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2019 CAPITAL BUDGET BRIEFING NOTE

State of Good Repair (SOGR) Backlog

Issue/Background:

This briefing note presents the State of Good Repair (SOGR) Backlog for Tax and Rate Supported City Programs and Agencies, and the impact investments in the 2019 – 2028 Staff Recommended Capital Budget and Plan will have on the City's SOGR Backlog.

The City owns an inventory of physical assets valued at \$94 billion as shown in Table 1 below:

Table 1: City's Physical Infrastructure

		Estimated Asset Value
Transportation Infrastructure	- 5,600 km of roads & 130 km of expressways - 900 bridges/culverts	\$27 Billion
Water & Wastewater Infrastructure	- 4 water filtration & 4 wastewater treatment plants - 11 reservoirs, 4 elevated water storage tanks & 7 storm-water storage and detention tanks - 105 pumping stations - 6,100 km of water-mains & 4,100 km of sanitary sewers	\$29 Billion
Public Transit System	- 2,008 buses & 248 streetcars/LRVs - 876 subway - Subway, buildings, track-work, equipment, etc.	\$16 Billion
Buildings, Facilities & Fleet	- 462 City-owned facilities including Union Station, covering more than 11.8 million sq. ft. - More than 5,500 vehicles, ferries and vessels	\$9 Billion
Toronto Housing Corporation	- 58,500 public housing units (full responsibility)	\$10 Billion
Parkland & Other Land	- 8,106 hectares of parkland (= 13% of the land area of the City of Toronto)	\$3 Billion
Estimated Asset Value		\$94 Billion

The City's capital program is driven largely by the cost of maintaining these physical assets in a state of good repair. The City has an expansive asset inventory and its infrastructure is aging. Managing the accumulated SOGR backlog is a key capital strategic objective and priority for the City in order to ensure that current assets are able to support the delivery of City services and meet service outcomes.

When capital funding for planned SOGR capital works is less than the annual SOGR need, the unfunded balance is added to the accumulated SOGR backlog. Conversely, should the capital funding in SOGR exceed the planned SOGR need, the excess is applied against the accumulated SOGR backlog, effectively reducing the balance.

In the absence of comparable benchmarks, the City has established its own state of good repair performance measure; "*backlog as a percentage of total asset value (replacement value)*" that is applied across its portfolio of assets. The benefits of gathering accurate asset data is that it:

- provides a true picture of what the accumulated SOGR backlog is;
- identifies areas of growing need and attention to the City's asset condition; and
- shows the impact of City SOGR planned funding on the City's accumulated SOGR backlog for the capital planning period.

This metric provides the City with year over year comparisons and trends that assist City Council in determining how best to apply scarce resources in making strategic investments to reduce the City's SOGR Backlog by Program/Agency and/or by asset type. By employing this practice, the City can measure its progress in achieving SOGR objectives and conversely, can determine where additional investments are required. Details of the SOGR Backlog trend and percentage of total asset value can be found in the Budget Notes for each Program and Agency.

In addition to the SOGR backlog metric, the City employs practices that require comprehensive asset value condition assessments by asset type; the use of decision support tools to rank and prioritize reinvestment needs and debt funding scenario analysis, all of which form part of the City's regular capital planning process. These actions taken together improve asset lifecycle management, more accurately identify the SOGR needs in the City's portfolio, and reflect the City's strategic commitment to address the infrastructure deficit in a holistic fashion,

