

# Guidelines for Fiber Optic Cable Permits

NOVA District (Fairfax) Permits  
[www.VirginiaDOT.org/business/fairfax-permits-main.asp](http://www.VirginiaDOT.org/business/fairfax-permits-main.asp)  
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These Guidelines are for the exclusive use of NOVA District (Fairfax) Permits

**NOVA District (Fairfax) Permits  
Guidelines for Fiber Optic Cable Permits**

**Permit Application**

1. PERMITTEE:
  - a) Permit must be in the name of the fiber optic company that is responsible for the installation and maintenance of the cable. An employee in responsible charge of the fiber optic cable listed as the owner must sign the permit application. This employee's title must be included. A business card must be attached to the permit application providing information for the person signing the permit, indicating their position in the company and telephone number.
  - b) Permit application shall list the name, address, tax identification number, phone number, and emergency 24-hour number for the contact person for the fiber optic company. Sub-contractor information may be provided separately.
2. SPECIAL NOTICE OF PERMITTEE LIABILITY:
  - a) Page 5 of the Special Notice of Permittee Liability rev. March 2004 (MP-63) must be signed by the permittee and attached to the permit application.
3. COUNTY TAX MAP NUMBERS:
  - a) List all of the county tax map numbers that cover the work being performed.
  - b) The first tax map page listed should match the first route number listed on the permit.
4. PERMITTEE JOB NUMBER: is optional, but any identification placed here will be printed on correspondence as a reference.
5. STATE ROUTE NUMBER(S) AND STREET NAME(S):
  - a) The permit application shall list the route number and street name where the work is being performed.
  - b) A separate list shall be provided of any additional routes, and the between routes for each of these streets.
  - c) The between routes and street names shall be listed for the nearest state maintained road to the beginning and ending of work on the main road.
6. DOOR HANGERS: Door hangers must be placed at all homes and businesses along the fiber optic route a minimum of 72 hours prior to beginning any work. A copy of the hanger which will be used must be submitted with the permit application. The hanger must list the name of the fiber optic company performing the work, the contact name, the phone number, and the dates of construction.
7. DESCRIPTION OF WORK:
  - a) The permit description must be specific.
  - b) The description must include the length and type of each variety of installations, and the total amount of each item being installed. For example: Install 3,456' of 144 count underground fiber optic cable, 245' of 80 count fiber optic cable in existing conduit, 2667' of 120 count aerial, 10 hand holes, and 5 guy and anchors.
8. LIMITATIONS:
  - a) Permits will not be issued for applications in excess of 5,000 linear feet and/or for cable sections displacing no more than 20 square inches, or the equivalent of eight (8) 1 ½" conduits.
  - b) The permit application should be broken down into one-mile segments. The segments should be broken at logical points such as an intersection.
9. COMPUTER DISKETTE: Must be submitted with each permit application. See Pages #6 and #7 of this document labeled Permit Data Upload, for further instructions.

