

To: Chief Administrative Officer **Date:** June 2, 2025
From: Tracy Kyle, Director of Engineering and Public Works
Subject: **Engineering and Public Works Project Update – Spring 2025**

Recommendation

This report is provided for information. No staff recommendation accompanies this report and Council action is not required.

Executive Summary

Capital projects are scheduled each year based on the funding available in the Financial Plan, in conjunction with infrastructure condition assessments and master plans. Most capital projects require multiple years to carry out from design, consultation and permitting through to construction. This report provides an update on the projects that are currently underway and new 2025 projects.

Purpose

The purpose of this report is to update Council on the scope and status of Engineering and Public Works capital projects starting in 2025 as well as those carried over from previous years.

Background

Each year, the City's Financial Plan includes allocations for the following within the Engineering and Public Works department:

- Engineering planning, studies, and design
- Transportation projects
 - The assessment and replacement of pavement
 - Transportation safety improvements
 - Renewal and expansion of walkways and sidewalks
- Upgrades to water, sanitary, and drainage infrastructure
- Environmental and waste management
- Fleet and equipment; and
- Facility upgrades.

This report is to inform Council on projects and projects funded in these areas as of June 2025.

Discussion and Analysis

Based on the funding available in the Financial Plan, and in conjunction with infrastructure condition assessments, staff have listed and prioritized project requirements over the next five years. The following is a list of new 2025 and prior years' carry forward projects.

1. Engineering Planning, Studies, and Designs

1.1. Conceptual Design for Silverdale Crossing

- Scope: This project involves the conceptual road design of the Silverdale Crossing.
- Status: A Terms of Reference is currently being developed. It is expected the project will be initiated in 2025 as part of the Mission Mobility 2050 update.
- Next Steps: Multiple planning documents have identified the need for a westerly bridge connection over Silverdale Creek to Silverdale. Those are the Official Community Plan, Mission Mobility 2050 (City of Mission's Transportation Plan), the Silverdale Master Infrastructure Strategy, the Central Neighbourhood Plan, the DCC Bylaw and it is a critical element to the Cedar Valley Local Area Plan.
- Staff are evaluating options for this Silverdale Crossing and plan to hire a consultant who will evaluate various crossing locations, consider environmental impacts, more detailed geotechnical issues, road design, traffic information, drainage improvements, road right-of-way requirements, and provide cost estimations of construction costs.
- Budget: This project has approximately \$200,000 available.

1.2. 7th Avenue Greenway – Phase 2

- Scope: A continuation of Phase 1 of the greenway from Grand Street to Wren Street.
- Status: Detailed design for Phase 2 is at 70% completion but is currently on pause as per Council direction. At their meeting of November 4, 2024, Council received an update on Phase 1 results, however; Phase 2 is still on hold until staff receive direction from Council.
- Next Steps: Should Council direct staff to continue with Phase 2, staff will restart engagement prior to finalizing the 100% design drawings. Until then, the portion of 7th Avenue adjacent to the Mission Secondary School will still need to be designed and developed as part of the new high school project. Staff continue to work with the high school design team on the adjacent road improvements with current concepts showing it as a MUP similar to 14th Avenue.
- Budget: This project is incorporated into the new DCC five-year capital program; however, the actual construction timeline depends upon Council direction, property acquisition, and grant funding.

1.3. 14th Avenue Road Construction Phase 3 and 4, Tanager Street to Grand Street

- Scope: Road widening and improvements along 14th Avenue from Tanager Street to Grand Street.
- Status: The detailed design is 95% complete. A recent Road Safety Audit generated the need to make a few revisions.
- Next Steps: An engineering consultant is completing the design drawings, generating construction documents, and will assist with selecting a contractor, administering the contract, and inspecting the work once a contractor is selected. The construction is expected to take place in 2025.

Budget: The 2025 Financial Plan includes \$10,000,000 in primarily DCC funding for this project.

1.4. Voluntary Water Metering Program

Scope: On January 20, 2025 Council approved that the existing \$300,000 annual budget approved on August 28, 2023 for the voluntary metering program be reallocated to provide for the supply and installation of the entire meter assembly, including fees to provide a Voluntary Metering Program at no cost.

Status: A communications consultant was retained in June 2024 and the program was launched March 22, 2025. An online application and communication materials were prepared to encourage residents to apply. As of May 7, 2025, 93 applications have been received, 81 approved and 23 installed.

Next Steps: Letters to homes with meter boxes with spools will be sent out to encourage more residents to apply and information will be sent out in the tax notice. Data is being collected on real savings for homes that have had their meter installed to show the effectiveness. Staff are receiving training on the Sensus Analytics software and the customer portal in the next couple months, and the portal will be launched sometime in 2025.

Budget: The communications plan had a budget of \$35,000. Approximately \$10,000 is available to use for the launch of the customer portal and ongoing promotion of the program in 2025

1.5. SCPA – GAP Services

Scope: This will update the analysis of the proposed water system and sanitary sewer systems connecting the SCPA to existing trunk mains in the waterfront area. It includes coordinating the installation of underground crossings of Highway 7 and CPKC Rail at/near Highway 7 and Nelson Street.

Status: Staff are reviewing submissions from engineering consultants for this project.

Next Steps: A consulting engineer will be retained.

Budget: The budget is \$400,000 and it will likely be funded from a variety of DCC projects.

