

2024

Business Plan

**ENGINEERING & PUBLIC
WORKS**

Engineering

DEPARTMENT OVERVIEW

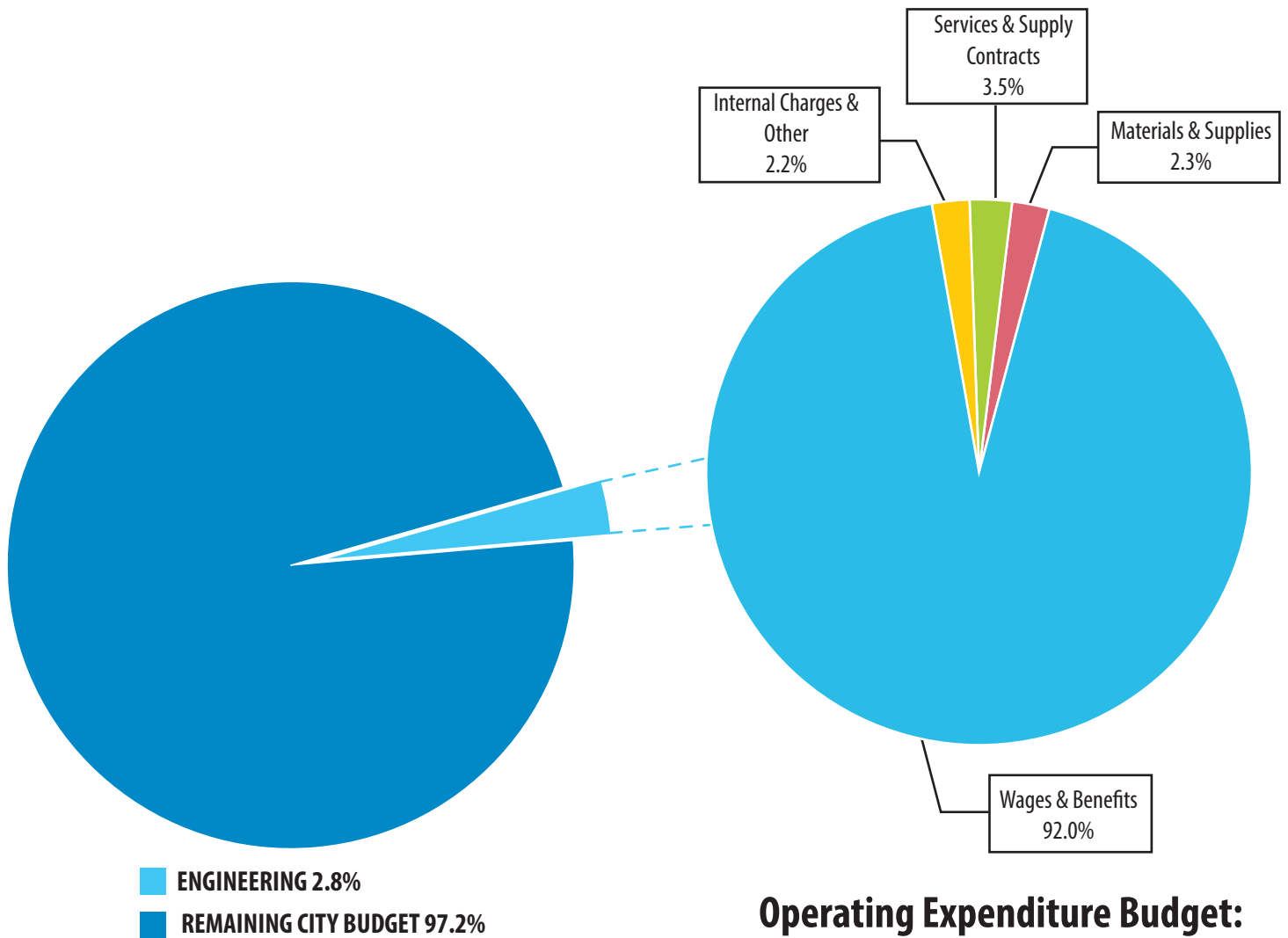
The Engineering Department plans and implements the City's capital works, designs and constructs City infrastructure residents rely on daily including: transportation, water distribution, sanitary sewer, drainage and facilities. A substantial aspect of the work in Engineering is project management, which often includes projects for other departments.

The work of the department focuses on stewarding the condition of public infrastructure, and development of new infrastructure in support of City Plan.

