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# Engineering Capital Infrastructure 2020 Update – No.: 04 2021 Update – No.: 01

January 18, 2021 Governance and Priorities Committee Meeting



### **Engineering Capital Infrastructure Project Updates**

This report is intended to provide an Engineering Capital Infrastructure Project Update and information pertaining to the services which will be procured to assist Administration with Project Delivery. The projects listed are expected to be completed in 2021.

The report is broken down into the following sections:

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#### 1. At a Glance

2020 Carry Forward Projects:

Engineering Capital Infrastructure Projects	Approved Budget	Total Expenditure to Date (As of 01/06/2021)	Expected Project Completion Date	Estimated Project Completed %
1813618 - Drainage Channel Improvements (East Lake K)	\$664,109.00	\$597,780.77	SUBSTANTIALLY COMPLETED	98%
1913610 - Drainage Improvements (75 Avenue)	\$300,000.00	\$14,051.83	ON HOLD	15%
1913640 - Sidewalk & Road Condition Survey: 2-3 & 3-3	\$120,000.00	\$47,690.56	N/A	50%
2013610 - 50 Avenue (Highway 17) - Timing and Coordination Improvements - Construction	\$425,000.00	\$295,658.77	SUBSTANTIALLY COMPLETED	100%
2013611 - 2020 Traffic Signal Hardware Improvement Program - Construction	\$375,000.00	\$189,453.03	Q1 (2021)	80%
2013613 - Lloydminster Helipad Crossing Improvements - Construction	\$20,000.00	\$0.00	Q3	0%
2013615 - Trails and Sidewalk Master Plan	\$150,000.00	\$84,349.14	N/A	95%
2013604 - Central Business District Replacement Program - Planning and Design Services (Underground Assessment)	\$300,000.00	\$0.00	N/A	0%
2013607 - East Drainage Channel Improvements (Lake J Control Structure) - Phase II - Construction	\$1,600,000.00	\$14,190.80	Q4 (2021)	20%
2023002 - Fire Station #1 - Design and Construction	\$8,500,000.00	\$89,308.54	Q4 (2021)	3%
1841107 - Water Treatment Plant - Chemical Feeder System (Carbon)	\$655,240.00	\$12,279.00	Q4 (2021)	5%
1841108 - Water Treatment Plant - Chemical Feeder System (Lime)	\$712,200.00	\$12,279.00	Q4 (2021)	5%



#### 2021 Projects:

Engineering Capital Infrastructure Projects	Approved Budget	Total Expenditure to Date (As of 01/06/2021)	Expected Project Start Date	Estimated Project Completed %
2032003 - Concrete Intersection Construction (44 Street and 62 Avenue)	\$2,660,000.00	\$6,705.66	Q1	5%
2032004 - Road Rehabilitation (44 Street between 62 Avenue and 75 Avenue)	\$4,085,401.00	\$0.00	Q1	5%
2113601 - 2021 Water and Sewer Replacement Program - Construction	\$2,900,000.00	\$0.00	Q2	0%
2113605 - Northwest Drainage Channel - Phase III - Construction	\$1,800,000.00	\$0.00	Q3	0%
2113606 - East Drainage Channel Improvements (Lake K Pond and Control Structure) - Phase III - Construction	\$2,500,000.00	\$0.00	Q3	0%
2113607 - 2021 Street Improvement Program - Construction	\$1,700,000.00	\$0.00	Q2	0%
2113626 - 67 Street Water Line Extension - Design and Construction	\$1,500,000.00	\$0.00	Q2	0%
2113627 - Water Treatment Plant Fibre Optic Line Connection - Design and Construction	\$215,000.00	\$0.00	Q2	0%
2113628 - Dangerous Goods and Truck Route Signage Procurement and Implementation	\$150,000.00	\$0.00	Q2	0%
2135005 – East Drainage Channel Improvements (40 Avenue to Lake K Drainage Channel) – Phase IV Construction	\$1,500,000.00	\$0.00	Q3	0%
2171004 - BMASP - Asphalt Trail Upgrades	\$80,000.00	\$0.00	Q2	0%
2171005 - Refurbish Lawn Bowling Green	\$200,000.00	\$0.00	Q2	0%
2173314 - SSC - Asphalt Parking Lot Rehabilitation	\$156,000.00	\$0.00	Q2	0%
2213603 - 2022 Water and Sewer Replacement Program - Design Services	\$100,000.00	\$0.00	Q2	0%
2213606 - 2022 Street Improvement Program - Design Services	\$100,000.00	\$0.00	Q2	0%
2135004 - Neale Edmunds Complex Easement Plan	\$50,000.00	\$0.00	Q1	0%
2143005 - Landfill - Transfer Station and Weigh Scale (WMF-4)	\$50,000.00	\$0.00	Q1	0%
2143007 - Landfill - Maintenance Building	\$100,000.00	\$0.00	Q1	0%



