

Planning & Development Report to  
Priorities and Finance Committee  
2018 October 02

ISC: UNRESTRICTED  
PFC2018-0973

## Off-site Levy Bylaw Amendment Arising from New Community Growth Strategy 2018

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### EXECUTIVE SUMMARY

Through the New Community Growth Strategy 2018, Council approved 14 new communities and directed that the required capital investments to initiate these communities be brought forward as part of the One Calgary (2019-2022) service plan and budget. A number of these required investments are eligible to be funded through the Off-site Levy Bylaw, but are currently not included in the bylaw.

As directed by Council on 2018 June 18 and 2018 July 30, this report brings forward amendments to the Off-site Levy Bylaw to incorporate the developers' proportionate share of the cost of off-site transportation and utility infrastructure attributable to the 14 new communities approved by Council on 2018 July 30. The new infrastructure includes the 80 Avenue NE/Stoney Trail overpass for the East Stoney Area Structure Plan (ASP) and approximately \$151 million in utility infrastructure. These amendments are necessary to ensure a funding source exists for a substantial part of the infrastructure required to support the new communities approved through the New Community Growth Strategy 2018.

These amendments are not intended to replace the planned review of the off-site levies, which has already commenced within Administration in preparation for a new Off-site Levy Bylaw, expected in 2021. No changes are proposed for the Water Treatment Plant levies or the Community Services Charges; as well, no changes are proposed to the levies paid in the Established Area. The proposed amendments do not change or alter the base methodology used in 2016 to calculate the off-site levy rates.

As the annual escalation rate increases for Transportation and Community Services are linked to the Non Residential Consumer Price Index, the official 2019 rates will not be known until 2018 December. At that time, it will be possible to state definitively what the 2019 rates will be. This report provides estimates for 2019 Transportation Levy rates and for the overall 2019 levy rates. For this reason, the proposed Off-site Levy Bylaw (Attachment 1) is to come into force 2018 December 31 in order to become effective with the 2019 rates on 2019 January 1.

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### ADMINISTRATION RECOMMENDATION:

That Priorities and Finance Committee recommend:

1. That this report (PFC2018-0973) be directed to the November 12 Combined Meeting of Council to the Public Hearing portion of the Agenda;
2. That Council hold a public hearing on the proposed bylaw amendment set out in Attachment 1; and
3. That Council approve the proposed bylaw amendment to the Off-site Levy Bylaw 2M2016 in Attachment 1.

### RECOMMENDATION OF THE PRIORITIES AND FINANCE COMMITTEE, DATED 2018 OCTOBER 02:

That Council hold a Public Hearing, and;

1. That Council hold a public hearing on the proposed bylaw **41M2018** amendment set out in Attachment 1; and
2. That Council approve the proposed bylaw amendment to the Off-site Levy Bylaw 2M2016 in Attachment 1.

### PREVIOUS COUNCIL DIRECTION / POLICY

On 2018 July 30, as part of the New Community Growth Strategy 2018 report (C2018-0900), Council adopted the following recommendation:

3. For the fourteen communities identified in Attachment 4 of C2018-0900, as amended, direct Administration to:
  - (a) approve, as part of One Calgary 2019-2022 four year service plan and budget, a property tax rate increase of up to 0.75% in 2019 to fund the capital and direct incremental operating budgets necessary to support development of these communities;
  - (b) approve, as part of One Calgary 2019-2022 four year service plan and budget, a water utility rate increase of up to 0.5% per year to fund the specific capital budget necessary to support development of these communities;
  - (d) Direct Administration, in consultation with stakeholders, to incorporate the proportionate share of the cost of off-site transportation infrastructure and any additional off-site utilities infrastructure attributable to new growth that provides servicing to new communities into the off-site levy rates, through a proposed amendment to the Off-site Levy Bylaw 2M2016, and report back to the Priorities and Finance Committee by no later than 2018 Q4.

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On 2018 June 18, as part of the Utilities Indicative Rates and Funding New Growth report (C2018-0787), Council adopted the following recommendation:

1. Direct Administration, in consultation with stakeholders, to incorporate the proportionate share of the cost of off-site utility infrastructure attributable to new growth that provides servicing to communities approved by Council in the New Community Growth Strategy report (PFC2018-0678) into the off-site levy rates, through a proposed amendment to the water, sanitary sewer and storm sewer levy rates in Bylaw 2M2016, and report back to the Priorities and Finance Committee by no later than 2018 Q4.

On 2018 April 25, as part of the One Calgary: Setting Indicative Rates for 2019-2022 report (C2018-0489), Council referred the indicative rates for Water, Wastewater and Stormwater services including new growth to the 2018 June 18 Strategic Meeting of Council.

On 2016 January 11, Council adopted Bylaw 2M2016 to establish off-site levies pursuant to Section 648 of the Municipal Government Act and adopted by resolution, the Community Services Charges.

### BACKGROUND

Section 648 of the Municipal Government Act authorizes municipalities to establish off-site levies that can be imposed at the time of subdivision or development permit approval. According to this legislation, an off-site levy may be used to fund all or part of the capital cost of new or expanded water, sanitary and storm infrastructure, new or expanded roads and transportation infrastructure, and land required for or in connection with these infrastructure projects. In Calgary, developers fund the capital cost of the local infrastructure within new communities and construct all of the on-site infrastructure such as parks, roads and underground utilities. Off-site levies are paid by developers to help fund capital costs of infrastructure that is considered off-site from these communities.

The Off-site Levy Bylaw allocates the cost of capital infrastructure in greenfield areas based on the allocation of benefit. The City and developers each contribute a proportionate share of funding to new infrastructure for the greenfield area based on allocation of benefit.

The City's current Off-site Levy Bylaw 2M2016 was approved on 2016 January 11 and came into force 2016 February 1. This Off-site Levy Bylaw, including the methodology and assumptions, were the result of extensive consultation between The City and stakeholders. A full discussion of the principles, process, and methodology used to create the 2016 Off-site Levy Bylaw can be found in Attachment 1-Schedule C of report C2016-0023 (link: [2016 Levy Report](#)). Updates to the Background Report from C2016-0023, necessary to reflect the proposed changes from this update, can be found in Attachment 1-2018 October Background Report Addendum of this report.

In the 2016 Bylaw it was identified that amendments to the bylaw may be required from time to time to keep calculations current or reflect unanticipated events. The impact of the approvals from the New Community Growth Strategy 2018, and the subsequent Council direction, are considered such an event. For potential changes beyond this, Administration and industry

## Off-site Levy Bylaw Amendment Arising from New Community Growth Strategy 2018

representatives have shared an understanding that this review would focus on incorporating the infrastructure required by the New Community Growth Strategy 2018, and not revisit the base methodology.

In 2018, Council, Industry, and Administration were actively involved in the New Community Growth Strategy 2018, which culminated with Council approvals that will result in the initiation of 14 new communities through investments in the One Calgary (2019-2022) service plan and budget. Council approved 14 new communities under the following assumptions:

- a base property tax rate increase of 0.75 per cent in 2019, that was approved on 2018 July 30,
- an annual water utility rate increase of up to 0.5 per cent, to be approved in 2018 November; and
- inclusion of levy-eligible infrastructure for the New Community Growth Strategy 2018 into the Off-site Levy Bylaw.

Through this process, it was identified that most of the required utility infrastructure, and one transportation infrastructure item, were not included in the current Off-site Levy Bylaw. For this infrastructure to be funded through the off-site levies, it must be added into the levy calculations. The estimated total cost of the infrastructure to be added to the levy is listed in Table 1.