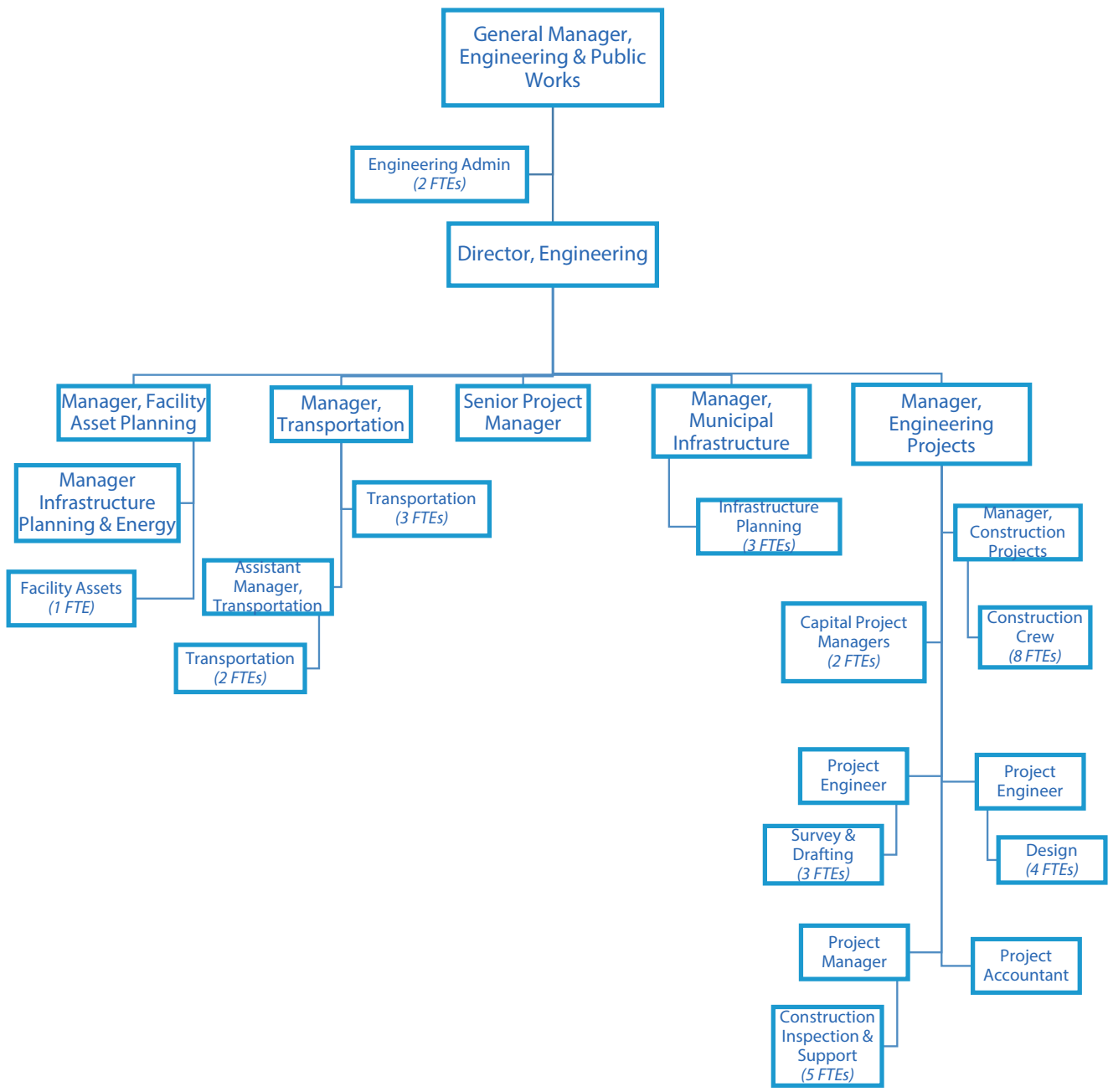
The Engineering Department is currently composed of five primary groups:

- Administration
- Transportation
- Infrastructure Planning
- Capital Projects
- Facilities Asset Management

DEPARTMENT'S SHARE OF THE BUDGET



Operating Expenditure Budget:
\$ 5,584,273



ADMINISTRATION

Engineering Administration provides essential support to the department. These are front-line staff that interact with the public, provide financial and clerical support, records management, organization, and ensure that other staff have the day-to-day resources they need.

Administrative services for the Engineering Department is provided by 2 staff members located at the Service and Resource Centre (SARC).

Background and Level of Service:

- A front counter is available for the public to access and reach staff in Engineering during normal working hours.
- Permit processing and approvals including trucking, film, street use, third-party utility construction, etc.
- Clerical support for Council and Committee reports.
- Records management for the department is maintained.
- Assistance for financial transactions and processing of invoices.
- Administration for Engineering is primarily internally focused and supports matters relating to infrastructure planning, technical and project standards, capital project design, and construction.

2023 ACHIEVEMENTS

- Over 150 permits processed in 2023.
- Brought a co-op student on board for eight months of the year.

2024 CONSIDERATIONS AND OPPORTUNITIES

The public-facing level of service in this area is high. Each resident who calls is able to speak with a member of the Admin team. Residents are accustomed to this service. It is increasingly rare in cities of this size. Many cities have opted to move to an automated answering service. In 2024, staff will continue with this level of service; however, use the voicemail box to provide information during periods of high call volumes.



TRANSPORTATION

Transportation in Nanaimo has seen significant changes over the past 5 years. The adoption of the Complete Street standards, City Plan and its Integrated Action Plan, as well as unprecedented demand for calls for service. Guided by Council's Strategic Framework and the Integrated Action Plan, Transportation works to ensure fair and equitable use of public spaces and appropriate investments into new infrastructure, while also diligently maintaining and optimizing existing assets.

In 2023, Transportation maintained the following existing assets (*Note: Transition to new Asset Management Software as well as updated field asset collection has created anomalies between previously reported stats):

- 540 km of roads, 452 km of sidewalks, and 119 km of bicycle lanes/cycle tracks
- 53 signalized intersections, 4 roundabouts, and 19,004* traffic signs
- 1,576 pay parking spaces (285 on-street and 1291 off-street,
- 18 bridges and 40 (28 vehicle/12 pedestrian only) railroad crossings*
- 4728 City owned streetlights and 4,286 lights leased from BC Hydro
- 1,201* marked crosswalks
- 76 pedestrian activated crosswalk-warning beacons
- 14 transit shelters.

In 2023, Transportation completed the following:

- Over 15,000m² of asphalt road re-surfacing
- 8 mid-life traffic signal renewals
- 2 traffic signal structural renewals
- 10 crosswalk rectangular rapid flash beacon (RRFB) crosswalk renewals
- Added 0.5km of cycling facilities
- Added 0.8km of sidewalks
- Added 2 transit shelters

Background and Level of Service:

The Transportation Group is the initial point of contact for businesses, residents, and visitors to Nanaimo who have enquiries or concerns regarding mobility within the City of Nanaimo.

Of the 500 concerns and requests Transportation received in 2022, the most common were speeding, parking, intersections and pedestrian safety. With many taking hours to complete, due to the complexity of the requests and associated data collection, analysis and on-site visits required to respond. The theme for priorities has remained in 2023; however, the volume has risen dramatically and Transportation is on track to receive more than 650 requests. Managing issues consumes almost 25% of the groups capacity.