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**Plans**

1. **PLAN SHEETS:** Include **two original**, complete copies of the plans showing the proposed work and one additional copy is required if there is a bridge attachment, box culvert crossing, limited access or interstate involved.
2. **COLOR HIGHLIGHTS:** Highlight the plans to show the right-of-way (yellow) and the proposed cable (orange) only.
3. **MAPS:** Include a vicinity map showing all of the roads that will be included in the permit, and the surrounding area of the work.
5. **DIRECTIONAL ARROW:** A north arrow must be shown on each page of the plan and on the vicinity map.
6. **LEGEND:**
  - a) Legend showing the symbols used on the plans, and the color-coding used to mark the plan.
  - b) Include a sheet for typical construction notes together with local utility contact information.
7. **PLAN, SECTION, & TYPICAL VIEWS:**
  - a) A typical section showing the proposed types of installations (such as aerial or underground), and the minimum depth or height requirement for the cable.
  - b) Do not include typical sections that do not pertain to the proposed work.
  - c) Must include items such as right-of-way lines, proposed underground cable, etc.
  - d) Individual section views must be submitted for any crossing, which might create a potential conflict, including but not limited to, cable crossings over or under large storm pipes, culverts, gas lines, water and storm lines, transmission lines, & other affected utilities. The section view may be contained on the same plan sheet as the crossing.
  - e) The plans must indicate the minimum vertical clearance distance as determined by the affected authority. The plan views must show the horizontal distance to the nearest affected utility and/or right-of-way object.
  - f) For underground road crossings, the section view must show the type of roadway such as curb and gutter or ditch line, the minimum depth, etc. The minimum depth of the crossing needs to be figured from the lowest point of the roadway, which is generally the bottom of the ditch.
  - g) Any proposed work in the vicinity of a bridge or box culvert must include a typical section showing the distance from all features of the structure, including any footers.
8. **MANHOLES:**
  - a) Manholes must be located outside of sidewalks, trails, roadways, and shoulders.
  - b) Manholes shall be placed a minimum of 25' apart.
  - c) There shall be no more than one manhole in front of one property.
  - d) Manholes must be located a minimum of 3 feet off the edge of shoulder.
  - e) Manholes are not to be located in the ditch line.
  - f) Provide detail and specifications of manhole.
  - g) Manholes must be placed flush with existing grades.
  - h) Maximum size of manholes permitted in the right-of-way shall be 4'W X 6'L X 5'D with a 36" diameter access and minimum 20 ton load bearing.
9. **STREET LABELING:** All streets must be labeled with the street name and route number on each page of the plan. This includes all cross streets.

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**10. RIGHT-OF-WAY OBJECTS:**

- a) Plans must include all items that may interfere with the proposed placement of the cable.
- b) This should include, but not be limited to sidewalk, utility poles, traffic signals, landscaping, sanitary sewer lines, storm sewer lines, other existing utilities, etc. Guardrails and ditchlines along the proposed cable route must also be indicated on the drawings.
- c) The plan must also show the vertical and horizontal distance from the item.
- d) Indicate on the drawing where existing items will be removed and replaced.

**11. HANDHOLES:**

- a) Handhole lids must have company name.
- b) Handholes must be located outside of sidewalks, trails, roadways, and shoulders.
- c) If the plans do not clearly show the absence of a conflict, a note must be added to the plan indicating the handhole will be outside of the sidewalk.
- d) Handholes must be located a minimum of 3 feet off the edge of shoulder unless the handhole is to be installed in the utility strip along a curb and gutter roadway.
- e) Handholes are not to be located in the ditch line.
- f) Maximum size of handholes permitted in the right-of-way shall be 4'W X 5'L X 4'D
- g) Provide detail of handhole and COTT markers.
- h) COTT markers are not to be used in landscaped areas. Permittee is to use the composite flush type marker.
- i) Handholes may be buried in the VDOT right-of-way with the following conditions:
  - An EMS marker (electronic marker system) must be cast into the lid.
  - A flat composite type marker 1' x 1' x 4" must be placed above the buried handhole showing the size of the handhole and the depth of the handhole.
  - Handholes must be buried a minimum of 12" below finished grade and no deeper than 24".
  - Maximum size of handholes in the right of way must remain the same. (4'W x 5'L x 4'D)
  - Handholes are not permitted under sidewalks, trails, or pavement areas.
  - Handholes shall be placed a minimum of 25' apart.
  - There shall be no more than one handhole in front of one property.

**11. LABELING:**

- a) Indicate the length and type of cable proposed for installation on each page.
- b) Show and label the edge of pavement and/or curb and gutter.
- c) Show and label the correct VDOT right-of-way line and indicate on the drawing the total width of available right-of-way along the roadway route.
- e) Show distance of proposed cable from the roadway.
- f) Do not install cable in a ditchline.
- g) Identify the proposed cable installation method on each plan sheet, such as hand, machine trenching, or directional bore.

