking lots, garages, yards, utility lines, storm water management facilities, septic fields, and recreation facilities such as playgrounds, playing fields, and golf courses (provided the golf course is an integral part of the residential development).
- E. Commercial and Institutional Developments: construction or expansion of commercial and institutional building foundations, building pads, and attendant features that are necessary for the use and maintenance of the structures. Attendant features may include, but are not limited to, roads, parking lots, garages, yards, utility lines, storm water management facilities, and recreation facilities such as playgrounds and playing fields. Examples of commercial developments include retail stores, industrial facilities, restaurants, business parks, and shopping centers. Examples of institutional developments include schools, fire stations, government office buildings, judicial buildings, public works buildings, libraries, hospitals, and places of worship.



- F. Linear transportation: the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxi ways).

#### IV. AUTHORIZED ACTIVITIES

A. Residential, Commercial, and Institutional Development Activities Eligibility Criteria:

- 1) Activities are subject to Corps regulations;
- 2) Activities involve the discharge of dredged/fill material associated with residential, commercial, and institutional projects and propose:
  - a. the TOTAL permanent loss of not more than 1 acre of non-tidal waters of the US, to include stream channel, wetlands and open waters.  
AND
  - b. the permanent loss of not more than 2,000 linear feet of stream channel;
- 3) Activities meet the general and special conditions of 17-SPGP-01 listed in this document and any special conditions required of each project-specific verification;
- 4) Compensatory mitigation is provided in accordance with the mitigation standards and general conditions listed in this document.
- 5) Activities have received and completed all applicable federal review as listed in the general conditions of this document.

**\*\*The following activities are NOT authorized under the 17-SPGP-01:**

- The Construction of one stand-alone single family home and/or its attendant features.
- Golf courses that are not an integral part of a residential development.
- The construction of new ski areas.

B. Linear Transportation Activities Eligibility Criteria:

- 1) Activities are subject to Corps regulations;
- 2) Activities involve the discharge of dredged/ fill material associated with the construction, expansion, modification, or improvement of linear transportation projects that are single and complete with independent utility and propose:

- a. the TOTAL permanent loss of not more than ½ acre of non-tidal waters of the US, to include stream channel, wetlands and open waters  
AND
  - b. the permanent loss of not more than 1,000 linear feet of stream channel at any single impact site with independent utility.
- 3) Activities meet all general conditions of 17-SPGP-01 listed in this document and any special conditions required of each project-specific verification;
- 4) Compensatory mitigation is provided in accordance with the mitigation standards and general conditions listed in this document.
- 5) Activities have received and completed all applicable federal review as listed in the general conditions of this document.
- 6) Construction and/or relocation of utility lines by the applicant and within the right-of-way/easements of the project and performed in direct relation with the project are included in the project impact totals.

**V. GENERAL CONDITIONS:**

The following conditions apply to all activities authorized under 17-SPGP-01. Work that does not meet one or more of the terms or general conditions of 17-SPGP-01, including work that has been determined to be more than minimal in nature (at any impact level), will require consideration under a different type of Corps permit.

- 1) Other permits: Authorization does not obviate the need to obtain other Federal, state, or local authorizations required by law or to comply with all Federal, state, or local laws.
- 2) Minimal effects: Projects authorized shall have no more than minimal individual or cumulative adverse environmental impacts.
- 3) Discretionary authority: The Corps District Commander retains discretionary authority to require processing of an individual permit based on concerns for the aquatic environment or for any other factor of the public interest (33 C.F.R. § 320.4(a)). This authority is exercised on a case-by-case basis.
- 4) Single and complete projects: The activity must be a single and complete project.
  - a. For non-linear projects: the term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other

association of owners/developers. A single and complete non-linear project must have independent utility (see "independent utility" as defined in these general conditions). Single and complete non-linear projects may not be "piecemealed" to avoid the limits in a 17-SPGP-01 authorization.

- b. For linear transportation: For projects with multiple crossings or encroachments a determination of "single and complete" will typically apply to each crossing or encroachment of waters that occurs (i.e., single waterbody and/or wetlands) at separate and distinct locations and with independent utility. However, in cases where there are many crossings in close proximity, numerous crossings of the same waterbody, multiple crossings, or multiple encroachments that otherwise may have more than minimal individual or cumulative impacts; the Corps has the discretion to consider all the crossings cumulatively as one single and complete project.
- 5) Independent utility: A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. A phase of a project that would be constructed even if the other phases were not built can be considered as a separate, single and complete project with independent utility. For a linear transportation project, separate impact areas on a new location roadway are not considered to have independent utility and thus impacts would be considered cumulatively and eligible for a single 17-SPGP-01 verification. However, separate impact areas on a roadway that is being widened or where pipes are being replaced at multiple crossings are considered to have independent utility, and each crossing would be considered eligible for a separate 17-SPGP-01 verification. Although such impacts are not considered cumulatively for permitting purposes, they are considered cumulatively when assessing the need for federal review.
- 6) Multiple general permit authorizations.: The 17-SPGP-01 may be combined with other Corps general permits (including Nationwide, Regional or Letters of Permission) as long as the impacts are considered cumulatively and do not exceed the acreage limit or linear footage limits of the 17-SPGP-01. Two separate activities (e.g. Residential and Linear, within 17-SPGP-01, may be combined as long as they do not exceed the acreage or linear footage threshold of the activity with the highest specified acreage or linear footage threshold).
- 7) Permit on-site: The permittee shall ensure that a copy of 17-SPGP-01 and the accompanying authorization letter are at the work site at all times. These copies must be made available to any regulatory representative upon request. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be expected to comply with all conditions of any 17-SPGP-01 verification.

- 8) Historic Properties: In cases where the Corps determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the District Engineer with the appropriate documentation to demonstrate compliance with those requirements. The District Engineer will review the documentation and determine whether it is sufficient to address section 106 compliance for the 17-SPGP-01 activity or whether additional section 106 consultation is necessary.

Non-federal permittees shall not begin work on the activity until Section 106 review and/or coordination has been completed AND they have received their 17-SPGP verification letter from the VDEQ.

Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such permit or assistance despite the adverse effect created or allowed by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

Discovery of Previously Unknown Remains and Artifacts: If a permittee discovers any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, the permittee must immediately notify the District Engineer of what has been found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The District Engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.



Tribal Rights: No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

- 9) Federal Lands: Authorized activities shall not impinge upon the value of any National Wildlife Refuge, National Forest, National Park, or any other area administered by the United States Fish and Wildlife Service (USFWS), U.S. Forest Service, or National Park Service unless approval from the applicable land management agency is provided with the permit application.
- 10) Endangered Species: No activity is authorized under any 17-SPGP-01 which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any 17-SPGP-01 which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the District Engineer with the appropriate documentation to demonstrate compliance with those requirements. The District Engineer will review the documentation and determine whether it is sufficient to address ESA compliance for the 17-SPGP-01 activity, or whether additional ESA consultation is necessary.

Non-federal permittees shall not begin work on the activity until Section 7 review and/or consultation has been completed AND they have received their 17-SPGP verification letter from the VDEQ.

Authorization of an activity by a 17-SPGP-01 does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the USFWS or the National Marine Fisheries Service (NMFS), The Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the USFWS and NMFS or their World Wide Web

pages at <http://www.fws.gov/> or <http://www.fws.gov/ipac> and <http://www.noaa.gov/fisheries.html> respectively.

