



Making a difference...together

**REPORT TO FULFORD WATER SERVICE COMMISSION
MEETING OF MONDAY 13 DECEMBER 2010**

SUBJECT SUNNYSIDE AND TAHOUNEY CONNECTIONS

ISSUE

The Fulford Water Service Commission (FWSC) has requested further information regarding costs and alternatives for providing treated water service connections on Sunnyside Drive and Tahouney Road.

BACKGROUND

Staff presented a report to the FWSC at its meeting of 25 November 2010 on alternatives and estimated costs for connecting properties fronting Sunnyside Drive and Tahouney Road to treated water from the new DAF plant. These properties currently receive chlorinated water directly from Weston Lake. The FWSC requested clarification of the estimated costs of two alternatives for providing treated water to Sunnyside Drive properties when a new 150mm PVC watermain between the Sunnyside Drive PRV station and cul-de-sac is installed. The FWSC also requested cost estimates for two alternatives to provide treated water to two properties fronting Tahouney Road.

Revised Cost Estimates – Tahouney Road

A cost estimate has been prepared by the North Salt Spring Waterworks District to provide a service connection to 120 Tahouney from the end of Hilltop Road, which would provide improved service pressure to the property. The estimated cost to complete this connection, including a 25% allowance for engineering and contingency, is \$11,301. Providing a connection for 120 Tahouney from Hilltop Road would reduce the scope of work required on Tahouney Road to a connection for 105 Tahouney only, thereby reducing the estimated cost (including engineering and contingency) to \$9,597. The \$20,898 total estimated cost of this approach is \$3,444 lower than the estimated cost of \$24,342 to provide both connections from Tahouney Road.

Revised Cost Estimates – Sunnyside Drive

Sketches showing the two scenarios discussed at the 25 November meeting for installing a new 150mm watermain and completing treated water connections on Sunnyside Drive are provided in Attachment 1. Scenario 1A (described in the 25 November staff report as Alternative 1) includes the installation of the 150mm main and transfer of the individual service connections from the original asbestos-cement main to the new 150mm main. Scenario 1B avoids the expense of transferring the individual services to the new main by reversing the direction of flow in the two existing 100mm mains in Sunnyside Drive. CRD staff estimators advised prior to the 25 November meeting that the cost to complete 1B would not be less than 1A, yet 1A would yield greater value by removing the original asbestos-cement watermain from the treated distribution system. For these reasons, a detailed cost estimate to complete 1B was not prepared for the 25 November report.

Detailed cost estimates have been prepared for Scenarios 1A and 1B. Upon review of earlier estimates of Scenario 1A, it was discovered that the transfer of service connections had inadvertently not been included in these estimates. With the estimated cost to transfer service connections from the original asbestos-cement main to the new 150mm PVC main cost included, the estimate to complete Scenario 1A is \$18,806 greater than was reported 25 November.

Although Scenario 1B avoids the cost of transferring individual service connections to the new main, it requires changes to the configuration of the watermains in three locations (described as Alternative 2 in

the 25 November staff report) in addition to the installation of the 150mm watermain and hydrant (at an estimated cost of \$49,830). The estimated cost to reconfigure the mains is \$56,777. For this reason, the estimated cost of Scenario 1B exceeds that of Scenario 1A by \$39,971. The cost estimates are as follows:

Cost Estimates to Provide 150mm Watermain and Treated Water Connections on Sunnyside Drive

Item	Estimated Cost
SCENARIO 1A. Install new 150mm distribution main from Sunnyside Drive cul-de-sac to PRV station, install new hydrant at PRV station, and reconnect service connections to new main.	
Labour	\$ 20,032.87
Materials	\$ 18,610.14
Tools and Equipment	\$ 5,865.60
Services	\$ 10,400.00
Engineering and Contingency	\$ 13,727.15
Total	\$ 68,635.76

SCENARIO 1B. Install new 150mm distribution main from Sunnyside Drive cul-de-sac to PRV station, install hydrant at PRV station and reconfigure existing 100mm mains to use existing 100mm PVC main as raw water line, and 100mm asbestos-cement main as distribution main serving Sunnyside and Hilltop.