1.6. Mission Downtown Parking Study

Scope: The scope of the downtown parking study was to determine existing on-street and public parking supply and capacity. As well, to understand current parking occupancy rates and patterns during peak and off-peak times. The study identified locations of high parking pressures and areas of excess capacity. The study provided short, medium, and long-term recommendations to improve parking conditions in the downtown.

Status: The Downtown Parking Study was endorsed by Council on August 19, 2024. As directed by Council, staff initiated the Downtown Mission Parking Working Group in November 2024. Council approved funding for the Downtown Parking Reconfiguration in 2025.

Next Steps: Staff continue to meet with the Downtown Mission Parking Working Group. A proposed downtown parking layout will be provided to Council for their consideration before implementing in 2025.

Budget: The Downtown Parking Reconfiguration Project received a budget of \$25,000 in 2025.

1.7. Original Fraser River Sanitary Forcemain Condition Assessment

Scope: Inspect the original forcemain river crossing to estimate its remaining life and inform ongoing maintenance and operation decisions.

Status: In late 2023, the City engaged an engineering consultant to assess technologies for evaluating the condition of sanitary pipelines and recommend an optimal methodology for the Fraser River forcemain. After receiving the consultant's report in mid-2024 and conducting follow-up discussions with technology vendors, the City hired a contractor to perform a screening-level inspection of the forcemain. This inspection, conducted on October 30, 2024, involved passing a tennis-ball-sized device through the pipeline, which can detect large leaks, significant debris buildup, or substantial pipe metal loss. The results report is expected by the end of the year.

Next Steps: The screening inspection outcomes will inform next steps. Such may include forcemain cleaning and/or a follow-up detailed inspection with a higher resolution device.

Budget: There is a budget of \$150,000. Approximately \$65,000 of this budget was allocated to the engineering consulting contract and the screening level inspection contract is approximately \$45,000. Remaining budget covers internal costs or will carry forward for next steps.

1.8. Sanitary Forcemains Condition Assessment Project

Scope: The longevity of existing sanitary sewers is dependant on their age, the material they are made of, the soil conditions, and a number of other factors. This study will refine longevity estimates made in the Utility Master Plan to better inform condition replacement strategies and future financial plans.

Status: The Terms of Reference is finalized, and staff are in the process of hiring a qualified engineering consultant to carry out the study. Project is expected to be completed in late 2025.

Budget: A budget of \$75,000 has been allocated for this study.

1.9. Storm Mains Condition Assessment Project

Scope: The City of Mission operates a large network of underground storm sewers monitored through a CCTV program to assess pipe conditions, identify issues, and prioritize maintenance. Each year, the City receives around 600 CCTV videos linked to specific pipe segments and is seeking a detailed review of this data to assign condition ratings, with a particular focus on larger corrugated metal pipe (CMP) segments.

Status: The Terms of Reference is finalized, and staff have issued an RFP to procure a consultant to complete this project. Project is expected to be completed in late 2025.

Budget: A budget of \$75,000 plus a \$10,000 grant has been allocated for this study.

1.10. Storm Sewers – Risk Assessment Related to Climate Change

Scope: The City's storm drainage systems were designed for runoff rates that have increased because of changing climates, and they are typically no longer capable of conveying the same events they were designed for. This study will examine rainfall intensities, review the impacts of increased rainfall, and identify storm sewers and culverts where upgrades are necessary due to the flooding and/or failure risks resulting from the higher flows.

Status: Deferred.

Next Steps: To minimize duplication of efforts, this will be included in an upcoming update of the Utility Master Plan.

Budget: A budget of \$122,500 has been allocated for this study.

1.11. Pump Station Asset Management Plan Project

Scope: The proposed scope of work for the Mission Pump Stations Asset Management Plan Project will include conducting site inspections of each pump station, reviewing and completing an existing infrastructure inventory, and assessing capacity, reliability, criticality, and general conditions. The project will estimate the service life of each asset, develop a major capital rehabilitation and upgrading program, and create a schedule for the remaining life of each pump station. A Class D cost estimate for each pump station will be prepared.

Status: The project is currently underway and scheduled to be completed in 2025.

Budget: \$50,000 plus a \$25,000 grant.

1.12. Ruskin Water Supply Improvements Planning

Scope: Engineering planning to enhance the Ruskin Water System's resilience to weather-related events that impact treated water quality.

Status: A test well was drilled at Ruskin Park in September 2024 to assess if the underlying aquifer could replace the existing Hayward Lake water source. Preliminary results are not promising with groundwater quality poorer than anticipated. In October 2024, an engineering consultant was retained to explore water system improvement options and recommend a preferred conceptual solution along with a budgetary estimate.

Next Steps: The conceptual engineering study will span through to mid-2025. Public and stakeholder engagement is included within the study scope. Study outcomes will inform decisions and capital budgeting for the design and construction of Ruskin Water System improvements.

Budget: \$190,000 which covers the groundwater exploration phase, the conceptual engineering study, internal costs, and includes contingency for potential follow up planning investigations.

1.13 Horne St & CP Railway Utilities Replacement Study

Scope: This complex multi-utility project consists of the replacement of twin sanitary mains and an AC watermain on Horne St, connecting N. Railway to S. Railway beneath CPKC train tracks. These critical pipes have been graded as “poor condition” with a high risk of failure.