- 11) Migratory Birds and Bald and Golden Eagles: The permittee is responsible for obtaining any "take" permits required under the USFWS regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the USFWS to determine if such "take" permits are required for a particular activity. As of the issuance date of the 17-SPGP the current contact, concerning this matter, is at the U.S. Fish and Wildlife Service, Thomas Wittig at 413-253-8577 or [Thomas\\_wittig@fws.gov](mailto:Thomas_wittig@fws.gov). Information on active bald eagle nests in the project area can be obtained via The Center for Conservation Biology (CCB) Virginia Eagles Nest Locator: <http://www.ccb-wm.org/virinia eagles/index.htm>.
- 12) Wild and Scenic Rivers: Currently, there are no designated Wild and Scenic Rivers in Virginia. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system, while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river has determined, in writing, that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service (NPS), U.S. Forest Service (USFS), Bureau of Land Management (BLM), USFWS). Impacts that occur in these resource areas will require coordination with the appropriate Federal agency.
- 13) Department of Defense (DOD) Siting Clearinghouse Coordination: For all commercial and institutional development projects that include the construction of wind energy generating structures, solar towers, or overhead powerlines the VDEQ must notify the DOD Clearinghouse of the permitted project. The VDEQ will send a copy of the joint permit application and SPGP verification letter to the following address: DoD Clearinghouse, Attn: David Blalock, 101 Marietta St. NW, Suite 3120, Atlanta, Georgia 30303 or [david.c.blalock2.civ@mail.mil](mailto:david.c.blalock2.civ@mail.mil)
- 14) Navigation: No authorized activity may cause more than a minimal adverse effect on navigation.

The permittee understands and agrees that if future operations by the United States require the removal, relocation, or other alteration of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his/her authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United

States. No claim shall be made against the United States on account of any such removal or alteration.

- 15) Floodplains: The activity must comply with applicable FEMA-approved state or local floodplain management requirements.
- 16) 408 Certification: Under 33 USC 408, no activity may temporarily or permanently alter or make use of a U.S. Army Corps of Engineers civil works project unless reviewed and permitted by the Secretary of the Army. The Corps may grant this permission if the work does not impair the usefulness of the project and is not injurious to the public interest.
- 17) Environmental justice: Activities authorized under 17-SPGP-01 must comply with Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations".
- 18) Federal liability: In issuing 17-SPGP-01, the Federal government does not assume any liability for the following: (a) damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes; (b) damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest; (c) damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by 17-SPGP-01; (d) design or construction deficiencies associated with the permitted work; (e) damage claims associated with any future modification, suspension, or revocation of this permit.
- 19) Avoidance and minimization: Except as provided under section 404(b)(2), no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences. ( 40 CFR 230.10(a)-(d) Section 404 (b)(1) Guidelines).
- 20) Compensatory Mitigation: Mitigation will be required for all permanent impacts, on a project site, once the compensatory mitigation threshold has been exceeded for waters OR wetland impacts.
  - a. Wetland mitigation: will generally be required for all residential, commercial, and institutional development projects where the total permanent impacts exceed 1/10 acre AND for all wetland impacts on linear transportation projects that are funded in part or in total by local, state or federal funds.

Generally, the minimum required wetland mitigation ratios will be as follows:

- 2:1 for forested wetlands
- 1.5:1 for scrub-shrub wetlands
- 1:1 for herbaceous emergent wetlands
- 0.5:1 for permanent loss of open waters
- 1:1 for conversion of forested wetlands to herbaceous emergent wetlands.

Compensatory mitigation may be required on a case-by-case basis to ensure impacts are minimal for:

- permanent or temporary conversion of one wetland type to another
- wetland impacts totaling less than 1/10 acre
- at mitigation ratios beyond the generally recommend ratios

All wetland mitigation will comply with the Mitigation Rule [Corps-EPA Compensatory Mitigation for Losses of Aquatic Resources, dated April 10, 2008, 33 CFR 325 and 332/40 CFR 230].

- b. Stream mitigation: will generally be required for all residential, commercial, institutional developments AND linear transportation projects where the total permanent stream channel impacts exceed 300 linear feet.

Minimum stream mitigation requirements will be determined using the current Corps and VDEQ endorsed assessment methodology.

Stream mitigation that exceeds the assessment methodology recommendation and mitigation for impacts totaling less the 300 linear feet may be required on a case-by-case basis to ensure impacts are minimal.

All stream mitigation will comply with Mitigation Rule [Corps-EPA Compensatory Mitigation for Losses of Aquatic Resources dated April 10, 2008 33 CFR 325 and 332; 40 CFR 230].

Where local zoning ordinances provide for riparian and floodplain protection pursuant to the Chesapeake Bay Preservation Act (Virginia Code 10.1-2100 et seq.) and the Chesapeake Bay Preservation Area Designation and Management Regulations (9 VAC 1-20 et seq.), the use of buffers as a form of compensatory mitigation shall be allowed only:

- where the extent of the buffer exceeds the lateral extent already required by local ordinances pursuant to the Act and the regulations
- where the quality of the existing protected buffer area is enhanced to provide greater water quality protection benefits
- where the proposed compensatory mitigation is undertaken in



compliance with the Mitigation Rule [Corps-EPA Compensatory Mitigation for Losses of Aquatic Resources: Final Rule dated April 10, 2008 33 CFR 332.4(c)(2)-(14) and 33 CFR 332.3(h)]

- 21) Heavy Equipment: Heavy equipment working in wetlands must be placed on mats, or other measures must be taken to minimize soil disturbance.
- 22) Temporary fills: All temporarily disturbed waters and wetlands must be restored to their pre-construction contours within 12 months of commencing the temporary impact's construction. Impacts that will not be restored within 12 months (calculated from the start of the temporary impacts construction) will be considered permanent unless otherwise approved by the Corps, and compensatory mitigation may be required. Once restored to their natural contours, soil in these temporarily disturbed areas must be mechanically loosened to a depth of 12 inches and wetland areas must be seeded or sprigged with appropriate native vegetation.
- 23) Sedimentation and erosion control: Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.
- 24) Countersinking of Pipes and Culverts: Following consultation with the Virginia Department of Game and Inland Fisheries (VDGIF), the Norfolk District assumes there are fish and other aquatic organisms present in any stream being crossed, in the absence of site-specific evidence to the contrary. Although prospective permittees have the option of providing such evidence, extensive efforts to collect such information is not encouraged, since countersinking will in most cases be required except as outlined in the conditions below:
- a. All pipes and culverts placed in streams will be countersunk at both the inlet and outlet ends, unless indicated otherwise by the VDEQ on a case-by-case basis (see below). Pipes that are 24" or less in diameter shall be countersunk 3" below the natural stream bottom. Pipes that are greater than 24" in diameter shall be countersunk at least 6" below the natural stream bottom. The countersinking requirement does not apply to bottomless pipes/culverts or pipe arches. All single pipes or culverts (with bottoms) shall be depressed (countersunk) below the natural streambed at both the inlet and outlet of the structure. In sets of multiple pipes or culverts (with bottoms) at least one pipe or culvert shall be depressed (countersunk) at both the inlet and outlet to convey low flows.
  - b. When countersinking culverts, permittees must ensure reestablishment of a surface water channel (within 15 days post

construction) that allows for the movement of aquatic organisms and maintains the same hydrologic regime that was present pre-construction (i.e. the depth of surface water through the permit area should match the upstream and downstream depths). This may require the addition of finer materials to choke the larger stone and/or placement of riprap to allow for a low flow channel.

