



CAPITAL INVESTMENT OUTLOOK 2019–2028

THE CITY OF EDMONTON

Edmonton

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EXECUTIVE SUMMARY

The 10-year Capital Investment Outlook (CIO) has been prepared by Administration to provide a longer term view of the City's capital program infrastructure requirements from 2019 to 2028. The Outlook assists City Council in making decisions in the shorter term with an understanding of how these decisions will affect the City's future capital investment requirements. It also assists Council in making strategic decisions on how best to allocate City resources between the replacement and rehabilitation of existing assets and building new infrastructure.

The development and presentation of the 2019-2028 CIO is the first step in delivering the proposed 2019-2022 Capital Budget to City Council in October of 2018. Over the coming months Administration will collect feedback and input to assist in the development of the proposed Capital Budget that will best and most efficiently use the available capital funding and allow Council to achieve the strategic goals and priorities it has set for the City.

The 2019-2028 CIO has been largely shaped by the economic realities and infrastructure spending of the last 30 years. Throughout the 1990s the City of Edmonton, much like the rest of the province, was dealing with an environment of fiscal and economic constraint. During this period City Council responded with consecutive years of 0% tax increases and focused on providing core services. This meant that little investment was made in new and existing infrastructure and the use of debt financing was limited.

This trend continued in the early 2000s as economic conditions were stabilizing. It was not until the mid-2000s to the present day that the City of Edmonton experienced a tremendous period of growth and enhanced service delivery. During this period, Council priorities shifted to respond to evolving citizens demands for new and enhanced service delivery and toward a greater emphasis on building and developing

modern infrastructure and facilities. This was characterized by investing in the renewal and maintenance of the City's existing infrastructure, and building new infrastructure and facilities to meet the increasing demands and pressures of a rapidly growing city. During this period of time, the condition of the City's infrastructure began to improve under a long-term renewal program including the introduction of the Neighbourhood Renewal program in 2009. During this period, the City also reintroduced the use of debt financing for large capital projects.

Looking forward to the next 10 years from 2019 - 2028 it is expected that Edmonton will experience a more moderate pace of economic and population growth, after having come through the economic downturn in 2015-2017. This would suggest that the level of investment in infrastructure required for new and enhanced service delivery will not be as significant as was the case over the past decade. However, it is still expected that over the next 10 years there will be an emphasis on city building projects while ensuring the City's existing infrastructure continues to be maintained.

As shown in Table 1, Administration has identified \$18.8 billion of potential infrastructure investment for the City over the next 10 years. This investment in infrastructure continues to ensure that the City's existing assets are maintained to the appropriate standards and aligns new capital growth with each of the strategic goals that Council has identified. Of the total expenditures, \$2.6 billion is related to growth and renewal projects that have already been approved by Council, an additional \$6.0 billion is required to continue to invest in the renewal of existing infrastructure (in order to continue to work towards achieving the targets set out in the 2012 - 2021 Capital Investment Agenda), and \$10.2 billion of growth projects have been identified over the 10-year period.

Table 1: Capital Investment Outlook 2019 - 2028

(billions)	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	Total
Previously Approved Growth & Renewal Projects	0.7	0.9	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.0	2.6
Potential New Investments from Unconstrained Funding											
Growth	0.2	0.4	0.4	0.3	0.2	0.2	0.3	0.3	0.1	0.1	2.4
Renewal	0.5	0.5	0.5	0.5	0.7	0.7	0.7	0.7	0.7	0.7	6.0
Subtotal	0.7	0.8	0.9	0.9	0.8	0.9	1.0	1.0	0.8	0.8	8.4
Potential New Investments from Constrained Funding	0.4	0.4	1.0	0.9	0.8	0.7	0.8	0.9	0.9	0.9	7.8
Total Approved and Potential Investment	1.8	2.1	2.0	1.9	1.8	1.7	2.0	2.0	1.7	1.7	18.8
Total Project Funding	1.3	1.6	1.5	1.6	1.5	1.4	1.5	1.6	1.5	1.5	15.0
Project Funding Gap	(0.5)	(0.5)	(0.5)	(0.4)	(0.3)	(0.3)	(0.5)	(0.4)	(0.2)	(0.2)	(3.8)

There is a significant gap between what the City is projected to receive in funding over the next 10 years and the \$18.8 billion of capital expenditures that have been identified by Administration. Given the assumptions for 2019-2028, the City is anticipated to have \$15.0 billion in available capital funding. Of this amount, \$2.6 billion has already been committed by Council to fund future growth or city building projects, such as LRT expansion. Of the remaining funding available a significant amount is identified as constrained and can only be used to fund specific growth projects which total \$7.8 billion. This leaves \$4.6 billion of funding available to address the remaining \$8.4 billion of identified growth and renewal projects, resulting in a net funding gap of \$3.8 billion over the next ten years.

With very limited funding available, decisions related to debt levels, and the level of investment in renewal, as well as the prioritization of projects, are required to allocate the limited resources in the best possible manner.

To assist with making these decisions, this 10-year capital outlook has also been developed in order for Council to provide Administration with guidance and direction on the following items:

The principles used to guide the development of the capital budget,

The prioritization criteria Administration uses to rank capital profiles and projects,

To what extent additional debt financing should be considered to finance new projects, and

To what level should available funding be used for renewal projects versus growth projects.

Council direction on these items will assist Administration in continuing to develop and bring forward the Proposed 2019-2022 Capital Budget in the fall of 2018.

PART 1: INTRODUCTION

THE MODERN CITY

A modern city is a complex entity. It's a geographical place, a gathering of citizens, a set of opportunities, a history, and a future. It is also a collection of physical assets. And these physical structures—its facilities and infrastructure—play a significant role in every one of those city-making attributes mentioned above. A city's physical status helps define a place. It can inspire, facilitate a strong business and sense of community, and can tell citizens and visitors an enormous amount about where a city has been and where it's going.

Such is certainly the case in Edmonton, with its long history, a bright future, a young and diverse population, and where its asset and infrastructure landscape is central to the life of the city. Of course, to some extent it's this way in any city. But Edmonton's challenges are also unique given its significant economic and population expansion, larger metropolitan region, challenging environmental climate, and cyclical resource-based economy. Which is why the sound management and maintenance of over \$29.2 billion (replacement cost) of capital assets—comprised of roadways, bridges, buildings, transit facilities, parks, fleet, and information technology—is both complicated and essential.

OUR RESPONSIBILITY

The City is responsible for building and maintaining capital assets and infrastructure in order to serve the residents and businesses of Edmonton, and this is something the City approaches both with an immediate and longer-term view. The ability to construct and properly maintain capital assets is essential to ensure the provision of services and to make sure Edmonton stays an attractive, cost-effective place to live and do business.

The City must optimize the life cycle and value for money of its assets. A city is sustainable only if its capital assets can be maintained over the long-term. Infrastructure is expensive to build or buy, renew or replace, which means getting maximum value from every dollar spent on infrastructure is important and necessary.

With these factors in mind, it is incumbent on the City to develop a view of Edmonton's infrastructure needs through multiple lenses, principally the needs of today and what our best information tells us will be the needs of tomorrow. The 10-year CIO provides this longer term view of the City's capital program taking into account the following:

Council's strategic vision and goals,

The City's growth forecast and other key economic indicators,

Projects and initiatives that have been committed to beyond 2018,

Ongoing investment required in existing infrastructure,

New infrastructure to support a growing community, and

Projected available capital funding and debt capacity.

The CIO enables Council to make decisions in the shorter term with an understanding of how these decisions will affect the City's future capital investment requirements. It also assists Council in making strategic decisions on how best to allocate City resources between the replacement and rehabilitation of existing assets and building new infrastructure.

PART 2: PUTTING THE CAPITAL OUTLOOK IN CONTEXT

PAST TO PRESENT

In the late 1980s and 1990s, Edmonton operated in a constrained fiscal and economic environment. This period was marked by a recession followed by deep Provincial budget cuts along with three consecutive years of population decline in the city from 1994 to 1996. With uncertain funding from higher levels of government and an economy just emerging from recession, capital spending was kept to a minimum to maintain basic services while keeping property tax increases to a minimum.

There is always a trade-off. Through this difficult period Edmonton was virtually debt-free, but lower investment in core infrastructure was beginning to undermine its prosperity and competitiveness as a city. Edmonton was not investing in services or infrastructure to enable it to compete with other big cities for labour and capital. Edmonton experienced a reduction in its service standards as the focus was only on core service delivery, and the condition of its infrastructure also deteriorated.

By the early 2000s, the fiscal and economic environment began to stabilize and the City began to take dramatic steps starting in 2004 to address a backlog of renewal projects and deliver new infrastructure. This period kick-started the transformation of Edmonton into an urban centre that was only just beginning to realize its full potential.

A change in philosophy around debt funding came about with the City re-introducing the use of debt financing for large capital projects. There were other key factors that drove the increase in investment in infrastructure including more rapid economic and population expansion (Edmonton's population grew by 42% between 2000 and 2016) and increases in grant funding from the Province (Alberta Municipal Infrastructure Program, Municipal Sustainability Initiative, City Transportation Fund, and GreenTrip) and the Federal government (Federal Gas Tax, Building Canada Fund and Infrastructure Stimulus Funding).

The gradual increase in capital spending beginning in 2004 allowed for greater investment in projects ranging from bridge construction to public transit (including recommencement of the LRT system), to neighbourhood revitalization (including the Neighborhood Renewal Program introduced in 2009) to parks, recreation, and waste management.

ONGOING REALITIES

Infrastructure investment during this period still had its challenges. As the economy picked up, construction costs escalated dramatically, increasing approximately 70 per cent between 2002 and 2008. This rapid escalation of capital project costs meant the annual growth in the City's capital spending had to be substantial—particularly from 2006 to 2008—simply to meet inflation-related cost increases. Construction costs declined somewhat in 2009 and 2010 as a result of the downturn in the economy from the global financial crisis, but were still 50 per cent over 2002 levels.

The construction market began to cool in 2009, which allowed the City to take advantage of favourable economic conditions, increased industry capacity, longer term contracts and decreased labour and material costs. The City also benefited from increased federal and provincial grant funding and its strategic use of debt. Prudent borrowing decisions took advantage of low interest rates to finance major projects and fast-track others by borrowing against committed grant dollars. This made it possible for the City to deliver new infrastructure and address past infrastructure deficits. By 2010, investment in infrastructure had surpassed \$1 billion annually, revitalizing neighbourhoods, rehabilitating roads and bridges, and creating new parks and public transit.

Capital spending remained steady as the economy recovered and began to build momentum through 2014. During this time the City continued its strategy of borrowing for long-term capital projects such as new recreation centres in Terwillegar, Clareview and The Meadows, as well as continued expansion of the LRT. The City also implemented innovative funding strategies, such as utilizing a Community Revitalization Levy (CRL) to invest in the new downtown arena and help spur development in the central core.

Over the past three years, as the oil and gas industry experienced another cyclical downturn, Edmonton has once again seen the market slow down. Population growth has also slowed. Overall, the City has made every effort to maintain that delicate balance of keeping its infrastructure in good repair to support long-term, cost-effective service delivery while investing in new capital projects to meet the increased service demands of a growing population. This deliberate, planned investment in infrastructure is rooted in the vision Edmontonians have for their city — a thriving, welcoming, safe, affordable and sustainable community in which people enjoy the freedom to explore, experience, excel and expect the most out of every day.



ECONOMIC OUTLOOK

Planning for the Future

As discussed in the previous section, the recent slowdown in energy related activities has meant that the rate of population growth in Alberta and Edmonton has slowed. Higher unemployment has brought interprovincial migration nearly to a halt and, in fact, Alberta has begun losing residents to other parts of Canada, particularly Ontario and British Columbia. The data for this trend is not broken down into municipal levels, but if the current high levels of unemployment were to continue Edmonton would experience an interprovincial out-migration over the next few years as the workforce goes to where the jobs are.

By contrast, international migration remains very strong with both Calgary and Edmonton seeing a rising share of total Canadian migration. Combining this rise in migration with a high natural population growth rate (the excess of births over deaths) means that Edmonton's population growth is expected to continue at a pace of about 1.4%, which is above the national average. What does that mean in terms of the CIO? It means that population growth will place a higher demand on city services and the capital investments needed to support those services—particularly those that address the needs of recent arrivals to the city from overseas.

With interest rates in both Canada and the US beginning to rise, borrowing costs can be expected to escalate in the coming years. However, the rise in rates will be very gradual as inflationary pressures in Canada and globally remain low.

As of late 2017 and early 2018, the Alberta and Edmonton economies are slowly recovering. Business activity is beginning to expand. Employment levels are returning to their pre-recession levels. This means that it is reasonable to expect growth to continue in Edmonton, and as a result, investments that improve the efficiency of moving a growing volume of goods, services and people will be in high demand.

The Decade to Come

After a sharp downturn in activity over 2015 and 2016, employment and other indicators for Alberta are beginning to improve. Edmonton experienced a modest fall in employment and output in mid-2016. As is the case with Alberta, Edmonton's 2017 key indicators point to a stabilization and slow improvement in the economy. Looking even further ahead, with limited prospects for dramatic gains in oil and natural gas prices, investment levels in Alberta's energy sector are expected to be modest by historical standards. Consequently the theme of ongoing but moderate growth noted above will hold in the longer term as well.

It's also expected that long-term employment growth will be slower than in the past, largely due to an aging population that will dampen growth in the labour force. Over the 10-year period outlook of the CIO, real economic growth adjusted for inflation is expected to average 2.7% annually. Edmonton is, nevertheless, unique in Alberta; it has a relatively young demographic profile compared to much of Canada and Alberta, and is also expected to continue to attract newcomers to the City. What this means is that Edmonton, over the next decade, will have to deal with a growing population and service demands greater than in many Canadian cities, while simultaneously having to grapple with a stable but not high-performing economy. Added to this mix is that, after an extended period of low interest rates, 2019 is expected to see rates stabilize at levels closer to historical averages. The City should, therefore, anticipate a long term upward trend in interest costs.

Even though Edmonton's population and economy will be growing faster than the national average, inflation as measured by the Consumer Price Index will be close to the national average of about 1.5% over 10-year CIO forecast. Expenses for the city can be expected to rise at a faster pace – between 3.5 and 4.0 per cent reflecting the high proportion of wages, salaries and benefits in its operating budget.

Inflation as measured by both the Consumer Price Index (CPI) and the Non Residential Construction Price Index (NRCPI) was very low in the period from 2014 to early 2017. As noted above, the CPI will pick up in the coming years. As well, the NRCPI, which tends to be very volatile, will also increase and could spike above 5% in particular years. A summary of key economic indicators is provided in Table 2 below:

Table 2: Key Economic Indicators

Key Indicators	Average Annual % Growth 2009–2018	Forecast Average Annual % Growth 2019–2022	Forecast Average Annual % Growth 2019–2028
Real Economic Output	1.6	2.9	2.7
Population	2.6	2.5	2.2
Employment	1.8	1.7	1.8
Consumer Price Index (CPI)	1.3	1.6	1.5
Non Residential Construction Price Index (NRCPI)	0.3	4.3	2.9

To summarize, Edmonton's population along with its economy is expected to continue to grow, which means that the demand for new services and the pressure on existing services will also grow. But within this reality is another reality—the City has limited revenue generation

tools and is in a province with an economy that has historically been dominated by an industry that is volatile at best and is now possibly experiencing a “new normal” of lower oil prices and lower investment. The next 10 years, in other words, present tricky terrain to negotiate.

EMERGING ISSUES

There are numerous emerging issues that could have direct impacts on the City's capital program. The City will continue to pay close attention to these issues, with the long-term capital outlook continuing to be refined in the coming years.

Edmonton Metropolitan Region

Edmonton is the metropolitan centre and economic anchor of a region of approximately 1.4 million people comprised of 24 municipalities. The City is continuously working with its regional partners to help the region thrive while addressing the challenges of rapid growth. In 2017, the Edmonton Metropolitan Region Board was established, and comprised of 13 of the largest municipalities, to identify where future growth will occur in the region along with plans for efficient infrastructure to support that growth.

There are ongoing discussions with the regional partners on collaborative approaches to deal with shared investments and shared benefits in the Edmonton Metropolitan Region, including such items as land use, transit, and emergency services. It is uncertain what the outcome of these discussions may be, or how it could affect the City. While collaborative regional growth has many upsides, it may also present additional infrastructure growth pressures on the City that have not been accounted for in the 10-year CIO. A successful model for shared investments may also introduce complexity in planning for capital investments, including new processes and tools developed collaboratively.

There are two broad types of financial challenges experienced by the City as a consequence of its position in the Edmonton Region. The first has to do with demand pressures on Edmonton services and infrastructure by those living in surrounding municipalities. For example, residents of neighbouring municipalities may place additional demand pressures on Edmonton's roadway system, but would not contribute financially towards its upkeep through property taxes. The second financial challenge has to do with the industrial and commercial land development markets. The City does not benefit proportionally with the levels of non-residential tax base growth experienced in the broader Edmonton Metropolitan Region. Given that all large Canadian municipalities rely disproportionately on their non-residential tax bases, this poses a long-term financial sustainability issue for the City.

Growth in City Boundaries

Given that Edmonton is situated in the centre of a multi-municipal metropolitan region, its future growth comes with the prospect that city boundaries may one day need to expand. When municipal boundaries expand due to annexations, a number of financial impacts follow. For example, the geographical expansion of the city would introduce growth pressures for new infrastructure in these new locations. While Administration has done extensive analysis on estimating the infrastructure costs of annexation, including the proposed Leduc County annexation, the CIO does not include the growth impacts of annexation in its 10-year outlook.

Uncertainty of Future Capital Grant Funding

The City of Edmonton exists in an environment of continual financial uncertainty around the security and stability of provincial and federal grants. The City's infrastructure program is highly dependent on grant funding, both for the maintenance of existing infrastructure and for major strategic projects such as LRT expansion.

As part of the 2018 Provincial Budget, the province announced a reduction to the Municipal Sustainability Initiative (MSI) funding. The impact to the City of Edmonton is a \$61 million per year reduction to the MSI capital funding from 2018 to 2021, or a total reduction of \$244 million over the four years (with the program slated to end in 2021-22). Given the current and forecast provincial budget deficits along with the forecast continued low commodity prices into the medium-term, there is the possibility of further reductions in Provincial capital transfers to Edmonton over the next 10 years.

Legislative Changes

As the Municipal Sustainability Initiative (MSI) program is scheduled to terminate in 2021, the Province is currently engaging with its two big cities—Edmonton and Calgary—on formulating an alternative program in the future. This future program would likely be nested within the City Charter Fiscal Framework, and has the potential to include new revenue tools, and/or alternatives to transfer funding. At this time, it is uncertain what these new tools may look like, what type of program could replace MSI transfer funding, or whether these changes would present positive or negative impacts to the City's capital planning program.

CORPORATE STRATEGY

Planning for the Future

The City has a well-developed set of strategic planning documents. "The Way Ahead" is the City's core organizational strategic plan for 2009-2018, which establishes six 10-year strategic goals to achieve the City's vision and to direct long-term planning for the City. The Way Ahead outlines 12 corporate outcomes for the strategic goals and provides a

set of indicators, measures, and targets for each outcome. To identify strategies to achieve the 10-year strategic goals, the City developed Directional Plans, also called "The Ways". Collectively, The Way Ahead and The Ways form the City's Strategic Plan (Figure 1).

Figure 1. City of Edmonton 2009-2018 Strategic Plans



It should be noted that the City is currently updating Council's strategic plans, as "The Way Ahead" and "The Ways" are coming to the end of their planning horizon (2009-2018). Instead of six "The Ways" documents,

Council will have a single, integrated strategic plan with five goals. Figure 2 shows the preliminary, draft goals for Council's strategic plan spanning 2019-2028.

Figure 2. Draft Goals for New Strategic Plan

STRATEGIC GOAL	Healthy City	Urban Shift	Regional Economic Resilience	Energy and Climate	Open and Effective Government
STRATEGIC GOAL STATEMENT	Edmonton is a city that thrives, where every member of our community has equitable opportunity to be healthy and fulfilled	Edmonton is a city with infrastructure design, smart land use, transportation options and public spaces that enable the population to live safe and healthy lives	The Edmonton Metro Area has a robust, diversified economic system founded on ingenuity, regional collaboration and shared economic prosperity	Edmonton is a low-carbon city with smart energy options and innovative energy delivery systems. Our infrastructure is resilient to shocks and disturbances from climate change	The City of Edmonton government is open, transparent and accountable to Edmontonians

Guided by The Way Ahead, the 10-year CIO is essentially a tool to assist City Council in making strategic decisions on how best to allocate city resources to build and maintain infrastructure. The City's infrastructure supports the continued provision of high quality services to residents and businesses. In order to meet current and future service needs, it's vital to identify and prioritize infrastructure projects holistically, taking into account every element of what Edmonton needs to be a great city in which to live and work.

To deliver on Council's strategic plan, Administration is developing a four-year Corporate Business Plan which outlines the key work and initiatives to be undertaken over the 2019-2022 period to help achieve Council's goals. The Corporate Business Plan sets direction for Departments Business Plan priorities which are translated into tactical Branch Action

Plans. Figure 3 shows an overview of the corporate planning framework with Council's vision, strategic plans, and operational asset management strategies, policies, and plans. Similar to The Way Ahead 2009-2018 and The Ways plans, Council's renewed strategic goals recognize that infrastructure is critical to social, economic, financial and environmental sustainability and see infrastructure as one of the levers of change. For instance, The Way We Grow (Municipal Development Plan) cited infrastructure as a critical element in residential neighborhoods, parks, attractions and economic prosperity. The Way We Move acknowledged asset management as key to safe and effective public transportation. These concepts are echoed in Council's 2019-2028 goal, Urban Shift. Infrastructure condition and funding strategies will have an effect on how fast Council's updated goals will be achieved.

Figure 3. Overview of Corporate Planning Framework /Asset Management Framework Integration



PART 3: BALANCING RENEWAL AND GROWTH

OVERVIEW

There is an ongoing calculation the City goes through as it deals with inevitably changing economic circumstances and a shifting population base. The City must be poised and prepared to facilitate growth, but it must also safeguard the integrity of existing services and structures. Being unprepared for growth will lead to poorly planned and over-expensive development. On the other hand, focussing too heavily on new projects and services might compromise the condition, life and value provided to citizens over the longer term. There needs to be an ongoing balance between renewal and growth.

When the City discusses the concept of renewal, this refers to investment in existing infrastructure to restore it to an efficient operational condition and extend its service life. This might include replacement of individual components as they age or become obsolete. Capital investment in renewal extends the period of service potential but does not change the replacement value, which means it doesn't increase the size of the infrastructure asset portfolio. At one level, this is money that must be spent—assets need to be maintained and looked after. The question is how much to spend, when, and to what benefit (meaning, is it worth the cost?). Growth, on the other hand, includes investment in new assets as well as investment in projects that add to or enhance existing assets, all with an eye to improving the type of service provided and/or to improve functionality and/or capacity. Limitations in funding always raise certain questions: What should the City spend on existing assets and on new assets? What will best serve Edmontonians? What is the best use of tax dollars?

All of which goes to the heart of what the City provides citizens. Public infrastructure is essential to residents and businesses. It's critical to the competitiveness of our economy, the quality of life citizens enjoy, and the delivery of public services. Being able to build and properly maintain infrastructure assets is necessary to ensure Edmonton can provide services and remain an attractive and cost-effective place to live and do business. A core principle of any long-term capital plan is to measure the investment in existing municipal infrastructure to ensure that all assets are in a condition that allow them to meet intended service levels. The best possible balance between growth and renewal makes sure that investments in infrastructure assets maximize benefits, reduce risk, and provide satisfactory levels of service to the public.

When a city is aging and growing at the same time, balancing investment choices between renewal and growth is a significant challenge. As infrastructure ages, more maintenance and rehabilitation is required to ensure that it is performing well and continuing to meet the needs of citizens. At the same time, there is always going to be demand for new infrastructure to support growth. The reality is that the City does not have enough funding to meet all its infrastructure needs. Tradeoffs need to be made. The gathering of information, from both data driven analytics and from listening to what citizens tell us they want and need, is vital.

THE CITY'S APPROACH TO ASSET MANAGEMENT

The City's approach is to build an effective, transparent, data driven system that connects asset investment to strategic goals and service level outcomes. The City has developed performance indicators and raised public awareness of its infrastructure challenges to help define needs. It has identified, developed, and adopted nationally recognized solutions such as evaluation tools, leading edge models to ascertain long-term infrastructure investment strategies (e.g., the City's Risk-Based Infrastructure Management System [RIMS]), and integrated corporate asset management and capital budgeting. With these developments, the City has garnered a reputation for being one of Canada's most advanced and progressive jurisdictions in infrastructure asset management techniques. In fact, the system developed for the prioritization of funding and projects for the 2015-2018 Capital Budget was selected as a Case Study for the 2015 International Infrastructure Management Manual, a widely recognized resource in public sector asset management.

Going forward, the City continues to look for even more effective and efficient infrastructure asset management practices. With an update to its Infrastructure Strategy in 2018, the City will be working towards integrating and maturing our systems across various asset categories, for example Facilities, Open Spaces, and Transportation, providing improved assessment and asset data management, developing advanced risk analysis technique and creating asset specific management plans. Moving hand in hand with these processes will be a series of ongoing conversations with City Council and citizens to establish a more comprehensive level of asset service standards.

ASSET MANAGEMENT PRINCIPLES

Through the Infrastructure Strategy, the City is developing fundamental asset management principles that will be refined and implemented across the City. These principles will focus on these five key themes:

Service Delivery to Customers

Long-Term Sustainability and Resiliency

An Integrated, Holistic Approach

Investment Decision-Making

Innovation and Continuous Improvement

ASSET INVENTORY

Renewal projects focus on making the most of existing capital assets. The process of deciding what to fund and to what degree in the renewal framework is achieved through a customized assessment methodology—the Risk-based Infrastructure Management System (RIMS)—which was developed by the City. Investing in renewal begins with a comprehensive understanding of the nature, scope and state of all City assets.

The City of Edmonton, as of year-end 2016, had a total asset replacement value of \$29.2 billion as seen in Table 3 below, almost triple the \$10.3 billion value reported in the 2003 infrastructure inventory report. Increases in this value reflect both an expanding inventory of assets as the City has grown, as well as construction cost escalation.

Table 3: Asset Replacement Value (\$ millions)

Asset Class	Inventory Value*
Transportation	16,836.0
Open Spaces	3,443.1
Facilities	6,910.0
IT	497.2
Fleet	908.5
Specialized Equipment	557.6
Total	29,152.4

*Values as of December 31, 2016

The physical condition of an asset is an assessment made at a specific moment in time. Over the past 10 years, the physical condition of the city-wide assets in good and very good condition has seen an upward trend. Much of this can be attributed to the addition of new assets (growth), which would naturally raise the overall average physical condition. It's for this reason that perhaps a better measure of the effectiveness of the City's renewal programs is the percentage of assets in poor and very poor condition. This has ranged from 16 percent in 2007 to 12 per cent in 2016. What the combination of these two numbers—the good and the bad—tells us is that a majority of the City's assets are in good condition, but that there are problem areas requiring continuing attention. The focus cannot be on new assets only; taking care of older assets is the responsible way to maximize taxpayers dollars so that the City gets the most out of every asset and therefore every tax dollar.

DETERMINING RENEWAL NEEDS

As the owner of a multi-billion dollar inventory of municipal assets, the City must make decisions in terms of when and how to maintain, repair, renew, and replace key assets in a cost-effective manner. Existing priorities compete. Some investments may be only incrementally addressed while others may be delayed altogether. This is despite a clear understanding that proper maintenance can extend asset life and reduce long-term repair or replacement expenditures.

A standardized rating system is used to evaluate existing infrastructure assets. Assets are evaluated based on three distinct categories: physical condition, capacity, and functionality. Though all three components are important to the understanding of infrastructure's contribution to services, only the evaluation of the physical condition is advanced enough at this time for comprehensive analysis.

The RIMS process is used to assess the rehabilitation needs of the City's assets, allowing for the smartest allocation of renewal funds. Doing so means prioritizing needs across more than \$29.2 billion worth of infrastructure assets and directing constrained available capital dollars to the highest priorities.

