



May 7, 2018

Mr. Don Adams, County Manager
Jackson County
401 Grindstaff Cove Road
Sylva, North Carolina 28779

Via email

Re: **Jackson County Cashiers Water System Demand
Evaluation for Proposed 188 Burns Street Water Request
(Grouse Point, LLC – Jackson County PIN 7572-30-9722)
Cashiers, North Carolina**

Dear Mr. Adams:

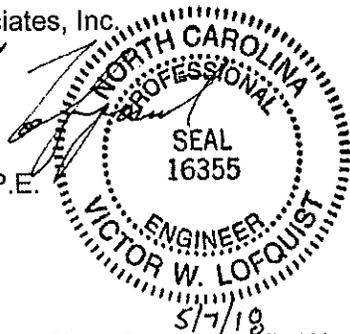
We are writing as a follow up to our April 3, 2018 Letter regarding the Jackson County Cashiers Water System. At the time of our previous evaluation, as summarized in the April 3, 2018 letter, we were unaware that the Village Green was planning the addition of a new Community Center at their facility. We have subsequently updated our preliminary evaluation based on both, the change in service proposed at 188 Burns Street (Grouse Point, LLC) and the addition of the new Village Green Community Center. We have based our updated evaluation on the May 1, 2018 letter from Alec Stillwell, PE to Chad Parker, Public Works Director.

Using the data presented in the Stillwell letter (including both potable water demands and fire sprinkler tank filling), we recommend upgrading the existing water system by replacing the 49 gallons per minute well pump with a new pump and controls having a minimum capacity of approximately 75 gallons per minutes. This upgrade will provide for the additional demands without the need for increasing well capacity or increasing the size of the existing hydro-pneumatic storage tank. This proposed well pump upgrade will increase the motor horsepower from 7.5 to approximately 10 or 15, which will likely require an upgrade from single phase to three phase electrical service. Plan approval and an Authorization to Construct will be required from NC Public Water Supply prior to replacing and upgrading the well pump.

If we can provide further assistance regarding the Cashiers Water System, please do not hesitate to call.

Sincerely,
Lofquist & Associates, Inc.

Victor Lofquist, P.E.



cc with attachment: Chad Parker, Public Works Director

Preliminary Cost Estimate
for
Jackson County Cashiers Water System
New Well Pump and Chemical Feed Upgrade

<u>Estimated Construction Costs</u>		
<u>Item #</u>	<u>Description</u>	<u>Estimated Cost</u>
1	Mobilization	\$1,500
2	New Well Pump (75 gpm ±)	\$6,800
3	Minor Piping & Valve Modifications	\$3,800
4	Electrical and Control Upgrades	\$5,750
5	Set Well Pump and Miscellaneous Related Work	\$7,500
6	Upgrade Chemical Feed System (Chlorination & Corrosion Control)	\$8,200
	Estimated Construction Subtotal	\$33,550
<u>Other Estimated Project Costs</u>		
<u>Item #</u>	<u>Description</u>	<u>Estimated Costs</u>
7	Permit Fee Allowance	\$300
8	Engineering: Design (Well Pump & Chemical Feed Upgrade)	\$5,500
9	Engineering: Informal Construction Quote Solicitation & Contract Administration Services	\$2,500
10	Engineering: Periodic Construction Observation	\$1,000
11	Project Contingency	\$5,000
	Estimated Other Estimated Costs Subtotal	\$14,300
	Total Estimated Project Cost	\$47,850
<u>Notes:</u>		
a. This estimate assumes that NCPWS will not require additional testing (ie: drawdown or water quality tests).		
b. This estimate assumes that the existing well drop pipe will be suitable for re-use with the new pump.		
b. This estimate is based on the engineer's opinion of typical current market pricing and does not contain provisions for inflation.		