

2023 Proposed Capital Works Budget as Part of Ten-Year (2023-2032) Program

Date: August 30, 2022

To: The Board of Governors of Exhibition Place

From: Chief Executive Officer

Wards: All Wards

SUMMARY

On July 26, 2022, the Executive Director of City Financial Planning Division (FPD) provided supplemental instructions to assist City Divisions and Agencies in the preparation of the 2023 Capital Works Budget as Part of Ten-Year Submission with a firm submission deadline of September 16, 2022, and additional budget guidance and directions for all City Divisions and Agencies.

Supporting the City objective of minimizing debt funding, Exhibition Place staff have successfully come in with a zero-budget increase as compared to our 2022 10-year Capital Works Budget of \$156.358 million.

The City practice for 2023 allocation of funds is still based on the Board capacity to spend but is linked more closely to the City's ability to fund the projects with debt. Annually, staff review the 10-year capital plan; this annual review procedure allows Exhibition Place to adjust its current State of Goods Repair (SOGR) program each subsequent year based on changing and operational needs, building/audit assessments, legislative changes, mandates, and priorities.

Throughout the budget process Exhibition Place staff worked closely with City FPD in developing the budget. As part of the budget process, staff completed their due diligence by performing three (3) building assessments in 2022 on the Beanfield Centre, General Services Building, and Enercare Centre. The building assessments are a systematic inspection, review, and report on the state of our buildings, and is done annually on a rotating basis with all our buildings. More importantly with the debt funding constraints from the City, this is of great importance to help prioritize our plan as building assessments will indicate whether we need to do repairs in the short term, as well as what will be required in the longer term such as years 5-10 or even years 11-15.

Exhibition Place staff will submit the 2023 Capital Works Budget to City FPD to meet the City Manager September 16, 2022, mandate; however, due to the budget submission schedule, City FPD understands that the budget is subject to Board approval and that the Board reserves the right to make changes to the Capital Works Budget content.

Exhibition Place staff will notify the City of any changes or directions made by the Board.

In accordance with City guidelines for capacity to spend, the City's ability to fund, building assessments and SOGR priority, a total of \$22.131 million gross is recommended for 2023 Capital budget. This includes:

- a) \$1.000 million for revitalization of Centennial Square and the surrounding areas with 100% cost recoveries from the Exhibition Place Green Space reserve fund held by the City.
- b) \$0.216 million previously approved project for Food Building boilers, hot water tanks, water distribution and sanitary systems; 50% of which is funded by CNEA as per Board's Master Agreement provisions with CNEA.
- c) \$0.200 million in 2023 and \$0.500 million in 2024 (a total of \$0.700 million over two years) for New Brunswick Way Improvement/Road Widening to support Phase-2 Hotel and Venue development.
- d) \$2.000 million previously approved project cash flow for high voltage utilities upgrade.
- e) \$18.715 million for various upgrades within existing buildings, parking lots and roads grounds wide, all funded by debt. This includes resubmission of \$2.190 million initially approved by City Council for 2022 projects budget but later got postponed due to City funding constraints.

In summary, the total budget cash flow for Above the Line Capital Program 2023 (Sections A & B in Appendix 'A'), including previously approved and new projects is \$22.131 million. This includes funding (recoveries) from CNEA and Exhibition Place Green Space reserve fund of \$1.108 million and City net debt funding of \$21.023 million.

Even with the additional funding being recommended, the Net Accumulated Backlog at the end of 2023 for Exhibition Place stands at \$54.885 million.

RECOMMENDATIONS

The Chief Executive Officer recommends that:

1. The Board approve the Proposed 2023 Above the Line Capital Works State-of-Good Repair Budget (Sections A and B of Appendix 'A') of \$22.131 million with \$21.023 million funded by debt and \$1.108 million funded by recoveries from third parties and Exhibition Place Green Space reserve fund, as part of the ten-year (2023-2032) proposed program submission to the City of Toronto.
2. The Board direct the Chief Executive Officer to submit the 2023 Budget and any changes or directions by the Board to the City Financial Planning Division as part of the 2023 Budget Process.

FINANCIAL IMPACT

The proposed 2023 Capital Works Program cash flows total \$22.131 million as a total program budget, which includes third party and reserve fund recoveries of \$1.108 million and net debt funded program of \$21.023 million, details of which are in Appendix 'A' to this report.

DECISION HISTORY

The Exhibition Place 2022-2026 Strategic Plan has identified Protecting and Spotlighting our Assets Goal to ensure that our State-of-Good Repair plan and processes are adequately linked to our capital plan.

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2022.EP24.12>

COMMENTS

It should be noted that all these capital projects submitted may be subject to changes as the City may provide new guidance and direction in plan at a later date.

Background

Over the next 10 years, Exhibition Place staff have met our City target by deferring some projects. Our overall net capital program budget and plan for Exhibition Place ranges from a minimum of \$6.550 million to a maximum of \$29.140 million.

To formulate the Capital Program and as required by the City, building assessments are regularly carried out for all the non-tenanted buildings. Results from these assessments are included, where applicable, in this ten-year capital program. Recent studies and assessments in 2022 include the Beanfield Centre, General Services Building, Food Building, and Heritage Structures.

Attached as Appendix 'A' is the proposed Ten-Year (2023-2032) Capital Works Program for Exhibition Place with 2023 overall budget being \$22.131 million including recoveries of \$1.108 million. The 2023 SOGR budget is submitted in accordance with the guidelines, policies and the five expenditure categories below as established by the City Financial Planning Division.