Status: Staff are actively corresponding with CPKC, Ministry of Transportation & Transit, AMWSC, and others to understand the design requirements prior to engaging the design services of an engineering consulting firm.

Next Steps: Define the scope and retain a consulting engineer for design services.

Budget: This phase of the project has approximately \$200,000 available. Class A construction estimates will be a requirement of the consulting engineer.

2. Transportation Projects

2.1. Transportation Safety Strategy

Scope: Funds were approved for safety improvements identified in the Transportation Master Plan (Mission Mobility 2050).

Status: Staff are completing various transportation safety improvements across the community. Projects include:

- Leading pedestrian intervals implementation at up to five intersections.
- Annual crosswalk warrant review to determine which crosswalks require upgrades.
- 30 km/h speed zone review at Cedar Street, adjacent to Albert McMahon Elementary School, as requested by Council.
- Design of crosswalk upgrades as per Mission Mobility 2050.
- Crosswalk upgrade on Best Avenue, adjacent to Cherry Hill Elementary School, as directed by Council.

Next Steps: Staff continue working on designs and will implement as many as possible by the end of 2025 using available budget.

Budget: A budget of \$756,267 is available in 2025, plus an additional \$170,000 for a crosswalk upgrade on Best Avenue adjacent to Cherry Hill Elementary School.

2.2. Road Paving

Scope: Pave roads in priority order based on a condition assessment completed in the Transportation Master Plan.

Status: Contractor has started the 2025 Paving Program.
Locations are:

- London Avenue
- Horne Street
- Best Avenue
- Whidden Avenue
- Rose Avenue
- Hazel Crescent
- Sharp Street
- Grove Avenue
- Holiday Avenue
- Viola Street

Budget: A budget of \$2,500,000 has been approved for 2025.

2.3. Converting Street Lights to LED Fixtures

Scope: The City of Mission requires the services of a qualified electrical contractor to provide electrical services in replacing approximately 797 HPS streetlight fixtures with new LED streetlight fixtures purchased by the City of Mission Purchasing division.

Status: A contract has been awarded to Standard Electric BC Ltd. to replace all HPS bulbs with LED bulbs on all remaining streetlights in the City.

Next Steps: All LED bulbs, hardware and related components have been ordered, with the delivery date scheduled for the end of May, or early June. Once received, the replacement schedule will begin. This project is anticipated to be completed by the end of 2025.

Budget: A budget of \$200,000 was approved in 2024. Minimal amount of this budget has been used for the procurement process. The remainder of funds have been carried over into 2025 for the purchase and replacement of HPS fixtures to LED. There is added incentive to complete this work before the end of 2025 in order to qualify for a BC Hydro incentive program that could amount to \$100,000 to the City.

2.4. Active Transportation (previously called Walkways and Sidewalks)

Scope: Current projects include:

- Cherry Avenue from Edwin S. Richards School to Harms Street,
- Cherry Avenue east of Cedar Street, at Albert McMahon School.
- 32604 Cherry, and
- Best Avenue at Kudo Drive

Status: The status of each project is:

- Cherry Avenue from Edwin S. Richards School to a point about 25 m west of Harms Street – a design is complete for 250 m of temporary asphalt sidewalk on the north side of the road.
- Cherry Avenue at Albert McMahon Elementary School. A Multi-Use Path is designed on Cherry Avenue, in front of the school.
- 32604 Cherry Avenue, a short section of missing sidewalk is designed in front of this property.

- Best Avenue at Kudo Drive – a sidewalk is designed on the north side of Best Avenue, west of Kudo Drive. An RRFB is also being designed at this intersection.

Next Steps: The project will be combined into one RFP and posted for contractor submissions. As work in front of Albert McMahon Elementary School should not take place during school operating periods, the construction there may need to be deferred until 2026.

Budget: The 2025 financial plan allocates about \$3M in Active Transportation for these and other projects.

2.5. 2nd Avenue Transit Exchange Improvements

Scope: To review and evaluate various options and implement a preferred option to improve overall user experience and pedestrian crossing safety at the Transit Exchange on 2nd Avenue.

Status: Since 2022, two new shelters were installed, and a concept for improved pedestrian circulation and traffic calming was approved by Council. A crosswalk will be installed on the west side of the transit exchange, but construction is delayed while the adjacent development (7375 Horne Street) is underway.

Next Steps: Staff plan to hire a contractor to construct the works once road works for the adjacent development is largely complete.

Budget: The estimated costs to construct the project will be accommodated within existing available budgets.

2.6. 14th Avenue Road and Utility Improvements Phase 2, Grand Street to Cade Barr Street

Scope: Road widening and improvements along 14th Avenue from Grand Street to Cade Barr Street, with:

- A 3 m wide MUP on the southside of the road,
- A 1.5 m wide concrete sidewalk on the northside of the road,
- A user activated flashing beacon at the Horne Street crosswalk,
- New pavement for two travel lanes and, where room is available, two on-street parking lanes,
- Street lighting,
- 300 m of open cut storm sewer replacement (on 14th Avenue, Cade Barr Street, and Knight Avenue)
- 90 m of storm sewer replacement through trenchless pipe bursting (Brown Crescent to 14th Avenue); and
- Approximately 200 m of watermain to improve fire flows to properties on 13th Avenue.

Status: The project achieved substantial completion on June 20, 2024.

Next Steps: The project is now in the one-year warranty period and deficiency work is being completed as required.