#### 2. Brief Project Descriptions

#### 2020 Carry Forward Projects:

#### 1813618 – Drainage Channel Improvements (East, Lake K)

- Approved Budget: \$664,109.00
- Project Description: The program will consist of completing the removal and replacement of one (1) culvert crossing within the East Drainage Channel near 40 Avenue. The crossing location has been selected to be improved due to the timing of the 40 Avenue Rehabilitation Project scheduled for mid-summer 2019. Consultant Services associated with Design and Project Management were previously procured in 2018 but will cease in 2019. The Engineering Team will be completing the Construction Management for this project in-house.
- Services to be Procured: Contractor Services.
- Project Status: The project has been substantially completed in 2020 with minor landscaping and clean-up work to be completed in 2021. The roadway repairs and concrete box culvert installation have been completed and are fully operational.

#### 1913610 – Drainage Improvements (75 Avenue / 29-44 Street)

- Approved Budget: \$300,000.00
- Project Description: The program includes the completion of a detailed design and creation of a tender package to remediate the ditch along the east side of 75 Avenue between 29 Street and 44 Street in an effort to minimize standing water and promote feasible ditch maintenance. The Engineering Team will be completing the Design, Project Management and Construction Management for this project in-house.
- Services to be Procured: Contractor Services.
- Project Status: Due to restrictions placed on the project associated with working adjacent to and over top of both active and abandoned oil pipelines, the project budget has been questioned. The project is currently on hold indefinitely until agreeable working requirements and methodologies can been agreed to by both the City of Lloydminster and the utility provider.

#### 1913640 – Sidewalk & Road Condition Survey: 2-3 & 3-3

- Approved Budget: \$120,000.00
- Project Description: The intent of the Road and Sidewalk Survey Condition Survey project is meant to record and track the condition of the City of Lloydminster's surface infrastructure on an annual basis. The data collected is imported and analyzed in the RoadMatrix Software to help prioritize which links of the sidewalk should be remediated or considered for repair, in preparation for a more formal Asset Management plan. This program consists of year 2 of 3 and year 3 of 3 as these services were procured using a Standing Offer Agreement for a three (3) year term.
- Services to be Procured: None
- Project Status: The second phase, of the three (3) phase program has been completed with the final phase of data collection scheduled for Q2 2021.

#### 2013610 – 50 Avenue (Highway 17) – Timing and Coordination Improvements -Construction

- Approved Budget: \$425,000.00
- Project Description: The intent of the 50 Avenue Timing and Coordination project is to review and update the timing and coordination for the traffic signals along 50 Avenue (Highway 17). The improvements to the timing and coordination will be such that these traffic signals will



interface with the improvements completed along 44 Street (Highway 16) in 2019 and be operated using the Centracs Automated Traffic Management (ATM) System.

- Services to be Procured: Contractor Services
- Project Status: The project has been completed with the Centracs ATM System operational and adjusting traffic signal timing in real-time. Minor carry over work is required in 2021 to finalize the controllers and data collection, however the system is operational, and the program deemed substantially complete.

#### 2013611 – 2020 Traffic Signal Hardware Improvement Program - Construction

- Approved Budget: \$375,000.00
- Project Description: The intent of the Traffic Signal Hardware Upgrade project is to improve existing signal hardware associated with the City's traffic signals to more efficiently serve the community. In 2014 a review was conducted on the traffic signal system and recommendations were compiled into the 2015 Traffic Signal Assessment Report. Several recommendations were identified. The work to be completed in 2020 include improvements of the pedestrian crossing signals at the intersections of 44 Street and 56 Avenue, 44 Street and 47 Avenue, and 50 Avenue and 55 Street.
- Services to be Procured: Contractor Services
- Project Status: Due to COVID-19 restrictions, the completion of the program was carried forward into early 2021. It is expected that the program will be completed in its entirety by January 20, 2021.