Summary of Program by Expenditures Categories

1. Health and Safety:

At \$0.200 million (1%); these capital projects have an urgent requirement for repairs due to concerns of a health and safety hazard;

2. Legislated/City Policy:

Nil for 2023; these capital projects are required by the Provincial or Federal legislation or compliance with City Policy;

3. State of Good Repair:

At \$20.331 million (92%); these capital projects are for the maintenance, repair or replacement of existing assets including asset rehabilitation required to meet health and safety issues or extend the useful life of the asset by 10 or more years;

4. Service Improvement:

At \$1.600 million (7%); these capital projects are for improvement of service delivery above the current Council-approved standard or provides for the introduction of new services; and

5. Growth Related:

Nil for 2023; these capital projects support the growth and development across the City.

For information purposes only, at the bottom of the Appendix 'A' spreadsheet for each asset, as well as on the summary sheet, there is a separate table showing the SOGR Building Assessment Backlog, the annual SOGR requirement, the SOGR submission for that year and the net SOGR backlog remaining for that same year, which is above and beyond the allowable net capital program funding.

As discussed in the summary, the overall net budget of \$22.131 million for 2023 will not adequately address all the essential items arising from recently completed state-of-good-repair building assessments that include the Enercare Centre, the Coliseum Complex along with revised assessment of Beanfield Centre, General Services Building, Food Building, Heritage Structures, and other buildings.

2023 Projects Details

All budgets include estimated costs for engineering, construction, in-house work, project management, disbursements, and administrative charges where applicable but exclude the H.S.T.

1. Pre-Engineering (\$0.175 million)

a) Study, Investigate, Design, Engineer, and Check Various Buildings (\$0.175)

This program is critical to the success of planning and executing the annual Capital Works Program. It provides funds for studies and investigations to determine project schedules and to establish costs for present and future required work. This pre-engineering work ensures the development of a relevant and realistic Capital Works Budget.

2. Parks, Parking Lots, and Roads (\$1.350 million)

a) Sidewalks, Pathways Road & Lots and New Pedestrian Features - AODA (\$0.450 million)

This program is aimed at preventing deterioration of various sidewalks, pathways, and road sections on the grounds to avoid and reduce risk and public liability and to comply with the AODA regulations for the safety of all visitors. Aside from the replacement of

the damaged section of road surfaces for the Indy track, Exhibition Place will also be continuing to implement the repair recommendations of the 2015 Parking Study conducted by WSP. These recommendations include resurface and overlay of deteriorated parking lots based on priority.

b) Street & Parking Lots Lighting Retrofit (\$0.300 million)

This project aims to replace existing end-of-life light standards with upgraded energy efficient LED lighting to locations where necessary. Exhibition Place has 140 cobra pole streetlights which were installed over 25 years ago. These poles and the lighting fixtures are past their rated life span and require retrofit on an ongoing basis. Providing adequate and moral lighting in public areas and parking lots is required by the AODA. This budget allows only for the upgrades as outlined based on priority needs.

c) Fountains Retrofit - Various Locations (\$0.150 million)

Exhibition Place has numerous exterior fountains, some of which are listed in the Ontario Heritage Structures list, including the Princes' Gates Lion Fountains, McGillivray Fountain, Peace Fountain, Princess Margaret Fountain, and the Rose Garden east and west fountains. These fountains were built from early 1920 to 1960's. As exterior fountains are subject to outdoor elements, most require retrofitting or even re-built. Restoration to these fountains is a must for Exhibition Place to not only maintain the historical fixtures but also for public safety.

Princess Margaret Fountain retrofit is the priority and the 2023 budget will allow for the project design, costing, and construction. Structurally this fountain is showing many cracks and pieces of concrete have decayed and fallen off. The pool surfaces are worn/pitted enhancing the growth of algae and accumulating dirt resulting in water quality issues. The mechanical pit hatch is cumbersome with broken supports resulting in entry safety concerns. The mechanical system is original to the fountain and the filtration system is 27 years old and needs replacement. All electrical, control panels, starters, lighting, and controls require upgrading. It is the intention to reduce potable water requirements by utilizing non-potable water in the retrofitted fountain.

d) Parking Technology (LRP) Upgrade (\$0.100M)

Parking Technology upgrades include the installation of license plate recognition technology with support from the Toronto Parking Authority to allow Exhibition Place to move away from parking passes, increase enforcement, service efficiencies to reduce costs, and ensure revenues are maximized. Additional car counting technology will be added to the surface lots to improve vehicle wayfinding and parking availability across the grounds. Adding additional parking gates and loops to surface lot exits will assist with traffic management and vehicle flow. Upgrading parking attendant kiosks equipment replacement and upgrade will also be part of the work.

e) Build Curb Stop and Storm Catch Basin Replacement (\$0.150 million)

Each building on Exhibition Place is supplied with water, both potable and fire protection water through single or multiple mains. On each main, there is a main building isolation

valve outside of the building called a curb stop. This is the first phase of a multi-phased project to replace the isolation valves which shut the water in the event of a maintenance requirement or breakage of the system inside the building.

Some of the above-mentioned valves are over 80 years old and are in the ground exposed to the elements resulting in corrosion of the valve stems and degradation of the valve. In the past, these valves have only been activated in the event of a system maintenance event inside the building or a catastrophic failure which could result in flood conditions and damage inside the building. The older the valve the more difficult it is to actuate the valve to the closed position, sometimes resulting in valve stem failure leaving the valve open and unable to be closed.

