The Built Environment

Section 1: Index of Key Considerations

CAPACITY & LAYOUT (assumptions – social distancing = 2m)

- Will the public be restricted based upon total occupant load of the building or capacity of an area/space? and how will that be done?
- What are the unique challenges of each branch? (i.e. leased space, multiple floors, co-located with other municipal and non-municipal uses)?
- Does the library need to submit a "plan" of how it is meeting public health requirements prior to opening?
- What is the decision-making framework for changes to the facility? Who signs off on plans/renovations? Will some areas need to be cordoned off? Move to closed stacks?
- Which areas in the library are high priority for modifying to allow for social distancing? Computer lab/area, service points, entrances/exits, shelving aisles- directional limits (ex. one-way aisles), meeting rooms, reading lounges/seating areas
- Where should quarantined materials be held (program room? expanded book-drop areas?)
- What work could be done prior to re-opening to improve capacity? weeding of collection?

BUILDING SYSTEMS

- Are HVAC systems maintained and working well?
- Can windows in the building be opened safely?
- Is it preferable for the AMH to be used over staff handling materials? What is the most effective way to clean your AMH machine(s)?
- What changes are required to existing contracts? (e.g. cafe, maintenance, janitorial)

FURNITURE & FINISHES

- Which surfaces and finishes are more susceptible to contamination and how long does the virus live? (research is evolving)
- How are high touch surfaces identified to ensure cleaning priority? e.g., touch screens, service point counters, door handles, washroom fixtures, etc.
- Is it possible to retrofit entrance ways so door handles are eliminated?
- If furniture/equipment/toys are to be moved, where will they be stored?

TECHNOLOGY CONSIDERATIONS

- How will keyboards and mice be cleaned (public and staff use)?
- Can self-checks be set to not require touch screen use? (Bibliotheca ones can – QuickConnect) Is it possible to implement further touch free/self-service options with customers checking out items on their own devices? (AmazonGo – Bibliotheca mobile checkout)?
- Are there options for touch-free automation to reduce contact with surfaces (ex. automated hand-washing dispensers, automated hand drying, automatic doors, etc.)

MOVING THROUGH & INTERACTING WITHIN THE SPACE

- Are distance markers required for limiting the number of people allowed in at a time? For queueing?
- What strategies can be used to manage crowding in elevators, escalators and stairs?

THE BUILT ENVIRONMENT

- Is it possible to separate entrance areas from exit areas in your building?
- Do emergency evacuation procedures need to be reconsidered? What would that look like?
- Should plexiglass barriers be installed at service desks? Between public computers?
- What strategies will we use to discourage use of cash? (cards/phones with tap preferred, fine-free?)
- When will it be safe to open children's play areas? Will they have shared toys? Interactives?
- Should all shelving be done during closed hours?
- How will staff breaks be handled to allow for social distancing? Are staff areas being adequately cleaned? Who is responsible for the cleaning?
- Are there adequate hand-washing stations? Is there a need for handwashing stations in the public areas of the library? In staff (circulation) areas? More hand sanitizer stations featured more prominently?
- Should water fountains be used? Should they be redesigned? Should food and drink continue to be allowed in libraries?
- What should be measured at the facility? Gate count, material returns, WiFi use?
- What has to be procured in advance of opening? sneeze shields, foot prints – peel and stick, PPE, stanchions, signage.
- Is your library continuing curbside pickup during a partial or staged opening for people who choose it or who have compromised immune systems? What precautions need to be in place outside of buildings?
- Is there adjacent outdoor space that can be used to increase seating capacity? Can the building's WiFi be extended into that space?

COMMUNICATION

- Is there signage and communication asking customers to stay home if feeling unwell/displaying any symptoms?
- What wayfinding methods should be used to communicate new guidelines and limits to visitors and staff (signage, floor decals, PA announcements stanchions, etc.)?
- Are drawings needed to communicate what furniture is to be moved, routing of the public, stanchions?
- Is staff training required related to the physical changes to the branch?
- How are the limitations of the branch (occupant load) documented and communicated?