Labour	\$ 37,105.39
Materials	\$ 19,405.68
Tools and Equipment	\$ 11,406.80
Services	\$ 17,368.00
Engineering and Contingency	\$ 21,321.47
Total	\$ 106,607.33

A summary of the estimated costs to complete the treated water connections on Sunnyside Drive and Tahouney Road is included in Attachment 2.

ALTERNATIVES

1. That the Fulford Water Service Commission authorize the expenditure of up to \$90,000 for the installation of a new 150mm PVC watermain and hydrant on Sunnyside Drive, 16 service connections to the new main, one connection on Tahouney Road and one connection on Hilltop Road; with funding of \$54,679 provided from the 2010 capital plan and the balance of up to \$35,321 recovered through an increase of approximately \$330 in the 2011 residential user charge and proportional increases in non-residential fees and charges.
2. That the Fulford Water Service Commission direct staff to add the \$35,321 funding shortfall for the Sunnyside and Tahouney connections to the maximum proposed borrowing for a spring 2011 referendum of the electors of the Fulford Water Service Area.

IMPLICATIONS

Of the two scenarios for installation of a 150mm watermain and provision of treated water to properties on Sunnyside Drive, Scenario 1A represents a much lower construction cost and better long-term value (by removing services from the aging asbestos-cement main) than scenario 1B. Similarly, completing one of the two Tahouney connections from Hilltop Road is estimated to cost less than completing both

connections off Tahouney, and will yield better service to one of the two customers. There is no apparent reason to favour Scenario 1B for Sunnyside Drive, or servicing 120 Tahouney from Tahouney Road.

Alternative 1

In order to complete the Sunnyside and Tahouney connections to treated water as soon as possible, the \$35,321 funding shortfall would need to be recovered in 2011 directly from parcel tax or user charge revenue. Recovering on the user charge ensures that tax exempt properties and connections serving more than a single family dwelling contribute a fair share of the funding.

Alternative 2

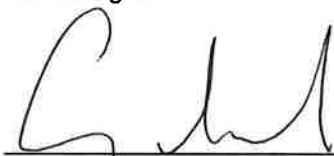
Adding the funding shortfall for the Sunnyside and Tahouney connections to the proposed 2011 loan authorization would enable the cost to be recovered over 15 years, reducing the impact on the user charge from a one-year cost of about \$330 to an annual cost of about \$36 for 15 years. There is a risk of failure of a loan authorization referendum, in which case the work would need to be funded directly from revenue as it is required to meet legislated obligations for the provision of drinking water service. Further delays pose an undue hardship to the customers on Sunnyside Drive and Tahouney Road.

CONCLUSION

The cost to install a new 150mm watermain and hydrant and to transfer service connections to the new main is about \$40,000 less than the cost to install a 150mm watermain and hydrant and to reconfigure watermain to enable service connections to remain on the original asbestos-cement watermain. The cost to service 120 Tahouney Road from Hilltop Road is about \$3,400 less than to service it from Tahouney Road. In both cases, the lower cost approaches also yield better long-term value to the users of the service.

RECOMMENDATION

That the Fulford Water Service Commission authorize the expenditure of up to \$90,000 for the installation of a new 150mm PVC watermain and hydrant on Sunnyside Drive, 16 service connections to the new main, one connection on Tahouney Road and one connection on Hilltop Road; with funding of \$54,679 provided from the 2010 capital plan and the balance of up to \$35,321 recovered through an increase of approximately \$330 in the 2011 residential user charge and proportional increases in non-residential fees and charges.



Colwyn Sunderland, ASCT
Local Services Engineering Coordinator



Tim Tanton, PEng
Senior Manager, Infrastructure Engineering
Concurrence



J.A. (Jack) Hull, MBA, PEng
General Manager, Integrated Water Services
Concurrence

FOR

CS:ls
Attachments: 2

Fulford Water System - Cost Estimates for Water Service Connection Work**ATTACHMENT 2**