The City's insurer FM Global has now made it a requirement to exercise these valves monthly to mitigate risk to the systems which they serve. By excavating and replacing these valves with modern more robust fully functioning valves, this risk is reduced.

f) New Brunswick Way Improvement/Road Widening (\$0.200 million)

This project involves the removal and disposal of contaminated soil from the New Brunswick Way; part of a road widening work which follows the Province of Ontario Regulation 153/04. More specifically, the Regulation states a future development site shall have no soil and groundwater contaminants above the level set by MECP (Ministry of Environment Conservation and Parks).

3. Mechanical / Electrical & Communication Infrastructure - (\$2.250 million)

a) Building Automation System (\$0.150 million)

Energy efficient systems are the key to a greener Exhibition Place and the city. Some of the present automation systems such as Johnson Controls, Automatic Logic, GE, Fanuc, etc. at Exhibition Place are not functioning as required and need replacement. Maintaining energy efficient systems in good working order translates to a lower utilities cost and less exertion on the environment. Efficient equipment, proper programming, on lighting power on or off, directional input to AHU, and cooling and heating are all part of the program.

b) Transformers, Switchgears and Circuit Breakers (61 Sets in 38 Locations)
Replacement in all Substations (\$0.100 million)

This program will maintain all building and voltage power equipment some of which are over 70 years old. Unplanned outages or failure of the substation equipment could cause shows or events to be shut down for days as replacements are sought. As importantly, this program is to maintain safety standards for staff working in this high-risk area.

c) Replace Fibre Optic Cables Grounds Wide (\$0.200 million)

The original fibre optic cable system is starting to break down, resulting in communication problems. When there is a communication problem due to the

breakdown of the Fibre optic cable system, Exhibition Place loses monitoring of fire alarm systems and the building automation systems. Therefore, replacement and upgrades to our existing Fibre optic cable to meet today and future needs is urgently recommended.

d) Upgrade Communication Infrastructure (\$0.350 million)

Since its installation, the existing system has served its purpose providing a stable communication system for the operations of Exhibition Place and its partners. The average life span of a radio system is 10 to 12 years. It is time to renew the system as operations have also been expanding.

e) Fluorescent Light Fixtures - Various (\$0.200 million)

Fluorescent lighting system has been installed within various buildings. Existing lamps and ballasts are at the end of their life and Exhibition Place has embarked on a program to gradually replace this system with new energy efficient and maintenance free LED lamps. This project fulfills our objectives of grid supply electricity reduction (Fluorescent to LED) and public safety concerns.

f) Emergency Generators Upgrade at Various Buildings (\$1.100 million)

The diesel emergency generators located at the Horse Palace (15 Nova Scotia Avenue), Better Living Centre (195 Princes' Boulevard), General Services Building (2 Manitoba Drive), as well as, both the emergency generator and diesel fire pump located at the Beanfield Centre (105 Princes' Boulevard) are at end of their life and require replacement. This project involves replacing four generators with natural gas-fired generators and conversion of diesel fired pump with electric to address state-of-good-repair backlog as well as to enhance energy savings.

g) Upgrade of Infrastructure Cabling/Integration with Security Control Room at General Services Building (\$0.150 million)

Existing infrastructure Cabling is starting to break down, resulting in service disruption. When there is a communication problem due to breakdown of the cabling system, Exhibition Place loses monitoring of security and fire life safety systems. Therefore, replacement and upgrades to existing cabling infrastructure is urgently recommended.

4. Enercare Centre (\$5.610 million)

a) Sectional Floor Resurfacing in Swing Space & Halls (\$0.365 million)

Considering high traffic and movement of heavy equipment in Swing Space and Halls, to prevent further deterioration of concrete slab, periodic resurfacing is recommended.

b) Roof Sectional Replacement over Exhibit Halls (\$2.000 million)

This project involves roof replacement for all the halls at the Enercare Centre. This is the largest area with a highly visible white roof over them and is a PVC membrane roof.

It is a single ply system, light weight, highly reflective to reduce summer cooling loads and has an insulation value of R51 and R22. Replacement will be done in a priority basis. The possibility to add photovoltaic to generate electric power on this roof after the resurfacing is being considered.

Enercare Centre was built and completed in April 1997 with 1,028,000 sq. ft. of roofing areas. The main roof over the exhibit halls is shaped like a barrel-vaulted with a single ply Sarnafil PVC membrane over insulation of R20, draining to continuous gutters along the north and south sides. The Sarnafil membrane has an estimated life of 25-30 years. Eventually, the material will degrade due to plasticizer loss from weather element, causing the membrane to become less flexible and thus brittle and break out. Therefore, replacement is required. This budget is only for sectional roof replacement with upgrade insulation to R40 to comply with current code.

If this project is not done, continued, and accelerated deterioration of the roof will occur. Significant damage will be done every time it rains because of the water penetration to the interior of the building which will result in greater capital restoration cost in future as damages continue to escalate. Increased safety risks to the public and clients. Exhibition Place is liable to the exhibitors and show managers for any damage due to roof leak to their shows and businesses.

c) Replace Southwest Curtain Wall at Galleria with Triple Glazing (\$0.200 million)

There is considerable glazing in the south façade. These are sealed thermal units dating from the construction of the building in 1997. Although there is no noted failure listed in the assessment, but as most references consider 20 years to be the reliable service life of an insulated glass unit. It is anticipated the requirement to replace these existing units with higher grade units of triple glazing and filled with argon gas.