To create a well linked multi-modal transportation system in Nanaimo, Transportation has prioritized safe, equitable, sustainable and accessible mobility choices. The following priorities were supported by residents through the consultation process and established in City Plan and the accompanying Integrated Action Plan:

- Creating complete communities that aim to meet the needs of all residents that provide alternate accessible mobility options to reduce the dependency of personal vehicles.
 - “Complete Streets” that safely accommodate all people of all abilities in an attractive and comfortable setting while providing alternate travel options that are more convenient for the community.
 - Influencing behavioural changes through street design, encouraging reduced vehicle speeds and mode shift to support active transportation and decreased pollution.
 - Maximize investments in safe, healthy and equitable travel for all people and goods within the City, including endorsing safe walking routes, active school travel plans and route connectivity.
 - The use of socioeconomic factors when planning and prioritizing new infrastructure or services to provide dignified and safe travel options for vulnerable populations.
 - Innovation and technology is used to improve asset management and travel demand models to make better decisions for future investments that improve quality of life. Data driven, fact based and informed decision making is the foundation of Transportation’s stewardship of municipal funds.
- Nanaimo’s streets and road right-of-ways currently equate to 540 km. The Transportation network represents one of the largest opportunities to provide safe, inclusive and accessible places for residents’ need to meet and connect. Community events such as street markets, parades, festivals and outdoor patios are just a few examples of reclaiming city assets for public connection.
 - In addition to maintaining and planning hard infrastructure, the City provides strategic initiatives that promote, educate, empower and encourage our residents to move and connect throughout our City. Some of these initiatives include:
 - GoByBike Week
 - The Cycle Commuter Challenge
 - Electric vehicle advocacy
 - Car share and bike share advocacy
 - Active School Travel planning in partnership with the School District, the school community and its PAC, as well as other agencies
 - Transit shuttles for special events with RDN partnership
 - Bike valet for special event
 - Nanaimo Online Cycling Map
 - Ride hailing
 - Upass – to support low barrier mobility for University Students

2023 ACHIEVEMENTS

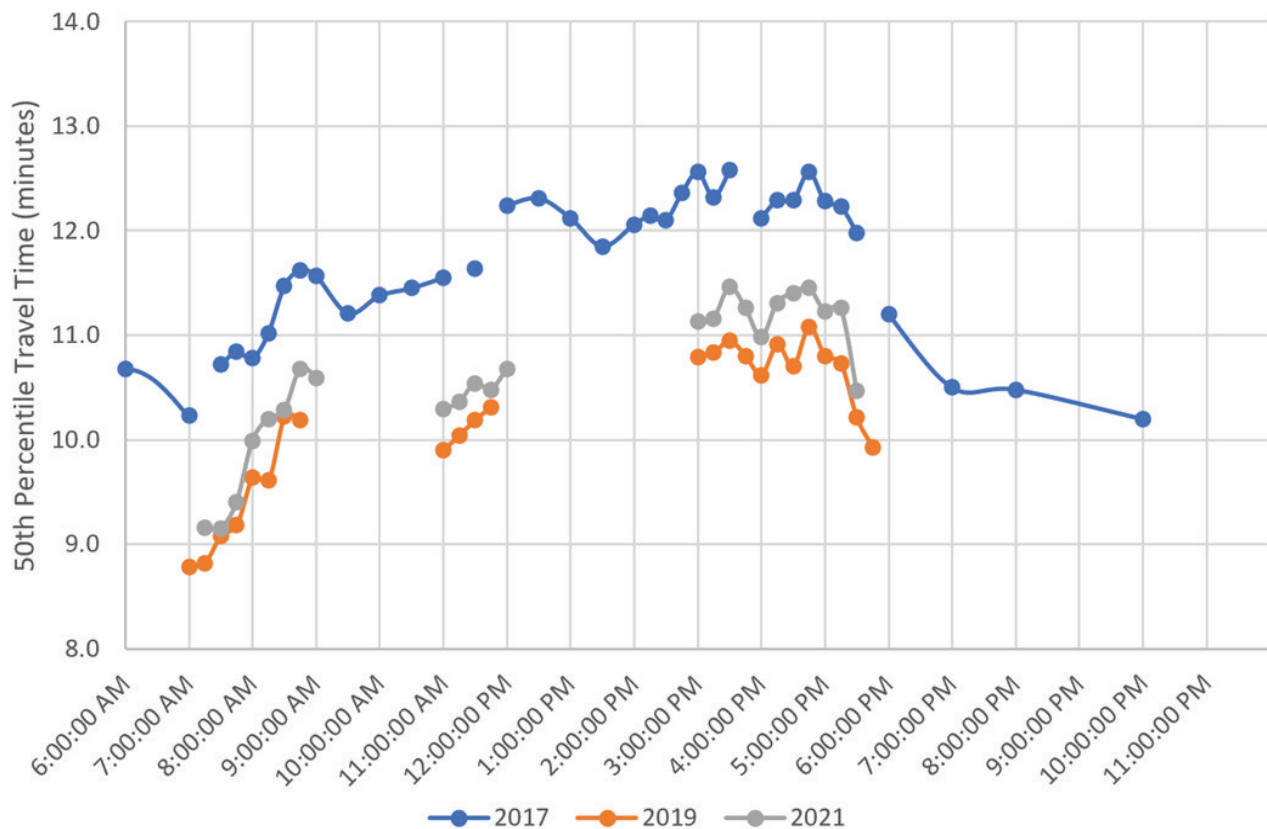
In 2023, Transportation completed the following:

- Renewed over 15,000m² of asphalt road surface
- Major Corridor Upgrades
- Added 0.5 km of cycling facilities
- Added 0.8 km of sidewalks
- Provided free bike valet and bus shuttles for City events
- Coordinated with the ACAI on implementation of the inclusive bus stop pilot project
- Transportation guides and influences a number of decisions regarding road safety, operational efficiencies, development, and asset renewal. The financial implications of these decisions inform the annual multimillion dollar capital and operating budgets which maintain and grow the City's services. Staff have historically relied on the manual collection, aggregation and analysis of this data to support these decisions, but this process was time consuming and inefficient. In 2021 a web-based traffic data analysis platform was created to house and analyse mobility data. In 2023 a Traffic Signal Management System

has been created which not only enhances staffs ability to maintain and operate the network of signals, but can now act as remote sensors to acquire data that was previously gathered manually. The integration of these tools sets the foundation for a more efficient and effective decision making system.