**12. CABLE INSTALLATION ALONG ROADWAYS:**

- a) No cable installations are permitted within one foot of the roadway shoulder. If there is no curb or road shoulder, the cable must be located a minimum of three (3) feet off the roadway.
- b) No cable installation will be permitted in a ditchline. Cable installations will be permitted along the backside of the ditchline (only).
- c) Underground pipe installations encased in concrete are not permitted.

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- d) Requirement for trenchless excavation: Any person conducting trenchless excavation shall take all reasonable steps necessary to protect and support underground utility lines. These steps shall include, but are not limited to the following:
- The excavator should verify that all utility lines in the area are marked.
  - The excavator shall ensure that bore equipment stakes are installed at a safe distance from marked utility lines
  - When grounding rods are used, the excavator shall ensure that they are installed at a safe distance (at least 24 inches plus the width of the utility line, if known) away from the marked or staked location of utility lines.
  - The excavator shall ensure sufficient clearance is maintained between the bore path and any underground utility lines during pullback.
  - The excavator shall give special consideration to water and sewer systems within the area that cannot be located accurately.
  - Unless prohibited by other laws, ordinances, regulations, or rules of governmental and regulatory authorities having jurisdiction, the excavator shall expose all utility lines which will be in the bore path by hand digging to establish the underground utility line's location prior to commencing bore. For a parallel type ore, unless prohibited by other laws, ordinances, regulations, or rules of governmental and regulatory authorities having jurisdiction, the excavator shall expose the utility line by hand digging at reasonable distances along the bore path.
  - The excavator shall ensure the drill head locating device is functioning properly and within its specification.
  - The excavator shall visually check the drill head as it passes through potholes, entrances, and exit pits.
  - If the depth indicated by the locating device is lower than the bottom of the pothole or pit, the excavator shall cease boring until the hole/pit can be hand excavated further to maintain a visual inspection of the drill head.
13. CROSSINGS: All crossings are to be made perpendicular to the roadway for both aerial and underground cable.
14. TRAFFIC SIGNALS:
- a) Cable must be located so as not to interfere with VDOT's traffic signals and related equipment.
  - b) The plan must indicate all of the equipment including the loop detectors, and the distance from the equipment.
  - c) The crossing must be a minimum of 10 feet away from the loop detectors on the backside of the loops.
15. MATCH LINES: Indicate match lines between pages of the plan.
16. PHASES OF WORK: When work is divided between more than one permit, the phases of the project must be split at an intersection.
17. SEPARATE PERMITS REQUIRED:
- a) INTERSTATE: Work on the interstate must include the work zone plan, and the expected date the work is to be performed. This work must be submitted on a separate permit.
  - b) BRIDGE: Bridge attachments must be a separate permit. A detailed plan must be submitted for any proposed bridge attachment showing how the cable will be attached.

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- c) DULLES TOLL ROAD: Crossings of the Dulles Toll Road must have an authorization letter from the Washington Metropolitan Airport Authority before starting work and must have an approval letter before the permit will be released by VDOT.
18. GIS REQUIREMENT: Refer to sheets #9 and #10 for application requirement details.

### **Continuous Surety**

1. NAME:
  - a) A continuous surety must be in place for all fiber optic cable companies
  - b) The surety must be in the name of the company that owns the fiber optic.
  - c) If the incorporated name of the company changes for any reason, the surety must be updated to the new name.
2. AMOUNT:
  - a) The surety amount is determined based on the amount of cable which is anticipated to be installed in the Virginia Department of Transportation right-of-way, and will remain in effect as long as the fiber optic cable is within the right-of-way.
  - b) It is the responsibility of the fiber optic cable company to ensure that the total obligation for all of their active permits does not exceed the total amount of the continuous surety. If it exceeds this amount at any time, no new permits will be issued until the surety is increased or some of the permits are completed.
3. Enclosed is a calculation sheet that should be used to determine the amount of the surety. See Page 8 of this document.
  - a) A sheet to be submitted showing how the surety obligation amount was calculated.
  - b) List name of bonding company, amount of continuous bond, bond number, and the amount of the obligation for work covered under this permit.