The Galleria glazing is a high-quality framing system and was well executed. There are no significant broken seals except one unit (measuring approximately 6' by 8') that has lost its outer glazing. As for the remaining glazing, if recent alerts are to be accepted, it will likely have to be replaced before it reaches 20-25 years of age. In this case it is anticipated the requirement to replace the existing glazing with higher grade units - triple glazing.

Elements of building envelop are the most areas that use a lot of energy and least energy efficient. Double glazing is no longer the best and the latest technology is available for triple glazing in any future window replacement.

d) Salons Retrofit (\$0.100 million)

Based on the building assessment and staff recommendation for the use and functional aspect of the Enercare salons, they indicated that there is a need to replace and/or upgrade the high demand meeting rooms with new electrical and AV equipment. Various salons were upgraded within the last decade. It is proposed that we continue upgrading the remaining salons in the next few years.

e) Huffcore Partitions Replacement & Retrofits - in phases (\$0.900 million)

This project is to retrofit the existing movable huffcore walls in the Halls allowing them to be rented out without being bothered by the activities of the adjacent areas. The existing huffcore walls at the Halls need to be retrofitted in due course.

This installation wall sections are capital in nature and cannot afford to be funded from the operating budget. Existing service agreement does not cover major installation or replacement. Without the ability to isolate the large halls from neighboring area with other on-going operation, our ability to satisfy show market request is reduced, thus resulting in loss of show revenue.

f) Acoustic Wall Replacement in Meeting Rooms - in phases (\$0.250 million)

This project is to retrofit the existing Acoustic walls in the meeting rooms allowing them to be rented out without being bothered by the activities of the adjacent areas. The existing acoustic walls are at the end of their service life and require replacement.

This installation wall sections are capital in nature and cannot afford to be funded from the operating budget. Existing service agreement does not cover major installation or replacement. Without the ability to isolate the meeting rooms from neighboring area with other on-going operation, our ability to satisfy show market request is reduced, thus resulting in loss of show revenue.

g) Retrofit Pumps in Cooling Towers (\$0.325 million)

The pumps in cooling tower are used to circulate the warm water for the chiller condenser into the tower to the top and cooled water is pumped back to the chillers after it is going through the cooling process. The pumps are constantly working and have limited life cycle of 20-25 years, which then must be replaced. The cooling tower for this type of design is usually shaped like a box. Warm water from the chiller condenser is pumped to the top of the cooling tower where it is distributed to the sides and allowed to drop through small holes. Plastic air intake louvers at the sides of the cooling tower allow the water to spread out while dropping. Air from outside is sucked into the cooling tower by several fans located at the top. The incoming air encounters the dropping water, and the water is cooled. The cooled water is collected at the bottom of cooling tower and is then pumped out again and circulated through the chiller.

This project is essential to enhance the Enercare Centre as a major trade show and marketing facility. It is desired to make the building easy to use and appealing to potential renters and show organizers and thus increase revenues. The cooling tower exhaust is integral to the HVAC system for the building. Without its proper functioning, the building cannot be rented out and will violate the building code and operation standard.

h) Retrofit Pumps in Chillers (\$0.290 million)

In Enercare Centre, the chilled water system consists of three centrifugal chillers. Each chiller is provided with a dedicated circulation pump. The piping arrangement is such

that only one pump can operate with a designated chiller. In case of failure of one component of chiller (pump or piping set), the entire set must be taken off-line. Similarly, each chiller is provided with a dedicated cooling tower and circulating pump with no provision of operating a chiller with any other cooling tower or pump. Installation of a new chiller in 2017 provided a common chilled water supply and return header between the pumps and chillers with all pumps connected to the common header. This new pipe arrangement allows operating any chiller with any pump for added redundancy and flexibility of the system. These chiller pumps are required to be replaced which are over 25 years in service.

This project is essential to enhance the Enercare Centre as a major trade show and marketing facility. It is desired to make the building easy to use and appealing to potential renters and show organizers. The cooling tower exhaust is integral to the HVAC system for the building. Without its proper functioning, the building cannot be rented out and will violate the building code and operation standard.

i) Replace Pump and Piping Loops for Boiler System (\$0.185 million)

The heating plant consists of three hot water boilers. Each boiler has a dedicated circulating pump. There is a stand-by pump that can be used for any of the boilers if one of the main pumps fails. The hot water heating piping is subdivided into one primary and two secondary loops. Each loop is hydraulically separated while allowing interchange of water between the loops.

The Enercare Centre boiler plant occupies a room of about 450 sq. m. in an area on the second-floor mechanical space. The boiler plant room contains the building hot water heating boilers, associated primary and secondary heating loop pumps and domestic hot water boilers with two storage tanks. All boilers are connected to a common branching with exhaust stack terminated above the roof in the north-east corner of the boiler plant room.

The updated building assessment pointed out this is a high priority measure to be taken as soon as possible before the elements are getting too deteriorated to be retrofit.

j) Replace Sprinkler System Booster Pump (\$0.130 million)

The fire booster pump located in each of the two sprinkler rooms at Enercare Centre has a capacity of 2000 gpm, 65 psi (150ft) head, and a 100 HP motor. This pump is due to be replaced by 2023.