- Newly developed tools in this system include:
 - Automated process to view the collected traffic data (speeds, volumes, pedestrian crossing demand, number of cyclists, turning movement counts, etc.).
 - Crash analysis tool where ICBC crash data is incorporated with features to compare the crash numbers at an intersection before and after changes to the roadway, which can include the replacement of a 4-way stop sign with traffic signal.
 - Issues management tool to record and track the progress of public concerns and inquiries related to traffic.
 - Ongoing major corridor travel time monitoring which will quantify changes over time.
 - Ability to more efficiently adjust signals to reduce delay (example of Bowen Road 10%-15% travel time savings in Figure 1).

Figure 1: Change in Traffic Signal Management Resulting in Reduced Travel Time





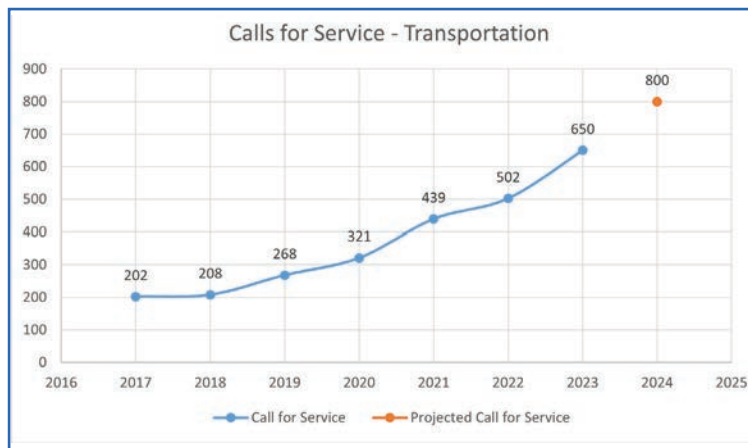
- Delivery of safety improvement projects including:
 - Fifth Street and Bruce Avenue intersection upgrades, which includes installation of traffic signals, new pavement and LED lighting, complete sidewalk with tactile warning indicators for the visually impaired, as well as dedicated a bike lane with green paint to highlight potential conflict zones.
 - Completed construction of Mary Ellen Drive roundabout, which improves the traffic flow since right-of-way control operations can function more seamlessly. This in turn improves safety for all modes of transportation.
- With increasing traffic calming requests over the past few years, Staff have worked diligently to deliver Council approved and funded traffic calming projects such as Bay Street, while continuing to carry out the traffic calming process for more than 30 traffic calming investigation tasks over the past two years:
 - These requests which were prompted by public concerns require data collection and analysis.
 - In 2023, public consultation was carried out simultaneously with the design process for Extension Road traffic calming, which was ultimately supported by Council to advance to the construction stage. A functional design is being developed later in 2023 and is going to be implemented in Spring 2024.
 - Staff also started the work for the first two projects in the growing Project Consideration list, namely, Bradley Street and Mountain Vista traffic calming.
- Transit Action have the following Items outlined in the Integrated Action Plan:
 - Transportation is leading a program in partnership with the RDN, BCT, and the third party vendor to establish a purposeful transit stop amenity program that supports the objectives of creating a safe, integrated and appealing transit system. IAP Ref. C2.2.10/C2.2.11.
 - Transportation is collaborating with the RDN and BCT to develop a Norwell Drive Corridor Plan which will support Active Mobility within the Country Club Urban Center. IAP Ref. C2.2.13.
- Noting that Nanaimo is one of the fastest growing communities in Canada, it's not surprising that land development is booming. However, availability of vacant land is declining, which has made each application more challenging to accommodate. These challenges have caused the community to become increasingly sensitive to the impacts of the higher demands on the mobility system, travel time, parking, etc. By the end of 2023, Transportation staff will have reviewed more than 300 applications, which is 50% higher than 2022. The steady increase in volume and complexity in the referral process has identified gaps in the previous referral process. Staff have re-structured workflow to increase efficiencies and introduce a higher degree of rigour. This demand consumes approximately 40% of the groups capacity.
- With land development, there are both direct and indirect impacts to municipal infrastructure. Direct impacts, such as sidewalks and utility connections, are dealt with by each individual applicant. Indirect impacts, such as large-scale intersection upgrades that are needed to support multiple developments are addressed by the City as part of growth but are partially funded by Development Cost Charges (DCCs). These are fees that are levied by the City to development applications through a Provincially approved bylaw. The bylaw is updated regularly to ensure that projects, project costs, and DCC fees are current. The City undertook this review in 2023 to ensure that appropriate investments are being made to maintain and grow community services.
- The City and School District 68 staff have continued collaborative efforts to support safe and healthy travel to and from school by undertaking multiple Active School Travel projects the past few years. In 2023, Uplands Elementary Active School Travel plan was finalized and aligned with the City's School Zone policy. Dynamic speed limit signs have also been installed at Cilaire Elementary to enhance driver compliance during school hours.
- Utilizing the recently created pedestrian prioritization tool, which uses common safety and demand metrics and includes socio-economic factors, \$1 million in mobility improvements were moved forward.
- This includes:
 - Pedestrian connections on Departure Bay Road south sidewalk – Alan-A-Dale to Wardropper Park.
 - Crosswalk improvements at:
 - Dufferin Crescent at Grant Avenue
 - Howard Avenue at Regal Street
 - Pine Street and Wentworth Street
 - Dover Road at Applecross Road
 - Brickyard Road at Broadway Road
 - 3700 Block of Departure Bay Road
 - 400 Block of Campbell Street



2024 CONSIDERATIONS AND OPPORTUNITIES

In the Spring of 2023, Transportation staff participated in the Neighbourhood Association Engagement Event. The discussions at this event highlighted how important mobility is to residents. This, combined with the dramatically escalating calls for service are a strong indication of what should be expected in 2024.