Section 2: Best & Leading Practices

The physical space may have four phases of being open:

1. Staff only
2. Staff with distribution of materials out
3. Staff with limited public interaction and materials in and out
4. Staff with full public access

- Each step should have a clear plan (ex. signage, stanchions, staff training, stakeholder communication)

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- Existing contracts should be reviewed and amended at each step (janitorial, cafes, leases, etc.)

CAPACITY & LAYOUT (assumptions – social distancing = 2m)

The application of social distance guidelines will impact the capacity (number of people allowed in a branch) and the physical layout of the library. Depending on the current layout, location of furniture or equipment in the branch, the total number of people in the space may need to be reduced by up to 50%. To calculate the total occupant load, attention needs to be given to specific functional areas including staff spaces, information desks, public seating areas, computer areas and program spaces.

Think of the design of space as evolutionary as the public and staff adjust to the new layout and social cues around social distancing; be prepared to make further revisions based on observation and feedback.

For public areas, the analysis of furniture layout drawings will help managers determine the revised placements of furniture and equipment and ensure the public and staff practice appropriate social distancing. Consideration should be to the following:

- Public health guidelines and regulations that apply in your province or territory
- Safe ratio of people per square metre for all library space – staff and public spaces
- Capacity monitoring and enforced
- Consultation with staff and stakeholders with consideration to accessibility. Staff may require training related to physical changes made to the space
- Entry doors and exit doors (separate from each other where possible)
- Redundant furniture and equipment stored to avoid congestion (either onsite or offsite)
- Restricting movement of furniture from its social distance placement
- Open seating areas that allow people to be in the presence of each other while still retaining distance are preferable
- Determining whether stacks will be accessed. One-way aisles are recommended
- Relocation or reduction of shelving to provide for wider traffic routes may be necessary
- Estimating the volume of materials that will need to be quarantined. Identify dimensions and layout of the quarantine area and staff access pattern
- Using floor distance markers to guide queuing in high traffic areas

BUILDING SYSTEMS

Initial analysis of the spread of the COVID-19 virus indicates the virus is <u>not</u> likely transmitted via the building systems in the way that Legionnaires' disease is. The droplet form of the virus is more likely to fall on horizontal surfaces rather than remaining suspended in air and distributed by the ductwork in the building.

However, it remains recommended to maximize the air quality in the building through:
- increasing the percentage of outside air,
- improving or more frequent replacement of air filters,
- extending the operating hours of the ventilation system beyond opening hours of the location, and

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- opening exterior windows.

FURNITURE & FINISHES

- Health care facilities are leaders in best practices for choosing and maintaining furniture finishes and materials. Contract furniture manufacturers are good resources for information on furniture coverings, and most textile manufacturers offer health care lines which feature upholstery that is stain resistant and has antimicrobial protection and fluid-barrier protection. https://www.stancehealthcare.com/resources/fabrics
- Soft and porous materials are generally not as easy to disinfect as hard and non-porous surfaces. EPA has listed a limited number of products approved for disinfection for use on soft and porous materials. Soft and porous materials that are not frequently touched should only be cleaned or laundered, following the directions on the item's label, using the warmest appropriate water setting. Find more information on CDC's website on Re-opening Guidance and Cleaning and Disinfecting Your Facility for developing strategies for dealing with soft and porous materials.
- Furniture high touch surfaces to consider for increased cleaning:
  - lounge chair and task chair arms
  - chair backs
  - study table surfaces
- Consider plastic wrapping fabric upholstery for ease of cleaning
- Affix notices to each chair reminding occupants to avoid or disinfect touchpoints

CLEANING

Phase 1 & 2 – Staff only and staff with distribution out

- Ensure easy access to handwashing stations as well as adequate supplies of soap and paper towel. If there is no sink immediately accessible near the work area, a plastic jug with a spigot and a catch bucket may be used.
- When cleaning and disinfecting staff spaces:
  - prioritize cleaning and disinfecting high-touch surfaces
  - choose a product that cleans and disinfects
  - create a cleaning procedure
- Review procedures with staff and ensure that high touch tools/equipment are not shared between staff (book trucks, work stations, phones, etc.)

