

# TECHNICAL MEMORANDUM

**To:** Washington State Department of Health (DOH)  
**From:** John Wells, P.E.  
**Subject:** Wallula Dodd Water System, ID No. AB183,  
DOH Project No. 24-0805 Project Report - Peterson  
Road Extension  
**Date:** October 28, 2024  
**Job/File No.** 385-399-015  
**cc:** Patrick Reay (Port of Walla Walla), Paul Gerola (Port of Walla Walla), Bill Vixie, P.E.  
(Anderson Perry & Associates, Inc.)



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10/29/2024

The Port of Walla Walla is expanding the Wallula Dodd Water System water distribution service in the Wallula Gap Business Park following the construction of the Peterson Road Extension and paving of Peterson West and Nunn Roads. The distribution water line extension is necessary to supply potable and fire suppression water to future businesses proposing to construct in the Wallula Gap Business Park or the adjacent property (known as the Kelly-Sterns Property).

The Port is under agreement with Rockwool Group, a new manufacturer, to provide potable water to the edge of Rockwool's property on or before June 1, 2025. The manufacturer has requested an 8-inch water line capable of supplying 23,400 gallons per hour (390 gallons per minute [gpm]) at 40 pounds per square inch gauge. A new 24-inch water main is being constructed along the eastern edge of the Wallula Gap Business Park, approved by DOH Project No. 23-1104. Supply to Rockwool Group would be from the new water main, proceeding west following a new proposed roadway (known as the Peterson Road Extension).

The target maximum peak hour demand velocity is 5 feet per second (fps). The future distribution system water line will be looped to provide additional flow and redundancy as needed.

## Design Criteria

Distribution system piping will be 18-inch diameter DR 13.5 (160 pounds per square inch) HDPE PE4710. This decision was made to match existing piping at the Wallula Gap Business Park and is intended to reduce conflicts by not introducing multiple types of distribution piping in this area of the water system. The average inside diameter of 18-inch diameter DR 13.5 is 16.439 inches for ductile iron pipe equivalent. This current segment of the proposed distribution system piping would be able to provide 3,300 gpm at 5 fps.

Valves will be placed to shut off pipeline segments or maintain equipment, including flowmeters and air release valves. Combination air and vacuum release valves will be installed at all high points or at a maximum distance of 2,500 feet. Combination air and vacuum release valves may be

spaced farther apart if water services are installed in the new distribution line, such as for Rockwool Group service. The combination air and vacuum valves in the existing 24-inch main can be relied on to provide vacuum relief for the new proposed water line since this water main is installed at the system's highest points. However, two additional combination valves should also be installed along the Peterson Road Extension and one at the highest point on Nunn Road.

Blowoff valves will be connected to any hydrants installed at low points with the tee turned downward on the main line to ensure sediment can be flushed and complete draining of the pipeline can occur.

Fire hydrants to match existing Wallula Gap Business Park hydrants will be installed along the roadway at selected locations and will conform to American Water Works Association specifications for dry barrel fire hydrants. Each fire hydrant will have its own auxiliary gate valve. Additional future hydrants will be installed as the business park develops. Rockwool Group will install an on-site fire tank, fire booster pump, and dedicated fire suppression system for both interior and exterior coverage, to be approved by the Walla Walla County building official.

The pipeline cover will be a minimum of 3.5 feet.

Backfill will be native material; no imported backfill will be required. Thrust restraint will be provided by mechanical joints, flanges, and fusion welding. Thrust blocks will be required when mechanical restraints are insufficient or when additional forces may be anticipated.

All non-potable water crossings are to be cased and meet Washington State Department of Ecology and DOH separation requirements found in publication No. 06-1-029, May 2006. The casing pipe diameter will be a minimum of 4 inches larger than the carrier pipe diameter. All water lines will have tracer wire installed to facilitate future location of the water lines.

Backflow prevention will be provided by Rockwool Group downstream of the flowmeter. Rockwool Group will submit the proposed backflow device for approval by the Port of Walla Walla certified backflow assembly tester.

JW/ms