Budget: The 2023 Financial Plan was updated through a Council award report on September 5, 2023, to increase the project budget to \$6,760,802. Supplemental funding includes \$2,433,496 road DCC funding, \$300,000

in water utility funding, plus \$625,000 in drainage utility funding for storm sewer replacement.

2.7. Wren Street Bridge Construction

- Scope: Building off of the investigation project, to design and construct a twin cell box girder bridge complete with utility relocates. The consultant has also been retained to conduct regular inspections of the existing bridge to ensure that it safely remains in service until the new bridge is constructed.
- Status: Stantec has been awarded the consulting services for the project and design, permit applications are underway.
- Next Steps: The design, permit applications and regular inspections are underway. Construction is anticipated for the 2027 environmental window.
- Budget: The total budget is \$3,021,097 including \$789,789 contributed through the DCC Roads Program.

2.8. 1st Avenue Bus Stop

- Scope: To convert the “Plaza” on the north side of 1st Avenue between James Street and Welton Street into a bus stop. This included curb, gutter, paver brick modifications, and street furniture adjustments.
- Status: This project is now substantially complete.
- Next Steps: This project is now in the one year warranty period.
- Budget: The budget for this project was \$83,680, however costs for design and construction were higher. Additional budget for this project was available from the Transit Infrastructure Budget.

2.9. Grand Street Active Mobility Project (14th Avenue to 2nd Avenue)

- Scope: This project is funded primarily by DCCs and was identified as a priority in Mission Mobility 2050 and the DCC Background Report 2025. Mission Mobility 2050 also identified Grand Street (14th Avenue to 11th Avenue) as being a high priority for traffic calming. Grand Street is proposed to have a multi-use pathway as per Mission Mobility 2050.
- Status: The project is in the very early stages and has not had significant progress due to staffing challenges. However, staff applied for the Federal Active Transportation Fund for this project in February 2025. Although this project does not have a design yet, it was presented at the 2025 Capital Projects Open House for early feedback.
- Next Steps: Hire a consultant to continue the project to detailed design and bring the project forward for additional public engagement.
- Budget: Just over \$2M is available for this project in 2025.

2.10. 11th Avenue Active Mobility Project (Stave Lake Street to Taulbut Street)

- Scope: This project is funded primarily by DCCs and was identified as a priority in Mission Mobility 2050 and the DCC Background Report 2025. Mission Mobility 2050 identifies this as having a multi-use pathway. The project would also include traffic calming elements to encourage people driving to

travel the posted speed limit of 50 km/h (or 30 km/h in the school zone adjacent to Windebank Elementary School).

Status: The project is in the very early stages and has not had significant progress due to staffing challenges. Although this project does not have a design yet, it was presented at the 2025 Capital Projects Open House for early feedback. The scope is still being developed to enable staff to engage with a consultant.

Next Steps: Hire a consultant to continue the project to detailed design and bring the project forward for additional public engagement.

Budget: \$314,259 is available in 2025.

2.11. Wren Street Upgrade (7th Avenue to Teal Street)

Scope: This project is funded primarily by DCCs. Mission Mobility 2050 identifies this road segment as having a multi-use pathway. The project would also include traffic calming elements to encourage people driving to travel the posted speed limit of 50 km/h (or 30 km/h in the school zone adjacent to West Heights Elementary School).

Status: The project is in the very early stages and has not had significant progress due to staffing challenges. Although this project does not have a design, it was presented at the 2025 Capital Projects Open House. This project is now paused due to staffing challenges and so staff can focus on other projects.

Next Steps: None.

Budget: \$750,000 is available in 2025 for this project.

2.12. Nelson Street Upgrade (Highway 7 to Gill Avenue)

Scope: This project is funded primarily by DCCs and was identified as a priority in Mission Mobility 2050 and the DCC Background Report 2025. Mission Mobility 2050 identifies Nelson Street as having a multi-use pathway in this segment (Highway 7 to Gill Avenue).

Status: Much of the project has already been built by adjacent development.

Next Steps: Additional connections north across the railway and to Highway 7 are still required. However, the remainder of this project is now paused due to staffing challenges.

Budget: \$458,750 is available for this project in 2025.

2.13. Cedar Valley Connector and Mall Access Intersection Safety Improvements

Scope: The Cedar Valley Connector and Mall Access intersection is identified as a top collision prone intersection in Mission and requires safety improvements, as identified in Mission Mobility 2050. Improvements are anticipated to include signal timing changes, additional signage, and improved visibility.

Status: The project is still in early stages and has not had significant progress due to staffing challenges. The scope is being developed to enable staff to engage with a consultant.

Next Steps: Hire a consultant to complete the design.

Budget: There is a budget of \$41,250 available.

2.14. Transit Future Action Plan Update

Scope: The existing Central Fraser Valley Transit Future Action Plan (TFAP) was adopted in 2018. TFAPs are generally updated every five years, so it has come time to prepare an update. BC Transit is leading the TFAP update in collaboration with the City of Abbotsford and City of Mission.

Status: The TFAP update underwent key stakeholder engagement in spring 2024 and a broader public engagement campaign in fall/winter 2024. Using feedback received, a final draft has been prepared.

Next Steps: Staff anticipate the TFAP update will be brought forward to Council for their consideration for adoption in summer 2025.

Budget: None.

