

# Engineering



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

Third Quarter Report, 2020

## Organic Waste Facility & Digester #4 Project



The Wastewater Treatment Plant (WWTP) is currently treating wastewater and generating renewable energy through the anaerobic digestion of wastewater residual solids. The new organic waste facility and digester will enhance gas production at the WWTP and allow production of biogas generated for beneficial reuse either in WWTP operations or through sale to energy markets. The organic waste facility will receive and pre-process organic waste prior to its introduction into the digester waste stream. The digester will be

the fourth at the WWTP and is required to meet the growing demand for wastewater treatment in the City as well as to enable increased energy production from co-digestion.

The City has been awarded over \$6 million in green infrastructure funding by the Government of Canada and the Province to complete the project. Associated Engineering Ltd. have been awarded the contract for the preliminary design, development of design build documentation and Owner's Engineer services. This \$9 million project is scheduled for completion by end of 2022.



## 2019 Utilities Upgrades Project

The 2019 Utilities Upgrades design-build project includes the upgrade of six water mains, two sewer mains, one storm sewer main, two new pressure reducing valves (PRV) and the landfill gas collection system. These upgrades were combined to increase scope and economy of scale. The water main installations increase supply, fire flow capacity and protect the water quality in the existing water system. The storm and sewer main replacements and upgrades replace aging infrastructure while increasing capacity to satisfy increased flow from new developments. The new Jinkerson PRV station facilitates current and future development activities in the area by ensuring downstream fire flow demands can be met. The new Salmonberry PRV replaces aging infrastructure to protect the integrity of supply. The Bailey Landfill gas system improves landfill gas collection to contribute to the City's actions to protect the environment.

On August 31, 2020, the City issued substantial completion to the Timbro Contracting / Onsite Engineering design-build team for the \$3.85 million-dollar project. The completed project areas are listed below:



- Banford Road watermain;
- Bailey Landfill gas collection;
- South Sumas Road gravity sanitary sewer main;
- Fletcher Street (Reece to Mellard) watermain;
- Mellard Avenue (Reece to Victoria) watermain;
- Jinkerson PRV (Jinkerson & Sylvan);
- Salmonberry PRV replacement;
- Cleveland Avenue (Young to Victor) watermain;
- Lewis Avenue (Young to Williams) watermain;
- Nowell Street gravity storm and sanitary sewer main;
- Fletcher Street (Yale to Bole); and
- Crestwood Drive, Leary Crescent, and Haig Drive watermain

## Wastewater Treatment Plant Inlet Works Upgrade Project

The existing Wastewater Treatment Plant (WWTP) inlet works, constructed in 1973, need investment to replace aging infrastructure and to accommodate increased flows due to growth in the city. The new inlet works will be able to manage flows projected for the next 30 years and beyond. The project includes a new inlet works building to house the new treatment system which includes the following efficient, high-performance processing systems:

- fine screening;
- screenings washing, compaction and conveyance;
- induced vortex grit removal;
- grit washing and dewatering; and
- space for a future trucked septage receiving and screening station.



Tritech Group Ltd. / Stantec Consulting Ltd. design-build team have completed the detailed design work. Underground utility installation is complete and construction of the inlet works building is currently underway. This \$9.15 million design-build project is scheduled to be completed in May 2021.

## Vedder / Promontory / Prest Design-Build Project

### Vedder Road (Keith Wilson Road to Watson Road)

Detailed design was completed during the third quarter and drainage works began in September 2020. Underground utility works will continue through the fourth quarter along with the start of road widening works near Keith Wilson Road.

### Prest Road (Hwy 1 to McGuire Road)

Detailed design was completed including co-ordination with BC Hydro, Telus and Shaw for necessary relocations. Some portions of the road widening works including base gravels were completed. Continuation of the works will be scheduled once BC Hydro and Telus have relocated their poles.

### Promontory Road (Vedder Elementary to Chester Drive)

Drainage, street lighting, road paving and sidewalk works were completed during the third quarter. Necessary Hydro and Telus utility relocations will be completed in the fourth quarter to allow for the completion of the balance of the project works.





## Hack Brown / Prest / Five Corners Design-Build Project

### Prest / Chilliwack Central Road Roundabout

Jakes Construction Ltd. completed all project activities including placing concrete curb, sidewalks, road widening, drainage improvements, street lighting, final paving, line painting, signage and landscaping. The project is planned to be completed by the middle of October after completing the remaining stamped concrete work.



### Five Corners



After adjustments to ensure the continued safety of the public and construction staff due to COVID-19, work commenced again on the Five Corners project in April. Jakes Construction Ltd. completed improvements on Wellington Avenue, Yale Road and Young Road. Streetlight installation, line painting, signage, a few sidewalk sections and final landscaping work is scheduled. The contractor is currently working in stages to complete remaining intersection work, including final commissioning of traffic signals at the Five Corners intersection to minimize business impact and public inconvenience. The work is planned to be completed by the end of October.