Phase 3 & 4 – Staff with limited public and staff with full public

- Identify optimal locations for additional hygiene stations- is there a need for handwashing stations in the public areas of the library? In staff (circulation) areas? Should there be more hand sanitizer stations featured more prominently? Hand sanitizer / wash stations should be placed at entrance/exit to allow customers to clean hands before and after touching library surfaces, and anywhere in library where contact with frequently touched surfaces may occur
- Reduce clutter (browsing copies of magazines, flyers, papers, brochures) This will allow for easier cleaning of surfaces and removes high-touch items.
- Review customer paths through the space to identify high-touch surfaces. This list may include:

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- doorknobs or push buttons to open doors
- elevator buttons
- chair arms and table surfaces
- computer keyboards
- courtesy phones or pay phones
- computer keyboards and mice
- touch screens at search stations
- touch screens on self-check machines
- photocopier screens and lids
- POS keypads
- faucets, paper towel dispensers, and stall doors in washrooms
- When cleaning and disinfecting public spaces:
  - prioritize high-touch surfaces
  - choose a product that both cleans and disinfects
  - create a cleaning procedure – consider altering open hours to allow more time for cleaning
- Outdoor areas should be clean but do not generally require disinfecting

TECHNOLOGY CONSIDERATIONS

Phase 1 & 2 – Staff only and staff with distribution out

- Automated Material Handling (AMH) machines should be used for checking in/sorting material where possible. AMH machines should be cleaned regularly per vendor guides
- Audit doors and ensure those with automatic door openers are functioning as they should. Identify opportunities to retrofit with powered doors
- Ensure other automated devices (soap dispensers, water faucets, toilets, paper towel dispensers) are all functioning as they should. Identify opportunities to replace manual devices for automated ones to reduce contact with surfaces (like automated hand sanitizing dispensers, automated hand drying, automatic doors, etc.)

Phase 3 & 4 – Staff with limited public and staff with full public)

- Encourage customers to use self-checks or mobile checkouts. Ensure that your self- check machines are configured to minimize touchscreen interactions. Contact your library's vendor if you need support in this
- Review point of sale procedures. Enable tap for debit or credit card transactions
- Discourage use of cash, consider waiving all fines and fees where possible. Consider overriding copier charges to enable free copying and printing

MOVING THROUGH THE SPACE

Phase 1 & 2 – Staff Only/ Staff with materials distribution to public

- Determine how staff will enter and exit the building. Provide sanitizer at each entry and exit, particularly if contactless entry/exit is not possible.
- Reorganize space to ensure that physical distancing of 2m between people can be maintained by staff at:
  - assigned workstations

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- paths of travel to and from workstations
- paths of travel from collections to curbside pick-up or current method of service delivery
- paths of travel to lunch rooms and washrooms
- paths of travel to handwashing stations
- Identify potential high traffic areas and take steps to reduce congestion in these areas.
- Handwashing stations: Utilize available washrooms to designate hand washing stations and minimize traffic to each station. If staff are working outside, or there are not enough handwashing stations to accommodate staff, create a portable handwashing station. Designate a specific enclosed room to isolate any person who experiences symptoms of an illness while at work

