

Basis for Cost Increase

The West Inter Lake District (WILD) regional water transmission line is designed to transport potable water from the Capital Region Parkland Water Services Commission (CRPWSC) transmission line to the WILD pumping station, and then onto multiple municipalities. The tie-in is located inside of Stony Plain along the Boundary Road right-of-way and the pumping station is located just north of Stony Plain in the reclaimed lagoon site. The length of the WILD line between the tie-in and the pumping station is 4,278m and includes multiple fittings, valves, and a highway crossing. The WILD transmission line is sized using water modeling and is calculated from a projected twenty-five year demand of 7,181 m³/day for the members of the WILD Commission. Based on this demand, the line was sized to have an interior diameter of 400mm with a nominal pipe size of 18".

Parkland County has asked the WILD Commission to include capacity in the WILD water line to accommodate the future servicing of the 5th Meridian area. The 5th Meridian Servicing Study (AE, 2010) provides a projected demand for this area of 49.6L/s or 4,286m³/day. When added to the projected demand for the WILD line, the total capacity of the line would be increased to 11,467m³/day. By updating the water modeling to accommodate the increased capacity, the interior diameter of the pipeline was calculated to be 450mm, with a nominal pipe diameter of 20".

To analyze the cost associated with increasing the WILD line to include Parkland County demands, only the affected costs are compared. The affected costs include: pipe supply and install costs, highway crossing costs, valve installation costs, and fittings costs. For this cost increase it is assumed that the WILD line will be increased in size only for the 4,278m of pipe between the tie-in and the pumping station. The expected increase in cost to include Parkland County flows in the WILD line is approximately \$226,000. This cost does not include any alterations to the WILD line or pumping station to connect to the future Parkland system.

Estimated Cost for WILD Only

Description	Quantity		Unit Price	Cost
Supply 18" DR 26 Fusible PVC	4,184	m	\$96.00	\$401,664.00
Supply 18" DR 21 Fusible PVC (Highway Crossing)	94	m	\$122.00	\$11,468.00
Install 18" Fusible PVC by HDD	4,278	m	\$265.00	\$1,133,670.00
Supply and Install 18" Valve	6	Each	\$35,000.00	\$210,000.00
Miscellaneous Fittings (Tees, bends, etc.)	14	Each	\$9,000.00	\$126,000.00
Sub-total				\$1,882,802.00
G.S.T. (5%)				\$94,140.00
Total				\$1,976,942.00

Estimated Cost for Combined WILD and Parkland County Demands

Description	Quantity		Unit Price	Cost
Supply 20" DR 26 Fusible PVC	4,184	m	\$120.00	\$502,080.00
Supply 20" DR 21 Fusible PVC (Highway Crossing)	94	m	\$152.00	\$14,288.00
Install 20" Fusible PVC by HDD	4,278	m	\$295.00	\$1,262,010.00
Supply and Install 20" Valve	6	Each	\$30,000.00	\$180,000.00
Miscellaneous Fittings (Tees, bends, etc.)	14	Each	\$10,000.00	\$140,000.00
Sub-total				\$2,098,378.00
G.S.T. (5%)				\$104,919.00
Total				\$2,203,297.00