

# The Recorder

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## Dominion maps USFS access roads, describes build-out for pipeline

By John Bruce • Staff Writer



*Map shows access roads, in red, located in Highland and Bath for the proposed Atlantic Coast Pipeline and U.S. Forest Service land.*

MONTEREY — Dominion has issued a “draft biological evaluation” for the proposed Atlantic Coast Pipeline, promising safeguards and identifying access roads, describing construction techniques and wildlife habitat impacts on U.S. Forest Service land in Bath and Highland counties and elsewhere.

### *Mountain access roads*

A list of access roads on USFS land includes seven roads totaling roughly 10 miles on mountainous terrain in George Washington National Forest, covering about 33.6 acres in western Highland and northern Bath. All would be permanent.

In describing the roads, the evaluation states, “Construction of the ACP will require roads for access to the right of way ... In the GWNF, 13 access roads (including Augusta) have been identified, including seven existing USFS roads that would require grading and gravel, three existing trails that would be permanently converted to access roads, one existing trail that would

be temporarily converted to an access road for construction, and two new permanent access roads.”

Roadwork will conform to USFS design standards, it said. New roads will be about 30 feet wide and graveled. Dominion explained typical improvements to existing roads will include re-grading and graveling, and trimming overhead vegetation.

Dominion said it would provide the USFS proposed design details after civil surveys have been completed. New roads will include short spurs ranging from less than 0.01 to 0.4 mile long to connect existing roads with the proposed right of way. Once the pipeline is installed, permanent access roads will be used for operations and maintenance. Temporary roads will be restored to pre-existing conditions, Dominion said.

### *Clearing and roads*

Dominion proposes to use a 53.5-foot-wide permanent right of way for operating purposes, and a 75-foot-wide easement for pipeline maintenance on USFS lands, the company explained. “The permanent right of way will be maintained in an herbaceous state in non-cultivated uplands to allow for maintenance access along the right-of-way, except for the outermost portions of the construction right of way — including 20 feet on the working side and 13 feet on the spoil side — which will be replanted with a combination of indigenous tree and shrub seedlings on USFS property,” Dominion explained.

Dominion said it anticipates vegetation “pre-clearing,” which includes removing trees and mowing, will begin this November.

Other pre-construction activities like timber removal, preparing contractor yards and access roads are also expected to begin in November. Dominion expects pipeline construction will begin in April 2018.

The pipeline will be built along 17 spreads with construction, the company said, which would occur over a roughly two-year period beginning in February, through April 2018, depending on spread. Five of the 17 spreads occur within USFS lands. Dominion expects all facilities for the project will be placed in service by the fourth quarter of 2019.

Construction on the GWNF will span four spreads, the company said. One crosses the GWNF for about 4.06 miles just east of the West Virginia-Virginia border. In Bath and Augusta counties, other spreads will cross the GWNF for about 4.12 and 6.51 miles, respectively.

“Based on consultations to date with the (U.S. Fish and Wildlife Service), timing restrictions for tree clearing in West Virginia and Virginia for the migratory bird nesting season and the federally listed Indiana bat Summer season are as follows: Virginia: migratory birds — March 15-Aug. 30; Indiana bats, if a site is within five miles of a known hibernacula, April 1-Nov. 15; if a site is not within five miles of a known hibernacula, April 15-Sept. 15.

“(Dominion) plans to comply with these time-of-year restrictions by clearing trees outside of the migratory bird nesting season, and outside of the Indiana bat summer season in occupied habitat,” the company said.

Habitat occupied by Indiana bats was found in portions of the MNF and GWNF project areas. Currently, tree clearing for the MNF and GWNF is scheduled to begin after the Indiana bat clearing restriction ends in November, Dominion said.

#### *Trout streams and roads*

Dominion said stream crossings will be scheduled to comply with in-water work timing restrictions, and no waterbody crossings are planned for waterbodies in the MNF or GWNF, unless there is no flow in the streams. Dominion said it will adopt and use the most recent (2013) versions of FERC's plan and procedures with project-specific modifications in accordance with Virginia's erosion and sediment control requirements. It will also use a best-in-class method for construction in steep slope areas — those equal to or greater than 30 percent.