Phase 3 & 4 – Public in the building, limited and full access

- Staff access should be limited to one point of entry, separate from public entry if possible. Public access should be limited to one point of entry, with designated "in" and "out" doors if possible.
- Set up safe queueing space outside and inside of buildings.
- Consider the use of Contact Tracing Apps, or a social distancing app such as Crowd Solo (free for attractions).
- Identify high traffic areas based on available services, and ensure that paths of travel allow for a physical distance of 2m in each direction.
- Mark safe queuing distances and directional flow using signage in high traffic areas, stanchions or floor markers. Note: vinyl floor tape is easier to remove and leaves less residue than masking or duct tape.
- Monitor types of use, and consider scheduling specific areas for type of occupancy throughout the day to reduce large groups gathering in one area (for example set up an overflow Teen Area between 3 pm and 5 pm if you see large numbers at that time).
- Implement occupancy limits for elevators to ensure safe physical distancing for passengers, ensuring accessibility for people with disabilities. In addition:
  - Prominently display instructional signage regarding healthy elevator use protocols. This may include floor stickers to establish distancing zones while queuing, passenger limits, and safe distances in the carriage
  - Consider elevator attendants to manage flow and discourage over-crowding of elevator carriages
  - Review elevator cleaning processes, and update to ensure on-going cleaning of high touch surfaces such as elevator panels / buttons
- Escalators and stairs pose fewer challenges which may be managed with signage directing passengers where to stand and not to pass. High touch surfaces as handrails will require increased cleaning.
- Review emergency evacuation procedures and local requirements, and consider:
  - reasons for evacuation, including if a person exhibiting symptoms is identified;
  - role of fire wardens during an evacuation
  - how to maintain physical distancing during evacuation and at muster points;
  - cleaning procedures before re-opening after an evacuation;

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Make use of outdoor space if it is available to you. The risk of coronavirus spread is significantly lower in open air spaces. Exterior spaces should be clean, but do not require disinfecting. Add seating if possible and ensure the WiFi extends into these areas.

INTERACTING WITHIN THE SPACE

Phase 1 & 2 – Staff Only/Staff with materials distribution to the public

- Disallow handshaking, hugging, and unnecessary person to person contact
- Discourage staff from sharing phones, desks, workstations, pens, etc. with each other or the public. If equipment is shared, have staff clean the equipment with alcohol or disinfectant wipes before and after use
- If possible provide each staff with a designated laptop for work use
- When possible, encourage employees to avoid staff rooms by taking breaks and lunches outside, in their office (if applicable) or in larger areas
- Ensure employees wash their hands upon arrival, before eating, after touching a shared item, after using the washroom and before leaving at the end of the day
- Limit the interactions between staff and outside contractors, delivery people, implementing electronic signature systems and related receiving practices
- Set operating hours to allow downtime between staff shifts for thorough cleaning
- Program regular audio messages that regularly remind employees to follow hygiene and social distancing guidelines

Phase 3 & 4 – Public in the building, limited and full access

- Stacks should be accessed in a single direction and hand sanitizer placed in easily accessible locations. Public should be asked to sterilize hands and asked to place any browsed (touched) item in clearly marked baskets for disinfection/quarantine
- Reconfigure service desks to allow for fewer staff working close together. Set up more satellite service points or reduce reasons for transactions (i.e. eliminate fines)
- Modify self-serve areas (hand-outs, headphones, utensils, food) to limit shared handling of items
- Reduce meeting room capacity or limit public gathering within meeting rooms, where it is more difficult to monitor capacity. For work locations where a staff member will be in regular face-to-face contact, or where computer workstations are facing each other, consider adding a plexiglass barrier
- Provide sufficient garbage receptacles to allow for customers to dispose of their own garbage safely, including rubber gloves
- Food and drink can continue to be allowed in libraries, but encourage hand washing prior to food consumption
- Water fountains/water bottle filling stations are considered safe, although customers should be instructed to let the water run for 10 seconds before filling

SPECIAL CONSIDERATION FOR CHILDREN'S AREAS

Each province and jurisdiction will have guidelines for safe toy cleaning and services for children. The following list outlines some considerations for libraries to follow based on best practices in child care centres and schools when re-opening spaces for children and families.