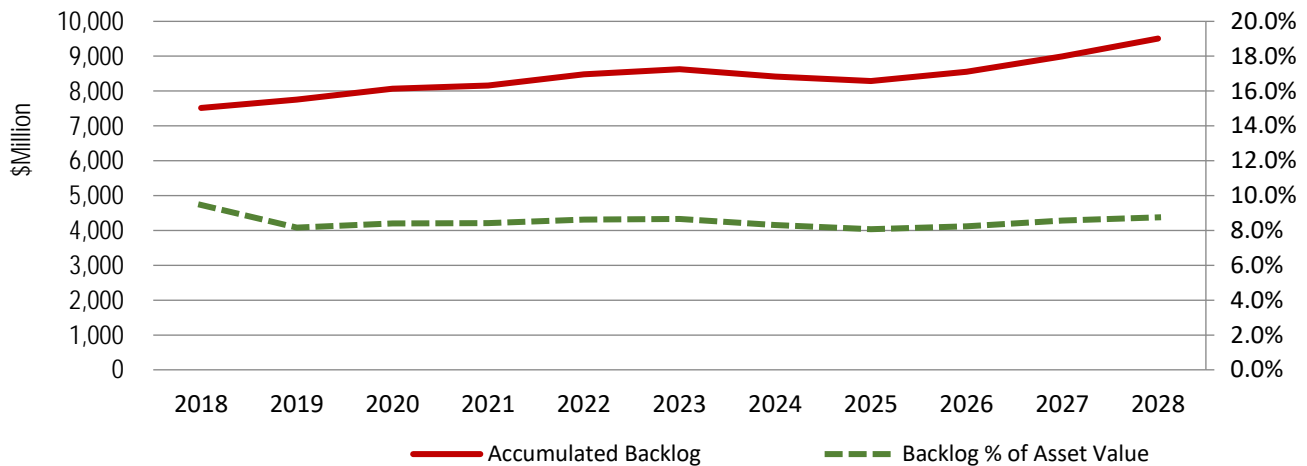
As City Programs and Agencies continue to mature its asset management best practices, SOGR backlog funding pressures continue to rise as better information is received about the condition of City infrastructure. Further funding strategies will be required to reduce the backlog in future years.

Key Points:

Total City SOGR Backlog (Tax & Rate)

- The 2019 – 2028 Staff Recommended Capital Budget & Plan (Tax & Rate) allocates \$19.749 billion or 49% of funding to capital works to address City infrastructure required to deliver services to the citizens of Toronto are maintained in a state of good repair
- Despite a total investment in SOGR funding of \$19.749 billion in the 2019-2028 Capital Budget and Plan, the accumulated SOGR backlog estimate is projected to increase from \$7.515 billion at the end of 2018 to \$9.506 billion by 2028 as shown in Chart 1.
 - While the absolute backlog value will increase, the backlog as a percentage of asset value will decrease from 9.5% to 8.8% owing to higher asset values over the same capital planning period.

**Chart 1
10 Year Capital SOGR Backlog – Tax & Rate Supported Programs**



Tax & Rate Supported (\$M)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total Asset Value	79,426	94,979	95,932	96,951	98,244	99,540	101,316	102,729	103,879	104,972	108,614
Accumulated Backlog	7,515	7,759	8,065	8,159	8,477	8,623	8,420	8,291	8,557	8,994	9,506
Backlog % of Asset Value	9.5%	8.2%	8.4%	8.4%	8.6%	8.7%	8.3%	8.1%	8.2%	8.6%	8.8%