- Increased demand for engagement and communication
- Increased demand for road safety improvements
- Increased demand for curb space management (parking)



Acknowledging how much time is spent by both staff and residents in trying to share concerns and feedback, the Transportation group is looking to utilize the evolving transportation data system to enhance communication with

the community by creating a stronger web interface. The objective of this would be to create an open and transparent data viewer, which would enable residents to have direct access to data which should provide seamless insight into what is happening with transportation in the City. This could look like a mobility dashboard which would also assist with tracking targets and indicators from City Plan.

Enhancing road safety and efficiency saves the community money in the long run, however, the capital investments are often significant. Enhancement projects are typically competing for the same scarce funding which is used to maintain assets which creates a very difficult decision process for the City; maintain or grow services? Staff use the best information available to prioritize investments, but maintaining current levels of service and enhancing the system is becoming all but impossible.

Like most municipalities, Nanaimo has acknowledged that the transportation system that was developed decades ago is not environmentally or financially sustainable (for the users or the City). This does not mean that residents should be expected to suffer higher costs or lower levels of safety or mobility, but it does mean that there will need to be an acceptance of change; possibly convenience. One of the most sensitive aspects of this change is parking. Staff will be embarking on a broad scale review of how the City manages parking. A significant element of this task will be public engagement and education. The outcome is envisioned to be a resident guided process for managing curb space in a fashion that is equitable and sustainable.

2024 KEY INITIATIVES

Initiatives

Strategic Priority: Implementing City Plan



IAP Priority Action #37 - Implement Pay Parking Technologies that allow multiple payment methods and remote payment (e.g. online, phone) for extending parking.



IAP Priority Action #38 - Develop Bike Parking/End of Trip facilities for short and long-term bicycle parking around key trip generators such as urban centres, transit exchanges and destination parks.



IAP Priority Action #52 - Target \$365,000 over the next 5 years to enhance safety through Traffic Calming.



IAP Priority Action #61 Stewart Avenue Complete Street - Terminal to Cypress | Redistribution of space along Stewart Avenue demonstrates that a numbered highway can be integrated into an urban environment while still supporting all mobility needs.

Strategic Priority: Social, Health and Public Safety Challenges

Through the values of Vision Zero there will be a continued investment in road safety initiatives such as intersection enhancements and speed management (traffic calming).

Strategic Priority: Communicating with the Community

Transportation is a highly visible service provided to the community. Part of this service is to both receive and share information. Utilizing the developing transportation data platform, staff will be creating a public interface that will enable a more effective and efficient process to communicate with the community.



INFRASTRUCTURE PLANNING

The Infrastructure Group is responsible for planning, organizing and implementing programs, and establishing and monitoring policies and standards necessary to provide a safe and efficient water distribution, sanitary sewer collection, and storm drainage infrastructure to support existing needs and future growth.

The group also assembles the 10 Year Project Plan, coordinates across departments and prepares revisions to the Manual of Engineering Standards and Specifications (MoESS), coordinating across departments.

In 2023, there were approximately:

- 634 km of Sanitary Sewer,
- 635 km of Storm Drainage Sewer, and
- 649 km of Watermains.

Background and Level of Service:

- Oversee the development and implementation of the City's Infrastructure Modeling programs for water distribution, sanitary sewer, and storm drainage systems. The group uses the models as a tool to plan infrastructure capacity improvements, develop operational maintenance strategies and proactively manage our underground utilities systems.
- Oversee the Sanitary Sewer Flow, Storm Drainage Flow and Rainfall Monitoring programs. Sanitary Sewer Monitoring stations and Rainfall gauges provide critical real-time rainfall, flow and level data necessary for calibration of our Sanitary Sewer and Storm Drainage hydraulic models and for storm and sanitary sewer pipe sizing. The group, with the support of Public Works staff, oversees and maintains 15 sanitary sewer flow, 5 rainfall, and 4 level sensors monitoring stations.
- Manage annual program that employs Closed Circuit Television (CCTV) inspection of critical sanitary sewers and storm drainage. The defect coding output from the program provides the ability to identify defects of both a structural and operational nature, including observed locations of infiltrating ground water. Manage yearly inspection program of critical watermains.
- Complete master plans and studies for water distribution, sanitary sewer collection, and storm drainage infrastructure. Staff from the Infrastructure Planning group are the team leaders and project managers overseeing the engaged consultants.

- Develop scope of projects to renew infrastructure based on network models, condition assessments, operational input, master plans and studies recommendations. The identified projects are prioritized with a triple bottom line risk assessment methodology that considered environmental, social and economic consequences of failure for each pipe segment, both under existing and future conditions, for inclusion in the Ten Year Project Plan. Staff prepare conceptual designs for highest-ranked projects and conceptual designs are handed over to the Projects group for detailed design.
- Coordinates the Ten Year Project Plan across departments on behalf of the Engineering and Public Works (E&PW) group for inclusion into the City's annual Financial Plan. Revisions to the Five Year Project Plan are annual, starting in January of each year. Staff meet individually with stakeholder groups, prepare scopes of projects with updated cost estimates based on input from stakeholders, enters the information in CityProjects, updates the Excel master table, and submits the information to Finance at the end of May.
- Coordinates, organizes, researches, collaborates with stakeholders and prepares the bylaw amendments for the review and issuing of the City's MoESS. The MoESS is a Bylaw that provides design requirements, material specifications and installation requirements for all works built by developers or City forces that will be operated, maintained and replaced by the City, in perpetuity.
- Engages with RDN through participation in Liquid Waste Monitoring Committee.
- Develops policy, bylaws, standards and tools with regards to climate change, storm water management and asset management that take into account the most current CityPlan goals and objectives, Climate Change, industry trends, and initiatives from other jurisdictions.