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Phase 3 – Public in the building with limited access
- Remove and store toys, play materials and loose parts
- Close or limit access to fixed play structures
- Collect loose books in the area regularly and follow procedure for quarantining returns
- Arrange seating and tables to allow for physical distancing and individual family groups
- Online children's program delivery only
- Consider all surfaces in children's areas to be high-touch and increase cleaning frequency in this area

Phase 4 – Public in the building with full access
- Follow guidelines in Phase 3, and;
- Allow access to toys and loose parts, following local guidelines for daycares and schools where possible
- If toys are used, keep only enough for individual play, and remove for cleaning after each use
- Sensory tables and materials like Play-Doh, sand and water are not recommended

Section 3: Stories from the Field or Related Sectors
- Hong Kong Public Libraries re-opened the Hong Kong Central Library on May 6, 2020 and partially re-opened six others. The libraries are open for borrowing and returning of items only and public computers, study rooms, and room rentals are not available. The number of visitors to the buildings is monitored and tickets are distributed for hour long sessions. Between each session the building is closed for cleaning.
- The American Alliance of Museums has developed a Sample Reopening Plan for the Children's Museum of Manhattan, which suggests some strategies for preparing facilities and for managing the visitor experience in spaces for children.
- Crowd Solo is an app that has been developed by Holovis, an experience designer, for theme parks, zoos, museums and cultural centres to monitor capacity and ensure physical distancing is being upheld.
- Almost every major contract furniture manufacturer features products and sample office layouts that support safe distances as well as barriers between coworkers and the people they serve. Haworth, Steelcase, Teknion are three examples.
- For textiles, Healthguard, a company that specializes in anti-dust mite and anti-fungal protection for textiles, is testing a treatment that could potentially be used on soft furnishings that would kill the COVID-19 virus. Most healthcare upholstery lines feature some antimicrobial protection and there will be more research on how furniture finishes can protect people from viruses like COVID-19.

Section 4: Resources
- Coronavirus/COVID-19 Resources for Retailers – Retail Council of Canada
- COVID-19 Recovery Planning – Retail Council of Canada
- https://www.albertahealthservices.ca/assets/wf/eph/wf-eh-temp-handwashing-stations-personal-services.pdf
- https://www.elevatorworld.com/blogs/creativity-in-cabins-combat-coronavirus/ Elevator Guidelines

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- Quarantine Librarianship
- Cleaning and disinfecting public spaces during COVID-19 – Government of Canada
- Hard-surface disinfectants and hand sanitizers (COVID-19): List of disinfectants for use against COVID-19 – Government of Canada
- How the COVID-19 Pandemic Will Change the Built Environment – Alyssa Giacobbe, Architectural Digest
- SelfCheck and CloudLibrary Configuration – Bibliotheca
- Disinfecting Bibliotheca Products – Bibliotheca
- Lyngsoe Coronavirus Updates – Lyngsoe
- Social distancing signs around the word show the new normal – Reuters
- Getting your workplace ready for COVID-19 – World Health Organization
- Latest arrangements on services of Hong Kong Public Libraries – Hong Kong Public Libraries
- COVID-19 Information Guidance For Museums And Art Galleries – Government of Alberta
- COVID-19 Rapid Recovery Guide – Restaurants Canada
- Whole Food Market's COVID-19 Response – Whole Food Market
- COVID-19 Sample Reopening Plan – American Alliance of Museums
- COVID-19 (Coronavirus) Preparedness Resources – The American Society of Heating, Refrigerating and Air-Conditioning Engineers
- BC Public Health Guidance for Child Care Centres Cleaning and Disinfection for Toys – Ottawa Public Health
- COVID-19 Guidance for Daycare/Out of School Care – Government of Alberta
- Bright Tape Promoting Social Distancing Transforms Public Architecture in Singapore – Grace Ebert, This is Colossal
- Pathway Back to Work – BOMA (Building Managers & Owners Association of Canada)
- Guide for Reopening Your Workplace – Cushman Wakefield

Section 5: Authors and Acknowledgements

Amanda Fullerton, Manager, Service Design, Halifax Public Libraries
Terry Gallagher, Senior Manager, Finance and Facilities, Halifax Public Libraries
Lisa Hardy, Facilities Design Lead, Calgary Public Library
Åsa Kachan, Chief Librarian & Chief Executive Officer, Halifax Public Libraries

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