BOMA BESt Assessment: Open Air Retail Properties

June 2009

Contents

	BASIC INFORMATION	
0.1	What is the name of the building? Tip: Please enter the name as you would like it to appear on the certificate if the building becomes certified.	
0.2	What is the street address?	City: _____ Province: _____ Postcode: _____
0.3	When was the building constructed? Tip: Specify year of construction OR choose an era.	in _____ (exact year) ☐ prior to 1960 ☐ prior to 1989 ☐ after 1990
0.4	What is the total area of the site? Tip: include building footprint, parking, landscaping and all other areas within the property boundary.	___ Hectares ___ Acres
0.5	What is the gross floor area of the building (in square feet)? Tip: The gross floor area for the purposes of the assessment is the total heated floor area within the perimeter of the exterior walls of the building, including common, mechanical and structural support areas, and excludes unheated parking garage areas. The total gross floor area should include all supporting functions such as kitchens and break rooms used by staff, storage areas, administrative areas, elevators, stairwells, atria, etc.	
0.6	How many parking stalls are there?	
0.7	Who are the main occupants?	The main occupants are:
0.8	How many people work in this facility during normal operating hours?	
0.9	How many hours per day is the facility open?	
0.1	How many days per week is the facility open?	
0.11	How many days per year is the facility open?	
0.12	Who is the owner of the building?	
0.13	Who is the building manager (company)? Tip: Provide the name and the company of the manager.	
0.14	Provide a general description of the building, the property and landscaping as well as information related to major retrofits or other pertinent details. Tip: Provide a short building description describing also any additional innovative energy and environmental measures.	
0.15	What is the mix of retail, storage and office space?	Retail:_____% Storage:_____% Office:_____%
OPTIONAL – The following 7 fields are optional to fill in. You can answer these, or continue at the number of loading docks question.		
	Number workers on main shift	
	Number of personal computers	

	Number of cash registers	
	Number of walk-in refrigeration/freezer units	
	Number of open and closed refrigeration/freezer cases	
	Percent of the store that is heated	
	Percent of the store that is cooled	
0.16	How many loading docks are there?	
0.17	How many overhead doors are there?	
	Drive-in	
	Truck level	
0.18	Building construction description? Tip: Provide a short description of building construction, including the structural system (eg. Brick or block or prefab steel framing) and building envelope (eg. Single or double glazed windows).	
0.19	HVAC system description? Tip: Provide a short description of building HVAC system.	

	1.0 ENERGY (30%)	
	1.1 Energy Consumption	
1.1.1	Please select the fuels or utilities used by the building, for which energy consumption figures will be entered. Tip: Check each fuel for which consumption will be entered. If there is more than one meter for a given fuel, please combine data for all meters into a single meter.	
	☐ Gas (m^3) ☐ Electricity (kWh) ☐ Propane (litres) ☐ Fuel Oil (litres) ☐ Steam - GJ - Mlbs (steam pounds x1000) Tip: Check Steam and/or Chilled water only if purchased directly from an external supplier. ☐ Chilled Water GJ – Ton Hours (CHW) Tip: Check Steam and/or Chilled water only if purchased directly from an external supplier.	

Energy Consumption for Leased Light Industrial and Strip Retail Buildings.

1.1.2 Please indicate how the property is being billed for electricity and heating fuel (building owner pays or tenant pays, or a combination). Where some space types are partially sub-metered, indicate the percentage of the floor area that is sub-metered.

Electricity		
1.1.2	Are tenants, independently metered and billed by the electricity supplier?	☐All tenants ☐Some tenants ☐None