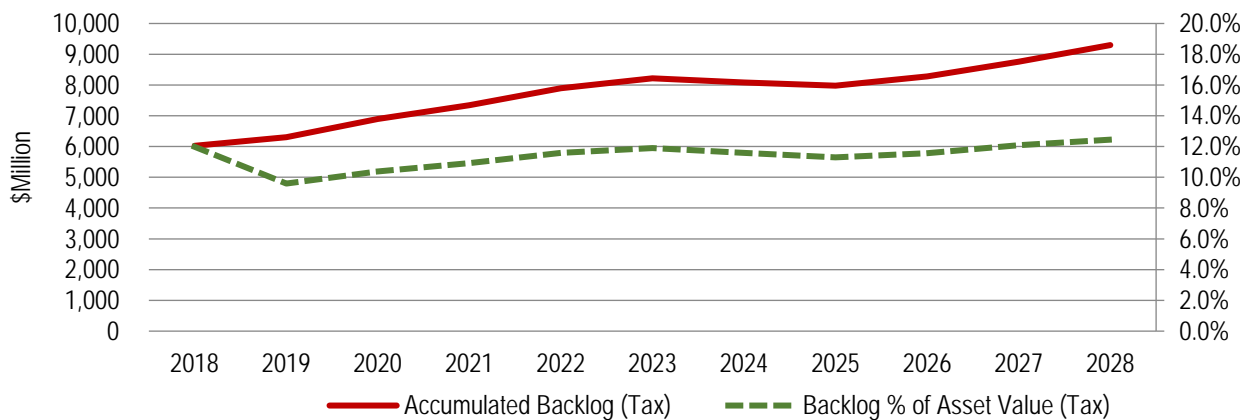
Rate Supported Programs

- Currently, Toronto Water is the only Rate Program that has an accumulated SOGR backlog. At the end of 2018, the replacement value of Toronto Water's assets was estimated at \$28.723 billion incorporating both linear (watermains, sewers) and facility/plant (water treatment plants, wastewater treatment plants, pumping stations) assets.
- The 2019-2028 Staff Recommended Capital Budget and Plan for Toronto Water dedicates \$6.745 billion or \$675 million on average annually, to fund State of Good Repair capital projects, which is anticipated to reduce the backlog from \$1.491 billion at the end of 2018 to \$208.495 million or 0.6% of the total asset value by the end of 2028, virtually eliminating the SOGR Backlog by the end of the 10 year Capital planning period.

Tax Supported Program

- The 2019 – 2028 Staff Recommended Tax Supported Capital Budget and Plan will invest \$12.785 billion or 49% of its total \$26.2 billion in SOGR projects to maintain assets in a state of good repair for the next 10 years. This level of funding addresses SOGR backlog in some Programs and Agencies but for the most part, does not reduce the accumulated backlog of SOGR projects overall.
- The accumulated SOGR backlog balance is estimated to increase from \$6.024 billion or 12.0% of total asset value at the end of 2018 to \$9.298 billion or 12.4% of total asset value by the end of 2028 as shown in Chart 2 below:

Chart 2
10 Year Capital SOGR Backlog – Tax Supported Programs



Tax Supported (\$M)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total Asset Value (Tax)	50,262	65,721	66,488	67,291	68,093	68,974	69,811	70,665	71,537	72,426	74,692
Accumulated Backlog (Tax)	6,024	6,306	6,902	7,347	7,898	8,215	8,085	7,976	8,282	8,758	9,298
Backlog % of Asset Value (Tax)	12.0%	9.6%	10.4%	10.9%	11.6%	11.9%	11.6%	11.3%	11.6%	12.1%	12.4%

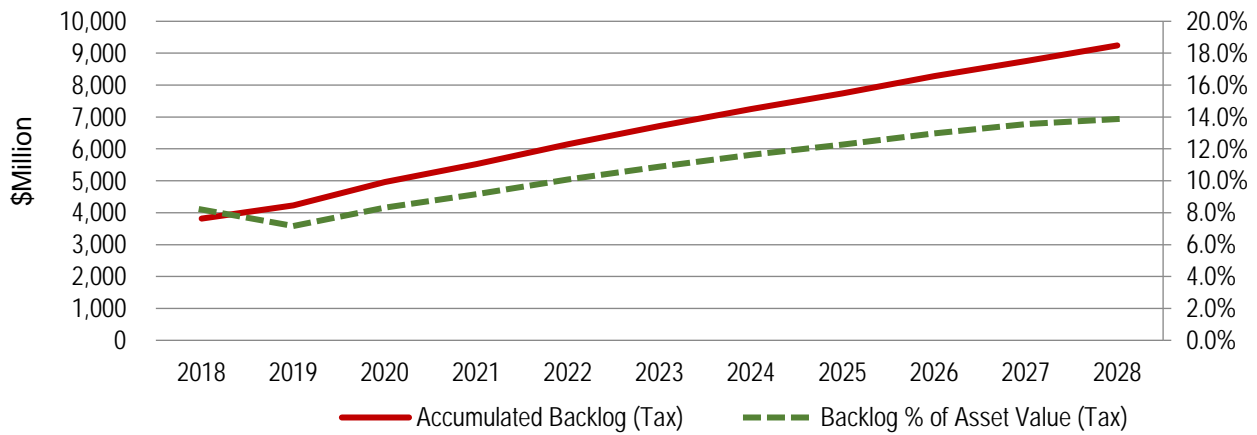
- The main contributors to the City's accumulated SOGR backlog are: Toronto Community Housing (TCHC), Transportation Services, Toronto Transit Commission, Facilities Real Estate, Environmental and Energy (FREEE), Parks, Forestry and Recreation (PF&R) and Toronto Public Library.
 - Together the six Programs, Agencies and Corporation make up \$5.497 billion or 91.3% of the \$6.024 billion accumulated SOGR backlog at the end of 2018. Over the 10 year period, these key Programs are projected to make up \$8.896 billion or 96% of the \$9.298 billion accumulated SOGR backlog by the end of 2028 as summarized in Table 2 below.
 - When the Gardiner Expressway project is excluded from the analysis, Transportation Services is the largest contributor to the City's SOGR backlog increase, projected to rise by \$2.438 billion over the 10 year period.
 - These increases are slightly offset by a decrease in SOGR backlog in Fleet Services, Economic Development and Culture, Toronto Police Services, Children Services, and Toronto Region Conservation Authority.