RENEWAL TARGETS

Over the last decade, RIMS has evolved into a dynamic analytical tool designed to predict the optimal funding for the renewal of existing infrastructure. The model uses an asset’s current physical condition, its target physical condition, renewal investment options/costs, and expected lifecycle deterioration curve to model the effect of different investment options and their timing throughout the life of the asset. Ideally, the physical condition of any asset will fall within an acceptable tolerance range or standard. This tolerance—or conversely, the physical condition beyond which the deterioration is unacceptable—differs for every asset. The City’s assets are there to provide a service such as recreation, transportation and protection. The physical standard is dependent on the type of service the asset is providing, the risk it exposes the City to if it fails, and the best combination of investment and performance to maximize the life of the asset at a minimized cost. In other words, when deciding what to renew the City considers a combination of the condition of an asset and how important it is.

The Table below illustrates some of these measures and shows the range of tolerances used by RIMS. Each asset category is assigned a level of importance rank, High, Medium High, etc., and this represents the target physical condition of the asset within the model.

RIMS uses 4 measures, each with its own target, to assess an asset category’s physical performance to determine required investment.

1. Average Condition Index – A value from 1 to 5 that represents the average condition of a category of assets. Ranges from 1 being Very Poor (F) to 5 being Very Good (A).
2. Severity – a computed risk factor, the product of the probability of failure of an asset by its impact of failure. Ranges from 0 (little risk) to 700 (high risk). The City has a target of 200 for all assets in its inventory
3. % of Assets in D&F Condition – The % of a category of assets that are assessed at either a Poor (D) or Very Poor (F) physical condition
4. % of Assets in F Condition – Similar to 3, except it is only the % of a category of assets that are assessed at Very Poor (F) physical condition

Table 4: Levels of Importance

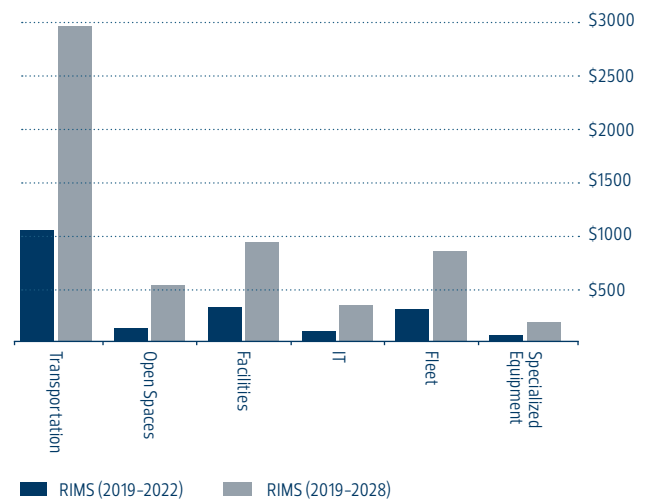
Importance Level	Average Condition Index	Severity	% of Assets in D & F	% of Assets in F	Examples
High	3.5	200	1%	0%	River Bridges, LRT Braking System
Medium-High	3	200	5%	2%	Hoists
Medium	2.75	200	10%	5%	Police Marked Vehicles
Medium-Low	2.5	200	20%	7%	Bus Stops
Low	2.25	200	40%	10%	Decorative Winter Lights

IDEAL RENEWAL BUDGET

RIMS was applied to City infrastructure assets and modeled over a 30-year period to predict the optimal funding to maintain City assets in a good state of repair. The model was set to determine the annual investment required to bring all City assets to their target physical performance levels by 2031 (a 20 year period that began with the 2012–2014 capital cycle). The RIMS model recommended a 10-year renewal cash flow with an annual reinvestment of \$530 million (not-inflated) from 2019–2022 and an average annual reinvestment of \$590 million (not-inflated) from 2019 to 2028.

Figure 4 depicts renewal investment requirements in the timespan of the 2019 – 2028 Capital Investment Agenda by asset subcategory.

Figure 4: Ideal Renewal Allocation



IMPACT OF REALLOCATING DOLLARS

In the previous segment, we looked at the annual renewal investment required to bring city infrastructure up to an acceptable physical condition and keep it there. This model assumed unconstrained funding. Modeling was performed to determine the impact of investing less than the ideal budget and the resulting effect on the percentage of city assets in Poor and Very Poor (D&F) condition. Generally, the longer the required renewal of municipal assets is deferred, the more deterioration impacts are felt and the more expensive it becomes to bring these assets back to an acceptable condition.

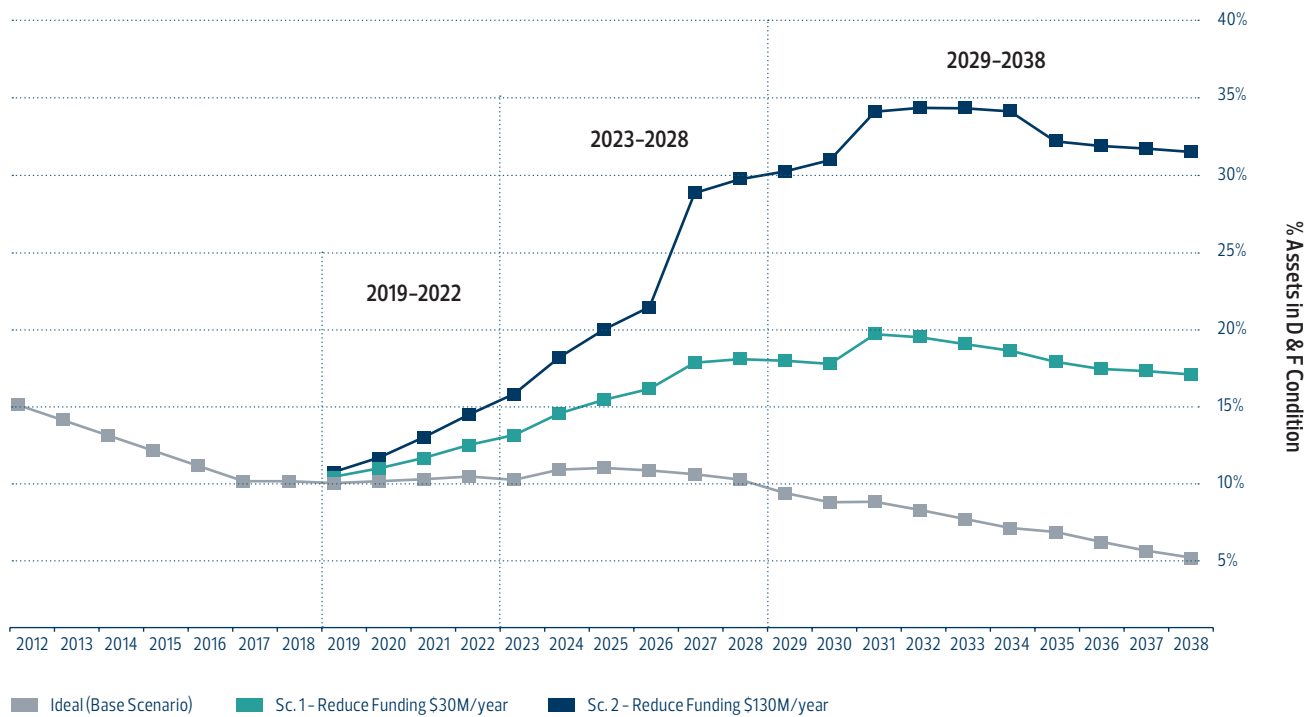
To demonstrate the impact of reallocating renewal dollars, two scenarios were modeled in addition to the ideal renewal budget scenario. The first considered the impact of maintaining the same annual average amount of Pay-As-You-Go (PAYG) and MSI funding (Municipal Sustainability Initiative) dedicated to renewal in the 2015-2018 Capital Budget throughout the 2019-2028 CIO forecast period. This essentially modelled the option of "holding the line" on renewal spending. With respect to the ideal scenario, this would result in an annual reduction of approximately

\$30 million between 2019 and 2022 and \$90 million between 2023 and 2028.

The second alternate scenario contemplates the impact to the renewal budget if MSI is not renewed or replaced by the Province, and there is no additional funding for renewal by either the Province or the Federal government. In this situation, there would be an annual reduction of approximately \$130 million between 2019 and 2022 and \$175 million between 2023 and 2028, with respect to the ideal scenario.

In both alternate scenarios, dedicated funding within the renewal budget is preserved. This includes the Neighbourhood Renewal Program, the Alley Renewal Program, and funding for Fleet replacement that is derived from the Operating Budget. An additional 10 years beyond the 2019-2028 CIO forecast period are also depicted. Figure 5 depicts the contrast between the ideal, and 2 alternate funding scenarios as measured by the percentage of assets in poor and very poor condition (D&F).

Figure 5: Effect of Budget on % D&F for City Tax Supported Assets





It needs to be noted that the effect on %D&F shown in Figure 5 should be considered a worst case scenario. There are limitations to the modelling employed to depict the alternate funding scenarios. It does not contemplate various mitigations that could be employed, depending on asset type. This could include reducing allowances for growth related expenditure within the individual renewal projects, and more directed/exclusive scope towards high priority components.

Within the next Capital Cycle (2019–2022) there is not a significant difference between the ideal and first alternate scenario on the overall health of the City's assets, certainly within the error tolerance of the model and mitigations opportunities in the short term. Beyond 2022, the first scenario's reductions will begin to be felt within the portion of the City's assets that are funded exclusively with PAYG and MSI (Facilities, arterial roads, Parks). By the end of the 2023–2026 Capital Budget, deteriorations within the affected asset portfolio could be compared with the average condition of City assets circa 2007.

The second alternate scenario begins to noticeably depart from the ideal within the 2019–2022 cycle. The predicted response from this funding scenario on the affected assets quickly approaches conditions outside of our inventory collection history by the 2023–2026 Capital Budget Cycle.

This high-level overview illustrates how decisions made today will impact the state and condition of our infrastructure assets in the future. Knowing the overall state of our assets and understanding the consequences of foregoing reinvestment in them provides information for decision-makers to make smart and strategic decisions today that will have a deep impact on the citizens of tomorrow. Effective renewal extends the life of the assets and allows them to perform as they are intended, saving the City money over the long-term.

PART 4: AVAILABLE CAPITAL FUNDING AND DEBT CAPACITY

CAPITAL FUNDING

The ability to execute on both growth and renewal capital projects is constrained by the amount of available capital funding and debt capacity. Therefore, it is critical to achieve as much certainty as possible around the timing, sources and amount of funding based on what is known and committed in the present moment. Funding for capital is provided from various funding sources both internal and external to the City. The City aims to maximize financing from external sources such as provincial and federal grant funding, development fees and levies, sale of city-owned land, contributions from other purpose-specific reserve funds, and third party contributions, prior to utilizing internal sources such as PAYG and the issuance of debt.

Funding can be classified into two main categories: unconstrained and constrained. Unconstrained funding is available, at Council's discretion and with no restrictions, for a variety of infrastructure needs. Unconstrained funding includes funds raised from property taxes and funds received from the Province through the Municipal Sustainability Initiative (MSI). Constrained funding, on the other hand, is dedicated (for various reasons) to specific types of infrastructure. Constrained funding is often tied to grants from other levels of government, developer and partner contributions, or a dedicated tax levy such as the Neighbourhood Renewal Program.

In the 10-year CIO, the total projected funding is \$15.0 billion, which includes \$10.4 billion for growth and renewal projects either previously approved or where the funding is tied to constrained sources. This

leaves funding of \$4.6 billion available for allocation in 2019-2028 to be balanced between growth and renewal.

The total capital project needs included in the 10 year outlook are \$18.8 billion, which creates a gap of \$3.8 billion between capital project needs and the projected funding available. Prioritization has to come into play.

FUNDING SOURCES

The City of Edmonton funds its capital program from a number of sources, as shown on Table 5. PAYG is a term used to describe paying for capital assets from current revenues. For the City, those current revenues include both property taxes and investment income.

Borrowing is a method of financing capital projects. It is not a funding source itself. Please refer below for a further discussion of the use of debt to finance capital projects during the 10 year outlook period.

The City receives two primary capital grants from the Province: Municipal Sustainability Initiative Funding and GreenTRIP. It also receives matching funds from the Province for Federal grants it receives. The Federal Government provides the City with funding through the Building Canada Fund, Federal Gas Tax, and grants provided through the Investing in Canada Plan.

More details related to funding sources for the City are provided below.

Table 5: Projected Funding & Debt (\$ millions)

Funding Source	2019	2020	2021	2022	2019 - 2022	2023 - 2026	2027 - 2028	2019 - 2028
Pay-As-You-Go	133	123	127	129	512	545	286	1,343
Federal	243	349	328	332	1,252	1,200	635	3,087
Provincial	316	493	459	509	1,776	2,159	1,041	4,977
Fees and Levies	188	200	195	197	780	790	398	1,967
Land Enterprise	80	82	59	54	275	264	139	678
Reserves	23	23	23	23	92	92	46	230
Utility Rates	20	19	20	13	73	49	29	151
Total Funding	1,003	1,289	1,211	1,257	4,760	5,098	2,574	12,433
Debt	341	337	290	301	1,269	869	466	2,604
Total Funding & Debt	1,344	1,626	1,501	1,558	6,029	5,968	3,040	15,037

FUNDING SOURCES: PAY-AS-YOU-GO**(\$1.343 billion or 8.9%)**

Pay-As-You-Go (PAYG) funding is largely made available from annual investment/dividend income, in addition to a portion of the funds received through property taxes. Due to its nature, investment volatility can have a material impact on the total amount of funding available in a given year. PAYG is a vital component of the City's funding strategy, since it is used to pay for the costs grant-funded projects incur that are not eligible for reimbursement under federal and provincial grant funding rules. In order to maximize the use of grant funding, it is necessary to have an unconditional fund source to address the grant eligibility gaps.

FUNDING SOURCES: FEDERAL GRANTS**(\$3.087 billion or 20.5%)**

The City receives infrastructure funding under a number of Federal programs outlined below:

New Building Canada Fund (NBCF)

Initiated in 2014, this is a 10-year Federal grant program with a total investment of \$14.0 billion to support projects of national, regional and local significance that promote economic growth, job creation and productivity. There is no formal application process for NBCF projects; they are considered for funding only if they are endorsed at the political level and recommended by a federal minister. Funding is allocated for projects in the provinces based on population and all major projects are selected through federal-provincial negotiations. Projects that are considered to be of national importance are included under the National Infrastructure Component (NIC) of the Building Canada Fund. Edmonton has been awarded \$241.6 million under the NIC for Yellowhead Trail Freeway Enhancements.

Federal Gas Tax

Estimates are based on Edmonton's 2017 allocation of \$48.7 million and are indexed with population growth each year. The current contribution agreement ends in 2024, and while the City's allocation beyond the existing agreement is not known, the Federal government has confirmed this as an ongoing funding program that will continue beyond this year. The City has been using the total Federal Gas Tax grant of \$43.6 million per year, supplemented by an additional \$1.3 million per year from the LRT Reserve, to service debt for the South LRT extension to Century Park. This funding is committed until the debt for South LRT is repaid. Project debt will begin to retire in 2026, with all South LRT borrowing retired by the end of 2031.

P3 Canada Fund

The P3 Canada Fund was created to improve the delivery of public infrastructure and provide better value, timeliness and accountability by increasing the effective use of Public-Private-Partnerships (P3s). The City has been awarded \$250 million to fund the Valley Line Southeast LRT. There are no other projects being considered for funding at this time.

Investing in Canada Plan

The Investing in Canada Plan provides funding that will create long-term economic growth, build inclusive, sustainable communities and support a low carbon, green economy. A portion of the funding is provided through bilateral agreements between the Federal and Provincial Government, and there is no formal application process. Projects are considered for funding only if they are endorsed at the political level and recommended by a federal minister. Other components are application based. The Plan is broken down into six main categories:

Public Transit Infrastructure Fund: The Public Transit Infrastructure Fund (PTIF) provides short-term funding to help accelerate municipal investments to support the rehabilitation of transit systems, new capital projects, and planning and studies for future transit expansion to foster long-term transit plans. Under Phase I of the program, the City was awarded \$145 million for 46 projects including LRT design, fleet purchases and facility renewal. While PTIF Phase II has not yet been allocated, the City has anticipated approximately \$1.3 billion in support of LRT expansion contemplated in the CIO.

Smart Cities: A \$300 million program to encourage communities to adopt a smart cities approach to improve the lives of their residents through innovation, data and connected technology. Funding under this program is application based and includes the Smart Cities Challenge, a pan-Canadian competition that will award up to \$50 million for project proposals. The City will assess potential projects for funding under this program.

Social Infrastructure: At the municipal level, this program is intended to support investments in affordable housing and cultural and recreational infrastructure. While funding has not been awarded, the province has been allocated \$3.2 billion over 11 years.

Green Infrastructure: A program to ensure Canada's communities are healthy and productive places to live, the first phase included \$5.0 billion of funding over five years towards infrastructure projects that protect communities and support Canada's ongoing transition to a clean growth economy. Of this, \$2 billion was directed through Infrastructure Canada's Clean Water and Wastewater Fund (CWWF) to provide communities with more reliable water and wastewater systems. The City was not allocated any funds under Phase I of the program.

While Phase II funding has not yet been allocated, it is estimated the Province will receive \$900 million to be managed through bilateral

agreements with the Federal government. Projects will need to be endorsed at the political level and recommended by a federal minister. Potential projects to be considered for funding may include transit, active transportation, Blatchford redevelopment, and electric fleet or transit.

Trade and Transportation: This is a \$10.1 billion program over 10 years to build stronger, more efficient transportation corridors, and includes the Trade and Transportation Corridors Initiative. This initiative will prioritize investments that address congestion and bottlenecks along vital corridors and around transportation hubs. While more details for the program are required to fully assess eligibility, potential projects to be considered for funding may include rail and grade separation along 50th and 75th streets.

Canada Infrastructure Bank: This is a tool that allows government partners to access innovating financing for revenue-generating infrastructure projects. The program aims to leverage private and institutional investment as well as expertise to help public dollars go further. Projects are considered for funding based on applications. The City is assessing which projects may be best suited for funding under this program.

FUNDING SOURCES: PROVINCIAL GRANTS

(\$4.977 billion or 33.1%)

Municipal Sustainability Initiative (MSI)

Grant payments for MSI will continue until March 31, 2022 – the expiry date of the current contribution agreement, with the remaining provisions of the program in place until 2026. Currently, \$242 million of MSI funding remains available under the current program.

In 2014, the Province consolidated the former Basic Municipal Transportation Grant (BMTG) with MSI funding. Provincial funding from fuel taxes has provided the City with an average of \$100 million in each of the past 3 years. Based on information from the Province, this amount is expected to continue, with slight increases in future years. Over the 10-year period, BMTG funding is projected to be \$1.1B, including \$81 million of funding that has already been allocated.

Potential New Provincial Funding

The City is currently engaged in discussions with the Province and anticipates reaching an agreement that will establish a new funding program that would commence when the MSI program expires in March 2022. While the specifics of such an arrangement are still to be determined, the capital outlook assumes overall funding from the Province will remain consistent with funding levels in the past, and includes \$1.2 billion over the period from 2022 to 2028.

Though a new agreement is anticipated to be reached that will effectively replace funding provided by the capital component of the MSI program, it should be noted that any new funding source may not necessarily follow the same format. MSI is an unconstrained funding source and has historically been used to fund a broad array of projects related to growth and renewal. The inherent flexibility of the MSI program has allowed the City to meet many of its City-building objectives. There's no certainty a new revenue sharing formula would bring with it the same flexibility as the current format; the Province might choose to impose restrictions on funding and limit its use to targeted initiatives. As the Province draws more of its funding from Climate Change initiatives such as the Carbon Tax, this scenario becomes ever more plausible. This could have significant impacts on funding for Renewal, which currently utilizes 70% of MSI funding. Any new restrictions on funding may limit the amount that could be used for funding renewal for roads or recreation centres, among other areas.

Green Transit Incentives Program (GreenTrip)

The total amount of GreenTrip funding included in the 2019–2028 period is \$94 million. These funds are part of the \$474.4 million that was previously awarded towards completion of the Valley Line LRT, which is currently under construction. All funds from the GreenTrip program are expected to be utilized by 2020, and are not expected to be replaced for future projects.

Matching Funds to Federal Grants

Contributions made by the Federal government in relation to PTIF and the NBCF are matched in part by the province, based on cost sharing agreements. Current matching agreements in place are:

1. **PTIF:** Total matching funds from the province for PTIF are anticipated to be \$600 million to support LRT expansion.
2. **NBCF:** The province has approved \$309 million in matching funds for Yellowhead Trail and the Valley Line Southeast LRT.

While future grants received from other orders of government are uncertain, projections in the capital outlook include future matching grants from the province for city-building initiatives such as LRT expansion totalling \$1.5 billion over the 10-year period.

FUNDING SOURCES: FEES AND LEVIES

(1.967 billion or 13.1%)

Neighbourhood Renewal Program (NRP) Tax Levy

Council approved a dedicated tax levy for the Neighbourhood Renewal Program starting in 2009. In 2017, Council endorsed the additional component of the Alley Renewal Program, which expands the NRP to include residential alleys. This component of the program is expected to gradually increase over the period from 2019–2022, to cumulatively add 1.2 per cent to the tax levy which will provide an additional \$20 million of funding for Alley Renewal by 2022, and maintained at this level into the future.

Local Improvement Fees

For tax-supported operations, local improvements are used exclusively to support streets and sidewalks in residential neighbourhoods. The City borrows money through a formal borrowing bylaw to front-end specific projects, which are then recovered over time from residents benefiting from these improvements. Local improvements can be resident-initiated or City-initiated. Examples of resident-initiated local improvements include alley paving and lighting, curb crossings, and resident-initiated sidewalks and roads. City-initiated local improvements include cost-shared sidewalk reconstruction. The Neighbourhood Renewal Program uses local improvements as a cost-sharing tool for sidewalk reconstruction and replacement.

Developer Fees/Partner Financing

Funds are contributed by developers or partners for specific civic infrastructure, such as buildings, parks, recreation facilities, roads and social housing. Current approved projects with significant developer/partner financing include Coronation Recreation Centre and Fort Edmonton Park.

FUNDING SOURCES: LAND ENTERPRISE**(\$678.1 million or 4.5%)**

Land Enterprise acts as the development arm of the City of Edmonton. It acquires raw land, services, markets, and sells the serviced lots with one of its primary goals being to earn a financial return for the City. The development activities are financed by the reinvestment of past profits (retained earnings) in the acquisition of raw land and the associated site servicing costs.

A secondary mandate of Land Enterprise is to acquire land for future municipal needs with the funding for the land portion to be recovered from the Capital Budget. The acquisition of land often occurs ahead of the Capital Budget approval to take advantage of lower pre-development land prices. This results in a significant working capital deficit in the municipal land acquisition program of Land Enterprise. A strategy based on a split of the functions between Enterprise Land Development (ELD) and Land For Municipal Purposes (FMP) will be developed to systematically repay ELD for previous acquisitions of land for municipal purposes not yet recovered from the Capital Budget. This will also allow the City to take advantage of acquiring land at pre-development prices without creating a financial liability.

FUNDING SOURCES: RESERVES – FLEET/OTHER**(\$230.0 million or 1.5%)**

Fleet Services provides vehicle and equipment procurement, maintenance, fleet engineering, fabrication services, fuel management and fleet administration to other City departments and EPCOR. A dedicated Vehicle Replacement Reserve was established in 2010. This reserve helps to ensure that the long-term funding of capital replacement needs is adequately maintained. The pricing model Fleet Services uses, includes both variable rate charges for maintenance costs and fixed rate charges for vehicle replacement funding. Fuel charges are billed separately, as fuel prices can be highly volatile, and are largely controlled by the customers' usage patterns. ETS buses are not subject to fixed rate charges, but remain funded through transit-related grants.

FUNDING SOURCES: UTILITY OPERATIONS**(\$150.6 million or 1.0%)**

Utility funding sources largely include retained earnings and self-liquidating debentures. One of the key tenets of the Utility Fiscal Policy is that the utility is self-funded and therefore does not rely on municipal grants or funding from tax levy. Only grants specifically targeted for utilities are leveraged. All information on the Utility Capital Budget is included in the Utility Capital Budget submission approved by Council in November 2017.

DEBT**(\$2.604 billion or 17.3%)**

Borrowing is a method of financing capital projects. It is not a funding source itself. Please refer the section on debt below for more details of the use of debt to finance capital projects during the 10 year outlook period.

DEBT

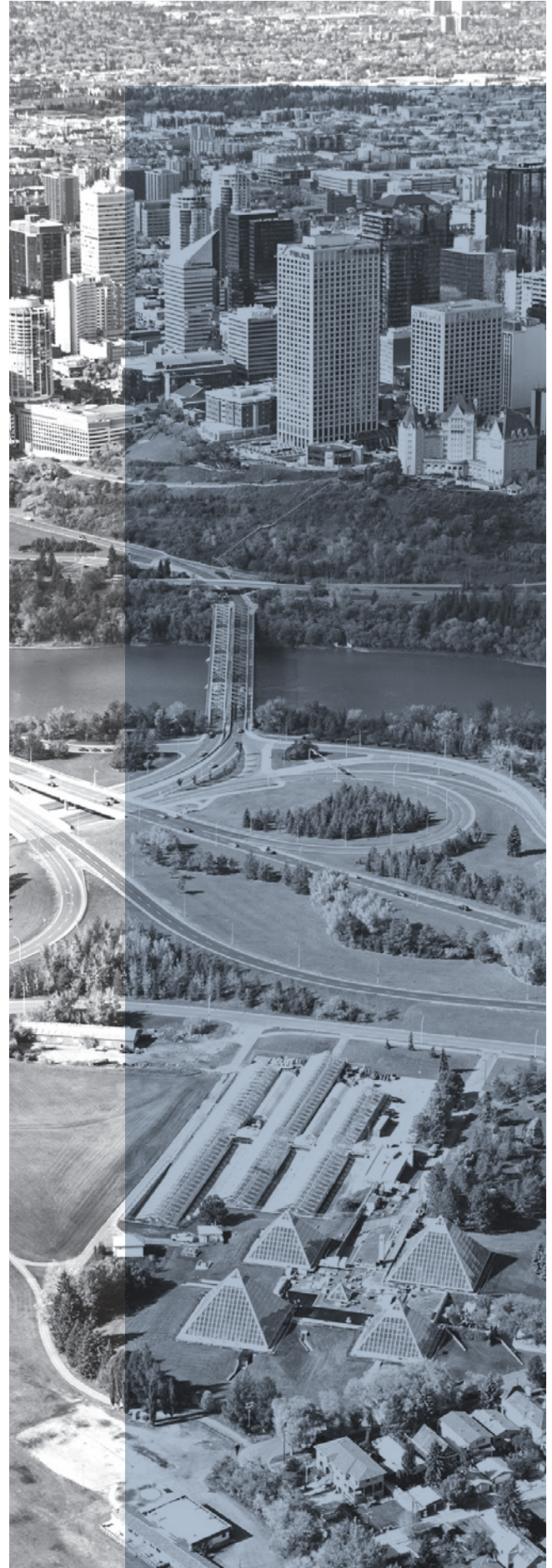
Background

The manner in which municipalities fund the services, growth and renewal that citizens expect has changed significantly in the last two decades. After a period of relatively little borrowing due to the high interest rates and recession of the 1980s and 1990s, the City reintroduced debt for tax-supported capital in 2002, and the result has been a significant expansion and revitalization of the city in many ways. It has become accepted that an appropriate and sustainable use of debt is an important tool in a strong capital infrastructure program. The reality is that without the use of debt, the City would not be able to advance significant infrastructure projects without first accumulating the savings to pay for projects 'up front'. There are many problems with this scenario, the most obvious one being that if the City had to save the full amount of a project's costs in advance, there would be an inequitable time lag between the citizens who have to pay for the project and the citizens who benefit from the project. Not only that, negative carrying costs can be associated with this approach, where the cost of construction increases faster than the investment return earned on savings over the same period of time.

The use of debt also helps the City to maximize its capital funding in those situations where eligibility constraints on grant funding from other orders of government prevents the funding of a City infrastructure project in its entirety. Furthermore, some granting streams require the City to provide matching funds simply to access grants; without the use of debt financing for the City's share of certain projects, the City would not be able to access such grant funding.

