# Engineering



Engineering is responsible for water and sewer, transportation and environmental services.

## Third Quarter Report, 2017



#### **2016 Water and Sewer Combo Project**

The project is a combination of one water main installation, one storm main installation and five sewer main upgrades throughout Chilliwack that have been combined to increase scope and economy of scale. The proposed water main installation will increase supply, fire flow capacity and improve the water quality of the existing water system in the local area. The proposed sewer main replacements and upgrades will replace aging infrastructure and increase capacity to satisfy increased flow from new and future developments. The proposed storm main installation will convey storm water away from water supply production wells to protect the City's drinking water.

Name of Project	Contract Value	Project Status
Keith Wilson Road Water Main	\$840,130	Completed
Watson Road Storm Main	\$808,389	Completed
Watson Road Sanitary Main	\$82,147	Completed
Watson Road Paving Works	\$315,384	Completed
Evans Road Sanitary Main	\$348,242	Completed
Vedder Road Sanitary Main	\$643,364	In Progress
Cheam Avenue Sanitary Sewer	\$935,604	Completed
Hodgins Avenue Sanitary Sewer	\$746,777	Completed
Hodgins Avenue Paving Works	\$333,730	Completed
Princess Avenue Sanitary Sewer	\$89,957	Completed

The following table shows water, storm and sewer main installation and upgrade projects:

The Sandpiper Contracting/Wedler Engineering Design-Build team is proceeding with design and construction of the project.

This \$5,143,724 overall project is scheduled to be completed in October 2017.







#### **Well #5 Pilot Testing Study**



The objective of this project is to conduct a pilot testing study to determine the treatment requirements before Well #5 can be brought online.

Associated Engineering is proceeding with designing the pilot testing study at present. This \$250,000 study is scheduled to be completed in the Fall of 2018.

#### Wastewater Treatment Plant High Strength Wastewater Pre-Treatment

The PCL Constructors Westcoast Inc. (PCL) has been selected as the Construction Manager along with Associated Engineering (B.C.) Ltd. as the design consultant for this Construction Management Project. Global Water & Energy (GW&E) has been selected as the preferred vendor to supply an anaerobic wastewater treatment system for the pre-treatment facility after successful completion of the Request for Proposal (RFP) process. PCL, AE and GW&E are currently in the process of completing detailed design work.

The overall project is scheduled to be completed in December 2018.





#### **Vedder Bridge Replacement Design-Build Project**

Chilliwack residents celebrated the new Vedder Bridge and said goodbye to the old bridge at the ribboncutting event on August 24 with food, live music, history and transportation displays, dignitary speeches and the opportunity to experience the new bridge before it was opened to vehicular traffic. By August 31, the bridge and roundabout were opened to all vehicle movements. The remaining curb, sidewalk, paving and utility works continued through September. The old bridge structure will be pulled to the south for deconstruction on the old Vedder Mountain Road approach in October. Final completion and landscape restoration will be completed in November.









CHILLIWACK

#### 2016 Transportation Design-Build Combination Project

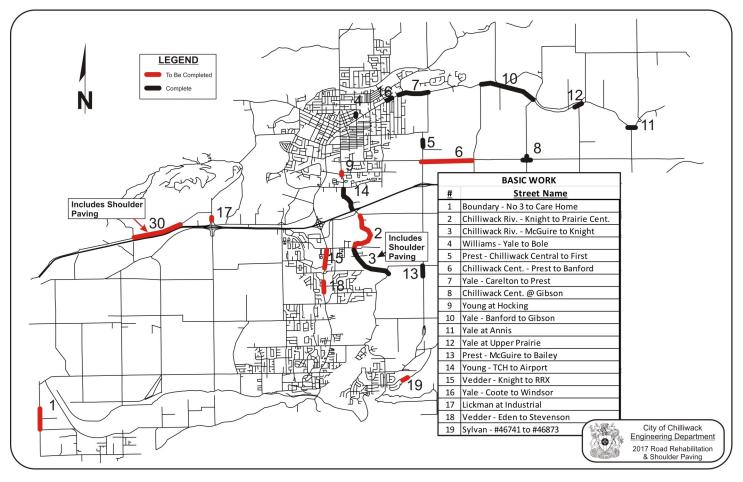
Design-Build proposals were received from Eurovia BC Inc., Emil Anderson Construction Inc. and Jakes Construction Ltd. for the design and construction of the 2016 Transportation Design-Build Combination Project. Council accepted the proposal from the lead proponent, Eurovia BC Ltd., in the amount of \$6,990,259.49 on July 4, 2017. This is made up of the eight different Transportation and Drainage projects listed below:

Project	Construction Completion
Sardis Rail Trail Phase 1	Summer 2018
Promontory Road and Chilliwack River Intersection	Fall 2018
Promontory-Teskey Pond	Spring 2018
Evans and Stevenson Intersection	Fall 2018
Pedestrial Signal in Yarrow	Fall 2017
Portage Avenue Sidewalk	Summer 2018
Selkirk Street Sidewalk	Summer 2018
Cultus Lake and Vedder Mountain Road Roundabout	Fall 2018
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#### **2017 Asphalt Rehabilitation and Shoulder Paving**

After a late start, B.A. Blacktop is making good progress.

Project sites and current completion status are shown in the map as follows:





Young Road at Creamery Road

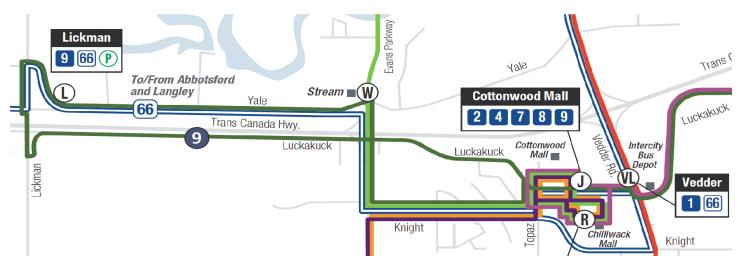


Yale Road at Quarry Road

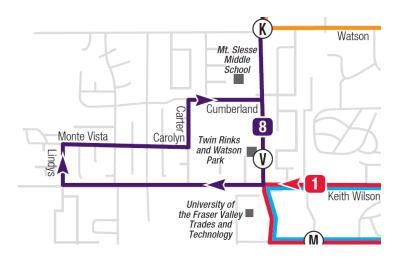


## **2017 Transit Expansion**

**Bus Route Additions and Bus Stop Improvements** 

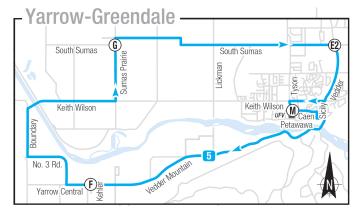


On September 5, Route #9 "Industrial" was initiated.



Route #8's western boundary shifted from Carter Road to Lindys Drive.

Route #5's weekday service was added and its circuit shortened.





#### **Engineering Department**



Hard surfacing of new or improved bus stops was completed at the locations shown on the above site map



Yale Road at O'Connor RV – new concrete pad and bus stop

#### **Third Quarter Report**



Young Road south of Airport Road – new bus stop with concrete pad



Yale Road at Banford Road

#### **Traffic Signal Upgrades**

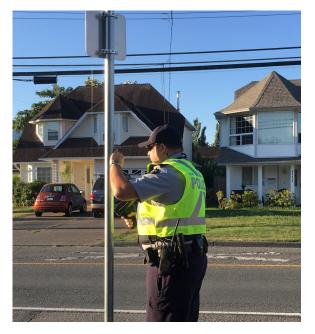
Promontory at Thomas – Video Detection



Video detection was installed for all approaches in place of detection loops that had failed due to worn asphalt. The cameras provide the added feature of bicycle detection and some basic traffic count features. This system will eliminate the need for in-pavement detection loops and will provide continuous detection during reconstruction activities planned over the next few years.



#### **Back to School**



This year's "Back to School" enforcement and education project was another success. The Safer City team attended 18 schools enforcing and educating drivers on 30 km/h school StarFM and Safer City partnered to reward good zones. driver behaviour in school zones. The first event occurred at Bernard Elementary on the first day of school. Good driver behaviour was identified by the RCMP and each of those drivers received a gift bag and words of thanks from the Safer The team then redeployed to McCammon City team. Elementary the following week and rewarded good driving behaviour in the Hamilton Road school zone. The local business community donated advertising space on their roadside advertising boards in an effort to collectively raise awareness that school was back in session. Reminders were also provided through social media, website tips, newspaper and radio ads. School Bus safety was also highlighted through a full page reminder in the Fall/Winter edition of the Leisure Guide.