**Table 1: Capital Infrastructure to be added to the Off-site Levy to Support the New Community Growth Strategy 2018**

Levy Component	Description	Estimated Cost
Transportation	80 AV NE & Stoney Trail Flyover	\$8,500,000
Water Distribution (Water Levy)	New linear infrastructure	\$98,268,000
Wastewater Collection (Sanitary Sewer Levy)	New linear infrastructure	\$29,080,000
Drainage System (Storm Sewer Levy)	New linear infrastructure	\$13,550,000
Drainage System (Storm Sewer Levy)	Change to the cost of 144 AV NE Storm Trunk 4	\$10,400,000
<b>Total</b>		<b>\$159,798,000</b>

### INVESTIGATION: ALTERNATIVES AND ANALYSIS

To incorporate the necessary infrastructure into the Off-site Levy Bylaw, while seeking to maintain the base methodology, Administration first reviewed the guiding principles from the

## Off-site Levy Bylaw Amendment Arising from New Community Growth Strategy 2018

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2016 Off-site Levy Bylaw process, including but not limited to Certainty, Financial Sustainability, Fairness and Equity, and Efficiency. Amending only the sections of the bylaw related to the transportation levy, water levy, sanitary sewer levy, and storm sewer levy to include infrastructure required for the approved new communities is aligned to the 2016 principles and approach. This proposed amendment to the Off-site Levy Bylaw adheres to the principles of Benefit Allocation, Accountability, Transparency and Efficiency that were foundational to the off-site levy objectives and recommendations in 2016.

Administration considered a number of scenarios in determining how to best incorporate the required infrastructure in a way that supported the underlying principles in establishing the 2016 Bylaw, and respected the base methodology. Through this review, amendments to the bylaw are isolated to only the elements that need to be changed to provide for the funding of the additional items listed in Table 1 above. Other matters which would typically be reviewed as part of a comprehensive review will be considered as part of the next Off-site Levy Bylaw review that has commenced within Administration.

### Updates to the Transportation Levy

As part of the New Community Growth Strategy 2018 evaluation, one identified levy-eligible transportation project was not already included in the Off-site Levy Bylaw. The 80 Avenue NE/Stoney Trail flyover, an \$8.5 million, levy-eligible project required for the East Stoney business case, is necessary to provide emergency access, transit and active transportation mode access to support development. The need for this project was specifically identified through the New Community Growth Strategy 2018 evaluation process, which is why it was not included in the 2016 Off-site Levy Bylaw.

The annual escalation factor for the 2019 Transportation Levy rate is currently unknown and will not be known until mid-December 2018. As a result, Administration has estimated the 2019 Transportation Levy rate. With the addition of the new infrastructure, the projected 2019 Transportation Levy rate is \$135,720 per hectare, this is an increase of \$185 per hectare compared to the 2019 rates projected in the current Off-site Levy Bylaw. A more detailed description of all the proposed change for Transportation is included in Attachment 2.

### Update to the Utilities Levies

The original 2016 Off-Site Levy Bylaw for Water Resources relied on the Water Infrastructure Investment Plan 2015-2024 (the "WIIP"). When the WIIP was originally developed in 2014, most of the 14 new communities approved in 2018 July were not contemplated for development in this 10-year timeframe, meaning much of the water, sanitary and storm linear infrastructure necessary to service these new communities is not included within the existing Off-site Levy Bylaw calculation. To secure a funding source for this infrastructure, a total of \$151,298,000 of infrastructure must be added to the levy bylaw calculation. A more detailed description of all the proposed changes to the off-site levy calculations is included in Attachment 2.

Given that the inclusion of new utilities investments can be expected to lead to changes in the pattern of growth among the watershed catchments, Administration also made a change to the

**Off-site Levy Bylaw Amendment Arising from New Community Growth Strategy  
2018**

growth assumptions within the catchments. The change in growth distribution only affects the Storm Sewer Levy.

The proposed 2019 rates, including the 3.3 per cent escalation in accordance with the existing Off-site Levy Bylaw, are shown in Table 2 below.

**Table 2: 2019 Utilities Levy Update**

Levy		Proposed 2019 Levy (per hectare)	Difference from 2M2016 Bylaw (per hectare)
Water levy		\$44,845	+\$9,213
Sanitary sewer levy		\$51,781	+\$2,785
Storm sewer levy	Bow River	\$8,615	+\$917
	Elbow River	\$0	\$0
	Fish Creek	\$22,221	+\$22,221
	Nose Creek	\$17,425	+\$4,941
	Pine Creek	\$19,569	+\$1,037
	Shepard	\$45,565	(\$1,508)

The difference per hectare represents the increase/decrease over the 2019 rates under the current Off-site Levy Bylaw. The Elbow River watershed catchment has no additional infrastructure added nor a change in growth pattern. The Shepard watershed catchment has no additional infrastructure added and has additional growth attributed to this catchment to reflect the impact of the 14 new communities, for this reason the cost per hectare decreases. The Fish Creek watershed catchment has both additional infrastructure and additional growth attributed.

Summary

In summary, the projected 2019 rates represent between a 2.2 per cent to 7.8 per cent increase from the 2016 Off-site Levy Bylaw projected 2019 rates depending on the storm sewer catchment. Table 3 below displays the overall levy rates by storm sewer catchment area. A detailed description of off-site levy rate changes is included in Attachment 2.

**Table 3 – 2019 Projected Overall Change in Levies by Storm Sewer Catchment**

Catchment Area	Projected 2019 Levy (per hectare)	% Change from existing 2019 projected rates
Bow River	\$462,012	2.9%
Elbow River	\$453,397	2.8%
Fish Creek	\$475,619	7.8%
Nose Creek	\$470,822	3.8%
Pine Creek	\$472,966	2.9%
Shepard	\$498,962	2.2%

Next Steps

This proposed amendment to Off-site Levy Bylaw has been brought forward at this time to align with the One Calgary (2019-2022) service plan and budget decisions. As such, this report and

## **Off-site Levy Bylaw Amendment Arising from New Community Growth Strategy 2018**

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bylaw amendment are expected to be heard at the 2018 November 12 Public Hearing of Council, where members of the public will be welcome to speak to Council on this matter. Approval of the amended Off-Site Levy Bylaw prior to budget decisions would provide confirmation that the infrastructure for the 14 new communities has a funding source prior to Council approval of the One Calgary (2019-2022) service plan and budget.

The rates in the proposed bylaw in Attachment 1, reflect 2018 rates. The proposed Off-site Levy Bylaw is to come into force 2018 December 31 to prepare the updated rates for the escalation factor for the 2019 Transportation Levy rate. Until then, in this report, Administration has provided an estimate for the overall 2019 off-site levies.

Administration will communicate off-site levy changes to stakeholders on calgary.ca and will coordinate with BILD Calgary Region and NAIOP to communicate to their members and ensure industry members are aware of the new levy rates well in advance of implementation.

### **Stakeholder Engagement, Research and Communication**

Administration worked with BILD Calgary Region using a small representative working group of stakeholders. Administration met with the working group on four occasions. Early in the consultation, the working group communicated that key objectives would be to minimize the increase in levy amounts overall and to minimize the volatility of the increase among the storm sewer catchments. These objectives, overall, intended to minimize the impact of any increase in levies, both for developers with projects approved through the New Community Growth Strategy 2018, and developers with projects in other areas of the city. A letter of support has been provided by BILD Calgary Region and is included in Attachment 3.

Many industrial land owners and developers are within the Greenfield Area of the Off-site Levy Bylaw. In order to incorporate feedback from these affected stakeholders, a representative from the Calgary branch of NAIOP was added to the aforementioned working group. As well, a presentation was made to, and feedback collected from, the Industrial Strategy working group, an industrial development specific working group first initiated through the Industry/City Work Plan.

A presentation was also made to the Developer Advisory Committee of the Industry/City Work Plan, which includes a broad array of industry representation.

Finally, Administration also distributed an information package and held a public open house for interested stakeholders on 2018 September 21. Approximately 35 people attended, with representation from industrial and residential developers, from proponents which advocated for the 14 new communities in the New Community Growth Strategy 2018, and from others who did not specifically advocate for communities in the Strategy.

### **Strategic Alignment**

The recommendations in this report align with Council's recent direction on the New Community Growth Strategy 2018 and Section 5.2.5 of the Municipal Development Plan by considering the

## Off-site Levy Bylaw Amendment Arising from New Community Growth Strategy 2018

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municipal capacity to finance growth and infrastructure in consideration of growth and change decisions. The guiding principles of the 2016 Off-site Levy Bylaw were adhered to in the formation of the amendment such as Financial Sustainability and Benefit Allocation. This report aligns with One Calgary Council directive of A City of Safe and Inspiring Neighbourhoods: Growth of the city needs to be managed in a way that achieves the best possible social, environmental and economic outcomes within financial capacities. The cost of growth needs to be manageable for The City, while maximizing housing choice and affordability within these constraints. The report also aligns with the One Calgary Council directive of A Well-Run City by being focused on resilience and continuous improvement.