Debt Management Fiscal Policy

The City has created a Debt Management Fiscal Policy (DMFP) to help guide it with this process. The DMFP classifies debt into two major categories: tax supported and self-liquidating. The category of tax supported debt is further broken down into tax-supported (the primary repayment of debt is property taxes) and self-supporting tax-guaranteed (the primary repayment of debt is some other revenue source such as grants, user fees, lease payments, etc). Self-liquidating debt is predominantly debt incurred on behalf of the City utilities, and is repaid through utility rate revenue. Effective with the 2017 transfer of the City's Drainage operations to EPCOR, the City transferred the obligation for \$593 million in self-liquidating debt to EPCOR. This means that as of September 1, 2017, self-liquidating debt refers almost exclusively to debt associated with the Waste Utility and Local Improvements.



The DMFP allows for the consideration of long-term debt related to capital expenditures for:

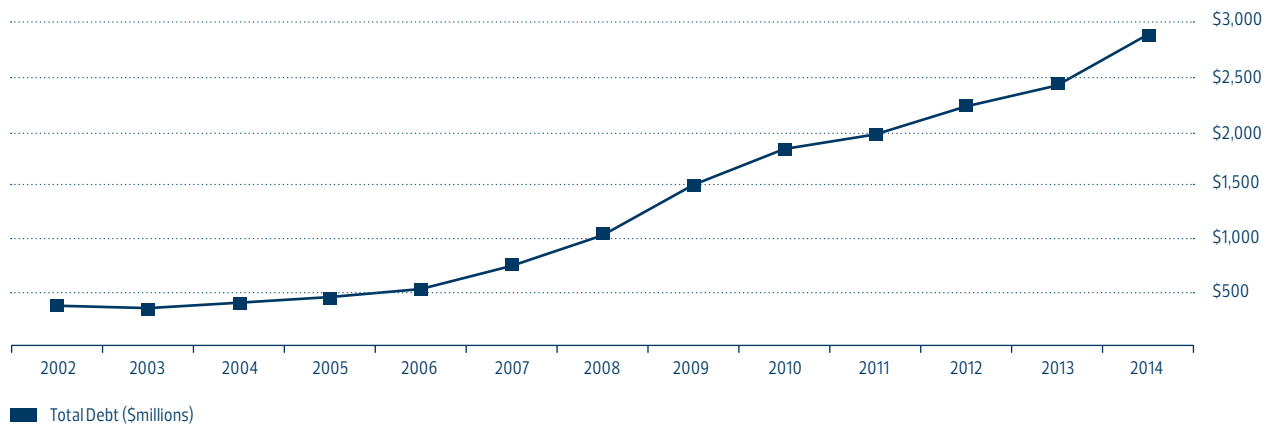
-
Large projects with long-term benefits
-
Projects with benefits for the community-at-large (for tax-supported debt)
-
Growth-related projects
-
Emerging needs to support corporate priorities and approved strategic plans
-
Major rehabilitation of existing assets.

Historical Use of Debt

As mentioned earlier, it was in 2002 that the City reintroduced debt for tax-supported operations. PAYG as a stand-alone financial strategy was abandoned for a very simple reason: it was impossible to provide the infrastructure a growing number of Edmontonians needed and expected without huge increases in taxation to pay for costly assets on a cash basis. It's true that the City's financial debt was not growing, but its infrastructure debt was becoming significant. In some ways, it was simply passing on a problem to future generations. Analysis revealed a gap between the value of infrastructure that could be funded with identified capital resources and the value of the infrastructure required to support the growing City to be in excess of \$4 billion dollars. With a "no tax supported debt" strategy, the City was unable to address growing infrastructure issues.

Significant increases in borrowing started in 2007, and an annual average amount of \$280 million was borrowed for capital projects in the 2009-2011 capital budget cycle. The 2012-2014 capital budget cycle contained an additional \$673 million in tax-supported debt. The debt incurred in this period up to 2014 was used to advance a combination of renewal and growth projects such as Libraries, Recreation Centres, Great Neighborhoods Program, South LRT Expansion, Metro Line LRT, and the Walterdale Bridge.

Figure 6: Total Debt (\$ millions)



The following chart illustrates the growth in total debt on the City's balance sheet between 2002 and 2014.

Current Capital Budget Cycle

The 2015-2018 approved capital budget contained \$1.9 billion in tax-supported debt to advance a number of transformational City building projects. These projects included:

Downtown Arena Project (Self-Supporting Tax Guaranteed Debt which is repaid primarily by ticket surcharge revenues, lease revenues, and Community Revitalization Levy revenues)

Valley Line Southeast LRT (Tax supported debt was used by the City to access match grant funding of \$1 billion from other orders of government)

Kathleen Andrews Transit Garage

Co-located Dispatch and Emergency Operations Centre

Coronation Community Recreation Centre

In 2017, Council also approved the Yellowhead Trail Freeway Conversion project, which saw an additional \$511 million in tax-supported debt approved between 2017 and 2024 in order to match and access \$483 million in grant funding from other orders or government.

Debt Limits

The City of Edmonton is subject to limits both for total debt and debt servicing by the Municipal Government Act, RSA 2000, c M-26 (MGA). The MGA Debt Limit Regulation AR 255/2000 specifies that the City's total debt limit is 2 times the revenue of the municipality, and that debt servicing costs is capped at 35% of municipal revenue.

Debt is further restricted through the DMFP, which limits total debt servicing to 22% of annual municipal revenues, and tax-supported debt to 15% of annual tax-supported revenues. Table 6 below shows a comparison between the actual debt limits and performance from the final year of the previous capital budget cycle (2014), and the projected debt limits and performance for the first year of the next capital budget cycle (2019).

Table 6: Debt Limits (\$ millions)

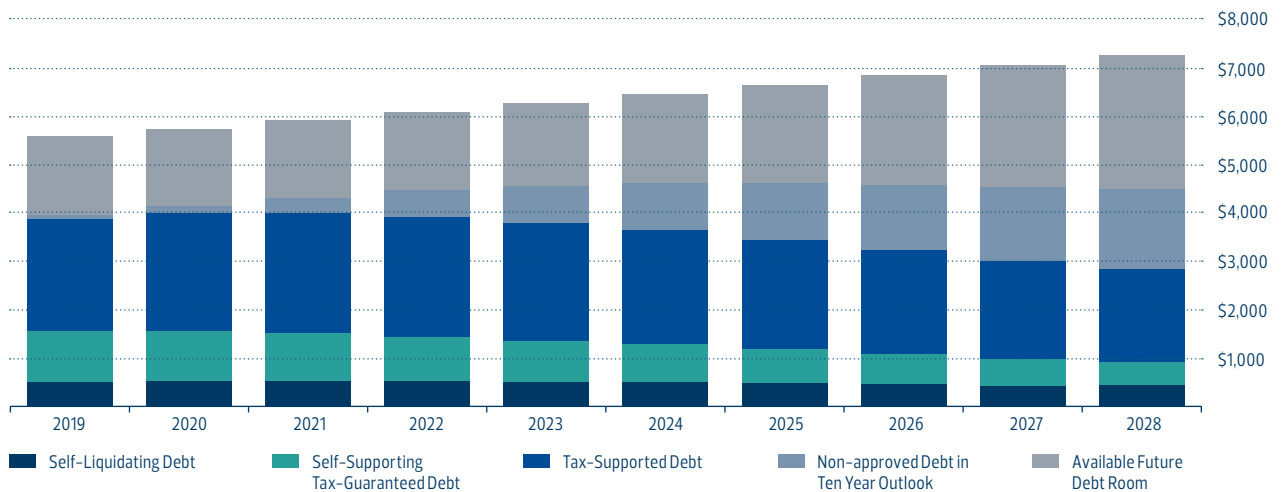
	Total Debt (MGA) 2x Municipal Revenue	Total Debt Servicing (MGA) 35% of Municipal Revenue	Total Debt Servicing (DMFP) 22% of Municipal Revenue	Tax-Supported Debt Servicing (DMFP) 15% of Tax-Supported Revenue
2014 (Actuals)				
Limit	5,154	902	567	310
Actuals	2,896	319	224	143
Available Room (\$)	2,258	583	343	167
Available Room (%)	44%	65%	60%	54%
2017 (Actuals)				
Limit	5,627	985	619	349
Actuals	2,914	265	336	267
Available Room (\$)	2,713	720	283	82
Available Room (%)	48%	73%	46%	23%
2019 (Projected)				
Limit	5,565	974	612	370
Actuals	3,890	320	307	256
Available Room (\$)	1,675	654	305	114
Available Room (%)	30%	67%	50%	31%
2028 (Projected)				
Limit	7,261	1,271	799	483
Actuals	4,485	435	444	401
Available Room (\$)	2,776	836	355	82
Available Room (%)	38%	66%	44%	17%

Debt Projections

Taking into consideration known debt commitments made in previous capital budget cycles, such as the Yellowhead Trail project and LRT commitments, as well as non-approved debt contemplated in the 10 year outlook, the amount of total debt room projected to be available under

the MGA limit will decrease from \$2.3 billion in 2014, to \$1.7 billion in 2019. Based on a conservative annual revenue growth assumption of three per cent, total debt room is projected to grow to \$2.8 billion by 2028.

Figure 7: MGA Total Debt Limit (\$ millions)



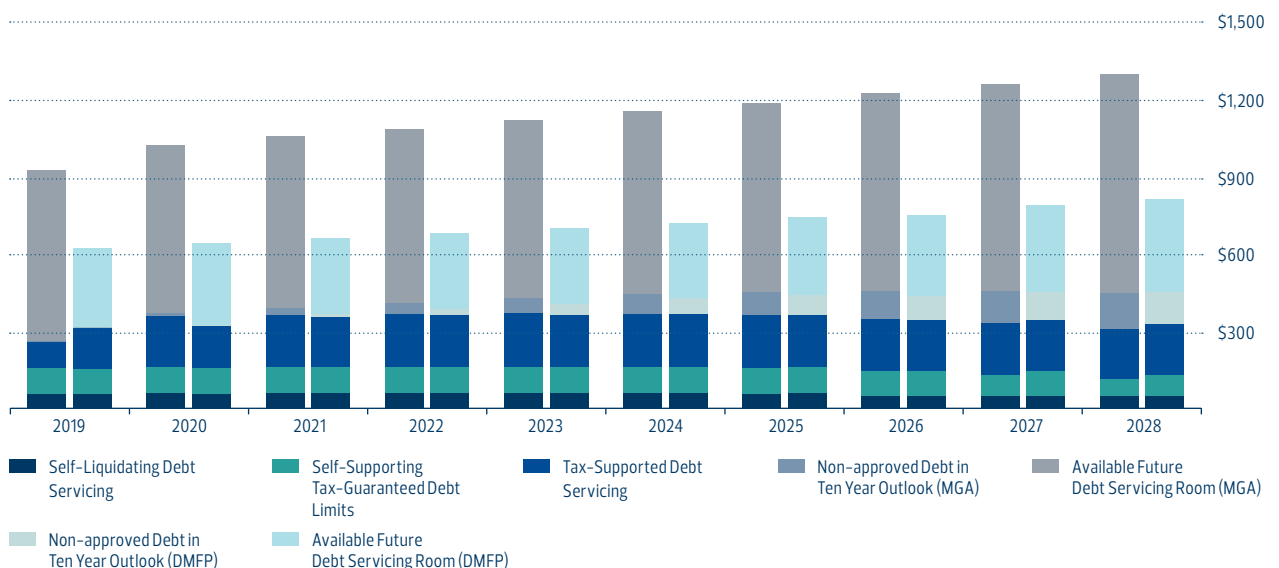
Debt Servicing: Total Debt Servicing

With the increased use of debt as a financing tool, the amount of total debt servicing room available under the MGA and DMFP has, as discussed above, decreased since 2014. That said, the City still has substantial room available under both limits. The City is projected to have \$654 million in available debt servicing room under the MGA limit in 2019, growing to \$836 million in 2028 based on a conservative annual revenue growth assumption of three per cent. Under the more restrictive DMFP total debt servicing limit, the City is projected to have \$305 million in available

room in 2019, growing to \$355 million in 2028 on the same three per cent revenue growth assumption.

The City saw the amount of self-liquidating debt servicing costs substantially decrease due to the transfer of Drainage Operations to EPCOR. This decrease, combined with the additional DMFP restriction on the amount of tax-supported debt servicing, results in the City being unable to approach the 22% total debt servicing limit unless a significant amount of self-liquidating debt is added in the future.

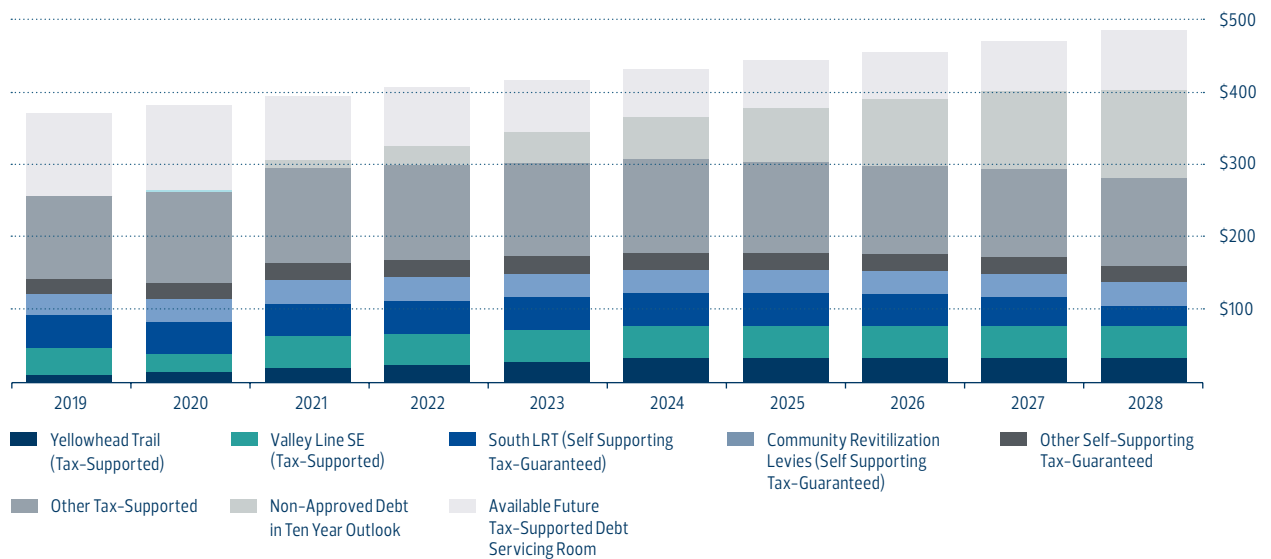
Figure 8: Total Debt Servicing Limits (\$ millions)



Debt Servicing: Tax-Supported Debt Servicing

The DMFP tax supported debt servicing limit is the most restrictive to the City. The City is projected to have \$114 million in tax supported debt servicing room available in 2019, which decreases to \$82 million by 2028 based on a conservative annual revenue growth assumption of three per cent. The City will start to see some portion of significant tax-supported debt projects beginning to be paid off (such as the South LRT) after 2026.

Figure 9: DMFP Tax-Supported Debt Servicing Limit (\$ millions)



Debt Servicing: Future Use of Debt

The use of debt as a capital infrastructure financial tool has been of enormous value to Edmonton and its citizens. It has helped create and revitalize the city in countless ways, which means Edmontonians have had a direct quality of life increase from this shift in philosophy. But while it remains the case that the City continues to operate within its legislated debt limits, the increased use of debt in recent capital budget cycles has been significant and cannot continue at the same pace in future capital budget cycles without encroaching on the City's internal debt limits. The City must maintain flexibility to issue debt in response to emerging needs, and to maximize matching grant funding on high Council priority projects such as the expansion of the LRT network (Valley Line West and Metro Line extension to Blatchford). The non-approved expenditure forecast related to future LRT expansion included in the 10 year CIO assumes that grant funding from other orders of government will be received at the time it is needed to cover the project expenditures it relates to. Any delay in funding will result in the City either having to delay

these large projects to the future, or the City having to take on additional interim borrowing to bridge these gaps. Interim borrowing creates additional debt that puts pressures on the City's debt limits, and creates additional interest costs that add to the total amount of funding required to complete these projects.

As current debt is retired, tax-supported debt servicing costs are reduced, creating room which can be used to fund new projects without having an incremental impact on the tax rate. The available room generated between 2019 and 2026 has been allocated to the Valley Line Southeast in the Valley Line funding plan approved by Council in 2015, to reduce the tax levy required to fund the operating impacts of the project. Available room beyond this timeline has not been allocated. The judicious use of debt has helped our city grow and remain competitive; now is the time to ensure that rigour is maintained.

PART 5: CAPITAL OUTLOOK BY SERVICE AREA

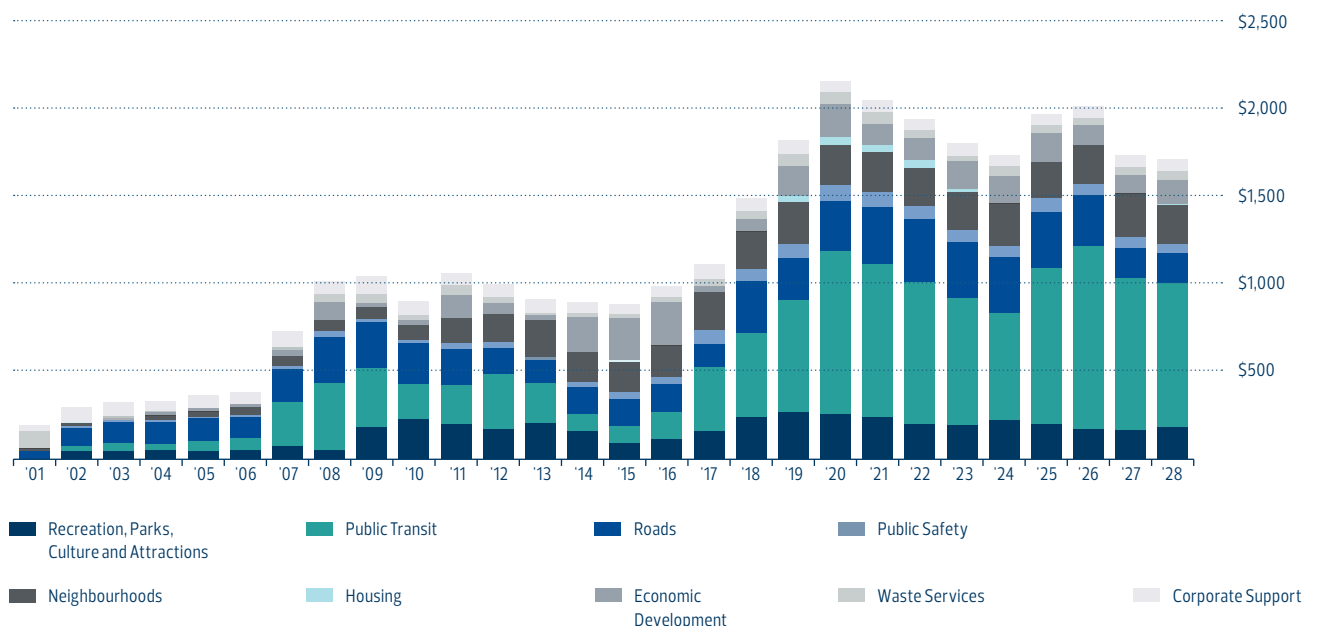
In previous sections of this document, we examined the context around the CIO, how it evolved to the present day, some of the emerging issues that will affect this and future CIOs, and our corporate strategy. We also looked at the fundamentals behind how the CIO is created, including our planning principles, the ways in which the City seeks to balance renewal and growth, our principles around asset management, and the ways in which the City oversees renewal projects and those projects that create new assets. We also discussed the ways in which the City funds these activities.

Now that we have gone through the technical and/or theoretical elements of how the CIO is created, it's an appropriate time to look at what the CIO exists for, namely the specific services Edmontonians pay for with their tax dollars. In this section, we will look at the Service Area Responsibilities. We will examine Transformational Projects in the section that follows.

Table 7: 2019 -2028 Potential Capital Investments (\$ millions)

Service Category	Growth	Renewal	Total
Recreation, Parks, Culture and Attractions	915	1,142	2,056
Public Transit	7,343	834	8,177
Roads	1,713	1,068	2,781
Public Safety	334	372	706
Housing	173	16	189
Neighborhoods	524	1,749	2,273
Economic Development	1,178	254	1,432
Waste Services	148	364	511
Corporate Support	172	510	683
Total	12,500	6,309	18,810

Figure 10: Historical and forecast capital spend 2001 - 2028 (\$ millions)



SERVICE AREA 1: RECREATION, PARKS, CULTURE & ATTRACTIONS

Overview and mandate

Recreation, Parks, Culture & Attractions encompasses a wide range of facilities and spaces that comprise much of what makes Edmonton a rich and vibrant city. The City makes opportunities available for recreation and fitness, cultural and community connection, as well as learning and entertainment through its investment in Recreation, Cultural and Community Centres and the Edmonton Public Library. Edmonton's renowned river valley and ravine system forms the largest urban park in Canada and provides a connective network of trails, corridors, and pathways used for recreation and commuter access throughout the city. Investment in this portfolio ensures Edmonton remains an attractive locale, while positively impacting the health of citizens and the economic, social, and cultural capacity of the City.

Quick Facts:

- 18 recreation & leisure centres
- 20 ice arenas
- 3 golf courses
- 9 cultural centres
- 4 museums
- 455 playgrounds
- 6,128 hectares of parkland
- 20 libraries

Looking Back

Over the past budget cycle, significant investment was made in libraries, parks, and recreational and cultural infrastructure. Funding for design was directed toward development of new recreation centres at Lewis Farms and Coronation, as well as renewal of leisure centres and arenas in Castle Downs and Jasper Place. The City moved to make investments that will strengthen community learning, enjoyment and sustainability through the acquisition of MacEwan University West Campus (The Orange Hub), as well as initial designs for the Wellington/African Multicultural Centre and expansion of the Winspear Centre. A number of new parks were created through partnership with industry and the Shared Park Development Program. This program saw the completion of Rosenthal School Park, Griesbach Central Park, Charlesworth Sustainability Plaza, and the Orchards School Park.

Overview of CIO submissions

Edmonton's recreational and cultural facilities are a key component of our quality of life and drive our shared experience as a city. The Capital Outlook for the next 10 years supports Council's vision of becoming a Healthy City, with ample opportunities for social connection and a place that provides equal opportunity to learn, create, be, and work. As previously stated, investment in these areas over the past ten years has been substantial, but with moderating growth in GDP and population on the horizon, this investment will be more gradual relative to prior years.

The Capital Outlook balances the challenge of meeting the demands of an increasing population with maintaining aging infrastructure, against the backdrop of limited and somewhat uncertain funding. Anticipated investments are targeted at community and cultural centres such as the Indigenous Cultural and Wellness Centre, Strathcona 55+ Seniors Centre, and the African Multicultural Centre, as well as providing wraparound community wellness services. These projects have been identified as key priorities through strategic initiatives such as End Poverty Edmonton, the Edmonton Seniors' Centres Plan, and ELEVATE.

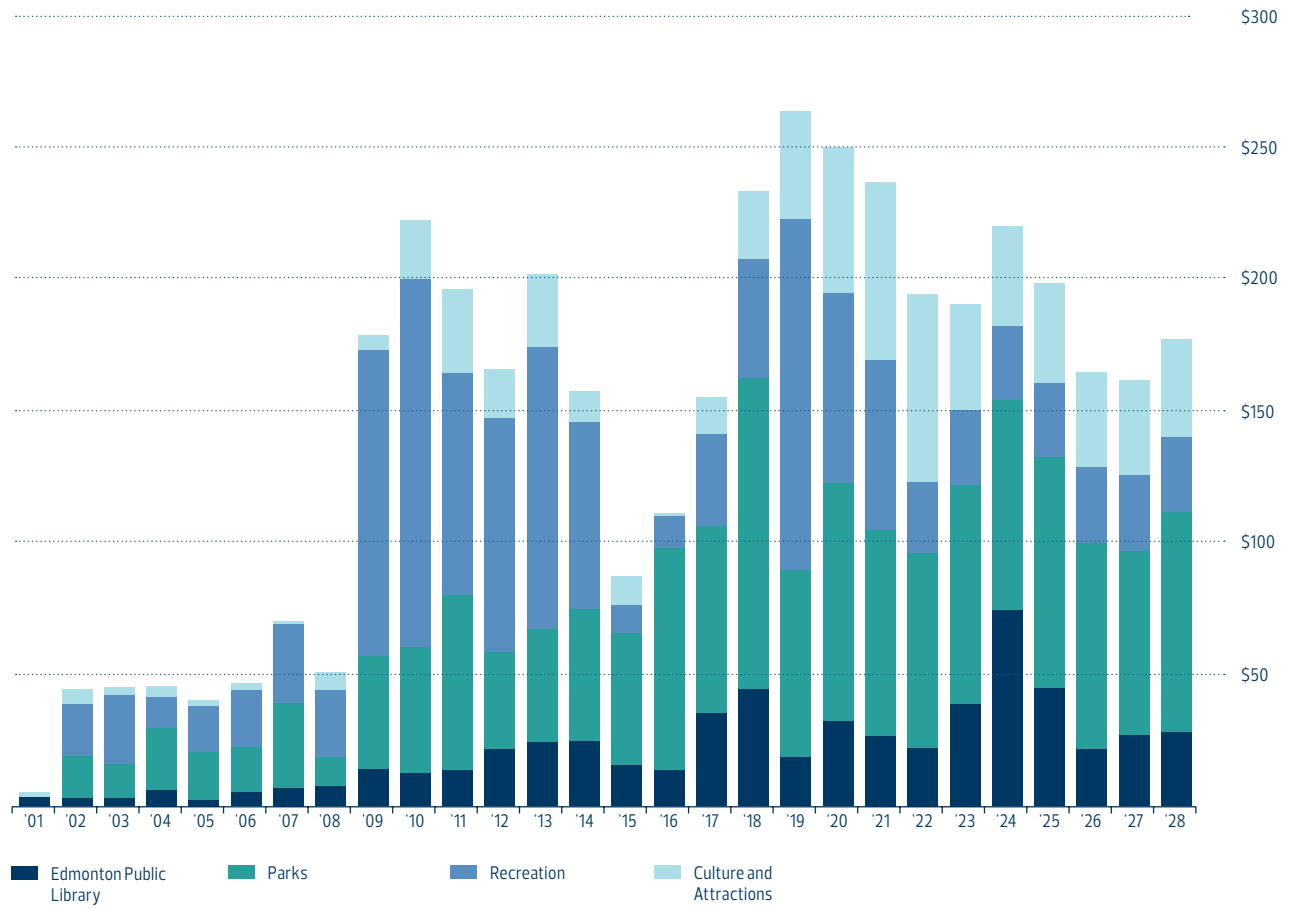
With the anticipated completion of new recreation centres at both Lewis Farms and Coronation by 2025, capacity should be sufficient to meet service level targets for the foreseeable future, especially as population growth is expected to moderate compared to previous years. Resources will be focused more on ensuring Edmonton's existing facilities are in a state of good repair, and providing value to residents.

Breathe, Edmonton's green network strategy, is an expression of the new Open Space Policy, and is designed to support a more diverse and complex approach to growth in parks and open spaces. Breathe is designed to support continued expansion into new developing areas, intensification in mature and established neighbourhoods, and transforming our central core. Guided by this strategy, in this Capital Outlook the City aims to continue acquisition of land in the river valley and natural areas on an opportunistic basis, and develop park space in a manner that appreciates the interconnected nature of open spaces across the city and the way that many different urban networks coexist and overlap to form an integrated, multifunctional green network.

The newly approved 2019-2022 Edmonton Public Library Strategic Plan and City Council's strategic goals provide direction and expected outcomes for future library services. This plan aligns with the City's 10 year strategy The Way Ahead, particularly regarding improving Edmonton's livability and Edmonton's economic success. Through capital investment, EPL will be able to expand its reach to new and growing communities and revitalize branches that have been serving areas for a number of years. Using demographics analysis from recent Environics Analytics' Envision software, and current and projected usage, EPL has identified areas of growth or change. This information will be used in establishing capital priorities in terms of identifying new branches, and/or expanding or relocating existing branches.

For the next 10 years, the EPL has estimated that \$132 million in funding will be required for investment in future infrastructure for new library branch growth, and renewal and rehabilitation of existing infrastructure. This plan will enable the development of four new library branches to be established in growth areas of the City, the replacement and renewal of four library branches in existing communities, and sufficient funding to renew and rehabilitate other existing buildings, IT, furniture, equipment, vehicles and library collections. The EPL Board continues to seek support from City Council, partners and other levels of government for its infrastructure needs in delivering valued services for Edmontonians.