2023 ACCOMPLISHMENTS

- Completed three utility master plans, one water distribution study, and one sanitary sewer study.
- Completed a joint sanitary study with the RDN.
- Started Natural Asset Inventory as part of stormwater management.
- Maintained yearly Sewer Flow, Storm Drainage Flow and Rainfall Monitoring program for City wide sewer and storm drainage model calibration.
- Completed construction of two sewer monitoring stations to monitor flows from the Millstone and Northfield sewer catchments as well as two new Level Sensor stations to monitor sewer and storm drainage flows.
- Oversaw video inspection and condition assessment of 37 km of sewer pipe and 14 km of drainage pipe.
- Continued work towards establishing Storm Water Utility as a means of alleviating general revenue funding demand.
- Collaborated with Planning staff to complete close to 150+ Development reviews due to the booming construction market and needed to assess impacts of proposed development on underground utilities. Watermain and sanitary sewer models are run to identify impacts/flows from proposed development and the results are documented in a Technical Memo.

- Continued collaboration with RDN and RDN jurisdictions working group on possible Inflow & Infiltration (I&I) reduction strategies to include in the Liquid Waste Management Plan (LWMP) Amendment. Work will be ongoing for the next few years.

2024 CONSIDERATIONS AND OPPORTUNITIES

- To construct an additional priority sewer monitoring station to monitor flows within the sanitary sewer system.
- To complete DCC review for water distribution, sanitary sewer and drainage utilities.
- To further develop a Storm Water utility funding model.
- To complete an AMI water meter review.
- To continue collaborating with MABRRI/VIU, Regional District of Nanaimo and Municipality of North Cowichan on a three-year commitment to complete Ecological Accounting Process (EAP) training of VIU students with Departure Creek and other areas to be selected.
- To continue researching and collaborating with other jurisdictions to learn new and more efficient ways of organizing and managing capital projects.



2024 KEY INITIATIVES

Initiatives

Strategic Priority: Implementing City Plan



IAP Priority Action #24 - Construction of additional priority sewer monitoring station to monitor flows within the sanitary sewer system.



IAP Priority Action #25 - Complete DCC review for water distribution, sanitary sewer, and drainage utilities.



IAP Priority Action #27 - Further develop a Storm Water utility funding model.



IAP Priority Action #182 - Complete an AMI water meter review.



IAP Priority Action #10 - Collaborate with MABRRI/VIU, Regional District of Nanaimo and Municipality of North Cowichan on a three-year commitment to complete Ecological Accounting Process (EAP) training of VIU students with Departure Creek and others areas to be selected.



IAP Priority Action #26 - Complete Natural Asset Inventory as part of stormwater management.

Strategic Priority: Maintaining and Growing Current Services

Continue to provide technical input for the City water distribution, sanitary sewer and storm drainage utilities to support the various asset management initiatives.

CAPITAL PROJECTS

- Responsible for the delivery of the majority of capital projects for the City. The Capital Projects group ensures that each project has a dedicated project manager who works with various operational departments to guide the project from a concept idea to finished construction using Nanaimo's robust Project Management Framework (PMF).
- The City is located on the traditional territory of the Snuneymuxw First Nation (SFN), and some projects cross into registered archeological sites or near watercourses that are of interest to Snuneymuxw First Nation. The projects group continually engages with SFN to ensure that these projects are completed in a respectful manner consistent with the City's commitments to reconciliation.
- The City's in-house construction crew completes several million dollars' worth of projects each year and primarily focuses on projects that would be difficult to tender, such as smaller projects, short notice projects or projects that require a high degree of engagement with the public during construction. The construction crew is also tasked with emergency work.
- The remainder of the projects are completed by external contractors, most of which are located within Nanaimo, allowing the City's capital construction dollars to flow back into the local economy.

The timing of projects is driven by a number of factors including:

- Staff capacity
- Market capacity (contractors)
- Environmental consultation
- Seasonal efficiencies

Background and Level of Service:

- Project governance is undertaken in alignment with the Project Management Framework and the Project Management Policy.
- Projects are generally underway in the year they are budgeted.
- Budgets are set with high quality cost estimates prepared by professionals.
- The public is well informed about work that may affect them or their neighbourhood.
- Project risks are identified early in the project, and appropriate risk mitigation measures are put into place.
- Engineering work is completed within the City's Professional Practice Guidelines.





2023 ACCOMPLISHMENTS

Similar to last year, 2023 saw continued inflation to challenge the delivery of capital with pricing for projects most projects exceeding the project budget. Several projects were deferred from 2022 to 2023 because of the inflation that surprised the industry in 2022. This has caused a constant re-evaluation of project budgets, priorities and timelines.

In total, approximately 55 projects are being delivered by the Engineering Project group in 2023 with a value of nearly \$70 million.

Major projects that were under construction in 2022 and will be completed in 2023 include:

- Midtown Gateway Phase 2A
- Lenhart Bridge Upgrades
- Westwood Lake Parking Lot Improvements (PRC)

Major Projects that were designed in 2023 and construction was underway by the end of the year include:

- Albert Streets Complete Street and Midtown Gateway Phase 2B
- Terminal Avenue Phase 1
- 580 Fitzwilliam Street Renovations (RCMP)
- Harewood Artificial Turf Fields (PRC)
- Fifth Street Signalization
- Commercial Street Upgrades Phase 1

Other Accomplishments:

- Continued to implement the City's new negotiated request for proposal document on several construction projects, allowing the City to obtain the best value from the procurement process and implement the principles from the City's sustainable procurement policy on some of the largest purchases the City makes.
- Completed the functional design for Commercial Street Upgrades.