### **Social, Environmental, Economic (External)**

The off-site levies help deliver important complete community infrastructure and services by contributing to the funding of infrastructure that supports social and environmental wellbeing, and safe and resilient communities. The off-site levies also help support the economic benefits of community growth, such as attracting private investment and creating jobs.

### **Financial Capacity**

#### ***Current and Future Operating Budget:***

There is no impact to current operating budget as a result of this report. By adding the additional infrastructure into the off-site levy, the approved 0.75 per cent property tax rate and approved indicative utility rate are able to remain as approved in 2018 July, in alignment with Council's approvals through the New Community Growth Strategy 2018.

#### ***Current and Future Capital Budget:***

There is no impact to the current capital budget as a result of this report. The proposed amendments to the Off-site Levy Bylaw ensures that the new development will contribute its proportionate cost share of the infrastructure on which levies are charged. By adding the additional infrastructure into the off-site levy and securing the funding source, Administration can move forward with efforts to deliver the infrastructure.

### **Risk Assessment**

#### ***Funding source for required infrastructure***

The property tax and utility rate increases fund The City's share of the required infrastructure, while off-site levies fund the developers' share. If the amendments to the Off-site Levy Bylaw are not approved, an alternative funding source will be required for the developers' share of the infrastructure costs. The only anticipated available source of funding would be through a further increase in the property tax rate or a further increase in utility rates. Without another identified funding source, it would be unknown how required infrastructure in some or all of the 14 communities could proceed.

#### ***Market risk and financial impacts***

Consistent with the risk identified in the 2016 Off-Site Levy Bylaw report (C2016-0023), there is a continued risk that cash flow shortfalls will materialize if the assumptions about growth



## Off-site Levy Bylaw Amendment Arising from New Community Growth Strategy 2018

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patterns do not materialize. This means that if growth is lower than forecast, levies paid by developers will also be lower, The City will need to carry these costs for longer until levies paid are sufficient to cover costs. To manage potential shortfalls from a change in growth, greater than expected future utility rate increases may be required for debt servicing.

Another Utilities-specific risk is that growth may not occur in the separate watershed catchments as projected, and therefore levies may not be sufficient to service the principal and interest payments within a particular watershed catchment, even if overall growth is healthy. Any shortfalls would have to be funded from utility rates.

The current calculation methodology for Utilities' levies uses principal and interest payments to calculate the require cost recovery for a period of six years, this is consistent with the current off-site levy bylaw. The phase in of the principal and interest payments matches the timing of delivery of the required infrastructure. Therefore, the full cost is not spread out evenly over 25 years, rather it ramps up in the early years and trails off in the later years as the 25 year amortization period comes to an end. The result is that the off-site levy rate for the same infrastructure will be higher in future years than in this off-site levy period. Industry members have been made aware of this future rate increase and continue to support the current calculation methodology for the proposed off-site levy amendments. Additionally, if more development agreements come in in the next few years and benefit from the existing rate, the off-site infrastructure costs may not be recovered over the fullness of time. Utility rates will have to cover this shortfall.

These risks are partially mitigated by the upcoming full review of the Off-site Levy Bylaw that is to occur for 2021. At that time the opportunity to review the methodology for calculations will be available to determine the best solution, and two years of development will have elapsed, providing information on which to base these decisions.

### **REASON(S) FOR RECOMMENDATION(S):**

The proposed amendments to the Off-site Levy Bylaw will enable Council's direction on the New Community Growth Strategy 2018, will contribute to the financial sustainability of The City as it relates to capital infrastructure in greenfield areas, and ensure that the proportionate share of the cost of growth is borne by developers for this infrastructure.

### **ATTACHMENT(S)**

1. **Attachment 1 – Proposed Bylaw 41M2018**
2. Attachment 2 – Detail of Proposed Changes to the Off-site Levy Calculations
3. Attachment 3 – Letters Received

# PROPOSED

Report PFC2018-0973  
ATTACHMENT 1

## BYLAW NUMBER 41M2018

### BEING A BYLAW OF THE CITY OF CALGARY TO AMEND BYLAW 2M2016 THE OFF-SITE LEVY BYLAW

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**WHEREAS** Council has considered Reports C2018-0900 and C2018-0787 and considers it necessary to ensure a funding source exists for a substantial part of the infrastructure required to support new communities approved through the New Communities Growth Strategy 2018;

**AND WHEREAS** Council further considers it necessary to update the list of infrastructure included in the calculation of the off-site levies prior to scheduled review of the Off-Site Levies Bylaw 2M2016 in order that the proportionate share of the cost of off-site infrastructure attributable to new growth that provides servicing to these new communities is incorporated into 2M2016, including new rates for water, sanitary sewer, storm sewer and transportation infrastructure;

**AND WHEREAS** following an engagement and consultation process, The City of Calgary has updated the levies based on the application of the principles and criteria set out in the Off-Site Levies Regulation, Alta Reg 187/2017, and as outlined in The City of Calgary Off-Site Levy and Community Services Charges Background Report Addendum, contained as Schedule "B" of this bylaw;

**AND WHEREAS** notice of this bylaw has been provided pursuant to the provisions of sections 606 and 648 of the Municipal Government Act;

### **NOW, THEREFORE, THE COUNCIL OF THE CITY OF CALGARY ENACTS AS FOLLOWS:**

1. Bylaw 2M2016, the Calgary Off-site Levies Bylaw, is hereby amended as follows:
  - a. Section 4(2) is amended by inserting the following after the words "Schedule "C":  
"; as amended by The City of Calgary Off-Site Levy and Community Service Charges Background Report Addendum attached to this Bylaw as Schedule "D";
  - b. Schedule "B" is amended by deleting Table 1, entitled "Levy Rates in the Greenfield Area", in its entirety and replacing it with a new Table 1, entitled "Levy Rates in the Greenfield Area", attached hereto as Schedule "A"; and
  - c. Add a new Schedule "D", attached hereto as Schedule "B".

# PROPOSED

BYLAW NUMBER 41M2018

2. This bylaw comes into force on December 31, 2018.

READ A FIRST TIME ON \_\_\_\_\_

READ A SECOND TIME ON \_\_\_\_\_

READ A THIRD TIME ON \_\_\_\_\_

\_\_\_\_\_  
MAYOR

SIGNED ON \_\_\_\_\_

\_\_\_\_\_  
CITY CLERK

SIGNED ON \_\_\_\_\_



# PROPOSED

BYLAW NUMBER 41M2018

## SCHEDULE "B"

# PROPOSED

BYLAW NUMBER 41M2018

**Calgary**



**SCHEDULE "D"  
TO BYLAW 2M2016**

The City of Calgary

## **Off-Site Levy and Community Services Charges Background Report Addendum**

October 2018



# PROPOSED

**BYLAW NUMBER 41M2018**

Off-Site Levy and Community Services Charges Background Report  
Addendum

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# PROPOSED

**BYLAW NUMBER 41M2018**

Off-Site Levy and Community Services Charges Background Report  
Addendum

## EXECUTIVE SUMMARY

On 30 July 2018, Council approved the New Community Growth Strategy 2018. Certain transportation and water resources infrastructure required to service these new communities was not contemplated at the time of the 2016 Off-site Levy Bylaw. Council directed that this infrastructure be incorporated into the existing Bylaw 2M2016.

This Off-site Levy & Community Services Charges Background Report Addendum (hereafter referred to as the "Background Report Addendum") in combination with the Off-site Levy & Community Services Charges Background Report (December 2015) (the "2015 Background Report") forms part of the Off-site Levy Bylaw. The Background Report Addendum details the amended assumptions, infrastructure projects and capital costs underpinning the revisions to the levies based on the inclusion of new growth-related infrastructure to be funded through the Off-site Levy program. Jointly with the 2015 Background Report, the Background Report Addendum details the process used to deliver the update, infrastructure needs, calculation methodology and assumptions utilized to establish the amended Off-Site Levies.