1.1.3	For what percentage of the tenant leased area are tenants independently metered and billed by the electricity supplier?	_____%
1.1.4	Is the property manager able to get the copies of the electrical utility bills from the tenants? Tip: Where tenants are not independently metered, mark "not applicable."	□Yes □No □ N/A
1.1.5	Where tenants are not independently metered and billed by the electricity supplier, do tenants pay the landlord for their share of electricity usage based on: Tip: a sub meter is a separate meter installed by the landlord to measure actual energy use by the individual tenant, to quantify what portion of the main utility account is to be paid by the tenant.	Check all that apply: □ outside lighting only □ sub-metered data? □ N/A
1.1.6	The reported electricity consumption covers:	Check all that apply: □ outside lighting only □ service areas □total tenants' electricity consumption
Heating Fuel		
1.1.7	Are tenants, independently metered and billed by the heating fuel (natural gas/ Propane/ Oil) supplier?	□All tenants □Some tenants □None
1.1.8	For what percentage of the tenant leased area are tenants independently metered and billed by the heating fuel supplier?	_____%
1.1.9	Is the property manager able to get the copies of the heating fuel bills from the tenants? Tip: Where tenants are not independently metered, mark "not applicable."	□Yes □No
1.1.10	Where tenants are not independently metered and billed by the natural gas supplier, do tenants pay the landlord for their share of electricity usage based on: Tip: a sub meter is a separate meter installed by the landlord to measure actual energy use by the individual tenant, to quantify what portion of the main utility account is to be paid by the tenant.	□ floor area □ sub-metered data □ N/A
1.1.11	The reported heating fuel consumption covers:	□ no heating fuel consumption □ total tenants' heating fuel consumption
1.1.12	Describe how tenant energy-use billing is handled:	

1.1.13	Specify the ending month of the 12 month period for which energy consumption figures are being entered.	Month _____ Year _____
1.1.14	What was the energy consumption for each non-renewable fuel type by month, for the 12 month period specified? Tip: This will be calculated automatically if 12 months of detailed data is entered below. Leave this field blank if you wish it to be calculated automatically. If detailed information is not available, please provide an estimate.	$_____
1.1.15	What was the energy consumption for each non-renewable fuel type, by month? If you do not have a breakdown of 12 months of information, please enter the building's total energy bill for the entire specified 12 month period in Month 1. Tip: This information is used to calculate the energy intensity (ekWh/sqft/yr), based on the following scale:	

Offices	Warehouses	Retail	
< 36 kWh/sf-yr	< 46kWh/sf-yr	< 42kWh/sf-yr	3.8pts
< 32 kWh/sf-yr	< 42kWh/sf- yr	< 39kWh/sf-yr	7.6pts
< 28 kWh/sf-yr	< 38kWh/sf- yr	< 36kWh/sf-yr	11.4pts
< 24 kWh/sf-yr	< 34kWh/sf- yr	< 33kWh/sf-yr	15.2 pts
< 20 kWh/sf-yr	< 30kWh/sf- yr	< 30kWh/sf-yr	19pts
< 18 kWh/sf-yr	< 26kWh/sf- yr	< 27kWh/sf-yr	22.8pts
< 16 kWh/sf-yr	< 22kWh/sf- yr	< 24kWh/sf-yr	26.6 pts
< 14 kWh/sf-yr	< 18kWh/sf- yr	< 21kWh/sf-yr	30.4 pts
< 12 kWh/sf-yr	< 14kWh/sf- yr	< 18kWh/sf-yr	34.2 pts
< 10 kWh/sf-yr	< 10kWh/sf- yr	< 15kWh/sf-yr	38pts

	Gas month 1: … Gas month 12:	m^3		Cost $	
	Electricity month 1: … Electricity month 12:	kWh.		Cost $	
	OPTIONAL – Electricity demand does not have to be entered, but will allow your power factor to be calculated.				
	Electricity Demand month 1: … Electricity Demand month 12:	kW		kVA	
	Oil month 1: … Oil month 12:	Litres.		Cost $	
	Propane month 1: … Propane month 12:	Litres.		Cost $	

	1.2 Energy Efficiency Features	
	Lighting	
1.2.1	Does the building incorporate any of the following high-efficiency lighting features for interior lighting: Tip: Choose as many as apply.	
	• Compact fluorescents Tip: Compact fluorescents are suitable replacement for incandescent lighting, combining small size with a high level of performance.	☐70%-100% ☐40%-70% ☐Under 40%
	• T8 or T5 fluorescent lamps? Tip: T8 or T5 fluorescent lamps are suitable for general lighting, are highly efficient and produce warmer colours than traditional cool white fluorescents.	☐70%-100% ☐40%-70% ☐Under 40%
	• Exit signs with light-emitting diodes (LEDs)? Tip: LED exit signs consume very little electricity, and have a long life	☐70%-100% ☐40%-70% ☐Under 40%
	• aisle lighting Tip: Aisle lighting saves up to 20% in energy consumption compared to multi-tube fixtures.	☐Yes ☐No
	• Occupancy sensors in low-traffic areas, where appropriate (e.g. storage rooms, loading docks)? Tip: Occupancy sensor control can be used on fixtures located in ancillary aisles and bulk or open storage areas	☐Yes ☐No
	• Timed automatic shut-off for all non-essential lighting, including task lighting, and during unoccupied hours? Tip: Automatic shut-off can be provided by programmable time scheduling devices or occupancy sensors	☐Yes ☐No
1.2.3	What percentage of all tenant interior lighting in the facility is "high efficiency lighting"? Tip: Estimate the percentage either by floor area of occupied space or by numbers of lights. High efficiency refers to the types of lighting mentioned above.	☐ 80% – 100% ☐ 60% – 80% ☐ 40% – 60% ☐ 20% – 40% ☐ Under 20% ☐ none
1.2.2	Does the building incorporate any of the following high-efficiency lighting features for the parking area and exterior lighting:	
	• daylight sensors	☐Yes ☐No
	• timers to control exterior lighting? Tip: Exterior lighting is typically controlled with photovoltaic sensors (photocells or daylight sensors) to ensure lighting operates only at night although it can also be controlled by time clocks, computerized lighting control systems or the building's mechanical control systems.	☐Yes ☐No
	• use of high intensity discharge lamps (HID) Tip: High-intensity discharge (HID) lighting offers very high efficiency, providing energy savings of 50 to 90 percent when replacing incandescent sources.	☐Yes ☐No
	• high-intensity fluorescent fixtures on the building's exterior, parking garages and other appropriate areas? Tip: Originally intended for outdoor and high-bay applications.	☐Yes ☐No

1.2.4	What percentage of all exterior lighting at the facility is "high-efficiency" lighting? Tip: High efficiency refers to the types of lighting mentioned above.	☐ 75% - 100% ☐ 50% - 75% ☐ 1% - 50% ☐ none
	1.3 Major HVAC Equipment	
1.3.1	What percentage of the rooftop package units in the facility are high-efficiency? Tip: High-efficiency Package Rooftop Units have Seasonal Energy Efficiency Ratio (SEER) 13/11.2.Energy Efficiency Ratio (EER) minimum. Proper maintenance is required to maintain the SEER, and there should be evidence of the SEER maintenance available. Note that maintenance of SEER ratio typically requires re-commissioning.	☐ 50% – 100% ☐ 25% – 49% ☐ less than 25% ☐No Package Units
1.3.2	Are there direct-fired space heating/ventilating systems? Tip: Direct gas-fired make-up air technology is the most energy efficient choice for heating make-up air because it does not use a flue or heat exchanger. The gas is burned directly in the air stream being heated. If there is no direct gas-fired, mark not applicable.	☐ Yes ☐ No ☐ N/A
	1.4 Controls	
1.4.1	Is temperature setback and weather compensation implemented? Tip: These refer to adjustments to the building temperature based on occupancy and outside temperatures, to reduce heating or cooling requirements.	☐ Yes ☐No
1.4.2	Does the building have building automation systems (BAS)? Tip: These systems optimize the start-up and performance of HVAC equipment, improve the interaction of mechanical subsystems, increase occupant comfort, lower energy use and provide off-site building control. . Partial BAS can consist of items such as snow and ice sensing controls that operate garage ramp heaters or domestic hot water system (DHW) controls).	☐ Full ☐ Partial ☐ None
1.4.3	Are there programmable thermostats in tenant spaces?	☐ Yes ☐ No
	1.5 Other Energy Efficiency Features	
1.5.1	Are there other energy efficiency measures such as:	
	• Infra-red heating Tip: Radiant heating systems which is also called infrared radiation heating, are the most efficient and effective method with which to delivery "heat"under the diverse conditions present in warehouses, garages, and storerooms.	☐ Yes ☐ No
	• Exhaust air heat recovery? Tip: This could be in the form of a heat pipe, heat wheel, air to air exchanger or glycol heat recovery loop. Where heat recovery would not be practical, mark not applicable.	☐ Yes ☐ No ☐ N/A
	• De-stratification fans? Tip: The de-stratification fan is a unit for re-circulating ambient air and thus making it possible to recover the heat accumulated under the roof space by redirecting it downwards to ground level.	☐ Yes ☐ No

	• High-efficiency air compressors? Tip: A high-efficiency air compressor may come equipped with some energy efficiency features such as high-efficiency motor, integrated air passages, variable frequency drive, high-efficiency separation system or integral coolant sump	☐ Yes ☐ No
	• Energy-efficient motors on fans/pumps / and or variable speed drives? Tips: Energy-efficient motors use from 1% to 4% less electricity than standard motors and are generally more reliable, last longer and result in lower transformer loading	☐ Yes ☐ No
	• A green roof? Tip: Roof covered by lightweight vegetation and soil medium with low maintenance requirements.	☐ Yes ☐ No
	• A solar pre-heated ventilation air system? Tip: A pre-heated ventilation air system such as a solar wall uses a perforated metal cladding to pre-heat outside air supply to the facility.	☐ Yes ☐ No
	• Cogeneration (building or district scale)? Tip Cogeneration is the simultaneous production of heat and electrical or mechanical power achieved by capturing and recycling the rejected heat that escapes from an electricity generation process in the building. Cogeneration can be used to reduce peak demand. Where cogeneration would not be economically justified, mark "not applicable".	☐Yes ☐No ☐N/A
	• Thermal insulation coating? Tip: New (nanotechnology based) thermal insulation paints or coatings can keep external or internal surfaces cooler or warmer by reflecting and emitting heat.	☐ Yes ☐ No
	• Other energy-saving systems or measures? Describe: _____ Tip: Describe any other energy-saving systems or measures used to save energy (eg. deep lake cooling, solar absorption chillers, CO2 demand ventilation, displacement ventilation, dehumidification methods, daytime cleaning, high-performance fume hoods, thermal mass storage, etc.)	☐Yes ☐No
	1.6 Green Energy	
1.6.1	Is "green electricity" purchased? Tip: Many energy retailers now offer energy produced from certified solar, water, wind and recovery technologies. If not known, check "No".	☐Yes ☐No
1.6.2	Does the building utilize any of the following renewable on-site energy sources: Tip: Renewable energy sources do not deplete natural resources	
	• Active Solar? Describe: Tip: This is generally used to increase the temperature of large volumes of water or air in commercial and industrial buildings (e.g. solar wall or solar DHW panels).	☐Yes ☐No
	• Wind? Describe: Tip: This is generally used to generate electricity to offset electricity purchased from the electric utility	☐Yes ☐No
	• Photo Voltaic? Describe: Tip: Photovoltaics convert the sun's energy to usable electricity. They are most effective when used during the day, avoiding the need for battery or other storage systems.	☐Yes ☐No

	• Ground Source Heat Pump? Describe: Tip: Using the temperature differential between above ground and below ground (or ground water), fluid is circulated in an underground (or underwater) loop. The energy collected is used for air and/or water heating. The system can be reversed in summer to provide cooling instead of heating	☐Yes ☐No
	• Bio-mass? Describe: Tip: Fuel such as round wood, wood and agricultural waste, prepared wood fuels, landfill gas and digester gas are burned using high efficiency combustion to provide space and/or water heating	☐Yes ☐No
1.6.2	What percentage of the building's total energy use is supplied by these renewable sources? Tip: Enter percentage of total annual energy requirements supplied from above sources. Describe the source and enter percentage of total annual energy requirements supplied:	☐ > 10% ☐ < 10% ☐ 0%
	1.7 Envelope	
1.7.1	Has the current performance and condition of the building envelope been assessed in terms of: Tip: The condition of the building envelope is critical to the building performance. An assessment of the current performance and condition of the envelope should consider the issues of relative humidity temperature and interior pressure	
	• Water infiltration and condensation? Tip: Consider the differences in temperature on the inner surface of the building and the water vapour condensation on the surface of thermal bridges-the mould and mildew control points.	☐Yes ☐No
	• Moist air transfer? Tip: Consider the envelope permeability and the ability of materials to withstand, without deterioration, periods of freezing and thawing.	☐Yes ☐No
	• Air flow? Tip: Consider the air pressure differences and air-leakage characteristics of the envelope	☐Yes ☐No
	• Heat transfer? Tip: Assess the thermal resistance and quantity of heat transferred through the envelope	☐Yes ☐No
1.7.2	Is there a periodic caulking inspection and repair program?	☐Yes ☐No
1.7.3	Are windows energy-efficient? Describe:_____ Tip: Energy-efficient windows consist of, at minimum, double-glazed, low-e windowpanes with frames spacers that have high thermal integrity. Mark "not applicable" where there are no windows.	☐Yes ☐No ☐N/A
1.7.4	Does the building have the following features to reduce the cooling load : Tip: Exterior awnings, exterior and interior solar blinds, green roofs and exterior vegetation, high albedo (reflective roofing materials, and low-e film reduce cooling loads and reduce glare.	
	• Exterior awnings, mounted window film or interior solar blinds? Tip: Mark "not applicable "where there are no windows.	☐Yes ☐No ☐N/A

	• High-albedo (cool) roofing materials ~~having a high~~ with a Solar Reflectance Index (SRI) of 70 or higher? Tip:A white or cool roof has a high-reflectance surface which contribute to reduced cooling energy, lower peak electricity demand , improved indoor comfort, decreased air pollution due to the reducing of the "heat island effect".	☐Yes ☐No
1.7.5	Are loading doors "high speed type" equipped with devices to minimize outside air infiltration when open? Tip: Air curtains and "gasket" type cushions around loading docks are one of the most effective ways to seal a door opening. Air curtains provide a relatively low cost enclosure that reduce heating and refrigeration costs. If infrared heaters are used at loading areas these should have controls interconnected to prevent their operation when doors are opened, unless there is uninsulated piping in the area.	☐Yes ☐No
1.7.6	If the buildings has multiple uses or occupancies (e.g. heated or cooled areas), are they thermally separated? Tip: Inadequate insulation and sealing between different functional areas in a building or between occupied and unoccupied spaces can cause large energy losses (e.g. a small heater/AC in the one area may try to heat/cool the entire adjoining space in building with improper insulation and sealing between the refrigerated and heated area) In buildings without multiple uses or occupancies mark N/A	☐Yes ☐No ☐N/A
1.7.7	Has the building envelope been air-sealed in the following areas: Tip: Stack effect and air leakage through the building envelope can cause significant heat loss and deterioration of the building envelope. One indication of a leaky building is when, in the winter, the occupants in the lower levels complain of draft and cold and those in upper levels complain of over-heating.	
	• The top part of the building? Tip: Exterior openings and roof-to-wall connections of mechanical penthouse and floors in the upper part of the building	☐Yes ☐No
	• The bottom part of the building? Tip: Exterior openings and floor slab-to-wall connections and service core of the parking areas, entrance doors and the floors in the lower third of the building.	☐Yes ☐No
	• Vertical shafts? Tip: Service ducts and conduit penetrations, including excessive cable holes in the elevator shafts. In buildings with no vertical shaft or no elevators mark N/A	☐Yes ☐No ☐N/A
1.7.8	Are all exterior doors and associated weather-stripping routinely checked and repaired to ensure a tight fit with minimal infiltration of outside air? Tip: High performance weather stripping on doors combined with regular checking and maintenance increases their thermal performance.	☐Yes ☐No
1.7.9	Has there been a Building Condition Report within the last 3 years? Tip: A loss of integrity of the building envelope, such as cracking in sealing, corrosion in exterior panel hangers or leaky roofs can start to occur in ten to fifteen year old buildings. At this point, a building condition survey, including infrared scans and hot-spot searches, is desirable. In buildings less than 10 years old and not requiring a Building Condition Report mark not applicable.	☐Yes ☐No ☐ N/A

1.7.10	Were the recommendations of the Building Condition Report for the envelope carried forward into a Capital Plan? Tip: In buildings less than 10 years old and not requiring a Building Condition Report mark N/A. In buildings older than 10 years, with no report within the last 7 years, mark No.	☐Yes ☐No ☐ N/A
1.7.11	Were the recommendations of the Building Condition Report for the roof carried forward into a Capital Plan? Tip: In buildings less than 10 years old and not requiring a Building Condition Report mark N/A. In buildings older than 10 years, with no report within the last 5 years, mark No.	☐Yes ☐No ☐ N/A
1.7.12	Does the roof maintenance and management plan include an infrared (thermal) scan for insulation? Tip: Infrared scans and hot-spot searches, can locate missing or deficient roof insulation and pinpoint energy loss	☐Yes ☐No
	1.8 Energy Management	
	Energy Policy	
1.3.1	Is there an energy policy endorsed by senior management? Tip: This should be a public document that expresses commitments to establish energy targets, assign responsibilities, monitor performance, and undertake an annual review and report.	☐Yes there is a formal energy management policy ☐ No there is no energy management policy ☐ Other there is no formal (documented) energy management policy, but management operates with a view to avoiding excessive energy use
	Energy Audit	
1.8.2	Has the building had an energy audit within the past three years that included recommendations with costs, savings and a payback period? Tip: This is a minimum requirement for BOMA BESt. An energy audit identifies areas that unnecessarily consume excessive amounts energy. The energy audit report must include: • Utility billing analysis with benchmarking observations • Summary of major equipment and type of lighting systems in the buildings • List of potential energy conservation opportunities based on walk-through audit of the facility • Building owner and manager information, building name and address, date of energy study completion • Building description A BOMA-accepted equivalent may suffice in particular situations as per the conditions and criteria set out in the BOMA BESt Application Guide	☐Yes ☐No ☐A BOMA-accepted equivalent
1.8.3	Which of the following systems were audited: If no audit was done, mark "no".	
	• Lighting system?	☐Yes ☐No
	• HVAC plant?	☐Yes ☐No
	• HVAC distribution system? Tip: If there is no major duct distribution system or heating/cooling piping systems mark "N/A".	☐Yes ☐No ☐ N/A
	• Domestic hot water system?	☐Yes ☐No

	• Major equipment?	☐Yes ☐No
	• Plug load equipment?	☐Yes ☐No
	• Building envelope?	☐Yes ☐No
	• Renewable energy systems (e.g. Solar, wind, geothermal)?	☐Yes ☐No
	Energy Management, Monitoring and Targeting	
1.8.4	Is there an energy management (reduction) plan to address issues raised in the energy audit? Tip: This is a minimum requirement for BOMA BESt. An energy management/reduction plan should identify measures, allocate resources, and identify implementation timelines.	☐Yes ☐No
1.8.5	Is there a regular review of energy consumption by a qualified person to identify anomalies or excessive consumption - and take corrective action as needed? Describe how this is done.__ Tip: Energy use should be monitored. This means that monthly energy bills should be actually reviewed for anomalies or excessive consumption.	☐Yes ☐No
1.8.6	Are energy usage targets set? Tip: Targets are best expressed as a percentage decrease of energy used	☐Yes ☐No
1.8.7	Is there evidence of movement towards these energy targets over time? Tip: Review energy figures for the past 3 years. If there is no marked energy use decrease or there are no energy figures, mark “no”.	☐Yes ☐No
1.8.8	Have steps been taken to analyze and reduce peak energy demand? Tip: Electricity demand should be monitored, either through monthly utility bills or the use of more frequent load measurements (such as daily, hourly or 15-minute interval readings), to assess undesirable trends and peaks. Measures should be implemented to reduce peak demand.	☐Yes ☐No
1.8.9	Is there a policy that Building Management upgrades spaces to more energy efficient lighting when tenants move out?	☐Yes ☐No
	Energy Training	
1.8.10	Is there a formalized training plan for building staff, including new employees, on how to implement energy and equipment monitoring and preventive maintenance, as well as energy efficiency improvements? List the training courses or internal training taken by staff in last two years:_____ Tip: Training needs should be identified for each staff member. Training updates should be provided on a regular, ongoing basis. New employees should be familiarized with the building’s operations, and energy efficient practices and goals	☐Yes ☐No
	Financial Resources	
1.8.11	Are there financial resources to improve the energy efficiency of the building, or is the building participating in a program for energy efficiency upgrades? Describe:_____ Tip: This could be an energy efficiency improvement budget or participation in a program that provides financial assistance for energy upgrades.	☐Yes ☐No