2.15. Transit Infrastructure Improvements

Scope: The Transit Infrastructure Improvements Budget is available for transit related improvements needed as outlined in Mission Mobility 2050 and the latest available Transit Future Action Plan. This budget covers new bus stop pads, bus shelters, benches, and other improvements to improve safety and accessibility at bus stops (lighting, curb ramps, crosswalks). This budget is also used when a new transit expansion is proposed, and new bus stops are required to be installed to support new transit routing.

Status: The project has not had significant progress due to staffing challenges.

Next Steps: Staff to identify priority locations for improvements and hire a consultant to begin design.

Budget: There is a budget of \$709,000 available.

2.16. Cedar Street, Tunbridge Avenue to Dewdney Trunk Road

Scope: Preparation of detailed design drawings for future road widening of Cedar Street from Tunbridge Avenue to Dewdney Trunk Road. This is necessary to ensure development improvements are cohesive and the road will have adequate long-term traffic capacity.

Status: A consulting engineering firm prepared two conceptual designs of road widening options for the City's review. One showed a roundabout at the intersection of Cedar with Rosetta/Laminman Avenues, the other a traffic signal. These were presented at a February 26, 2025, Capital Projects Open House. The numbers of comments and preferences at the Open House were approximately equal for the two options.

Next Steps: ICBC is providing a Road Safety Audit of the designs, which will be followed by selecting one and retaining a consultant to prepare detailed design drawings.

Budget: The 2025 Financial Plan allocates about \$720,000 in primarily DCC funding to this project.

1. Water Projects

3.1. Watermain Replacements

- Scope: Based on available funding, in conjunction with infrastructure condition assessments and detailed design provided by engineering consultants.
- Status: Continued utility condition assessments and AC main replacement are ongoing. Detailed designs are completed to prepare for next locations of replacement. Best Avenue / Viola Street / Rose Avenue AC Watermain replacement is underway, and will be completed by mid-summer, 2025. Ryan Street and 4th Avenue AC watermain replacement is scheduled for Fall, 2025.
- Manson Avenue (Phase 2 Dann Avenue to Vosburgh Avenue) watermain replacement was completed in August 2024.
- Alpine Place, water main replacement was completed in October 2024.
- Budget: A budget of \$2,440,103 was approved for 2025. \$628,000 has been spent to date with \$547,000 encumbered for consulting and detailed designing of future projects.

3.2. Retrofitting of ICI Meters

- Scope: While nearly all of the Industrial/Commercial/Institutional (ICI) sector is metered, only a portion of the meters were read by the radio-read system. The scope of this project is to work towards 100% of ICI customer meters being on the radio read system, and installing new meters in known ICI locations that do not have meters
- Status: Public Works completed three large ICI meter replacements in 2024. The Westminster Abby, West Cost Express Train Wash, and Heritage Dental Office. Outstanding locations to be completed in 2025 are, the Federal Prison, Heritage Park, and Mission Hills Mall.
- Next Steps: These projects will be scheduled for completion in coordination with the property owners and the tenants involved. Meter replacements that require internal plumbing in mechanical rooms will be completed by a red seal plumber retained under a preferred vendor program (PVP).
- Budget: A budget of \$160,089 has been approved for 2025.

3.3. Automated Meter Infrastructure (AMI) Project

- Scope: Implementing a voluntary user-pay water metering program spring, 2025. With this program, Council approved funding to implement the supply and installation of the meter and transmitter portion of the meter assembly, AMI hardware and software for meter data collection and integration with existing software.
- Status: In 2024, the first AMI base station was installed on Eagle Mountain in Abbotsford. This base station collects 2600 of the 2800 water meter accounts. The new radio network infrastructure (RNI) software has been installed and is capturing meter data on an hourly basis. This meter data is reviewed in real time and analyzed to identify consumption issues.

A contract was awarded to a qualified contractor through the RFP process to install meters at property line. The contract was awarded to Water Matix. They installed their first meter April 14, 2025.

Sensus Analysis (SA) set up has been completed and the integration from RNI and our billing software was successful.

Next Steps: The Vertex One customer portal kick off meeting is in May 2025 and should be ready for roll out soon after.

The next base station location has been identified as the tower in the Public Works yard. This project is on hold due to the tariffs applied by the USA.

Continue to run social media content and provide more information to the public on the customer portal access.

Budget: In 2024, \$200,000 was approved to initiate an Advanced Metering Infrastructure system for water meter data retrieval and analysis (annually for 3 years). \$85,000 for Advanced Metering Infrastructure software and licensing (on-going).

3.4. Supervisory Control and Data Acquisition (SCADA) Upgrades

Scope: The SCADA system monitors and controls the water and sewer systems. Critical operational information is received through the SCADA system to ensure the water and sewer systems continue to operate correctly and, should a failure occur, keep the response time to a minimum. This upgrade includes replacing outdated software as well as hardware at pump stations and pressure reducing stations.

Status: An updated assessment of the SCADA system was completed as part of the Utilities Master Plan, outlining the steps the City should take to upgrade it. That includes checking radio reception, upgrading the antenna systems, installing new hardware, and implementing new control system software. The SCADA antenna systems have been upgraded, and new radios have been installed.

Next Steps: New software will be purchased and a consultant specializing in SCADA software will be retained, through standard procurement processes, to set up the new system. The new software will reduce current inefficiencies in after hour call-outs of staff, as well as enhancing analysis of the collected data.