These amendments are limited to only consider the inclusion of new growth-related infrastructure that provides servicing to new communities not previously contemplated under the 2016 Off-site Levy Bylaw. To support development of these new communities, additional infrastructure is required under the following infrastructure types: a

- Transportation
- Water Distribution
- Wastewater Collection
- Drainage Systems

This Background Report Addendum outlines amendments made in the determination of the Off-Site Levies to incorporate the new transportation and utility infrastructure. No changes are proposed for the Water Treatment Plant levies or the Community Services Charges, which means the levies applied in the Established Areas are unchanged. The proposed amendments align with the guiding principles established in consultation with stakeholders in 2015 and apply a consistent calculation methodology to the 2016 Off-site Levy Bylaw.

In alignment with the 2016 Off-site Levy Bylaw, the amendments ensure those who will use and benefit from the infrastructure pay their share of the costs in a fair and equitable manner. The amendments create certainty by providing stable charges to the development industry and by allowing the orderly and timely construction of infrastructure as determined by The City.





# PROPOSED

## BYLAW NUMBER 41M2018

### Off-Site Levy and Community Services Charges Background Report Addendum

Table 1 provides a summary of the Levy Rates amended based on the inclusion of new infrastructure as detailed in the Background Report Addendum.

**Table 1 – Amended Off-site Levy Rates for Greenfield Area**

Infrastructure	2018 Rate (\$/Ha)
Transportation	\$133,740
Water Distribution	\$43,413
Wastewater Collection	\$50,127
Drainage Systems - By Catchment	
Bow River	\$8,340
Elbow River	\$0
Fish Creek	\$21,511
Nose Creek	\$16,868
Pine Creek	\$18,943
Shepard	\$44,110



# PROPOSED

BYLAW NUMBER 41M2018

Off-Site Levy and Community Services Charges Background Report  
Addendum

## 1.0 INTRODUCTION

Calgary is a great city known worldwide for its quality of life and robust economy. As a result, it has continued to experience rapid growth. Despite the recent economic downturn, Calgary is forecast to grow by 1.3 million people in the next 60 years. Growth provides numerous benefits along with a requirement for investment in services and infrastructure to support the growth.

Developers fund the capital cost of the local infrastructure within new communities such as roads, sidewalks, parks and underground utilities. Growth also creates a need for additional or expanded infrastructure that is off-site from these communities such as water and wastewater systems, and major roads and interchanges. One of the tools used to help fund the capital cost of this infrastructure is to charge developers off-site levies. The Municipal Government Act (MGA) authorizes municipalities to create off-site levies that can be imposed at the time of subdivision or development permit approval.

In 2015, The City initiated a review and major update of off-site levies related to new or expanded transportation, water resources and community services infrastructure. Extensive stakeholder engagement contributed to the review and development of the 2016 Off-site Levy Bylaw, which was approved by Council on 2016 January 11.

On 30 July 2018, Council approved 14 new greenfield communities for development as part of the New Community Growth Strategy 2018. Certain transportation and water resources infrastructure required to service these new communities was not contemplated at the time of the 2016 Off-site Levy Bylaw. Council directed that this infrastructure be incorporated into the existing Bylaw 2M2016.

To reflect the approval of new growth areas, this Background Report Addendum has been developed to outline amendments made to the levy calculations to support the inclusion of new growth-related infrastructure to be funded through the Off-site Levy. The Background Report Addendum in combination with the Off-site Levy 2015 Background Report forms part of the Off-site Levy Bylaw.

### 1.1 Purpose of the Background Report Addendum

The amendments outlined within the Background Report Addendum are limited to the incorporation of new growth-related infrastructure not previously contemplated under the 2016 Off-site Levy Bylaw that provides servicing to the new communities. It adds to, but does not replace, the 2015 Background Report.

Additional infrastructure has been identified for the following infrastructure types:

- Transportation
- Water Distribution
- Wastewater Collection
- Drainage Systems

No changes are proposed for the Treatment Plant Levy or the Community Services Charges, which means the levies applied in the Established Areas are unchanged. Amendments outlined within the Background Report Addendum remain consistent with the guiding principles established in consultation with stakeholders in 2015. In response to the guiding principles of *Certainty, Clarity and Transparency* and *Efficiency*, the methodology and fundamental, underlying assumptions utilized to calculate the levy rates adopted in 2016 have not been altered. However, the amendments articulated in the Background Report Addendum recognize the additional infrastructure needs and ensure those that benefit from the infrastructure, pay for the infrastructure (*Benefit Allocation*) and that the *Financial Sustainability* of the Off-site Levy Program remains robust.



# PROPOSED

**BYLAW NUMBER 41M2018**

Off-Site Levy and Community Services Charges Background Report  
Addendum

## 2.0 STAKEHOLDER ENGAGEMENT

Extensive stakeholder engagement contributed to the review and development of the 2016 Off-site Levy Bylaw, which was approved by Council 2016 January 11. As the proposed amendments will not impact established area landowners, and given the nature of the amendments, a more focused approach was utilized to consult with greenfield stakeholders. This approach is consistent with the Principles and Criteria for Off-Site Levies Regulation within the MGA, which requires that "...the municipality must consult in good faith on the calculation of the levy with stakeholders in the benefiting area where the levy will apply" (Alberta Regulation 187/2017).

Administration worked with BILD Calgary Region to formulate a working group consisting of greenfield developers with and without newly identified infrastructure requirements to service the new growth areas. The working group met four times between 2018 August 27 and 2018 September 18. The intent of these meetings was to review, discuss and provide feedback related to the proposed infrastructure being added, amendment approach and levy calculations.

In addition to consulting with the working group, an information package related to the amendments was distributed to Industry organizations (BILD, NAIOP, BOMA) to notify stakeholders of the proposed amendments and provide opportunities for feedback. Lastly, an information session was held on 2018 September 21, to provide an in-person opportunity for stakeholders to attend and provide feedback on the proposed amendments. Stakeholders were notified through the information package, meetings with industry, and through BILD Calgary Region circulation for the information session; approximately 35 members of industry attended.



# PROPOSED

**BYLAW NUMBER 41M2018**

Off-Site Levy and Community Services Charges Background Report  
Addendum

## **3.0 GROWTH PROJECTIONS**

Growth projections identify the benefiting area and population over which infrastructure costs are allocated. Dividing the growth infrastructure cost by the benefiting area or population produces the levy rate per hectare or unit amounts referenced in the Bylaw.

Overall growth projections, as outlined in Chapter 4 of the Off-site Levy 2015 Background Report, along with the residential, non-residential, and industrial share of annual growth remain consistent with the December 2015 Background Report. Through the approval of the New Community Growth Strategy 2018, the projected distribution of residential growth between the watershed catchments from 2019-2024 was amended to reflect a revised growth pattern accounting for the new areas. This redistribution impacts the drainage system levies, which are calculated with a catchment-based methodology; the city-wide levies are unaffected by these revisions.



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## 4.0 AMENDMENTS

### 4.1 Transportation

The City of Calgary’s Municipal Development Plan and Calgary Transportation Plan set out a clear framework for development growth over a 60-year timeline with associated transportation infrastructure requirements to build out the plans, as envisioned. The transportation Off-site Levy provides a mechanism for greenfield growth to contribute to the cost of transportation infrastructure based on the benefit allocated to greenfield development.

#### 4.1.1 INFRASTRUCTURE NEEDS

Through the approval of the New Community Growth Strategy 2018 on 2018 July 30, the 80<sup>th</sup> Avenue / Stoney Trail Overpass was identified as an additional infrastructure need not contemplated in the 2016 Bylaw. Details related to the 80<sup>th</sup> Avenue / Stoney Trail Overpass are described in Table 2. The cost estimates are based on a Class V cost estimate, as per the Corporate Project Management Framework definitions. Cost estimates for new infrastructure were determined through the New Community Growth Strategy 2018 process.

**Table 2 – New Transportation Infrastructure Costs**

Infrastructure	New Greenfield Area Project	Total New Greenfield Area Transportation Infrastructure Cost (\$millions)
Interchanges	80 <sup>th</sup> Avenue / Stoney Trail Overpass	\$8.5

Appendix A of the Background Report Addendum has been updated to include the newly identified infrastructure project.