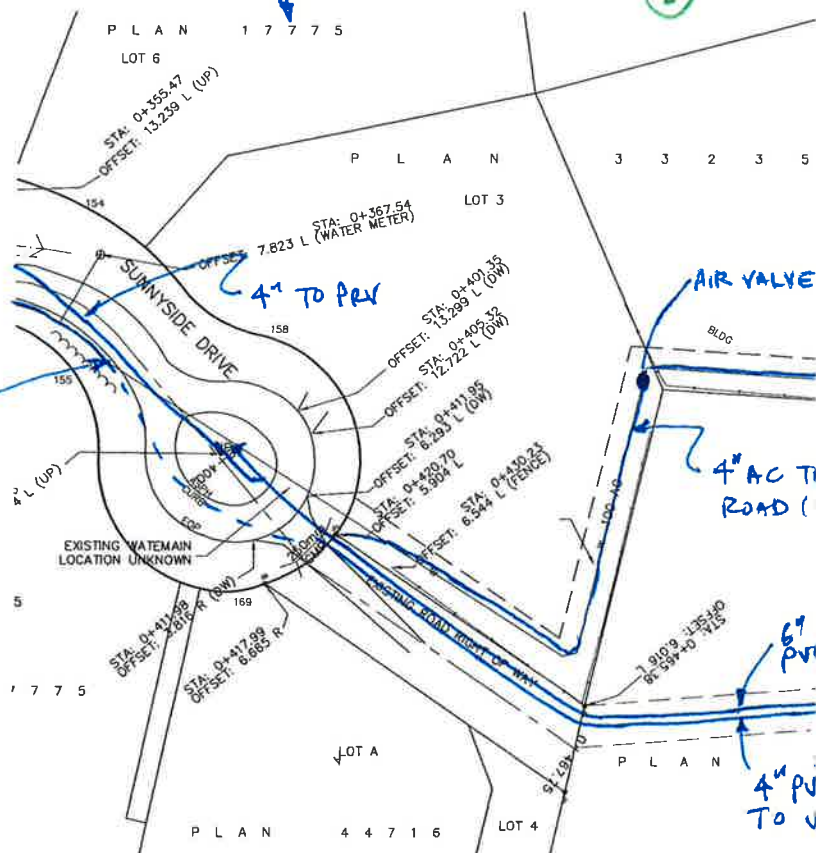
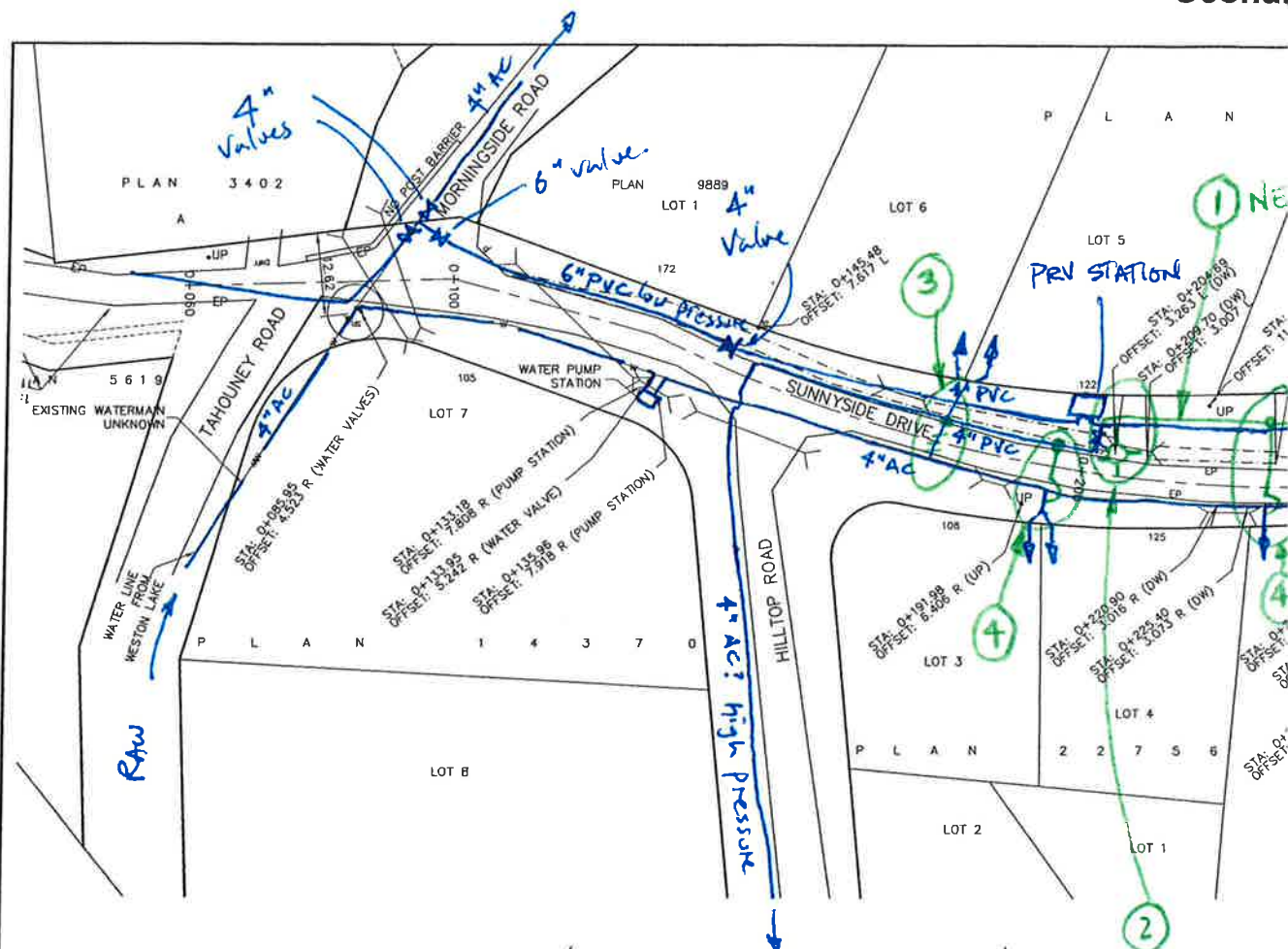
Item	Estimated Cost
-------------	-----------------------