#### 2013615 – Trails and Sidewalk Master Plan

- Approved Budget: \$150,000.00
- Project Description: The intent of the Trails and Sidewalk Master Plan Project will be to provide the City with direction for improving upon the existing trail and sidewalk network while also allowing the City to adapt to future growth and expand the trail and sidewalk network. The project will entail creation of a new Trail and Sidewalk Master Plan (including updated 5-year and 10-year pedestrian network/transportation capital plan), development of a pedestrian crossing safety analysis matrix to determine required pedestrian crossing improvements, develop an integrated pedestrian and bicycle movement system, and development of a long term trail and sidewalk network that will allow the City to accommodate growth in a timely manner.
- Services to be Procured: None
- Project Status: The DRAFT final report has been issued to Engineering Services by the Consultant for review. Upon completion of the review the FINAL document will be issued, at which time final presentations to ELT, and Council, i.e., Governance and Priorities Committee and Regular Council, will be initiated. The recommendations of the Trail and Sidewalk Master Plan will be used to inform future network improvement programs.

#### 2013604 – Central Business District Replacement Program – Planning and Design Services (Underground Assessment)

- Approved Budget: \$300,000.00
- Project Description: The intent of the Central Business District Replacement Program Planning and Design Services project will be to address the concerns with aging infrastructure in the downtown core of the City. Bordering on a primary Highway (Highway 17), performing utility upgrades to the Central Business District brings rise to various challenges in construction: Traffic Accommodation, Business Access, etc. To take a proactive approach to the future replacement programs, Engineering Services is seeking to procure a consultant to complete a plan, design, and construction phasing schedule for the Central Business District.



This process will include data collection, design of the underground and surface systems, public consultation, traffic accommodation plan creation, and construction phasing options. The goal of the plans will be to create a rehabilitation plan and surface layout that is consistent with the Downtown Area Redevelopment Plan (DARP) and future for the downtown area such as the North-South Corridor project. This will set the foundation for future Water and Sewer Replacement Programs in the downtown area. The limits of the program are tentatively set between 44 Street and 52 Street and between 48 Avenue and 52 Avenue.

- Services to be Procured: Consultant Services
- Project Status: Administration has put a hold on this project with the anticipation of issuing a Request for Proposal to secure the services of a design consultant in Q1 2021.

### 2013607 – East Drainage Channel Improvements (Lake J Control Structure) – Phase II - Construction

- Approved Budget: \$1,600,000.00
- Project Description: The program will consist of completing the design review and construction
  of a control structure at Lake J (Jaycee Lake) within the City's East Drainage Channel. The
  installation of a control structure at this facility will assist with improving the effectiveness of
  the pond while managing and maintaining water levels within the storm sewer and pond
  system at safe levels. Consultant Services associated with Design were previously procured
  in 2018 but ceased in 2019. The Engineering Team will be completing the Construction
  Management for this project in-house.
- Services to be Procured: Contractor and Consultant Services
- Project Status: ICIP Grant Funding was not successful and as such Engineering Services proceeded with the project in Q2 2020. The design and construction management Consultant is currently working through the data collection and background review stage in preparation for finalizing the detailed design. Due to the hold placed on the program during the grant application process the design and control structure procurement process will be completed in Q1 2021 with the installation of the control structure scheduled for Q3/Q4 2021; summer construction will not be advantageous.

#### 2023002 – Fire Station #1 – Design and Construction

- Approved Budget: \$8,500,000.00
- Project Description: The program includes the design and construction of a new Fire Station #1 which will include an apparatus bay, dorm and living space, training facilities, as well as the main administration centre for the Fire Services department. Upon completion of the building and site development, the existing Fire Station #1 building which is located on 49 Avenue will be decommissioned and closed.
- Services to be Procured: Consultant Services, Construction Manager Services, and Contractor Services
- Project Status: Detail to be provided under a separate cover.