The total transportation greenfield capital costs identified in the 2016 Bylaw were \$2,620 million. Inclusion of the 80<sup>th</sup> Avenue / Stoney Trail Overpass results in a revised greenfield capital cost of \$2,629 million as displayed in Table 3.

**Table 3 – Total Transportation Infrastructure Costs**

Infrastructure	Total Transportation Infrastructure Costs (\$millions)
Established Areas Projects	\$6,062
Greenfield Areas Projects	\$2,629



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## 4.1.2 AMENDMENT APPROACH

The transportation levy is based on a city-wide approach over a 60-year time horizon. The amendment approach does not contemplate adjustments to the growth projections or the allocation of benefit assigned to greenfield growth determined in the 2016 Bylaw. The new infrastructure identified contributes to the overall city transportation network and provides benefit to greenfield growth anticipate over 60-year time horizon. As such, the amendment approach recalculates the 2016 levy based on the new total transportation infrastructure costs allocated to greenfield development over the 60-year time horizon. The recalculated levy is then adjusted annually to determine the 2019 transportation levy rate.

## 4.1.3 LEVY CALCULATION

Details of the methodology and benefit allocation remain unchanged from Chapter 5 of the Off-site Levy 2015 Background Report.

The levy calculation remains unchanged from the original 2015 Background Report methodology:

$$\text{Levy Rate} = \frac{\text{GF Area Reduction (\%)} \times [(\text{GF Costs (\$)} \times \text{GF Benefit (\%)} + \text{Established Costs (\$)} \times \text{GF Benefit (\%)})]}{60 \text{ year GF Developable Area (Ha)}}$$

Based on the updated total greenfield transportation costs identified in Table 3 the amended levy calculation is as follows:

$$\text{Levy Rate (2016 Recalculation)} = \frac{0.9 \times [(\$2.629\text{M} \times 67\%) + (\$6.062\text{M} \times 17\%)]}{18,345 \text{ Ha}} = \$136,976/\text{Ha}$$

The transportation levy is adjusted annually on January 1 in the amount of the percentage equal to the average Statistics Canada non-residential construction price index (NRCPI) for Calgary for the previous four published quarters. The transportation levy rate effective 2018 December 31 is \$133,740 per hectare, as displayed in Table 4. This rate will be subject to the annual adjustment, which will be applied on 2019 January 1.

**Table 4: Transportation Levy**

Year	Transportation Levy
2018	\$133,740



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## 4.2 Water Resources

The Water Resources Off-site Levy program is divided into the following three components:

- Water Distribution & Wastewater Collection – including upgrades and extensions to water distribution infrastructure and wastewater collection infrastructure.
- Drainage Systems – including new and upgraded drainage facilities and collection systems
- Water and Wastewater Treatment – including new plants, upgrades and capacity for wastewater and water treatment

A variety of additional water distribution, wastewater collection and drainage systems infrastructure needs were identified to provide service to new growth areas that were not contemplated in the 2016 Bylaw. No additional infrastructure needs were identified for water and wastewater treatment; these levies remain unchanged from the 2015 Background Report.

Through development of the Water Resources levy program in 2015 four Guiding Principles, as described in Section 2.3 of the 2015 Background Report, were particularly important. These specific principles guided the amendment approach utilized and are as follows:

- **Certainty** – A primary objective of the water resources program is to provide revenue assurance to the utilities.
- **Financial Sustainability** – Long term financial sustainability of the utilities is extremely important. There are two parts to this objective. The first is resiliency to ensure that the framework for funding and financing of growth infrastructure is responsive to changing growth levels. The second part is to manage financial risks in the business.
- **Fairness and Equity** – Fairness and equity ensures that those benefiting from the infrastructure are paying for that benefit.
- **Efficiency** – Finally, the water resources program provides an efficient levy process that is simple to administer and understand.

### 4.2.1 AMENDMENT APPROACH

In 2015 the Water Resources levy program methodology to calculate water distribution, wastewater collection and drainage systems levy rates was updated. The levy program was based on a 10-year timeframe reflective of The City's 10-year capital planning process (2015-2024). When the Bylaw was passed in 2016 the levy calculation was adjusted to 9 years based on the timeframe remaining in the 10-year capital plan.

In alignment with the guiding principles articulated above, the amendment approach updates the new infrastructure needs identified within the remaining 6-year timeframe (2019-2024) based on the new growth areas and recalculates the water, wastewater and drainage systems levy rates. Recognition of the new infrastructure needs in the levy rates reflects a responsiveness to the funding and financing of new infrastructure needs to support development of the new communities along with a reciprocal need to ensure those benefiting pay for the infrastructure. This provides a consistent approach to the levy calculation methodology established through extensive stakeholder engagement in 2015.



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The levy calculation in the 2015 Background Report included a number of assumptions to calculate the levy rate, including interest rate projections and project timelines. All assumptions remain consistent with the 2016 Bylaw, save for total project costs to allow for the inclusion of new growth infrastructure and residential growth distribution to account for the new growth areas.

#### 4.2.2 INFRASTRUCTURE NEEDS

The water distribution and wastewater collection off-site levies are applied across all greenfield areas, while application of the drainage system levy is dependent on which of the six major watershed catchments areas the subject lands are located within. These catchments are: Bow River, Elbow River, Fish Creek, Nose Creek, Pine Creek and Shepard.

Table 5 summarises the total costs for water distribution, wastewater collection and drainage systems infrastructure required to service growth from 2016 – 2024. Further details on costs are provided in Appendix B of the Background Report Addendum.

**Table 5 - Water Distribution, Wastewater Collection and Drainage Systems Total Infrastructure Costs**

Infrastructure	Total Infrastructure Costs -2016 Bylaw (\$millions)	Total New Infrastructure Costs (\$millions)	Total Infrastructure Costs – 2016 – 2024 (\$millions)
Water Distribution	266.4	98.3	364.7
Wastewater Collection	497.0	29.1	526.1
Drainage Systems	67.9	24.0	91.9
<b>Total</b>	<b>831.3</b>	<b>151.3</b>	<b>982.6</b>

Cost estimates used in the levy calculation are generally Class V cost estimates, as per the Corporate Project Management Framework definitions. These estimates include engineering, contingency and project administration. Cost estimates for new infrastructure were determined through the New Community Growth Strategy 2018 process.





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## 4.2.3. ALLOCATION OF BENEFIT

### *Water Distribution & Wastewater Collection*

The approach to allocating costs to greenfield growth for the new infrastructure needs identified is consistent with the 2016 Bylaw - all sanitary and water linear extensions to serve new development areas are 100% attributable to new growth, while costs allocated to growth for upgrades are undertaken on a project by project basis. Detailed allocations can be found in Appendix B of the Background Report Addendum.

Table 6 summarises the allocation of water distribution and wastewater collection infrastructure costs to greenfield growth. The allocation includes infrastructure identified in the 2016 Bylaw plus the new infrastructure needs identified.

**Table 6 - Greenfield Allocation of Water Distribution & Wastewater Collection Infrastructure Costs**

Infrastructure	Total Infrastructure Costs – 2016 – 2024 (\$millions)	Greenfield Water Distribution & Wastewater Collection Infrastructure Costs – 2016 - 2024 (\$millions)
Water Distribution	364.7	186.2
Wastewater Collection	526.1	231.6
<b>Total</b>	<b>890.8</b>	<b>417.8</b>

### *Drainage Systems*

The approach to allocating costs to greenfield growth for new infrastructure needs identified is consistent with the 2016 Bylaw - none of the drainage projects included in the levy calculation benefit existing development or regional areas and drainage system levy rates only include the project costs determined to benefit the Greenfield Area of the drainage catchment.

Table 7 summarises the allocation of drainage system infrastructure costs to green growth. The allocation includes infrastructure identified in the 2016 Bylaw plus the new infrastructure needs identified.

**Table 72 – Greenfield Allocation of Drainage System Infrastructure Costs**

Infrastructure	Total Infrastructure Costs – 2016 – 2024 (\$millions)	Greenfield Drainage System Infrastructure Costs – 2016 - 2024 (\$millions)
Greenfield Area	91.9	68.5



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## 4.2.4. LEVY CALCULATION

The calculation utilized for the amended levy rates for water distribution, wastewater collection and drainage systems is consistent with Chapter 6 of the Off-site Levy 2015 Background Report. The amended calculation accounts for the inclusion of new infrastructure costs and adjusts the residential distribution of growth to reflect future growth within new growth areas. The calculation utilized for water, wastewater, and drainage systems levy rates is as follows.