The sprinkler system is provided for the entire building, which consists of wet pipe automatic sprinkler fire protection system, dry pipe system and pre-action. Upright sprinkler heads are used in open spaces without ceilings. Areas with suspended ceilings are provided with recessed pendent type sprinkler heads. There are a few areas where fire protection piping is subject to potential freezing. These areas are provided with dry type sprinkler zones. Entrance to the underground pedestrian tunnel between Enercare Centre and Beanfield Centre is equipped with a pre-action fire protection system.

k) Replace Garbage Compactor (\$0.090 million)

Due to age, existing garbage compactor breaks down frequently and requires immediate replacement.

l) Elevators Retrofit (\$0.050 million)

Enercare Centre has five elevators that were manufactured and installed in 1997 with the opening of the building:

Elevator #1 - West kitchen Elevator; Elevator #2 - Management Office Elevator; Elevator #3 - North Galleria Elevator; Elevator #4 - South Galleria Elevator; Elevator #5 - Heritage Court Elevator. The only elevators that operate from the underground parking level are NW corner Elevator #5 and SE corner Elevators #3 and #4. The most usage during shows is for the elevators #3 and #4 that are providing access to the Galleria where most of the entrances for the shows are located. Elevators #3, #4 & #5 were retrofitted in 2018/2019. Elevators #1 & #2 remain to be retrofitted.

As all the elevators are over 20 years old at this time, purchasing parts from external suppliers have become difficult. To avoid this, the alternative is to have the parts manufactured and repaired locally, which are becoming extremely costly. Based on the age and current condition of the equipment a major control modernization must be done for all units within the next ten years.

The updated building assessment pointed out this is a high priority measure to be taken as soon as possible before the elements are getting too deteriorated to be retrofit. Serious health and safety concerns for patrons as well as code violation if entrapment becomes injury or worst fatal accident. Design work is scheduled to be complete in 2023 with the implementation in 2024-2025.

m) VFD for AHUs at 3rd Floor - in Phases (\$0.120 million)

This project is to replace existing Variable Frequency Drive (VFD) for the Air Handling Units (AHU). Project will be completed in phases to reduce burden on the capital budget. VFDs save energy, reduce maintenance costs, and increase longevity of the fan motors.

n) LED Lighting and Conservation/Demand Management - offices, Galleria, common areas (\$0.150 million)

This project is to retrofit the aging 34w fluorescent to high efficiency LED fixtures. The existing fixtures were installed when the building was opened in April 1997. The aging fixtures are becoming both an environmental issue as well as a safety issue. Modern LED technology can produce the same lumens level as compact fluorescents using one third the amount of power which helps drive down the building's carbon footprint and operating cost, and the new fixtures and bulbs no longer contain mercury vapour which is harmful to the environment. The fixture assemblies have also proven unsafe at this point of their lifecycle, when aircrafts pass overhead during the airshow, the vibration to the building may cause the tubes to loosen. The new design will remedy this issue.

o) Floor Ports Rebuilding (in Phases) (\$0.175 million)

The floor ports rebuild focus on replacing the floor port lid seat frame, then replacement of modular copper Cat5 jack, surface mount boxes, 4 port angled entry, faceplates, 8 port faceplates, mounting brackets, multi-mode fibre termination modules, coax termination module, all electrical terminations and wiring as required. All including testing, certification, and commissioning.

All connectivity is provided to exhibitors through these floor ports. A floor port is a box built originally under the floor and the cover flush at the floor level. The floor port lid consists of a steel plate with a slotted opening, 5 ½ inch by 1 inch wide to allow for show power to be installed. The underside of the lid cover has a neoprene rubber that outlines the edge of the plate and allows for a seal. Four (4) screw holes with Allan key screws secure the cover to the box. The size of the lid cover is 18 inches by 19 inches rectangular steel plate. This plate is capable of withstanding heavy loads such as forklifts or heavy equipment. This lid, however, is not waterproof. Water from cleaning of the floor does leak into the box containing all the connections. The drain holes in the bottom of the box are not large enough to drain the water and they are often plugged with wire. Water and moisture stay inside for a long time and the metal box, and the steel plate support frame are rusting. Under such conditions the plug and connectivity wire are also rusted. A redesign of the lid and box when rebuild is happening required.

In all trade and consumer shows, connectivity for power, internet, emails, and cell phones are all necessary technology required to be provided to clients and patrons. Without such services, show managers will not choose the facility for their shows.

p) Lighting Retrofit in Salons, Concessions, and Meeting Rooms (\$0.280 million)

This work includes replacement of 50 compact florescent down-light, 20 industrial solid top 8' fluorescent strip lights, and 370-2'x4' fluorescent fixtures c/w 2" deep cell parabolic anod aluminum louvers in concealed frame.

Salons and meeting rooms are in high demand. Proper lighting and other communication connectivity are required to be provided for client use. This lighting replacement is recommended to be up keeping with the technology at the time. With the advancement of powerful, yet energy efficient LED light fixtures, the opportunity for dimming comes at no extra cost. This dimming capability coupled with the proposed Energy Control System (Encelium) that are rated for both normal and emergency lighting control, will have greater productivity and effectiveness for in-house staff servicing events, as well as the flexibility to tailor the lighting, by individual fixtures, to the requirements of exhibitors, and any other clients' needs.

5. Coliseum Complex (\$3.195 million)

a) Roof Replacement in Phases (\$1.200 million)

This project is to replace the step system roofs of the Industry Building to a white roof membrane to be environmentally friendly solution.