#### 2021 Projects:

#### 2032003 – Concrete Intersection Construction (44 Street and 62 Avenue)

- Approved Budget: \$2,660,000.00
- Project Description: The program includes the design and construction of a concrete intersection and approach lanes using a ridged concrete pavement. The current flexible pavement structure, i.e., asphalt concrete pavement, has reached is serviceable life and is deteriorating at a quicker rate then can be remediated using standard methods. The project



will include the removal and replacement of all municipal underground servicing infrastructure located within the project limits to ensure the life cycles of the underground servicing and the concrete intersection are in line with each other to limit the need for future excavations. The project planning and design stages is anticipated to be initiated in Q4 of 2020 with the procurement of a Contractor and completion of the project occurring in 2021. It is anticipated that the program will be completed in its entirety in 2021.

- Services to be Procured: Consultant Services, and Contractor Services
- Project Status: Design and construction management Consultant has been procured with the initial data collection and background review stages being completed.

#### 2032004 – Road Rehabilitation (44 Street between 62 Avenue and 75 Avenue)

- Approved Budget: \$4,085,401.00
- Project Description: The program includes the completion of the detailed design as well as the complete rehabilitation of the roadway along 44 Street between 62 Avenue and 75 Avenue. Due to the age, surface and underlying sub-surface conditions, the rehabilitation for this section of roadway will entail the use of various rehabilitation methods within the project limits. These methods will include, but are not limited to, full depth reclamation, the use of a concrete stabilized base, and mill and overlay. Also included in this project will be the construction of a right turn bay at 66 Avenue and 62 Avenue.
- Services to be Procured: Consultant Services, Construction Management Services, and Contractor Services
- Project Status: Consultant and Construction Management Services have been procured by Engineering Services in Q4 2020. Contractor Services are expected to be procured in Q1 2021.

#### 2113601 – 2021 Water and Sewer Replacement Program - Construction

- Approved Budget: \$2,900,000.00
- Project Description: The City of Lloydminster's annual Water and Sewer Main Replacement Program. The 2021 program will be along 50 Street between 52 Avenue and 54 Avenue. The design phase has been completed as part of the 2020 Water and Sewer Replacement Program – Design project. The Engineering Services Team will be completing the Construction Management for this project in-house.
- Services to be Procured: Contractor Services
- Project Status: Contractor Services are expected to be procured in Q1 2021.

#### 2113605 – Northwest Drainage Channel Improvements – Phase III – Construction

- Approved Budget: \$1,800,000.00
- Project Description: The program includes the drainage channel regrade between 57 Street and the CP Railway Crossing along the NW Drainage Channel, the installation of an additional two (2) culverts at the existing CP Railway Crossing and the installation of a concrete vault structure on the south side of the CP Railway Crossing to enable future tie-ins.
- Services to be Procured: Contractor Services are expected to be procured in Q2/Q3 2021.
- Project Status: A Request for Proposals was issued in Q4 2020 to procure Consultant and Construction Management services for the program



#### 2113606 – East Drainage Channel Improvements (Lake K Pond and Control Structure)– Construction

- Approved Budget: \$2,500,000.00
- Project Description: The program will consist of re-defining and expanding the existing Lake K storm water pond accompanied by the installation of a Control Structure at its outlet. Currently the Lake K storm water pond acts as a flood plain during major events and as such has never been properly defined. This program will entail finalizing the detailed design, as well as the expansion of the storm water pond and construction of the associated outlet Control Structure.
- Services to be Procured: Design and Construction Management services and Contractor Services.
- Project Status: Currently the program is awaiting grant funding approval prior to initiating the procurement processes.

#### 2113607 – 2021 Street Improvement Program – Construction

- Approved Budget: \$1,700,000.00
- Project Description: The City of Lloydminster's annual Street Improvement Program includes various locations throughout the City of Lloydminster. The focus of the 2021 Street Improvement Program – Construction project will be local road rehabilitation as opposed to new construction. The Engineering Services Team will be completing the Construction Management for this project in-house.
- Services to be Procured: Contractor Services
- Project Status: Engineering Services has begun to compile locations for this project. Contractor Services are expected to be procured in Q1 2021.