- c. Exemption for extensions and certain maintenance: The requirement to countersink does not apply to extensions of existing pipes or culverts that are not countersunk, or to maintenance to pipes/culverts that does not involve replacing the pipe/culvert (such as repairing cracks, adding material to prevent/correct scour, etc.).
- d. Floodplain pipes: The placement of pipes/culverts above ordinary high water, such as those placed to allow for flood plain flows, is not jurisdictional (provided no fill is discharged into wetlands).
- e. Hydraulic opening: Pipes should be adequately sized to allow for the passage of ordinary high water with the countersinking and invert restrictions taken into account.
- f. Pipes on bedrock or above existing utility lines: Different procedures will be followed for pipes or culverts to be placed on bedrock or above existing buried utility lines where it is not practicable to relocate the lines, depending on whether the work is for replacement of an existing pipe/culvert or a new pipe/culvert:
  - i. Replacement of an existing pipe/culvert: Countersinking is not required provided the elevations of the inlet and outlet ends of the replacement pipe/culvert are no higher above the stream bottom than those of the existing pipe/culvert. Documentation (photographic or other evidence) must be maintained in the permittee's records showing the bedrock condition and the existing inlet and outlet elevations. That documentation will be available to the Norfolk District upon request, but notification or coordination with the Norfolk District is not otherwise required.
  - ii. A pipe/culvert is being placed in a new location: If the prospective permittee determines that bedrock or an existing buried utility line that is not practicable to relocate prevents countersinking, they should evaluate the use of a bottomless pipe/culvert, bottomless utility vault, span (bridge) or other bottomless structure to cross the waterway, and also evaluate alternative locations for the new pipe/culvert that will allow for countersinking. If the prospective permittee determines that neither a bottomless structure nor an alternative location is practicable, then they must submit supporting documentation in the JPA. The prospective permittee must provide documentation of measures evaluated to minimize disruption of the movement of aquatic

life as well as documentation of the cost, engineering factors, and site conditions that prohibit countersinking the pipe/culvert. Options that must be considered include partial countersinking (such as less than 3" of countersinking, or countersinking of one end of the pipe), and constructing stone step pools, low rock weirs downstream, or other measures to provide for the movement of aquatic organisms. The permit application must also include photographs documenting site conditions. The prospective permittee may find it helpful to contact his/her regional fishery biologist for the VDGIF, for recommendations about the measures to be taken to allow for fish movements. When seeking advice from VDGIF, the prospective permittee should provide the VDGIF biologist with all available information such as location, flow rates, stream bottom features, description of proposed pipe(s), slopes, etc. Any recommendations from VDGIF should be included in the JPA. The VDEQ will notify the prospective permittee whether the proposed work qualifies for the 17-SPGP-01. NOTE: Blasting of stream bottoms through the use of explosives is not acceptable as a means of providing for countersinking of pipes on bedrock.

- g. Pipes on steep terrain: Pipes being placed on steep terrain (slope of 5% or greater) must be countersunk in accordance with the conditions above. It is recommended that on slopes greater than 5%, a larger pipe than required be installed to allow for the passage of ordinary high water in order to increase the likelihood that natural velocities can be maintained. There may be situations where countersinking both the inlet and outlet may result in a slope in the pipe that results in flow velocities that cause excessive scour at the outlet and/or prohibit some fish movement. This type of situation could occur on the side of a mountain where falls and drop pools occur along a stream. Should this be the case, or should the prospective permittee not want to countersink the pipe/culvert for other reasons, they must provide documentation of measures evaluated to minimize disruption of the movement of aquatic life as well as documentation of the cost, engineering factors, and site conditions that prohibit countersinking the pipe/culvert. The prospective permittee should design the pipe to be placed at a slope as steep as stream characteristics allow, countersink the inlet 3-6", and implement measures to minimize any disruption of fish movement. These measures can include constructing a stone step/pool structure, preferably using river rock/native stone rather than riprap, constructing low rock weirs to create a pool or pools, or other structures to allow for fish movements in both directions. Stone structures should be designed with sufficient-sized stone to prevent

erosion or washout and should include keying-in as appropriate. These structures should be designed both to allow for fish passage and to minimize scour at the outlet. The quantities of fill discharged below ordinary high water necessary to comply with these requirements (i.e., the cubic yards of stone, riprap or other fill placed below the plane of ordinary high water) must be included in project totals. The prospective permittee may find it helpful to contact the regional fishery biologist for the VDGI, for recommendations about the measures to be taken to allow for fish movements. When seeking advice from VDGI, the applicant should provide the VDGI biologist with all available information such as location, flow rates, stream bottom features, description of proposed pipe(s), slopes, etc. Any recommendations from DGIF should be included in the permit application. The VDEQ will notify the prospective permittee whether the proposed work qualifies for the 17-SPGP-01.

- h. Problems encountered during construction: When a pipe/culvert is being replaced, and the design calls for countersinking at both ends of the pipe/culvert, and during construction it is found that the streambed/banks are on bedrock, a utility line, or other documentable obstacle, then the permittee must stop work and contact the VDEQ (contact by telephone and/or email is acceptable). The permittee must provide the VDEQ with specific information concerning site conditions and limitations on countersinking. The VDEQ will work with the permittee to determine an acceptable plan, taking into consideration the information provided by the permittee, but the permittee should recognize that the VDEQ and/or Corps could determine that the work will not qualify for a 17-SPGP-01 authorization.
- i. Emergency pipe replacements: In the case of an emergency situation, such as when a pipe/culvert washes out during a flood, a permittee is encouraged to countersink the replacement pipe at the time of replacement, in accordance with the conditions above. However, if conditions or timeframes do not allow for countersinking, then the pipe can be replaced as it was before the washout, but the permittee will have to come back and replace the pipe/culvert and countersink it in accordance with the guidance above. In other words, the replacement of the washed out pipe is viewed as a temporary repair, and a countersunk replacement should be made at the earliest possible date. The VDEQ must be notified of all pipes/culverts that are replaced without countersinking at the time that it occurs, and must provide the permittee's planned schedule for installing a countersunk replacement (it is acceptable to submit such notification by email). The permittee should anticipate whether bedrock or steep terrain will limit countersinking and, if so, should follow the procedures outlined in (g) and/or (h) above.