SCENARIO 1A. Install new 150mm distribution main from Sunnyside Drive cul-de-sac to PRV station, install new hydrant at PRV station, and reconnect service connections to new main

Hilltop Road: Service connection to 120 Tahouney	
Labour	\$ 3,120.00
Materials	\$ 3,425.04
Tools and Equipment	\$ 1,600.00
Services	\$ 896.00
Engineering and Contingency	\$ 2,260.26
Subtotal - Hilltop Road	\$ 11,301.30
Tahouney Road: Service connection to 105 Tahouney	
Labour	\$ 3,945.17
Materials	\$ 1,431.73
Tools and Equipment	\$ 660.80
Services	\$ 1,800.00
Engineering and Contingency	\$ 1,759.42
Subtotal - Tahouney Road	\$ 9,597.12
Sunnyside Drive	
Labour	\$ 20,032.87
Materials	\$ 18,610.14
Tools and Equipment	\$ 5,865.60
Services	\$ 10,400.00
Engineering and Contingency	\$ 13,727.15
Subtotal - Sunnyside Drive	\$ 68,635.76
TOTAL ESTIMATED COST - SCENARIO 1A	\$ 89,534.18

SCENARIO 1B. Install new 150mm distribuion main from Sunnyside Drive cul-de-sac to PRV station, install hydrant at PRV station and reconfigure existing 100mm mains to use existing 100mm PVC main as raw water line, and 100mm asbestos-cement main as distribution main serving Sunnyside and Hilltop.

Hilltop Road (as above)	\$ 11,301.30
Tahouney Road (as above)	\$ 9,597.12
Sunnyside Drive	
Labour	\$ 37,105.39
Materials	\$ 19,405.68
Tools and Equipment	\$ 11,406.80
Services	\$ 17,368.00
Engineering and Contingency	\$ 21,321.47
Subtotal - Sunnyside Drive	\$ 106,607.33
TOTAL ESTIMATED COST - SCENARIO 1B	\$ 127,505.76



THIS DRAWING IS FOR THE SOLE USE OF THE CLIENT AND NO REPRESENTATIONS OF ANY KIND ARE MADE TO ANY OTHER PARTY.

bullock baur

File No. 1529-02
civil engineering
community infrastructure
project management

202-J-130 Charleston Way
Victoria BC V8Y 5J2
phone: 751 386 2521
fax: 250 381 1825
office@bullockscout.ca