#### 2113626 – 67 Street Water Line Extension – Design and Construction

- Approved Budget: \$1,500,000.00
- Project Description: The program will consist of the design and construction of a potable water main between the existing Water Treatment Plant located east of the intersection of 50 Avenue and 67 Street and the proposed Waste Water Treatment Plant which is to be located northeast of the intersection of 40 Avenue and 67 Street. The proposed water main will provide potable water to the proposed Waste Water Treatment Plant, as well as the Landfill, and the Northeast Area.
- Services to be Procured: Consultant Services and Contractor Services
- Project Status: The project is currently on hold while discussions with regional water partners are being completed as the alignment, pipe sizing, and ownership of construction are still being reviewed.

#### 2113627 – Water Treatment Plant Fibre Optic Line Connection – Design and Construction

- Approved Budget: \$215,000.00
- Project Description: The program will consist of the design and construction of a "Dark" Fibre Optic line between the Operations Centre located west of the intersection of 52 Street and 62 Avenue and the existing Water Treatment Plant located east of the intersection of 50 Avenue and 67 Street. The proposed "Dark" Fibre Optic line will provide internet service and network integration capabilities at the existing Water Treatment Plant which will be extended along 67 Street to the proposed location of the Waste Water Treatment Plant. The limits of this project will be between the Operations Centre and the Water Treatment Plant.
- Services to be Procured: Consultant Services and Contractor Services



 Project Status: The project is currently on hold while discussions with regional fibre optic partners are being completed as existing service providers may extend existing service to the Water Treatment Plant.

#### 2113628 – Dangerous Goods and Truck Route Signage Procurement and Implementation

- Approved Budget: \$150,000.00
- Project Description: The program will consist of the procurement and installation of applicable Dangerous Goods Route and Truck Route signage throughout the City of Lloydminster's transportation network. The signage to be procured and the placement of the signage will be in accordance with the recently completed Dangerous Goods and Truck Route Master Plan. Accompanying the implementation of the signage will be Bylaw Amendments to both the Traffic Bylaw and Transportation Systems Bylaw. The Engineering Services Team will be completing the Construction Management for this project in-house.
- Services to be Procured: Contractor Services
- Project Status: Both Bylaws are being reviewed by Engineering Services with applicable amendments being made in preparation for presentation to Council. The procurement and implementation of the signage will be initiated in Q2 of 2021.

#### 2135005 – East Drainage Channel Improvements (40 Avenue to Lake K Drainage Channel) – Phase IV – Construction

- Approved Budget: \$1,500,000.00
- Project Description: The program will consist of the regrading of the East Drainage Channel between the 40 Avenue Culvert Crossing and Lake K stormwater pond including the installation of gabion rock structures to mitigate erosion concerns along the channel. The project will connect the previously replaced culverts at 40 Avenue and 36 Street to the soon to be implemented Lake K storm pond from Project No.: 2113606. A conceptual design of the channel has been completed by a past consultant and will create the foundation for the final design package to be completed in 2021.
- Services to be Procured: Design and Construction Management Services and Construction Contractor
- Project Status: Not initiated, awaiting grant funding approval.

#### 2171004 – BMASP – Asphalt Trail Upgrades

- Approved Budget: \$80,000.00
- Project Description: The program will consist of the rehabilitation of select asphalt concrete pavement walking trails throughout the Bud Miller All Seasons Park. Engineering Services, in conjunction with Parks, will determine the area's most needing of rehabilitation and will prepare Bid Documents accordingly. The Engineering Services Team will be completing the Construction Management for this project in-house.
- Services to be Procured: Contractor Services
- Project Status: In Q2 2021, Engineering Services, in conjunction with Parks, will determine the area's most needing of rehabilitation and will prepare Bid Documents accordingly. The procurement documents will be tailored to maximize the available budget.

#### 2171005 – Refurbish Lawn Bowling Green

- Approved Budget: \$200,000.00
- Project Description: The program will consist of the removal of the existing Lawn Bowling playing surface followed by the placement and construction of an asphalt concrete pavement pad. The asphalt concrete pavement pad will be finished with appropriate surface treatments



and pavement markings associated with sports, i.e., basketball courts, in an effort to expand the number of services being offered at the Bud Miller All Seasons Park. The Engineering Services Team will be completing the Construction Management for this project in-house.