- 25) Discharge of pollutants: All authorized activities involving any discharge of pollutants into waters of the United States shall be consistent with applicable water quality standards, effluent limitations, standards of performance, prohibitions, and pretreatment standards and management practices established pursuant to the CWA (33 U.S.C. § 1251 et seq.) and applicable state and local laws.
- 26) Suitable Material: No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).
- 27) Obstruction of high flows: Discharges of dredged or fill material must not permanently restrict or impede the passage of normal or expected high flows.
- 28) Aquatic Life Movements: No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species.
- 29) Spawning Areas: Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.
- 30) Migratory Bird Breeding Areas: Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.
- 31) Native trout and anadromous fishes: Authorizations for discharges of dredged or fill material into native trout waters or anadromous fish spawning areas are conditioned to limit in-stream work within the timeframes recommended by the DGIF. <http://206.16.194.16/environmental-programs/files/VDGIF-Time-of-Year-Restrictions-Table.pdf>
- 32) Water supply intakes: No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization
- 33) Invasive Species: Plant species on the most current Virginia Department of Conservation and Recreation's Invasive Plant Species List shall not be used for replanting activities authorized by the SPGP. The list of invasive plants in Virginia

may be found at: <http://www.dcr.virginia.gov/natural-heritage/document/nh-invasive-plant-list-2014.pdf>

- 34) Inspections: The permittee understands and agrees that the Corps and/or the VDEQ are permitted and allowed to make periodic inspections at any time the Corps or VDEQ deems necessary in order to assure that the activities being performed under authority of this permit are in accordance with the terms and conditions prescribed herein. The Corps reserves the right to require post-construction engineering drawings and/or surveys of any work authorized under 17-SPGP-01, as deemed necessary on a case-by-case basis.
- 35) Maintenance: The permittee shall maintain the work authorized herein in good condition and in conformance with all terms and conditions of this permit. All fills shall be properly maintained to ensure public safety.
- 36) Property rights: 17-SPGP-01 does not convey any property rights, either in real estate or material, or convey any exclusive privileges, nor does it authorize any injury to property or invasion of rights or any infringement of Federal, state, or local laws or regulations. If real estate rights are needed from the Corps, you must contact the Corps Real Estate Office at (757) 201-7735 or at the address listed on the front page of this permit.
- 37) Suspension and revocation: 17-SPGP-01 and individual verifications under 17-SPGP-01 maybe either suspended or revoked in whole or in part pursuant to the policies and procedures of 33 C.F.R. § 325.7. Any such action shall not be the basis for any claim for damages against the United States.
- 38) Restoration directive: The permittee, upon receipt of a restoration directive, shall restore the waters of the United States to their former conditions without expense to the United States and as directed by the Secretary of the Army or his/her authorized representative. If the permittee fails to comply with such a directive, the Secretary or his/her designee, may restore the waters of the United States to their former conditions, by contract or otherwise, and recover the cost from the permittee.
- 39) Special conditions: The Corps may impose other special conditions on a project verified pursuant to 17-SPGP-01 that are determined necessary to minimize adverse navigational and/or environmental effects or based on any other factor of the public interest. Failure to comply with all conditions of the authorization/verification, including special conditions, constitutes a permit violation and may subject the permittee, or his/her contractor, to criminal, civil, or administrative penalties and/or restoration.
- 40) False or incomplete information: In granting authorization pursuant to this permit, the Corps has relied upon information and data provided by the permittee. If,

subsequent to notification by the Corps or the VDEQ that a project qualifies for this permit, such information and data prove to be materially false or materially incomplete, the Corps may suspend or revoke authorization, in whole or in part, and/or the United States or Corps may institute appropriate legal proceedings.

- 41) Abandonment: If the permittee decides to abandon the activity authorized under 17-SPGP-01, unless such abandonment is merely the transfer of property to a third party, they may be required to restore the area to the satisfaction of the Corps.
- 42) Transfer of verification: In order to transfer verification under 17-SPGP-01, the transferee and permittee must supply the Corps and the VDEQ with a written and signed, by all appropriate parties, request to make such a transfer. Such transfer is not effective until written approval has been granted by the Corps or the VDEQ.
- 43) Binding effect. The provisions of the permit authorization shall be binding on any assignee or successor in interest of the original permittee.
- 44) Expiration of 17-SPGP-01: Unless further suspended or revoked the 17-SPGP-01 will be in effect until May 31, 2022. Activities which have commenced (i.e., are under construction) or are under contract to commence construction in reliance upon 17-SPGP-01 will remain authorized provided the activity is completed within twelve months of the date of this 17-SPGP-01's expiration of May 31, 2022, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 CFR 325.7(a-e).

  
Jason E. Kelly, PMP  
Colonel, U.S. Army  
Commanding



*Commonwealth of Virginia*

*VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY*

NORTHERN REGIONAL OFFICE  
13901 Crown Court, Woodbridge, Virginia 22193  
(703)583-3800  
[www.deq.virginia.gov](http://www.deq.virginia.gov)

Matthew J. Strickler  
Secretary of Natural Resources

David K. Paylor  
Director  
(804) 698-4000

Thomas A. Faha  
Regional Director

March 5, 2019

By e-mail: [john@lann.com](mailto:john@lann.com)

**Receipt Confirmation Requested**

Mr. John E. Napolitano, Manager  
Northfax JV LLC  
3900 Jermantown Road, Suite 300  
Fairfax, Virginia 22030

Re: Virginia Water Protection (VWP) Individual Permit Number 18-1003  
Northfax, City of Fairfax, Virginia  
Final VWP Individual Permit

Dear Mr. Napolitano:

Pursuant to the VWP Permit Program Regulation 9 VAC 25-210 and § 401 of the Clean Water Act Amendments of 1977, Public Law 95-217, the Department of Environmental Quality has enclosed the VWP Individual Permit for the "Northfax" project.

This permit is valid for 15 years from the date of issuance. An extension of the permit may not occur as the permit term cannot exceed the maximum of 15 years. A new permit may be necessary if any portion of the authorized activities or any permit requirement (including compensatory mitigation provisions) is not complete at the end of the 15 year permit term.

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have **30 calendar days** from the date of service (the date you actually received this decision or the date it was e-mailed to you, whichever occurred first) within which to appeal this decision by filing a notice of appeal in accordance with the Rules of the Supreme Court of Virginia with the Director, Department of Environmental Quality. In the event that this decision is served on you by mail, three days are added to that period. Refer to Part 2A of the Rules of the Supreme Court of Virginia for additional requirements governing appeals from administrative agencies.

Alternatively, an owner may request a formal hearing for the formal taking of evidence upon relevant fact issues under Section 2.2-4020 of the Administrative Process Act. A petition for a formal hearing must meet the requirements set forth in 9VAC25-230 of the Virginia Administrative Code. In cases involving



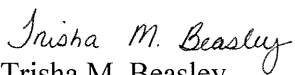
Mr. John E. Napolitano  
VWP Individual Permit No. 18-1003  
March 5, 2019  
Page 2 of 2

actions of the board, such petition must be filed within 30 calendar days after notice of such action is sent to such owner by certified mail.

The work authorized by this permit also satisfies the terms and conditions contained in the Norfolk District, Corps of Engineers' State Program General Permit (17-SPGP-01) and the special conditions, if any, attached to 17-SPGP-01. No additional authorization from the Corps is required. Your 17-SPGP-01 authorization is effective as of the date on this letter and remains effective until May 31, 2022.

If you have any questions, please contact Wynn Prusaczyk by phone at (703) 583-3871 or by email at [Wynn.Prusaczyk@deq.virginia.gov](mailto:Wynn.Prusaczyk@deq.virginia.gov).