2024 CONSIDERATIONS AND OPPORTUNITIES

- The global market conditions have led to significant uncertainty with respect to the cost of construction. Continued inflation has made it challenging to estimate costs accurately and control costs.
- Supply chain issues are recovering and stabilizing but they continue to challenge construction schedules.
- Staff shortages and difficulty recruiting will lead to reduced capacity.
- Increase the ability to proactively communicate with the public about projects and to manage complaints.

2024 KEY INITIATIVES

Initiatives

Strategic Priority: Implementing City Plan



IAP Priority Action 42 -Third Street Pedestrian Upgrades – Design this project will be completed in 2023/2024 with construction scheduled for 2025.



IAP Priority Action 43-Downtown Transit Hub - Continue to work with BC Transit and the RDN and design and construction of the Downtown Transit Hub.



IAP Priority Action 57 -Design Commercial - Conceptual design is underway with the first phase of construction scheduled for completion in 2024.



IAP Priority Action 58-The Midtown Gateway Project scheduled for construction in 2023 & 2024 supports the redevelopment of 2230 Boxwood Road.



IAP Priority Action 59 - Terminal Ave Corridor Improvements – Phase 1 construction is underway and expected to be completed in mid 2024.



IAP Priority Action 128 -Westwood Lake Park – Support PRC with the Design and construction of Phase 2 of Westwood Lake Park improvements.



IAP Priority Action 160 – Harewood Centennial Park Improvements – Support PRC with the design and construction of Harewood Centennial Park improvements.



IAP Priority Action 162 – Loudon Park Improvements – Support PRC with the Design and construction of Loudon Park improvements.



IAP Priority Action 164 – Stadium District – Support PRC with the Design and construction of the Stadium District improvements.



Initiatives

Strategic Priority: Maintaining and Growing Current Services

Support maintaining and growing of services through the infrastructure of capital projects.

Strategic Priority: Capital Projects

Terminal Avenue Phase 1 – Complete the construction in 2024.

Commercial Street Upgrades – Complete construction of Phase 1 before summer 2024 & continue the design process for future phases.

Downtown Transit Exchange – Continue to work with the RDN and BC Transit on the Downtown Transit Exchange, with the intent of finalizing the design and starting construction in 2024.

Nanaimo Operations Centre – Complete the first phase of site works in 2024 and begin detailed _____ in Phase 1 of the overall project.

Capital Improvements – Support renewal, replacement and upgrades of infrastructure throughout the City.

FACILITIES ASSET MANAGEMENT

Responsible for project planning, asset management, some capital project delivery, and energy and emissions management within facilities, the Facility Asset Management (FAM) group works closely with Facility Operations to plan for and execute capital renewals within the various facilities. While structured as part of the Engineering Department, FAM works closely with Parks, Recreation and Culture, Nanaimo Fire Rescue, and Corporate Services on a portfolio of approximately 100 corporate service, and recreation facilities. This group also publishes an annual update to our Strategic Energy Management Plan and works with BC Hydro and other funding agencies toward implementation of our energy and emission goals within the corporate facility portfolio. The Corporate Energy Manager resides in this group and works closely with the Community Energy Manager ensuring alignment with goals and initiatives.

Background and Level of Service:

- Provide long-term project planning for facility asset renewals and upgrades.
- Seek out and optimize opportunities to reduce energy consumption and Green House Gas Emissions within the City's facilities.
- Works with Facility Managers and Operators to prioritize capital renewals to maintain levels of service at recreation and corporate service facilities.
- Manages condition assessments for City-owned facilities and building components, such as building enclosure, electrical and mechanical systems, (including plumbing and HVAC) and structural considerations (including seismic).
- Strategic energy management planning for the organization, including energy and greenhouse gas emissions reductions, and a 20-year partnership with BC-Hydro who has provided more than \$2M in funding for studies, grants, incentives, etc. since partnership inception. Additional funding sources including FortisBC and Clean BC initiatives achieve a total of more than \$2.56M.
- Provides project management and project support for projects, overseeing the budget planning, tender process and project execution for several City departments including Parks, Recreation and Culture; Bylaw; Nanaimo Fire Rescue; Police Services, and other civic facilities as resources allow.





2023 ACCOMPLISHMENTS

- Submitted the final report for the five-year long Condition Assessment Program, funded in part by the Strategic Priorities funding stream of the Canada Community-Building Fund.
- Ongoing coordination of condition and feasibility studies for equipment and system renewals to maintain an effective asset management strategy.
- Continued expansion of facility asset management plans with the information from the Condition Assessments, including substantial contribution to the draft project plan.
- Initial research and stakeholder engagement on sustainable policy updates using the feedback from ReImagine Nanaimo and the Integrated Action Plan to align with Community initiatives.
- Started the gap analysis to understand investment required to meet our corporate emissions targets and identify a viable pathway to net-zero carbon emissions in our corporate facility portfolio by 2050.
- Completed a draft Facility Asset Management Strategy with financial assistance from Federation of Canadian Municipalities to aid with project prioritization for facility renewals within recommended funding levels.
- Brought five new Electric Vehicle Chargers online for public use and drafted a bylaw to recuperate operating and capital costs associated with the new public-facing Electric Vehicle Chargers.

- Continue to source and optimize grant and other external funding opportunities for energy reduction within facilities.
- Secured \$195,000 in grants, incentives, and other financial supports to offset the cost of energy reduction strategies.