**Table 2
SOGR Backlog by Program – Summary**

SOGR Backlog (\$M)	2018	2019	2023	2028	10 Yr Change
Transportation Services	895	1,080	2,174	3,517	2,623 ▲
Toronto Transit Commission*	26	48	351	755	729 ▲
Facilities, Real Estate & Environ. & Energy	328	311	743	637	309 ▲
Parks, Forestry & Recreation	421	454	462	609	188 ▲
Toronto Public Library	59	68	96	161	103 ▲
Toronto Community Housing Corporation	1,560	1,763	2,440	3,161	1,601 ▲
Other	527	503	448	402	(125) ▼
Total City Backlog (Tax excl. Gardiner)	3,816	4,227	6,714	9,243	5,427 ▲
F.G. Gardiner Expressway Rehabilitation	2,209	2,079	1,501	55	(2,154) ▼
Toronto Water	1,491	1,453	408	208	(1,282) ▼
Total SOGR Backlog (Tax & Rate)	7,515	7,759	8,623	9,506	1,991 ▲
Total Asset Value	79,426	94,979	99,540	108,614	29,188
SOGR as % Asset Value	9.5%	8.2%	8.7%	8.8%	

- The 2019-2028 Staff Recommended Capital Budget and Plan includes \$2,209 billion to address the backlog of F.G. Gardiner Expressway project which will virtually eliminate the accumulated backlog from \$2.079 billion to \$55 million by the end of 2028.
- As demonstrated in Chart 3 on the following page, when the Gardiner Expressway Rehabilitation project is excluded, the SOGR backlog for remaining City Programs and Agencies is estimated to increase steeply from \$3.816 billion at the end of 2018 to \$9.243 billion by the end of 2028.

Chart 3
10 Year Capital SOGR Backlog – Tax Supported Programs (excl. Gardiner)



Tax Supported excl. Gardiner (\$M)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Total Asset Value (Tax)	46,566	58,976	59,608	60,274	60,936	61,673	62,364	63,069	63,789	64,523	66,631
Accumulated Backlog (Tax)	3,816	4,227	4,959	5,522	6,149	6,714	7,250	7,745	8,279	8,750	9,243
Backlog % of Asset Value (Tax)	8.2%	7.2%	8.3%	9.2%	10.1%	10.9%	11.6%	12.3%	13.0%	13.6%	13.9%

- Additional factors have contributed to the increase of accumulated SOGR backlog for the City:
 - In 2018, the SOGR backlog estimates for many Programs increased. The City continues to receive updated asset values and condition assessments from asset inspections that more precisely account for SOGR needs.
 - A capacity to spend analysis undertaken during the 2019 Budget review process has adjusted estimates to better match actual spending to project activities, thereby, spreading the capital funding over a longer period.
 - The addition of TCHC's SOGR backlog estimates for 2019 contributed significantly to the City's accumulated SOGR backlog over the 10-year period. This 10 year SOGR backlog estimate shows the impact of no additional SOGR funding being received beyond 2019. ***In the absence of any additional SOGR funding beyond 2019***, TCHC's SOGR backlog is estimated to grow from \$1.560 billion at the end of 2018 to \$3.161 billion by the end of 2028. The 2-year interim funding model introduced in 2018 to fund TCHC's SOGR backlog continues into 2019 and has allowed the TCHC to continue its capital repair plan, to reinstitute 143 units that were closed and prevent any further unit closures to the end of 2019. The City will be developing a funding strategy to help address this SOGR backlog for the 2020 Budget process.