Budget: The 2025 Capital Plan includes just over \$510,000 for this project.

4. Sanitary Sewer Projects

4.1. Fraser River Forcemain River Crossing

Scope: Supply and install new 900 mm diameter steel pipe from Mission racetrack to the JAMES plant crossing underneath the Fraser River using the dredge, drag, and cover method.

Status: The project achieved substantial performance on May 16, 2022, with a couple of minor outstanding deficiencies to work through. To fulfill a requirement to compensate for a destroyed raptor nest, staff in

partnership with the Hancock Wildlife Foundation have successfully installed an artificial nest at Jack Poole Harbourside Park. The nest is set atop a 70-foot-tall wood pole complete with two high resolution, fully remote, cameras. The cameras are currently live streaming via the Hancock Wildlife Foundation Live Cams page. Final grant reporting has been submitted to and accepted by the Province and final grant payments were received in December 2023.

Next Steps: Finalize any outstanding business with the private property owners impacted by the project. Additionally, there is a requirement to provide some environmental compensation for temporary disturbance of habitat in the form of wintering ponds for juvenile salmon in Lane Creek. Staff are working with the Province and Fisheries and Oceans Canada (DFO) on options to satisfy this condition.

Budget: The total approved project budget for the design and construction of a new sanitary forcemain is \$34,836,762. The current budget forecast puts the final project cost at \$34.8M dollars less grant contributions received in the amount of \$17.5M.

4.2. Penitentiary Pump Station/Gravity Main Upgrade

Scope: Supply and install new sanitary pump station, as recommended by sewer model study, to address capacity issues.

Status: Drake Excavating mobilized to site April 3, 2023. The pump station is operational as of August 2023 however, a design issue has emerged that is being worked through. The genset was installed and commissioned in February 2024. Substantial completion is pending.

Next Steps: A solution to the design issue was determined and Drake mobilized to site in April 2025. Construction should wrap up May 2025.

Budget: Drake Excavating's bid was \$2,795,000 with an overall project budget of \$3,535,000.

4.3. Electrical Assessment of Sanitary Pump Stations

Scope: Assess the sanitary lift station (SLS) electrical components at Mission Way, Harbour Avenue and Lougheed Highway sanitary pump stations. The existing electrical components are approaching 20 years of service in a harsh environment and may be reaching end of life.

Status: Harbour Avenue SLS upgrades have been completed.
Lougheed Highway SLS electrical upgrades, and pump replacements have been completed, April 2025.

Next Steps: Ongoing commissioning of new components will be completed by the end of May 2025.

Budget: 2025 budget for Lift Station Maintenance is \$396,992, of which \$222,730 has been spent to date.

4.4. 2025 Sanitary Sewer Replacement and Relining

Scope: Upgrade the sanitary sewers along 6th Avenue Laneway from Alder Street to Grand Street including sections of Cedar Street, 7th Avenue, Alder Street and Birch Street. Upgrades will be a combination relining and open cut replacement.

Status: Aplin and Martin has been retained as the design consultant.

Next Steps: A kick off meeting with Aplin and Martin was held May 6, 2025 to initiate the project. Construction is anticipated for late 2025.

Budget: \$668,000 inclusive of design and construction.

4.5. Rai Avenue Sewer Upgrade

Scope: Upgrade the sanitary gravity forcemain resulting from the leak that occurred in September 2020. This project includes upgrading 60 m of 750 mm diameter of forcemain and the corresponding land acquisition for a suitable Statutory Right-of-Way (SRW).

Status: Wedler Engineering has been retained, and the topographical survey and geotechnical investigations have been undertaken. The City received consent from the landowners of 32400 and 32416 Lougheed Highway to facilitate the investigations. Design is underway.

Next Steps: A contractor will be engaged to expose the forcemain and conduct non-destructive testing to ensure the downstream tie-in point is satisfactory after which detailed design can commence.

Budget: \$600,000 inclusive of design, construction and SRW acquisition.

5. Drainage Projects

5.1. Nottman Street Rainwater Detention Pond

Scope: The 2007 'Cedar Valley Area Stormwater Management Plan Update' identified the need to control and help treat surface runoff from Phase 1 and Phase 2 of Cedar Valley. The design for a rainwater detention pond located along the Nottman Street alignment, north of Dalke Avenue (in accordance with the Cedar Valley Engineering Plan), was submitted for Water Sustainability Act (WSA) approval in 2019. Changes to the Fisheries Act in 2020 required approval from the DFO, which has been provided.

Status: This project achieved substantial completion on October 31, 2023 and the warranty period has now expired. All deficiencies have been remediated.

Next Steps: Parks staff will be constructing a small bridge over the spillway.

Budget: The current budget for Cedar Valley Drainage DCC Capital Project is \$1,865,000 with funding from the Cedar Valley Drainage DCC reserve (99%) and the General Capital Reserve (1%).

5.2. Drainage Pipe Replacements

Scope: CCTV investigations of the storm and sanitary sewers along sections of roads indicate if a storm main or sanitary main are in poor condition and need to be replaced.

Status: The 10th Avenue storm main design from Alder Street to Grand Street has been completed.

Next Steps: Works will be scheduled for late 2024 or early 2025.

Budget: Combined budget of \$225,000 carried forward from 2019, plus an additional \$351,500 in 2020 for the 10th Avenue project.