Figure 11: Historical and Forecast Capital Spend, 2001 – 2028 (\$ millions)



SERVICE AREA 2: PUBLIC TRANSIT

Overview

With Edmonton's population and economy growing, Transit service has never been more important to the city's wellbeing. Without efficient operations and adequate capacity, many residents, workers and visitors would be unable to access the schools, jobs, community events and attractions that make Edmonton a great city. The City strives to provide customer-focused, safe, reliable and affordable public transportation services that link people, jobs and communities on buses, Light Rail Transit (LRT) and DATS (paratransit). A great public transit system can help build an efficient transportation system and more compact and lively neighbourhoods, reduce our environmental footprint, link workers with jobs and customers with businesses, improve public health, and enable all citizens to fully engage in urban life.

Quick Facts:

- 926 buses
- 87,170,418 transit ridership (2016)
- 94 trains
- 6,325 bus stops
- 18 LRT stations
- 27.7km LRT track
- 6 transit garages
- 27 transit centres

Looking Back

The City has continued to make advancements in enhancing the use of public transit and promoting a shift in the way people move. Over the past budget cycle, The Edmonton Transit System (ETS) realized significant investment in the LRT with completion of the Metro Line to NAIT, and the start of construction on the Valley Line Southeast, from Downtown to Millwoods.

The entire ETS bus fleet was modernized with Smart Bus technology, providing a Real-Time Passenger Information system, and Computer-Aided Dispatch as well as On-board Mobile Data Terminals. These enhancements are a precursor to implementing Smart Fare technology and together provide greater passenger connectivity, convenience, and improve operational efficiency.

Major renewal projects included the complete refurbishment of the West Edmonton Mall Transit Centre, and renewal of the Capital Line LRT, including replacement of sections of track north of Churchill station, and upgrades to the traction power and signalling systems. In addition, the escalators were replaced at Bay and Corona LRT stations.

In July 2017, Council approved the Transit Strategy, which reflects the priorities of Edmontonians and will modernize Edmonton's transit system. It identifies a long term vision for Transit and will guide development and investment in the transit system, which is a foundational element to building a great city.

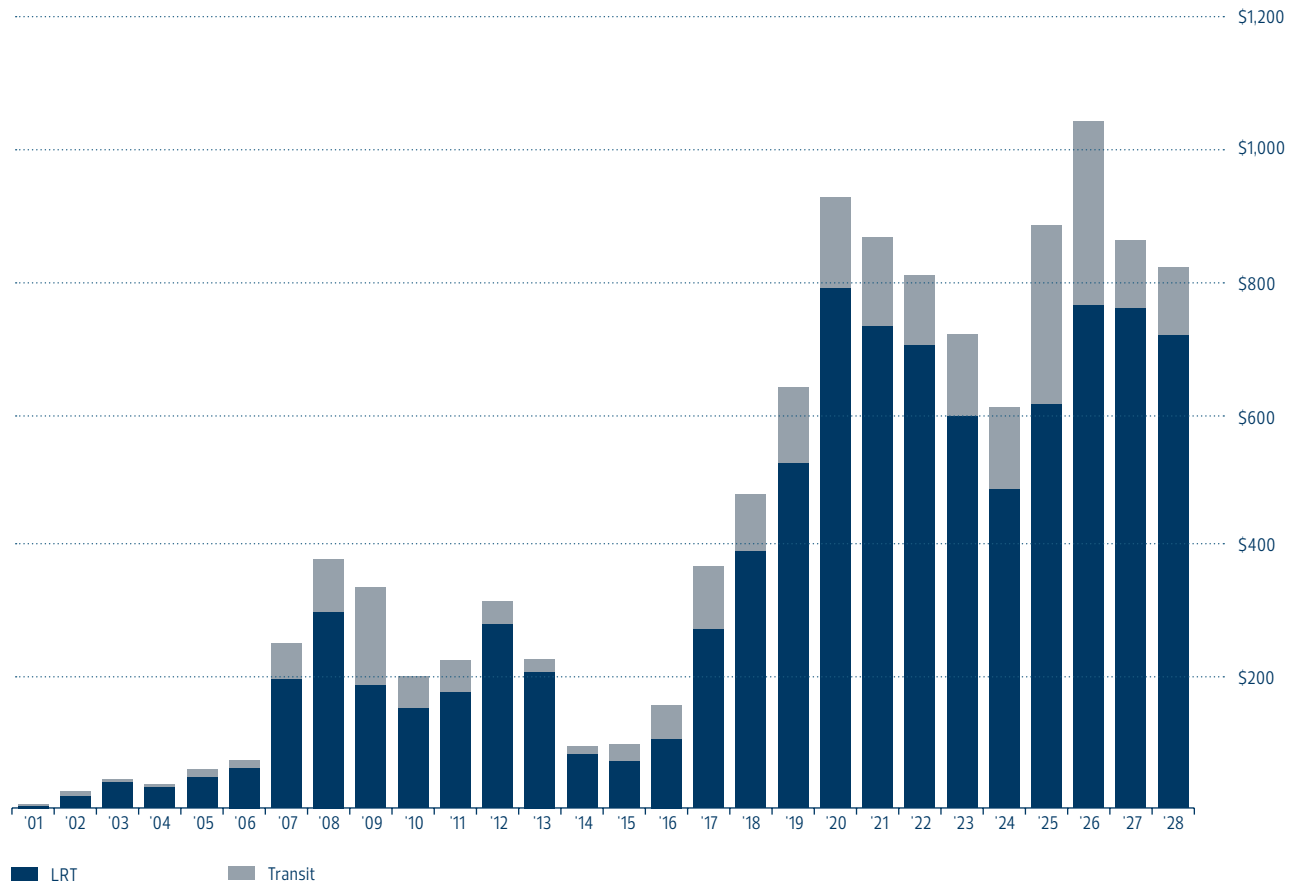
Capital Outlook

Guided by the Transit Strategy, the City will work to build a transit system that will focus on transit service that is safe, fast, convenient and reliable. Consistent with Council's priority of expanding the LRT network, within the Capital Outlook, the City anticipates the completion of the Valley Line Southeast and Valley Line West, as well as the expansion of the Metro line from NAIT to Campbell Road and the Capital Line from Century Park to Ellerslie Road and Heritage Valley. As it looks beyond the 10-year horizon, the City also plans for future expansion of the Capital and Valley lines.

Annual ridership has increased from almost 68 million in 2009 to just over 87 million in 2016. The current transit system is nearing capacity and even with modest projections for population growth needs to expand to keep up with service delivery demands. The Capital Outlook includes expanding the number of buses in the ETS fleet, as well as construction of a new transit garage. These investments will bolster the City's capacity and enable a phased strategy for the use of alternative energy technology for the transit bus fleet, transit support vehicles, and transit facilities.

As outlined in the Transit Strategy, the City seeks to establish a balanced approach to operating funding and fare policy. Through Smart Fare, expected to be fully implemented by 2020, the City will be able to explore the potential for new fare structure opportunities made possible by this initiative, potentially providing an opportunity for a regional transit fare integration plan with neighbouring municipalities in the Edmonton Metropolitan Region.

Figure 12: Historical and Forecast Capital Spend, 2001 - 2028 (\$ millions)



SERVICE AREA 3: ROADS

Overview and Mandate

To support our residents, workers, and visitors, the City must plan, operate and maintain a vast system of transportation infrastructure ranging from sidewalks and cycling routes, to residential streets, arterial roadways, connectors, and freeway systems. Recognizing that a transportation system comprises a significant part of a city's public space and how its citizens choose to move, it is vital to ensure that urban form, area planning and programming create an inviting and functional environment for Edmonton's citizens. Investment in how the City moves people, goods and services shapes our urban form, impacts our economic well-being and is a primary determinant of our city's environmental, financial and social sustainability.

Quick Facts:

- Over 10,000km of roadways, sidewalks, bicycle lanes and alleys
- 163 bridge structures
- Over 150,000 traffic signs and 113,000 street lights
- Over 5,700 parking stalls
- Approximately 1,100 pedestrian and full traffic signals

Looking Back

Over the past budget cycle, a multitude of arterial roadway projects have added capacity to existing roadways and key goods movement corridors, along with the construction of interchanges and railway grade separations. An increased commitment and investment into traffic safety has resulted in the implementation of Vision Zero, which includes equipment investments into speed signs, new pedestrian signals and crosswalks, signal upgrades, school zone safety, and neighbourhood safety. A continued implementation of active modes infrastructure, including the completion of a downtown bike grid and several major bike routes in central Edmonton, have moved the City towards a more complete network of infrastructure for walking and cycling. From 2015 to 2018, the City saw significant investment in parking control technology and the establishment of the City's E-Park system. In an effort to accommodate all citizens within Edmonton's roadway networks, investment has been made in the conversion of Edmonton's traffic controller system and complete streets enhancements across the city. Understanding what major changes are likely to impact the City's operations over the next decade, and how program and service reviews and changing technologies will potentially impact the City's capital needs is crucially important moving forward.

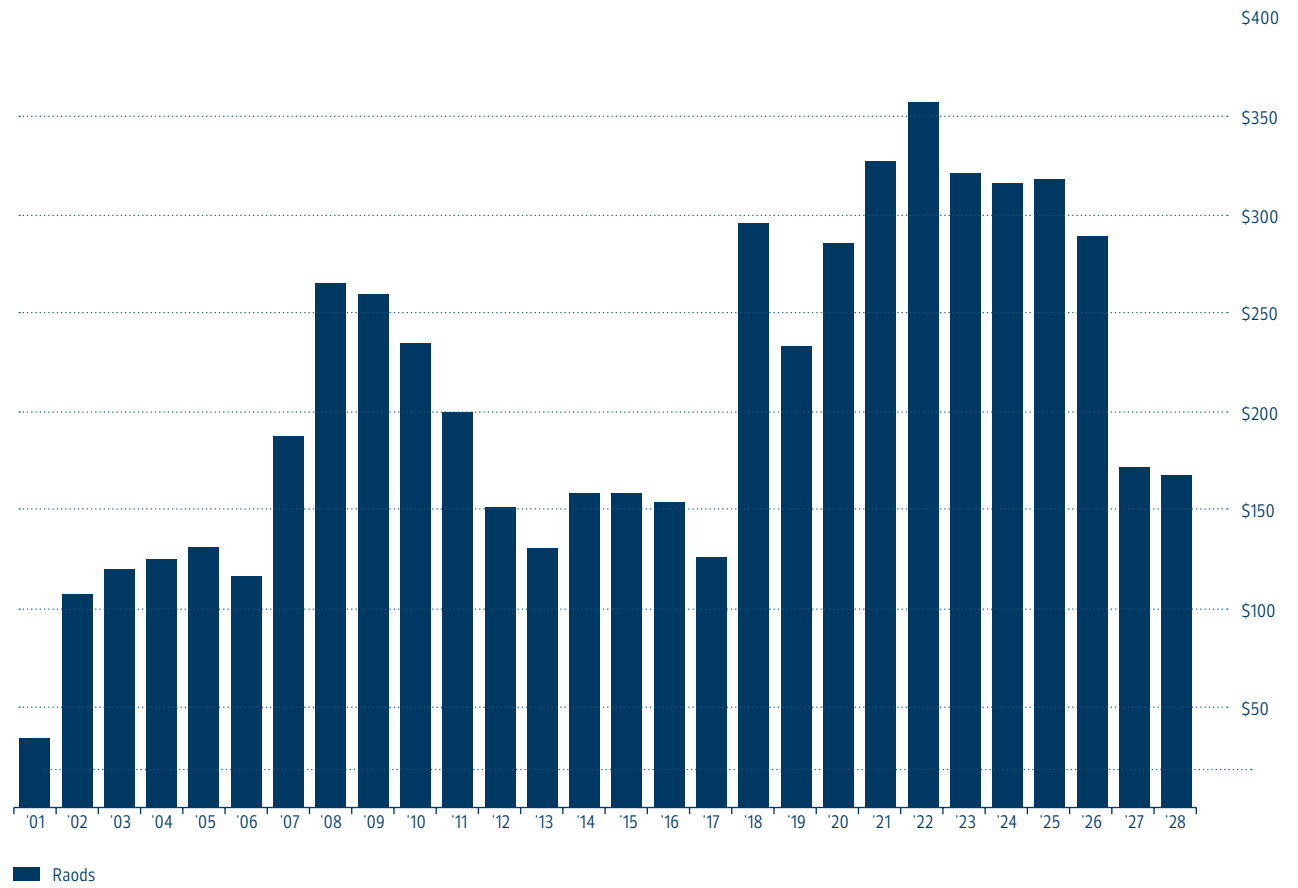
Overview of CIO Submissions

Roads investments are estimated to be over \$2.7 billion in order to support the City's corporate outcomes. Capital investments into Roads programs support Council's strategic goals for Urban Shift, promoting complete and uplifting neighbourhoods, and appropriate and accessible infrastructure.

Through the expansion of missing sidewalk links, cycling routes and transit-oriented developments in Edmonton, the City is working to enhance the use of public transit and active modes of transportation while also creating a more attractive and compact city. Programming to retrofit missing curb ramps and create accessible transit infrastructure support the City's corporate outcome of having sustainable and accessible infrastructure. Over the next 8 years, significant investment will be made in Yellowhead Trail, transitioning this major thoroughfare into a freeway. (More details on this project are provided in the section titled "Transformational Projects" below.)

The City will improve the movement of goods and services along its roads with major upgrades planned for road widening on key arterial roads, and better options for railway crossings to reduce congestion and improve traffic flow. Traffic safety programs, such as Vision Zero and Community Traffic Management Plans, invest in equipment and road improvements targeted towards influencing positive driver behaviours and improving safety, which allow Edmontonians to better connect with the City in which they live, work and play. Traffic and parking infrastructure are rehabilitated and replaced with new technologies to optimize the benefits and efficiencies offered by new equipment. Programs such as Smart Roads, which employ the use of technology such as traffic sensors, cameras, electronic signs and controls to address the impacts of congestion, work alongside programs for improvements to signalization and expand capacity on key corridors to support the efficient movement of goods and services.

Figure 13: Historical and Forecast Capital Spend, 2001 – 2028 (\$ millions)



SERVICE AREA 4: PUBLIC SAFETY

Overview and mandate

The Public Safety service area addresses the capital needs of the Edmonton Police Service (EPS) and Fire Rescue Services (FRS), who work to keep Edmontonians safe and secure in their daily lives and in response to emergency situations. The EPS is dedicated to public safety and the advancement of policing as a profession. The EPS continues to strive to meet its vision of making Edmonton the safest major city in Canada and for the EPS to be recognized as a leader in policing. Under the oversight of the Edmonton Police Commission, the EPS' mission is to increase public safety through excellence in the prevention, intervention and suppression of crime and disorder. Through the protection of life, property and the environment, FRS improves the livability of all Edmontonians. The provision of internationally-recognized frontline fire rescue services, fire prevention programs and public education make the city a safer and healthier place. Supporting the response is critical with properly trained personnel, up to date equipment and communication infrastructure.

Quick Facts:

- 409 marked police vehicles
- 394 unmarked and specialty police vehicles
- 2 police helicopters
- 6 police divisional stations
- 29 active fire stations
- 51 staffed major apparatuses

Looking Back

In the past four years, the EPS has moved forward key elements of its Capital Plan including construction of the NorthWest Campus facility expected to open in 2019, and replacement of the Air-1 helicopter. EPS also began the implementation of a new Digital Asset Management System and protocol to organize unstructured data into a consistent, easily searchable format.

Key accomplishments for FRS include the opening of new fire stations at Lewis Farms (#29) and Pilot Sound (#30). An increasing number of intersections have been equipped with the traffic preemption system to improve safety and response times. The FRS training facility has also been converted to propane, improving firefighter safety and decreasing negative environmental impact.

The EPS and FRS, in conjunction with all City users of the existing Public Safety Public Security Radio System, continued to move to the Alberta First Responders Radio Communication System (AFRRCS). The new system is expected to be completed in early 2019.

Work has also continued on the Co-Located Dispatch and Emergency Operations Centre, which will house bylaw, police and fire communications functions and is anticipated to be operational in 2020.

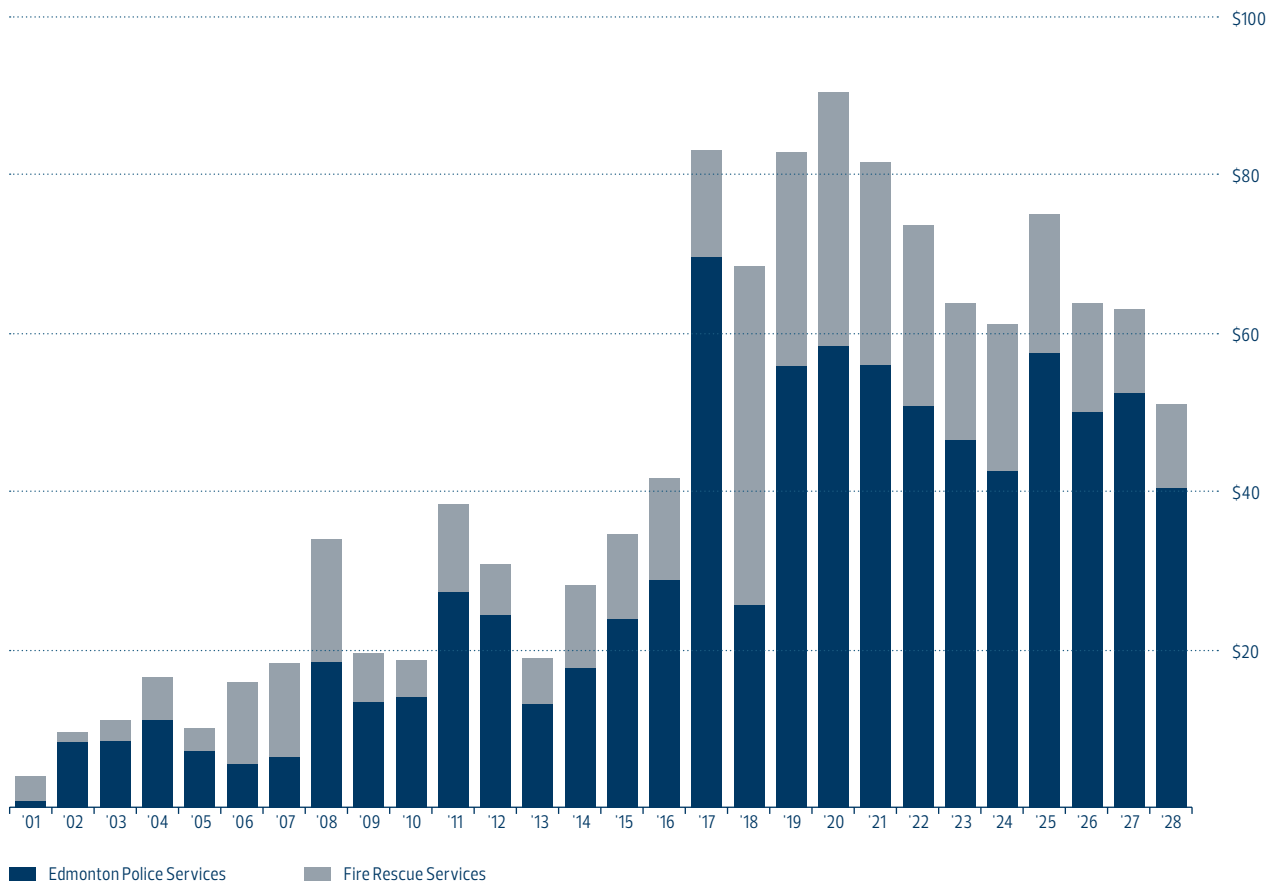
Looking Ahead

Renewal and major rehabilitation of existing assets will continue to be a focus for both EPS and FRS over the next 10-year period, as well as responding to the needs of a growing city.

EPS bases its 10-year CIO on various sources of information including existing inventory information, renewal cycles, the EPS twenty year Strategic Facilities Plan, crime trends and recognition of technology that can assist the EPS in achieving its goals and priorities. This begins with a new Firearms Training Facility, and relocation of the existing Canine Facility and Police Seized Vehicle Lot adjacent to Yellowhead Trail, and will continue in the future with a new 7th Divisional Station based on population growth and anticipated workload increases. Improved health and safety of residents and visitors will be aided by an Operations and Intelligence Command Centre as well as IT enhancements that increase access to intelligence and provide better connectivity and resource deployment for emergency response.

Looking beyond 2018, FRS has identified the potential need for two new stations in the northwest and southeast of the city based on the continued development of those areas. Focusing on worker safety as a priority, the CIO includes the updating of 18 fire stations to have properly vented gear storage rooms to prevent hazardous off-gassing from contaminating the working areas of stations that are occupied 24/7. Investment is anticipated for additional reserve fire apparatus to ensure sufficient fleet capacity to keep all active fire stations operational. The CIO also includes improvements to the Poundmaker training and logistics site to ensure firefighters are well trained and equipped to deal with increasingly complex buildings and taller high-rises.

Figure 14: Historical and Forecast Capital Spend, 2001 - 2028 (\$ millions)



SERVICE AREA 5: HOUSING

Overview and Mandate

The City believes that safe, adequate and affordable housing is fundamental to the physical, economic and social well-being of individuals, families and communities. Safe and adequate housing has long been linked to improved individual health and well-being. Further, a sufficient supply of affordable housing helps to support a healthy labour market; it is also crucial to enable long-term financial stability for low income households. A broad range of housing choices provided in all areas of the city helps to contribute to more inclusive communities and positive social outcomes for a range of social and demographic groups.

Quick Facts:

- Since 2006, the City has created more than 3,500 new affordable housing units.
- In 2016, more than 45,000 renter households in Edmonton experienced housing affordability problems. Of these households, 22,350 spent more than 50% of income on housing meaning they experienced severe housing affordability issues.
- The City is the owner or beneficial owner of approximately 3,400 social housing units in the city.

Looking Back

Efforts to address affordable housing have increased significantly since the launch of the City of Edmonton's Cornerstones program in 2006. Since then the City has partnered with other levels of government to deliver more than 3,500 units of affordable housing. The City has also invested in the Developer-Sponsored Affordable Housing program to provide citizens with diverse and affordable housing choices, while also creating a reliable and sustainable source of tax-levy income. The City developed the Affordable Housing Strategy that was approved by Council in 2015 and established four goals to guide the City's actions:

1. Increase the supply of affordable housing in all areas of the city
2. Maintain the supply of affordable and market rental housing
3. Enable stable residential tenancies and transition people out of homelessness
4. Anticipate, recognize and coordinate action to respond to housing and homeless needs

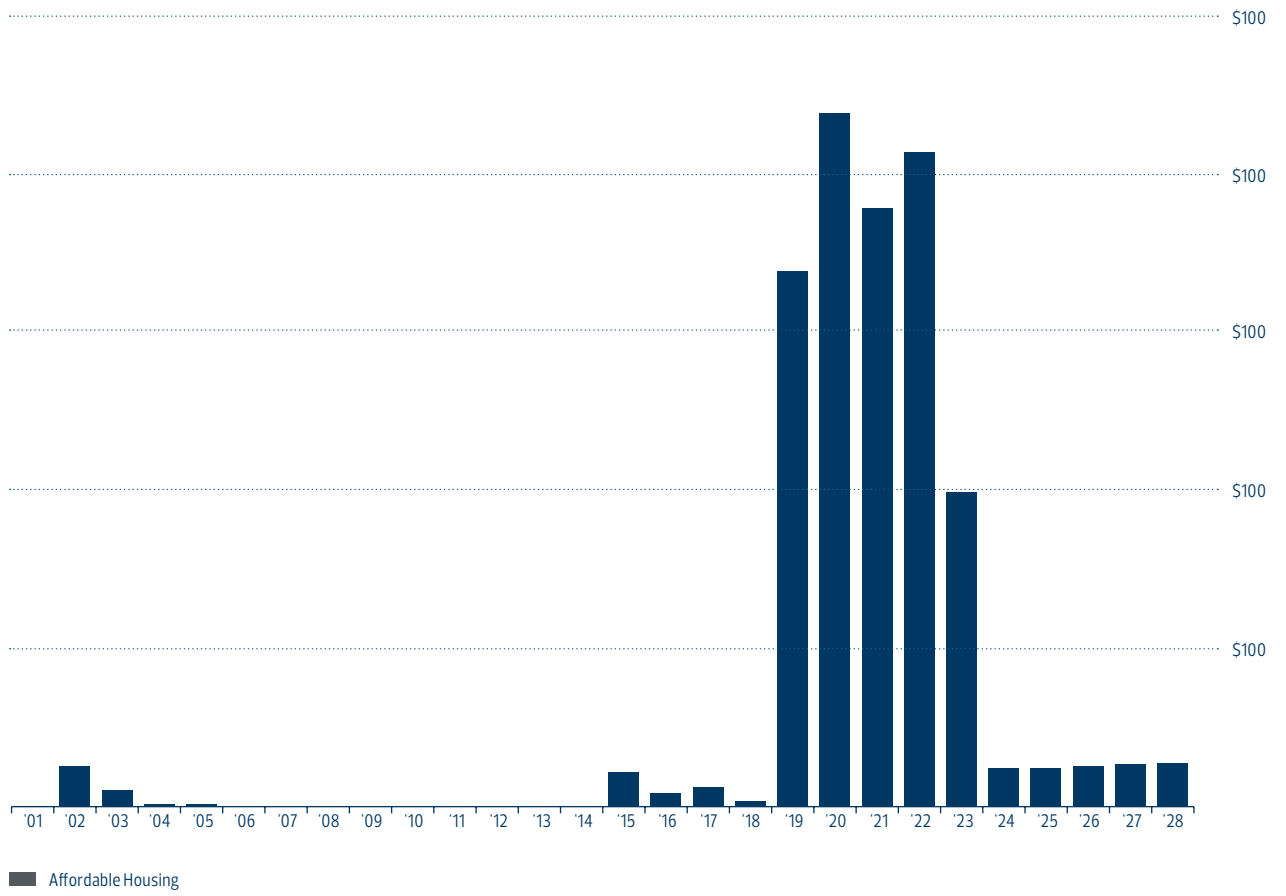
Capital Outlook

Guided by the Affordable Housing Strategy, the City is taking a strong leadership role and using a full tool box comprised of funding, land, regulations, partnerships and policies to meet a wide range of affordable housing needs in all areas of the city.

Income inequality in Edmonton is growing and low income households in economically distressed neighbourhoods remain isolated from mainstream economic opportunities. Initiatives such as those outlined in the End Poverty Edmonton strategy are intended to preserve affordability and living conditions for qualified income residents. In that context, over the next ten years the city will leverage funding from other orders of government to increase the affordable housing supply. To ensure the City of Edmonton is prepared, a dedicated capital funding source will be used to acquire additional land, purchase existing buildings for affordable housing, and acquire land in strategic locations throughout the city.

Existing City-owned social housing sites that have reached the end of their useful life will be redeveloped and potentially densified. Consistent with Council direction for a more distributed model, affordable housing will be targeted for areas across the city that are near transit and other services.

Figure 15: Historical and Forecast Capital Spend, 2001 - 2028 (\$ millions)



SERVICE AREA 6: NEIGHBOURHOODS

Overview and Mandate

The Neighbourhoods service area encapsulates much of the planning and development that make Edmonton a place that continues to grow and be an attractive place to live. Great neighbourhoods contribute to the City's vibrancy and prosperity. They provide an exceptional quality of life for residents, offering a diversity of housing and local amenities, good access to transportation options and a strong sense of place and belonging. Providing livable, sustainable, innovative and integrated neighbourhoods in both new and mature areas will ensure that our city is well positioned to attract new residents and new talent and sustain economic growth and competitiveness over time.

Quick Facts

- Over 300 neighbourhoods in Edmonton
- Capital project enhancements in approximately 18 neighbourhoods per year
- Approximately \$1.3 billion invested in neighbourhood renewal and enhancements from 2009-2018

Looking Back

In the last budget cycle, capital investments continued as part of the 10 year (2009-2018) Great Neighbourhoods Initiative, in which \$150 million in funding was approved for the revitalization of neighbourhoods, improvements aligned with drainage and transportation related neighbourhood renewal work and public realm improvements around neighbourhood level commercial areas.