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$$\text{Debt Servicing for Greenfield Growth-Related Capital Costs (9 yrs.)} = \text{Cost Base Future Value}$$

$$\frac{\text{Cost Base Future Value}}{(1+\text{Discount Rate})^{n1\dots n9}} = \text{Cost Base Present Value}$$

$$\frac{\text{Cost Base Present Value}}{\text{Greenfield Developable Land Forecast (9 yrs.)}} = \text{Off-site Levy}$$

**Table 83 – 2018 Water Distribution and Wastewater Collection Levy Rate (\$/Ha.)**

Water Distribution	\$43,413
Wastewater Collection	\$50,127

The proposed Off-site Levy for drainage systems is shown in the following table.

**Table 9 – 2018 Drainage System Levy Rate by Catchment**

Catchment	\$ per Hectare
Bow River	\$8,340
Elbow River	-
Fish Creek	\$21,511
Nose Creek	\$16,868
Pine Creek	\$18,943
Shepard	\$44,110

Water distribution, wastewater collection and drainage system levy rates are increased annually on January 1 by 3.3 per cent. The proposed rates in Tables 8 and 9 will be effective 2018 December 31. These rates will be subject to the annual January 1 increases, which will be applied on 2019 January 1.



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## 5.0 SUMMARY OF OFF-SITE LEVIES

### 5.1 Summary of Amended Off-site Levy Rates for Greenfield Area

Table 10 below provides a summary of the 2018 Levy Rates amended based on the inclusion of new infrastructure as detailed in the Background Report Addendum. These rates will come into effect 31 December 2018 and be subject to the annual adjustments applied on 1 January 2019.

**Table 10 – Amended Off-site Levy Rates for Greenfield Area**

Infrastructure	2018 Rate (\$/Ha)
Transportation	\$133,740
Water Distribution	\$43,413
Wastewater Collection	\$50,127
Drainage Systems - By Catchment	
Bow River	\$8,340
Elbow River	-
Fish Creek	\$21,511
Nose Creek	\$16,868
Pine Creek	\$18,943
Shepard	\$44,110



### APPENDIX A - TRANSPORTATION

Table 11 (Update to Table 34 in 2015 Background Report) – Greenfield Infrastructure Transportation Project List  
New infrastructure is identified in red text.

Category	Project Name	Total Cost (millions)
Interchanges	Métis Tr / Airport Tr I/C	\$70.0
	Airport Tr / Stoney Tr NE (Ultimate)	\$60.0
	Macleod Tr / 194 AV SE I/C	\$70.0
	Macleod Tr / 210 AV SE I/C	\$70.0
	West 22X/53 St SW Interchange	\$70.0
	West 22X/ 85th St W Interchange	\$70.0
	West 22X/69 St W interchange	\$70.0
	Deerfoot Tr / 212 AV SE I/C	\$16.0
	104 St / Marquis of Lorne (Fly Over) SE	\$30.0
	120 St / Marquis of Lorne I/C SE	\$70.0
	East Freeway/130th Ave SE I/C (To/from the North)	\$40.0
	East Freeway/106th Ave Trail Fly Over	\$30.0
	Glenmore Tr / 68 ST SE I/C	\$70.0
	Glenmore / Garden Rd SE	\$70.0
	Glenmore / 116th E I/C Se (Second Structure and Upgrade requirements)	\$70.0
	Peigan Tr / 52 ST NE I/C	\$70.0
	Peigan Trail/68th St I/C	\$60.0
	East Freeway / Memorial Dr Flyover	\$30.0
	16 AV NE / 68 ST NE I/C	\$70.0
	East Freeway/ 32 AV NE Flyover	\$30.0
	64 Ave / East Freeway Flyover	\$30.0
	Airport Trail/36th St NE I/C	\$40.0
	Airport Trail/60th St NE I/C	\$75.0
	Métis Tr / 64 AV NE I/C	\$70.0
	Metis Trail/128th Ave NE I/C	\$70.0
	60 St / Stoney Tr I/C NE	\$50.0
	Deerfoot Tr / 128 AV NE I/C	\$60.0
	Deerfoot Tr / Country Hills Blvd I/C (second structure)	\$30.0
	Deerfoot Tr/Airport Trail Ultimate	\$50.0
	160 Ave / Hwy 2 NE (second structure and upgrade requirements)	\$30.0
	11th Street/Stoney Trail I/C	\$50.0
	Centre St / Stoney Tr (second structure and upgrade requirements)	\$15.0
	14 St / Stoney I/C	\$40.0
Shaganappi Tr/Stoney Tr (second structure and upgrade requirements)	\$15.0	
Centre St / Hwy 566 I/C	\$80.0	
Crowchild Tr / 12 Mile Coulee Rd I/C	\$70.0	
80 <sup>th</sup> Avenue / Stoney Trail Overpass	\$8.5	
	<b>Total</b>	<b>\$1,919.5</b>



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<b>Road Structures over Rail/Creek</b>	CP Rail at 194th Ave SW	\$25.0
	CP Rail at 210th Ave SW	\$25.0
	210 Ave SW at Pine Creek	\$20.0
	Pine Creek Crossing in South Macleod	\$25.0
	CP Rail at 114th Ave SE	\$25.0
	WID Canal Crossing at Glenmore Trail SE	\$20.0
	144th Ave at West Nose Creek	\$25.0
	160th Ave at West Nose Creek	\$25.0
	160th Ave at Rail and Creek Crossing (6 Lane X-section over creek, rail, service road)	\$53.0
	11th St at Nose Creek/CPR Rail Crossing	\$20.0
	<b>Total</b>	<b>\$263.0</b>
<b>Expressways</b>	Airport Tr - Barlow Tr, Airport - 19 St interchanges and widening 36 St to 60 St NE	\$83.0
	88 Street SE skeletal road extension	\$17.0
	<b>Total</b>	<b>\$100.0</b>
<b>Ring Road Connections</b>	SW and West Ring Road Connections	\$133.3
		<b>Total</b>
<b>Greenfield Traffic</b>	296 signals required	\$81.4
		<b>Total</b>
<b>Pedestrian Overpasses</b>	Stoney Tr, between Centre St and 14 St NW	\$6.0
	Stoney Tr, between Centre St and 11 St NE	\$6.0
	Airport Tr, east of Metis Tr, between Cityscape and Savannah	\$6.0
	Country Hill Bv NE, west of Stoney Trail, between North Cornerstone and South Cornerstone	\$6.0
	52 Street SE, between Auburn Bay and Mahogany	\$6.0
	Bow River, between Legacy and Cranston	\$12.0
	<b>Total</b>	<b>\$42.0</b>
<b>BRT Infrastructure</b>	162 Avenue SW, SW Ring Road to west side of Providence	\$90.0
		<b>Total</b>
<b>Greenfield Transportation Infrastructure List: TOTAL</b>		<b>\$2,629.2</b>



### APPENDIX B – WATER RESOURCES

Table 12 (Update to Table 35 in 2015 Background Report) – Water Distribution, Wastewater Collection and Drainage Systems Infrastructure Project Lists  
New infrastructure is identified in red text.