- It should also be noted that TTC recently developed a Capital Investment Plan (CIP) with the completion of a comprehensive review of all state of good repair needs and capital requirements to support ridership growth (exclusive of Transit Expansion).
 - The CIP's estimates have not been incorporated into the City's accumulated SOGR backlog. City and TTC staff will work together to better understand the SOGR incremental needs, timing, dependencies and priorities and determine the additional capital investment requirements.
 - The results of this assessment will then be used to adjust the City's SOGR Backlog and be integrated into the City's 2020 capital planning and budgeting process and long term fiscal plan.

Accumulated Backlog Analysis:

- As detailed in Appendix 1, SOGR needs for the City total \$2.514 billion of which \$2.270 billion will be funded. This will result in the 2019 accumulated SOGR backlog balance to increase by 3.2% or \$243.520 million.
- As part of the 2019 Administrative Review process, \$600 million of debt room was released allowing \$783.062 million in targeted investments, of which \$293.278 million (gross) is recommended to fund critical SOGR backlog such as:
 - \$113.294 million for *City Bridge rehabilitation*;
 - \$108.000 million for *Purchases of Buses*;
 - \$24.706 million for *High Lake Effect – Flooding Damage & Repair Project and Wind Storm Damage Project*;
 - \$47.278 million of other capital works such as *Major Maintenance in Civic Theaters Toronto for Centre for the Arts, mechanical systems for Howard Monument Conservation, Multi-Branch Renovation Program for Toronto Public Library, TRCA's Asset & Infrastructure Management Plan* and so on.
- As also detailed in Appendix 1, the accumulated SOGR backlog balance is projected to increase by \$1.991 billion to a total of \$9.506 billion at the end of 2028. The SOGR needs for the City will total \$23.020 billion, while the investments dedicated to SOGR projects in the 2019 – 2028 Staff Recommended Capital Budget and Plan will fund \$21.028 billion of the SOGR needs.

Conclusion

The City has implemented a series of capital investment strategies to help address the continued pressure from its accumulated SOGR backlog. This is evidenced by the significant decline of the backlog in some key areas such as the Rate Supported Programs (Toronto Water) and the near elimination of Gardiner Expressway backlog as well as TRCA, Children Services and Toronto Police Services. However, the backlog in other key program areas continues to grow.

The City will need to explore sustainable long term financing strategies to address this issue on an on-going basis and establish a balance between capital projects and funding priorities. This will be necessary to maintain the City's current \$94 billion of assets in a state of good repair as well as improve and add assets to meet service demand and growth.

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Attachments:

Appendix 1: 2019-2028 Increment/Decrement in State of Good Repair Backlog by Program