Respectfully,

  
Trisha M. Beasley  
Regional VWPP Program Manager

Enclosures: Permit Cover Page, Part I - Special Conditions, Part II - General Conditions, Monthly VWP Permit Inspection Checklist, VWP Permit Construction Status Update Form, 17-SPGP-01 Verification Letter, and 17-SPGP-01

Cc (by e-mail):

Mr. Jason Franti, Apex Companies, LLC  
Mr. Jim Irre, Apex Companies, LLC  
Ms. Theresita Crockett-Augustine, U.S. Army Corps of Engineers, Northern VA Field Office



# Federal Emergency Management Agency

Washington, D.C. 20472

April 1, 2019

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**APR 08 2019**

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

IN REPLY REFER TO:

Case No.: 18-03-2239R

**Community Dev & Planning**

Mr. Robert A. Stalzer  
Manager, City of Fairfax  
10455 Armstrong Street, Room 316  
Fairfax, VA 22030

Community Name: City of Fairfax, Virginia  
Community No.: 515524

104

Dear Mr. Stalzer:

We are providing our comments with the enclosed Conditional Letter of Map Revision (CLOMR) on a proposed project within your community that, if constructed as proposed, could revise the effective Flood Insurance Study (FIS) report and Flood Insurance Rate Map (FIRM) for your community.

If you have any questions regarding the floodplain management regulations for your community, the National Flood Insurance Program (NFIP) in general, or technical questions regarding this CLOMR, please contact the Director, Mitigation Division of the Federal Emergency Management Agency (FEMA) Regional Office in Philadelphia, Pennsylvania, at (215) 931-5512, or the FEMA Map Information eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP). Additional information about the NFIP is available on our website at <https://www.fema.gov/national-flood-insurance-program>.

Sincerely,

Patrick "Rick" F. Sacbibit, P.E., Branch Chief  
Engineering Services Branch  
Federal Insurance and Mitigation Administration

Enclosure:

Conditional Letter of Map Revision Comment Document

cc: Ms. Michelle Coleman  
Zoning Administrator  
City of Fairfax

Mr. David Hodgkins  
Assistant City Manager and Finance Director  
City of Fairfax

Mr. William R. Zink, P.E.  
President  
christopher consultants, ltd.



# Federal Emergency Management Agency

Washington, D.C. 20472

Community Dev &amp; Planning

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## CONDITIONAL LETTER OF MAP REVISION COMMENT DOCUMENT

COMMUNITY INFORMATION		PROPOSED PROJECT DESCRIPTION	BASIS OF CONDITIONAL REQUEST
COMMUNITY	City of Fairfax (Independent City) Virginia	CHANNELIZATION CULVERT GRADING	HYDRAULIC ANALYSIS UPDATED TOPOGRAPHIC DATA
	COMMUNITY NO.: 515524		
IDENTIFIER	NORTHFAX	APPROXIMATE LATITUDE AND LONGITUDE: 38.859, -77.310 SOURCE: Precision Mapping Streets DATUM: NAD 83	
AFFECTED MAP PANEL			
TYPE: FIRM*	NO.: 5155240002D	DATE: June 2, 2006	* FIRM - Flood Insurance Rate Map

### FLOODING SOURCE AND REACH DESCRIPTION

North Fork Accotink Creek – from just upstream of Chain Bridge Road to approximately 1,670 feet upstream of Chain Bridge Road

### PROPOSED PROJECT DESCRIPTION

Flooding Source	Proposed Project	Location of Proposed Project
North Fork Accotink Creek	New Twin 8'x8' Box Culvert Extension	From approximately 80 feet upstream of Chain Bridge Road to approximately 1,050 feet upstream of Chain Bridge Road.
	Channelization	From approximately 1,050 feet upstream of Chain Bridge Road to approximately 1,200 feet upstream of Chain Bridge Road.
	Grading	From just upstream of Chain Bridge Road to approximately 1,200 feet upstream of Chain Bridge Road.

### SUMMARY OF IMPACTS TO FLOOD HAZARD DATA


Flooding Source	Effective Flooding	Proposed Flooding	Increases	Decreases
North Fork Accotink Creek	Zone AE	Zone AE	Yes	Yes
	BFEs*	BFEs	Yes	Yes
	Zone X (shaded)	Zone X (shaded)	Yes	Yes

\* BFEs - Base (1-percent-annual-chance) Flood Elevations

### COMMENT

This document provides the Federal Emergency Management Agency's (FEMA's) comment regarding a request for a CLOMR for the project described above. This document is not a final determination; it only provides our comment on the proposed project in relation to the flood hazard information shown on the effective National Flood Insurance Program (NFIP) map. We reviewed the submitted data and the data used to prepare the effective flood hazard information for your community and determined that the proposed project meets the minimum floodplain management criteria of the NFIP. Your community is responsible for approving all floodplain development and for ensuring that all permits required by Federal or State/Commonwealth law have been received. State/Commonwealth, county, and community officials, based on their knowledge of local conditions and in the interest of safety, may set higher standards for construction in the Special Flood Hazard Area (SFHA), the area subject to inundation by the base flood. If the State/Commonwealth, county, or community has adopted more restrictive or comprehensive floodplain management criteria, these criteria take precedence over the minimum NFIP criteria.

This comment is based on the flood data presently available. If you have any questions about this document, please contact the FEMA Map Information eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional information about the NFIP is available on the FEMA website at <https://www.fema.gov/national-flood-insurance-program>.

  
Patrick "Rick" F. Sacbitt, P.E., Branch Chief  
Engineering Services Branch  
Federal Insurance and Mitigation Administration

18-03-2239R

104



# Federal Emergency Management Agency

Washington, D.C. 20472

## CONDITIONAL LETTER OF MAP REVISION COMMENT DOCUMENT (CONTINUED)

### COMMUNITY INFORMATION

To determine the changes in flood hazards that will be caused by the proposed project, we compared the hydraulic modeling reflecting the proposed project (referred to as the proposed conditions model) to the hydraulic modeling used to prepare the Flood Insurance Study (FIS) (referred to as the effective model). If the effective model does not provide enough detail to evaluate the effects of the proposed project, an existing conditions model must be developed to provide this detail. This existing conditions model is then compared to the effective model and the proposed conditions model to differentiate the increases or decreases in flood hazards caused by more detailed modeling from the increases or decreases in flood hazards that will be caused by the proposed project.

The table below shows the changes in the BFEs:

BFE Comparison Table

Flooding Source: North Fork Accotink Creek		BFE Change (feet)	Location of maximum change
Existing vs. Effective	Maximum increase	2.6	Approximately 1,090 feet upstream of Chain Bridge Road
	Maximum decrease	2.1	Approximately 270 feet upstream of Chain Bridge Road
Proposed vs. Existing	Maximum increase	0.6	Approximately 1,450 feet upstream of Chain Bridge Road
	Maximum decrease	7.1	Approximately 1,000 feet upstream of Chain Bridge Road
Proposed vs. Effective	Maximum increase	0.6	Approximately 1,450 feet upstream of Chain Bridge Road
	Maximum decrease	7.1	Approximately 1,040 feet upstream of Chain Bridge Road

NFIP regulations Subparagraph 60.3(b)(7) requires communities to ensure that the flood-carrying capacity within the altered or relocated portion of any watercourse is maintained. This provision is incorporated into your community's existing floodplain management ordinances; therefore, responsibility for maintenance of the altered or relocated watercourse, including any related appurtenances such as bridges, culverts, and other drainage structures, rests with your community. We may request that your community submit a description and schedule of maintenance activities necessary to ensure this requirement.