5.3. Culvert Rehabilitation (Dewdney Trunk Road at Vishloff Street)

Scope: The existing culvert crossing was assessed to have conveyance and structural deficiencies and is considered a priority. 2023 work involved retaining a consultant for design services and permit applications. Once the detailed design is completed, environmental permits secured and a Class A estimate developed, staff will budget for construction in 2025.

Status: The project was procured in Q1 of 2025 and B&B Heavy Civil Ltd. submitted the highest scoring proposal.

Next Steps: A pre-construction meeting is pending for August 2025 construction.

Budget: This project falls within the Storm Sewer/Culvert Design and Renewal and Capital Upgrades (\$1,800,000) line item within the 2025 budget. The project budget is \$900,000.

5.4. Culvert Rehabilitation (9452 and 9756 Dewdney Trunk Road and 12121 Ainsworth Street)

Scope: The existing culvert crossings were assessed to have conveyance and structural deficiencies. This project includes design and construction of the three culverts.

Status: ISL submitted the 90% design for review. Environmental permitting is underway.

Next Steps: Once Class A estimates and permitting requirements are submitted, staff will triage construction for 2026 and 2027.

Budget: This project falls within the Storm Sewer/Culvert Design and Renewal and Capital Upgrades (\$1,800,000) line item within the 2025 budget.

5.5. Lane Creek Pump Station Preliminary Design

Scope: The Waterfront Engineering and Utilities Master Plan both identified the need to replace the existing Lane Creek drainage pump station due to its age and need for increased capacity.

Status: A consulting engineering firm is preparing preliminary and detailed design of a replacement station.

Next steps: The existing station is located on private property with no legal agreements. The consultant will identify and compare options for a new

location in the immediate vicinity of the existing one. That will be followed by a preliminary design.

Budget: The 2025 Financial Plan includes \$1.9M for this project. Engineering staff applied and received a grant of \$150,000 in 2023 for the design.

5.6. Waterfront Dike Design

Scope: This project is a detailed design for approximately 1 km of dike and related items along the north banks of the Fraser River extending from the Canadian Pacific Kansas City (CPKC) train bridge upstream to where the tracks rejoin the banks of the river near North Railway Avenue. Currently this dike is non-existent or significantly below Flood Construction Level (FCL). Open/green-space design, nearby utility replacement design, permit applications, cost estimates, right-of-way plans, and longer-term contamination testing are examples of other items included in the scope.

Status: The consulting team was retained and the project kicked off in July 2024. Meetings and coordination with stakeholders are underway. Surveying and geotechnical testing is completed. The project team has been working on the preliminary design, for example shifting the dike alignment slightly from what was shown in the Waterfront Revitalization Master Plan.

Next Steps: Substantially complete the project before 2026 (e.g., 100% detailed design/specifications package and cost estimates). Some permits may lag beyond this date.

6. Environmental Projects

6.1. Stormwater Infrastructure Repairs and Slope Remediation

Scope: Funds were allocated for remedial work at three storm sewer outfalls where there is a risk to private property due to slope erosion. The sites are in areas of steep slopes.

Status: McFall Terrace site: Follow-up inspections indicate the site is relatively stable.

Cedar Street site: Access is severely constrained and is dependant on the re-development of adjacent lands.

Rook Crescent site: Additional geotechnical investigation is needed but the access into the area is severely constrained.

Next Steps: McFall Terrace site: Public Works personnel will undertake some minor repairs and monitor the site on an annual basis.

Rook Crescent site: Staff and the consultant will investigate relocating the outfall.

Budget: Approximately \$600,000 is budgeted for this in the 2025 Financial Plan.

6.2. Land Clearing Management Program Implementation

- Scope:** To address increasing pressures of development and associated land clearing on the natural ecosystems in the City, under Council direction, staff have developed a Land Clearing Management Program (LCMP) that consists of updated environmental development permits areas, enforcement and ticketing tools through bylaw updates, a public communication plan, and an educational component outlining the benefits of maintaining a healthy urban ecosystem.
- Status:** All required updates to the Development Permit Areas in the OCP and bylaw amendments to establish enforcement powers are complete. Staff provided an update to Council on February 3, 2025, where staff were directed to develop an escalating fine structure, establish the requirement for visible permit signage, and amplify the communications strategy to increase public awareness, including videos reels.
- A webpage and brochure have been developed, additional posts have been made to the City's social media pages, and information is circulating on the City Pattison advertisement board. Staff also had a booth at the Capital Projects open house with information on the LCMP.
- Next Steps:** Updates to the Ticket Information Bylaw 2646-1993 and the Bylaw Notice Enforcement Bylaw 5700-2018 will be brought to Council for review to allow for an escalating.
- Staff are currently working on video reels, signage for placement in rural neighborhoods, and permit posting requirements. An information session is being planned.
- Budget:** Staff time, sign printing, and costs of paper print materials are currently the only budgetary impact of this project. Signage is expected to cost no more than \$1,000.
- Staff intend to report to Council with a second project update in late August 2025.