### **Account Receivable Numbers**

1. An accounts receivable charge is established for each permit for the Field Inspector's time and related equipment.
2. A monthly bill is mailed to the Permittee for the appropriate Accounts Receivable charges.
3. Permittee must keep the charges up-to-date; failure to do so will be subject to having the job shut down.
4. The permit will not be released until all of the Accounts Receivable charges have been paid.

### **Other**

1. PROJECT CONFLICTS:
  - a) The fiber optic cable company shall certify in writing to VDOT that the above referenced projects have been researched, and that there are no conflicts with any of these projects.
    - The Virginia Transportation Development Plan,
    - Fairfax County's Comprehensive Plan,
    - Fairfax County Public Improvement projects,
    - VDOT's Maintenance Projects,
    - VDOT's Incidental Construction Program,
    - VDOT's Revenue Sharing, or
    - Fairfax County Proposed Development (currently assigned a site plan number)

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- b) If there are conflicts with any of these projects, the fiber optic cable company shall certify and list those projects.
  - c) A conflict is determined to exist if a fiber optic cable route is found to be within the limits of any of the above referenced projects, as stated on the listings. **Any incomplete fiber optic cable route found to be in conflict with any of the above referenced projects listings, is subject to immediate cancellation by VDOT, regardless of the status of individual project developmental drawings. VDOT does not permit work determined to be in conflict with future roadway projects.**
2. The fiber optic cable company is responsible for ensuring that their facilities are installed in compliance with all State and/or Federal regulations including the separation of utilities as regulated by the State Corporation Commission.

### **Active Permits**

1. It is the responsibility of the permittee to maintain accurate records of each and every permit status. All work being performed on state right-of-way must be with an active permit. Those permits that are expired are not legal.
2. If the permittee desires a re-instatement of the permit, it is the permittee's responsibility to request same in writing to VDOT, Fairfax Permits.
3. It is the permittee's responsibility to request, in writing, an inspection to complete the permit.
4. All VDOT inspection punchlists must be handled within 30 working days. It is the responsibility of the permittee to immediately respond to the punchlist items and have the contractor complete those items.
5. Failure to complete punchlist items is subject to placing a hold on processing new permit applications.

### **Permit Data Upload**

1. The file containing permit application data for upload to the VDOT Land Use Permit System (LUPS) are to be submitted on 3½" floppy diskettes with a batch/application number clearly written on the floppy diskette.
1. The only limit on the number of records on that diskette is based upon the capacity of the diskette. Each record represents one permit application.
2. The data file should be created using the Automated Permit Application System. An installation disk and guidelines for this program can be obtained from the Fairfax Permits office. Only one installation disk will be provided per company.
3. Data is validated on input and records failing the validation will be listed on an error report. Rejected records (permit applications) will need to be resubmitted on another diskette for a future data upload.
4. Records accepted will be assigned a permit number and added to the VDOT system.
5. If a record is accepted and added to the Land Use Permit System this does not constitute permit approval. Permit approvals are granted after VDOT review.
6. VDOT will specify what forms or signatures are required to be submitted with the upload diskette.

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**Utility Surety Amounts**

Underground Lines

Minimum:     \$5,000.00 for up to 3,000 feet  
                  Additional \$10.00 per foot for every foot over 3,000 feet

Hand Holes:   \$800.00 each

Overhead Lines

Minimum:     \$5,000.00 up to 4,000 feet  
                  Additional \$50.00 per 200 foot increments over 4,000 feet