#### **School Zone Traffic Information**

In September, a radar traffic data collector was installed across from Vedder Elementary School on Promontory Road to gather detailed information on traffic speed, volume and type of vehicle.





#### **Roadside Delineators**



The intersection of Tyson and Evans Road saw the installation of bike lane delineators to protect the bike lane and slow northbound traffic by narrowing the road width. Motorists were cutting across the cycling path as you can see by the worn bicycle stencil and diamond stencil when travelling along the curved portion of the roadway.

Keith Wilson and Lindys Drive also saw the installation of roadside delineators to help provide temporary pedestrian refuge for the crosswalk at this intersection.

Cyclists and pedestrians are already voicing their appreciation for the new protective measures.

#### Lark Road

Lark Road in the Sardis area saw roadway improvements this summer including additional drainage improvements, the addition of a garden and the installation of stalls and arrows. This little hub is very popular with local residents who visit the garden and local merchants.



#### City of Chilliwack and Stó:lō Nation Partner for Public Art Project



The City of Chilliwack is pleased to announce a public art partnership with Stó:lō Nation for the Vedder Road Roundabout Art Project to celebrate the history of the Ts'elxwéyeqw Tribe and Stó:lō Nation. The City's budget for the project is \$180,000, which is included in the overall budget for the Vedder Bridge Replacement Project. The artwork was designed by Squiala First Nation Chief David Jimmie and Bonny Graham, Coast Salish Aboriginal artist, in consultation with the Stó:lō Nation Chiefs Council and Ts'elxwéyeqw Tribe.

The artwork will be located at the roundabout at the northern end of the new Vedder Bridge. The artwork will feature a traditional Stó:lō / Coast Salish canoe on top of an upper ring,

on which "Ey kwesé é mi" with its English translation "It's good that you are here...welcome" will be embossed with a salmon and wave design. Eight paddles will encase the supporting posts for this structure. Seven of the paddles will hold emblems that represent the seven Ts'elxwéyeqw communities and one will hold the City of Chilliwack crest. Recirculating water will flow from the upper ring, giving the artistic impression of the canoe over the water and the surrounding landscape will reflect the natural Vedder River vegetation.

The artwork will be scaled to suit the centre button area of the roundabout and will be proportioned to maximize the artistic statement. Construction of the public art project at the new roundabout on Vedder Road is scheduled to be completed by the end of Spring 2018.



#### **Fall City-Wide Garage Sale**



The semi-annual City-Wide Garage Sale took place on September 23. This event, which promotes waste reduction through reuse, continues to be a community favourite with approximately 135 residences taking part.

Garage sale hosts with left-over items were encouraged to donate them to local charities or thrift stores to keep them out of the landfill.

#### **Adopt-A-River**

The BC Rivers Day Adopt-A-River event took place on September 24. Approximately 250 volunteers came out to help clean up the Chilliwack/ Vedder River, removing 2,820 kg of garbage and 720 kg of metal. The City supports the cleanup events by providing free disposal at the landfill and funding assistance to the Chilliwack-Vedder River Cleanup Society, which organizes the events.



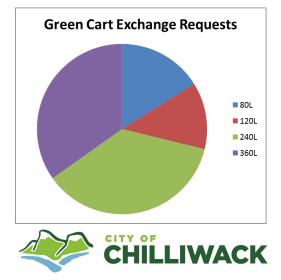
## Environmental Services staff was on-hand to promote the City's environmental programs.

## **Green Cart Exchanges**



Since late June, Emterra Environmental has been processing Green Cart size exchanges. Approximately 775 Green Carts had been exchanged by the end of September. While still ongoing, the number of exchange requests has now decreased significantly.

Most residents requesting a cart exchange have wanted to upsize their carts, which contributes to the success of the compostables diversion program. Over 70% of the exchange requests were for 240L or 360L carts.



#### **McGillivray Pump Station Upgrade**

Design-build proposals were received from three (3) selected proponent teams following the public Request for Expression of Interest process. The proposal submitted by the design-build team of Gerry Enns Contracting Ltd. / Urban Systems Ltd in the amount of \$4,522,052 was accepted by Council at their regular meeting of August 15, 2017. Contract documents have been executed and the final engineering design is under way.

The pump station upgrade will increase capacity to accommodate a 1:100 year return period rainfall flood event and will benefit over 750 hectares of agricultural land, plus associated homes and outbuildings. Construction will commence in early 2018 with completion by December 2018.