- Services to be Procured: Contractor Services
- Project Status: The procurement and construction of the asphalt concrete pad will be initiated in Q2 of 2021. Contractor Services will be procured by Engineering Services in Q2 of 2021 to ensure timely completion of the project in its entirety in 2021.

#### 2173314 – SSC – Asphalt Parking Lot Rehabilitation

- Approved Budget: \$156,000.00
- Project Description: The program will consist of the rehabilitation of select areas throughout the Servus Sports Centre parking lot which have failed or are showing signs of near failure to prolong the life of the asphalt concrete pavement parking lot. Large scale rehabilitation measures will not be completed rather localized patch repairs and asphalt overlays will be completed. Team will be completing the Construction Management for this project in-house.
- Services to be Procured: Contractor Services
- Project Status: The procurement and construction of the asphalt concrete pad will be initiated in Q2 of 2021. Contractor Services will be procured by Engineering Services in Q2 of 2021 to ensure timely completion of the project in its entirety in 2021. The procurement documents will be tailored to maximize the available budget.

#### 2213603 – 2022 Water and Sewer Replacement Program – Design Services

- Approved Budget: \$100,000.00
- Project Description: Preparation of detailed designs and construction cost estimates for the City of Lloydminster's annual Water and Sewer Replacement Program. The chosen area will be discussed with Operations and other City Staff to evaluate the ideal area for rehabilitation. A Request for Proposals will be issued in 2021 to procure the design services once the area has been chosen. This program may be completed in house if Engineering Services workload permits. Team will be completing the Construction Management for this project in-house.
- Services to be Procured: Design Services
- Project Status: Project will be initiated in Q2 2021 as data collection will need to be completed in frost, ice, and snow free conditions.

#### 2213606 – 2022 Street Improvement Program – Design Services

- Approved Budget: \$100,00.00
- Project Description: Preparation of detailed designs and construction cost estimates for the City of Lloydminster's annual Street Improvement, Asphalt Trail Improvement and Concrete Sidewalk Improvement Programs. The areas to be included in the program will be reviewed by the Engineering Team in conjunction with the Operations Group. A Request for Proposals will be issued in 2021 to procure the design services once the areas have been chosen.
- Services to be Procured: Design Services
- Project Status: Project will be initiated in Q2 2021 as data collection will need to be completed in frost, ice, and snow free conditions.

#### 2135004 - Neale Edmunds Complex Easement Plan

- Approved Budget: \$50,000.00
- Project Description: The project will include procurement of land agency services to assist in conducting preliminary work and assessment in securing easements along the Neale Edmunds Complex. The Waste Water Treatment Plant IPD Team is in the process of



assessing the potential of discharging high quality treated effluent into the Neale Edmunds Complex. Easements are required to secure a permit to discharge treated effluent into the Neale Edmunds Complex.

- Services to be Procured: Land Agent and Consultant Services
- Project Status: Project will be initiated in Q2 2021 as data collection will need to be completed in frost, ice, and snow free conditions.

#### 2143005 - Landfill - Transfer Station and Weigh Scale (WMF-4)

- Approved Budget: \$50,000.00
- Project Description: The project includes the procurement of consultant services to design a new transfer station and weigh scale in conjunction with the landfill maintenance building project. The weigh scale will improve safety on site by providing a safer entrance into the facility. The transfer station will allow a drop-off area for the public that is away from the landfill working face. These two improvements are expected to reduce the amount of traffic at the working face and improve the overall flow and safety of the facility.
- Services to be Procured: Design Services
- Project Status: Project will be initiated in Q1 2021.

#### 2143007 - Landfill - Maintenance Building

- Approved Budget: \$100,000.00
- Project Description: The project includes the procurement of consultant services to design a landfill maintenance building. The maintenance building is intended to secure heavy equipment and trucks at the facility. The maintenance building will also serve as working area for staff conducting maintenance on equipment and provide a proper and adequately sized lunch room, locker rooms and offices for facility staff.
- Services to be Procured: Design Services
- Project Status: Project will be initiated in Q1 2021.



## **3. Project Location Map** 2020 Carry Forward Projects:

