

February 2014

MEC

# DESIGN CRITERIA MANUAL

## ALL MEC BUILDINGS

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## INTRODUCTION

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The following design criteria has been prepared solely for the purpose of providing Tenants with general information on the features of their building as well as specific documentation on requirements and procedures to be followed in the design and construction of their leased space.

Tenants will, for the mutual benefit of all, be required to comply with the various provisions of this document unless specifically stated otherwise under the terms of their lease. Any deviation from this document will require the Landlord's written approval. The Tenant, its consultants, and contractors are encouraged to become thoroughly familiar with the contents of this document, as it will form the basis for the Landlord's approval of all submissions for work to be performed by the Tenant's contractors. Accordingly, Colliers International would welcome the opportunity to introduce the Tenant to its varied resources in the design and construction of the Tenant's premises under a separate construction agreement.

## TENANT COORDINATION

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This document is supplied to the Tenant by the Construction Services Department.

The Construction Services Department's function is to act as the Landlord's representative; serving as liaison between the Landlord and the Tenant; providing the Tenant with consultants, contractors, guidance, and assistance throughout the design and construction phases of the Tenant's leasehold improvements.

The Construction Services Department is also responsible for the review and written approval of all submissions prepared by the Tenant's consultants prior to construction and supervision of the construction to the Tenant's premises.

Accordingly, all inquiries concerning this document are to be addressed to:

**Colliers International**  
Mississauga Executive Centre  
4 Robert Speck Parkway  
Suite 260  
Mississauga, Ontario  
L4Z 1S1

Attention: Construction Services Department  
Tel: 905-281-7232  
905-275-5337

## LANDLORD'S CONSULTANTS

The tenant may wish to retain the Landlord's Architect, Structural Engineer, and/or Mechanical and Electrical Engineer under direct contractual arrangement for the production of Design and Working Drawings. If the Tenant chooses to employ Consultants other than the Landlord's Consultants for its design work, the Landlord will have such drawings reviewed by the Landlord's Consultants (peer review) in order to ensure compatibility with the Base Building systems and standards. The cost of this review will be at the Tenant's expense. A list of the Landlord's Consultants is included below:

| Category                                     | Company Name   | Address  | Phone Number  |
|--|--|--|---|
| <b>Structural Engineers</b>                  | Stephenson Engineering Limited<br>(Original Design Engineer) | 2550 Victoria Park Avenue,<br>Suite 602<br>Toronto, ON M2J 5A9             | T: 416-635-9970                                       |
| <b>Other Approved Structural Engineers</b>   | Halcrow Yolles   | 207 Queen's Quay West,<br>Suite 550<br>P.O. Box 132<br>Toronto, ON M5J 1A7 | T: 416-363-8123                                       |
| <b>Mechanical &amp; Electrical Engineers</b> | MMM Group Limited  | 100 Commerce Valley Drive<br>West<br>Thornhill, ON L3T 0A1                 | <b>Neil Selby</b><br>T: 905-882-1100<br>selbyn@mmm.ca |

### Riser Management Consultant

For all installations and removals of Data and Communications within Base Building Common Areas contact Rycom and refer to cabling guidelines and return to base cabling guidelines.

| Category                           | Company Name | Address                                       | Phone Number      |
|------------------------------------|--------------|---|-------------------|
| <b>Riser Management Consultant</b> | Rycom        | 6201 Highway 7, Unit 8<br>Vaughan, ON L4H 0K7 | T: 1-877-792-6687 |

### Approved Contractors and Designers

Construction contractors may be hired at the discretion of the Tenant provided the construction contractor selected is approved in writing by the Construction Services Department in advance. Below is a list of pre-approved contractors.

| Category                   | Company Name        | Address   | Phone Number    |
|----------------------------|---------------------|---|-----------------|
| <b>General Contractors</b> | The Jesslin Group   | 25 Faulkland Road<br>Scarborough, ON<br>M1L 3S4 | T: 416-757-8280 |
|                            | Michael and Douglas | 98 Trinity St., Unit 5<br>Toronto, ON M5A 3C6   | T: 416-594-9353 |
|                            | Gillanders          | 7 Dohme Avenue<br>Toronto, ON M4B 1Y7           | T: 416-750-7313 |
|                            | Vermont             | 111 Merton St., Suite 106                       | T: 416-484-9057 |

|                        |                                     |  |                                    |
|------------------------|-------------------------------------|--|------------------------------------|
|                        | Management Inc.                     | Toronto, ON M4S 3A7  | F: 416-484-9061                    |
|                        | Tomac Interiors Limited             | 57 Lynndale Road<br>Scarborough, ON M1N 1B9                            | T: 416-919-6848<br>F: 416-699-4826 |
| <b>Architects</b>      | Stevens Burgess Architects          | 301-40 St. Clair Ave. East<br>Toronto, ON M4T 1M9                      | T: 416-961-5690                    |
|                        | WZMH                                | 95 St. Clair Avenue West<br>Suite 1500<br>Toronto, ON M4V 1N6          | T: 416-961-4111                    |
|                        | Arcade Architecture and Design Inc. | 197 Spadina Avenue,<br>Suite 200<br>Toronto, ON M5T 2C8                | T: 416-351-3330<br>F: 416-351-3303 |
|                        | George Popper Architects            | 344 Bloor St. West,<br>Suite 508<br>Toronto, ON M5S 3A7                | T: 416-961-0051<br>F: 416-488-3830 |
| <b>Interior Design</b> | Modo/BH Design                      | 171 East Liberty St. East,<br>Unit 130<br>Toronto, ON M6K 3P6          | T: 416-595-9880                    |
|                        | S.G.H.                              | 366 Adelaide St. West, Unit 8<br>Toronto, ON M5V1R9                    | T: 416-360-0488                    |
|                        | Fit Design + Build Inc.             | 42 Industrial St.<br>Toronto, ON M4G 1Y9                               | T: 416-425-0660<br>F: 416-425-2460 |
|                        | Comley Van Brussel                  | 2600 Skymark Avenue,<br>Bldg 8, Unit 101<br>Mississauga, ON<br>L4W 5B2 | T: 416-621-7745<br>F: 416-621-8103 |

The following is a list of pre-approved trades for the work at Mississauga Executive Centre. Other trades may be used at the discretion of the Tenant provided the trades are approved, in writing by the Construction Services Department.

| Category                      | Company Name                         | Address   | Phone Number                       |
|-------------------------------|--------------------------------------|---|------------------------------------|
| <b>Mechanical Contractors</b> | Adelt Mechanical Works Ltd.          | 2640 Argentia Road<br>Mississauga, ON<br>L5N 6C5        | T: 416-757-8280                    |
|                               | Niagara Mechanical Contractors       | 12 Penn Drive<br>Weston, ON M9L 2A9                     | T: 416-749-6031                    |
|                               | Ainsworth Inc.                       | 131 Bermondsey Road<br>Toronto, ON M4A 1X4              | T: 416-750-6817<br>F: 416-750-6543 |
|                               | W.M. Tough Mechanical                | 3111 Beech Grove Side Rd.<br>Caledon, ON L7K 0N6        | T: 519-927-3792                    |
|                               | Commercial Mechanical Services (CMS) | 2721 Markham Rd., Unit 10<br>Scarborough, ON<br>M1X 1L5 | T: 416-609-9992                    |
|                               | Plan Group Co.                       | 27 Vanley Crescent<br>North York, ON M3J 2B7            | T: 416-635-9635                    |
| <b>Electrical Contractors</b> | Garner Clarke                        | 21 Links Lane<br>Brampton, ON L6Y 5H1                   | T: 905-460-1585                    |
|                               | Campbell & Kennedy                   | 212 Applewood Crescent,<br>Unit 11                      | T: 905-761-8550                    |

|                   |  |                 |
|-------------------|--|-----------------|
|                   | Concord, ON L4K 4E5                          |                 |
| Guild Electric    | 470 Midwest Road<br>Scarborough, ON M1P 4Y5  | T: 416-288-8222 |
| Plan Electric Co. | 27 Vanley Crescent<br>North York, ON M3J 2B7 | T: 416-635-9040 |
| Ainsworth Inc.    | 131 Bermondsey Road<br>Toronto, ON M4A 1X4   | T: 416-750-6631 |

The Landlord may engage the services of the above-noted consultants to review submissions by the Tenant to ensure compliance with engineering criteria established for the office building. The cost of such review services will be at the Tenant's expense. In addition, the following contractors have been retained to service, modify and repair existing and new installations to the mechanical system and life safety:

| Category                                  | Company Name                           | Address  | Phone Number                       |
|---|--|--|------------------------------------|
| <b>Fire Alarm Systems</b>                 | Siemens                                | 2 Kenview Boulevard<br>Brampton, ON L6T 5E4                        | T: 905-799-9937                    |
|   | Vipond<br><b>MEC 1 ONLY</b>            | 6380 Vipond Drive<br>Mississauga, ON L5T 1A1                       | T: 905-564-7060                    |
| <b>Automation &amp; Lighting Controls</b> | Siemens                                | 2 Kenview Boulevard<br>Brampton, ON L6T 5E4                        | T: 905-799-9937                    |
| <b>HVAC – Pneumatic Controls</b>          | Honeywell Limited                      | 2511 Barton St. East<br>Hamilton, ON L8E 2X1                       | T: 905-643-5574                    |
| <b>Sprinklers</b>                         | Paul & Douglas<br>Sprinklers Ltd.      | 1576 Bonhill Road<br>Mississauga, ON L5T 1C7                       | T: 905-564-2421                    |
|   | General Sprinkler<br><b>MEC 1 ONLY</b> | 315 Deerhide Cres., Unit 3<br>North York, ON M9M 2Z2               | T: 416-748-1175                    |
| <b>Locksmith</b>                          | Bill's Lock Service                    | 6790 Davand Dr., Unit 8<br>Mississauga, ON L5T 2G5                 | T: 416-626-1010                    |
| <b>Security</b>                           | Diebold                                | 6630 Campobello Road<br>Mississauga, ON L5N 2L8                    | T: 905-817-7696                    |
| <b>Parking</b>                            | Colliers International                 | 4 Robert Speck Parkway,<br>Suite 260<br>Mississauga, ON L4Z 1S1    | T: 905-281-7204                    |
| <b>Code Consultants</b>                   | George Popper<br>Architects            | 344 Bloor Street West,<br>Suite 508<br>Toronto, ON M5S 3A7         | T: 416-961-0051<br>F: 416-488-3830 |
|   | Randal Brown &<br>Associates           | 105-6 Lansing Square<br>North York, ON M2J 1T5                     | T: 416-492-5886<br>F: 416-492-1258 |
|   | Leber Rubes                            | 2300 Yonge St., Suite 2100<br>P.O. Box 2372<br>Toronto, ON M4P 1E4 | T: 416-492-5886<br>F: 416-515-1640 |
| <b>Designated Substance</b>               | Pinchin<br>Environmental               | 5749 Coopers Avenue<br>Mississauga, ON L4Z 1R9                     | T: 905-363-0678<br>F: 905-363-0681 |
| <b>Air Balancing &amp; HVAC Testing</b>   | Design Test &<br>Balancing Co Ltd.     | 70 East Beaver Creek Road<br>Richmond Hill, ON<br>L4B 3B2          | T: 905-886-6513                    |
| <b>Other Approved Air</b>                 | Dynamic Flow                           | 1200 Spears Road, Unit 36  | T: 905-338-0808                    |



|                                     |                       |  |  |
|-------------------------------------|-----------------------|--|--|
| <b>Balancers &amp; HVAC Testing</b> | Balancing Ltd.        | Oakville, ON L6L 2X4   |  |
|                                     | VPG Associates Ltd.   | 2062 King Road<br>King City, ON L7B 1K9                        | T: 905-833-4334<br>F: 905-833-2224<br><b>Toronto</b><br>T: 416-674-0644<br>F: 416-674-7640 |
| <b>IAQ Testing</b>                  | Pinchin Environmental | 5749 Coopers Avenue<br>Mississauga, ON L4Z 1R9                 | T: 905-363-0678<br>F: 905-363-0681   |
|                                     | OHE Consultants       | 496 South Service Road<br>Mississauga, ON L5G 2S5              | T: 905-278-7000  |
| <b>Duct Cleaning</b>                | New Duct              | 40 Freemont Avenue<br>Toronto, ON M9P 2W3                      | T: 416-560-4348<br>F: 416-551-4397   |
| <b>Carpet Recycling</b>             | Aspera Recycling      | 3375 North Service Road,<br>Unit B12<br>Burlington, ON L7N 3G2 | T: 1-855-927-7372<br>Ext.101<br>F: 1-855-932-9274<br>M: 905-599-0590                       |
|                                     | Carpet Cycle Canada   | 500 Keele St., Unit 410<br>Toronto, ON M6N 3C9                 | T: 416-452-7873  |

## TENANT'S CONSULTANTS

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The Landlord requires that the Tenant engage the services of professional consultants licensed to practice in Ontario, to prepare and submit drawings, specifications and pertinent calculations relative to the Tenant's proposed leasehold improvements. The selection of such consultants is at the discretion of the Tenant, but subject to the approval of the Landlord. It is recommended that the Landlord's approved engineers be retained to prepare the Electrical and Mechanical working drawings.

When two or more contractors are expected to do work in a space at one time, it is required that the Tenant hire a General Contractor. The General Contractor's duty is to supervise and oversee sub trades throughout the construction process. Individuals, Owners and Franchisees are not permitted to build themselves. The General Contractor will be held responsible for all activities on site and compliance with the Landlord's construction policies and procedures. General Contractors are mandatory in order to minimize the risk and liability of both the Tenant and Landlord.

As per above, the General Contractor must submit to the Landlord a list of sub trades (mechanical and electrical trades are restricted to Landlord approved list of trades), liability insurance, WSIB clearance certificate, contractor safety requirements forms and the contractor acknowledgment form prior to the commencement of work. In instances where only one trade is expected on site, WSIB and Insurance Certificates are to be presented by the Tenant prior to the trades' arrival.

The Tenant and/or his consultants shall be responsible for ensuring that the proposed leasehold improvements comply with the requirements of the authorities having jurisdiction over the work and shall also be responsible for the application, payment and obtaining all permits necessary for the work, in advance of commencement of such work.

The Tenant and/or his consultants shall be responsible for the verification on-site, of the location of all existing services or fixtures or features of the base building that may impact on the design and/or construction of the Tenant's proposed leasehold improvements.

## BASE BUILDING INFORMATION

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The Landlord, through the Construction Services Department, will supply the Tenant with:

- An outline drawing of the leased premises (Space Plan)
- A copy of a typical floor plan
- Details indicating the major elements of the base building (i.e. reflective ceiling)
- A layout of the base building mechanical and electrical systems

Additional drawings or information, relative to the base building which the Tenant may require, may be made available through the Construction Services Department for a fee.

## DESIGN GUIDELINES AND RESTRICTIONS

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In order to avoid delays in the processing of submissions and minimize costs to the Tenant, adherence to the following design guidelines and restrictions is recommended:

- The Tenant must advise the Landlord, in writing, of any Tenant requirement that may necessitate a modification to the base building components.
- Ceiling heights in rooms abutting the exterior wall should not be lower than the base building ceiling height of 8'9" above the typical floors.
- Ceiling heights in excess of the base building ceiling height of 8'9" above the typical floors should be avoided to minimize conflict with base building ductwork and sprinkler systems.
- All new and relocated lights must be chain hung directly from the ceiling concrete slab independent from the T-bar ceiling suspension system.
- Washrooms or other rooms requiring water supply and drainage should be located as close as possible to the rough-ins for such services provided by the landlord.
- Maintain partition layouts centered on the 5'0" x 5'0" ceiling grid and window mullion module.
- Drilling or cutting of the base building structure shall not be permitted without the prior written approval of the Landlord. Allow for X-ray operation to locate all reinforcing steel bars, conduits, and other embedment in slab.
- Mechanical fastening of Tenant improvements to window frames, convactor covers or the acoustic tile ceiling grid is not permitted. Wherever Tenant improvements abut such components, foam gaskets or tapes shall be provided between the improvements and such base building components to prevent damage to the component finishes.
- Painting of perimeter convection unit is not permitted.
- Modification to the core area and common area layout and finishes will not be permitted unless agreed to and approved by the Landlord in writing.
- Photocopiers, computers, CRT stations, etc., which may require special or dedicated electrical power must be located and identified on the Tenant's preliminary and final submissions to the Landlord. The Tenant shall provide all operating characteristics and requirements for such business machines, including the heating load generated. Required modifications to the air conditioning system caused by excessive heat generation from this equipment shall be carried out at the Tenant's expense.

- All doors giving access to the Tenant's leased premises must be provided with locksets that are compatible with the Landlord's master key system. The Tenant must secure the Landlord's written approval of the proposed locks in advance of their being installed.
- Data/Voice plenum cables, CSA rated FT-6, to be used in ceiling, shall be bundled together, routed to clear ceiling mounted equipment requiring access for maintenance. Suspend cables directly with bridle rings or "J"-hooks from the underside of the ceiling slab – independent from the ceiling grid support system. A ladder tray, suspended at high levels and not interfering with lighting fixture locations would be acceptable.
- New exit lights to be provided, Shall match the latest "LED" type base building standards. Existing exit lights indicated, to be relocated or to be re-installed into new suspended ceiling, shall be replaced with the "LED" type. Any existing exit lights indicated to remain in place, if badly damaged and/or not in good condition, shall be replaced with "LED" type regardless.
- Any additional power capacity required from building including new transformer(s), tenant supplementary air conditioning units, and general lighting tenant requirements intended to operate beyond the normal business hours (i.e. Call centers) shall be provided with metre(s) at tenant expense.
- Tenant KWHR/Demand metre shall be up to latest building standards. Tenant KWHR rated metre shall be Solid state, fully contained, Din Rail mounted metre (measurement Canada approval for Revenue billing). The unit shall be complete with pulse output (dry contact) for future demand data logger and automation. External current transformer(s) (100/120/240 to 347/600 volt units) shall be wired with twisted pair AWG and No-16, ¾" Conduits. Voltage to be configured and sizes of current transformer(s) to match load requirements. Metre shall be mounted in a 10"x10"x4" metre box in the typical electrical room.

Manufacturer: Intellimetre Canada Inc. 905-839-9199  
Model no-TX2005 Series Revenue metre

Data logger - Model no- PT-2000 (up to 8 emergency metre pulse initiators)

- Tenant shall provide and install solenoid valves and sensors on hot water tank in kitchenette areas.
- Tenants are to use copper piping on all water coolers and coffee makers to require a water connection.
- Land room A/C units, condenser units are to be installed in either roof or parking level.

## TENANT SUBMISSIONS

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### Preliminary Submission

Tenants are required to submit a feasibility drawing of their proposed leasehold improvements to the Landlord for review and approval in advance of commencing final submissions working drawings and specifications.

### Final Submission

All drawings forming part of the final submission shall be of uniform size, 30" x 36" in size and the drawing scale is 1/8". All specifications for material, labour, performance and general conditions shall be typewritten on 8 1/2" x 11" bond paper. Material samples and colour samples shall be firmly adhered to rigid presentation board stock with all materials and colours clearly identified and referenced as to proposed location in the leased premises, and with all boards identified as to tenancy. All material sample and colour sample boards shall be of uniform size, 24" x 30". The final submission drawing component shall consist of four (4) sets of prints of all drawings.

### Landlord's Approval

Upon receipt of tenant's final submissions, the Landlord will review and formally notify the Tenant of any modifications, clarifications, additional information or details required.

The Tenant is cautioned that the Landlord's approval of the proposed leasehold improvements shall not be construed as a building permit nor as certification of the proposed work as being in compliance with the requirements of the municipal and provincial authorities having jurisdiction over such proposed work. In all cases, the Landlord's approval of the Tenant's final submissions shall be conditional upon all other terms of the lease between the Landlord and the Tenant, having been met, to the satisfaction of the Landlord.

### Prior to Commencement

Prior to starting work, the Tenant or Contractor shall provide to the Construction Services Department the following:

- Building Permits
  - A valid building permit obtained from the city must be provided.
  - A work permit from Colliers must be obtained and submitted (see Appendix C)
- Notice of Project – if applicable
- Contact List
  - A list of all main contacts, contractors, and sub-trades that includes full names, addresses, emergency contact numbers, and day/night contact numbers.

- Project Schedule
  - This is a detailed timeline showing map trades and their approximate beginning and end dates including furniture installation and final turn-over of completed space for occupancy.
- Project Costs
  - The calculation of the project cost will include but it is not limited to construction, design fees, data and communications cabling and all installations permanently affixed to the building either within the tenant space or in base building areas.
- Tenant Coordination Fee
  - This fee is governed by your lease agreement. An amount of \$0.80 per square foot is required as a deposit prior to construction start. Upon final submission there may be adjustments to the actual fees based on the terms of the lease and the cost of construction.
- Refundable Deposit
  - The Tenant or Contractor shall provide a refundable deposit to be held by Colliers International to ensure the submission of close-out documents at project completion. The deposit will be based on 3% percent of the project cost with a minimum of \$1,000 and a maximum \$15,000. No interest will accumulate or be payable on this deposit.
  - In the event that Colliers does not receive complete close-out documentation, including the closing of the building permit, within six months of occupancy of the space by the tenant, the deposit will be forfeited. The deposit will then be used to engage all parties necessary to complete all close-out documentation. **The remainder of the deposit will be refunded.**

## TENANT WORK REGULATIONS

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### Permits

Tenants will be responsible for obtaining all necessary permits including Building & Occupancy permit, Department of Labour, Health & Fire Prevention approvals, and must furnish evidence of such approvals prior to commencement of any work.

### Appointment of Contractors

All Tenant's Contractors and Sub-contractors must be approved by the Landlord, in writing, prior to tender and commencement of Tenant work, must have union affiliations compatible to those on site, and furnish evidence of good standing with the Workers' Compensation Board.

### Insurance

Commercial Liability Insurance Certificate, for each contractor/subcontractor, with minimum coverage for bodily injury \$5,000,000.00 and property damage \$5,000,000.00. The "additional insured" should be included on the certificate as follows:

***Sun Life Assurance Company of Canada and Patria Properties Inc. (collectively the "Landlord") and Colliers Macaulay Nicolls (Ontario) Inc. (as "Manager") 4 Robert Speck Parkway, Suite 260, Mississauga, ON L4Z 1S1***

### Security

The Tenant will be entirely responsible for the security of the premises and shall take all necessary steps to secure the premises. The Landlord shall have no liability for any loss or damage including theft of building materials, equipment or supplies.

### Temporary Fire Protection

Operable fire extinguisher of proper classification must be kept on the premises throughout the construction.

### Minors

Minors are not permitted on the construction site at any time.

### Health and Safety

It is the responsibility of the Tenant to ensure that his contractors exercise all caution in matters relating to public safety and comply with the Occupational Health and Safety Act and Regulations including Bill 208 (see Appendix G detailed Colliers Safety Criteria).

### Public Safety

It is the responsibility of the Tenant to ensure that his contractors exercise all caution in matters relating to public safety.



### Working Hours

All construction shall be carried out after business hours, unless otherwise approved by Property Management.

### Drilling and Cutting

Under no circumstances shall the Tenant or his contractor drill or cut chases or openings of any description in any part of the structure unless approved by the Landlord in writing and structural x-rays provided. Any drilling or cutting must be performed after hours. X-raying walls and/or floor slabs shall not be permitted without the express consent of the Landlord. Work is to be performed between the hours of midnight and 5:00 am unless otherwise instructed. **When drilling and coring x-rays and cores must be reviewed by base building structural engineer.** All cores in telecommunications, electrical, mechanical riser beams will be minimum 3 ½" diameter and sleeved to 2" above the floor slab.

### Clean-up

The Tenant and/or his Contractor shall remove garbage and debris from their premises, electrical and mechanical room on a daily basis and dispose of same.

### Access and Deliveries

All material deliveries must be scheduled 48 hours in advance and approved by the Landlord and restricted to specific times established by the Landlord. Major deliveries must be scheduled after hours.

### Work Areas

All construction materials, tools, equipment and work benches must be kept within the Leased Premises throughout construction.

### Work Conflict

Tenant contractors work shall be performed in a manner that will not interfere or conflict with any activities of the Landlord, other Tenants or the operation of the complex.

### Damages

The Tenant shall be responsible for all damages caused by his contractors and shall protect all finishes to base building elements at all times.

### Cabling Guidelines

The intent of this document to define guidelines that Colliers International expects cabling Contractors and Carriers to follow. Where these guidelines exceed local building or fire codes, this guideline will be the governing document.

The major goals in this program are:

1. To ensure that cabling in the building is installed in professional manner.

2. To ensure that cables are properly labeled in order to determine ownership for future considerations.
3. To ensure proper fire stopping and reduced smoke and fuel loading in the event of a fire.

#### Building Risers: Copper or Fiber Cables

1. Contractors will install cables in a professional manner adhering to standards such as published by BICSI and local building and fire codes.
  - a. Cables installed in a buildings riser system should be FT-6 fire rating.
  - b. Cables will be properly supported and “strain relieved”
  - c. Cables will be labeled on either end and on every floor.
  - d. Cables will be properly dressed.
  - e. Contractors will replenish the Fire stopping in the riser sleeves that are used to route the cables, regardless of the previous condition of the Fire stopping.

#### Building Floor Space: Copper or Fiber

1. Contractors will install cables in a professional manner adhering to standards such as published by BICSI and local building and fire codes.
  - a. Cables installed in the building’s horizontal floor space will be plenum rated/FT-6, regardless if the space is actually plenum or not.
  - b. Cables will be routed in conduit, cable trays or on J-hooks. Running cables over the ceiling tiles and light fixtures is not acceptable.
  - c. Cables will be properly dressed.
  - d. FT-4 rates cables can be used providing they are in metal conduit or FT-6 rated Inner duct.

If a contractor fails to implement the above guidelines then they will be asked to perform remedial action to correct the deficiencies. If the contractor fails to correct the deficiencies then the contractor will be barred from performing additional work in the building until the deficiencies are corrected.

This guideline is to help tenants understand their responsibilities regarding the removal of telecommunications cabling when vacating the premises at the expiry of their lease. It is understood that all costs associated with this work are borne by the Tenant.

For the purposes of this guideline the demarcation point is considered to be the Main Telephone Room (MTR) and/or Point of Presence (POP) room which are located in the parking level floor of the building. The Incumbent Local Exchange Carrier’s (ILEC) demarcation point - typically Telus or Bell - is the MTR. The Competitive Local Exchange Carrier’s (CLEC) demarcation point - typically Allstream, Sprint, Group Telecom etc. - is a POP room. The ILEC usually uses the buildings main backbone cabling that they installed when it was built. CLECs usually install Homerun cables to the tenant suite on an ad hoc basis.

The tenant is responsible for in-suite horizontal cabling and the vertical cabling to the MTR or POP room.

In the Return to Base Building situation the tenant at the discretion of the Landlord must remove all:

- Horizontal Cabling: Voice and data cabling used for in-suite distribution to the desktop from a communication room within the tenant's suite and/or the riser room located on the same floor as the tenant (this room may be located outside of the tenant's suite). In addition, the tenant must remove cables that run between floors where the tenant occupied multiple floors. The tenant is also responsible for the removal of any in house communications systems such as PA systems/security etc.
- Vertical Cabling: Voice and data cables between the MTR/POP room and the tenant's suite through the building riser system. In the event that the tenant's cabling terminates on the Building's backbone, the tenant is responsible for removing all cable to the backbone only.

Tenants are responsible for the following:

- Contact RycomTPM before removing wiring: 1-877-792-6687 (Option 1) or [customercare@rycom.ca](mailto:customercare@rycom.ca). RycomTPM will inspect, tag or indicate in writing cabling that is to be removed. RycomTPM will perform a follow-up inspection to ensure that all redundant cabling as described above has been removed and will work with contractors to ensure that any necessary remedial work is performed correctly.

RycomTPM can remove cable at the Landlord's or Tenant's request if no contractor is available.

### **Completion**

Upon completion of the Tenant's work, the Tenant shall provide to the Landlord the following in **Appendix A**.

## LANDLORD'S CHARGES

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The Tenant will be responsible to pay the Landlord a fee for building services, coordination and supervision as a result of the Tenant's development work. This fee will be a percentage of the total cost of the Tenant's Leasehold Improvements or a price per square foot based on the total rentable area occupied by the tenant. This is subject to change according to the Lease terms and conditions.

## LANDLORD'S WORK FOR OFFICE PREMISES

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Any changes, revisions, alterations, additions and upgrades by the Tenant to standard provisions herein shall be solely at the Tenant's expense.

### The Landlord will provide

- Flooring - Smooth trowelled concrete floor ready to receive Tenant's floor finishes.
- Suspended T-bar Ceiling - Ceiling consists of five (5) foot Modular Lay-In acoustic tile. Ceiling tile will be installed prior to the Tenant's alterations. The ceiling height is 8'9" on typical floors.
- Air Conditioning - Base building air conditioning is designed, installed and balanced for open space concept. The air conditioning is supplied through a variable volume duct system distributed evenly using air handling light fixtures and air boots. There are 33 thermostats per floor.
- Heating - Heating is provided through the perimeter convection units.
- Sanitary Water and Exhaust Connections - These connections are located on either side of the core for future Tenant's use.
- Lighting - Fixtures are 20" x 60" recessed, 2 tube fluorescent/combo air handling units centered in 5'0" x 5'0" ceiling module. Must be installed in a staggered pattern and re-locatable. Operating voltage is 347/600 volt. Must be capable of being programmed.
- Demising Walls on Multi-Tenant Floors Only - Partitions between Tenancies and smoke barrier partitions along public corridor are all constructed of 1/2" drywall either side of 2 1/2" metal stud filled with 2" batten insulation floor to ceiling and above ceiling to underside of structural slab.
- Suite Doors on Multi-Tenant Floors Only - Single full height, oak veneer door & frame, stained to designer's approved sample, is standard for Tenant's suite entrance. Additional entrances to the premises will be installed at Tenant's expense.
- Lobby Finishes - On Multi-Tenant floors, carpet is furnished, and walls are finished with vinyl wall covering per designer's approved samples.
- Fire Protection - Two fire hose cabinets (FHC) are located on either side of core. Additional FHC may be required depending on Tenant's layout and are to be installed by the Landlord at Tenant's expense.

- Sprinklers - Base building sprinkler system is installed to suit an open space concept. Depending on the Tenant's layout, sprinkler heads are to be relocated or added by the Landlord at Tenant's expense.
- Washrooms - Washroom facilities are located on all typical floors and designed to accommodate the handicapped.
- Electrical Power - A separate electrical system with check meter is available on each typical floor with an approximate capacity of 2 watts per square foot (excluding lighting). Tenant power service is 120/208V, 60 cycle, 3 phase, 4 wire. Any tenant additional panels, distribution, breakers, transformers, and check meters are not included and shall be provided at Tenant's cost.
- Telephone - Telephone zone conduits are provided through the floor directly into the telephone room on each floor. Tenants are requested to make arrangements directly with Bell Canada for their telephone requirements.
- Emergency Voice Communications and Fire Alarm System, Emergency Lighting, and Exit Lighting -The systems are designed and installed to suit an open space concept. Depending on tenant's layout, relocations and additions shall be provided by Tenants contractor at Tenant's expense.

## MEC: SUMMARY OF PRECONSTRUCTION REQUIREMENTS

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Please be advised that Colliers International requires all construction projects to be monitored by the Construction Services Department. The purpose is to ensure that design and construction can be completed with minimal impact on the building and tenants. All design and construction must conform to the Tenant Design Criteria Manual and the building rules and regulations.

If renovations include significant changes that have an impact on the base building it is strongly recommended that these alterations be reviewed at the preliminary stages to avoid delays in final approvals.

### Preliminary Documentation

Prior to the commencement of the work, an approved Colliers Work Permit is required. The following documentation is required:

- For submissions where Landlord's approved consultants have been retained – Two (2) complete hard copy sets of drawings must be submitted.
- For submissions using other consultants – Four (4) complete hard copy sets of drawings must be submitted.
- **Please allow ten (10) business days for drawing review. Please note there is a fee payable for review of drawings completed by consultants other than those approved by the Landlord.**
- Commercial Liability Insurance Certificate for each contractor/subcontractor with minimum coverage for bodily injury \$5,000,000.00 and property damage \$5,000,000.00. The "additional insured" should be included on the certificate as follows:

***Sun Life Assurance Company of Canada and Patria Properties Inc.  
(collectively the "Landlord") and Colliers Macaulay Nicolls (Ontario)  
Inc. (as "Manager") 4 Robert Speck Parkway, Suite 260,  
Mississauga, ON L4Z 1S1***

- Schedule K and K1 – Colliers Designated Substance Contractor Acknowledgement Form signed by the contractor and returned.
- Colliers Health and Safety Policy Acknowledgement signed by each trade entering the site.
- Current WSIB Certificate for each contractor entering the site.
- Copy of the City Building Permit and applicable plumbing and mechanical permits.
- Ministry of Labour Notice of Project.
- List of key contacts for the project including Tenant Contacts, Designers, General Contractors and Subcontractors. GC and trades listing will include after-hours contact name and phone number(s).
- Any contractors hired directly by the tenant are subject to all the same documentation requirements.
- Detailed Construction Schedule.
- Project Costs.
- Refundable Close-Out Document Deposit.

- Tenant Coordination Fee as prescribed in the Project Review provided by the Landlord's Representative.

Please make all submissions to the Colliers Management Office at 4 Robert Speck Parkway, Suite 260, Mississauga, Ontario, attention to the Construction Services Department.

### Engineering Review

It is recommended that the tenant use the base-building consultants. This will minimize the time involved in the submission process and reduce the cost of the consultant's review.

### Standing Work Permit

Upon acceptance of the above noted documentation, an authorization letter will be issued to the Tenant requesting the work and a standing work permit will be issued by the Construction Services Department granting access to the premises. The contractor or the tenant will then be responsible for all special request permits such as by-passes, elevator bookings, access to adjacent tenant spaces, etc. that may be required from time to time during the project.

Work permits will be submitted for review and approval with a **minimum of 72 hours in advance** to the Property Management office located at: ***4 Robert Speck Parkway, Suite 260, Mississauga, ON***. As well please email a copy of the work permit to Sante Esposito, General Manager (sante.esposito@colliers.com) and Manny Costa, Operations Supervisor (manny.costa@colliers.com).

In some instances (ie. building power shut-downs) a minimum of one week advance notice will be required. Also, it is understood by both the Contractor and the Tenant that additional security and use of Operations Staff after regular business hours are chargeable cost(s) to the Tenant.

### Changes in Scope of Work

During construction all changes to the scope of work must be submitted to the undersigned for review.

### Close-out Documentation

Upon completion of the project, documentations are required to be submitted to the Property Management Office in a hard (binder) and soft copy format (CD). The following is an abbreviated list of the necessary documentations; a full list is contained within the "Close-out Document Checklist".

- Fire Alarm and Life Safety verification certificates.
- Air Balancing Report from approved balancer. Written confirmation that all deficiencies have been rectified.
- Electrical Safety Association Certificate.



- Consultant's letters of compliance certifying that the project was completed in accordance with the approved construction documents.
- Publication of the Certificate of Substantial Completion (Form 6).
- Statutory Declaration as submitted for release of hold back.
- Two (2) complete sets of As-Built documents and one (1) AutoCAD and PDF CD version of the same.
- Certificate of Clearance with the City Building Inspector.
- Confirmation of the Final Cost of construction and total square footage.

## Fees

The following fees are applicable for all construction and renovation projects:

- Base Building Consultant Reviews (Mechanical, Electrical, Communications and Structural) if not retained for design.
- **Tenant Coordination Fee (to be provided before start of construction).**
- After hours HVAC and Lighting.
- Security and Operations Staff required for any special needs.

## Waste Management

Colliers International, as a responsible leader in Property has initiated an action plan focused on "Sustainable Intelligence" and environmental stewardship. Contractors shall at all times follow the Sustainable Intelligence criteria as stated in the schedules within this document. Construction waste is an area of concern. All contractors are required to monitor and record the amount of waste generated at the site and report back to the Property Management Office with the amount in weight and where the waste was sent. Recycling initiatives are expected to be implemented by contractors wherever possible.

If you have any questions or require clarification, please contact:

**Colliers International**  
Sante Esposito  
General Manager  
905-281-7230  
[sante.esposito@colliers.com](mailto:sante.esposito@colliers.com)

# APPENDIX A - Close-Out Document Checklist

| PROJECT:   |                          |
|--|--------------------------|
| Project Title/Tenant   |                          |
| Address  |                          |
| PLEASE RESUBMIT  | <input type="checkbox"/> |
| FORWARD REMAINING  | <input type="checkbox"/> |
| FOR YOUR RECORD  | <input type="checkbox"/> |
| COMPLETE   | <input type="checkbox"/> |
| If asked to resubmit, ALL documentation has to be resubmitted, including the documentation previously submitted. |                          |

## CLOSE-OUT DOCUMENT CHECKLIST

COMPLETE SUBMISSION ONLY/PARTIAL SUBMISSIONS WILL NOT BE ACCEPTED

| Submission Format  |
|--|
| <ul style="list-style-type: none"> <li>• Two (2) Three Ring Binders are to be provided. One (1) Tenant and one (1) Property.</li> <li>• All information to be contained in a 2" or larger binder (White)</li> <li>• Cover and side band to identify tenant, month, and year of completion, building and suite number (two binders per buildings if project spans two buildings)</li> </ul> |

Review Date: \_\_\_\_\_

General Contractor: \_\_\_\_\_

Tenant Contact: \_\_\_\_\_

Building Permit: \_\_\_\_\_

HVAC Permit: \_\_\_\_\_

Plumbing Permit: \_\_\_\_\_

WEB ACCESS ID: \_\_\_\_\_

|  | Minimum Required | Complete | Incomplete | Notes |
|--|------------------|----------|------------|-------|
| <b>PROPER SUBMISSION FORMAT (binder, labels, etc...) See Above Description</b>   | X                |          |            |       |
| <b>As-Built Drawings:</b>  |                  |          |            |       |
| Softcopy Drawings  |                  |          |            |       |
| - PDF  | X                |          |            |       |
| - AutoCAD (DWG)  | X                |          |            |       |
| Hardcopy Drawings  |                  |          |            |       |
| - 11" x 17" Representation of the As-Built's bound within the binder   | X                |          |            |       |
| <b>General Contractor/Conditions</b>   |                  |          |            |       |
| - Table of Contents  | X                |          |            |       |
| - Trade list with contact information  | X                |          |            |       |
| - Project Schedule   | X                |          |            |       |
| - G.C. Statutory Declaration in CCA 9 format only (release of holdback) OR Tenant Stat Dec   | X                |          |            |       |
| - Building Permit Sign-offs  | X                |          |            |       |
| - Receipted General Contractor Invoice(s)  | X                |          |            |       |
| - Certificate of Publication   |                  |          |            |       |
| - WSIB Clearance Certificate   | X                |          |            |       |
| - Colliers Health & Safety Policy  | X                |          |            |       |
| - Schedule K & K1 Forms  | X                |          |            |       |
| - Copy of General Contractors Insurance Certificate (w/ LL listed as additional insured)   | X                |          |            |       |
| - Warranties (General Contractor)  | X                |          |            |       |
| <b>Architectural</b>   |                  |          |            |       |
| - Certificate of Substantial Completion  | X                |          |            |       |
| - Finishes Care and Maintenance specifications   |                  |          |            |       |
| - Hardware schedule complete with keying information   |                  |          |            |       |
| - Architects/Designers Certificate of Completion with Building Permit number referenced in the letter  | X                |          |            |       |
| - LEED CI (Commercial Interiors) Certification Certificate   |                  |          |            |       |
| <b>Mechanical (HVAC and Plumbing)</b>  |                  |          |            |       |
| - Maintenance manuals and approved cut sheets  |                  |          |            |       |
| - Balance Report (provided by base building approved testing company)  | X                |          |            |       |
| - HVAC Controls Verification Certificate   |                  |          |            |       |
| - Design Engineers Certificate of Completion with Building Permit number referenced in the letter  | X                |          |            |       |
| - Warranties   | X                |          |            |       |
| <b>Electrical</b>  |                  |          |            |       |
| - Electrical Safety Authority Certificates   | X                |          |            |       |
| - Fire Alarm Verification Certificate  |                  |          |            |       |
| - Design Engineers Certificate of Completion, w/ stamp and Building Permit number referenced in the letter                                     | X                |          |            |       |
| - Warranties   | X                |          |            |       |
| - Copy of Electrical Panel Circuit Cards   | X                |          |            |       |
| <b>Sprinklers</b>  |                  |          |            |       |
| - Other: Approved design drawings of other engineered systems (ie. Pre-action, FM, etc...)   |                  |          |            |       |
| - Engineers NFPA 13 letter (Sprinkler head coverage) with Building Permit number referenced  | X                |          |            |       |
| - Engineers NFPA 14 letter & Contract Test & Materials Certificate on Stand Pipe Install or Relocations with Building Permit number referenced |                  |          |            |       |
| - Design Engineers Certificate of Completion with Building Permit number referenced in the letter  | X                |          |            |       |

## APPENDIX B – Sample MEC Project Permit

### Mississauga Executive Centre TENANT PROJECT PERMIT

**POST COPY ONSITE**

|                     |                  |
|---------------------|------------------|
| Building _____      | Contact: _____   |
| Floor(s): _____     | GC Phone: _____  |
| Project: _____      | GC Fax: _____    |
| Contractor: _____   | GC Cell: _____   |
| Site Foreman: _____ | Pager: N/A _____ |

Site Personnel & Subtrades: (complete or attach separate list)

| Contact:     | Company: | Phone: | Pager |
|--------------|----------|--------|-------|
| See Attached |          |        |       |
|              |          |        |       |
|              |          |        |       |

For Colliers Use Only

|   |  |
|---|--|
| <p><b>Property Management</b></p> <p><input type="checkbox"/> WSIB</p> <p><input type="checkbox"/> City Building Permit # _____</p> <p><input type="checkbox"/> Reviewed Drawings</p> <p><input type="checkbox"/> List of Contractors &amp; Emergency No.'s</p> <p><input type="checkbox"/> Construction Schedule</p> | <p>As Built Drawings <input type="checkbox"/> Not Required <input type="checkbox"/> Required</p> <p>Tenant Approval <u>N/A</u> <input type="checkbox"/> Not Required</p> |
|---|--|

I have reviewed this Tenant Work Permit and I understand the nature and extent of the conditions within the Mississauga Executive Centre Tenant Design Criteria Manual, its amendments and the Rules and Regulations for the Property. These I will adhere to in performing the Work. I am in receipt of two (2) copies of the Architectural, Electrical, and Mechanical Drawings submitted to the Landlord for review.

Contractors Signature: X \_\_\_\_\_ Date: \_\_\_\_\_

Print Name

\* (72 hr. advance notice required for noisy, odorous, or vibratory work )

\* E- mail to the Oxford office your submissions.

THIS PERMIT IS NOT VALID UNLESS A SIGNED COPY IS RETURNED TO THE LANDLORD.

X \_\_\_\_\_  
Property Management

\_\_\_\_\_ Date Approved

\_\_\_\_\_  
\*Copy to Security  
\*Copy to Operations

\_\_\_\_\_ Date Issued

## APPENDIX C – Sample MEC Work Permit



**Mississauga Executive Centre**  
 4 Robert Speck Parkway, Suite 260, Mississauga, ON  
 Tel: 905.275.5000 Fax: 905.275.5337

| WORK PERMIT REQUEST   |         |   |                             |                                     |  |                                    |                             |   |                          |
|---|---------|---|-----------------------------|-------------------------------------|--|------------------------------------|-----------------------------|---|--------------------------|
| <b>TYPE OF PERMIT</b>   |         | <b>GENERAL</b> <input type="checkbox"/> |                             | <b>HOT</b> <input type="checkbox"/> |  | <small>(please choose one)</small> |                             | <b>STANDING</b> <small>(for office use only)</small> <input type="checkbox"/> |                          |
| <b>TENANT INFORMATION</b>   |         |   |                             |                                     | <b>Date</b>  |                                    |                             |   |                          |
| Company   |         |   |                             |                                     | Building No.   |                                    |                             |   |                          |
| Tenant Contact Name   |         |   |                             |                                     | Suite No.  |                                    |                             |   |                          |
| Tenant Contact Title  |         |   |                             |                                     | E-mail   |                                    |                             |   |                          |
| Authorization <small>(Signature)</small>  |         |   |                             |                                     | Telephone No.  |                                    |                             |   |                          |
| <b>WORK DATES AND TIMES</b>   |         |   |                             |                                     | <b>STANDING PERMIT START DATE</b>                          |                                    |                             |   |                          |
| Weekday   | Day     | Month                                   | Year                        | Start Time                          | <small>Shade One</small>                                   | Finish Time                        | <small>Shade One</small>    |   |                          |
|   |         |   |                             | _____ am                            | <input type="checkbox"/> pm                                | _____ am                           | <input type="checkbox"/> pm |   |                          |
|   |         |   |                             | _____ am                            | <input type="checkbox"/> pm                                | _____ am                           | <input type="checkbox"/> pm |   |                          |
|   |         |   |                             | _____ am                            | <input type="checkbox"/> pm                                | _____ am                           | <input type="checkbox"/> pm |   |                          |
|   |         |   |                             | _____ am                            | <input type="checkbox"/> pm                                | _____ am                           | <input type="checkbox"/> pm |   |                          |
| <b>WORK DESCRIPTION</b>   |         |   |                             |                                     |  |                                    |                             |   |                          |
| _____   |         |   |                             |                                     |  |                                    |                             |   |                          |
| _____   |         |   |                             |                                     |  |                                    |                             |   |                          |
| _____   |         |   |                             |                                     |  |                                    |                             |   |                          |
| <b>CONTRACTOR INFORMATION</b> <small>If necessary, a separate list for subcontractors may be attached.</small>  |         |   |                             |                                     |  |                                    |                             |   |                          |
|   | Company | Contact Person                          | After Hours Phone           | WSIB                                | Insurance  |                                    |                             |   |                          |
| Contractor  |         |   |                             |                                     |  |                                    |                             |   |                          |
| Subcontractor   |         |   |                             |                                     |  |                                    |                             |   |                          |
| Subcontractor   |         |   |                             |                                     |  |                                    |                             |   |                          |
| Subcontractor   |         |   |                             |                                     |  |                                    |                             |   |                          |
| <b>TENANT NEEDS</b>   |         |   |                             |                                     | <b>Access to</b> <small>Please note Floor or Suite</small> |                                    |                             |   |                          |
| <sup>1</sup> Security to provide access?  |         | <input type="checkbox"/> Yes            | <input type="checkbox"/> No | Start Time                          |  | <small>Shade One</small>           | Finish Time                 |   | <small>Shade One</small> |
| <sup>2</sup> Extra security coverage required?  |         | <input type="checkbox"/> Yes            | <input type="checkbox"/> No | _____ am                            | <input type="checkbox"/> pm                                |                                    | _____ am                    | <input type="checkbox"/> pm   | <input type="checkbox"/> |
| <sup>3</sup> Service elevator required?   |         | <input type="checkbox"/> Yes            | <input type="checkbox"/> No | _____ am                            | <input type="checkbox"/> pm                                |                                    | _____ am                    | <input type="checkbox"/> pm   | <input type="checkbox"/> |
| <sup>4</sup> After hours HVAC required?   |         | <input type="checkbox"/> Yes            | <input type="checkbox"/> No | _____ am                            | <input type="checkbox"/> pm                                |                                    | _____ am                    | <input type="checkbox"/> pm   | <input type="checkbox"/> |
| <sup>5</sup> After hours lighting required?   |         | <input type="checkbox"/> Yes            | <input type="checkbox"/> No | _____ am                            | <input type="checkbox"/> pm                                |                                    | _____ am                    | <input type="checkbox"/> pm   | <input type="checkbox"/> |
| Smoke by-pass required?   |         | <input type="checkbox"/> Yes            | <input type="checkbox"/> No | _____ am                            | <input type="checkbox"/> pm                                |                                    | _____ am                    | <input type="checkbox"/> pm   | <input type="checkbox"/> |
| Sprinkler drain down required?  |         | <input type="checkbox"/> Yes            | <input type="checkbox"/> No | _____ am                            | <input type="checkbox"/> pm                                |                                    | _____ am                    | <input type="checkbox"/> pm   | <input type="checkbox"/> |
| Other _____   |         | <input type="checkbox"/> Yes            | <input type="checkbox"/> No | _____ am                            | <input type="checkbox"/> pm                                |                                    | _____ am                    | <input type="checkbox"/> pm   | <input type="checkbox"/> |
| <sup>1</sup> Tenant to provide access (either in person or by providing contractor with access card) unless otherwise requested in this form.<br><sup>2</sup> Extra Security coverage will be provided at the rate of \$45/hour (min. 4 hours) plus a 15% administration fee. Holiday and Overtime charges may apply.<br><sup>3</sup> After Hours HVAC will be provided upon request at the rate of \$35 per hour plus a 15% administration fee.<br><sup>4</sup> Additional charges may apply. Quote will be forwarded upon request.<br><sup>5</sup> Operations Staff will be required at the rate of \$45/hour (min. 4 hours) plus a 15% administration fee. Holiday and Overtime charges may apply.<br>* If additional charges apply, do not authorize permit until charges have been verified. |         |   |                             |                                     |  |                                    |                             |   |                          |
| <b>To be completed by building management only.</b>   |         |   |                             |                                     | <b>Additional Charges: (\$ x hrs)</b>                      |                                    |                             | <b>Tenant Authorization:</b>  |                          |
| Date _____  |         |   |                             |                                     | Extra Security Coverage: \$45 x _____ = _____              |                                    |                             | Please Initial to Authorize Additional Charges                                |                          |
| Authorized by _____   |         |   |                             |                                     | After Hours Lighting: \$15 x _____ = _____                 |                                    |                             | Tenant Signature  |                          |
| <small>Management Signature</small>   |         |   |                             |                                     | After Hours HVAC: \$35 x _____ = _____                     |                                    |                             |   |                          |
|   |         |   |                             |                                     | Operations Fees: \$45 x _____ = _____                      |                                    |                             |   |                          |
|   |         |   |                             |                                     | Administration Fees: 15% _____ = _____                     |                                    |                             |   |                          |
| <b>Total</b>  |         |   |                             |                                     |  |                                    |                             |   |                          |



## APPENDIX E – Sample Construction Schedule

| ID | Task Name                    | Duration | Start        | Finish       | 08 Aug '10 |   |   |   |   |   |   | 15 Aug '10 |   |   |   |   |   |   |   |   |
|----|------------------------------|----------|--------------|--------------|------------|---|---|---|---|---|---|------------|---|---|---|---|---|---|---|---|
|    |                              |          |              |              | M          | T | W | T | F | S | S | M          | T | W | T | F | S | S | M | T |
| 1  | Demo                         | 2 days   | Tue 03/08/10 | Wed 04/08/10 |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |
| 2  | Chalk Lines                  | 1 day    | Tue 03/08/10 | Tue 03/08/10 |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |
| 3  | Ceiling Tile Removal         | 1 day    | Tue 03/08/10 | Tue 03/08/10 |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |
| 4  | Partitions - Stud and Track  | 5 days   | Tue 03/08/10 | Mon 09/08/10 |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |
| 5  | Sprinklers                   | 1 day    | Tue 03/08/10 | Tue 03/08/10 |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |
| 6  | Electrical Rough In          | 1 day    | Wed 04/08/10 | Wed 04/08/10 |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |
| 7  | Electrical Inspection        | 1 day    | Thu 05/08/10 | Thu 05/08/10 |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |
| 8  | Plumbing Rough In            | 1 day    | Thu 05/08/10 | Thu 05/08/10 |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |
| 9  | Mechanical                   | 1 day    | Thu 05/08/10 | Thu 05/08/10 |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |
| 10 | Plumbing Inspection          | 1 day    | Mon 09/08/10 | Mon 09/08/10 |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |
| 11 | Close Walls                  | 1 day    | Tue 10/08/10 | Tue 10/08/10 |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |
| 12 | Taping                       | 1 day    | Fri 13/08/10 | Fri 13/08/10 |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |
| 13 | Painting                     | 4 days   | Mon 16/08/10 | Thu 19/08/10 |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |
| 14 | Doors and Frames             | 1 day    | Mon 16/08/10 | Mon 16/08/10 |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |
| 15 | Hardware                     | 1 day    | Tue 17/08/10 | Tue 17/08/10 |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |
| 16 | Glazing                      | 1 day    | Tue 17/08/10 | Tue 17/08/10 |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |
| 17 | Carpet Installation          | 1 day    | Tue 17/08/10 | Tue 17/08/10 |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |
| 18 | Cleaning                     | 1 day    | Wed 18/08/10 | Wed 18/08/10 |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |
| 19 | Final Deficiency Walkthrough | 1 day    | Thu 19/08/10 | Thu 19/08/10 |            |   |   |   |   |   |   |            |   |   |   |   |   |   |   |   |

Project: Project Schedule Template  
Date: Thu 29/07/10

Page 1

|  |  |   |   |
|--|--|---|---|
| <p>Task</p> <p>Split</p> <p>Progress</p> | <p>Task</p> <p>Split</p> <p>Progress</p> | <p>Milestones</p> <p>Summary</p> <p>Project Summary</p> | <p>External Tasks</p> <p>External Milestone</p> <p>Deadline</p> |
|--|--|---|---|

## APPENDIX F – Schedule K and K1 Form

**Form K1 - Contractor Acknowledgement Form**

---

**CONTRACTOR ACM / HAZ MAT ACKNOWLEDGEMENT FORM**

---

Tenant Name: \_\_\_\_\_ Suite /  
CRU #: \_\_\_\_\_

Your firm was retained by the above Tenant to renovate and provide construction services in this Suite/ CRU. Please certify below that no asbestos-containing / hazardous materials have been installed or added to the Suite/ CRU during construction, and that all known asbestos-containing / hazardous materials remaining in the Suite/ CRU are in good condition.

Our firm certifies that no asbestos-containing / hazardous materials have been installed in the above named Tenant Space during construction activities and all remaining asbestos-containing / hazardous materials are in good condition.

If a Pinchin Assessment indicates there is known asbestos-containing / hazardous materials in the Suite /CRU, please give details below as to whether it was removed or retained in good condition.

*All workers disturbing asbestos-containing / hazardous materials shall have received training in the handling of ACMs / hazardous materials as required by Ontario Regulation 278.05. Contractor shall submit proof of training upon request.*

ACM / HAZARDOUS MATERIALS REMOVAL CONTRACTOR: \_\_\_\_\_

| MATERIALS REMOVED                         |         | MATERIALS REMAINING                       |         |
|---|---------|---|---------|
| Material Type (Drywall, Vinyl Tile, etc.) | Sq. Ft. | Material Type (Drywall, Vinyl Tile, etc.) | Sq. Ft. |
|   |         |   |         |
|   |         |   |         |
|   |         |   |         |
|   |         |   |         |
|   |         |   |         |
|   |         |   |         |

On attached drawing, show 1) where asbestos-containing / hazardous materials were removed and 2) where they remain.

GENERAL CONTRACTOR: \_\_\_\_\_

G/C REP SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

PRINT NAME: \_\_\_\_\_

WORK RECORD #: \_\_\_\_\_ PO #: \_\_\_\_\_

WORK LOCATION: \_\_\_\_\_ CONTACT #: \_\_\_\_\_

**AIR QUALITY CERTIFICATE – to be completed by Pinchin Environmental Ltd.**

COMPLETED:  YES  
 NO

**Appendix K – Contractor Notification**

---

**CONTRACTOR NOTIFICATION AND ACKNOWLEDGEMENT FORM**

---

**WORKING WITH ASBESTOS CAN BE DANGEROUS. INHALING ASBESTOS FIBRES CAN CAUSE VARIOUS TYPES OF LUNG DISEASE INCLUDING CANCER. SMOKING INCREASES THE RISK OF LUNG CANCER FROM ASBESTOS EXPOSURE.**

Oxford Properties Group has identified the presence of various friable and non-friable asbestos materials in the Building (both tenant and landlord space). An asbestos inventory report showing the locations and amounts of these materials is available for viewing from **Property Management**.

R.R.O. 2005, Reg. 278, “Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations”, applies to all maintenance and renovation work that may disturb asbestos containing / hazardous materials. Contractors who have received training in asbestos-related precautions may only undertake the disturbance of asbestos building materials. Any activities that may disturb friable asbestos materials (i.e. Type 2 or Type 3 work), then **Property Management** must be notified. These activities are but not limited to:

- Removal of Drywall Compound Joint Material;
- Removal of repair of Asbestos Mechanical Insulation (various locations);
- Removal of Asbestos Ceiling Tiles;
- Removal of Vinyl Sheet Flooring;
- Removal of Vinyl Floor Tile;
- Any other operation, which may generate airborne asbestos.

There are also non-friable asbestos materials in the buildings, including vinyl composition floor tiles, transite sheeting, paper insulation, gaskets and packings, etc.

As a condition of our contract to provide services and materials to the Building, we will not disturb asbestos-containing / hazardous materials without prior notification to **Property Management**. This firm and its workers will follow all procedures specified by Oxford Properties Group and/or R.R.O. 2005, Reg. 278. All asbestos waste will be packaged and disposed of in accordance with Ministry of the Environment Requirements.

COMPANY NAME: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

PRINT NAME: \_\_\_\_\_

PRINT TITLE: \_\_\_\_\_

WORK RECORD #: \_\_\_\_\_ PO #: \_\_\_\_\_

WORK LOCATION: \_\_\_\_\_ CONTRACT #: \_\_\_\_\_







### Contractor Safety Program

All contractors who perform work at Colliers International are required to follow the Contractor Safety Program. Contractors must orient their employees and train them in safe work procedures, relevant safety policies and regulations. In addition, contractors must have a health and safety program and procedures that are appropriate to the work being performed. When requested, the Contractor will provide proof of training for their workers.

This program outlines responsibilities and procedures that need to be followed to ensure the health and safety of contractors and their employees, in addition to employees of Colliers International.

#### Roles and Responsibilities

##### Colliers International

- Check competence and resources of all appointees.
- Ensure there are suitable management arrangements for the project welfare facilities.
- Allow sufficient time and resources for all stages.
- Provide pre-construction information to designers and contractors.
- Appoint Contractor Coordinator and Principal Contractor.
  - Make sure that the construction phase does not start unless there are suitable welfare facilities and a construction phase plan is in place.
  - Provide health and safety instruction and guidance to the Contractor Safety Coordinator.
  - Retain and provide access to the health and safety file.

##### Client

A client (Colliers International) is anyone having construction or building work carried out as part of their business. This could be an individual, partnership or company and includes property developers or management companies for domestic properties.

##### Prime Contractor

A prime contractor has to be appointed for projects. The Prime Contractors role is to plan, manage and coordinate health and safety while construction work is being undertaken. The prime contractor is usually the main or managing contractor for the work.

- Plan, manage and monitor construction phase in liaison with contractor
- Prepare, develop and implement a written plan and site rules (Initial plan completed before the construction phase begins)
- Give contractors relevant parts of the plan
- Make sure suitable welfare facilities are provided from the start and maintained throughout the construction phase
- Check competence of all appointees
- Ensure all workers have site inductions and any further information and training needed for the work
- Consult with the workers
- Liaise with Contractor Safety Coordinator regarding ongoing design
- Shall obtain prior to commencing work, any necessary Municipal, Provincial or Federal approvals or permits, have them available at the site and provide them to Colliers' representatives , upon request.



## Contractor Safety Coordinator

The prime contractor shall be required to appoint a safety coordinator. The contractor safety coordinators role is to advise the contractor's employees on health and safety issues during the design and planning phases of construction work.

- Advise and assist the worker with his/her duties
- Co-ordinate health and safety aspects of design work and cooperate with others involved with the project
- Facilitate good communication between client, designers and contractors
- Liaise with project manager regarding ongoing design
- Identify, collect and pass on pre-construction information
- Prepare/update health and safety file

## Contractors

- A contractor is a business who is involved in construction, alteration, maintenance or demolition work. This could involve building, civil engineering, mechanical, electrical, demolition and maintenance companies, partnerships and the self-employed.
- Plan, manage and monitor own work and that of workers
- Check competence of all their appointees and workers
- Train own employees
- Provide information to their workers
- Comply with the specific regulatory requirements
- Ensure there are adequate welfare
- Facilities for their workers
- Confirm Contractor Safety Coordinator has been appointed and before starting work
  - Co-operate with prime contractor in planning and managing work, including reasonable directions and site rules
  - Provide details to the principal contractor of any contractor whom he engages in connection with carrying out the work
- Provide any information needed for the health and safety file
- Inform principal contractor of problems with the plan
- Inform principal contractor of reportable accidents, diseases and dangerous occurrences

All contractors, subcontractors and their employees are also responsible for the following while working at a Colliers International property:

- Adhering to the Company's Health and Safety policies and procedures as outlined in this Manual and applicable regulations.
- Contractors must be approved via ComplyWorks prior to commencing work on a Colliers Managed Property.
- Ensuring all employees and subcontractors are informed of and adhere to the material found in this Manual.
- Attending the Safety Orientation meeting and completing any required forms prior to commencing work.
- Filtering all applicable paperwork to the required governing authorities and Colliers International as required.
- Inspecting work areas on a regular basis and correcting any identified hazards conditions.
- Investigating all injuries and near misses and providing a copy of the

investigation report to the Contractor Safety Contact and Health and Safety Committee.

- Ensure that safe work procedures are available onsite and are specific to the work being done.
- Report inspections performed by regulatory agencies to the Contractor Contact and client.
- Investigating all injuries and near misses and providing a copy of the investigation report to the Contractor Safety Contact and Health and Safety Committee.
- Ensure that safe work procedures are available onsite and are specific to the work being done.
- Report inspections performed by regulatory agencies to the Contractor Contact and client.

### Workers

A worker is anyone who carries out work during the construction, alteration, maintenance or demolition of a building or structure. A worker could be, for example, a plumber, electrician, scaffold, painter, decorator, steel erector, as well as those supervising the work, such as foreman and charge hands.

When a contractor is hired, they must be provided with a Colliers International Contractor Contact and to facilitate and oversee the project. The Contractor Contact is also responsible for ensuring that an initial Safety Orientation meeting takes place and that all the appropriate forms are completed, for the work being performed.



## Acknowledgement of Receipt

I acknowledge receipt of a copy of the Colliers International Contractor Safety Program which sets forth the health and safety rules and practices to be followed as a contractor for Colliers International. I declare that I have read and understood the contents set forth of this guide and will abide by these rules, policies, standards. I further understand that I am responsible abiding by any additional safety information specific to the designated areas, where applicable.

I understand that as long as I am contracted by Colliers International, I am responsible for obeying the safety rules, plus the requirements set forth in the pertaining Occupational Health and Safety Act and any later amendments or regulations thereof. I also understand that I am continuously to aim to be self-informed about all health and safety aspects of my work and to exercise good judgment in the application of safe working practices in order to prevent accidents which may cause injury to either myself or to others. I also am aware that I am responsible for informing the Security and/or Operations Manager in advance of using any new chemicals, materials, equipment or procedures which may be a hazardous or potentially-hazardous nature.

Colliers reserves the right to stop the work of any contractor or contracted employees where we deem the work to be unsafe, or contrary to our safe work procedures. In these instances, work will not resume until the situation has been corrected satisfactorily, and that of our employees, as appropriate.

This document is considered part of our continuous contractual working arrangement, understanding that failure to follow safe work procedures will result in disciplinary action, up to and including termination of contract.

Signed by a Colliers' representative, indicating that the provisions of the Contractor Safety Program were reviewed with the contractor.

**On behalf of Colliers:**

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Signed by the Contractor, indicating that the provisions of the Contractor Safety Program were provided, are understood, and will be complied with while conducting work on any Colliers project, property or premises.

**On behalf of Contractor:**

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## APPENDIX H – Sample Deposit Form



Mississauga Executive Centre  
4 Robert Speck Parkway, Suite 280  
Mississauga, ON L4Z 1S1

### Fee / Deposit Form

Submitted As: Tenant Coordination Fee:  OR Refundable Close-Out Document Deposit:

|                                  |               |
|----------------------------------|---------------|
| <b>TENANT INFORMATION</b>        | Date          |
| Company                          | Building No.  |
| Company Contact Name             | Suite No.     |
| Company Contact Title            | E-mail        |
| Authorization <i>(signature)</i> | Telephone No. |

Further to the requirements outlined in the Design Criteria Manual, the following form must be submitted to the Construction Manager/Property Management Office  
This is to properly document the refundable deposit. Please also keep a copy of this form for your record.  
**THIS REFUNDABLE DEPOSIT IS REQUIRED PRIOR TO CONSTRUCTION START**

**CONSTRUCTION SCOPE**

|              |                    |
|--------------|--------------------|
| Project Name | Project Start Date |
| Site Address | Suite              |
| Description  |                    |

**COST BREAKDOWN**

|                               |   |    |  |
|-------------------------------|---|----|--|
| Break Down of Contract Values | Architect/Designer                              | \$ |  |
|                               | Mechanical & Electrical Engineering             | \$ |  |
|                               | All Other Design Professionals                  | \$ |  |
|                               | General Contractor                              | \$ |  |
|                               | All Other On-Site Contractors                   | \$ |  |
|                               | <b>Total Value of Construction &amp; Design</b> | \$ |  |

**REFUNDABLE DEPOSIT CALCULATION**

$$3.0\% \times \$ \frac{\text{Total Construction Value}}{\text{(Total Construction Value)}} = \$ \frac{\text{Refundable Deposit Amount}}{\text{(Min. \$1,000 to a Max. \$15,000)}}$$

**TENANT COORDINATION FEE**

OR  $\frac{\text{Construction Coordination Fee Amount}}{\text{(Total Construction Value)}} = \$ \text{Construction Coordination Fee Amount}$

$\$0.80 \times \text{(Renovated Area)} = \$ \text{Construction Coordination Fee Amount}$

PLEASE FORWARD THIS FORM ALONG WITH THE CHEQUE TO THE CONSTRUCTION SERVICES MANAGER/PROPERTY MANAGEMENT OFFICE

|  |                |
|--|----------------|
| Deposit Check Submitted By _____<br><span style="font-size: x-small; color: blue;">(Company Name)</span> | Cheque # _____ |
| Name _____<br><span style="font-size: x-small; color: blue;">(signature)</span>                          | Date _____     |

## SCHEDULE A – Sustainable Purchasing



# MISSISSAUGA EXECUTIVE CENTRE SUSTAINABLE PURCHASING PROGRAM FACILITY ALTERATIONS AND ADDITIONS

JUNE 2013– VERSION 1.0

### Contents

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*MR Credit 3*

*This Program is intended to document best management practices & comply with the CaGBC's LEED Canada for Existing Buildings: Operations & Maintenance 2009 Standard – MR Credit 3*



*This Program supports the Materials & Resources component of Colliers's Sustainable Intelligence Program.*

*Materials & Resources*

## Scope and Sustainability Goals

The goal of this program is to reduce the environmental and air quality impacts of the materials acquired for use in upgrades at the Mississauga Executive Centre (MEC).

This program is applicable to facility construction activities undertaken at MEC. All materials purchased which will be permanently or semi-permanently attached to the building itself are governed by this program. The program affects base building and tenant purchasing departments and contractors who will be responsible for purchasing products and materials used during alterations and additions.

For the purposes of this program, alterations and additions are changes that affect usable space in the building (mechanical, electrical or plumbing system upgrades that involve no disruption to usable space are excluded). The alterations and additions that are governed by this plan are:

Alterations that:

- Affect no more than 50% of the total building floor area or cause relocation of no more than 50% of regular building occupants (Buildings with alterations exceeding these limits should pursue certification under the LEED Canada for New Construction program);
- Include construction activity by more than one trade specialty\*;
- Make substantial changes to at least one entire room in the building\*; and,
- Require isolation of the work site from regular building occupants for the duration of construction\*.

Additions that:

- Increase the total building floor area by no more than 50% (Buildings with additions exceeding these limits should pursue certification under the LEED Canada for New Construction program); and
- Increase the total building floor area by at least 5%\*.

*\*Alterations or additions below these limits are considered repairs, routine replacements or minor upgrades and are ineligible to earn points under LEED Canada for Existing Buildings: O&M and therefore do not apply to this plan.*

Materials to be considered in this program include, but are not limited to, the following: building components and structures (wall studs, insulation, doors, windows), panels, attached finishings (drywall, trim, ceiling panels), carpet and other flooring material, adhesives, sealants, paints and coatings.

Materials considered fixtures, furniture and equipment (FF&E) are not permanently or semi-permanently attached to the building itself and are excluded from this program. Mechanical, electrical and plumbing components and specialty items such as elevators are also excluded from this program.

The following boundaries apply to this program:

Physical boundaries: MEC entire building property and alterations and additions as described above.



Programmatic boundaries: All materials purchased for facility renovations, demolitions, refits and new construction additions.

This plan applies only to elements permanently or semi-permanently attached to the building itself.

Project design professionals and contractors must ensure that Local Codes, Standards and By-Laws are met. This responsibility is not superseded by the measures or requirements outlined in this program.

NOTE: The procedures outlined in this document are required for the LEED Canada EB:O&M credit 3 – Sustainable Purchasing: Facility Alterations and Additions. Some content in this document is derived from the Canada Green Building Council's LEED Canada for Existing Buildings: Operations and Maintenance Reference Guide 2009 to align with specific credit requirements.

### **Guidelines for Resources and Implementation**

This section presents guidelines and resources for implementing this program. For additional practices and requirements related to this credit, refer to:

- Sustainable Purchasing Policy
- Waste Management Policy
- Solid Waste Management Program: Facility Alterations and Additions

The objectives of this Program will be achieved by purchasing materials, supplies, and equipment that meet one or more of the criteria listed in Section 3: Requirements and by tracking all materials purchased for facility alterations and additions. The Responsible Party (the various contractors and/or service providers) will document all purchases. Colliers International will maintain a copy of all documentation for the materials purchased, demonstrating compliance with the requirements of this Program.

Where material premiums exist for compliant products, consideration shall be given to developing a purchasing consortium where costs can be decreased by bulk purchasing.

### **Recommended Resources**

The following resources offer suggestions on how the strategies above can be implemented. In addition to these resources, many manufacturers and suppliers have product documentation that present product performance based on the criteria outlined in Section 3: Requirements.

- Forest Stewardship Council [www.fsc.org/fsc](http://www.fsc.org/fsc)  
The Forest Stewardship Council provides information on sourcing products manufactured from forests that are managed in a sustainable fashion.
- FloorScore – Scientific Certification Systems  
<http://www.scscertified.com/>
- South Coast Air Quality Management District (SCAQMD) Rule #1168: Adhesive and Sealant Applications (January 2005)  
<http://www.aqmd.gov/rules/reg/reg11/r1168.pdf>
- Regulation 8: Organic Compound, Rule 51: Adhesive and Sealant Products (July 2002) by the Bay Area Air Quality Management District (BAAQMD)

<http://www.baaqmd.gov/dst/regulations/rq0851.pdf>

- Green Seal's Standard GS-11 Requirements for Paints (May 1993)  
[http://www.greenseal.org/certification/standards/paints\\_and\\_coatings.pdf](http://www.greenseal.org/certification/standards/paints_and_coatings.pdf)
- Green Label Plus Testing Program (2004) & the Green Label Testing Program (1992) by the Carpet and Rug Institute (CRI)  
<http://www.carpet-rug.org/commercial-customers/green-building-and-the-environment/green-label-plus/index.cfm>

## Requirements

A minimum of 50% of total purchases (by cost) must be sustainable. For this program, sustainable purchases are considered to be those that meet one or more of the following criteria. It is encouraged that products meet more than one criterion (*Source: LEED Canada for Existing Buildings: Operations and Maintenance Reference Guide, 2009*).

- Contain at least 10% post-consumer and/or 20% post-industrial recycled content material.
- Contain at least 70% material salvaged from off-site or outside the organization.
- Contain at least 70% materials salvaged on-site, through an internal organization materials and equipment reuse program.
- Contain at least 50% rapidly renewable material.
- Contain at least 50% Forest Stewardship Council (FSC) certified wood.
- Contain at least 50% material that meets the requirements listed below:
- The final manufacturing location of the product is within 800km of the project site.
- The product (or component) did not leave the 800km (500 mile) radius surrounding the final manufacturing location (2,400km or 1,500 miles if shipped by rail or water). This includes all extraction, harvesting, recovery, and processing.
- Adhesives and sealants have VOC content less than the current VOC content limits of South Coast Air Quality Management District (SCAQMD) Rules # 1168, or sealants used as fillers meet or exceed the requirements of the Bay Area Air Quality Management District Regulation 8, Rule 51\*.
- Paints and coatings have VOC content not exceeding the VOC and chemical component limits of Green Seal's Standard GS-11 requirements.
- Non-carpet finished flooring is FloorScore-certified and constitutes a minimum of 25% of the finished floor area.
- Carpet meets the requirements of the CRI Green Label Plus Carpet Testing Program.
- Carpet cushion meets the requirements of the CRI Green Label Testing Program.
- Composite panels and agrifiber products contain no added urea formaldehyde resins\*\*.

\* Paints and coatings not governed by GS-11 must have VOC contents less than the VOC content limits of SCAQMD Rule #1113, if applicable.

\*\* Composite wood and agrifiber products include particleboard, medium-density fiberboard (MDF), plywood, oriented-strand board (OSB), wheat board, strawboard, panel substrates and door cores.

Note: Each purchase can receive credit for each sustainable criterion met (for example: a \$100 purchase that contains both 10% post-consumer recycled content and 50% rapidly renewable counts twice in the calculation, for a total of \$200 of sustainable purchasing).

Preferably, taxes and shipping costs on purchases of consumables should be excluded from total cost calculations. However, such taxes and shipping costs may be either included or excluded, as long as they are applied consistently.

**Quality Assurance/Quality Control Processes**

Colliers International will review the tracking logs on a monthly basis. The information provided in these forms will be used to determine if the goals of this Program are being met on an ongoing basis and to identify areas of improvement. Ultimately, knowledge gained from the contractors submittal information will be incorporated into future contracts by Colliers. The following are to be submitted by the Responsible Party for Program implementation during construction (*Source: LEED Canada for Existing Buildings: Operations and Maintenance Reference Guide, 2009*):

- All materials and products purchased for Facility Alterations or Additions shall be documented by the appropriate party on tracking logs. Products meeting multiple criteria will need multiple lines in the tracking log.
- Materials and products purchased for any Facility Alterations or Additions that meet the criteria listed in the Performance Measurement of this Program shall be accompanied by documentation from product manufacturers or suppliers that verify the product's compliance with the specific sustainability criteria.
- Colliers International shall compile the information provided by the building tenants for tenant alterations, or that they must provide themselves for common area alterations, into a comprehensive list for submittal to the LEED consultant or the CaGBC.

**Responsible Parties**

Colliers International and all building tenants are responsible for regular reporting of their purchases during all alterations or additions that are governed by this program. Each tenant is responsible for designating a party that will report their purchases to Colliers as listed below:

| Colliers International | Compile and Monitor Property Management and Tenant Purchasing Tracking Forms   | ***Name***<br>xxx-xxx-xxxx |
|------------------------|--|----------------------------|
| Contractors            | Complete tracking forms on a monthly basis.<br><br>If a tenant construction project, Contractor must provide the above to tenant. If a common area construction project, Contractor must provide the above to property management. | ***project<br>specific***  |

|         |  |  |
|---------|--|--|
| Tenants | <p>For all tenant construction projects:</p> <p>Ensure Contractor is meeting the requirements of this plan.</p> <p>Forward all relevant documentation, including completed tracking forms and waybills, to property management</p> |  |
|---------|--|--|

Prior to the commencement of any Facility Alterations or Additions, a pre-construction meeting is to be conducted to present the Sustainable Purchasing Program objectives and requirements to the General Contractor, Consultants and all Subcontractors. If the construction project is to occur in a tenant space, a tenant representative will also be present. During the meeting, Colliers International will describe how the Program will be tracked and enforced. A copy of the Sustainable Purchasing: Facility Alterations and Additions Program must be maintained on site.

**Time Period**

This policy will be implemented for one year, from June 4, 2013, after which, this policy will be reviewed and revised as required.

**Authorization**

|                                   |  |
|-----------------------------------|--|
| Signature of Head of Organization |  |
| Name of Head of Organization:     | Wade Warner LEED AP O+M  |
| Title:                            | Operations Manager   |
| Name of Organization:             | Mississauga Executive Centre<br>Colliers International                               |
| Date:                             | July 15, 2013  |

**Sustainable Purchasing Charts and Tables:**

**Project:**

|               |
|---------------|
| Completed by: |
| Company:      |
| Telephone:    |

|                 |
|-----------------|
| Log No.         |
| Log Start Date: |
| Log End Date:   |

**TABLE A-I:  
TRACKING OF SUSTAINABLE PURCHASES**

| Date of Purchase  | Item | Meets Criteria in Sec. 3 | Cost/Value |
|---|------|--------------------------|------------|
|   |      |                          |            |
|   |      |                          |            |
|   |      |                          |            |
|   |      |                          |            |
|   |      |                          |            |
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|   |      |                          |            |
|   |      |                          |            |
|   |      |                          |            |
|   |      |                          |            |
|   |      |                          |            |
|   |      |                          |            |
|   |      |                          |            |
|   |      |                          |            |
| <b>Total cost of value of purchases that meet credit requirements</b> |      |                          |            |



**TABLE A-III: SUMMARY OF PURCHASES**

|  |  |
|--|--|
| <b>(A) Total cost of purchases that meet credit requirements</b><br>(from Table A-I)         |  |
| <b>(B) Total cost of purchases that do not meet credit requirements</b><br>(from Table A-II) |  |
| <b>(C) Total cost of purchases</b> (Line A + Line B)   |  |
| <b>Percent Qualifying Purchases</b> (Line A/Line C x 100)                                    |  |

## SCHEDULE B – Waste Management Policy



# MISSISSAUGA EXECUTIVE CENTRE WASTE MANAGEMENT PROGRAM FACILITY ALTERATIONS AND ADDITIONS

June 2013 – Version 1.0

## Contents

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*MR Credit 9*

*This Program is intended to document best management practices & comply with the CaGBC's LEED Canada for Existing Buildings: Operations & Maintenance 2009 Standard – MR Credit 9*



*Materials & Resources*

*This Program supports the Materials & Resources component of Colliers's Sustainable Program.*



## Scope and Sustainability Goals

The goal of this program is to help reduce the demand for virgin materials, prevent the overburdening of existing landfills, and avoid pollution caused by incineration processes.

This Waste Management Program is applicable to all construction activities undertaken at the Mississauga Executive Centre (MEC). Procedures outlined in this program are to be used for any building alteration or addition.

The following boundaries apply to this program:

Physical boundaries: MEC entire property, its exterior site, including all retail and office tenants as well as base building construction activities.

Programmatic boundaries: This Waste Management Program incorporates procedures to divert construction and demolition debris from landfill and incineration disposal. This program applies to building elements permanently or semi-permanently attached to the building itself that enter the waste stream as well as other waste generated during an alteration or addition. Examples of these elements include, but are not limited to:

- Building Components and Structures: wall studs, insulation, doors, concrete brick and windows
- Panels
- Attached finishing: drywall, trim, ceiling panels
- Carpet and other flooring material
- Metals
- Plastic
- Glass
- Rigid insulation
- Clean dimensional wood
- Engineered wood products
- Corrugated cardboard
- Concrete, brick, asphalt, demolition and land clearing (CDL) debris (if applicable)

Alterations and additions includes changes that affect usable space in the building (mechanical, electrical or plumbing system upgrades that involve no disruption to usable space are excluded from this program). The alteration and additions that are governed by this program include:

Alterations that:

- affect no more than 50% of the total building floor area or cause relocation of no more than 50% of regular building occupants (Buildings with alterations exceeding these limits should pursue certification under the LEED Canada for New Construction program);
- include construction activity by more than one trade specialty\*;
- make substantial changes to at least one entire room in the building\*; and,
- require isolation of the work site from regular building occupants for the duration of construction\*.

Additions that:

- increase the total building floor area by no more than 50% (Buildings with additions exceeding these limits should pursue certification under the LEED Canada for New Construction program); and,
- increase the total building floor area by at least 5%\*.

*\*Alterations or additions below these limits are considered repairs, routine replacements, furniture, fixtures, equipment, mechanical, electrical, plumbing, elevator components, hazardous waste, excavated soil or minor upgrades and are ineligible to earn points under LEED Canada for Existing Buildings: O&M and are not governed by this plan.*

Project design professionals and contractors must ensure that Local Codes, Standards and By-Laws are met. This responsibility is not superseded by the measures or requirements outlined in this program.

NOTE: The procedures outlined in this document are required for the LEED Canada EB:O&M credit 9 – Solid Waste Management: Facility Alterations and Additions. Some content in this document is derived from the Canada Green Building Council's LEED Canada for Existing Buildings: Operations and Maintenance Reference Guide 2009 to align with specific credit requirements.

### **Guidance for Resources and Implementation**

Recycling of construction and demolition debris reduces demand for virgin resources and can potentially reduce the environmental and health burdens associated with resource extraction, processing, and transportation. Debris recycling also reduces dependence on landfills and incinerators; landfills can contaminate groundwater and encroach upon valuable green space, and incinerators can pollute the air and contaminate groundwater. Effective construction waste management can extend the lifetime of existing landfills, reducing the need for expansion or development of new landfill sites.

The following sections present guidelines and resources for implementing this program.

This credit is related to the following policies:

- Sustainable Purchasing Policy
- Waste Management Policy
- Sustainable Purchasing Program: Facility Alteration and Additions

### **Resources**

The following are resources for contractors, project managers and operations managers to be used when undertaking building alterations and additions. These resources provide successful strategies and methods for construction waste management.

- Construction Waste Management Handbook:  
[www.smartgrowth.org/library/constwastemgmt\\_hndbk.html](http://www.smartgrowth.org/library/constwastemgmt_hndbk.html)
- Public Works and Government Services Canada – The Environmentally Responsible Construction and Renovation Handbook  
<http://www.tpsqc-pwgsc.gc.ca/biens-property/gd-env-cnstrctn/page-10-eng.html>
- Building Savings – EPA Construction Waste Management Strategies  
[www.ilsr.org/recycling/buildingdebris.pdf](http://www.ilsr.org/recycling/buildingdebris.pdf)
- Construction and Demolition Waste Recycling Information  
[www.ciwmb.ca.gov/ConDemo](http://www.ciwmb.ca.gov/ConDemo)
- Construction Materials Recycling Association

[www.cdrecycling.org](http://www.cdrecycling.org)

- A Sourcebook for Green and Sustainable Building  
[www.greenbuilder.com/sourcebook/ConstructionWaste.html](http://www.greenbuilder.com/sourcebook/ConstructionWaste.html)

## Requirements

This Waste Management Program requires Colliers International and all tenants within their buildings to employ the measures outlined herein for any building retrofit, renovation, addition or alteration occurring at the property. This program also requires Colliers International and all their tenants to integrate these measures into all contract and construction documents, requiring contractors and sub-trades to adhere to the program. Contracts should include stipulations for accountability and incentives to meet waste reduction goals, specifying at least 70% waste diversion through recycling and/or reuse. A Construction and Demolition Materials Checklist shall be completed and submitted to Colliers International for each month that the facility is undergoing retrofit, renovation, addition or alteration.

This program outlines waste reduction strategies through:

- Source reduction
- Reuse of materials
- Recycling

## Source Reduction

Source reduction is the first step in waste reduction, decreasing the amount of materials brought on site. Every opportunity should be taken to minimize factors that contribute to waste as outlined in Table 1.

Table 1: Source Reduction Strategies

| Design    | <p>Review designs and plans to ensure optimal use of material. Where possible, specify materials with a longer lifespan and potential for recycling or reuse after deconstruction.</p> <p>Consider specifying standard sizes for all building materials, thereby reducing waste from cutting standard-sized materials to unusual lengths.</p> <p>Design flexible and adaptable spaces so that future waste can be avoided.</p> <p>Design for easy deconstruction by bolting materials together whenever possible.</p> |
|-----------|---|
| Planning  | <p>Plan and schedule projects thoroughly to prevent last minute changes which could result in wasted material.</p> <p>Continuously monitor material quantities to prevent leftover material.</p>  |
| Packaging | <p>Request that suppliers deliver products with a minimum amount of packaging. Where possible, order in bulk to prevent excess packaging.</p>   |
| Storage   | <p>Store materials according to material requirements to prevent damage or contamination. Where possible, order materials as they are required to prevent long storage times and potential damage which could result in new material orders.</p>  |

|                 |  |
|-----------------|--|
| Ordering errors | Review material quantities carefully to ensure the correct amount is received.   |
| Ordering excess | Order materials in sizes to match plans. Where possible, order pre-cut pieces to minimize waste on site or measure and cut accurately, collecting and storing reusable pieces. |
| Handling        | Handle all materials with care to prevent damage, breakage, or contamination, which in turn prevents waste generation.   |

## Deconstruction, Salvage and Reuse

For demolition projects, all materials should be evaluated for opportunities to be reused on site and/or at alternate sites. This should begin at the demolition stage and continue throughout construction. Consider including a specification on deconstruction (the systematic disassembly of a building for salvage and recycling) in the bid package. Removal costs can be avoided by allowing private salvage companies access to the site prior to demolition (*Source: LEED Canada for Existing Buildings: Operations and Maintenance Reference Guide, 2009*). Where possible, materials from demolition should be salvaged for reuse in the construction phase. Table 2 provides strategies to institute reuse of common materials during construction.

Table 2: Construction Material Reuse

|                  |  |
|------------------|--|
| Wood             | Salvage off-cuts to be used for bridging, blocking and back framing. Reuse palettes or return to vendors. Inspect wood forms to be reused to form other areas of the building or send with formwork trade to be reused on other job sites. |
| Drywall          | Reuse off cuts to finish off gaps, small bulkheads, etc.   |
| Cardboard        | Use boxes for storage of tools and materials or floor protection.  |
| Masonry          | Crush on site and use for fill or as bedding for driveways.  |
| Rigid Insulation | Use as ventilation baffles   |

Whenever possible, salvageable materials that cannot be reused on site should be taken back by suppliers or trades to be used at other sites. Alternately, materials should be sold or donated to businesses that collect and resell used construction materials.

Tender documents must identify nearby markets for salvaged materials.

## Recycling

Recyclable materials that cannot be reused should be redirected back to the manufacturing process. Tender documents should reflect the recycling protocol adopted for individual projects and identify licensed haulers and processors of recyclable materials within the region.

Colliers Inter must designate an area to sort and store recyclable construction and demolition waste. Contractors must train workers on the recycling protocols, and label recycling containers effectively. Once collected, the waste hauling company will remove waste from site and submit a waste tracking summary to the Property Manager. Best practices will be employed by Colliers International to include training workers in recycling protocols, gathering feedback on the waste management program and addressing any problems through posted notification to the construction personnel.

The Contractor shall document measures implemented on a monthly basis during construction. Colliers International will review the tracking form quarterly to verify compliance to this program.

**Quality Assurance/Quality Control Processes**

This program is intended to achieve a minimum of 70% (by volume) diversion of construction waste, including demolition waste (if applicable). To ensure this is achieved, all waste taken off site must be separated, weighed, and documented in tables provided by the general contractor. Supporting documentation (ie. waybills) must be submitted by the general contractor along with the tables requested above.

For projects using co-mingled recycling and off-site sorting in lieu of on-site separating, monthly reports are required from the off-site sorter that outline the diversion rates.

Contractors are to institute monthly reporting and feedback on the waste diversion progress and address any problems. Reporting shall be issued to the Responsible Party representing Colliers International or an authorized Agent. The Contractor shall post this information on site for all construction personnel to read. Colliers International shall communicate the diversion rate quarterly to the tenants based on their review of the Contractor submissions.

**Responsible Parties**

| Colliers International | Communication of program to tenants.<br>Review of Contractor submittals to verify compliance.<br>Designate area to sort and store recyclable construction and demolition waste.  | Wade Warner<br>Colliers International<br>905-281-7211 |
|------------------------|--|---|
| General Contractor     | Complete required supporting documentation (ie. waybills) on a monthly basis.<br>If a tenant construction project, Contractor must provide the above to tenant. If a common area construction project, Contractor must provide the above to property management. | ***project specific contact***                        |
| Tenants                | For all tenant construction projects:<br>Ensure Contractor is meeting the requirements of this plan.<br>Forward all relevant documentation, including completed tracking forms and waybills, to property management  |   |

Tracking tables are to be filled out by the Contractor and used by Colliers International, or the responsible tenant, to ensure that the requirements outlined in this Waste Management Program are followed. During any building retrofit, addition or alteration, these tables should be filled out on a monthly basis by the Contractor and forwarded to the appropriate parties.

**Time Period**

This policy will be implemented for one year, from June 4, 2013, after which, this policy will be reviewed and revised as required.

## Authorization

|                                    |  |
|------------------------------------|--|
| Signature of Head of Organization: |  |
| Name of Head of Organization:      | Wade Warner LEED AP O+M  |
| Title:                             | Operations Manager   |
| Name of Organization:              | Mississauga Executive Centre<br>Colliers International                             |
| Date:                              | July 15, 2013  |

**Waste Management Policy Charts and Tables:**

Address: \_\_\_\_\_

Completed by: \_\_\_\_\_ Log No.: \_\_\_\_\_

Company: \_\_\_\_\_ Log Start Date: \_\_\_\_\_

Telephone: \_\_\_\_\_ Log End Date: \_\_\_\_\_

|  |       |
|--|-------|
| Total Waste Generated (specify units): | _____ |
|--|-------|

**TABLE A-I:  
TRACKING OF MATERIALS DIVERTED FROM LANDFILL OR INCINERATOR**

| Type of Diverted Material | Type of Diversion (Check One) |                |                 |                  | Hauler Name and Destination | Amount of Waste diverted from Landfill or Incinerator (specify units – m <sup>3</sup> or kg) |
|---------------------------|-------------------------------|----------------|-----------------|------------------|-----------------------------|--|
|                           | Recycled                      | Reused On-Site | Reused Off-Site | Other (Specify ) |                             |  |
|                           |                               |                |                 |                  |                             |  |
|                           |                               |                |                 |                  |                             |  |
|                           |                               |                |                 |                  |                             |  |
|                           |                               |                |                 |                  |                             |  |
|                           |                               |                |                 |                  |                             |  |
|                           |                               |                |                 |                  |                             |  |
|                           |                               |                |                 |                  |                             |  |

\_\_\_\_\_  
Signature of Authorized Official

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

Address: \_\_\_\_\_

Completed by: \_\_\_\_\_ Log No.: \_\_\_\_\_

Company: \_\_\_\_\_ Log Start Date: \_\_\_\_\_

Telephone: \_\_\_\_\_ Log End Date: \_\_\_\_\_

|  |  |
|--|--|
| Total Waste Generated (specify units): |  |
|--|--|

**TABLE A-II:  
TRACKING OF MATERIALS SENT TO LANDFILL OR INCINERATOR**

| Type of Waste to Landfill and Incineration Disposal | Type of Disposal (Check One) |          | Hauler Name and Destination | Amount of Waste to Landfill or Incinerator (specify units – m <sup>3</sup> or kg) |
|---|------------------------------|----------|-----------------------------|---|
|   | Incineration                 | Landfill |                             |   |
|   |                              |          |                             |   |
|   |                              |          |                             |   |
|   |                              |          |                             |   |
|   |                              |          |                             |   |
|   |                              |          |                             |   |
|   |                              |          |                             |   |
|   |                              |          |                             |   |
|   |                              |          |                             |   |

\_\_\_\_\_  
Signature of Authorized Official

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date



**TABLE A-III: SUMMARY OF WASTE REPOSITORIES**

|   |  |
|---|--|
| <b>(A) Total weight of diverted materials</b><br>(from Table A-I)     |  |
| <b>(B) Total weight of disposed of materials</b><br>(from Table A-II) |  |
| <b>(C) Total weight of waste</b> (Line A + Line B)                    |  |
| <b>Percent Qualifying Waste</b> (Line A/Line C x 100)                 |  |

## SCHEDULE C – Indoor Air Quality Standards



# MISSISSAUGA EXECUTIVE CENTRE IAQ MANAGEMENT PROGRAM FACILITY ALTERATIONS AND ADDITIONS

JUNE, 2013 – VERSION 1.0

## Contents

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EQ Credit 1.5

*This Program is intended to document best management practices & comply with the CaGBC's LEED Canada for Existing Buildings: Operations & Maintenance 2009 Standard – EQ Credit 1.5*



*This Program supports the Indoor Environmental Quality component of Colliers's Sustainable Program.*

*Indoor Environmental Quality*

## Scope and Sustainability Goals

The goal of this program is to prevent indoor air quality problems resulting from construction or renovation projects. This will help sustain the comfort and well-being of building occupants and construction workers (*Source: LEED Canada for Existing Buildings: Operations and Maintenance Reference Guide, 2009*).

Indoor Air Quality (IAQ) Best Management Program is applicable to facility alterations and additions at the Mississauga Executive Centre (MEC). It affects base building and tenant spaces, including external contractors' work involving the use of products that may impact indoor air quality (i.e. paints, coatings, sealants, carpet installation, etc.).

For the purposes of this program, alterations and additions are changes that affect usable space in the building (mechanical, electrical or plumbing system upgrades that involve no disruption to usable space are excluded). The alteration and additions that are governed by this program are:

Alterations that:

- Affect no more than 50% of the total building floor area or cause relocation of no more than 50% of regular building occupants (Buildings with alterations exceeding these limits should pursue certification under the LEED Canada for New Construction program);
- Include construction activity by more than one trade specialty\*;
- Make substantial changes to at least one entire room in the building\*; and,
- Require isolation of the work site from regular building occupants for the duration of construction\*.

Additions that:

- Increase the total building floor area by no more than 50% (Buildings with additions exceeding these limits should pursue certification under the LEED Canada for New Construction program); and
- Increase the total building floor area by at least 5%\*.

*\*Alterations or additions below these limits are considered repairs, routine replacements or minor upgrades and are ineligible to earn points under LEED Canada for Existing Buildings: O&M and do not apply to this program.*

The following boundaries apply to this program:

Physical boundaries: MEC including all tenant and base building construction alterations and additions.

Programmatic boundaries: This program covers:

- All substances identified under Sources of Pollutants
- All stored on-site or installed adsorptive materials
- All filtration media used at return air grilles which were used during the construction period

Project design professionals and contractors must ensure that Local Codes, Standards and By-Laws are met. This responsibility is not superseded by the measures or requirements outlined in this program.

NOTE: The procedures outlined in this document are required for LEED Canada EB: O&M credit 1.5 – IAQ Best Management Practices – Management Program for Facility Alterations and Additions. Some content in this document is derived from the Canada Green Building Council’s LEED Canada for Existing Buildings: Operations and Maintenance reference guide 2009 to align with specific prerequisite and credit requirements.

### Guidance for Resources and Implementation

The following sections present guidelines and resources for implementing this program. For additional practices and requirements related to this credit, refer to the Sustainable Purchasing Program: Facility Alterations and Additions.

### Sources of Pollutants

Any construction activity that produces VOCs and/or dust is considered a source of air pollutants. Typical sources of pollutants are:

- Materials disturbed during demolition, repair or construction
- Materials that off-gas VOCs
- Materials that create dust
- Equipment that generates combustion by-products, or creates VOCs and/or dust
- Construction activities that disrupt previously settled pollutants

The following table provides specific examples of potential air pollutant sources:

|                    |  |   |
|--------------------|--|---|
| Building Materials | Wood<br>Concrete<br>Drywall<br>Engineered Wood<br>Cove base  | Plaster<br>Roofing<br>Insulation<br>Ceiling Tiles       |
| Wet Products       | Paint & stains<br>Sealants & coatings<br>Adhesives<br>Acid finish  | Glazing<br>Caulking<br>Grouting<br>Epoxy Flooring       |
| Furnishings        | Carpeting<br>Wood flooring<br>Furniture  | Wall coverings<br>Cabinets<br>Partitions                |
| Solutions          | Solvents<br>Cleaning products  | Fuels<br>Pesticides                                     |
| Equipment          | Generators<br>Compressors<br>Portable heaters<br>Cutting torches   | Heavy equipment<br>Vehicles<br>Welder<br>Soldering Guns |
| Others             | Standing water/moisture causing mould growth<br>Tobacco smoking within the building<br>Exterior work adjacent to building openings |   |

### Control Measures

The objectives of this program will be achieved through the “Control Measures” detailed in the following tables. The following Measures are applicable to all alterations and additions (as defined above) at MEC. The Responsible Party will provide documentation of the actions taken on site to ensure IAQ measures are maintained for the duration of the construction project. Each

measure references an applicable strategy from the Sheet Metal and Air Conditioning Contractors National Association (SMACNA) IAQ Guidelines for Occupied Buildings Under Construction, second edition, November 2007; and the LEED Canada-EB:O&M Reference Guide.

|   |              |
|---|--------------|
|   |              |
| All HVAC equipment will be protected from dust, odours or other contaminants and exposure to the elements. The system must be evaluated in detail by an engineer experienced in HVAC maintenance and operations.  | SMACNA 4.2   |
| The entire system will be shut down during heavy construction or demolition.  | SMACNA 4.2.1 |
| All return openings in the construction area will be sealed with plastic. Alternatively, if permanently installed air handlers are used during construction, filtration media with a MERV of 8 shall be used at each return air grille, as determined by ASHRAE 52.2-1999. All filtration media will receive frequent maintenance and be replaced immediately prior to occupancy.                               | SMACNA 4.2.1 |
| When the system must remain operational, the heaviest work areas will be dampered off or otherwise blocked.   | SMACNA 4.2.1 |
| The mechanical room will not be used to store construction or waste materials.  | SMACNA 4.2.1 |
| Consider protection of air plenums in the planning phase of Construction including: <ul style="list-style-type: none"> <li>• Ducts in the construction zone should be disconnected from the remainder of the active system</li> <li>• Seal openings in new ducts until construction is finished</li> <li>• Replace missing ceiling tiles, especially where the ceiling plenum is the return air path</li> </ul> | SMACNA 4.2.2 |
| Ducts, diffusers, and window units will be inspected upon completion of the work and cleaned if needed. The condition of the main filters will be checked whenever visible particulates are discharged from the system.   | SMACNA 4.2.3 |
| Where major dust loading is expected to impact operating HVAC systems, consideration will be given to upgrading filter efficiency. Filters will be installed with 60-80% dust spot efficiency. For odours, activated charcoal or potassium permanganate will be used.   | SMACNA 4.2.4 |
| An HVAC system has excessive dust or debris when an accumulation of particles can be observed under (not on) diffusers, or when ventilation is restricted. A decision whether and how to clean the ducts will be based on a detailed visual inspection of the system. Both highly specialized equipment and professional expertise is required to ensure that dust is effectively removed and contained.        | SMACNA 4.4   |

|   |              |
|---|--------------|
|   |              |
| Substitute high VOC content products with lower VOC alternatives.   | SMACNA 3.3.1 |
| Operating procedures which are detrimental to IAQ will be addressed including: <ul style="list-style-type: none"> <li>• Restricted motor vehicle access from areas where emissions may</li> </ul> | SMACNA 3.3.2 |

|   |              |
|---|--------------|
| <ul style="list-style-type: none"> <li>• be drawn into the building</li> <li>• Substitution of diesel equipment to cleaner gas or electric equipment</li> <li>• Switching gas powered equipment to electric</li> <li>• Adding catalytic converters to engines</li> <li>• Turning equipment off when not needed</li> </ul> |              |
| Work practices will be modified so that airborne dust is minimized.   | SMACNA 3.3.3 |
| Pollution sources will be directly exhausted to the outside by in-building systems or by portable systems.  | SMACNA 3.3.4 |
| Where exhaust is not feasible, local air will be re-circulated through a portable cleaner.  | SMACNA 3.3.5 |
| Open containers will be avoided thereby reducing VOC emissions.   | SMACNA 3.3.6 |

|  |            |
|--|------------|
|  |            |
| Work areas will be depressurized. A negative pressure will be created by either adjusting the balance of the HVAC system or by installing portable exhaust units.  | SMACNA 3.4 |
| Occupied spaces will be pressurized if the HVAC system is operation during construction and on occupied floors. Increasing supply air and/or reducing return/exhaust air in building areas that remain occupied during construction will help exclude airborne dust and odours.  | SMACNA 3.4 |
| Barriers will be erected to contain construction areas. The extent of barriers required is based on the materials involved and the implications of dust, odours or other contaminants of concern escaping the site.  | SMACNA 3.4 |
| Relocate pollutant sources. Project equipment and staging areas will be segregated from critical air flow pathways.  | SMACNA 3.4 |
| Temporarily seal the building, if construction emissions occur on the roof or adjacent to the building allowing contaminants to be drawn in through the outside air intake. If no other method of control is available, intake dampers, windows, doors or other pathways will be temporarily sealed for short durations. | SMACNA 3.4 |

|  |            |
|--|------------|
|  |            |
| <p>Site cleaning to maintain IAQ during construction will include:</p> <ul style="list-style-type: none"> <li>• Suppressing dust with wetting agents or sweeping compounds</li> <li>• Increase the frequency of cleaning for dust</li> <li>• HEPA vacuums will be used instead of sweeping for more efficient dust collection</li> <li>• Ensuring surfaces are kept clean</li> <li>• Removing spills or excess application of solvent-containing products as soon as possible</li> <li>• Clean up construction and demolition waste, debris and rubbish during all phases of construction.</li> <li>• Prohibit all tobacco and cigar smoking in the building interior.</li> <li>• Prevent fiber discharge or particle release when installing loose insulation media.</li> <li>• Clean the HVAC system consistently throughout construction and again once construction activity is complete</li> <li>• Protect porous materials (insulation and ceiling panels) from</li> </ul> | SMACNA 3.5 |

|  |  |
|--|--|
| moisture. <ul style="list-style-type: none"> <li>Remove any accumulations of water inside the building immediately.</li> </ul> |  |
|--|--|

|  |            |
|--|------------|
| Where applicable, construction activities will not overlap with occupancy for any given time and space. Supplementary scheduling strategies may include delaying occupancy and construction buffer zones. Install absorptive materials after the prescribed dry or cure time of wet finishes to minimize adverse impacts on IAQ. | SMACNA 3.6 |
|--|------------|

|   |            |
|---|------------|
| Hypersensitive individuals concerned about IAQ may be temporarily relocated for the duration of the project.  | SMACNA 3.7 |
| Create a buffer zone around the occupied space. The size of the buffer is dependent on the potential air quality problems presented by the project. | SMACNA 3.7 |

| <p>Option 1 – Flush out procedure: After construction ends and all interior finishes have been installed, prior to occupancy, install new filtration media and flush-out the affected space. The flush-out must be done by supplying a total outdoor air volume of 4,300 cubic meters per square meter (14,000 cubic feet per square foot) of floor area while maintaining an internal temperature of at least 16 degrees C (60 degrees F) and maintaining a relative humidity no higher than 60% where cooling mechanisms are operated. The affected space may be occupied only after the delivery of at least 1,100 cubic meters per square meter (3,500 cubic feet of outdoor air per square foot) of floor area and the space has been ventilated at a minimum rate of 1.5L/s per square meter (0.3 cfm per square foot) of outdoor air or the design minimum outside air rate (whichever is greater) for at least three hours prior to occupancy until the total of 4,300 cubic meters per square meter (14,000 cubic feet per square foot) of outdoor air has been delivered to the space. The flush-out may continue during occupancy.</p> <p>OR</p> <p>Option 2 – IAQ testing prior to occupancy: Conduct baseline IAQ testing, after construction ends and prior to occupancy, using testing protocols consistent with the United States Environmental Protection Agency “Compendium of Methods for Determination of Air Pollutants in Indoor Air” and demonstrate that the contaminants listed in the table below are not exceeded, taking remedial actions and repeating procedure until all requirements have been met.</p> <table border="1"> <thead> <tr> <th>Chemical Contaminant</th> <th>Maximum Concentration</th> </tr> </thead> <tbody> <tr> <td>Formaldehyde</td> <td>27 parts per million</td> </tr> <tr> <td>Particulate Matter (PM10)</td> <td>50 micrograms per cubic meter</td> </tr> <tr> <td>Total Volatile Organic Compounds</td> <td>500 micrograms per cubic meter</td> </tr> <tr> <td>* 4-Phenylcyclohexene (4-PCH)</td> <td>6.5 micrograms per cubic meter</td> </tr> </tbody> </table> | Chemical Contaminant           | Maximum Concentration | Formaldehyde | 27 parts per million | Particulate Matter (PM10) | 50 micrograms per cubic meter | Total Volatile Organic Compounds | 500 micrograms per cubic meter | * 4-Phenylcyclohexene (4-PCH) | 6.5 micrograms per cubic meter | LEED Canada EB:O&M EQc1.5 |
|--|--------------------------------|-----------------------|--------------|----------------------|---------------------------|-------------------------------|----------------------------------|--------------------------------|-------------------------------|--------------------------------|---------------------------|
| Chemical Contaminant   | Maximum Concentration          |                       |              |                      |                           |                               |                                  |                                |                               |                                |                           |
| Formaldehyde   | 27 parts per million           |                       |              |                      |                           |                               |                                  |                                |                               |                                |                           |
| Particulate Matter (PM10)  | 50 micrograms per cubic meter  |                       |              |                      |                           |                               |                                  |                                |                               |                                |                           |
| Total Volatile Organic Compounds   | 500 micrograms per cubic meter |                       |              |                      |                           |                               |                                  |                                |                               |                                |                           |
| * 4-Phenylcyclohexene (4-PCH)  | 6.5 micrograms per cubic meter |                       |              |                      |                           |                               |                                  |                                |                               |                                |                           |

|   |  |  |
|---|--|--|
| Carbon Monoxide (CO)  | 9 parts per million and no greater than 2 parts per million above outdoor levels |  |
| <p>*Required only if carpets with Styrene Butadiene (SB) latex backing material are installed.</p> <p>Protect stored on-site or installed absorptive materials from moisture damage.</p> <p>If permanently installed air-handlers must be used during construction, filtration media with MERV 8 must be used at each return air grille, as determined by ASHRAE 52.2-1999. Replace all filtration media immediately prior to occupancy.</p> <p>Upon the completion of construction, HVAC and lighting systems must be returned to the designed or modified sequence of operations.</p> |  |  |

### Recommended Resources

For further information, please refer to the following recommended resources:

- Sheet Metal and Air Conditioning Contractors National Association (SMACNA) IAQ Guidelines for Occupied Buildings Under Construction, second edition, November 2007, Chapters 3 and 4.
- United States Environmental Protection Agency (EPA) Compendium of Methods for Determination of Air Pollutants in Indoor Air
- South Coast Air Quality Management District (SCAQMD) Rule #1168: Adhesive and Sealant Applications (Adopted Apr. 1989. Last amendment Jan. 2005).
- Exterior sealants should adhere to South Coast Air Quality Management Rule #1168:

| ITEM                                 | LIMITS          |
|--------------------------------------|-----------------|
| Outdoor Carpet Adhesives             | 150 grams/litre |
| Wood Flooring Adhesives              | 100 grams/litre |
| Ceramic Tile Adhesives               | 65 grams/litre  |
| VCT & Asphalt Tile Adhesives         | 50 grams/litre  |
| Panel Adhesives                      | 50 grams/litre  |
| Cove Base Adhesives                  | 50 grams/litre  |
| Multi-Purpose Construction Adhesives | 70 grams/litre  |
| Structural Glazing Adhesives         | 100 grams/litre |
| Single Ply Roof Membrane Adhesives   | 250 grams/litre |

- South Coast Air Quality Management District (SCAQMD) Rule #1113: Architectural Coatings (Adopted Sept. 1977. Last amendment July 2007).
- Regulation 8: Organic Compound, Rule 51: Adhesive and Sealant Products (July 2002) by the Bay Area Air Quality Management District.
- Green Seal's Standard GS-11 Requirements for Paints (May 1993).
- The following table indicates the VOC limits for specific paint items according to GS-11:

| ITEM                     | VOC Limits      |
|--------------------------|-----------------|
| Flat Topcoats            | 50 grams/litre  |
| Non-flat Topcoats        | 100 grams/litre |
| Primers or Undercoats    | 100 grams/litre |
| Floor Paint              | 100 grams/litre |
| Anti-Corrosive Coatings  | 250 grams/litre |
| Reflective Wall Coatings | 50 grams/litre  |



|                          |                 |
|--------------------------|-----------------|
| Reflective Roof Coatings | 100 grams/litre |
|--------------------------|-----------------|

- Green Label Plus Testing Program (2004) & the Green Label Testing Program (1992) by the Carpet and Rug Institute (CRI).

## Requirements

The following are required for this program:

- Meet or exceed all applicable “Control Measures” outlined SMACNA Chapters 3 and 4, outlined in this program under section 2.2 – Control Measures
- Meet all additional requirements as outlined in this IAQ Best Management Program for Facility Alterations and Additions.
- Weekly inspection logs showing where control measures identified were implemented. Inspections of building and HVAC systems will identify deficiencies that could adversely affect the IAQ (e.g. Moisture in HVAC systems, water damaged walls, construction debris in ceiling spaces, materials stored near air intakes, etc.). Provisions must be made to correct any deficiencies.
- Photographs of each Control Measure implemented in the project from the tables above will be depicted in the photographs. Each photograph will include the date and a description of the control measure depicted.
- Provide technical information on filtration media used for each return air grille where the building’s air-handling units are operated during construction. Documentation shall be provided indicating the filter’s manufacturer, model number, MERV, and location. Documentation is required confirming the filter was replaced immediately prior to occupancy with MERV value highlighted. Note: the minimum MERV requirement is MERV 8, or the MERV of the filters installed prior to construction, whichever is greater.
- Documentation describing in detail the pre-occupancy and post occupancy flush-out process and procedures for all spaces that undergo alterations or additions including data regarding airflow, duration of flush-out, and any special considerations. Alternatively, IAQ testing can be completed prior to occupancy. If IAQ testing is completed – forward results to Colliers International.

## Quality Assurance/Quality Control Processes

Colliers International shall review the tracking logs monthly and verify that the measures are meeting the requirements of this program. Colliers International will solicit feedback on new technologies and potential improvements to procedures from their contractors that can be incorporated into this program and into future construction contracts. Changes to the program will be completed on an as-needed basis.

## Responsible Parties


|   |   |  |
|---|---|--|
| Colliers International Operations Manager | Oversee IAQ program development and implementation<br><br>Delegate responsibilities to external contractors and consultants | Wade Warner Colliers International<br>905-281-7211 |
| Contractor(s)                             | IAQ program implementation as designated by the Operations Manager  | Theodor Sterling Associates                        |
| Construction Consultant(s)                | Assist Colliers International, Wade Warner in monitoring IAQ program implementation   | Theodor Sterling Associates                        |

Prior to commencement of any property renovations or expansions, a pre-construction meeting is to be conducted to present the IAQ Best Management objectives and requirements to all Contractors and Subcontractors, and describe how each measure will be enforced. The objectives and requirements will be reinforced at construction progress meetings. A copy of the IAQ Best Management programs will be maintained on site.

## Time Period

This policy will be implemented for one year, from June 4, 2013, after which, this policy will be reviewed and revised as required.

## Authorization

|                                    |  |
|------------------------------------|--|
| Signature of Head of Organization: |  |
| Name of Head of Organization:      | Wade Warner LEED AP O+M  |
| Title:                             | Operations Manager   |
| Name of Organization:              | Mississauga Executive Centre<br>Colliers International                               |
| Date:                              | July 15, 2013  |



This IAQ Inspection Checklist is to be used to document regular inspections during construction.

Address: \_\_\_\_\_

Completed  
by: \_\_\_\_\_

Log No.: \_\_\_\_\_

Company: \_\_\_\_\_

Log Start Date: \_\_\_\_\_

Telephone: \_\_\_\_\_

Log End Date: \_\_\_\_\_

Areas  
Inspected:  
(describe)

|  |
|--|
|  |
|--|

Observed Activities by Contractors and Trades

|    |  | Yes | No | N/A |
|----|--|-----|----|-----|
| A. | HVAC Protection  |     |    |     |
| 1  | Supply air intakes protected   |     |    |     |
| 2  | Filters in air intake during testing and balancing                             |     |    |     |
| 3  | Exhaust/Return air system, system sealed                                       |     |    |     |
| 4  | Filters (MERV 8), in return air system   |     |    |     |
| 5  | Return air ducts cleaned   |     |    |     |
| B. | Source Control   |     |    |     |
| 1  | Prefabricated insulated duct work protected against moisture during delivery   |     |    |     |
| 2  | Ductwork stored in clean and dry environment                                   |     |    |     |
| 3  | Motor vehicles limited in vicinity of air intake manifolds                     |     |    |     |
| 4  | Ventilation with 100% outside air during installation of VOC emitting material |     |    |     |
| 5  | Wet product containers closed  |     |    |     |
| C. | Pathway Interruption   |     |    |     |
| 1  | Dust curtains or temporary enclosures used                                     |     |    |     |
| 2  | Pressure differentials used  |     |    |     |
| D. | Housekeeping   |     |    |     |
| 1  | Dust collection suppression  |     |    |     |
| 2  | Coils, air filters, fans and ductwork kept clean                               |     |    |     |
| 3  | Water accumulation checked   |     |    |     |
| E. | Scheduling   |     |    |     |
| 1  | Soft/porous, FF&E items after flushing   |     |    |     |
| 2  | New MERV 13 filters installed following flushing                               |     |    |     |
| F. | Photographs  |     |    |     |
| 1  | Photographs taken (Photograph requirements are outlined in section 3)          |     |    |     |

Remarks:

|  |
|--|
|  |
|--|

## SCHEDULE D – Green Cleaning Policy



# MISSISSAUGA EXECUTIVE CENTRE GREEN CLEANING POLICY

JUNE 2013 – VERSION 1.0

## Contents

|    |                                     |    |
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## APPENDICES

- I Apollo 8 Maintenance Services Limited Green Cleaning Program

*EQ Prerequisite 3,  
Credits 3.1 - 3.4*

*This Policy is intended to document best management practices & comply with the CaGBC's LEED Canada for Existing Buildings: Operations & Maintenance 2009 Standard – EQ Prerequisite 3 and Credits 3.1 – 3.4.*



*Indoor Environmental Quality*

*This Policy supports the Indoor Environmental Quality component of Colliers's Sustainable Program.*

## Objectives & Scope

This Green Cleaning Policy aims to eliminate or minimize the potential negative environmental and health impacts associated with the following activities:

| Activities                                   | Potential Negative Environmental Impacts  |
|--|---|
| Purchase of Cleaning and Related Products    | Resource depletion  |
| Storage, Use & Disposal of Cleaning Products | Adverse effects on indoor air quality (IAQ), human health, building finishes, building systems, and the environment |
| Use of Cleaning Equipment                    | Noise, emissions, adverse effects on IAQ  |
| Special Cleaning Activities                  | Adverse effects on IAQ, human health  |

This Green Cleaning Policy applies to all tenants (including their 3<sup>rd</sup> party contractors) and base building activities at the Mississauga Executive Centre (MEC) (physical boundaries) and the purchase, storage, use and disposal of cleaning products and equipment (programmatic boundaries).

## Responsible Parties

| Colliers International           | Responsibilities                             | Telephone #  |
|----------------------------------|--|--------------|
| Wade Warner- Manager, Operations | Oversee Green Cleaning Policy Implementation | 905-281-7211 |

Colliers's Manager, Operations is responsible for overseeing the integration of the requirements of this Green Cleaning Policy into all activities and applicable contracts at MEC.

| Service Provider  | Responsibilities                | Telephone #  |
|---|---------------------------------|--------------|
| Apollo 8 Maintenance Services Limited – Ron Campbell, President | Implement Green Cleaning Policy | 416-461-8748 |

The Service Provider is responsible for implementing this Green Cleaning Policy and submitting all appropriate logs and records.

| Tenants             | Responsibilities   | Telephone # |
|---------------------|--|-------------|
| Key Tenant Contacts | Share Green Cleaning Policy with 3 <sup>rd</sup> party contractors | Various     |

Key Tenant Contacts are responsible for sharing this Green Cleaning Policy with any 3<sup>rd</sup> party contractors utilized in their space (in addition to services Apollo 8 Cleaners provides).

## Procedures and Strategies

### a) Purchase of Cleaning & Related Products

*Purchase LEED compliant green cleaning & related products*

#### Cleaning Products

Cleaning products purchased for use at MEC shall meet one or more of the following standards for the appropriate category:

- Green Seal GS-37 for General-Purpose, Bathroom, Glass, and Carpet Cleaners Used for Industrial and Institutional Purposes.
- Environmental Choice CCD-110 for Cleaning and Degreasing Compounds
- Environmental Choice CCD-146 for Hard Surface Cleaners.
- Environmental Choice CCD-148 for Carpet and Upholstery Care.
- Green Seal GS-40 for Industrial and Institutional Floor-Care Products.
- Environmental Choice CCD-112 for Digestion Additives for Cleaning and Odour Control.
- Environmental Choice CCD-113 for Drain or Grease Traps Additives.
- Environmental Choice CCD-115 for Odour Control Additives.
- Environmental Choice CCD-147 for Hard Floor Care.
- California Code of Regulations maximum allowable VOC levels for the specific product category.

#### Janitorial Papers

Janitorial paper products purchased for use at MEC shall meet the requirements set out by the EPA Comprehensive Procurement Guidelines for Janitorial Paper and Plastic Trash Can Liners (April 2004), as follows:

| Item                              | Post-Consumer Content [%] | Recovered Content [%] |
|-----------------------------------|---------------------------|-----------------------|
| Bathroom Tissue                   | 20-60                     | 20-100                |
| Paper Towel                       | 40-60                     | 40-100                |
| Paper Napkin                      | 30-60                     | 30-100                |
| Facial Tissue                     | 10-15                     | 10-100                |
| General-Purpose Industrial Wipers | 40                        | 40-100                |

Or Products must be certified by one or more of the following standards for the appropriate category:

- Green Seal GS-09 for Paper Towels and Napkins.
- Green Seal GS-01 for Tissue Paper.
- Environmental Choice CCD-082 for Toilet Tissue.
- Environmental Choice CCD-086 for Hand Towels.
- Janitorial paper products derived from rapidly renewable resources or made from tree-free fibers.

#### Trash Can Liners

Trashcan liners purchased for use at MEC shall meet the requirement set out by the

EPA Comprehensive Procurement Guidelines for Janitorial Paper and Plastic Trash Can Liners (April 2004), which states that both the post-consumer content and the recovered content must be between 10% and 100%.

### Hand Soaps

Hand soaps purchased for use at MEC should meet one or more of the following standards:

- Green Seal GS-41, for industrial and institutional.
- Environmental Choice CCD-104 for hand cleaners and hand soaps.

Hand soaps that do not include antimicrobial agents (other than as a preservative) except where required by health codes and other regulations (e.g. food service and health care requirements) should be considered for use at MEC wherever possible.

## **b) Storage, Use & Disposal of Cleaning Products**

|   |
|---|
| <i>Implement a Green Cleaning Program</i> |
|---|

### Chemical Storage

Chemicals shall be stored in a manner that limits opportunities for accidental spills, leaks, and other mishaps. All chemical storage containers shall be checked for leaks or other imperfections before use. Containers should be stored at accessible heights, and where containers must be stored above shoulder height, a step ladder shall be used to reach the container. All cleaning products meet green cleaning product standards for occupant health and safety, however, rubber gloves and masks shall be available for individuals using these products regularly.

Cleaning chemicals (concentrated bulk chemicals or diluted versions) must be stored in isolated and secured designated storage areas. These areas must limit the opportunity for volatile chemicals to mix with the air delivered to occupied spaces by having deck to deck partitions or being separately ventilated.

Mixed/diluted chemicals shall be stored in their original containers, or in a secondary container that shall be identified with the appropriate labels, clearly identifying the chemical. If there are any chemicals or containers in question, the Resident Custodial Manager or Shift Supervisor shall be contacted for direction.

A Material Safety Data Sheet (MSDS) for each chemical used and stored on site shall be retained at the MEC Control Centre.

### Chemical Usage

Chemicals shall be applied in accordance with the Service Provider's Green Cleaning Operating Procedures. These Operating Procedures shall be consistent with industry best practice and describe how an effective cleaning, hard floor and carpet maintenance system will be consistently utilized, managed and audited. The Operating Procedures shall include guidance for preventing and managing any hazardous spills or mishandling incidents, use of appropriate dilution systems to minimize chemical use wherever



possible, and cleaning to protect vulnerable building occupants.

A copy of the Service Provider's Green Cleaning Operating Procedures shall be retained on site at the MEC Control Centre.

#### Chemical & Packaging Disposal

All residual chemicals shall be disposed of by the Service Provider in accordance with both the proper procedures as outlined on the applicable MSDS sheets and the City of Mississauga's hazardous waste disposal procedures.

Empty recyclable containers shall be recycled in the standard blue box program. Containers that are not recyclable and safe for the regular waste stream (e.g. empty aerosol cans) shall be disposed of in the regular garbage.

#### **c) Use of Cleaning Equipment**

*Use low environmental impact cleaning equipment*

Cleaning equipment used at MEC should meet the low environmental impact requirements listed below wherever possible:

| <b>Equipment</b>   | <b>Requirements</b>  |
|--|--|
| Vacuum cleaners  | Compliance with Carpet & Rug Institute "Green Label" Testing Program.<br><br>Must operate with a sound level of less than 70 dBA..   |
| Propane-powered floor equipment  | Equipped with high-efficiency, low-emissions engines with catalytic converters and mufflers that meet the California Air Resources Board (CARB) or EPA standards for the specific engine size and operate with a sound level of less than 90 dBA.  |
| Automated scrubbing machines   | Equipped with variable-speed feed pumps to optimize the use of cleaning fluids.  |
| Carpet extraction equipment used for restorative deep cleaning   | Certified by the Carpet and Rug Institute's "Seal of Approval" Testing Program for deep-cleaning extractors.   |
| Powered floor maintenance equipment, including electric and battery-powered floor buffers and burnishers | Must be equipped with vacuums, guards and other devices for capturing fine particles.<br><br>Must operate with a sound level less than 70db.<br><br>Must be ergonomically designed to minimize vibration, noise and operator fatigue.<br><br>Should have rubber bumper guards to reduce damage to building finishes and surface. |
| Battery-powered equipment  | Gel batteries are preferred.   |
| Powered equipment  | Ergonomically designed to minimize vibration,  |

|                      |   |
|----------------------|---|
|                      | noise and user fatigue.                                     |
| Applicable equipment | Designed with safeguards, such as rollers or rubber bumpers |

All new cleaning equipment purchased by the Service Provider for use at MEC shall meet the low environmental impact requirements listed above (as older equipment is phased out and replaced). The Service Provider shall retain a log of all cleaning equipment used at MEC, including the date of purchase, repair and maintenance activities, and all sustainability criteria met by the equipment.

**d) Special Cleaning & Other Activities**

|  |
|--|
| <i>Implement other specialized aspects of a Green Cleaning Program</i> |
|--|

Entrance Mats

All exterior areas around the perimeter shall be swept and cleaned of debris twice daily.

All exterior entrances shall be equipped with entryway systems (grilles, grates, mats, etc.). Entrance mats shall be semi-permanent and extend 10 feet from the building entrance to the building interior.

Entrance mats shall be vacuumed in the morning and at night. Steam cleaning using hot water extract shall be performed biweekly with spot cleaning as required.

This daily/weekly maintenance shall be conducted by the custodial service provider. Entrance mats shall be removed yearly for thorough cleaning.

Sensitive Building Occupants

Colliers and its Service Provider shall respond to occupants who are disproportionately affected by particular cleaning products or practices. Building occupants shall notify Colliers or the Service Provider of sensitivities directly or through 310-maxx. Colliers' Service Provider shall take reasonable accommodation to address these sensitivities.

Hand Hygiene

Colliers shall promote effective hand washing where appropriate, and provide waterless hand sanitizers at the main lobby, and where appropriate, throughout the building to promote effective hand hygiene.

Staffing

An appropriate staffing level and division of responsibilities will be developed by the Cleaning Service Provider in coordination with Colliers. Staffing should be allocated to ensure that areas accumulating greater amounts of contaminants are cleaned more frequently.

Training of Cleaning Staff

The Cleaning Service Provider shall provide training to all staff that operate at MEC on the hazards of use, disposal and recycling of cleaning chemicals, dispensing equipment and packaging. This shall be done by way of their introductory orientation training and during regularly scheduled toolbox meetings. These regularly scheduled sessions shall include retraining in green cleaning techniques and products, and address issues relating to custodial staff turnover and rotation, and cleaning by outsourced services.

### Performance Management

Colliers shall monitor implementation of this policy, through the following performance metrics:

| Activities                                    | Performance Metric  |
|---|---|
| Purchase & Use of Cleaning & Related Products | Percentage of green cleaning products purchased/used as a percentage of overall cleaning products [total \$ of purchases]   |
| Use of Cleaning Equipment                     | Percentage of green cleaning equipment purchased/used as a percentage of overall cleaning equipment [total \$ of purchases] |

Colliers's goals at MEC include:

- EQ GOAL #01      ► 90% of the total purchases of cleaning products and materials meet at least one of the stated sustainability criteria
- EQ GOAL #02      ► At least 20% of the total purchases of cleaning equipment meet at least one of the stated sustainability criteria

### Monitoring & Quality Assurance

Colliers' Service Provider shall submit a written statement outlining that they understand and will follow the sustainable practices outlined in this policy.

Colliers's Service Provider shall retain logs and appropriate records, consistent with the LEED Canada EB:O&M standard, to document full compliance with the requirements outlined in this policy. This shall include random quarterly audits/documentation of cleaning products (for all base building and tenant spaces) and manufacturer's or supplier's documentation for a minimum of 20% of purchases, by cost. These shall be made available to Colliers upon request and forwarded to the Manager, Operations for review at least quarterly.

Colliers' Manager, Operations shall review the logs and records at least quarterly to verify that the Service Provider is following their Operating Procedures and the requirements of this policy are being met, and take any necessary corrective actions.

Colliers shall also collect feedback from its tenants on the green cleaning program as part of its annual tenant survey, and make any adjustments to the program, in conjunction with the Service Provider, as required. In addition to tenant and Service Provider feedback, adjustments will also be made based on new technologies, procedures and processes.

**Time Period**

This policy will be implemented for one year, from June 4, 2013, after which, this policy will be reviewed and revised as required.

**Authorization**

|                                    |  |
|------------------------------------|--|
| Signature of Head of Organization: |  |
| Name of Head of Organization:      | Wade Warner LEED AP O+M  |
| Title:                             | Operations Manager   |
| Name of Organization:              | Colliers International<br>Mississauga Executive Centre                             |
| Date:                              | July 15, 2013  |

**Green Cleaning Charts and Tables**

Address: \_\_\_\_\_

Completed by: \_\_\_\_\_

Log No.: \_\_\_\_\_

Company: \_\_\_\_\_

Log Start Date: \_\_\_\_\_

Telephone: \_\_\_\_\_

Log End Date: \_\_\_\_\_

| Sustainable Cleaning Product/Material |                  | Applicable Sustainability Criteria | In use? |   |   |   |
|---------------------------------------|------------------|------------------------------------|---------|---|---|---|
| Category                              | Product/Material |                                    | Y/N     | If no:<br>NN – Product not needed<br>AP – alternate product used (list product) | Alternate Product Sustainability Criteria | Comments  |
| Glass Cleaner                         | Brand 1          | GS-37                              | Y       | n/a   | n/a                                       |   |
|                                       | Brand 2          | GS-37                              | N       | NN  | n/a                                       |   |
| Hand Soap                             | Brand 3          | CCD-104                            | N       | AP (Brand 4)  | CCD-104                                   |   |
| Paper Towel                           | Brand 5          | GS-09                              | N       | AP (Brand 6)  | None                                      | Brand 6 to be replaced with Brand 5 as soon as possible |
| Trash Bags                            | Brand 7          | EPA CPG                            | Y       | n/a   | n/a                                       |   |

\_\_\_\_\_  
Signature of Authorized Official

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date



**APPENDIX III**  
**GREEN CLEANING POLICY**  
**SAMPLE SUSTAINABLE CLEANING PRODUCT PURCHASING TRACKING TABLE**  
**[BUILDING NAME]**

Address : \_\_\_\_\_

Completed by: \_\_\_\_\_

Log No. : \_\_\_\_\_

Company : \_\_\_\_\_

Log Start Date: \_\_\_\_\_

Telephone : \_\_\_\_\_

Log End Date: \_\_\_\_\_

| Date of Purchase  | Item Purchased       | Purchasing Entity   | Product Category | Sustainability Criteria Met | Cost per Item | Quantity Purchased | Product Documentation | % of total Purchase Value | Value |
|---|----------------------|---------------------|------------------|-----------------------------|---------------|--------------------|-----------------------|---------------------------|-------|
| 2/24/2009   | Brand X Trash Bags   | ABC cleaners        | Trash Bags       | EPA CPG                     | \$15          | 25                 | Yes                   | 38%                       | \$375 |
| 2/24/2009   | Brand Y Paper Tower  | Jones Property Mgmt | Paper Towel      | GS-09                       | \$4           | 75                 | No                    | 31%                       | \$300 |
| 2/25/2009   | Brand Z Paper Towels | ABC cleaners        | Paper Towels     | None                        | \$2           | 150                | No                    | 31%                       | \$300 |
| Total sustainable purchases   |                      |                     |                  |                             |               |                    |                       |                           | \$675 |
| Sustainable purchases as percentage of total purchases  |                      |                     |                  |                             |               |                    |                       |                           | 69%   |
| The project team has provided documentation from project manufacturers or suppliers that verifies product compliance with the specified sustainability criteria for the following percentage of the purchased value of the sustainable purchases listed above (must be 20% minimum, by cost, to demonstrate compliance) |                      |                     |                  |                             |               |                    |                       |                           | 38%   |

\_\_\_\_\_  
Signature of Authorized Official

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date