Category	Project Name	Allocation				Total Cost (millions)
		% Growth	% Greenfield	% Established	% Regional	
<b>Water Distribution &amp; Wastewater Collection</b>						
<b>Water Linear Extension Infrastructure</b>	Ogden Feeder Main	100.0%	27.9%	55.0%	17.1%	\$38.5
	Lower Sarcee Feeder Main	100.0%	71.1%	15.7%	11.8%	\$30.9
	210 Ave SW Pump Station	100.0%	69.1%	17.8%	13.0%	\$15.0
	210 Ave Feeder Main	100.0%	69.1%	17.8%	13.0%	\$12.0
	East McKenzie FM	100.0%	29.8%	54.6%	15.6%	\$6.4
	Northridge FM Ph 1 and 2	100.0%	83.2%	16.8%	0.0%	\$30.7
	Northridge Reservoir Land	100.0%	83.2%	16.8%	0.0%	\$3.2
	Northridge Reservoir	100.0%	83.2%	16.8%	0.0%	\$12.1
	North Ridge West Leg Feedermain	100.0%	83.2%	16.8%	0.0%	\$20.8
	Belvedere Water Feeder Main Ph 1 and 2	100.0%	100.0%	0.0%	0.0%	\$23.0
	Haskayne Feedermain	100.0%	100.0%	0.0%	0.0%	\$11.3
	Providence 146 Ave Feedermain, Starlight East Pump Station and Westview Reservoir and Land	100.0%	100.0%	0.0%	0.0%	\$31.1
						<b>Total</b>
<b>Sanitary Linear Extension Infrastructure</b>	North Ridge Macdonald Trunk	100.0%	100.0%	0.0%	0.0%	\$7.1
	West Pine Creek Sanitary Trunk Ph 2	100.0%	100.0%	0.0%	0.0%	\$46.6
	Seton Tunnel Ph 1	100.0%	100.0%	0.0%	0.0%	\$31.8
	Seton Tunnel Ph 2	100.0%	100.0%	0.0%	0.0%	\$18.8
	144 Ave NE San Trunk	100.0%	100.0%	0.0%	0.0%	\$24.1
	North Beddington San Ph 2 CFA	100.0%	100.0%	0.0%	0.0%	\$8.9
	Beddington Creek II East Leg	100.0%	100.0%	0.0%	0.0%	\$2.7
	Belvedere Sanitary Trunk	100.0%	100.0%	0.0%	0.0%	\$6.0
	Glacier Ridge East Basin Sanitary Trunk	100.0%	100.0%	0.0%	0.0%	\$4.0
	Glacier Ridge West Basin Sanitary Trunk	100.0%	100.0%	0.0%	0.0%	\$8.2
	Haskayne Sanitary Trunk	100.0%	100.0%	0.0%	0.0%	\$3.9
	Rangeview Sanitary Trunk Laterals	100.0%	100.0%	0.0%	0.0%	\$7.0
						<b>Total</b>
<b>Sanitary Upgrade Infrastructure</b>	Redevelopment	TBD	0.0%	100.0%	0.0%	\$20.9
	Saddle Ridge Sanitary Upgrade	100.0%	46.2%	53.8%	0.0%	\$5.1
	Bowness Trunk Upgrade	87.0%	19.3%	40.5%	40.2%	\$48.6
	Shouldice Trunk Upgrade	61.0%	11.6%	69.3%	19.1%	\$24.0
	Nose Creek Trunk Upgrade	88.0%	48.4%	18.3%	33.3%	\$87.7
	Inglewood Trunk Upgrade	87.0%	24.0%	57.4%	18.7%	\$55.9
	McKenzie Siphon Upgrade	38.0%	40.5%	59.5%	0.0%	\$7.4
	17th Ave Trunk Upgrade	TBD	0.0%	100.0%	0.0%	\$4.6
	Beltline Trunk Upgrade	TBD	0.0%	100.0%	0.0%	\$1.5
	Forest Lawn LS Sewer Upgrading 1	55.0%	0.0%	100.0%	0.0%	\$6.7
	Forest Lawn LS Sewer Upgrading 2	68.0%	0.0%	100.0%	0.0%	\$6.6



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	Fish Creek West Sub Trunk	TBD	0.0%	TBD	TBD	\$14.3
	Tsuu Tina Connection Upgrade	TBD	0.0%	TBD	TBD	\$9.4
	Elbow Drive Trunk Upgrade 1	TBD	0.0%	100.0%	0.0%	\$1.4
	Elbow Drive Trunk Upgrade 2	TBD	0.0%	100.0%	0.0%	\$16.1
	Penbrooke Trunk Upgrades	89.0%	0.0%	100.0%	0.0%	\$46.7
					<b>Total</b>	<b>\$356.9</b>
Category	Project Name	Allocation				Total Cost (millions)
		% Growth	% Greenfield	% Established	% Regional	
<b>Water Upgrade Infrastructure</b>	Airdrie FM Tie-in and Meter Chamber Relocation	100.0%	100.0%	0.0%	0.0%	\$1.4
	Pump Station 36 Installation	100.0%	83.2%	16.8%	0.0%	\$0.2
	Redevelopment	TBD	0.0%	100.0%	0.0%	\$11.5
	South Glenmore Reservoir Basin II	60.0%	29.8%	54.6%	15.6%	\$40.4
	Bearspaw Pump Station STN012 Upgrade	37.0%	28.3%	40.6%	31.1%	\$6.6
	Bearspaw Pump Station STN020 Upgrade	37.0%	28.3%	40.6%	31.1%	\$2.0
	Nose Hill Feedermain	37.0%	28.3%	40.6%	31.1%	\$37.8
	Country Hills Blvd Uptown Feedermain	37.0%	28.3%	40.6%	31.1%	\$29.8
					<b>Total</b>	<b>\$129.6</b>
Drainage Facilities & Network						
<b>Drainage Facilities &amp; Network</b>	North Ridge Macdonald Trunk	100.0%	100.0%	0.0%	0.0%	\$7.5
	Redevelopment	TBD	0.0%	100.0%	0.0%	\$20.8
	Priddis Storm Trunk Outfall	100.0%	100.0%	0.0%	0.0%	\$23.8
	144 Av NE Storm Trunk Outfall*	100.0%	100.0%	0.0%	0.0%	\$10.4
	North Beddington Storm Trunk	100.0%	100.0%	0.0%	0.0%	\$1.7
	Riverbend Trunk Pond	TBD	0.0%	100.0%	0.0%	\$2.6
	Seton Storm Trunk	100.0%	100.0%	0.0%	0.0%	\$8.0
	Seton Storm Trunk Ph 2	100.0%	100.0%	0.0%	0.0%	\$3.5
	Glacier Ridge West Basin Storm Trunk and Outfall	100.0%	100.0%	0.0%	0.0%	\$3.8
	Haskayne Storm Outfall	100.0%	100.0%	0.0%	0.0%	\$2.0
Providence Storm Trunk and Outfall	100.0%	100.0%	0.0%	0.0%	\$7.8	
					<b>Total</b>	<b>\$91.9</b>

\*144 Av NE Storm Trunk Outfall was included in the 2015 Background Report with no project cost. This has been amended in the Background Report Addendum to reflect the projected project cost.



### Detail of Proposed Changes to the Off-site Levy Calculations

The purpose of this attachment is to provide the technical details and calculations of the proposed amendments discussed in the cover report. Details of the methodology to establish the off-site levies can be found in the 2015 Background Report and Background Report Addendum.

Through the New Community Growth Strategy 2018 process, the infrastructure summarized in Table 1 was identified as levy-eligible infrastructure required for the 14 approved communities that was not currently in the 2016 Off-site Levy Bylaw.

**Table 1: Summary of Capital Infrastructure to be added to the Off-site Levy to Support the New Community Growth Strategy 2018**

Infrastructure	Total Capital Costs (\$M) 2019-2022	Developer Portion in the Off-site Levy (\$M)
<b>Transportation Total</b>	<b>\$8.5</b>	<b>\$5.1</b>
Water Distribution	\$98.2	\$92.7
Wastewater Collection	\$29.1	\$29.1
Drainage System	\$24.0	\$24.0
<b>Utilities Total</b>	<b>\$151.3</b>	<b>\$145.8</b>

#### Timing of the Amendments to the 2016 Bylaw

An escalation rate is applied every year to the levy rates on January 1, as per Section 6(7) of the 2016 Bylaw. For the Water Resources rates, the escalation rate is 3.3 per cent, per year. For the Transportation rates, the escalation rate is the percentage equal to the average Statistics Canada Non-Residential Construction Price Index (“NRCPI”) for Calgary for the previous four published quarters. The Q3 2018 non-residential construction price index is unknown at this time and will not be available until mid-December 2018.

The proposed amendments, and the resulting 2018 levy rates, will come into effect on 2018 December 31. These amended 2018 levy rates will then be subject to the annual increases applied on 2019 January 1. The 2019 rates shown for the Transportation levy are estimates based on current projection of the NRCPI. The 2019 rates for the Water Resources levies are the rates that will be in effect after the 3.3 per cent escalation rate is applied to the amended 2018 rates on 2019 January 1.