### Hack-Brown Road Realignment

The City and the contractor are working with the Ministry of Transportation to finalize the design package for the Annis Road widening and the new intersection work. Jakes Construction Ltd. completed the installation of the Hack-Brown Road culvert and partially completed the roadwork portion of Hack-Brown Road realignment. The new intersection work, which includes the Annis Road widening, is planned to be completed by October 2021, after obtaining necessary approval from the relevant government agencies.



### Walden Street Sidewalk

Jakes Construction Ltd. completed the project substantially in September including drainage improvement work, curb and sidewalk, roadwork, streetlighting, final paving, line painting and signage.

### Chilliwack Central Road Sidewalk



Jakes Construction Ltd. completed the project substantially in August including drainage improvement work, curb and sidewalk, sanitary sewer pipe installation, roadwork, streetlighting, final paving, line painting and signage.

## Teskey-Spadina-Vedder Design-Build Project

### Teskey-Jinkerson Connector

Works include one single-lane roundabout, approximately 250m of new road construction, storm main relocation, drainage works, streetlighting and trail connections. Detailed design was advanced during the third quarter and will be completed during the fourth quarter. Construction is scheduled for December 2020 to September 2021.



### Vedder and South Sumas Intersection

Works include traffic signal expansion and approximately 260m of road widening complete with paving, drainage, streetlights, curb and sidewalk. Construction is scheduled for March to May 2022.

### Alder-Webb Connector

Works include 120m of new road construction complete with paving, drainage, street trees, streetlights, curb and sidewalk. This new road connection was a recommendation of the Alder Neighbourhood Plan and will provide better connectivity and access to the Alder Avenue area. Detailed design was completed during the third quarter and construction is scheduled for October to November 2020.

### Spadina Avenue (Ashwell to Corbould)



Drainage works, concrete curbing, streetlight bases along with road base preparation have been completed. Installation of sidewalks, paving, streetlighting and street trees are scheduled for completion in November 2020.



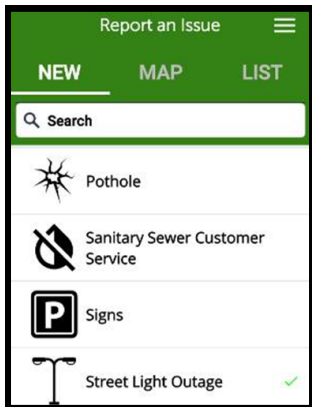
## Rectangular Rapid Flashing Beacon (RRFB) Signals

The contract for 20 new locations for installation of RRFB traffic signals has been awarded to Strohmaier Excavating (2019) Ltd. These improvements will include RRFB traffic signals, minor sidewalk and pathway improvements, asphalt repair, signage upgrades, delineators and road markings.

Road	Location
Watson Road	45305 Watson Road
Tyson Road	Cumberland Avenue
Yale Road	Carleton Street
Wellington Avenue	Hamilton Street
Stevenson Road	Higginson Road (W)
Wolfe Road	Townsend Park
Knight Road	Luckakuck Creek
First Avenue	Charles Street
Chilliwack Central Road	Charles Street
South Sumas Road	Dover Street

Road	Location
Brooks Avenue	Elm Drive
Yale Road	Veterans Memorial Park
Main Street	Veterans Memorial Park
Manuel Road	Sheffield Way
Yarrow Central Road	Community Street
Meadowbrook Road	Midtown Way
Young Road	Hope River Bridge
Teskey Way	Jinkerson Road
Thomas Road	Clover Drive
Bernard Avenue	Edward Street

## City of Chilliwack App Improvements



The City of Chilliwack app now has a new addition which allows residents to report issues regarding street lights.

Residents who download the City of Chilliwack app will have access to the Report an Issue feature, where they can select from a list of common reports, identify the location by address or using a map, take a photo, add notes and track the status of their report. This app already allows reporting on various other items such as potholes and park maintenance and allows residents to stay up to date on City news and initiatives.

## Asphalt Rehabilitation

Asphalt rehabilitation has now is now substantially completed on the following roadways:

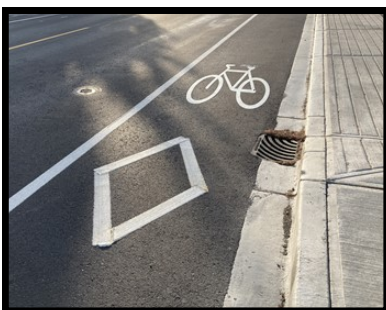
- Bernard Avenue from Ashwell Road to Railway Avenue
- Keith Wilson Road (major patching) from Tyson Road to Unsworth Road
- No. 5 Road from Boundary Road to Stewart Road

Roads in progress as weather permits:

- Fairfield Road – McSween Road to Kitchen Road (in progress)
- Industrial Way – Progress Way to Old Orchard Road



## Road Marking Maintenance



Infinite Road Marking Ltd. has completed all of the required work under their contract for repainting and thermoplastic installation. Some additional markings have been added. They will be completed as funding allows and on a priority basis, such as the new crosswalk at GW Graham Middle School on Thomas Road.