The Industry Building roof replacement is well overdue. It is a built-up asphalt roofing system with a fine gravel ballast covering. The gravel stops and other flashings were originally copper. Some of these flashings have been repaired with less expensive metals. It needs to be replaced soon to ensure the integrity of joints. Design is to be completed in 2022 and possibility of installation of photovoltaic will be considered.

The life expectancy of a flat built-up roof is about 25 years. On-going repairs to stop roof leaks and repair the roof system usually begin sometimes in the 20th year until such time a re-roofing is necessary. The roof now shows signs of deterioration and a roofing study in 2006 recommended its replacement in 2012. If a roof leaks, there can be extensive damage to the interior and Exhibition Place is liable to tenants for all damages resulting from a leak and will potentially lose future business and revenue in that building. Reinforcing the roof and adding a green roof will commence after the replacement is complete.

b) Roof Deck and Snow Shed Structure Replacement (\$0.500 million)

This project includes replacement of deteriorated roof beams and its support brackets, along with the deteriorated roof deck with new pressure treated board. The steel supporting roof structure and beams are corroded and the deck boards are near the end of their service life. The main roof joists require replacement. The existing roof deck has suffered from humidity accumulation during the winter months and are deteriorating. This must be corrected.

c) Flagpole installation (\$0.250 million)

Due to age, existing structural base of an original flagpole requires immediate repair and replacement. A new flagpole to be installed after concrete base is poured.

d) Exhaust Fans, Heaters, AHU and RTU Replacement in Phases (\$0.245 million)

This project includes the replacement of 2 RTU (air handling units on roof), 10 exhaust fans, and 37-unit heaters. It is to replace the aging air distribution and ventilation of the complex.

The heating plant is situated at the north part of the Mid-Arch Building. The heating plant has been altered in the past decades. Most of the changes are mechanical or electrical and relate to the refurbishing and upgrading of equipment. A steam system is used for heating the facility. The existing boiler plant was extensively renovated in 2008. The current steam plant consists of three high pressure boilers. The steam boilers generate steam at 15 psi. Each boiler is complete with economizers by CBW (Cannon Boiler Works Inc.). There is an old back-up boiler which is used only for the heating of the R.A.W.F. offices during shoulder seasons. This steam distribution system is close loop with condensate returned to the main condensate receiver in the boiler room. The low-pressure steam is provided to local air handling units' air distribution to the room it serves. The system is well over 25 years of age.

e) Electrical Bus Duct Replacement in Phases (\$0.600 million)

This project is to replace the aging bus duct distribution for show services on the floor. The bus duct equipment is aging and requires to be replaced in the next 5 years.

f) Electrical Lighting System (LED) in Phases (\$0.400 million)

The existing lighting system is not as energy efficient as it used to be. The advances in technology of LED lighting make it attractive to replace the metal halide lighting with LED lighting system. Lighting control should be upgraded to group dimming. With the advancement of powerful and energy efficient LED light fixtures, the capability of dimming comes at no extra cost. Together with the technology of energy control system such as Encelium, which is now being installed in ECC, will have greater productivity and effectiveness for in-house staff servicing the events, as well as the flexibility to tailor the lighting, by individual fixtures, to the requirements of the show manager, exhibitors, and clients.

6. Queen Elizabeth Building (\$1.150 million)

a) Replace Roof at Theatre (\$0.750 million)

The budget is for replacement of the QE Theatre roof of the QE complex. The Executive Offices / Fountain Dining Room roof were replaced in 2015 and the Exhibit Hall in 2019. The theatre roof is the last one in the QE complex and proposed for completion in 2023. It will be a white roof replacement consistent with the other two finished roof sections.

b) Lighting System Replacement to LED (\$0.400 million)

The existing lighting system is obsolete and at the end of life. It is also not as energy efficient when compared with LED lighting. The advances in technology of LED lighting make it attractive to replace the metal halide lighting with energy efficient LED lighting system.

7. Other Buildings (\$0.675 million)

a) Various Buildings & Grounds-wide Security Surveillance System/Card Access/CCTV (\$0.200 million)

This program will upgrade the security system throughout the grounds and includes the following:

- Video surveillance cameras located strategically throughout the grounds with a focus on parking areas, perimeter facilities, high security areas, and high incident areas;
- Card access doors located throughout the grounds focused on electrical substations, employee work area access and leasable space access; and
- Crisis stations strategically placed in the parking garage, reception areas, main public travel routes, and high security areas.

This Exhibition Place security program has focused on addressing three fundamental security elements:

- Addressing security concerns of employees working in environments with a high probability of workplace violence;
- Securing critical infrastructure, high hazard/risk locations and the protection of assets; and
- Balancing the need for physical security and ease of access.

b) Public Art & Monument Collection Restoration & Conservation (\$0.100 million)

This project relates to the restoration, preservation, and conservation of existing collection of public arts and monuments located throughout the grounds.

Exhibition Place is the custodian of a large collection of public art and monuments, valued at approximately \$2.0M. Included in the collection are paintings on canvas, painted on wall murals, glass and mosaic murals, sculptures (limestone, bronze, metal), as well as granite and brick installations. A study of the collection was completed in 2016 and a 10-year SOGR program for this collection was established. All the work will require the intervention of conservators with specialized training in various mediums of art. To date, 3 of the 8 Haines Murals have been restored as well as the sculpture in the Queen Elizabeth Theatre in 2019.

c) Emergency Command Centre (\$0.100 million)

With larger shows and festivals coming to Exhibition Place and with the ever-changing state of security in the world, Exhibition Place is adding infrastructure and technology to be able to operate an Emergency Command Centre (ECC) on site when required, such as FIFA 2026. The ECC would operate as a Board Room space when the need for an ECC is not required; however, infrastructure and technology installed through this project would allow for the transition to an ECC quickly and efficiently when required.