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**APR 08 2019**

**Community Dev & Planning**

This comment is based on the flood data presently available. If you have any questions about this document, please contact the FEMA Map Information eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional information about the NFIP is available on the FEMA website at <https://www.fema.gov/national-flood-insurance-program>.

Patrick "Rick" F. Sacbibit, P.E., Branch Chief  
Engineering Services Branch  
Federal Insurance and Mitigation Administration





Federal Emergency Management Agency  
Washington, D.C. 20472

**CONDITIONAL LETTER OF MAP REVISION  
COMMENT DOCUMENT (CONTINUED)**

**COMMUNITY INFORMATION (CONTINUED)**

**DATA REQUIRED FOR FOLLOW-UP LOMR**

Upon completion of the project, your community must submit the data listed below and request that we make a final determination on revising the effective FIRM and FIS report. If the project is built as proposed and the data below are received, a revision to the FIRM and FIS report would be warranted.

- Detailed application and certification forms must be used for requesting final revisions to the maps. Therefore, when the map revision request for the area covered by this letter is submitted, Form 1, entitled "Overview and Concurrence Form," must be included. A copy of this form may be accessed at <https://www.fema.gov/media-library/assets/documents/1343>.

- The detailed application and certification forms listed below may be required if as-built conditions differ from the proposed plans. If required, please submit new forms, which may be accessed at <https://www.fema.gov/media-library/assets/documents/1343>, or annotated copies of the previously submitted forms showing the revised information.

Form 2, entitled "Riverine Hydrology and Hydraulics Form." Hydraulic analyses for as-built conditions of the base flood, the 10-percent, 2-percent, and 0.2-percent-annual-chance floods must be submitted with Form 2.

Form 3, entitled "Riverine Structures Form."

- A certified topographic work map showing the revised and effective base and 0.2-percent-annual-chance floodplain boundaries. Please ensure that the revised information ties in with the current effective information at the downstream and upstream ends of the revised reach and any tributaries.
- An annotated copy of the FIRM, at the scale of the effective FIRM, that shows the revised base and 0.2-percent-annual-chance floodplain boundary delineations shown on the submitted work map and how they tie-in to the base and 0.2-percent-annual-chance floodplain boundary delineations shown on the current effective FIRM at the downstream and upstream ends of the revised reach, as well as any tributaries.
- As-built plans, certified by a registered Professional Engineer, of all proposed project elements.
- Documentation of the individual legal notices sent to property owners who will be affected by any widening or shifting of the base floodplain and/or any BFE increases along North Fork Accotink Creek.

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**APR 08 2019**

**Community Dev & Planning**

This comment is based on the flood data presently available. If you have any questions about this document, please contact the FEMA Map Information eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional information about the NFIP is available on the FEMA website at <https://www.fema.gov/national-flood-insurance-program>.

Patrick "Rick" F. Sacbitt, P.E., Branch Chief  
Engineering Services Branch  
Federal Insurance and Mitigation Administration



Federal Emergency Management Agency  
Washington, D.C. 20472

**CONDITIONAL LETTER OF MAP REVISION  
COMMENT DOCUMENT (CONTINUED)**

**COMMUNITY INFORMATION (CONTINUED)**

**DATA REQUIRED FOR FOLLOW-UP LOMR (continued)**

• FEMA's fee schedule for reviewing and processing requests for conditional and final modifications to published flood information and maps may be accessed at <https://www.fema.gov/forms-documents-and-software/flood-map-related-fees>. The fee at the time of the map revision submittal must be received before we can begin processing the request. Payment of this fee can be made through a check or money order, made payable in U.S. funds to the National Flood Insurance Program, or by credit card (Visa or MasterCard only). Please either forward the payment, along with the revision application, to the following address:

LOMC Clearinghouse  
Attention: LOMR Manager  
3601 Eisenhower Avenue, Suite 500  
Alexandria, Virginia 22304-6426

or submit the LOMR and fee using the Online LOMC portal at: <https://hazards.fema.gov/femaportal/onlinelomc/signin>

After receiving appropriate documentation to show that the project has been completed, FEMA will initiate a revision to the FIRM and FIS report. Because the flood hazard information (i.e., base flood elevations, base flood depths, SFHAs, zone designations, and/or regulatory floodways) will change as a result of the project, a 90-day appeal period will be initiated for the revision, during which community officials and interested persons may appeal the revised flood hazard information based on scientific or technical data.

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**APR 08 2019**

**Community Dev & Planning**

This comment is based on the flood data presently available. If you have any questions about this document, please contact the FEMA Map Information eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on the FEMA website at <https://www.fema.gov/national-flood-insurance-program>.

Patrick "Rick" F. Sacibit, P.E., Branch Chief  
Engineering Services Branch  
Federal Insurance and Mitigation Administration



Federal Emergency Management Agency  
Washington, D.C. 20472

**CONDITIONAL LETTER OF MAP REVISION  
COMMENT DOCUMENT (CONTINUED)**

**COMMUNITY INFORMATION (CONTINUED)**

**COMMUNITY REMINDERS**

We have designated a Consultation Coordination Officer (CCO) to assist your community. The CCO will be the primary liaison between your community and FEMA. For information regarding your CCO, please contact:

Ms. Janice Barlow  
Director, Mitigation Division  
Federal Emergency Management Agency, Region III  
One Independence Mall, Sixth Floor  
615 Chestnut Street  
Philadelphia, PA 19106-4404  
(215) 931-5512

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**APR 08 2019**

**Community Dev & Planning**

This comment is based on the flood data presently available. If you have any questions about this document, please contact the FEMA Map Information eXchange (FMIX) toll free at 1-877-336-2627 (1-877-FEMA MAP) or by letter addressed to the LOMC Clearinghouse, 3601 Eisenhower Avenue, Suite 500, Alexandria, VA 22304-6426. Additional Information about the NFIP is available on the FEMA website at <https://www.fema.gov/national-flood-insurance-program>.

Patrick "Rick" F. Sacbbit, P.E., Branch Chief  
Engineering Services Branch  
Federal Insurance and Mitigation Administration

## TECHNICAL MEMORANDUM

To:	Brooke Hardin, AICP	Director of Community Development & Planning City of Fairfax
CC:	Russell Rosenberger	Madison Homes, Inc.
	Andrew Rosenberger	Madison Homes, Inc.
	Steve Marker	Brightview Senior Living
	Kathryn Taylor	Walsh, Colucci, Lubeley & Walsh, P.C.
	Lynne Strobel	Walsh, Colucci, Lubeley & Walsh, P.C.
From:	Steven Matthew Dauterman, EIT, RSP1	Gorove Slade Associates Inc.
	Niraja Chandrapu, PE, PTOE	Gorove Slade Associates Inc.
	Chad Baird	Gorove Slade Associates Inc.
Date:	June 3, 2020	
Subject:	Northfax Development – Proposed Senior Living Facility Parking Assessment	

### Introduction

This memorandum presents the findings of a parking assessment conducted for the proposed senior living facility portion of the Northfax development within the City of Fairfax, Virginia. The projection of parking space needs was assessed based on the Institute of Transportation Engineer's (ITE's) parking generation rates, past experience of the operator, and the parking requirements per the City of Fairfax's *Zoning Ordinance*; and was compared to the number of spaces planned.