Between 2015 and 2018, investments in revitalization projects were made in four Council-approved neighbourhood areas with high social vulnerability and ageing infrastructure: McCauley, Central McDougall/Queen Mary Park, 118 Avenue (Avenue Initiative), and Stony Plain Road Streetscape (Jasper Place). Other projects include:

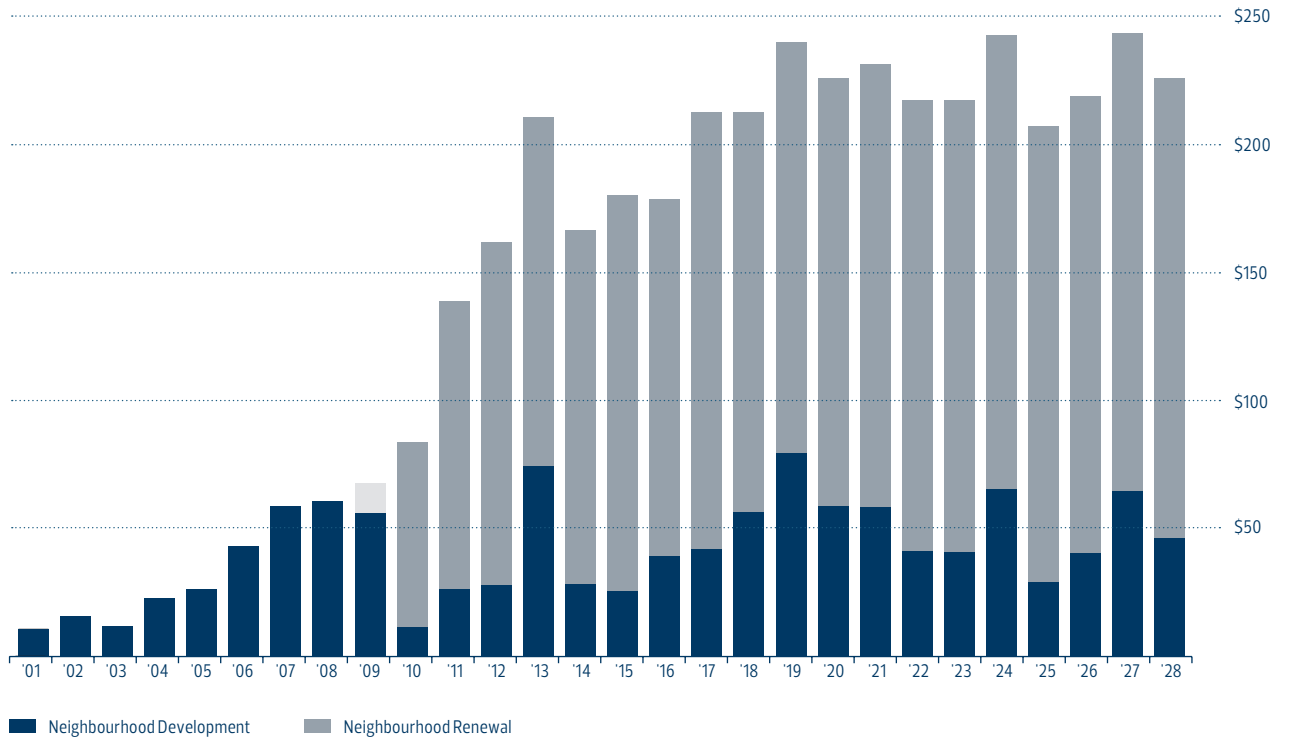
- Partial funding for MacEwan West Campus acquisition
- Central Station Streetscape Enhancements
- Capital Boulevard Streetscape Improvements

In addition to neighbourhood renewal, vibrant and complete neighbourhoods have been developed in Oxford and Schonsee, and work began in Laurel, Goodridge Corners and Rampart.

Capital Outlook

Great cities are built one great neighbourhood at a time. Edmonton is committed to building great neighbourhoods by investing in reconstructing neighbourhoods to enhance their livability and longevity. Work will continue on the next iteration of the Neighbourhood Revitalization Program, with \$58 million in planned projects, focusing on eight priority neighbourhood areas: Abbottsfield/Rundle Heights, Boyle Street, Sifton Park/Belmont, Lee Ridge/Richfield, Inglewood, Balwin/Belvedere, Lauderdale/Killarney and Sherwood. More information on Building Great Neighbourhoods is provided in Part 6: Transformational Projects.

Figure 16: Historical and Forecast Capital Spend, 2001 - 2028 (\$ millions)



SERVICE AREA 7: ECONOMIC DEVELOPMENT

Overview and Mandate

Business growth is the backbone of a sustainable community. As the City raises its profile on the national and international stage, it must ensure infrastructure is in place that will help grow its economy, enhance urban vitality, and allow it to compete for talent and business investment. Outlined in this area are some of the key initiatives the City focuses on to drive economic development, including revitalizing its downtown core, the Blatchford redevelopment (discussed further in Part 6), industrial land development and strategic land purchases. Downtown Edmonton is transforming into a vibrant, accessible, well-designed and sustainable heart of the City and region. With the highest residential and employment densities, an entertainment hub, numerous cultural and governmental institutions, the Downtown has become a primary destination for Edmontonians and other visitors. Implementation of the catalyst projects identified in The Capital City Downtown Plan and The Quarters Downtown Urban Design Plan is achieving the intended outcomes.

Quick Facts

- 1.8 million square feet of new office space completed or under construction in Downtown since 2015
- \$5 Billion in construction downtown since 2012 (planned, underway or completed)
- 748 new residential units have been built in the Capital City Downtown CRL boundary since 2015

Looking Back

The City has seen considerable change in its neighbourhoods, downtown, and economy. Edmonton's downtown is witnessing an unprecedented level of public and private investment, with \$5 billion in construction (underway or proposed) since 2015. City-led catalyst projects such as Rogers Place, the Armature (96 St) streetscape improvements, and Alex

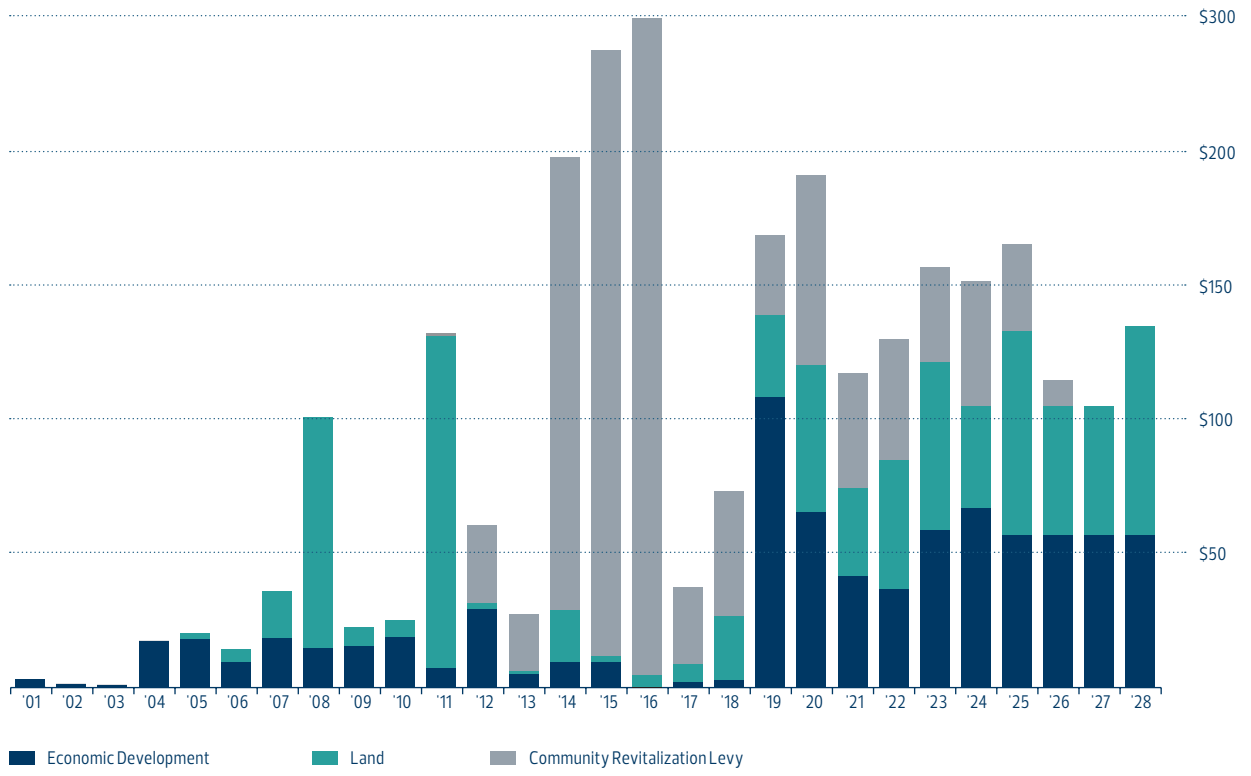
Decoteau Park are contributing to the transformation. Design work is underway for the Jasper Avenue New Vision and Kinistinaw Park and land is being assembled for a major new park in the Downtown Warehouse District.

Capital Outlook

The Capital Outlook considers the growth of the city and the strategies required to foster a strong, diverse economy, and build a vibrant, connected, welcoming and safe city. A goal of Council is to create a strong downtown characterized by high density, mixed-use, transit and pedestrian orientation, and excellent urban design. A strong downtown supports a sustainable urban form and integrated transit and land use. The Downtown Community Revitalization Levy and The Quarters Downtown Community Revitalization Levy provide dedicated funding for strategic investments in Edmonton's downtown with the goal of attracting continued investment and redevelopment. Subject to the financial capacity of the Community Revitalization Levies, the CIO will invest more than \$200 million over 10 years to create walkable and attractive streetscapes, new urban parks and open spaces, and resilient infrastructure. This will create a more attractive environment for private investment, and will ultimately lead to more people living, working, playing, and learning in Edmonton's downtown core.

The City's economic growth is not just limited to its downtown. There is an important need to drive industrial and commercial development to help secure economic resilience and diversity as well. The City projects future development of industrial and commercial land near key trade corridors, and is anticipating \$488 million of investment in Industrial Commercial Investment Land Acquisition & Development over the 10-year period. Over the same period the City will continue to identify strategic opportunities for land purchase to meet its own municipal use.

Figure 17: Historical and Forecast Capital Spend, 2001 - 2028 (\$ millions)



SERVICE AREA 8: WASTE SERVICES UTILITY

Overview and Mandate

The Waste Services Utility strives to achieve sustainable waste solutions with innovative systems that promote higher rates of landfill diversion and treat waste as a resource. The Utility builds and maintains unique infrastructure for its sustainable waste processing and collection divisions, such as composting and recyclable processing facilities, eco stations, waste collection bins and residential waste collection trucks. The City's integrated waste management system aligns with the City's goals of environmental preservation, financial sustainability and maintaining a healthy community.

Quick Facts

- 55,000 tonnes of non residential waste diverted from landfill
- 20 recycling depots
- 4 Eco Stations
- 21 sites and EWMC facilities
- 300 vehicles and mobile equipment
- 390,000 residential homes serviced annually

Looking Back

To attain higher diversion rates and to accommodate city growth, the Utility has allocated \$149 million in capital spending in the 2015 to 2018 budget cycle. This budget includes items such as the completion of the Northeast Eco Station, construction of the Anaerobic Digestion Facility, replacement of the Groundwater Diversion system, infrastructure and facility upgrades and acquiring vehicles and equipment to support waste collections and processing. To support the successful operation

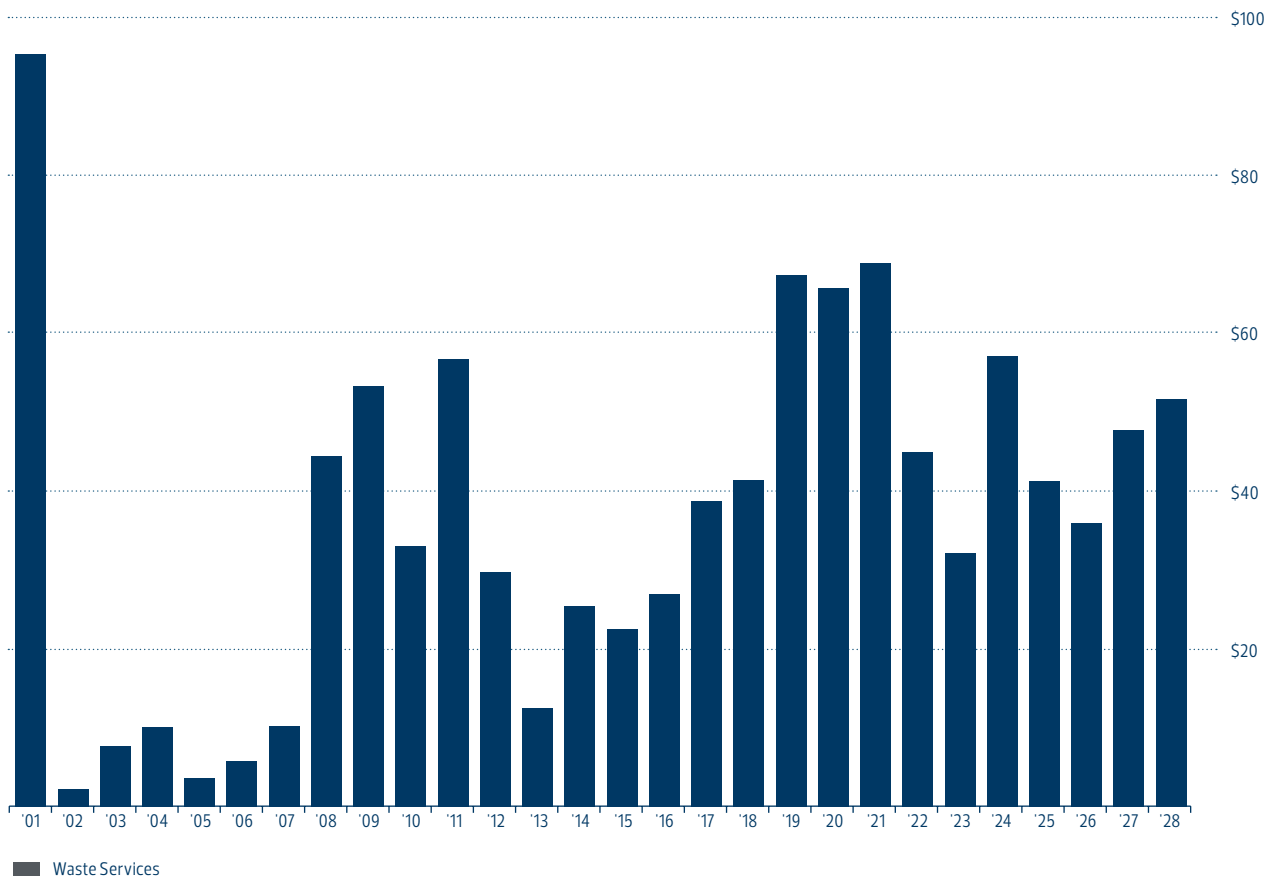
of the Waste to Biofuels and Chemicals Facility, the City of Edmonton is investing in new infrastructure for the Refuse Derived Fuel Dryer, which is currently under construction.

Overview of CIO Submissions

The CIO calls for both the renewal of and upgrades to existing infrastructure, and adding capacity through innovative and value-added solutions, all delivered under the City's new Project Development & Delivery Model. Council goals are supported through Waste Service's capital investments in three major areas:

- Collection Services delivers an efficient and reliable waste collection program, and provides convenient waste drop off locations for residents and small businesses, in an effort to maintain the City's cleanliness and achieve Council's goal of improving Edmonton's livability.
- Sustainable Waste Processing diverts waste from landfill by treating waste as a resource and aims to achieve Council's goal to preserve and sustain the environment. Investigations are underway to ensure waste processing facilities are optimally configured and are utilizing industry's best, proven technology.
- Innovative and value-added solutions to improve the delivery of the waste collection and processing programs.

Figure 18: Historical and Forecast Capital Spend, 2001 - 2028 (\$ millions)



SERVICE AREA 9: CORPORATE SUPPORT

Overview and Mandate

Building a great city takes foresight, planning, and the ability to run internal functions smoothly. In practice, much of the work that enables the city to operate with safe and reliable consistency happens behind the scenes. From operating yards, to fleet maintenance equipment and facilities, to security systems for information technology, the City is committed to increasing Edmonton's safety and resilience and ensuring the efficacy of municipal services. Day in and day out, this area helps the wheels of the City turn.

Fleet and Facility Services supports the City's vision and direction in working together to improve Edmonton's livability by maintaining city assets and providing maintenance and custodial services to transit buses and shelters, police stations, libraries, corporate vehicles, operational equipment, city-owned recreation centers and buildings. The safety, reliability, maintenance and cleanliness of these assets allow staff and citizens to truly enjoy Edmonton.

Information technology is a major investment for the City of Edmonton and an essential service. Protection of data and safeguarding digital assets is of paramount importance to the city, and IT security maintains a safe technology infrastructure to ensure all City employees can collaborate effectively. Investment in IT provides applications and technology that create a more connected, open city for staff, and builds new ways to share information with Edmontonians, enabling opportunities for dialogue and to make our services easier to access.

Quick Facts

- 900+ City-owned facilities
- 18,000+ supported devices
- 5000+ vehicles and equipment
- 1,100+ servers
- 300+ network and wireless sites
- 200+ km of fibre optic cable

Looking Back

Over the past four years, fleet services has focussed on enhancements that improve the quality of services it provides for operational areas across the city. Delivering on its commitment to provide value through safe, reliable and affordable transit service, fleet services, through its Mid-Life Refurbishment Strategy, was able to complete mechanical refurbishments on 64 transit buses, extending their useful life by six to eight years. Improvements to fleet maintenance shops included the addition of 14 new hoists to increase the operational capacity of mechanical services to better meet the increasing demands of a growing fleet.

The City of Edmonton is recognized as a leader in Open Data and is recognized as Canada's most open city for three consecutive years. To leverage the potential of open data the City has established the Analytic Centre of Excellence (ACE), which was built around four elements: building an analytics culture, delivering corporate data science projects, enabling the use of business intelligence and creating partnerships with citizens and local businesses. ACE works with individuals across the organization to enhance the Corporation's ability to access and use data to make information driven decisions. By leveraging the vast stores of City data and new analytic capabilities such as machine learning, natural language processing and data visualization, ACE supports informed policy development and decision making.

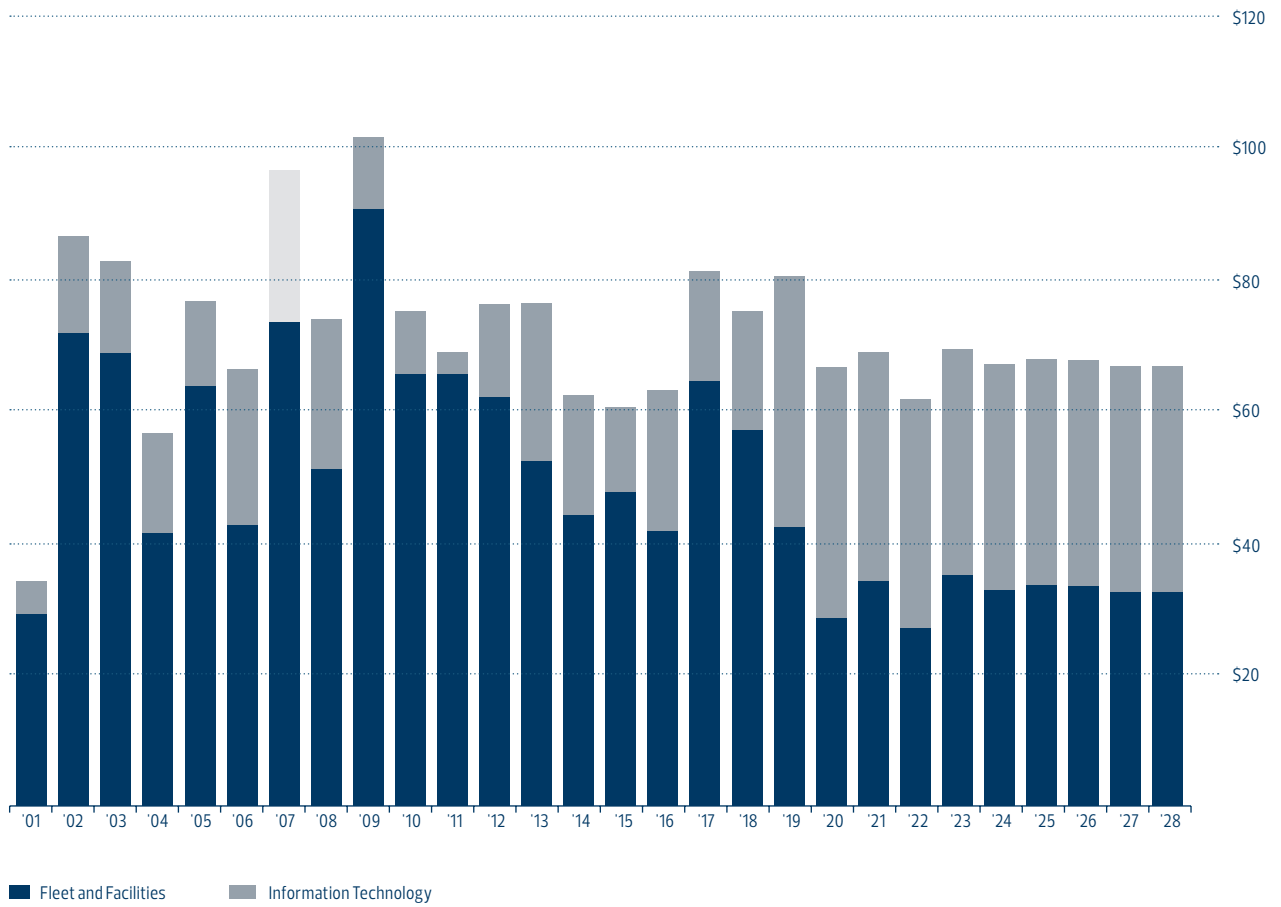
However, some of the most interesting and relevant work is done by our citizens. The City wants to grow Edmonton's analytics community and ensure that information is a key part of citizen conversations. Through the Open Access program free consistent and congruent broadband is more readily available across the city enabling Edmonton to be a connected, data-driven city. Enhancements are continually made to the Open Data portal in order to better reflect the needs and requirements of Edmonton's innovation ecosystem. Citizen engagement is critical to becoming an open city.

Capital Outlook

Investment in the Capital Outlook is mainly targeted for building renewal and fleet replacement. Fleet will require ongoing vehicle replacement while still meeting the goals of the Sustainable Fleet Management Action Plan. Other investments projected for supporting a growing and diversified fleet include shop equipment replacement and increased fuel storage capacity. Improvements to operating yard security measures are also considered, to better safeguard the City's assets.

Business Technology investments for 2019 - 2028 have been identified to achieve the vision where technology enables the availability, use and consumption of data to turn it into usable information. Investments will be made to drive innovation by introducing new functionalities and technologies as well as to refresh existing core infrastructure assets. These needs are being driven by both internal and external stakeholders who expect seamless digital experiences allowing them to consume and leverage data to inform decision-making and create new products.

Figure 19: Historical and Forecast Capital Spend, 2001 - 2028 (\$ millions)



PART 6: TRANSFORMATIONAL PROJECTS

In the life of a city there are projects that truly alter the landscape, sometimes literally. These can be projects that involve renewing an existing piece of infrastructure, that create a new asset, or, in some cases, re-purpose an asset into something unique and groundbreaking. Edmonton has never been afraid to embark on such transformational projects, and particularly with the alterations made in how the City secures funds for its capital investments (as discussed in **Part 4: Available Capital Funding And Debt Capacity**), the City has both the ability and the vision to make bold decisions where feasible. There are currently three projects underway in Edmonton that will substantially and positively impact how Edmontonians live, work and play.

BLATCHFORD

Blatchford is a new kind of urban community, created through the closure of the Municipal Airport. It will be a unique neighbourhood, designed from the ground up, literally, using the most advanced environmental and design knowledge. Work completed for the first stage of residential land in 2017 included installation of storm, sanitary and water servicing as well as piping for the district energy sharing system. With these utilities now installed, the project team can move forward with local road construction in Stage 1 and the installation of the shallow utilities, such as gas lines, electrical lines, as well as telephone and internet cables. Final landscaping of Stage 1 will also occur in 2018. The Blatchford Redevelopment Office is providing input to the NW LRT alignment review that is currently being led by the LRT Delivery Branch. Conceptual planning for Stage 2 West residential and the Town Centre has also been initiated. The outcome of the NW LRT alignment review will be an input to the final Town Centre concept plan.

As part of Blatchford's unique formation, the City is establishing the Blatchford Renewable Energy Utility, a new public, city-owned utility to achieve Blatchford's long-term goal of a carbon neutral community that uses 100% renewable energy. All buildings in Blatchford, unless built and certified to a net-zero energy standard, must be designed and constructed for heating, cooling and domestic hot water to be delivered via the District Energy Sharing System (DESS).

Energy is extracted from or shared by a number of sources. Shallow geothermal wells, sewer heat recovery, and energy sharing between heating dominant and cooling dominant buildings is the basis of the system. Buildings are connected to energy centres via a distributed ambient temperature water system. Heat pumps in the buildings then either extract or disperse energy for space heating, space cooling and heating domestic hot water. The development of each stage of the District Energy Sharing System goes hand-in-hand with the development of the Blatchford lands and construction of the buildings,

and as such, funding of the expansion of the District Energy Sharing System will need to coincide with the pace of development.

Over the course of the CIO it is anticipated that three to four DESS Stages will be designed, constructed and operated in sequence. The first stage, based on a geo-thermal energy system drilled under a future stormwater pond, has been designed and construction is anticipated to start in the first quarter of 2018. Subject to the pace of development, the second, third and fourth stages of the DESS, which will be based on sewer heat exchange and two geo-thermal energy systems, are anticipated to start construction in 2022, 2023 and 2028 respectively.

YELLOWHEAD TRAIL

The Yellowhead Trail has the highest volume of trucks within the City and services inter-City, inter-Regional, and inter-Provincial traffic. The City of Edmonton has a long history with various periodical upgrades to transition the Yellowhead Trail to a freeway. The Yellowhead Trail Strategic Plan (2011) and Goods Movement Strategy (2014) reaffirmed the need to improve the safety, operational capacity, and level of service of the corridor. To achieve this vision, the Yellowhead Trail freeway will consist of six core lanes with additional service and directional lanes in congested areas. The freeway will target an operating speed of 80 km/h (where possible) and will be free-flow. In some locations, off-corridor improvements will also be completed to ensure that traffic redistributed from previous direct connections to Yellowhead Trail will be able to travel to alternative connections more easily.

Council identified this project as the City's priority for consideration under the Federal Government's Building Canada Fund - National Infrastructure Component, recognizing the national significance of Yellowhead Trail as part of the Trans-Canada Highway. The project is fully funded, with a total of over \$1.0 billion being committed from all levels of government over 10 years. Planning, design, and public engagement will take place over the next several years, and construction is anticipated to be complete by the end of 2026.

LRT EXPANSION

In 2009, City Council approved the Light Rail Transit (LRT) Long term Network Plan that defined the future size, scale and operation of Edmonton's LRT system. It included the expansion of the Capital Line to the northeast and south, expansion of the Metro Line to St. Albert city limits, and completion of the Valley Line Southeast and West. The plan also identified the need for a supplemental east/west route south of the river that, once in place, would complete the network creating seamless transfer connections via LRT to all sectors of the city.



Currently, the Valley Line Southeast is fully funded (\$1.8B) and construction is underway. It is anticipated to be in service at the end of 2020. Preliminary design is underway to extend the Valley Line West project in anticipation of the procurement commencing in 2018 as the next priority for LRT Expansion. The Metro Line is another of the City's confirmed priorities for expansion. Design is underway on this segment of the network with the intent to extend into the Blatchford development in the short term. From this location, Council has directed that the corridor be advanced through the preliminary design phase to a construction procurement ready state, and have also requested an assessment of the potential for an express bus transit service, as a precursor to LRT. Work is also underway to prepare for expansion of the Capital Line south. The Centre LRT (circulator) which connects the Valley Line west and east of downtown is currently in the concept planning phase.

BUILDING GREAT NEIGHBOURHOODS

To ensure the quality of life of Edmontonians, the City must maintain and grow great neighbourhoods - the building blocks of a great city. Assets in neighbourhoods go beyond optimizing lifecycle to maximize returns in economic growth, social uplift, and community pride.

