



NORTH PERRY AVENUE WATER DISTRICT

FIRE FLOW ANALYSIS INFORMATION

Project No.: <u>12-10285.00 002</u>	Date: <u>December 10, 2019</u>
Applicant Name: <u>Skateland</u>	Project Location: <u>Hydrant HF4-12</u>
Proposed Use:	<u>N/A</u>
Static Pressure Range at Project Location:	<u>65 psi (minimum); 80 psi (maximum)</u>
Available Fire Flow (@ 20 psi min or 10 fps max):	<u>2,328 GPM</u>
Distance from Property to Fire Flow Hydrant(s):	<u>N/A</u>
Location of Fire Hydrant(s) (Refer to Attached Map):	<u>(Hydrant HF4-12 490 Zone)</u>
Fire Flow Analysis Expiration Date:	<u>(one year from date of issuance)</u>

A hydraulic analysis of the District's water distribution system was performed to determine available fire flow at the above-referenced project location. The analysis was conducted in accordance with WAC 246-290-230. Specific analysis criteria and operational conditions are as follows:

- This analysis is based on the District's existing water distribution system configuration.
- Analysis results indicate the capacity of the distribution system (as opposed to a given fire hydrant) to produce the required fire flow with a minimum residual pressure of 20 psi at all points throughout the distribution system (not including transmission piping). Actual fire flows may vary due to distribution system changes, variations in system demand and operational conditions.
- Minimum static pressure is based on Peak Hour Demand and reservoirs at the bottom of their respective equalizing ranges; maximum static pressure is based on minimum system demand and reservoirs full.
- Fire flow demand is superimposed over existing Maximum Day Demand (MDD).
- Maximum allowed velocity in the distribution system is 10 feet per second, during MDD plus fire flow conditions.
- The Sunset 1 & 2 and Olympus 1 & 2 tanks are set at a depth equivalent to a 470.8' water surface elevation, representing depletion of operational, equalizing and fire suppression storage.
- All 490 zone supplies and all pressure reducing stations are operating at their normal setpoints.
- Required fire flow is identified by the Kitsap County Department of Community Development.

Venu Kandiah

Venu Kandiah, P.E., Project Engineer
BHC Consultants, LLC



Permit Number: 19-04603

North Perry Avenue Water District Skateland Fire Main HF4-12

STATE HWY 303 NE

Available flow limited to
2,328 gpm due to velocity
exceedance (10 ft/s)

2,328 gpm available
in system at hydrant
HF4-12 location

NE FUSON RD

Junction PRESSURE

- < 20 psi
- > 20 psi

Pipe VELOCITY

- less than 9.50
- 9.50 ~ 10.00
- 10.00 ~ 100.00

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