As discussed in this memorandum, the Applicant is requesting the City Council to modify the parking requirement to allow for an approximately 35% reduction in the required parking spaces (from the 194 spaces required prior to any reductions to the proposed 126 spaces) for the senior living facility. Based on anticipated future demand, the proposed 126 spaces would adequately serve the future parking demand.

### Background

The Northfax development would be generally located in the northwest quadrant of the intersection of Route 123 and Fairfax Boulevard (Rte. 29/50). The proposed redevelopment of the site would require a rezoning of the property. The parcels fronting Fairfax Boulevard and Chain Bridge Road are currently zoned CR (Commercial Retail District), while the interior parcels along Orchard Street are zoned RM (Residential Medium); the Applicant is proposing to rezone the subject property from the CR and RM districts to a PD-M (Planned Development Mixed Use) district.

The development will be constructed in two phases. Phase 1 is anticipated to be complete by 2023 and is the current application with respect to the site. The current development program for Phase 1 includes 56 multi-family residential units and a 200-unit senior living facility. Phase 2, which would be constructed as part of separate application, is anticipated to be complete by 2027 and consist of 25,000 square feet of commercial use (including retail space, office space, and restaurants) with approximately 180 residential dwelling units on the upper floors and a 140-room capacity hotel.

### City of Fairfax Parking Requirements & Proposed Parking Supply

As noted, this memorandum assesses the parking demand and supply for the proposed senior living facility portion of the Northfax development. The senior living facility is anticipated to have an upward capacity of 200 units, split between independent living, assisted living, and memory care units. A summary of the number of units and beds by each type is provided below:

- Independent Living:
  - 76 one-bedroom units and 38 two-bedroom units (152 beds total)



- Assisted Living:
  - 54 one-bedroom units and 6 two-bedroom units (66 beds total)
- Memory Care:
  - 24 studios and 2 one-bedroom units (26 beds total)

The City of Fairfax's *Zoning Ordinance*, adopted in June 2016 and last amended June 2019, stipulates parking ratios (i.e., the number of parking spaces per unit type or square footage) required. A summary of the City's parking requirements relevant to the senior facility is summarized below in Table 1.

**Table 1: City of Fairfax Parking Requirements**

Land Use	Parking Requirements	Required Spaces
Independent Living	1.5 Spaces per dwelling unit*	171.00
Assisted Living	1 Space per 4 Beds	16.50
Memory Care	1 Space per 4 Beds	6.50
<b>Total</b>		<b>194</b>

*Note: (\*) The 1.5 spaces per dwelling unit is based on the City's guidelines for multifamily type land uses. Given the average age of an independent living resident, 82 years of age, it is anticipated this parking rate would be conservative given that many are not anticipated to own or operate personal vehicles.*

As can be seen the table above, the Northfax senior facility is mandated to provide a total of 194 parking spaces per the City's *Zoning Ordinance*. The Applicant is planning to construct a total of 12 surface and 114 garage parking spaces (totaling 126 spaces), which would account for a reduction of approximately 35% from the City's requirements.

Of note, the City's *Zoning Ordinance* allows for a parking reduction of 20%, which could reduce the required parking spaces to 156. Based on previous discussions with the City, the Applicant is requesting the City Council to modify the parking requirement as part of the rezoning application.

### ***Anticipated Parking Demand (ITE Parking Generation)***

In order to assess if the proposed number of spaces would accommodate future demand, a future parking analysis was conducted based on the parking rates and methodology presented in the Institute of Transportation Engineer's (ITE's) *Parking Generation Manual*, 5<sup>th</sup> edition publication.

The *Parking Generation Manual* contains statistics that describe "current state-of-the-practice understanding of the relationship between parking demand and the many characteristics associated with an individual development site or land use." The manual presents land use descriptions and data plots for 121 land use types with various time periods, independent variables, and area types in order to provide forecasts of maximum daily parking demand.

As noted previously, the proposed senior living facility is projected to have a capacity of up to 200 units. The units would be split between independent living, assisted living, and memory care. In order to assess the parking demand, the rates for ITE Land Use Code 252 (Senior Adult Housing – Attached) were utilized for the independent living units, and the rates for ITE Lane Use Code 254 (Assisted Living) were utilized for both the assisted living units and the memory care units. The independent variable used for ITE Land Use Code 252 was based on the number of dwelling units, whereas the independent variable used for ITE Lane Use Code 254 was based on the number of beds. These independent variables coincide with the City's guidelines for parking requirements.

The resulting parking generation is presented in Table 2 and is based on the rates for a general "urban /suburban" setting. Additional documentation from ITE is presented in the Appendix.

**Table 2: Senior Living Facility Parking Demand – Based on ITE's Parking Generation Manual (5 ED)**

Land Use	ITE Code	Size		Daily	
				Rate	Total
Senior Adult Housing - Attached (Independent Living)	252	114	DU	0.61	70
Assisted Living (Assisted Living and Memory Care)	254	66+26	Beds	0.39	36
<b>Total</b>					<b>106</b>

As can be seen in the table above, per ITE's *Parking Generation Manual*, the proposed senior living facility is anticipated to require a daily maximum of 106 parking spaces in order to meet future demand (inclusive of residents, staff, and visitor needs). Thus, the proposed 126 parking space supply is anticipated to adequately serve future parking demand with an excess of 20 parking spaces at any given time.

### ***Anticipated Parking Demand (Brightview Historic Parking Rates)***

The proposed senior living facility is anticipated to be built, owned, and operated by Brightview Senior Living. Currently, Brightview operates more than 50 senior living facility in the East Coast with many of their site operating in urban environments, such as in the Rockville Town Center and in the Woodmont Triangle area of Bethesda, Maryland. The closest facilities to the proposed Northfax site are located in the Fair Oaks and Woodburn areas of Fairfax County.

Based on an assessment of six nearby Brightview sites, located within Fairfax County (Virginia) and Montgomery County (Maryland), it is anticipated that the projected parking ratio per unit is approximately 0.56 spaces and the parking ratio per bed is approximately 0.50 spaces. A summary of the six sites is presented below in Table 3.

**Table 3: Parking Ratios of Existing Brightview Sites Near the City of Fairfax**

Name	Total units	Total Beds	Parking Space	Parking / Unit	Parking / Bed
Fair Oaks	170	196	105	0.62	0.54
West End	198	236	123	0.62	0.52
Bethesda Woodmont	113	119	42	0.37	0.35
Great Falls	88	96	57	0.65	0.59
Grosvenor	96	100	47	0.49	0.47
Woodburn	100	114	63	0.63	0.55
<b>Average</b>	<b>128</b>	<b>144</b>	<b>73</b>	<b>0.56</b>	<b>0.50</b>

Assuming the above mentioned rates of 0.56 spaces per unit and the 0.50 spaces per bed, it is anticipated that the proposed senior living facility would require a 110 parking space supply, as shown below in Table 4.