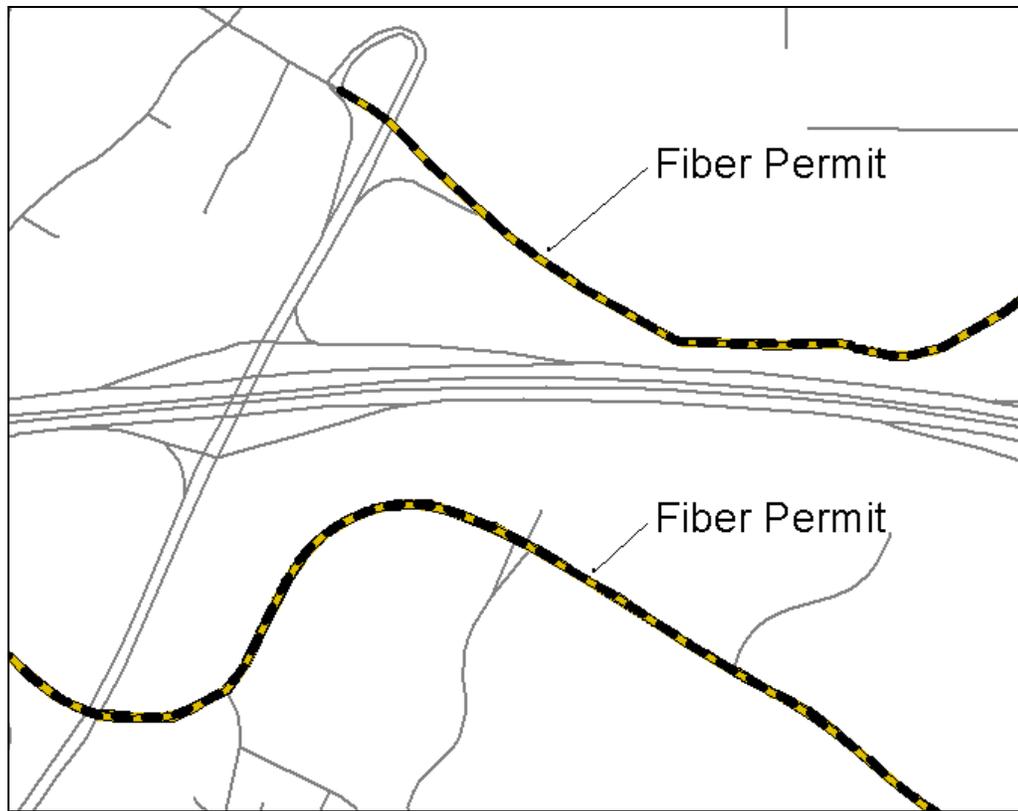
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**GIS LINE FILE for Fiber Optic Permit Submissions**

To better manage VDOT's right-of-way, the Fairfax Permits Section is now requiring a digital file depicting the limits of work for each Fiber Optic permit submittal. *This is in addition to the detailed plan sheets that are currently required.* The file must be compatible with the VDOT's Geographic Information System (GIS). Fairfax Permits will use these files to track permit locations and resolve potential conflicts.

NOTE: The GIS requirement is *not* a digital version of your CAD drawing.

**What is required from the applicant for the GIS submittal:** A "single line" file that depicts the location of the proposed improvements (typically from intersection to intersection). Other information such as the actual CADD plans, edge of pavements, driveways or utilities is not required for GIS.



Sample showing Fiber Permits overlaid upon Roads layer

This file will be overlaid with other VDOT data sets such as the Six-Year Improvement Program, traffic signals, commercial revitalization districts, paving, curb and gutter, active construction projects and other permits.

**Media:** The file should be delivered either on Compact Disc (CD) or 3 1/2" diskettes in Microsoft Windows format (no UNIX). Various "Zip drive" formats will not be accepted.

**File Format:** VDOT's preferred file format is Environmental System Research Institute (ESRI) Shapefile. This format can be produced by ESRI's ArcView software and several other

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commercial-off-the-shelf packages. Other formats that will be accepted are Drawing Exchange Format (DXF), AutoCad (DWG) release 14 or older, and Microstation (DGN).

**Geo-Referencing:** The file must be referenced to The Virginia Coordinate System as defined in Virginia code under § 55-287, 288.1 and 290. This is required to properly overlay the data onto other existing data sets.

Projection: State Plane  
Zone: VA (North)  
Datum: NAD83  
Units: US Survey Feet