#### Transportation Levy Infrastructure

To support the approved East Stoney ASP development, it was identified that the 80 Avenue NE/Stoney Trail overpass is required. This is the only required levy-eligible transportation infrastructure project identified in the New Community Growth Strategy 2018 not included in the 2016 Bylaw. The overpass is estimated at a total cost of \$8.5 million, of which \$5.1 million is attributable to greenfield growth.

The Transportation Off-Site Levy calculation is (GF = greenfield):

$$\text{Levy Rate} = \frac{\text{GF Area Reduction}(\%) \times [(\text{GF Costs}(\$) \times \text{GF Benefit}(\%)) + (\text{Established Costs}(\$) \times \text{GF Benefit}(\%))]}{60 \text{ year GF Developable Area (Ha)}}$$

In the 2015 Background Report, in 2016 dollars, approximately \$2.6 billion of levy-eligible greenfield capital infrastructure (“GF Costs”) was identified over the 60 year period. The New Community Growth Strategy 2018 adds \$8.5 million, in 2016 dollars, to this total. No further

changes are required to incorporate this infrastructure into the levy rate. Table 2 shows the amended levy rate, incorporating the 80 Avenue NE/Stoney Trail overpass:

**Table 2: Transportation Levy Update**

2018 Levy (2M2016 Bylaw) per hectare	Proposed Amended 2018 Levy per hectare	Projected 2019 Levy (2M2016 Bylaw) per hectare	Projected Amended 2019 Levy per hectare	Projected Difference per hectare (2019)
\$133,558	\$133,740	\$135,535*	\$135,720*	+\$185

\*2019 levy rate is estimated and subject to change once NRCPI rates are confirmed in Q4 2018.

### Utilities Levies Infrastructure

Through the New Communities Growth Strategy 2018, approximately \$151 million in required levy-eligible utility infrastructure was identified for the 14 new communities. This infrastructure affects three of the four Utility levy categories:

1. Water Levy;
2. Sanitary Sewer Levy; and
3. Storm Sewer Levies.

Water Resources generally funds the utility infrastructure projects through debt. The off-site levies cover the principal and interest payments over the timeframe of the calculation, details of which can be found in Sections 6.2 and 6.3 of the 2015 Background Report. The water levy, sanitary sewer levy and storm sewer levies are all calculated using the following formula:

$$\text{Levy Rate} = \frac{\text{Cost Base Present Value}}{\text{Greenfield Developable Land Forecast (X Years)}}$$

### *Levy Timeframe*

For the 2016 Bylaw, the levy timeframe (“X Years”) was the remaining period of the Water Infrastructure Investment Plan 2015-2024 (WIIP), or 9 years (2016-2024). The timeframe for the levy calculations has been adjusted from 9 years (2016-2024) to 6 years (2019-2024). An end date of 2024 aligns with the current WIIP (2015-2024) and approved program for capital investment by Water Resources.

### *Cost Base Present Value*

The Cost Base Present Value is the present value of the principal and interest payments for the infrastructure projects over a certain timeframe (X years). For these levy amendments, the forecasted principal and interest payments were projected over the new levy timeframe of 2019-2024, in accordance with timelines identified in the New Community Growth Strategy 2018, and added to the original principal and interest forecast to calculate the amended Cost Base Present Value. For consistency, the amendments use the same interest rates used to calculate the original Cost Base Present Value in 2016.

### *Greenfield Developable Land Forecast*

The Greenfield Developable Land Forecast for the water and sanitary sewer levies remains unchanged from the 2016 Bylaw, at 401 hectares per year until 2024.

The total growth forecast for the storm sewer levies is also 401 hectares per year until 2024. However, unlike the other levies, the storm sewer capital costs and growth forecasts are divided between the six watershed catchments that are outlined in the 2015 Background Report. The

capital costs benefitting growth in each catchment is paid for only by growth in that catchment. The original distribution of growth from the 2016 Bylaw was based on known and projected approvals at that time. However, the approval of the 14 new communities in the New Community Growth Strategy 2018 had a material impact on the forecasted growth pattern, as some areas would be moving forward that were not contemplated in 2015. Administration determined an adjustment to the distribution of growth across the watershed catchments was required to reflect the impact of the New Community Growth Strategy 2018. The growth distribution forecast was updated to reflect that some growth would be redistributed between the watershed catchments.

Table 3 shows the amended water, sanitary sewer, and storm sewer levy rates:

**Table 3: Utilities Levy Update**

	2018 Levy (2M2016 Bylaw) per hectare	Proposed 2018 Levy per hectare	2019 Levy (2M2016 Bylaw) per hectare	Proposed 2019 Levy per hectare	Difference per hectare (2019)
<b>Water levy</b>	\$34,494	\$43,413	\$35,632	\$44,845	+\$9,213
<b>Sanitary sewer levy</b>	\$47,431	\$50,127	\$48,996	\$51,781	+\$2,785
<b>Storm sewer levies</b>					
<i>Bow River</i>	\$7,452	\$8,340	\$7,698	\$8,615	+\$917
<i>Elbow River</i>	\$0	\$0	\$0	\$0	\$0
<i>Fish Creek</i>	\$0	\$21,511	\$0	\$22,221	+\$22,221
<i>Nose Creek</i>	\$12,085	\$16,868	\$12,484	\$17,425	+\$4,941
<i>Pine Creek</i>	\$17,940	\$18,943	\$18,532	\$19,569	+\$1,037
<i>Shepard</i>	\$45,569	\$44,110	\$47,073	\$45,565	(\$1,508)

Summary of Levy Impacts

Incorporating the proposed amendments, the overall impacts by watershed catchments are identified in Table 4:

**Table 4: Overall Change in Levies by Watershed Catchments**

Watershed Catchment	2018 Levy (2M2016 Bylaw) per hectare	Amended 2018 Levy per hectare	Projected 2019 Levy (2M2016 Bylaw) per hectare*	Projected amended 2019 Levy per hectare*	% Change (2019)*
Bow River	\$438,281	\$450,966	\$448,912	\$462,012	2.9%
Elbow River	\$430,829	\$442,626	\$441,215	\$453,397	2.8%
Fish Creek	\$430,829	\$464,137	\$441,215	\$475,619	7.8%
Nose Creek	\$442,914	\$459,494	\$453,698	\$470,822	3.8%
Pine Creek	\$448,769	\$461,569	\$459,747	\$472,966	2.9%
Shepard	\$476,398	\$486,735	\$488,287	\$498,962	2.2%

\*2019 levy rate is estimated and subject to change once NRCPI rates are confirmed in Q4 2018.

## Letters Received



21 September 2018

City of Calgary Planning & Development  
The City of Calgary  
PO Box 2100, Station M  
Calgary, AB  
T2P 2M5  
Attn: Kathy Davies Murphy, Growth & Strategic Services

Dear Kathy

**Re: Amendments to Off-Site Levy Bylaw 2M2016**

BILD Calgary Region provides this letter to acknowledge the proposed amendments to the Off-Site Levy Bylaw 2M2016.

BILD Calgary Region (BILD CR) worked closely with the Growth Strategies team on the New Communities Growth Strategy that led to the July 30th, 2018 approval of 14 new communities in developing areas.

BILD CR was involved in the discussions to find a funding source for the approved communities. After a lengthy exploration of different funding mechanisms, the City determined that only an amendment to the Off-site levy Bylaw would provide the required source of funding for the developer portion of the additional infrastructure needed for the 14 communities.

As part of City and industry discussions, BILD CR requested that administration limit the levy adjustments to only those required for the 14 new communities, as this change is occurring within the term of the current OSL (off-site levy) bylaw. Further, BILD CR requested that the methodology used to calculate the amended levies be consistent with the original calculations used when the Bylaw was created in 2016. Administration agreed to these requests.

BILD CR believes that the amended levies presented at an open house for industry on September 21st have been calculated as per our requested methodology and as such we acknowledge Administration's request to Council to amend Bylaw 2M2016.

## Letters Received

Yours truly,

**BILD Calgary Region**



Guy Huntingford  
Chief Executive Officer

c.c. Stuart Dagleish, General Manager Planning & Development, City of Calgary  
BILD Calgary Region, Board of Directors