**Table 4: Senior Living Facility Parking Demand – Based on Brightview Historic Parking Rates**

Land Use	Size		Daily	
			Rate	Total
Senior Adult Housing - Attached (Independent Living)	114	DU	0.56	64
Assisted Living (Assisted Living and Memory Care)	66+26	Beds	0.50	46
<b>Total</b>				<b>110</b>

### ***Additional Considerations – On-Street Parking***

In addition to the 126 on-site parking spaces, Orchard Street and the future extension of Farr Avenue are anticipated to supply 39 on-street parking spaces in their right-of-way as well as a single loading space for the senior facility. Though not included in this parking assessment as per the City's guidelines, these curb parking spaces could absorb parking demand fluctuations in excess of the 126 spaces on occasion and in excess of the 106 parking space demand as per ITE projections.

### ***Additional Considerations – Parking Utilization***

The proposed 126 parking spaces will be utilized by the facility's residents, staff, and visitors. At this time, it is not anticipated that on-site parking will be assigned or specifically designated. Of note, at other Brightview facilities, management has recommended their staff to park further way from the front door of the building. A similar practice will be recommended at this site.

### ***Additional Considerations – Alternative Transportation Amenities***

At other similar facilities, Brightview has operated company owned vehicles (vans and sedans) for the purposes of transporting residents. Brightview is planning to provide this service at the Northfax location with two vehicles (one van and one sedan). The vehicles will be operated by Brightview staff for planned activities/events as well a pre-reserved service to take residents for errands/appointments upon request.

The van service for this site is not anticipated to operate as a Metro shuttle, but would provide residents an alternative transportation mode in order to get to and from major hotspots (such as retail centers, medical centers, community centers, and places of worship). The service will be provided routinely. Of note, this service is practiced at Brightview's Rockville Town Center location (West End), which is a close proxy for the proposed Northfax location with 198 units in a walkable, mixed-use environment.

Per a meeting between City staff and representatives of the Applicant on March 19, 2020, Transportation Demand Management (TDM) plan for the Northfax Development will be submitted as a separate document to the City of Fairfax prior to Site Plan and would include this service as a component.

## **Conclusions**

This memorandum presents the findings of a parking assessment conducted for the proposed senior living facility portion of the Northfax development within the City of Fairfax, Virginia. This memorandum supports the following conclusions:

- Based on City guidelines, the site is required to provide a total of 194 parking spaces. With a 20% reduction allowable under the City's *Zoning Ordinance*, the parking requirements could be reduced to 156 parking spaces.
  - The Applicant is proposing to construct 126 spaces for the facility's residents, staff, and visitors. The 126 spaces would constitute a 35% reduction. Based on previous discussions with the City, the Applicant is requesting the City Council to modify the parking requirement as part of the rezoning application.
- The planned 126 spaces for the senior living facility are anticipated to adequately serve the future parking demand, based on either standard ITE data or Brightview's experience at similar operational facilities.
  - Based on ITE rates, a parking supply of 106 spaces would be required in order to meet anticipated demand. Thus, the proposed 126 parking spaces would accommodate the parking demand with an excess of 20 spaces.
  - Based on Brightview historic rates of nearby sites, a parking supply of 110 would be required in order to meet anticipated demand. Thus, the proposed 126 parking spaces would accommodate the parking demand with an excess of 16 spaces.

## **Technical Appendix**

### **Appendix A: Excerpts from ITE's Parking Generation Manual (5<sup>th</sup> ED)**



## **Appendix A:**

Excerpts from ITE's Parking Generation Manual (5<sup>th</sup> ED)

# Land Use: 252 Senior Adult Housing—Attached

## Description

Senior adult housing consists of attached independent living developments, including retirement communities, age-restricted housing, and active adult communities. This type of housing for active senior adults can take the form of bungalows, townhouses, and apartments. These developments may include limited social or recreational services. They generally lack centralized dining and on-site medical facilities. Residents in these communities live independently, are typically active (requiring little to no medical supervision) and may or may not be retired. Congregate care facility (Land Use 253), assisted living (Land Use 254), and continuing care retirement community (Land Use 255) are related uses.

The minimum age thresholds for the study sites in the database are not known. It would be expected that a development with an age restriction of 55 would include more households with an employed resident than would a development with an age restriction of 65. How this age restriction affects parking demand cannot be determined from the available data.

## Additional Data

The average parking supply ratio for the three study sites in a general urban/suburban setting and with parking supply information is 0.9 spaces per dwelling unit.

The sites were surveyed in the 2000s in Pennsylvania.

*It is expected that the number of bedrooms and number of residents are likely correlated to the parking demand generated by a residential site. Parking studies of multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex). Future parking studies should also indicate the number of levels contained in the residential building.*

## Source Number

431

## Land Use: 254 Assisted Living

### Description

An assisted living complex is a residential setting that provides either routine general protective oversight or assistance with activities necessary for independent living to mentally or physically limited persons. It commonly has separate living quarters for residents. Its centralized services typically include dining, housekeeping, social and physical activities, medication administration, and communal transportation.

Alzheimer's and ALS care are commonly offered by these facilities, though the living quarters for these patients may be located separately from the other residents. Assisted care commonly bridges the gap between independent living and nursing homes. In some areas of the country, assisted living residences may be called personal care, residential care, or domiciliary care. Staff may be available at an assisted care facility 24 hours a day, but skilled medical care—which is limited in nature—is not required. Congregate care facility (Land Use 253), continuing care retirement community (Land Use 255), and nursing home (Land Use 620) are related uses.

### Time of Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand on a weekday (nine study sites), a Saturday (eight study sites), and a Sunday (nine study sites) in a general urban/suburban setting.

## EXHIBIT 15

	Potential Redevelopment LOW	Potential Redevelopment HIGH
<b><u>RESIDENTIAL REVENUES</u></b>		
Real Estate Tax	\$803,000	\$887,000
Personal Property Tax	\$109,000	\$133,000
Retail Sales Tax (1%)	\$13,000	\$15,000
Restaurant Tax (1% + 4%)	\$16,000	\$20,000
<b>TOTAL</b>	<b>\$941,000</b>	<b>\$1,055,000</b>
<b><u>RESIDENTIAL EXPENSES</u></b>		
Education	\$182,000	\$222,000
Police/Fire	\$272,000	\$301,000
Misc. Gov't	\$438,000	\$484,000
<b>TOTAL</b>	<b>\$892,000</b>	<b>\$1,007,000</b>
<b><u>COMMERCIAL REVENUES</u></b>		
Real Estate Tax	\$0	\$0
Transient Occ. & Rental Tax	\$22,000	\$33,000
Retail Sales Tax (1%)	\$0	\$0
Restaurant Tax (4%)	\$0	\$0
<i>(Less 1/8 resident spending)</i>	<i>\$0</i>	<i>\$0</i>
Sr. Living BPOL/BPP	\$15,000	\$19,000
Office BPOL/BPP	\$0	\$0
<b>TOTAL</b>	<b>\$37,000</b>	<b>\$52,000</b>
<b><u>COMMERCIAL EXPENSES</u></b>		
Police/Fire	\$0	\$0
Misc. Gov't	\$0	\$0
<b>TOTAL</b>	<b>\$0</b>	<b>\$0</b>
<b>BALANCE</b>	<b>-\$29,000</b>	<b>\$215,000</b>