There are over 300 neighbourhoods in Edmonton. Through the Neighbourhood Renewal program, the City ensures the sustainability of the existing neighbourhood infrastructure by undertaking capital project enhancements in approximately 18 neighbourhoods per year. These investments focus on preserving the neighbourhood's street assets including sidewalks, signals, lighting, signs and boulevard trees. Additional enhancements to calm traffic patterns and improve the safety of communities will be undertaken at the same time through the Community Traffic Safety and Community Traffic Management programs.

From 2009 - 2018, approximately \$1.3 billion was invested in neighbourhood renewal and other enhancements. From 2019 - 2029, Administration will look to further build on these investments by integrating other capital investments in communities based on the schedule for the Neighbourhood Renewal program and the proposed Alley Renewal program. This will allow the City to maximize existing investments in renewal infrastructure with growth elements such as active transportation connections such as sidewalks, shared use paths and bike infrastructure. These investments will ensure neighbourhoods provide Edmontonians with opportunities to walk, roll and cycle regardless of age, ability or socioeconomic status. Public realm enhancements, including landscaping, lighting, signs, bollards, benches and other aesthetic upgrades will create new hubs of activity within a community and spark economic development. Additional investments in facility or open space infrastructure, may also be made depending on identified community need through the public engagement process.

PART 7: BUILDING THE 2019 – 2022 CAPITAL BUDGET

CAPITAL PLANNING PRINCIPLES

Knowing that the 10-year CIO has been developed by Administration to assist Council in making strategic decisions on how best to allocate city resources, the CIO helps inform the decisions our civic leaders make today by assisting them in understanding how those decisions may impact the future.

The 10-year CIO was prepared prior to the development of the four-year Capital Budget (2019–2022), which will be considered by Council in October 2018. While the four-year Capital Budget outlines the City's immediate capital funding needs and priorities, the 10-year CIO looks past the four-year capital budget cycle to identify the key infrastructure and financial challenges the City faces beyond 2022. Similar to the 10-year CIO, the four-year Capital Budget, supports the strategic direction of Council and will be developed around the following key principles:

- Prioritize projects to achieve the best results for the city overall,
- Use cash (PAYG and grant funding) for ongoing projects (e.g. maintenance and renewal),
- Use borrowing for new significant projects that are eligible according to the Debt Management Fiscal Policy (DMFP),
- Borrowing capacity is a consideration
- When debt is proposed, the funding source for the debt servicing is identified
- Fund utilities through utility rates,
- Align capital projects to the City's 30-year vision, 10-year strategic goals and corporate outcomes approved by Council,
- Optimize investment in existing municipal infrastructure to ensure all assets are in a condition that allows them to meet intended service levels,
- Allocate resources to achieve an appropriate balance between the renewal of existing infrastructure and the demand for new infrastructure growth, and
- Identify and account for all future operating, maintenance, and renewal costs associated with capital projects, and include those costs in future budgets as appropriate.

PRIORITIZATION

The 10-year CIO was developed through a collaborative process with all City departments, the Edmonton Public Library and the Edmonton Police Service. This process began with all the areas identifying what growth projects they anticipate as possible needs over the 10 years. The identification of these needs are typically generated from master plans, anticipated growth of the city, and previous Council or Committee direction. The projects identified as part of the CIO have not gone through a formal prioritization review process and therefore result in more projects being identified than there is funding available over the next 10 years. Many of these projects are also at the early stages of development. As such, funding calculations are based on high level project estimates.

To develop the four year capital budget, Administration will assess all the growth projects identified in the 10 year plan and use prioritization criteria to evaluate and produce an initial ranking of the projects. The criteria uses a value management approach that is consistent to what was used in the development of the 2015–2018 Capital Budget with a few enhancements. In response to feedback received in the previous budget cycle, specific criteria will be used that align with each of the Council goals identified in figure 3.3 above. Rather than having only one criteria evaluating how each project aligns to all of the strategic goals, there is now one criteria for each goal.

The specific prioritization criteria that will be used to evaluate each of the projects is as follows:

- | | |
|--------------------------------|---|
| · Healthy City, | · Corporate operational risk, including safety, |
| · Urban Shift, | · Operational savings, |
| · Regional Economic Resilience | · Demand and impact of the service, and |
| · Energy and Climate. | · The impact the project has on a service. |
| · Mandate, | |

PROJECT DEVELOPMENT AND DELIVERY MODEL

The Capital Governance Policy C591, which was approved by City Council at its April 25, 2017, meeting, requires all capital projects (infrastructure, fleet and equipment, information technology and land) to follow the Project Development and Delivery Model (PDDM). The PDDM is a phased approach that includes formal checkpoint reviews as projects progress through the strategy, concept, design, build and operate value chain.

The intent of the PDDM is to ensure that an appropriate level of development has been completed on projects prior to them transitioning to the delivery phase. This will allow Council and Business Partners to make more informed decisions by providing more accurate information at defined points in the development of a capital project leading to clearer project outcomes, effective utilization of capital spending as well as enhanced transparency and communication regarding the project delivery process.

As the PDDM will be fully implemented in the 2019 – 2022 capital budget, the four-year capital budget documents will look substantively different than what Council has previously considered. For infrastructure projects, Council will authorize a growth composite program specifically designated for project development including funding for the planning and initial design work by asset type. In the case of renewal, composite profiles will be set up for all phases of project delivery (planning, design and construction), separated by asset type, and further categorized related to the type of work that is being delivered (for example, Arterial Renewal, Neighbourhood Renewal, Facilities Renewal, or Bridges and Structures Rehabilitation). In the case of both growth and renewal projects, Administration will bring the projects forward for Council's consideration following the completion of planning and initial design work. This will allow Administration to conduct robust evaluations of alternatives and scope (with input from key stakeholders through application of public engagement best practices) increasing the ability for the City to regularly deliver on budget and schedule. Once infrastructure projects have gone through the appropriate level of planning and design in accordance with the PDDM, Council will receive an update and will have the capacity at that point to approve additional funding for the projects to continue through detailed design and construction as prescribed by the PDDM and capital budget processes. Council will still have the opportunity to evaluate the projects that Administration is recommending be included in the composite program.

As Administration will implement the PDDM through the 2019 – 2022 capital budget process, it is anticipated that Council will see projects at “checkpoint 3” throughout the four year budget cycle as part of Supplemental Capital Budget Adjustments. In the process of implementing the PDDM, Administration will also bring forward amendments to a number of profiles that predate this policy—which means they were not subject to as stringent a process to define scope, schedule and budget. Updating the cash flow, refining the scope of work, and revising the completion date for these profiles will allow Administration to consistently deliver on projects and to usefully measure its performance.

FRAMEWORK FOR THE 2019 – 2022 CAPITAL BUDGET

As a result of significant changes to the administration and management of capital projects the four-year capital budget will look significantly different from previous budgets. The capital budget information presented to Council in the fall of 2018 will contain fewer profiles and these profiles will be aligned to stages in the the PDDM.

As outlined in the PDDM, once projects progress through the develop phase and reach a point where delivery or construction would begin there is a check in with Council, unless there is an exemption to the Capital Governance Policy C591. The future supplemental capital budget adjustment reports would be used for these check ins and would allow Council to decide if Administration should proceed with the project. Depending on the value of the project this would also be the opportunity for a stand alone profile to be created so all specific costs for a project could be recorded.

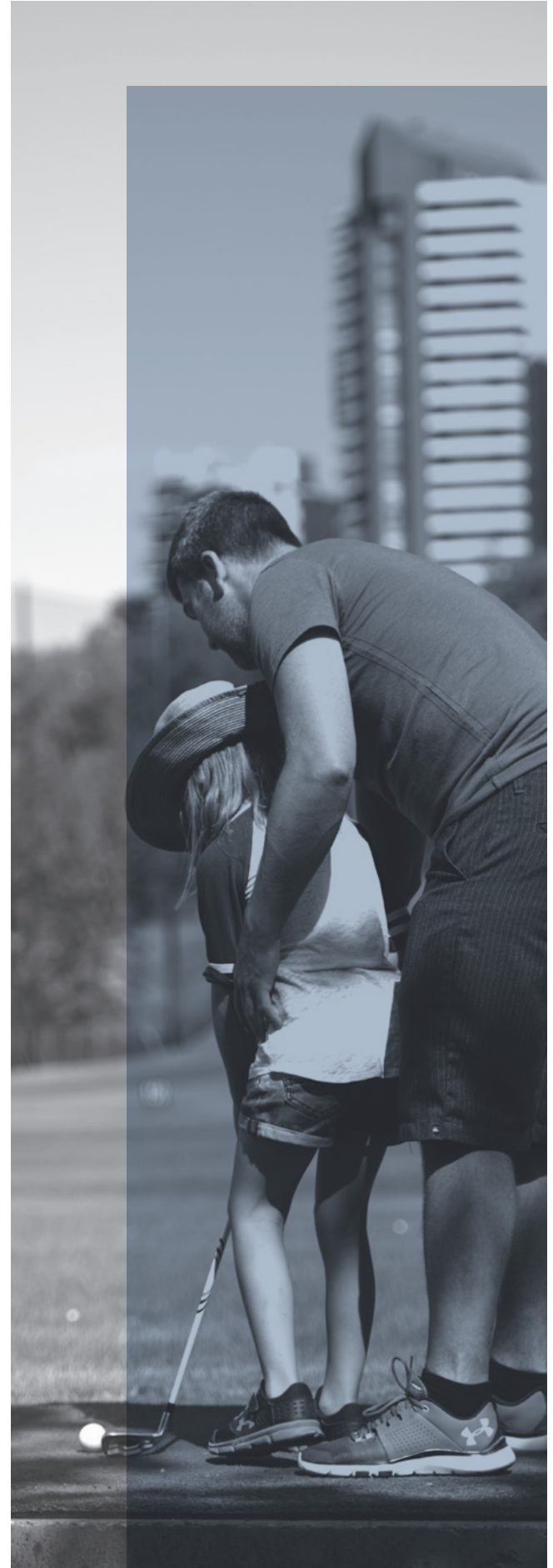
Appendix B and C has additional information on the asset portfolios that will be used to create the composite profiles as well as a sampling of the current projects that are being considered for each of the profiles. As noted above, the projects listed do not reflect the outcomes of the corporate prioritization process. As such, there may be more projects listed than there is available funding at this point.

PART 8: CONCLUSION

This 10-year CIO has been created to provide a road map towards understanding how the City of Edmonton manages and pays for its capital assets. Edmonton, like many modern cities, is becoming more complex to manage every day. Emerging technologies make our lives easier in some ways, but more complicated in others. Alberta, and Edmonton in particular, remain among the fastest growing spots in the country. Our city is a destination for people from all over the world. This is true despite the fact that we also happen to live in a climate that is not conducive to infrastructure growth and maintenance. And then we can factor in the reality that our dominant provincial industry remains oil and gas, which is and likely always will be prone to volatility. Edmonton has the advantages of being the seat of government that also has large educational and health sectors, but the city is still subject to the ups and downs of the provincial economy.

Simply put, Edmonton is not an easy place to build assets and keep them in optimal shape. Yet despite these factors, the City has created a process and framework to logically and efficiently oversee its capital investments. That process is encapsulated in this document. Through strong planning principles that seek to balance renewal and growth, through a transparent process of asset management, and through an open-minded yet rigorous approach to funding and debt, the City has created a community in which infrastructure and the services that populate it create a vibrant setting for Edmontonians to live, work and play.

We are fortunate to have Edmonton as our home, which means the City is well-advised to properly care for its condition and growth. The 10-year CIO is a significant part of that holistic process.



APPENDIX A: ASSET CLASSES FOR FUTURE CAPITAL BUDGETS

The City has aligned itself in a way that focuses on the assets required to deliver on the array of services discussed in the previous section. Council can expect that future budget submissions, beginning with the 2019-2022 Capital Budget will align with this new formation based on asset type.

ASSET: FACILITIES

To ensure successful delivery of the vast array of programs and services which are of the greatest value to Edmontonians, the City must maintain and grow an extremely diverse portfolio of buildings and other facility type infrastructures, from world-class recreation centres used by thousands of citizens everyday to a small-scale washroom facility in the River Valley. Sustaining existing facilities and developing new modern sustainable facilities improve Edmonton's livability as well-maintained assets ensure that all citizens have access to the services that they need and contribute to their quality of life.

The City owns and maintains a large variety of facilities divided in three main categories:

Safety and Security Facilities

Safety and Security facilities include Fire and Police Stations, as well as various buildings supporting emergency response and emergency management, such as Ambulance Stations and control centres.

These critical facilities are strategically located throughout the City to support the operations of Edmonton Fire Rescue Services and the Edmonton Police Service, providing emergency, educational and community services. The stations serve as operational bases for the delivery of emergency services to the community, but also allow citizens to interact with their fire and police force, both to receive routine support, as well as in times of crisis.

Service Delivery Facilities

Service Delivery facilities include publicly accessible facilities that support the delivery of City services and programs to Citizens. Facilities include, but are not limited to, community and recreation facilities, libraries, transit centres, eco stations and cultural and art hubs.

These facilities offer ways for Edmontonians to connect with their communities, volunteer and engage in health and wellness, sports, recreational, cultural and community activities. Many partner organizations support the City by offering programs within these facilities.

They also allow residents, workers and visitors to efficiently access services in a safe, accessible and comfortable environment, such as the

City's transit systems, recycling and waste disposal services, and large convention and exposition facilities.

Service Support Facilities

In order to provide efficient and effective services to Citizens and visitors, the City requires a wide range of support facilities with limited public interface, such as fleet garages and fueling stations, office buildings, training centres, operation and maintenance yards, storage facilities and waste collection and processing facilities.

Partner Facilities

Many partner organizations support the City's mandate and objectives by offering key programs and services to the Citizens and visitors within City facilities, or by operating and maintaining their own facilities. Such Partner facilities include Telus World of Science, Winspear, Citadel, many community and non-profit organizations, as well as sport groups and clubs.

Potential Projects

Administration has identified projects totalling approximately \$1.6B dollars in growth facilities from 2019 - 2028. Potential project priorities over the next 10 years are identified in Appendix B.

Administration has also identified investment of approximately \$905M in facility renewal between 2019 and 2028. Potential project priorities over the next 10 years are identified in Appendix B.

ASSET: TRANSPORTATION

The City maintains and develops a wide array of transportation infrastructure from roads, sidewalks, and bicycle infrastructure to bus and Light Rail Transit (LRT) in order to move people, goods and services effectively. Creating new provisions and maintaining the existing infrastructure improves the City's urban form, impacts its economic well being and improves Edmonton's livability as transportation assets ensure that all citizens can easily move and connect to the City in which they live, work and play.

The City owns and maintains a large variety of transportation assets, including but not limited to:

Public Transit

Public transit includes transit infrastructure that allows Edmontonians to connect to the public modes of transportation that they use. It includes park and rides, which provide Edmontonians a convenient parking location in order to access the transit system at LRT stations or at transit centers. There are over 5,000 park and ride parking spaces system wide. Public transit also includes the existing two LRT lines in operation today;

the Capital line from Clareview to Century Park and the Metro line from Health Sciences to NAIT. LRT serves over 110,000 riders on a daily basis. Future LRT lines will connect to Mill Woods Town Centre, Lewis Farms, Campbell Road near St Albert, and Heritage Valley. The Center LRT line will connect the west end of Downtown with the University of Alberta and Bonnie Doon.

Goods Movement

Goods movement includes the medium to high volume roadways that are used to efficiently and effectively transport goods and people across the City. They include arterial roadways, which are medium to high volume roadways that are typically 4 to 6 lanes wide that are generally used for travelling longer distances across the City at travel speeds of 50 to 60 km/hr. They also accommodate pedestrians with sidewalks and Shared Use Pathways (SUPs) and sometimes also have bicycle facilities within them. Transit bus routes often run on arterial roadways.

Infrastructure in this category would also include highway penetrators, Henday connectors and freeways. Highway penetrators are higher speed, higher capacity roadways that connect at city limits, joining the provincial highway system. Examples of highway penetrators connectors are Yellowhead Trail, Whitemud Drive, and 97 Street. Henday connectors are city streets which connect to interchanges along Anthony Henday Drive. Freeways are higher speed free-flow facilities that accommodate higher volumes of traffic; access to freeways occurs at interchanges with arterial roads. An example is Whitemud Drive.

Active Modes

Active modes facilities include pedestrian and cyclist accommodations along roads that transport vehicles and goods, as well as enhancements to these roads and dedicated facilities that improve the City's overall connectivity.

Enhancements may include streetscape elements such as benches, landscaping and street trees, enhanced streetlight poles, and street name blades, along with wider sidewalks, bike lanes, and shared use paths. Streetscape work is usually completed at the same time as the adjacent road infrastructure is being reconstructed or rehabilitated to maximize the effectiveness of the streetscape investment.

Dedicated facilities can include pedestrian connections and bicycle connections, so that people and cyclists can get to their destination safely and efficiently. These may include bike lanes and off-street shared use paths. Providing this infrastructure also improves accessibility to public transit and helps shift people away from the automobile mode.



Bridges and Auxiliary Structures

The City has many river valley, pedestrian, and roadway bridges. Other structures include overhead signs, retaining walls and noise walls that fall with the road right of way and in the public realm for use by Edmontonians. These important elements of the transportation system are carefully inspected, monitored and maintained.

Neighbourhoods

More than allowing Edmontonians to drive, walk and bike wherever they need to go, neighbourhood infrastructure plays a vital role in defining the unique character of each community. This importance is demonstrated through dedicated infrastructure programs, including the Neighbourhood Renewal program, which focuses on preserving the neighbourhood's street assets including roads, sidewalks, signals, lighting, signs and boulevard trees; as well as the proposed Alley Renewal program, which proposes preserving alleys so local traffic and service vehicles have the neighbourhood access that they need. Additional investments are also made through the Community Traffic Safety and Community Traffic Management programs which look at ways to enhance traffic calming and traffic safety. Infrastructure in this category also includes industrial streets.

Traffic Systems

Traffic systems ensure that transportation infrastructure is safe for everyone to use and includes street lighting, traffic signals and the Intelligent Transportation System (ITS), which uses technology to monitor and help inform the operations of the transportation network.

Potential Projects

Administration has identified projects totalling approximately \$8.7B dollars in transportation related projects from 2019 to 2028. Potential project priorities over the next 10 years are identified in Appendix B.

Administration has also identified investment of approximately \$1.1B in transportation renewal between 2019 and 2028. Potential project priorities over the next 10 years are identified in Appendix B.

ASSET: OPEN SPACES

Open spaces are used by citizens for recreation, for commuting, and to experience nature. Open spaces are found across the city including various levels of parks, neighbourhood, district, and river valley; and natural areas such as forests, grasslands, wetlands, and ravine and river valley areas. The development of these open spaces promotes Edmonton as a vibrant and attractive city in which to live.

The city has many Open Space areas that provide a variety of functions to citizens and include:

River Valley Systems

The ravine and river valley areas offer a unique opportunity to Edmontonians to enjoy nature through a variety of activities. The river valley provides access and opportunities to enjoy the valley through trails, staircases, access to the river and pedestrian bridge connections.

Parks

There are various levels of parks, including neighbourhood, district and river valley. Each park can have various functions and programming which are supported by various pieces of infrastructure including: parking lots, roads, utilities, sports fields and various amenities.

Open Spaces

Infrastructure in this category is not typically identified as park and includes the spaces adjacent to stormwater management facilities and roadways, as well as the City owned and operated cemeteries and golf courses.

Environmental

Open spaces within Edmonton, and in particular in the river valley, experience natural events which cause erosion and slope stability issues. City infrastructure impacted by these natural events requires restoration or reconstruction.

Soft Landscaping

This category considers those assets that are living such as trees, shrubs, other plants and flower beds. As citizens walk through parks and other green spaces or drive down a street, citizens are able to enjoy landscape and trees lining roadways.

Partner

The development of park amenities including playgrounds, spray decks, and trails are initiated by local community groups. Partner projects include projects developed through the Neighbourhood Park Development Program.

Potential Projects

Administration has identified projects totalling approximately \$480.4M dollars in open space related projects from 2019 - 2028. Potential project priorities over the next 10 years are identified in Appendix B.

Administration has also identified investment of approximately \$560M in open space renewal between 2019 and 2028. Potential project priorities are identified in Appendix B.

APPENDIX B: POTENTIAL CAPITAL PROJECTS

Note: This list is for conceptual purposes only. The projects identified in this appendix have not gone through a formal prioritization review process and therefore result in more projects being identified than there is funding available over the next ten years. Many of these projects are also at the early stages of development. The schedule is a high level estimate based on early project definition and subject to funding availability.

	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
FACILITIES – GROWTH				
Safety and Security				
Big Lake Fire Station			●	●
Charlesworth Fire Station	●	●		
Cumberland Fire Station	●	●		●
Edmonton Police Services Firearms Facility	●	●		●
Edmonton Police Services 7th Division Station			●	●
Edmonton Police Services Canine Facility – North West Campus	●		●	●
Fire Station Gear Rooms	●	●	●	●
Replace Police Seized Vehicle Storage Lot	●			●
Wedgewood Fire Station	●		●	●
Service Delivery				
Abbotsfield Library Branch Relocation			●	●
Bonnie Doon Twin Arena	●		●	●
Churchill LRT Station Upgrade	●	●		●
Coliseum LRT Station Upgrade			●	●
Commonwealth Stadium Master Plan Implementation	●	●	●	●
Community Hubs	●		●	●
Coronation Recreation Centre	●	●		●
Ellerslie Library			●	●
Grand Trunk Arena Twinning and Renewal			●	●
Kihciy Askiy Sacred Earth – Phase 2			●	●
Lewis Farms Recreation Centre and Park	●	●		●
Northwest Eco Station (replacement for Coronation)	●	●		
Pool Chlorine Systems and Occupational Health and Safety (OHS) Infrastructure Improvements	●	●		
Riverbend Library Relocation (Location Under Review)	●	●		●
Riverside Golf Course Pavilion and Clubhouse	●	●		●
South East Eco Station			●	●
Stadium LRT Station Upgrade	●	●		●
Terwillegar Heights Artificial Turf	●	●		●
Woodcroft Library Expansion and Renewal	●	●		●

APPENDIX B: POTENTIAL CAPITAL PROJECTS

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	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
Service Support				
Ambleside Integrated City Operations Site	●	●	●	●
Callingwood District Park - City Operations Yard	●	●		
Ferrier Garage Bus Storage Replacement	●	●		●
Integrated City Operations Response Center (Location Unknown)	●	●		
New Transit Bus Garage (Location Unknown)	●	●		●
Operational Yards Occupational Health and Safety (OHS)/Security Improvements	●	●	●	●
Solar Photovoltaic (PV) Installation	●	●	●	●
Upgrades to Garages for Electric Bus	●		●	●
Partner				
African Multicultural Community Centre	●	●		●
Edmonton Soccer Association South Soccer Centre Expansion	●	●		
John Fry Park Tennis Center	●	●		●
Strathcona 55+ Seniors Centre	●	●		●

TRANSPORTATION – GROWTH

Public Transit

LRT				
LRT Land Acquisition				
LRT Track & Right of Way (ROW) Growth	●	●	●	●
Metro Line				
NAIT to Blatchford		●		●
Valley Line				
Downtown to Lewis Farms	●	●		●
Transit Centres, Park and Ride Projects				
Ellerslie East Transit Centre and Park & Ride	●	●		
Windermere North Transit Centre and Park & Ride	●	●		

APPENDIX B: POTENTIAL CAPITAL PROJECTS

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	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
Goods Movement				
Arterial				
107 Avenue/142 Street Traffic Circle Conversion	●	●		
118 Avenue/101 Street Traffic Circle Realignment	●	●		
167 Avenue (76 Street to 52A Street) 4 Lane Widening	●	●		
17 Street (76 Avenue to Sherwood Park Freeway) 4 Lane Widening	●	●		
184 Street (107 Avenue to 116 Avenue) 4 Lane Widening	●	●		
215 Street (Stony Plain Rd to Yellowhead Trail) 4 Lane Widening	●	●		
215 Street (Whitemud Drive to Stony Plain Road) 4 Lane Widening	●	●		
50 Street (153 Avenue to 167 Avenue) 4 Lane Widening	●	●		
50 Street (Sherwood Park Freeway to 90 Avenue) 6 Lane Widening	●	●		
66 Street (158 Avenue to 167 Avenue) 4 Lane Widening	●	●		
Ellerslie Road (115 Street to 127 Street) 4 Lane Widening	●	●		
Parsons Road (19 Avenue NW to Ellerslie Road SW) 4 Lane Widening	●	●		
17 Street (34 Avenue to Tamarack Gate) 4 Lane Widening	●		●	●
17 Street (Silverberry Road to 34 Avenue) 4 Lane Widening	●		●	●
17 Street (Whitemud Drive to Roper Road) 4 Lane Widening	●		●	●
17 Street (23 Avenue to Silverberry Road) 4 Lane Widening	●		●	●
153 Avenue (Fort Road to (Transportation Utility Corridor) 4 Lane Widening	●		●	●
170 Street (Yellowhead Trail to 137 Avenue) 6 Lane Widening			●	●
199 Street (62 Avenue to 69 Avenue) 4 Lane Widening			●	●
199 Street (Hemingway Road to 62 Avenue) 4 Lane Widening			●	●
199 Street (Hammond Gate to Hemingway Road) 4 Lane Widening			●	●
199 Street (Lessard Road to Hammond Gate) 4 Lane Widening			●	●
149 Street (131 Avenue to 137 Avenue) 4 Lane Widening			●	●
23 Avenue (24 Street to 34 Street) 4 Lane Widening	●		●	●
23 Avenue (17 Street to 24 Street) 4 Lane Widening	●			
107 Avenue (109 Street to Groat Road) Improvements			●	●
127 Street (Transportation Utility Corridor) to North City Limit) 2 Lanes			●	●
17 Street North East (CNR to Aurum Road) – 2 Lanes			●	●
215 Street (Lessard Road to 45 Avenue) 2 Lanes Urbanization			●	●

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	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
215 Street (45 Avenue to 62 Avenue) 2 Lanes Urbanization			●	●
215 Street (62 Avenue to Glastonbury Boulevard) 2 to 4 Lane Widening			●	●
215 Street (Glastonbury Boulevard to Whitemud Drive) 2 to 4 Lane Widening			●	●
215 Street (Stony Plain Road to Yellowhead Trail) 4 Lane Widening			●	●
215 Street (Hawksridge Boulevard North to 137 Avenue) 2 Lanes			●	●
215 Street (137 Avenue to LeClaire Way) 2 Lanes – Within City of St. Albert			●	●
23 Ave (Rabbit Hill Road to Terwillegar Drive) Eastbound Upgrading	●	●		
231 Street (Whitemud Drive to Stony Plain Road)			●	●
34 Street (Whitemud Drive to Roper Road) 4 Lane Widening	●		●	●
34 Street (TUC to 23 Avenue) 4 Lane Widening			●	●
34 Street (76 Avenue to Sherwood Park Freeway) 4 Lane Widening and Urbanization	●		●	●
34 Street (CNR To Sherwood Park Freeway) 5 Lane Widening			●	●
34 Street (Whitemud Drive to Roper Road) 4 Lane Widening			●	●
34 Avenue (111 Street to 119 Street) 4 Lane Widening			●	●
41 Avenue SW (QEII to James Mowatt trail) 4 Lane Widening	●		●	●
50 Street (22 Avenue Southwest to 41 Avenue Southwest) 4 Lane Widening	●		●	●
50 Street (Roper Road to Sherwood Park Freeway) 6 Lane Widening	●		●	●
50 Street (Whitemud Drive to Roper Road) 6 Lane Widening	●		●	●
50 Street Shared Use Paths: Whitemud to 90 avenue			●	●
50 Street (90 Avenue to 101 Avenue) 6 Lane Widening			●	●
50 Street (Sherwood Park Freeway to 90 Avenue) 6 Lane Widening			●	●
50 Street (40 Avenue to Whitemud Drive) 6 Lane Widening			●	●
50 Street (34 Avenue to 40 Avenue) 6 Lane Widening			●	●
50 Street (23 Avenue to 34 Avenue) 6 Lane Widening			●	●
50 Street (19 Avenue to 23 Avenue) 6 Lane Widening			●	●
50 Street (TUC to 19 Avenue) 6 Lane Widening			●	●
50 Street (Ellerslie Road SW to TUC) 6 Lane Widening			●	●
50 Street (Ellerslie Road SW to TUC) 6 Lane Widening			●	●
50 Street (153 Avenue to 167 Avenue) 4 Lane Widening	●	●		