2024 CONSIDERATIONS AND OPPORTUNITIES

- Update sustainable policies including the Green Building Policy and Energy Conservations and Management Policy.
- Finalize the gap analysis of investment required to meet our corporate emissions targets and identify a viable pathways to net-zero carbon emissions in our corporate facility portfolio by 2050 for consideration by Council.
- Continued coordination of condition and feasibility studies for facility systems impacting various departments striving for asset management best practices.
- Continued expansion of facility asset management plans with the renewals identified through condition assessments and feasibility studies.
- Relocate the redundant backup generator from the Water Treatment Plant to Beban Complex where the support structure and wiring is already in place providing resiliency for an additional facility in the event of a power outage (deferred to 2024 due to delivery date of the new generator for the Water Treatment Plant).
- Finalization of the Facility Asset Management Strategy.

2024 KEY INITIATIVES

Initiatives

Strategic Priority: Implementing City Plan



IAP Priority Action #01 - Update sustainable policies including the Green Building Policy and Energy Conservations and Management Policy.



IAP Priority Action #04 - Finalize the gap analysis of investment required to meet our corporate emissions targets and identify a viable pathways to net-zero carbon emissions in our corporate facility portfolio by 2050 for consideration by Council.



IAP Priority Action #24 - Ongoing coordination of condition and feasibility studies for equipment and system renewals to maintain an effective asset management strategy.



IAP Priority Action #24 - Expanding facility asset management plans with the renewals identified in the Condition Assessments.

Strategic Priority: Maintaining and Growing Current Services

Submitted the final report for the five-year long Condition Assessment Program, funded in part by the Strategic Priorities funding stream of the Canada Community-Building Fund.

Continue to grow the Facilities Asset Management team to service the influx of renewal activities identified in the condition assessments.

Strategic Priority: Capital Projects

Continue to source and optimize grant and other external funding opportunities for energy reduction within facilities.

Relocate the redundant backup generator from the Water Treatment Plant to Beban Complex where the support structure and wiring is already in place providing resiliency for an additional facility in the event of a power outage (deferred to 2024 due to delivery date of the new generator for the Water Treatment Plant)

Secured \$195,000 in grants, incentives, and other financial supports to offset the cost of energy reduction strategies

Strategic Priority: Governance and Corporate Excellence

Finalize the Facility Asset Management Strategy with financial assistance from Federation of Canadian Municipalities to aid with project prioritization for facility renewals within recommended funding levels.

PROPOSED OPERATING BUDGET

| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
|-------------------------------------------|-----------------|--------------|--------------|--------------|--------------|--------------|
| | Approved Budget | Draft Budget | Draft Budget | Draft Budget | Draft Budget | Draft Budget |
| Revenues | | | | | | |
| Engineering & Public Works Administration | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Construction Management | - | - | - | - | - | - |
| Engineering Support | 2,800 | 2,800 | 2,828 | 2,856 | 2,885 | 2,914 |
| Facility Asset Planning | 60,000 | 60,000 | 60,600 | 61,206 | 61,818 | 62,436 |
| Infrastructure Planning | - | - | - | - | - | - |
| Transportation | - | - | - | - | - | - |
| Annual Operating Revenues | \$ 62,800 | \$ 62,800 | \$ 63,428 | \$ 64,062 | \$ 64,703 | \$ 65,350 |
| Expenditures | | | | | | |
| Engineering & Public Works Administration | \$ 259,365 | \$ 280,722 | \$ 289,131 | \$ 294,805 | \$ 300,628 | \$ 305,509 |
| Construction Management | 2,375,202 | 2,581,006 | 2,658,960 | 2,711,475 | 2,765,576 | 2,811,896 |
| Engineering Support | 584,495 | 665,203 | 687,040 | 700,724 | 714,964 | 727,110 |
| Facility Asset Planning | 434,076 | 470,144 | 484,610 | 493,904 | 503,857 | 512,704 |
| Infrastructure Planning | 509,463 | 545,748 | 561,999 | 573,191 | 584,700 | 594,465 |
| Transportation | 881,555 | 1,041,450 | 1,078,590 | 1,120,801 | 1,143,337 | 1,162,976 |
| Annual Operating Expenditures | \$ 5,044,156 | \$ 5,584,273 | \$ 5,760,330 | \$ 5,894,900 | \$ 6,013,062 | \$ 6,114,660 |
| Net Annual Operating Expenditures | \$ 4,981,356 | \$ 5,521,473 | \$ 5,696,902 | \$ 5,830,838 | \$ 5,948,359 | \$ 6,049,310 |
| Staffing (FTEs) - Budgeted | 47.0 | 47.0 | 47.0 | 47.0 | 47.0 | 47.0 |



PROPOSED OPERATING BUDGET

| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
|--------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| | Approved Budget | Draft Budget | Draft Budget | Draft Budget | Draft Budget | Draft Budget |
| Expenditure Summary | | | | | | |
| Wages & Benefits | \$ 4,681,723 | \$ 5,139,129 | \$ 5,297,503 | \$ 5,402,647 | \$ 5,510,859 | \$ 5,602,318 |
| Services & Supply Contracts | 119,896 | 192,720 | 203,715 | 228,595 | 233,169 | 237,830 |
| Materials & Supplies | 120,060 | 127,210 | 131,389 | 133,401 | 135,816 | 138,658 |
| Utilities | - | - | - | - | - | - |
| Internal Charges & Other | 122,477 | 125,214 | 127,723 | 130,257 | 133,218 | 135,854 |
| Debt Servicing | - | - | - | - | - | - |
| Grants & Subsidies | - | - | - | - | - | - |
| Annual Operating Expenditures | \$ 5,044,156 | \$ 5,584,273 | \$ 5,760,330 | \$ 5,894,900 | \$ 6,013,062 | \$ 6,114,660 |

Includes ENGPW Admin - General Manager

2023 wages & benefits reflect 2022 wage rates as contract negotiations were completed after adoption of 2023 - 2027 Financial Plan

Proposed Changes

A business case for changes to the transit stop amenities program has been prepared for Council's consideration for inclusion in the 2024 – 2028 Financial Plan.