World events and the requirement for a joint site command (Police, Fire, & Paramedics) as well as any other partner is a requirement. Exhibition Place is frequently asked if it has a space that would function as an Emergency Command (Site Command) Centre with the infrastructure and technology required for partners running large scale security events.

d) Eyewash Station Permanent Installation (\$0.050 million)

Recent health and safety audit has identified requirements for the installation of a permanent eye wash station to prevent accidental exposure to hazardous substance.

e) Bandshell Dry Drums Replacement - Fire Life Safety (\$0.050 million)

Recent fire life safety investigation has identified immediate replacement of Dry Drums and drips to prevent freezing and bursting of pipes as a result. This will also ensure dry sprinkler system is functioning properly.

f) Bandshell - Migrate the Inhouse Monitoring from ABB to Desigo System (\$0.075 million)

Last year, new Siemens Desigo Fire Alarm system at the Bandshell was installed. Recent fire life safety audit has identified opportunities of migrating monitoring of fire alarm system from ABB to Siemens Desigo.

g) Maintenance Shop Upgrades (\$0.100 million)

Upgrades to include replacement of Domestic Hot Water piping, Plumbing in Washroom, and replacement of hoists.

8. Beanfield Centre (\$2.035 million)

a) Basement and Concrete Foundation Wall Rehabilitation (\$0.130 million)

Based on recent Building Condition Assessment report, localized cracking, spalling, and concrete surface deteriorations of the basement slab-on-grade was observed, it has recommended immediate resurfacing the slab-on-grade in the basement service rooms and loading area to reinstate the area to a state of good repair.

Also, concrete deteriorations of the north foundation wall were observed along the north concrete foundation wall. Immediate concrete repair work of the north foundation wall have been identified within the report.

b) Loading Dock Rehabilitation (\$0.350 million)

The loading dock's concrete and steel elements are in a poor condition, exhibiting corrosion-related deteriorations of both the concrete and steel elements. A loading dock rehabilitation program for the entire loading dock area, complete with replacement of the four loading dock levelers, is recommended to address the deteriorations and reinstate the loading docks' effective service area.

c) Masonry and Soffit Replacement (\$0.050 million)

The cementitious finish on the soffit on the southwest corner of the building is cracking and spalling, immediate repairs are required to avoid fall hazard.

d) Roof Localized Replacement (\$0.050 million)

Existing roof is about 14 years old and localized repair work of membrane is required where plasticizer has deteriorated to prevent leaks.

e) Interior Walls & Ceiling Finishes (\$0.260 million)

This project is the rejuvenation of the walls, doors, and trim work in the Beanfield Centre ballrooms, hallways, and conference rooms.

After 13 years of use, the LEED certified FSC wood surfaces throughout the Beanfield Centre have degraded to the point where it effects the ability to present the Beanfield Centre as Class A conference space. These surfaces cannot be patched and repaired like common architectural features due to their LEED manufacturing processes. This project will replace damaged areas and protective guards to prevent further damages from use from customers and staff.

f) Heat Pump Replacement (\$1.020 million)

Replacement of the mechanical heat pump, its piping and associated equipment such as control valves, etc. The existing heat pump system is operating year-round. It drives both the heating and cooling systems for the building. If the system fails, there will be no air circulation, heating, or cooling for the building. For climates with moderate heating and cooling needs, heat pumps offer an energy-efficient alternative to furnaces and air conditioners. Like your refrigerator, heat pumps use electricity to move heat from cool space to a warm space, making the cool space cooler and the warm space warmer. During the heating season, heat pumps move heat from the cool outdoors into your warm house and during the cooling seasons, heat pumps move heat from your cool house into the warm outdoors. Because they move heat rather than generate heat, heat pumps can provide equivalent space conditioning at as little as one quarter of the cost of operating conventional heating or cooling appliances.

g) Danfoss VFD (\$0.075 million)

This project is to replace existing Variable Frequency Drive (VFD) for the fan units. VFDs save energy, reduce maintenance costs, and increase longevity of the fan motors.

h) Lighting - Various (\$0.050 million)

This project is to upgrade the control and distribution wiring for event lighting in the ballroom and salons to meet the state-of-the-art status and meet the requirements of the customers renting the facility. Additional lighting upgrades to LED to reduce operating costs will be included.

Technology in the conference business is continuing to evolve and existing infrastructure must be upgraded to allow for interconnectivity of the lighting systems with customer hardware to remain competitive in the industry. As the building is now 13 years old, so is the event infrastructure. This all aids in the reduction of operating expense for the conference business.

i) Fire Alarm System Upgrade (\$0.050 million)

To replace field devices are difficult service as part of the Fire and Life Safety System. This relates to sensors installed in ductwork that must be relocated as part of the Fire and Life Safety regulatory requirements. These items were identified in an internal fire system audit and are requirements of our insurer FM Global. Some necessary upgrades were completed in 2021. This budget is to upgrade the building fire life safety system in various other areas.