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	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
50 Street (Yellowhead Trail to 137 Avenue) 6 Lane Widening			●	●
62 Avenue (Glastonbury Boulevard to 215 Street) 4 Lane Widening			●	●
66 Street (Anthony Henday Drive to 23 Avenue) 4 Lane Widening	●		●	●
66 Street (Ellerslie Road to Anthony Henday Drive) 4 Lane Widening	●		●	●
75 Street (98 Avenue to 106 Avenue) Improvements	●		●	●
75 Street (101 Avenue to 121 Avenue) 6 Lane Widening	●		●	●
75 Street (Argyll Road to 101 Avenue) 6 Lane Widening	●		●	●
91 Street (23 Avenue – Whitemud Drive) 6 Lane Widening			●	●
91 Street (AHD to 23 Avenue) 6 Lane Widening			●	●
91 Street SW (AHD to Ellerslie Road SW) 6 Lane Widening			●	●
91 Street SW (Ellerslie Road SW to Parsons Road SW) 6 Lane Widening			●	●
97 Street (176 Avenue to Anthony Henday Drive) 6 Lane Widening			●	●
98 Avenue (85 Street) Traffic Circle Replacement			●	●
Arterial Growth Fully – Arterial Road Assessment (ARA) Recoverable	●		●	●
Arterial Growth Non ARA Recoverable	●		●	●
Arterial Growth Part ARA Recoverable	●		●	●
Callingwood Road (172 Street to 184 Street) 4 Lane Widening			●	●
Ellerslie Road (QEII to 111 Street) 4 to 6 Lane Widening			●	●
Ellerslie Road (62 Street to 66 Street) 4 to 6 Lane Widening			●	●
Ellerslie Road (66 Street to Parsons Road) 4 to 6 Lane Widening			●	●
Ellerslie Road (Parsons Road to QEII) 4 to 6 Lane Widening			●	●
Guardian Road (Grantham Drive to 69 Avenue) 4 Lane Widening			●	●
James Mowatt Trail (25 Avenue SW to 41 Avenue SW) 4 Lane Widening			●	●
Lessard Road (TUC To 199 Street) 6 Lane Widening			●	●
Lewis Estates Boulevard (Potter Greens Drive to Suder Greens Drive) 4 Lane Widening			●	●
Manning Drive (137 Avenue – Transportation Utility Corridor) 6 Lane Widening			●	●
Parsons Road (91 Street to Ellerslie Road) 5 Lane Widening	●		●	●
Rabbit Hill Road (TUC To Ellerslie Road) 6 Lane Widening			●	●
Strategic Land Purchase	●	●	●	●

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	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
Strategic Land Purchase	●	●	●	●
St. Albert Trail (137 Avenue to TUC) Widening and Upgrading			●	●
Transportation Infrastructure Land Acquisition	●	●	●	●
Victoria Trail (153-167 Avenue) 2 Lanes			●	●
Webber Greens Drive (East of Suder Greens Drive to 215 Street) 4 Lane Widening			●	●
Interchanges and Freeways				
Terwillegar Drive / 40 Avenue Interchange	●	●		
Whitemud Drive (Lewis Estates Boulevard to 215 Street) 4 Lane Widening	●	●		
Whitemud Drive / Terwillegar Drive Interchange – Stage 2 Improvements	●		●	●
Yellowhead Trail Freeway Conversion Program (156 Street – North Saskatchewan River)	●	●	●	●
170 Street / Windermere Drive Interchange			●	●
170 Street / Anderson Way Interchange			●	●
170 Street / Ellerslie Road Interchange			●	●
Yellowhead Trail / 215 Street Interchange Upgrades	●		●	●
Whitemud Drive / 215 Street Interchange			●	●
Whitemud Drive / 207 Street (Lewis Estates) Interchange			●	●
Terwillegar Drive / Rabbit Hill Road Interchange			●	●
Terwillegar Drive / 23 Avenue Interchange			●	●
Terwillegar Drive / Haddow Drive Flyover			●	●
Queen Elizabeth 2 / Ellerslie Road Interchange Improvements	●		●	●
Highway 15 (Manning Drive) Meridian Street Interchange	●		●	●
Anthony Henday Drive / 135 Street (Heritage Valley Trail) Interchange	●		●	●
Anthony Henday Drive / Terwillegar Drive Interchange Upgrades			●	●
Stony Plain Road / 215 Street Interchange Improvements			●	●
Whitemud Drive Land Acquisition	●	●		●
Whitemud Drive 170 to 178 Street 6 Lane Widening	●		●	●
Whitemud Drive 215 to 231 Street 4 Lane Widening			●	●
Whitemud Drive Anthony Henday Drive to Lewis Estates Boulevard 6 Lane Widening			●	●

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	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
Terwillegar Drive Intersection Improvements			●	●
Terwillegar Drive (40 Avenue to Whitemud Drive) 6 Lane Widening			●	●
Terwillegar Drive (Rabbit Hill Road to 40 Avenue) 6 Lane Widening			●	●
NERC Land Acquisition	●	●	●	●
170 Street Future Freeway Land			●	●
Highway 15 / 18 Street (Edmonton Energy And Technology Park - Horse Hill) Flyover			●	●
Freeway Improvements			●	●
137 Avenue / Northwest Anthony Henday Drive Ramps	●	●		
Bridge Replacement and Widening				
50 Street / Sherwood Park Freeway Bridge Replacement & Widening	●	●		
Whitemud Drive Rainbow Valley Bridges Widening	●		●	●
Duggan Bridge Replacement	●			●
Railway Crossings				
50 Street CPR Underpass	●	●		●
170 Street CNR Overpass			●	●
215 Street CNR Overpass			●	●
75 Street CPR Underpass and widening (Wagner to Argyll)	●		●	●
Regulated Safety Upgrades at Railway Crossings	●	●	●	●
Active Modes				
Bike				
111 Street Shared Use Path: 56 Avenue to 61 Avenue	●	●		
119 Street Shared Use Path: 34 Avenue to Whitemud Drive	●	●		
Bike Traffic Signal Improvements for Existing Routes	●	●	●	●
High Level Bridge Shared Use Path Connections at Saskatchewan Drive, 109 Street, and 110 Street	●			●
River Valley and Ravine Trail Lighting	●	●	●	●
Saskatchewan Drive: 99 Street to 109 Street (widening Shared Use Path)	●	●		
Shared Use Path connections to Valley Line Southeast LRT	●	●	●	●

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	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
Shared Use Path connections to Valley Line West LRT			●	●
Stony Plain Road/142 Street/102 Avenue (east boundary of LRT station at 142 Street to 136 Street)	●	●		
Victoria Park Hill (widening existing Shared Use Path)	●	●		
Downtown Bike Network (Phase 3 – Connection to Funicular)	●	●		
Nodes and Corridors Composite	●	●	●	●
Public Realm Composite	●	●	●	●
Pedestrian				
“Green and Walkable” Downtown	●	●	●	●
Various pedestrian connections supporting neighbourhood renewal	●	●	●	●
Various sidewalk links, curb ramps, and shared use paths	●	●	●	●
Various transit connector sidewalks to improve accessibility	●	●	●	●
Green and Walkable Future – Other streets	●	●	●	●
51 Avenue 122 Street to 50 Street probably Shared Use Paths			●	●
Complete Streets				
105 Avenue (97 Street to 116 Street) Streetscape	●	●		
109 Street (89 Avenue to 81 Avenue) Streetscape	●		●	●
124 Street (111 Avenue to 118 Avenue) Streetscape	●	●	●	●
124 Street (Jasper Avenue to 111 Avenue) Streetscape	●		●	●
Imagine Jasper Avenue (109 Street to 124 Street) Streetscape	●	●	●	●
Stony Plain Road – Phase 2 (159 Street to 170 Street) Streetscape	●	●		
Chinatown Strategy Implementation – Streetscape	●	●		●
101 Avenue (75 Street to Terrace Road) Streetscape			●	●
Norwood Boulevard (109 Street to 82 Street) Streetscape	●		●	●
Rice Howard Way pedestrian priority streetscape	●		●	●
81 Avenue Streetscaping Project			●	●
92 Avenue (34 Street to 50 Street) Urbanization			●	●
River Crossing/West Rosedale (Design)			●	●
Jasper Avenue New Vision (JANV) future phases			●	●
Jasper Avenue New Vision Phase 2	●	●		
TOD 114 Street–University Avenue Pedestrian Crossing	●	●		

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	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
Bridges & Auxiliary Structures				
Pedestrian Bridges				
142 Street (over Whitemud Drive) Pedestrian Bridge	●		●	●
Neighbourhoods				
Corner Stores Program	●	●	●	●
Industrial Area Upgrading	●	●	●	●
Traffic Systems				
Community Traffic Safety Countermeasures	●	●	●	●
Regulated Safety Upgrades at Railway Crossings	●	●	●	●
Traffic Safety – Speed Management Equipment	●	●	●	●
Traffic Safety – Engineering Measures	●	●	●	●
Traffic Signals – Developer and Arterial Road Assessment (ARA) Funded	●	●	●	●
Traffic Signals – Pedestrian/Vehicle Safety	●	●	●	●

TRANSPORTATION – GROWTH

River Valley System

North Shore Promenade	●			
River Valley Alliance – River Valley Trails	●	●	●	●
River Valley Alliance – River Valley Bridges	●	●	●	●

Parks

School Park Site Development				
Aster	●	●		
Cavanagh	●	●		
Chappelle East (Edmonton Public School Board, EPSB)	●	●		
Edgemont	●	●		
Glenriding heights (EPSB K-6)	●	●		
Griesbach	●	●		
Hawks Ridge	●	●		
Hays Ridge	●	●		
Keswick East (Edmonton Catholic School Board, ECSB)	●	●		
Keswick West (EPSB)	●	●		

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	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
Laurel East Completion (EPSB)	●	●		
Laurel West (ECSB)	●			●
Marquis	●			●
McConachie West (EPSB K-6)	●			●
Oxford	●			●
Rapperswill (ECSB)	●			●
Rivers Edge	●			●
Rosenthal (EPSB)	●			●
Secord South (ECSB)	●			●
Starling	●			●
The Orchards North Completion	●			●
Canossa			●	●
Crystallina Nera East			●	●
Crystallina Nera West			●	●
Eaux Claires Completion			●	●
Hollick Kenyon			●	●
Kinglet Gardens			●	
Potter Greens			●	
The Orchards South			●	
South Haven & Northern Lights Cemeteries Development			●	●
District Park Development				
Confederation Park (Growth)	●	●	●	●
Decoteau	●	●		
Glengarry Park (Growth)	●	●	●	●
Gorman	●	●		
Heritage Valley	●	●	●	●
Horse Hill	●	●		
McConachie	●	●		
Queen Elizabeth High School Park (Growth)	●	●	●	●
Riverview	●			●
Southeast Area Structure Plan (ASP)	●			●
Windermere	●			●
District Park Land Acquisition (New ASPs)			●	

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	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
Shared Park Site Development				
Various Sites	●	●	●	●
Site Amenities				
Centennial Plaza Redevelopment	●	●		
Gallagher Park Concept Plan Implementation	●		●	●
Louise McKinney Riverfront Park Improvements			●	●
Surplus School Land Acquisition			●	
Sportsfields				
Turf Management	●	●	●	●
Suburban Park Development				
Albany	●	●		
Allard	●	●		
Ambleside	●	●		
Callaghan	●	●		
Cameron Heights	●	●		
Carlton	●	●		
Charlesworth (2)	●	●		
Desrochers	●	●		
Edgemont	●	●		
McConachie	●			●
Schonsee	●			●
South Terwillegar	●			●
Summerside	●			●
Tamarack	●			●
Terwillegar Towne	●			●
Windermere	●			●
Windermere Estates (2)	●			●
AllaRoad			●	●
Aster			●	●
Callaghan			●	●

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	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
Cameron Heights			●	●
Canossa			●	●
Cavanagh			●	●
Central McDougall/Queen Mary Park ARP			●	●
Chappelle			●	●
Charlesworth			●	●
Crystallina Nera East			●	●
Crystallina Nera West			●	●
Cy Becker			●	●
Eaux Claires			●	●
Ebbers			●	●
Edgemont			●	●
Edmonton Energy And Technology Park			●	●
Ellerslie Industrial			●	●
Fraser			●	●
Glenridding Ravine			●	●
Goodridge Corners			●	●
Gorman			●	●
Granville			●	
Graydon Hill			●	
Griesbach			●	
Hawks Ridge			●	
Hays Ridge			●	
Keswick			●	
Kinglet Gardens			●	
Klarvatten			●	
Laurel			●	
Maple			●	
Marquis			●	
Paisley			●	
Pintail Landing			●	
Potter Greens			●	
Rivers Edge			●	

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	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
Mature Park Development				
Central McDougall/Queen Mary Park	●	●	●	●
Dogs and Open Spaces - Implementation	●	●	●	●
Ivor Dent Sports Park - Phase 3	●	●		
John Fry Park Plan Implementation	●	●		
Mary Burlie Park	●	●		
Rollie Miles Plan Implementation	●	●		
Sports Field Irrigation	●	●	●	●
Warehouse Campus Neighbourhood Central Park	●	●		
109 Street Corridor ARP			●	●
Belvedere ARP			●	●
Boyle Street/McCauley ARP			●	●
Capital City Downtown Plan (Frank Oliver)			●	●
Capital City Downtown Plan (MacKay Avenue Area)			●	●
Coliseum Station ARP			●	●
Garneau ARP			●	●
Groat Estate Implementation Plan			●	●
Jasper Place ARP			●	●
McKernan/Belgravia Station ARP			●	●
Oliver ARP			●	
Parkdale ARP			●	
Ritchie Neighbourhood Improvement Plan/ARP			●	
Riverdale ARP			●	
Stadium Station ARP			●	
Strathcona ARP			●	
New Cemetery Land Acquisition			●	
New Park Identification Signage			●	
New Natural Area Management and Enhancement			●	
Rundle Golf Course Driving Range Development			●	

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	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
River Valley Park Development				
Dawson Park (Growth)	●	●		
Oleskiw Park Plan Implementation	●	●		
Queen Elizabeth Park Plan Implementation	●	●		
River Valley Alliance - Touch the Water	●	●		
Terwillegar Park Plan Implementation	●	●		
Open Spaces				
Cemeteries Master Plan Implementation & Rehabilitation	●	●	●	●
Valley Zoo - Solar/Green Parking Lot & Stormwater Management	●	●		
Ice District Project			●	●
TOD Mill Creek Land Acq. and Ecol. Restoration - Davies LRT			●	
Soft Landscaping				
Trees				
Under Planted Parks Tree Canopy Growth (various)	●	●	●	●
Under Planted Roads Tree Canopy Growth (various)	●	●	●	●
Naturalization				
Various Sites	●	●	●	●
Partner				
Neighbourhood Park Development Projects - New	●	●	●	●

FACILITIES – RENEWAL

Safety and Security

Emergency Response Centre Station No. 42	●	●	●	●
Fire Rescue Services Training School	●	●		
Fire Station No. 19 (Ormsby Place)	●	●		●
Fire Station No. 22 (Oliver)	●	●	●	
Fire Station No. 3 (Queen Alexandra)	●	●	●	
Fire Station No. 7 (Highlands)	●	●	●	
Police Seized Vehicle Office	●	●	●	
Police Station Downtown Division	●	●	●	
Police Station North Division	●	●	●	

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	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
Service Delivery				
Civic Precinct Project – Phase 2	●	●		
Edmonton Cemetery Mausoleum	●	●		
Fort Edmonton Park Facilities Rehabilitation (Historical)	●	●		
Hangar 14 – Aviation Museum (Historical)	●	●		
Muttart Conservatory	●	●		
Northgate Lions Senior Centre	●	●		
Orange Hub – Phase 2	●	●		
Ortona Armouries (Historical)	●	●		
Recreation Service				
ACT Centre	●	●		
Callingwood Twin Arenas	●	●		
Confederation Arena	●	●		
Confederation Leisure Centre	●	●		
Eastglen Leisure Centre	●	●		
Grand Trunk Leisure Centre	●	●		
Kinsmen Sport Centre	●	●		
Mill Creek Pool	●	●		
Peter Hemingway Leisure Centre	●	●		
Russ Barnes Arena	●	●		
Shaw Conference Centre	●	●		
Service Support				
Mitchell Transit Garage	●	●		
Richard Paterson Garage	●	●		
Westwood Fleet Services/Stores	●	●		
Bonnie Doon Health Centre	●	●		
Norwood Ambulance Station	●	●		
Century Place	●	●		
O’Keefe’s Yard – Artifacts Centre (Historical)	●	●		
Prince of Wales Armoury (Historical)	●	●		
William Hawrelak Operations Facilities Renewal	●	●		

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	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
TRANSPORTATION – RENEWAL				
Public Transit				
66 Street tunnel track structure rehabilitation	●	●		
92 Street grade crossing replacement	●	●		
95 Street portal track structure rehabilitation	●	●		
Capital line – Wood Tie replacement program	●	●		
Elevator and escalator renewal program	●	●		
Facilities and furnishings life cycle replacements	●	●		
LRT substation and catenary power life cycle replacements	●	●		
System wide Building Management System/Supervisory control and data acquisition (SCADA) replacement	●	●		
Track maintenance equipment replacement (1980 and 1981)	●	●		
Uninterruptible Power Supply (UPS), switchgear and emergency generator replacements	●	●		
Goods Movement				
Arterial				
Central				
95 Street: 101 Avenue to 103A Avenue	●	●		
100 Avenue: 102 Street to 116 Street	●	●		
103A Avenue: 101 Street to 97 Street	●	●		
103 Avenue: 101 Street to 109 Street	●	●		
104 Street: River Valley Road to 97 Avenue	●	●		
106 Avenue: 101 Street to 109 Street	●	●		
109 Street: 61 Avenue to Walterdale Hill	●	●		
Jasper Avenue: 109 Street to 124 Street	●	●		
River Valley Road: 105 Street to Groat Road	●	●		
Rosssdale Road: 105 Street to 97 Avenue	●	●		
Rosssdale Road: 102 Street to Low Level Bridge	●	●		
McDougall Hill: MacDonald Drive to Rosssdale Road	●	●		

APPENDIX B: POTENTIAL CAPITAL PROJECTS

Note: This list is for conceptual purposes only. The projects identified in this appendix have not gone through a formal prioritization review process and therefore result in more projects being identified than there is funding available over the next ten years. Many of these projects are also at the early stages of development. The schedule is a high level estimate based on early project definition and subject to funding availability.

	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
Northeast				
17 Street: 116 Avenue to Hayter Road	●	●		
82 Street: North of 113 Avenue to Yellowhead Trail	●	●		
84 Street: 98 Avenue to 106 Avenue	●	●		
97 Street: 137 Avenue to 167 Avenue	●	●		
112 Avenue: 68 Street to West of 75 Street	●	●		
127 Avenue: 82 Street to 97 Street	●	●		
137 Avenue: 40 Street to Victoria Trail	●	●		
137 Avenue: 58 Street to Manning Drive	●	●		
137 Avenue [Eastbound]: 113A Street to 82 Street	●	●		
137 Avenue [Eastbound]: 50 Street to Fort Road	●	●		
153 Avenue: 18 Street to Fort Road	●	●		
McDougall Hill: MacDonald Drive to Rossdale Road	●	●		
Northwest				
69 Avenue [Eastbound]: 184 Street to 178 Street	●	●		
69 Avenue [Westbound]: 184 Street to 188 Street	●	●		
95 Avenue: 170 Street to 178 Street	●	●		
100 Avenue: 149 Street to 156 Street	●	●		
101 Street: 111 Avenue to 118 Avenue (linked to Traffic Circle Reconstruction)	●	●		
107 Avenue: Groat Road to 149 Street (linked to Traffic Circle Removal)	●	●		
111 Avenue: 149 Street to 156 Street	●	●		
111 Avenue: 97 Street to 104 Street and 106 Street to 109 Street	●	●		
112 Street: Castle Downs Road to 171 Avenue	●	●		
118 Avenue: 142 Street to 149 Street	●	●		
124 Street: 111 Avenue to 118 Avenue	●	●		
137 Avenue [Westbound]: 97 Street to 127 Street	●	●		
163 Street: 87 Avenue to 95 Avenue	●	●		
178 Street: 87 Avenue to Stony Plain Road	●	●		
184 Street: 107 Avenue to 114 Avenue	●	●		
Kingsway: 109 Street to 118 Avenue	●	●		
Stony Plain Road: 215 Street Off Ramp to 231 Street	●	●		
Stony Plain Road [Westbound]: 184 Street to Transportation Utility Corridor	●	●		

APPENDIX B: POTENTIAL CAPITAL PROJECTS

Note: This list is for conceptual purposes only. The projects identified in this appendix have not gone through a formal prioritization review process and therefore result in more projects being identified than there is funding available over the next ten years. Many of these projects are also at the early stages of development. The schedule is a high level estimate based on early project definition and subject to funding availability.

	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
Southwest				
111 Street [Southbound]: 61 Avenue to Whitemud Drive	●	●		
Riverbend Road: Reeves Gate to Terwillegar Drive	●	●		
Southeast				
17 Street [Southbound]: North of Whitemud Drive to South of Maple Ridge Drive	●	●		
23 Avenue [Eastbound]: 91 Street to Mill Woods Road East	●	●		
23 Avenue [Westbound]: 50 Street to 66 Street	●	●		
50 Street: 23 Avenue to 34 Avenue	●	●		
51 Avenue: 86 Street to 111 Street	●	●		
66 Street [Southbound]: Whitemud Drive to 23 Avenue	●	●		
82 Avenue: 83 Street to Mill Creek Bridge	●	●		
99 Street: 34 Avenue to Whitemud Drive	●	●		
99 Street: 67 Avenue to 80 Avenue	●	●		
Gateway Boulevard: University Avenue to 82 Avenue	●	●		
Parsons Road SW: 91 Street SW to Ellerslie Road SW	●	●		
McDougall Hill: MacDonald Drive to Rossdale Road	●	●		
Freeways				
Wayne Gretzky Drive [Northbound and Southbound]: North of 112 Avenue to 124 Avenue	●	●		
Wayne Gretzky Drive [Northbound]: Capilano Bridge to North of 112 Street (including North & South On/Off Ramps)	●	●		
Whitemud Drive [Eastbound]: Rainbow Bridge – 75 Street	●	●		
Whitemud Drive 75/66 Street Interchange Ramps	●	●		
Whitemud Drive 91 Street Interchange Ramps	●	●		
Whitemud Drive 99 Street Interchange Ramps	●	●		
Whitemud Drive 149 Street Interchange Westbound On Ramp	●	●		
Yellowhead Trail 50 Street Interchange Ramps	●	●		
Yellowhead Trail Victoria Trail Interchange Ramps	●	●		

APPENDIX B: POTENTIAL CAPITAL PROJECTS

Note: This list is for conceptual purposes only. The projects identified in this appendix have not gone through a formal prioritization review process and therefore result in more projects being identified than there is funding available over the next ten years. Many of these projects are also at the early stages of development. The schedule is a high level estimate based on early project definition and subject to funding availability.

	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
Bridges & Auxiliary Structures				
Road Bridges				
17 Street over Yellowhead Trail (B133 & 142), Rehabilitation	●	●		
170 Street over CNR [Northbound] (B170), Rehabilitation	●	●		
170 Street over Yellowhead Trail Overpass (B185), Rehabilitation	●	●		
Ada Boulevard over Wayne Gretzky Drive (B114), Rehabilitation	●	●		
Glenora O/P (107 Avenue over Groat Road) (B97), Rehabilitation	●	●		
Horsehills Road over Horsehills Creek (B130), Replacement	●	●		
Low Level Bridge [Northbound] on Connors Road /98 Avenue at North Saskatchewan River (B1), Rehabilitation	●	●		
Low Level Bridge [Southbound] on Connors Road/98 Avenue at North Saskatchewan River (B37), Rehabilitation	●	●		
Rainbow Valley Bridges (B162 & 180), Rehabilitation	●	●		
Scona Road Bridge over Connors Road (B65), Replacement	●	●		
Emily Murphy Park Road over Groat Road (B99), Rehabilitation	●	●		
Groat Road over North Saskatchewan. River (B59), Rehabilitation	●	●		
Groat Road over Victoria Park Road (B60), Rehabilitation	●	●		
Neighbourhoods				
Residential				
Alberta Avenue	●	●		
Allendale	●	●		
Baturyn	●	●		
Bellevue	●	●		
Bulyea Heights	●	●		
Calder	●	●		
Canon Ridge	●	●		
Carter Crescent	●	●		
Central McDougall	●	●		
Eastwood	●	●		
Elmwood Park	●	●		
Garneau	●	●		
Grandview Heights	●	●		
Jamieson Place (North/50 Avenue)	●	●		
Kilkenny	●	●		

APPENDIX B: POTENTIAL CAPITAL PROJECTS

Note: This list is for conceptual purposes only. The projects identified in this appendix have not gone through a formal prioritization review process and therefore result in more projects being identified than there is funding available over the next ten years. Many of these projects are also at the early stages of development. The schedule is a high level estimate based on early project definition and subject to funding availability.

	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
Killarney	●	●		
Lambton Park	●	●		
Lorelei	●	●		
Malmo Plains	●	●		
Newton (South/123 Avenue)	●	●		
Oleskiw	●	●		
Ottewell	●	●		
Pleasantview	●	●		
Prince Charles	●	●		
Rhatigan Ridge	●	●		
Royal Gardens	●	●		
Spruce Avenue	●	●		
Strathcona	●	●		
McDougall Hill: MacDonald Drive to Rossdale Road	●	●		
Industrial				
Bonaventure Industrial	●	●		
Calgary Trail North	●	●		
Carleton Square Industrial	●	●		
Cloverbar	●	●		
Cornet Addition Industrial	●	●		
Coronet Industrial	●	●		
Eastgate	●	●		
Industrial Heights	●	●		
Strathcona Junction	●	●		
Youngstown Industrial	●	●		
Traffic Systems				
The following are self-funded profiles managed by City Operations.	●	●		
Community Traffic Safety Countermeasures	●	●		
Regulated Safety Upgrades at Railway Crossings	●	●		
Traffic Safety – Speed Management Equipment	●	●		
Traffic Signals – Developer and ARA Funded	●	●		
Traffic Signals – Pedestrian/Vehicle Safety	●	●		
Traffic Safety Engineering Measures	●	●		

APPENDIX B: POTENTIAL CAPITAL PROJECTS

Note: This list is for conceptual purposes only. The projects identified in this appendix have not gone through a formal prioritization review process and therefore result in more projects being identified than there is funding available over the next ten years. Many of these projects are also at the early stages of development. The schedule is a high level estimate based on early project definition and subject to funding availability.

	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
OPEN SPACES – RENEWAL				
River Valley System				
Kinsmen Parking Lot Phases 3 and 4	●	●		
MacKinnon & Ramsay Ravine (Trail, Stairs and Viewpoints)	●	●		
River Valley Stair Renewal Program	●	●		
River Valley Parking Lot Renewal Program	●	●		
Signs Replacement	●	●		
Trails				
River Valley Road Trail Renewal	●	●		
River Valley Trail Resurfacing Program	●	●		
Gold Bar Park Trail Renewal	●	●		
Hermitage Park North Paved Trail	●	●		
Mill Creek Trail 76 Avenue to 93 Street	●	●		
Terwillegar Park Trail Access	●	●		
Wedgewood Ravine Trail Renewal	●	●		
Parks				
Dr. Wilbert McIntyre Park Surface Tiles Replacement				
<u>Site Amenities</u>				
Park Furniture Renewal	●	●		
Park Trail Renewal	●	●		
Park Road Renewal	●	●		
Park Parking Lot Renewal	●	●		
Playground Conservation	●	●		
Sports Field Renewal	●	●		
Signs Replacement	●	●		
<u>Running Track Rehabilitation</u>				
Confederation				
Glengarry (Design Only)				

APPENDIX B: POTENTIAL CAPITAL PROJECTS

Note: This list is for conceptual purposes only. The projects identified in this appendix have not gone through a formal prioritization review process and therefore result in more projects being identified than there is funding available over the next ten years. Many of these projects are also at the early stages of development. The schedule is a high level estimate based on early project definition and subject to funding availability.