Appendix 1:
Change in Accumulated SOGR backlog 2019 to 2028 by Program

Program Description (\$Millions)	2019					2019 - 2028				
	Accum. Backlog Beginning Balance	SOG R Needs Added	SOG R Backlog Addressed	Backlog Incr./ (Decr.)	Accum. Backlog Ending Balance	SOG R Needs Added	SOG R Backlog Addressed	Backlog Incr./ (Decr.)	Accum. Backlog 2028 Balance	
Community and Social Services										
Children's Services	4.6	0.4	(1.3)	(0.9)	3.7	9.8	(14.4)	(4.6)	0.0	▼
Economic Development and Culture	32.8	3.5	(5.1)	(1.7)	31.1	27.1	(45.1)	(18.1)	14.7	▼
Long Term Care Homes and Services	4.5	4.4	(4.4)	0.0	4.5	50.4	(50.4)	0.0	4.5	-
Parks, Forestry & Recreation	421.0	70.8	(37.5)	33.3	454.3	802.0	(614.0)	188.0	609.0	▲
Shelter, Support & Housing Administration	8.0	181.2	(173.7)	7.5	15.5	212.4	(188.6)	23.7	31.7	▲
Sub-Total Community and Social Services	470.9	260.2	(222.0)	38.2	509.1	1,101.6	(912.5)	189.0	659.9	▲
Infrastructure and Development Services										
F.G.Gardiner Expressway Rehabilitation	2,208.6	0.0	(129.4)	(129.4)	2,079.1	55.0	(2,208.6)	(2,153.6)	55.0	▼
Transportation Services (W/O FGG)	894.7	278.8	(93.8)	185.0	1,079.7	4,256.2	(1,633.5)	2,622.7	3,517.4	▲
Sub-Total Infrastructure and Development Services	3,103.3	278.8	(223.2)	55.6	3,158.9	4,311.2	(3,842.1)	469.1	3,572.3	▲
Corporate Services										
Facilities Management, Real Estate & Environment	328.1	51.7	(69.2)	(17.5)	310.6	896.3	(587.5)	308.8	636.9	▲
Fleet Services	75.6	38.8	(60.1)	(21.2)	54.3	691.0	(734.4)	(43.4)	32.2	▼
Information & Technology	0.0	22.6	(22.6)	0.0	0.0	256.1	(229.2)	26.9	26.9	▲
Sub-Total Corporate Services	403.6	113.1	(151.8)	(38.7)	364.9	1,843.4	(1,551.1)	292.3	695.9	▲
Other City Programs										
City Clerk's Office	0.0	0.6	(0.6)	0.0	0.0	6.7	(6.7)	0.0	0.0	-
Sub-Total Other City Programs	0.0	0.6	(0.6)	0.0	0.0	6.7	(6.7)	0.0	0.0	-
Total City Operations	3,977.8	652.6	(597.6)	55.1	4,032.9	7,262.8	(6,312.4)	950.4	4,928.2	▲
Agencies										
Exhibition Place	24.8	10.5	(4.5)	6.0	30.8	115.5	(100.8)	14.7	39.5	▲
Civic Theatres Toronto	21.5	7.0	(3.6)	3.5	24.9	50.8	(30.3)	20.5	42.0	▲
Toronto & Region Conservation Authority**	234.6	7.2	(20.3)	(13.0)	221.5	91.4	(199.6)	(108.2)	126.4	▼
Toronto Police Service	33.2	1.1	(4.4)	(3.4)	29.8	13.2	(44.0)	(30.8)	2.4	▼
Toronto Public Library	58.6	26.2	(16.4)	9.8	68.4	298.6	(196.0)	102.7	161.3	▲
Toronto Zoo	88.1	3.7	(5.2)	(1.5)	86.6	62.4	(68.2)	(5.8)	82.3	▼
Toronto Community Housing Corporation	1,559.8	453.7	(250.4)	203.3	1,763.0	2,217.5	(616.3)	1,601.3	3,161.0	▲
Yonge-Dundas Square	0.0	0.0	0.0	0.0	0.0	0.4	(0.4)	0.0	0.0	-
Sub-Total Other City Programs	2,020.4	509.4	(304.8)	204.7	2,225.1	2,849.8	(1,255.5)	1,594.3	3,614.7	▲
Toronto Transit Commission										
Toronto Transit Commission	26.2	893.8	(872.2)	21.6	47.8	5,516.5	(4,787.6)	728.9	755.1	▲
Sub-Total Toronto Transit Commission	26.2	893.8	(872.2)	21.6	47.8	5,516.5	(4,787.6)	728.9	755.1	▲
Total - Tax Supported Programs	6,024.3	2,055.9	(1,774.5)	281.3	6,305.7	15,629.1	(12,355.5)	3,273.6	9,297.9	▲
Rate Supported Programs										
Toronto Water	1,491.0	457.7	(495.5)	(37.8)	1,453.2	5,550.7	(6,833.2)	(1,282.5)	208.5	▼
Sub-Total Rate Supported Programs	1,491.0	457.7	(495.5)	(37.8)	1,453.2	5,550.7	(6,833.2)	(1,282.5)	208.5	▼
Total - Rate and Tax Supported Programs	7,515.3	2,513.5	(2,270.0)	243.5	7,758.8	21,179.8	(19,188.7)	1,991.1	9,506.4	▲

Note: Table includes Toronto Community Housing Corporation.

*Funding to address the state of good repair backlog for City-owned facilities for Paramedic Services, Toronto Fire and Toronto Public Health is included in FREEE's 10-Year Capital Plan as asset management capital funding was transferred to FREEE in 2010.

**TRCA includes other SOGR backlog and funding