9. Better Living Centre (\$0.100 million)

a) Brickwork Glazing Refinishing (\$0.050 million)

During building audit, it was noted that the white glazing of the Better Living Centre (BLC) exterior brickwork is deteriorating, it is spalling throughout the exterior of the building leaving the exposed raw red brick. This will lead to increased moisture issues, and further deterioration of the white glazing along with the esthetics of the building. Immediate design work is being recommended with implementation (reapply and/or repair glazing where possible) in a following year.

b) West Steel Rollup Door Upgrade (\$0.050 million)

Due to age and frequent operation, west rollup door requires replacement including mechanical system.

10. General Services Building (\$0.475 million)

a) Interior Walls, Ceiling and Finishes Retrofit (\$0.275 million)

This project includes replacement of interior finishes in high use areas, fire stopping in wall assemblies, staircases, and service area wall assemblies. It also includes renovations to make building barrier free to meet City's AODA guidelines.

b) Plumbing and HVAC Equipment Replacement (\$0.200 million)

Based on recent Building Condition Assessment Report, Boiler room condensate receiver tank including heat exchanger have past their life expectancy and require immediate replacement.

11. Horse Palace (\$0.100 million)

a) Restore Washrooms (\$0.100 million)

Recent building audit has identified deficiencies with interior walls, flooring, door operators and plumbing fixtures. They will require immediate replacements.

12. Food Building (\$2.016 million)

a) Replace Boilers, Hot Water Tanks & Water Distribution & Sanitary Systems (\$0.216 million) (CNEA funds 50% of this project).

This is a pre-approved cash flow carry forward from 2020/2021/2022 project budget postponement due to Covid-19. The project will replace the gas boiler, which is at the end of its rated life, with a high efficiency hot water boiler. This system provides hot water for the vendors as well as supplement for use for the existing washrooms.

b) Roof Replacement (\$1.800 million)

Design of this project was initiated in 2022 and construction is recommended to be implemented in 2023. The 2017 building assessment recommended replacement of main roof and penthouse roof.

The Food Building roof was replaced in autumn 2000, with a built-up system including 2-inch thick polyisocyanurate insulation, perlite protection board, 4-ply asphalt and fiberglass felts and modified bitumen membrane flashings and expansion joints. Equipment curbs are protected with pre-finished metal flashings. No major leakage has been reported. There was minor ponding over much of the roof surface from time to time. It is estimated that the roof will need major replacement in 20-25 years. At such time, upgrading the insulation to R40 as per the OBC will be necessary.

If this project is not executed, continued, and accelerated deterioration of the roof will occur. Significant damage will be done every time it rains because of the water penetration to the interior of the building. Greater capital restoration cost in future as damages continue to escalate. Increased safety risks to the employees and to the public. Fulfilling the responsibilities of an owner is required in the lease agreement with the tenant who funds 50% of the cost.

13. Press Building - No project in 2023

14. Special Projects (\$1.000 million)

a) Revitalization of Centennial Square and surrounding areas (\$1.000 million) 100% funding from Exhibition Place Green Space Renewal fund held by the City.

Centennial Square is situated in the Relax Zone, whereby features of the greatest concentration of heritage buildings and landscapes are located. The focus will be to re-organize recreational opportunities into passive and active activities. Centennial Square will improve the site's interface with the rest of the City, improve linkages to Ontario Place through enhanced transit services and pedestrian landscape linkage network. Centennial Square is surrounded by some notable landmarks such as the Dufferin Gate, Horticultural Building (currently operating as Toronto Event Centre), and Medieval Times.

Centennial Square will contribute to the City's Green Space System which will protect and enhance trees and vegetation, public visibility and access, linkages between other open spaces on the Exhibition Place Grounds.

The proposed future Waterfront LRT extension will identify Centennial Square as a significant Transit Stop. In coordination with the province of Ontario with respect to the revitalization on Ontario Place, Centennial Square will become an important Gateway off Dufferin Street linking pedestrians to the West Bridge of Ontario Place's new revitalization plan.

Revitalization of Centennial Square also supports the Exhibition Place's Strategic Plan to become Canada's premier destination for conventions, exhibitions, events, and entertainment.

There is no net impact on the City's Capital budget as revitalization to be funded from the Exhibition Place Green Space Renewal fund for this capital project.

15. Electrical Underground High Voltage Utilities (\$2.000 million)

a) Phase 2 - Consolidate Sub-Stations and Upgrade Code (\$2.000 million - 2023)

This is a previously approved project cash flow for 2023.

There is a need to replace all underground high and low voltage electrical cables (13,800 volts to 600 volts) and their associated equipment for isolation such as switchgears & grounding. The underground cables are old, some over 50 years old and beginning to fail. These cables supply all the power and life safety services to the buildings on the grounds as well as all street lighting and parking lot lighting. The rate of ground fault failures, splice failures, and general cable failures are increasing.

A feasibility study for Exhibition Place high voltage power distribution system and substations was completed at the end of 2017 and approved by the Board. The 8 priorities/phases of the Study to be completed over a 10-year period are as follows:

- Replace frequently failed feeders A32T/A33T to TWX and A34T/A35T to TWX;
- Consolidate indoor mid-air substation of IEX, IWX and FAX;
- Replace poor equipment in various substations due to safety and aging;
- Consolidate BLC substations (BLX, NE, NW, SE, SW) to one 13.8KV substation;
- Upgrade transformer and switchgear at TOX, WANX, and WASX;
- Upgrade switchgears at Beanfield substation;
- Replace cables A81T/A82T/A83T to NTX; and
- Upgrade General Services and Horse Palace substations.

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SIGNATURE

Don Boyle
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ATTACHMENTS

Appendix 'A' - Proposed 2023-2032 Capital Works Program