SEA

BY

DATE _____

No

REVISION

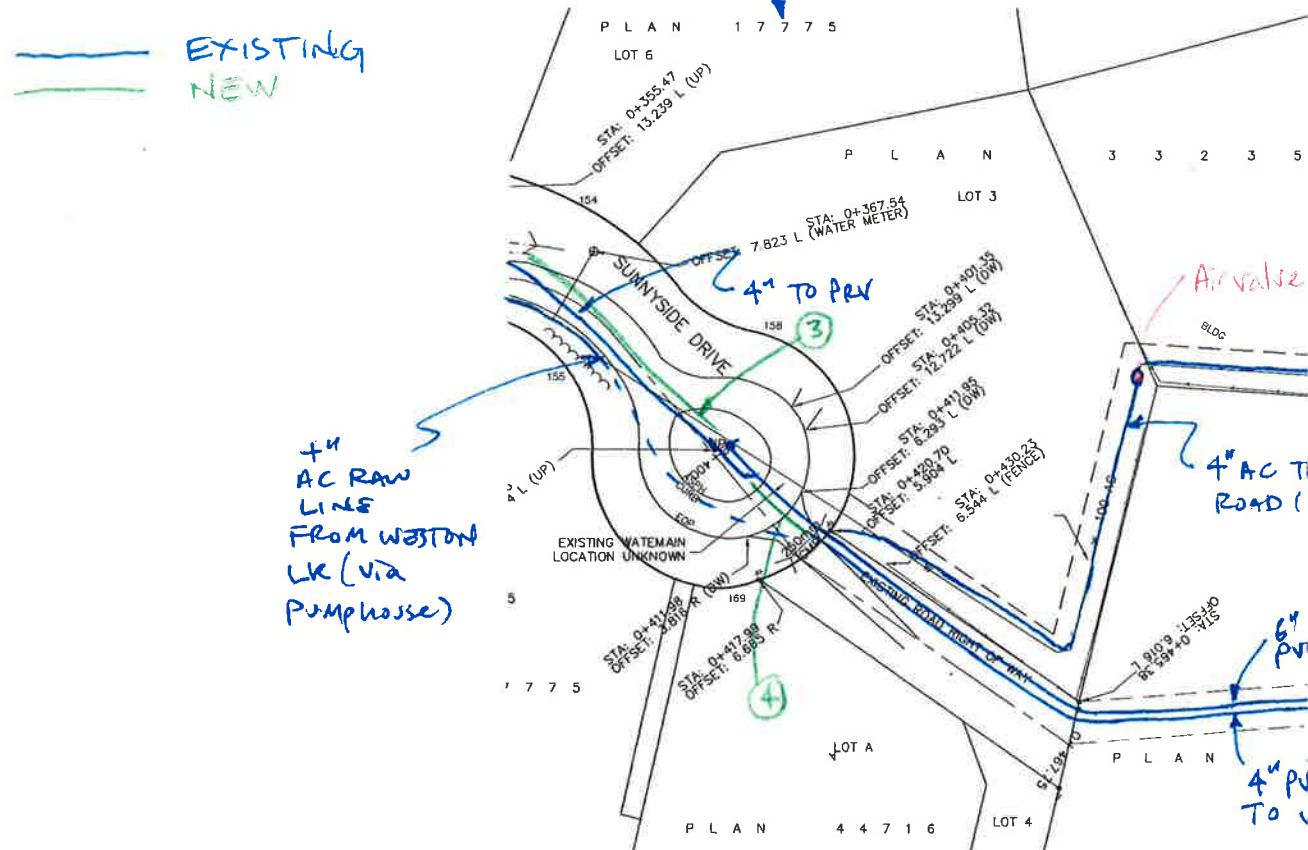
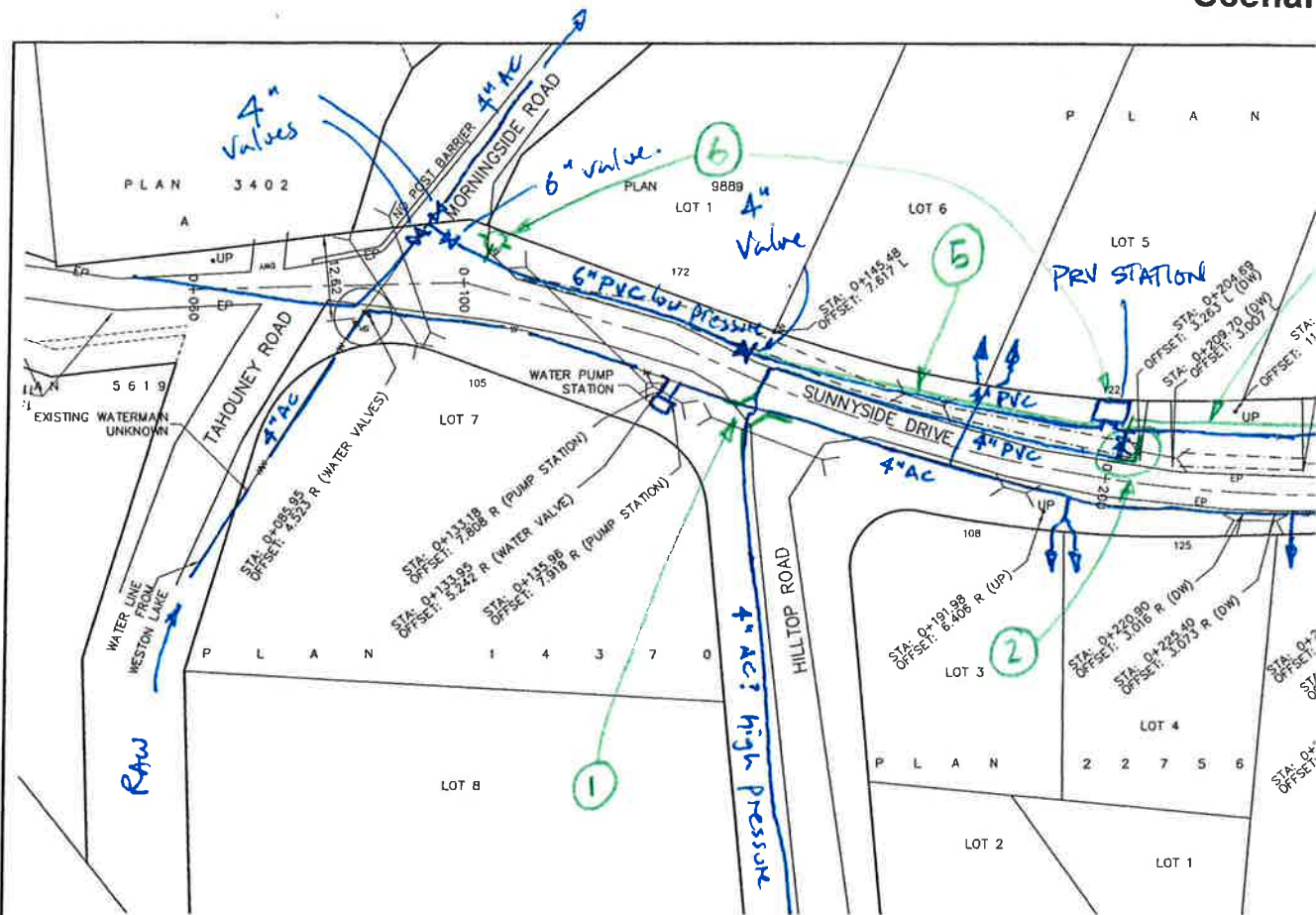
EN

1

1

06

OR CONSTRUCTION



THIS DRAWING IS FOR THE SOLE USE OF THE CLIENT AND NO REPRESENTATIONS OF ANY KIND ARE MADE TO ANY OTHER PARTY.

bullock baur

File No. 1529-02
civil engineering
community infrastructure
project management

202-3430 Chatterton Way
Victoria BC V8M 5G2
phone 250 366 2521
fax 250 367 1265
office@culicoides.ca

SEAL

BY	DATE	No.
----	------	-----

REVISION

ENG.	
------	--

1	JUNE 13/06	FOR CONSTRUCTION
---	------------	------------------

FOR CONSTRUCTION