## Traffic Counts



Trans Tech Data Ltd. will soon begin traffic counts at over 100 locations throughout the City. This annual program helps the department determine where drivers are going in the city and where future improvements can help meet the growth of the city. Once completed, the prepared data will be available to the public on the City's website.

## Back to School

The Safer City "Back to School" enforcement and education initiative was deployed at the start of the school year. The Safer City team attended 23 school sites enforcing and educating drivers, pedestrians and cyclists within the school zones. The community's supportive local business community graciously donated their advertising space on their roadside signs in an effort to collectively raise awareness that school was back in session; many of the businesses kept the messaging displayed into the month of October. School zone and school bus safety reminders were provided through social media, website tips, newspaper and radio ads.



## Hey Neighbour, Slow Down Program



After a hiatus due to COVID-19, the Hey Neighbour, Slow Down sign program is back up and running. A dedicated neighbourhood took the necessary precautions to deploy the program safely this quarter. As a result, a number of other interested neighbourhoods enquired about deploying the program. Speeding vehicles continue to be a concern across the community and the deployment of this sign program has been a helpful tool in curbing driver behaviour for over 14 years; one of the many reasons some neighbourhoods participate in the program season to season or year after year.

## Rail Safety Decals

As part of Operation Lifesaver's Community Safety Partnership Program, the City of Chilliwack was provided an opportunity to apply to receive 18 'Look Listen Live' rail safety decals. During the 2020 Rail Safety Week a virtual unveiling of all of the decals installed across the country was managed by Operation Lifesaver. Future decal installation sites may be considered. Currently, the 4'x4' decals are installed at:

- Eagle Landing (CN) = 4 decals
- Young Road (CN) = 4 decals
- Broadway (CN) = 4 decals
- Hocking Avenue (SRY) = 2 decals
- Airport Road (SRY) = 4 decals



## Adopt-A-River

This year's BC Rivers Day event was a physically distanced cleanup customized for less than 50 volunteers. Despite the intentionally restricted numbers, the dedicated volunteers removed 3.3 tonnes of garbage left behind by irresponsible river users. The City provides funding assistance to the Chilliwack-Vedder River Cleanup Society to organize the events and supports further by providing free tipping for the waste collected.



## Street Can Replacement



In August, eight double stream and twenty-four triple stream street cans were ordered from Busch Systems as part of a larger trial program in the downtown core. Container installation began in September and is expected to be completed by mid-October. The new containers feature recycled plastic construction, with a design that should minimize the impacts of misuse and vandalism.

The doors are colour-coded and include educational signage to promote diversion. The double stream containers include compartments for recycling and garbage, while the triple stream containers also have a compostable waste compartment and are being placed in locations closer to food sources.

The street can trial in the downtown area will inform the selection of additional containers for transit stops.

## Solid Waste Management Bylaw Update in Response to Bear Safety Concerns

During the summer, residents in some areas began reporting incidents of bears accessing curbside materials set out overnight prior to collection. In July, Council approved updates to the Solid Waste Management Bylaw 2019, No. 4660 to enable the hours residents place their materials out for collection to be changed on designated streets. Instead of allowing items to be set out after 6 pm the night before collection, the change requires residents in these areas to place their materials out after 5 am on the morning of collection. By reducing overnight access to this attractant, instances of human-wildlife conflict were reduced, resulting in improved safety outcomes for residents and bears living in these areas. The changes were instituted in the Eastern Hillside neighbourhoods and parts of Ryder Lake. Responses by the public have been positive so far and initial investigations by staff have found widespread compliance.





## COVID-19 Changes to the Curbside Collection Program

Changes made to the curbside collection program in response to COVID-19 continued through the third quarter of 2020. As in other municipalities in BC, residents have been asked to bag all garbage and double bag any personal hygiene items such as masks, gloves, tissues, etc. Requirements also remained in place to refrain from disposing of tissues, napkins and paper towels in Green Carts and instead placing them in bagged garbage. Information tagging by collection crews continued in order to educate when non-compliant materials were encountered.

## Bridle Ridge Trail Repair



The Bridle Ridge hillside and pedestrian trail have experienced periodic slope instabilities during and since its construction. The instabilities have primarily impacted the trail that runs between Bridle Ridge Crescent and Cecil Ridge Place. The City engaged GeoWest Engineering to review the hillside, assess the slope stability and provide recommendations to rehabilitate the unstable areas along the trail. GeoWest provided geotechnical reporting in 2019 with recommendations for repair work. These reports were used to obtain budget approval, prepare the tender document, and form the basis for the project scope of work. The construction tender was posted June 23, 2020 with a closing date of July 22, 2020.

The trail stabilization contract was awarded at the regular meeting of Council on August 4, 2020 to Greystone Design Management Construction Ltd. in the amount of \$346,044.00.

Construction work commenced early September 2020 and substantial completion was attained on October 8, 2020.



Before



After