7. Fleet and Equipment

7.1. Equipment Update

- Scope:** Public Works: Two additional dump body trucks equipped with plows and sanders have been procured and are in service. Two standard pickup trucks are being replaced with two dump body trucks equipped with plows and sanders. Procurement in progress.
- Parks: Replacement model for the light duty mower has yet to be determined by Parks staff. Vendor demonstrations are taking place to determine right model for the intended work. Light duty pickup added to the leisure center. Replacement of two pickups as per the Fleet Capital Plan currently being discussed to determine makes and models to best suit requirements. Replacement Zamboni ordered with anticipated delivery prior to next ice season.
- Mission Fire Rescue: Four HD pickups are nearing the end of the procurement process. Two are additional units and two are replacements of existing equipment. Draft Commander pump test trailer is on order with anticipated delivery mid-summer.

- Status: Procurement is in varying stages of progress for replacement vehicles identified. There have been four retired vehicles sent to auction thus far in 2025
- Next Steps: Efforts are being made to secure replacement vehicles scheduled for 2025 prior to any tariffs taking effect. Delays in procurement will result if tariffs affect availability and increased costs requiring budget amendments for the coming years.
- Budget: The General Capital Reserve has allocated \$3,707,140 to purchase equipment in 2025.

8. Facilities Projects

8.1. Mission Museum Rehabilitation Phase 2

- Scope: The scope of the Phase 2 rehabilitation project includes the replacement of the cedar shingle siding on the upper half of exterior walls; abatement of lead paint on, and repainting of, lower exterior walls, entrance portico, and decorative wood cornice; heritage wood window repairs including the repair/replacement of cracked panes; and exterior wood door preservation.
- Status: Construction contract has been awarded, and the contractor has mobilized on-site. In May the abatement containment enclosure (i.e. scaffolding around entire building and enclosed with shrink-wrap) was removed.
- Next Steps: Construction completion spring 2025. A public ceremony will be held in late summer or early fall.
- Budget: The construction contract is for \$471,998. The City was awarded \$88,920 in Heritage Legacy Fund grants from Heritage BC to help fund this heritage rehabilitation work.

8.2. Facility HVAC System Replacements

- Scope: There are nearly 150 HVAC components at the various facilities, comprised of heating/cooling units, hot water tanks, exhaust fans, sump pumps, etc. An inventory is used to prioritize the scheduled replacement of these items.
- Status: The replacement of Welton HVAC units was completed in 2024.
- Next steps: Staff are reviewing budgets for potential HVAC works at the Archives and RCMP in 2025.
- Budget: The total budget for Archives and RCMP HVAC replacement in 2025 is approximately \$154,000.

8.3. Public Works Roof Sections A & B Replacement

- Scope: Installation of new SBS modified bitumen, torch applied roof on sections A and B of the Public Works building
- Status: Preliminary planning is underway. No physical work has commenced to date.

Next Steps: Staff will finalize the project scope and initiate the procurement process, aiming to align construction timing with weather and operational needs.

Budget: \$395,000 has been approved in the current capital plan for this project.

8.4 Library and Archives Fire Alarm System Replacement

Scope: Replacement of the fire alarms and sprinkler systems.

Status: The project is in its early stages, and no work has commenced.

Next Steps: Staff are preparing to finalize the detailed scope of work and initiate the procurement process.

Budget: \$130,000 has been allocated in the approved 2025 budget for this critical safety upgrade.

8.5. Electrical Upgrades at Public Works

Scope: Electrical upgrades at the Public Works facility are being completed to address safety concerns and ensure adequate power for day-to-day operations. The project will be phased over a number of years.

The project involves replacement of major electrical hardware and is phased over years to minimize disruption to operations:

2022-2024 – The Design, telecommunication panel replacement, relocation of the fiber optic line and server bank has been completed.

2025 – Replacement of the remaining electrical panels, and an electrical engineer to design the replacement of the Public Works standby generator

2026 – Trenching and wiring for new services on the property. Installation of EV the charging station. Solicit public bids for replacement and installation of the Public Works standby generator.

Status: Phase one of the project has been completed. Phase two (replacement of 27 electrical panels and main 600V switch gear) was scheduled to begin in Summer, 2024. Unfortunately, this has been postponed due to electrical distributor supply issues and is projected to be completed by the end of 2025. Phase three (final phase) will begin in 2025.

Next Steps: Electrical staff have reviewed and updated the parts list for components needed to complete Phase two of the project. Projects supplies have been ordered. Due to limited staff resourcing and supply chain issues this continues to prolong the project.

Budget: There is \$630,000 remaining in the budget that will be carried forward into 2025.

8.6 Cedar Valley Safety Building Design and Construction

Scope: The scope of the Cedar Valley Safety Building project is to design and construct a new Firehall #4 and Mission Search and Rescue facility, at the corner of Dewdney Trunk Road and Ihles Avenue. Options for

additional City office/multipurpose spaces for leisure/recreational programs were evaluated but are not part of the current design.

The project consists of multiple phases, beginning with the conceptual/preliminary design which includes site surveys, conceptual layouts, and stakeholder meetings, followed by detailed design development with cost estimates and compliance with codes. The process then moves through RFP documentation, construction administration with site reviews, and post-construction activities, including final reports, warranty reviews, and permit close-out.

Status: The project team presented a conceptual plan and cost estimate to Council in Q1 2025. The project is currently in the RFP stage for final detailed design.

Budget: The 2025 budget for the current phase is \$496,200.

Financial Implications

Each capital project discussed above includes the financial implications.

Communication

There is a projects page on the City of Mission website and key projects are added there. Staff will provide a project update in the in the Fall of 2025.

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