The company said it will use existing roads to the extent practicable, but some new roads will need to be built in remote areas. Replacing existing access road waterbody crossings, if needed, will be designed to satisfy standards for stream simulation, it said. No new permanent access road waterbody crossings are currently planned.

#### *Construction and erosion*

Dominion said before ground is disturbed, its contractors will coordinate with a “one-call” system in each state to identify underground utilities like cables and conduits.

“Once this process is complete, the clearing crew will mobilize to the construction areas. Fences along the right of way will be cut and braced, and temporary gates and fences will be installed to contain livestock, if present,” Dominion explained. “The clearing crew will then clear the work area of vegetation and other obstacles, including trees, logs, brush, and rocks ... To the extent feasible, (Dominion) has minimized plans for tree removal during construction. Cleared vegetation and stumps will be burned, chipped (except in wetlands), ground below the surface and left in place, hauled offsite to a commercial disposal facility, or removed and sold for other uses, such as biomass fuel (for USFS lands, cleared vegetation will be removed and disposed of as directed by the authorized officer).”

Burning will not be conducted in wetlands. Following clearing, the construction right of way will be graded to provide a level work surface, Dominion said. More extensive grading will be required in steep side slope or vertical areas to make a safe and level workspace and prevent excessive bending of the pipelines.

Where USFS determines areas need topsoil segregation, graded topsoil will be segregated from the subsoil, Dominion said. Excavated topsoil will be placed on the edge or edges of the right of way. In some areas, the width may need to be increased by 25 feet to accommodate topsoil storage, the company said.

#### *Steep slopes and erosion*

“In mountainous areas, pipelines are typically routed along ridges and hills running perpendicular to the slope (i.e., along the natural fall of the slope) to provide a relatively level surface for vehicles and other equipment during construction,” the company said. “Except for

short distances and in unique circumstances, pipelines are not typically routed laterally along the sides of ridges and hills (i.e., on side slopes) ... Construction on side slopes requires cut-and-fill grading to create a flat surface for construction vehicles and equipment. Relative to construction along the natural fall of a slope, cut-and-fill grading typically requires more workspace and is more challenging to restore.”

Dominion said it will use “special” construction techniques in areas where the slope exceeds 30 percent, or where the pipeline crosses side slopes. A licensed geotechnical expert will be involved in the design of steep terrain crossings, and his or her technical oversight will continue into construction, Dominion said.

Temporary slope breakers will be installed during grading to reduce runoff velocity and divert water off the construction corridor. Dominion cited special measures to be used.

### *Trenching and erosion*

“The pipe trench will be excavated by rotary trenching machines, track-mounted backhoes, or other similar equipment,” Dominion said.

Trench spoil will be deposited next to the trench within the right of way,” the company explained. “The trench for each pipeline will be excavated to a depth that provides sufficient cover over the pipeline after backfilling.”

The dimensions of the trench will vary depending on a number of factors, it said, such as the substrate in the vicinity.

“In areas where topsoil segregation is required, subsoil from trench excavations will be placed adjacent to the topsoil in a separate pile to allow for proper restoration of the soil during backfilling and restoration,” Dominion said. “Gaps will be left between the topsoil and subsoil piles to prevent storm water runoff from backing up or flooding and to prevent risk of mixing. Mixing of topsoil and subsoil piles will be prevented by separating them physically or with a mulch or silt fence barrier, where necessary, to accommodate reduced workspace. When rock or rocky formations are encountered, tractor-mounted mechanical rippers, hydraulic hoe rams, or rock trenchers will be used for breaking up the rock prior to excavation.”

### *Blasting vs. rock removal*

In areas where equipment or other means cannot be used to break up or loosen boulders or hard bedrock within 60 inches of the ground surface, including at waterbody crossings, blasting will be required, the company explained.

“The act of blasting can be conducted in several forms: mass rock blasting typical in building of roadways or construction sites for grading large areas; production blasting (open pit) typical in quarry and strip mining; and trench blasting typical in construction of pipelines, water lines, and sewer lines. Trench blasting is the least impactful to the environment around the blast location. (Dominion) will be conducting trench blasting for this project. When trenches are excavated for pipeline installation, blasting will be used to break any rock encountered before the required depth is achieved.

“A trench blast is more confined than a normal open pit blast; open pit blasts result in higher explosives consumption per cubic feet of blasted rock. The diameter of the blast holes is normally smaller, which provides better distribution of the explosive in the rock and avoids excessive over break outside the width of the trench and will help avoid high peak overpressure (noise) and high peak particle velocities (vibration) readings.”

The company said trench blasting is controlled with a “precision blast design” by a certified blasting professional. Blasting will produce a one-time vibration and peak overpressure and is short in duration.

### *Pipe laying*

Dominion explained individual pipe joints (40 to 80 feet long) will be transported to the construction right of way and strung along the trench in a single, continuous line. Pipe sections will be bent, where necessary, to allow for a uniform fit with the contours at the bottom of the trench. “Typically, a track-mounted, hydraulic pipe-bending machine will tailor the shape of the pipe to conform to these contours. After the pipe sections are bent, they will be welded together into long sections and placed on temporary supports. Welding of pipe sections will primarily occur on the right of way. There may be some situations where terrain requires that pipe be bent in nearby workspaces and transported to its intended location,” Dominion said.

“Welding is a crucial phase of pipeline construction because the integrity of the pipeline depends on this process,” it continued. “Each weld must exhibit the same structural integrity with respect to strength and ductility ... Following welding and after inspection, pipe weld joints will be coated with an epoxy coating in accordance with required specifications. Field welds will be coated on the right of way immediately adjacent to the ditch or within the ditch at the tie-in location. The pipeline coating will consist of a two-part epoxy that will be mixed in an upland area. Splash pads, plastic or other material will be placed on the ground in the mixing area to contain potential spills.”

The company explained that before the pipe is lowered into the trench, the trench is inspected for rocks or debris.

The pipe is lowered in using side-boom tractors. “Pipe supports, either sandbags or soil, will be sifted in the bottom of the ditch to support the pipe. As necessary, trench breakers (stacked sand bags, Sakrete, or foam) will be installed in the trench around the pipe to prevent the movement of subsurface water along the pipeline. After lowering-in, the pipe will be padded and the trench will be backfilled with native materials using bladed equipment or backhoes. If the excavated material is rocky, the pipeline will be protected with a rock shield or covered with other suitable fill. In appropriate circumstances, excavated rock may be crushed with a rock pulverizer and incorporated into fill or used as gravel to upgrade access roads. Excavated material that is not required for backfill will be re- moved and disposed of at approved disposal sites. Alternatively, excess material could be stacked along the edge of the temporary workspace for habitat enhancement (e.g., for salamanders).”

### *Hydrostatic testing*

After backfilling the trench, each pipeline will be hydrostatically tested in sections to verify it's free from leaks and will provide the required margin of safety at operating pressures, the company said. Individual sections to be tested will be determined by water availability, pipe classification, and terrain conditions.

Water will be obtained from surface sources or municipal water sources. No water will be withdrawn from sources on either the MNF or GWNF, Dominion said.

“If a leak in the pipeline is found during testing, the pipeline section will be dewatered, the leak will be repaired, and the section of pipe will be retested until the required specifications are met. Once hydrostatic testing is complete, the test water will be discharged ... to remove turbidity or suspended sediments.”

After hydrostatic testing, the final tie-ins on each pipeline will be completed and commissioning will begin, Dominion explained. Commissioning involves activities to verify equipment is properly installed and working; controls and communications systems are functional; and the pipeline is ready for service.

During the commissioning, equipment like mainline valves will be inspected, and the initial start-up of compressor facilities will begin. The line and facilities will be slowly purged and loaded with natural gas until brought into operation.