	2019 – 2022		2023 – 2028	
	Planning	Delivery	Planning	Delivery
<u>Trails</u>				
Baranow Pathway	●	●		
Beaumaris Park and Connection Park Trail (Design Only)	●	●		
Thornccliffe School Asphalt Trail	●	●		
<u>Irrigation</u>				
Rundle Park Irrigation (Design Only)	●	●		
Neighbourhood Park Renewal (Various Locations)	●	●		
<u>Ornamental Ponds</u>				
Gold Bar Park	●	●		
Rundle Park	●	●		
Open Spaces				
<u>Cemeteries</u>				
Fencing	●	●		
Irrigation	●	●		
<u>Golf Course Renewal</u>				
Riverside Golf Course Irrigation (Design Only)	●	●		
Rundle Park Golf Course Irrigation (Design Only)	●	●		
<u>Valley Zoo</u>				
Fencing	●	●		
Irrigation	●	●		
Soft Landscaping				
<u>Trees</u>				
Tree Replacement	●	●		
Urban Tree Replacement	●	●		
<u>Horticulture</u>				
Bed (Flower & Shrub) Renewal	●	●		
Partner				
Neighbourhood Park Development Program - Renewal	●	●		

APPENDIX C: SAMPLE PROFILE PLANNING & DESIGN COMPOSITE - GROWTH

CAPITAL PROFILE REPORT

PROFILE NAME:	FACILITY PLANNING & DESIGN - GROWTH	UNFUNDED
PROFILE NUMBER:	CM-99-2019	PROFILE STAGE: Entry - Create Profile
DEPARTMENT:	Integrated Infrastructure Services	PROFILE TYPE: Composite
LEAD BRANCH:	Infrastructure Planning and Design	LEAD MANAGER: Jason Meliefste
PROGRAM NAME:		PARTNER MANAGER: Jason Meliefste
PARTNER:	Infrastructure Planning and Design	ESTIMATED START: January, 2019
BUDGET CYCLE:	2019-2022	ESTIMATED COMPLETION: December, 2022

Service Category: Corporate Support		Major Initiative:	
GROWTH	RENEWAL	PREVIOUSLY APPROVED:	-
100		BUDGET REQUEST:	60,900
		TOTAL PROFILE BUDGET:	60,900

PROFILE DESCRIPTION

This capital profile supports preliminary planning and design work (development) on infrastructure capital projects prior to budget approval for delivery of the project. This approach is consistent with Administration's implementation of the Project Development & Delivery Model (PDDM) as well as the Capital Governance Policy that was approved by Council. The profile includes 4 infrastructure types: Safety & Security, Service Delivery, Service Support and Partner.

Funding in the profile will be used to support preliminary planning and design work for the following asset types:

- * Safety & Security: Fire Stations, Police Stations, Emergency Management
- * Service Delivery: Transit/LRT Center, ECO Stations, Recreation Center, Arenas, Aquatic Facility, Seniors Centers, Community Center, Cultural Center, Arts Building, Housing, Libraries, Cemetery
- * Service Support: Fleet Garage, Service Yard, Waste Facilities, Administrative Offices, Operational Centers, Training Centers, Transit Garage Facilities
- * Partner: TBD

This composite profile will develop projects that may move to delivery in this 2019-2022 budget cycle and the start of the next budget cycle 2023-2026.

PROFILE BACKGROUND

In 2016, the Integrated Infrastructure Services Transformation program developed the Project Development and Delivery Model which has been endorsed by Council. The PDDM is a framework to managing capital infrastructure projects, and aims to achieve the following outcomes:

- (1) Better information to make capital investment decisions.
- (2) Improved project schedule and budget estimates through increased level of design to ensure realistic expectations are set prior to project tendering and construction.
- (3) Systematic evaluation of projects against the initial project business case and scope.

PROFILE JUSTIFICATION

To adhere with the PDDM, preliminary planning and design should be completed on projects prior to the project's budget being approved in its entirety. This profile funds that work so Administration can provide Council with better information regarding the scope, schedule and budget prior to funding the entire project.

The work within this profile will bring Facility projects to Checkpoint 3, at this point the projects will be most often come to Council to be approved as a stand-alone profile to advance the project.

STRATEGIC ALIGNMENT

The Way We Move: Well Maintained Infrastructure, Transportation and Land Use Integration, Sustainability, Access and Mobility, Transportation Mode Shift, Health and Safety, Economic Vitality. The Way We Green. The Way We Live.

ALTERNATIVES CONSIDERED

Planning work for the next budget cycle too late will increase the risk of not meeting the completion schedule and budget. Lack of planning can also lead to increased risk during delivery, increased costs and delays.

COST BENEFITS

Better information to make capital investment decisions:

- Early investment in design to support detailed business cases.
- Structured process to evaluate readiness, scope and prioritization.
- Increased confidence around budget and schedule estimates.
- There is the opportunity to make major changes in project scope if there are problems identified during the early planning and design phases.

APPENDIX C: SAMPLE PROFILE

PLANNING & DESIGN COMPOSITE - GROWTH

CAPITAL PROFILE REPORT

KEY RISKS & MITIGATING STRATEGY

A capital project is not approved after spending resources on concept planning and design. Current mitigation is the ongoing reporting to City Council regarding capital priorities while future mitigation could be the improvement to the long term capital planning process.

RESOURCES

Early investment in design will require reallocation of capital funding to planning and design efforts prior to project-specific approval.

CONCLUSIONS AND RECOMMENDATIONS

Funds are required for planning and design to adhere with the Project Development and Delivery Model, and improve project schedule and budget estimates through increased level of design to ensure realistic expectations are set prior to project tendering and construction.

CAPITAL BUDGET AND FUNDING SOURCES (000's)

APPROVED BUDGET		Prior Years	2018	2019	2020	2021	2022	2023	2024	2025	2026	Beyond 2026	Total
	Approved Budget												
	Original Budget Approved	-	-	-	-	-	-	-	-	-	-	-	-
	Current Approved Budget	-	-	-	-	-	-	-	-	-	-	-	-
BUDGET REQUEST	Budget Request	-	-	12,500	19,000	13,450	15,950	-	-	-	-	-	60,900
	Revised Funding Sources (if approved)												
	Pay-As-You-Go	-	-	12,500	19,000	13,450	15,950	-	-	-	-	-	60,900
	Requested Funding Source	-	-	12,500	19,000	13,450	15,950	-	-	-	-	-	60,900
REVISED BUDGET (IF APPROVED)	Revised Budget (if Approved)	-	-	12,500	19,000	13,450	15,950	-	-	-	-	-	60,900
	Requested Funding Source												
	Pay-As-You-Go	-	-	12,500	19,000	13,450	15,950	-	-	-	-	-	60,900
	Requested Funding Source	-	-	12,500	19,000	13,450	15,950	-	-	-	-	-	60,900

CAPITAL BUDGET BY ACTIVITY TYPE (000's)

REVISED BUDGET (IF APPROVED)	Activity Type	Prior Years	2018	2019	2020	2021	2022	2023	2024	2025	2026	Beyond 2026	Total
		Design	-	-	12,500	19,000	13,450	15,950	-	-	-	-	-
	Total	-	-	12,500	19,000	13,450	15,950	-	-	-	-	-	60,900

OPERATING IMPACT OF CAPITAL

Type of Impact:

Branch:																
	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE
Total Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

APPENDIX C: SAMPLE PROFILE PLANNING & DESIGN COMPOSITE – GROWTH POTENTIAL PROJECTS

	2019 – 2022	
	Planning	Delivery
FACILITIES – GROWTH		
Safety and Security		
Charlesworth Fire Station	●	●
Cumberland Fire Station	●	●
Edmonton Police Services Firearms Facility	●	●
Fire Station Gear Rooms	●	●
Safety and Security		
Churchill LRT Station Upgrade	●	●
Commonwealth Stadium Master Plan Implementation	●	●
Community Hubs	●	
Pool Chlorine Systems and Occupational Health and Safety (OHS) Infrastructure Improvements	●	●
Riverbend Library Relocation (Location Under Review)	●	●
Riverside Golf Course Pavilion and Clubhouse	●	●
Stadium LRT Station Upgrade	●	●
Woodcroft Library Expansion and Renewal	●	●
Service Support		
Callingwood District Park – City Operations Yard	●	●
Ferrier Garage Bus Storage Replacement	●	●
Integrated City Operations Response Center (Location Unknown)	●	●
New Transit Bus Garage (Location Unknown)	●	●
Operational Yards Occupational Health and Safety (OHS)/Security Improvements	●	●
Solar Photovoltaic (PV) Installation	●	●
Partner		
African Multicultural Community Centre	●	●
John Fry Park Tennis Center	●	●
Strathcona 55+ Seniors Centre	●	●

APPENDIX C: SAMPLE PROFILE DELIVERY STANDALONE PROFILE – GROWTH

CAPITAL PROFILE REPORT

PROFILE NAME:	ARENA INDOOR ARTIFICIAL TURF	PROFILE STAGE:	UNFUNDED Entry - Create Profile
PROFILE NUMBER:	21-21-2020	PROFILE TYPE:	Standalone
DEPARTMENT:	Integrated Infrastructure Services	LEAD MANAGER:	Brian Latte
LEAD BRANCH:	Infrastructure Delivery	PARTNER MANAGER:	Roger Jevne
PROGRAM NAME:		ESTIMATED START:	January, 2021
PARTNER:	Community & Recreation Facilities	ESTIMATED COMPLETION:	December, 2022
BUDGET CYCLE:	2019-2022		

Service Category:	Recreation & Culture	Major Initiative:	
GROWTH	RENEWAL	PREVIOUSLY APPROVED:	-
100		BUDGET REQUEST:	90,000
		TOTAL PROFILE BUDGET:	90,000

PROFILE DESCRIPTION

There are several organizations that have indicated an interest in exploring partnership opportunities for an indoor artificial turf facility. A full-sized indoor artificial turf facility could be used as a training and game venue for adult, youth and minor sports field organizations (soccer, baseball, rugby, ultimate frisbee, football, field hockey). Levels of play range from grass roots up to recreational, collegiate, and professional.

The City developed an indoor facility program as part of a 2013 Council inquiry on Sporting Facilities and Seating Capacity. The program includes a full-sized soccer (105 meters x 68 meters artificial turf field), dressing rooms, officials and medical support areas, 300 spectator seats, elevated walking/jogging track, lobby area, concession, public washrooms, administrative and storage space.

PROFILE BACKGROUND

There are several organizations that have indicated an interest in exploring partnership opportunities for an indoor artificial turf facility.

The City developed an indoor facility program as part of a 2013 Council inquiry on Sporting Facilities and Seating Capacity. The program includes a full-sized soccer (105 meters x 68 meters artificial turf field), dressing rooms, officials and medical support areas, 300 spectator seats, elevated walking/jogging track, lobby area, concession, public washrooms, administrative and storage space.

PROFILE JUSTIFICATION

Supports the Way's plans & outcomes; aligns with the Artificial Turf Strategy, Recreation Facility Master Plan and Urban Parks Management Plan; increases program opportunities with game play, off-season training, multiple games throughout the day, year-round playability.

Through the Project Development & Delivery Model (PDDM), this project has reached Checkpoint 3 and is ready for budget approval to be delivered. The funding for delivery of this project has been approved in composite CM-99-9000 Infrastructure Delivery Growth and will be transferred to this profile.

STRATEGIC ALIGNMENT

Aligns with: The Way We Grow: Transforming Edmonton's Urban Form, The Way We Live; Recreation Facility Master Plan, Urban Parks Management Plan, Artificial Turf Strategy, and Council's Infrastructure Strategy.

ALTERNATIVES CONSIDERED

There are several locations that would support the development of an indoor artificial turf facility. Several potential partners have identified land opportunities to accommodate a facility and required support amenities.

COST BENEFITS

An indoor artificial turf facility has the potential to provide over 3,000 hours of play to all levels of football, soccer and other sports for practices and games.

The benefits include the ability to meet user requirements for competitions and flexibility for major events on a year-round basis.

KEY RISKS & MITIGATING STRATEGY

A preliminary risk analysis has been completed. The risk management framework will be applied to all aspects of the project and will continue to develop and evolve as the project and potential partnerships are defined.

RESOURCES

The City of Edmonton seeks to purchase goods, services and construction fairly based on best value. Community and Recreation Facilities will follow Human Resource Management policies and procedures for engagement, training and retention of staff.

CONCLUSIONS AND RECOMMENDATIONS

An indoor artificial turf facility will meet the identified needs of all rectangular sport users including: a quality playing surface to support off-season training, expanded league play, year-round use and the ability to host special events.

APPENDIX C: SAMPLE PROFILE DELIVERY STANDALONE PROFILE - GROWTH

CAPITAL PROFILE REPORT

PROFILE NAME: **ARENA Indoor Artificial Turf**

UNFUNDED

PROFILE NUMBER: **21-21-2020**

PROFILE TYPE: **Standalone**

BRANCH: **Infrastructure Delivery**

CAPITAL BUDGET AND FUNDING SOURCES (000's)

APPROVED BUDGET	Prior Years	2018	2019	2020	2021	2022	2023	2024	2025	2026	Beyond 2026	Total
	Approved Budget											
Original Budget Approved	-	-	-	-	-	-	-	-	-	-	-	-
Current Approved Budget	-	-	-	-	-	-	-	-	-	-	-	-

BUDGET REQUEST	Budget Request	-	-	-	-	46,800	43,200	-	-	-	-	-	90,000
	Revised Funding Sources (if approved)												
Munc Sustain. Initiative - MSI	-	-	-	-	42,600	37,600	-	-	-	-	-	-	80,200
Pay-As-You-Go	-	-	-	-	4,200	5,600	-	-	-	-	-	-	9,800
Requested Funding Source	-	-	-	-	46,800	43,200	-	-	-	-	-	-	90,000

REVISED BUDGET (IF APPROVED)	Revised Budget (if Approved)	-	-	-	-	46,800	43,200	-	-	-	-	-	90,000
	Requested Funding Source												
Munc Sustain. Initiative - MSI	-	-	-	-	42,600	37,600	-	-	-	-	-	-	80,200
Pay-As-You-Go	-	-	-	-	4,200	5,600	-	-	-	-	-	-	9,800
Requested Funding Source	-	-	-	-	46,800	43,200	-	-	-	-	-	-	90,000

CAPITAL BUDGET BY ACTIVITY TYPE (000's)

REVISED BUDGET (IF APPROVED)	Activity Type	Prior Years	2018	2019	2020	2021	2022	2023	2024	2025	2026	Beyond 2026	Total
	Construction						33,500	33,500	-	-	-	-	-
Design						3,950	3,950	-	-	-	-	-	7,900
Equip FurnFixt						-	4,400	-	-	-	-	-	4,400
Land					9,000	1,000	-	-	-	-	-	-	10,000
Percent for Art					350	350	-	-	-	-	-	-	700
Total						46,800	43,200	-	-	-	-	-	90,000

OPERATING IMPACT OF CAPITAL

Type of Impact:

Branch:																
	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE
Total Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

APPENDIX C: SAMPLE PROFILE PLANNING & DELIVERY COMPOSITE – RENEWAL

CAPITAL PROFILE REPORT

Profile Page 1

PROFILE NAME:	TRANSPORTATION DEVELOPMENT AND DELIVERY - RENEWAL	UNFUNDED
PROFILE NUMBER:	CM-66-9000	PROFILE STAGE: Entry - Create Profile
DEPARTMENT:	Integrated Infrastructure Services	PROFILE TYPE: Composite
LEAD BRANCH:	Infrastructure Planning and Design	LEAD MANAGER: Jason Meliefste
PROGRAM NAME:		PARTNER MANAGER: Gord Cebryk
PARTNER:	Infrastructure Delivery	ESTIMATED START: January, 2019
BUDGET CYCLE:	2019-2022	ESTIMATED COMPLETION: December, 2022

Service Category:	Roads	Major Initiative:	
GROWTH	RENEWAL	PREVIOUSLY APPROVED:	-
	100	BUDGET REQUEST:	242,981
		TOTAL PROFILE BUDGET:	242,981

PROFILE DESCRIPTION

This capital profile supports both the development and delivery of Transportation Renewal Projects.

Funding in the profile will be used to support preliminary planning and design, and delivery work for the following:

- * Goods Movement - Arterial and Primary Highways
- * Bridges and Structures - Pedestrian Bridges, Road Bridges, Retaining Walls, Noise Walls, and Overhead Signs
- * Traffic Systems - Traffic Signal, Streetlighting, Transit Priority Signals, Pedestrian Signals, ITS, and Parking

This composite profile will develop and deliver projects in this budget cycle (2019-2022), as well as some project development for the next budget cycle (2023-2026).

The work within this profile will bring Transportation projects to Checkpoint 3, at this point the projects will be most often come to Council to be approved as a standalone profile to advance the project. The funding for delivery of these projects will be transferred from this capital profile.

PROFILE BACKGROUND

This approach is consistent with Administration's implementation of the Project Development & Delivery Model (PDDM) as well as the Capital Governance Policy that was approved by Council.

The Goods Movement outlines a cost-effective, long-term strategic approach to address Edmonton's major road infrastructure needs via the renewal of roads, sidewalks, and streetlights.

The profile provides for rehabilitation on bridge structures as required throughout the City to selectively improve safety, increase load carrying capacity and functionality.

Traffic and pedestrian signals are a critical component of the Transportation infrastructure to facilitate safe and efficient flow of vehicle and pedestrian traffic. Traffic signals are installed based on warrant guidelines to facilitate efficient flow of vehicle traffic towards preventing and relieving congestion in specified areas. Traffic signals are required to safely manage traffic and provide safe mobility for pedestrians.

PROFILE JUSTIFICATION

Goods Movement: To meet the recommended target of less than 10% of arterial inventory in need of rehabilitation, maintain the average PQI above 6.0, and to ensure safety of road users, arterial networks must be maintained and proactively renewed before their condition requires major reconstruction.

Bridge & Structures: Provide selective bridge rehabilitation to improve the structure's load carrying capacity, increase safety for all users and decrease congestion along rehabilitation corridors.

Traffic Systems: Traffic and pedestrian signals are installed based on warrant guidelines to facilitate efficient flow of vehicle traffic while preventing congestion in specified areas. Traffic and pedestrian signals also provide safe crossing and mobility opportunities for pedestrians.

STRATEGIC ALIGNMENT

The Way We Move: Well Maintained Infrastructure, Transportation and Land Use Integration, Sustainability, Access and Mobility, Transportation Mode Shift, Health and Safety, Economic Vitality. The Way We Green. The Way We Live.

ALTERNATIVES CONSIDERED

Using life cycle cost/benefit analysis demonstrates that a reconstruction-only program that would take many more years to complete at a significantly higher cost than a holistic approach (reconstruction, rehab, and preventative maintenance).

COST BENEFITS

Tangible benefits: renewing aging infrastructure via cost-effective renewal investments, efficient movement of goods and people, increased service level and customer satisfaction.

APPENDIX C: SAMPLE PROFILE

PLANNING & DELIVERY COMPOSITE - RENEWAL

CAPITAL PROFILE REPORT

Profile Page 2

KEY RISKS & MITIGATING STRATEGY

Reconstruction is required when infrastructure reaches end of its service life. To "do nothing" allows:

- further deterioration and poorer level of service
- higher risk to safety and failure
- higher maintenance and (triage) renewal costs

RESOURCES

External contractors (via tender process) will be used to complete design/construction. Projects are coordinated with initiatives of TS Planning, Transit, Drainage, Sustainable Development, Great NBHDs to optimize cost savings and investments.

CONCLUSIONS AND RECOMMENDATIONS

Require to achieve committed service levels to effectively manage aging arterial roads, ensure efficient movement of goods and people, increase service level and customer satisfaction.

CAPITAL BUDGET AND FUNDING SOURCES (000's)

APPROVED BUDGET		Prior Years	2018	2019	2020	2021	2022	2023	2024	2025	2026	Beyond 2026	Total
	Approved Budget												
	Original Budget Approved	-	-	-	-	-	-	-	-	-	-	-	-
	Current Approved Budget	-	-	-	-	-	-	-	-	-	-	-	-
BUDGET REQUEST	Budget Request	-	-	60,745	60,745	60,745	60,745	-	-	-	-	-	242,981
	Revised Funding Sources (if approved)												
	Munc Sustain. Initiative - MSI	-	-	54,671	54,671	54,671	54,671	-	-	-	-	-	218,683
	Pay-As-You-Go	-	-	6,075	6,075	6,075	6,075	-	-	-	-	-	24,298
	Requested Funding Source	-	-	60,745	60,745	60,745	60,745	-	-	-	-	-	242,981
REVISED BUDGET (IF APPROVED)	Revised Budget (if Approved)	-	-	60,745	60,745	60,745	60,745	-	-	-	-	-	242,981
	Requested Funding Source												
	Munc Sustain. Initiative - MSI	-	-	54,671	54,671	54,671	54,671	-	-	-	-	-	218,683
	Pay-As-You-Go	-	-	6,075	6,075	6,075	6,075	-	-	-	-	-	24,298
	Requested Funding Source	-	-	60,745	60,745	60,745	60,745	-	-	-	-	-	242,981

CAPITAL BUDGET BY ACTIVITY TYPE (000's)

REVISED BUDGET (IF APPROVED)	Activity Type	Prior Years	2018	2019	2020	2021	2022	2023	2024	2025	2026	Beyond 2026	Total
		Construction	-	-	54,671	54,671	54,671	54,671	-	-	-	-	-
	Design	-	-	6,075	6,075	6,075	6,075	-	-	-	-	-	24,298
	Total	-	-	60,745	60,745	60,745	60,745	-	-	-	-	-	242,981

OPERATING IMPACT OF CAPITAL

Type of Impact:

Branch:																
	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE	Rev	Exp	Net	FTE
Total Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

APPENDIX C: SAMPLE PROFILE PLANNING & DELIVERY COMPOSITE – RENEWAL POTENTIAL PROJECTS

	2019 – 2022	
	Planning	Delivery
TRANSPORTATION – RENEWAL		
Goods Movement		
Arterial		
Central		
95 Street: 101 Avenue to 103A Avenue	●	●
100 Avenue: 102 Street to 116 Street	●	●
103A Avenue: 101 Street to 97 Street	●	●
103 Avenue: 101 Street to 109 Street	●	●
104 Street: River Valley Road to 97 Avenue	●	●
106 Avenue: 101 Street to 109 Street	●	●
109 Street: 61 Avenue to Walterdale Hill	●	●
Jasper Avenue: 109 Street to 124 Street	●	●
River Valley Road: 105 Street to Groat Road	●	●
Rossdale Road: 105 Street to 97 Avenue	●	●
Rossdale Road: 102 Street to Low Level Bridge	●	●
McDougall Hill: MacDonald Drive to Rossdale Road	●	●
Northeast		
17 Street: 116 Avenue to Hayter Road	●	●
82 Street: North of 113 Avenue to Yellowhead Trail	●	●
84 Street: 98 Avenue to 106 Avenue	●	●
97 Street: 137 Avenue to 167 Avenue	●	●
112 Avenue: 68 Street to West of 75 Street	●	●
127 Avenue: 82 Street to 97 Street	●	●
137 Avenue: 40 Street to Victoria Trail	●	●
137 Avenue: 58 Street to Manning Drive	●	●
137 Avenue [Eastbound]: 113A Street to 82 Street	●	●
137 Avenue [Eastbound]: 50 Street to Fort Road	●	●
153 Avenue: 18 Street to Fort Road	●	●
McDougall Hill: MacDonald Drive to Rossdale Road	●	●

APPENDIX C: SAMPLE PROFILE PLANNING & DELIVERY COMPOSITE – RENEWAL POTENTIAL PROJECTS

	2019 – 2022	
	Planning	Delivery
Northwest		
69 Avenue [Eastbound]: 184 Street to 178 Street	●	●
69 Avenue [Westbound]: 184 Street to 188 Street	●	●
95 Avenue: 170 Street to 178 Street	●	●
100 Avenue: 149 Street to 156 Street	●	●
101 Street: 111 Avenue to 118 Avenue (linked to Traffic Circle Reconstruction)	●	●
107 Avenue: Groat Road to 149 Street (linked to Traffic Circle Removal)	●	●
111 Avenue: 149 Street to 156 Street	●	●
111 Avenue: 97 Street to 104 Street and 106 Street to 109 Street	●	●
112 Street: Castle Downs Road to 171 Avenue	●	●
118 Avenue: 142 Street to 149 Street	●	●
124 Street: 111 Avenue to 118 Avenue	●	●
137 Avenue [Westbound]: 97 Street to 127 Street	●	●
163 Street: 87 Avenue to 95 Avenue	●	●
178 Street: 87 Avenue to Stony Plain Road	●	●
184 Street: 107 Avenue to 114 Avenue	●	●
Kingsway: 109 Street to 118 Avenue	●	●
Stony Plain Road: 215 Street Off Ramp to 231 Street	●	●
Stony Plain Road [Westbound]: 184 Street to Transportation Utility Corridor	●	●
Southwest		
111 Street [Southbound]: 61 Avenue to Whitemud Drive	●	●
Riverbend Road: Reeves Gate to Terwillegar Drive	●	●
Southeast		
17 Street [Southbound]: North of Whitemud Drive to South of Maple Ridge Drive	●	●
23 Avenue [Eastbound]: 91 Street to Mill Woods Road East	●	●
23 Avenue [Westbound]: 50 Street to 66 Street	●	●
50 Street: 23 Avenue to 34 Avenue	●	●
51 Avenue: 86 Street to 111 Street	●	●
66 Street [Southbound]: Whitemud Drive to 23 Avenue	●	●
82 Avenue: 83 Street to Mill Creek Bridge	●	●
99 Street: 34 Avenue to Whitemud Drive	●	●
99 Street: 67 Avenue to 80 Avenue	●	●
Gateway Boulevard: University Avenue to 82 Avenue	●	●
Parsons Road SW: 91 Street SW to Ellerslie Road SW	●	●
McDougall Hill: MacDonald Drive to Rossdale Road	●	●

APPENDIX C: SAMPLE PROFILE PLANNING & DELIVERY COMPOSITE – RENEWAL POTENTIAL PROJECTS

	2019 – 2022	
	Planning	Delivery
Freeways		
Wayne Gretzky Drive [Northbound and Southbound]: North of 112 Avenue to 124 Avenue	●	●
Wayne Gretzky Drive [Northbound]: Capilano Bridge to North of 112 Street (including North & South On/Off Ramps)	●	●
Whitemud Drive [Eastbound]: Rainbow Bridge – 75 Street	●	●
Whitemud Drive 75/66 Street Interchange Ramps	●	●
Whitemud Drive 91 Street Interchange Ramps	●	●
Whitemud Drive 99 Street Interchange Ramps	●	●
Whitemud Drive 149 Street Interchange Westbound On Ramp	●	●
Yellowhead Trail 50 Street Interchange Ramps	●	●
Yellowhead Trail Victoria Trail Interchange Ramps	●	●
Bridges & Auxiliary Structures		
Road Bridges		
17 Street over Yellowhead Trail (B133 & 142), Rehabilitation	●	●
170 Street over CNR [Northbound] (B170), Rehabilitation	●	●
170 Street over Yellowhead Trail Overpass (B185), Rehabilitation	●	●
Ada Boulevard over Wayne Gretzky Drive (B114), Rehabilitation	●	●
Glenora O/P (107 Avenue over Groat Road) (B97), Rehabilitation	●	●
Horsehills Road over Horsehills Creek (B130), Replacement	●	●
Low Level Bridge [Northbound] on Connors Road /98 Avenue at North Saskatchewan River (B1), Rehabilitation	●	●
Low Level Bridge [Southbound] on Connors Road/98 Avenue at North Saskatchewan River (B37), Rehabilitation	●	●
Rainbow Valley Bridges (B162 & 180), Rehabilitation	●	●
Scona Road Bridge over Connors Road (B65), Replacement	●	●
Emily Murphy Park Road over Groat Road (B99), Rehabilitation	●	●
Groat Road over North Saskatchewan. River (B59), Rehabilitation	●	●
Groat Road over Victoria Park Road (B60), Rehabilitation	●	●
Parsons Road SW: 91 Street SW to Ellerslie Road SW	●	●
McDougall Hill: MacDonald Drive to Rossdale Road	●	●
Traffic Systems		
The following are self-funded profiles managed by City Operations.	●	●
Community Traffic Safety Countermeasures	●	●
Regulated Safety Upgrades at Railway Crossings	●	●
Traffic Safety – Speed Management Equipment	●	●
Traffic Signals – Developer and ARA Funded	●	●
Traffic Signals – Pedestrian/Vehicle Safety	●	●
Traffic Safety Engineering Measures	●	●