	Sub-metering	
1.8.12	Do tenants have individual meters or are tenants sub-metered? Describe: _____ Tip: Submetering not only encourages energy conservation by tenants; it also enables the owner to charge them fairly. For large single tenants, it is assumed that they may have significant process loads. In this case, the question should be interpreted whether the process loads are sub-metered.	☐Individual meters ☐Sub-metered ☐Bulk meters
	Documented Operating Instructions	
1.8.13	Are there a readily available documented operating instructions, covering standard control settings, and basic trouble-shooting for all major equipment and related sub-systems? Tip:Brief, user-friendly operating instructions listing all the building services, and describing their function, with operating instructions, standard control settings, and basic trouble-shooting make it possible to handle minor problems and make adjustments without interrupting the service or having to call in the contractor. While electronic manuals may be available, It is useful, as a precaution, to have printed copies of basic instructions in an accessible location, so that in the event that computers are down or regular staff is not available, someone who is not entirely familiar with the systems can take over.	☐Yes ☐No
	Maintenance and Commissioning	
1.8.14	Is HVAC maintained by Building Management or by the tenants? Tip: If the maintenance is carried out by tenants, the verifier will seek evidence that schedules are documented and records maintained	☐Building Management ☐Tenants
1.8.15	Does the regular mechanical systems maintenance schedule include: Tip: The maintenance schedules should be documented and records maintained	
	• Measurement of boiler efficiency? Tip: If there are no boilers, mark “not applicable”.	☐Yes ☐No ☐N/A
	• Checks on the correct operation of ventilation and cooling controls? Tip: If there is no HVAC, mark “not applicable”.	☐Yes ☐No ☐N/A
	• Systematic checking of temperature, humidity and fresh air controls to ensure they are set correctly and are responding as intended?	☐Yes ☐No
	• Identification and investigation of all occurrences of excess energy use?	☐Yes ☐No
	• Checking of air supply grills to ensure they are not blocked and are delivering outdoor air as required?	☐Yes ☐No
	• Checks for refrigerant leaks? Tip: If there is no cooling plant, mark “not applicable”.	☐Yes ☐No ☐N/A
	• Checks for compressed air?	☐Yes ☐No ☐N/A
	• Checking on all exterior door and associated weather-stripping? Tip: High performance weather stripping on doors combined with regular checking and maintenance increases their thermal performance.	☐Yes ☐No
1.8.16	Does the Roof Maintenance and Management Plan indicate that there should be a regular maintenance cycle?	☐ 6-10 year cycle ☐1-5 year cycle ☐ none

1.8.17	Is there a preventive maintenance program for the HVAC (heating, ventilation, air-conditioning)? Tip: This is a minimum requirement for BOMA BESt. Preventive maintenance differs from regular maintenance in that it takes into account that certain systems components require overhauling or replacement after a certain age or at certain intervals. More detailed suggested practices are available from BOMA Canada, including maintenance to be performed monthly, quarterly, semi-annually, annually and every 5 years	☐Yes ☐No
	1.9 Transportation	
	Public Transportation	
1.9.1	Does the building have access to public transport within 500 meters? Tip: Good access to public transport is defined as at least one bus or streetcar stop, or train or underground station within 500 meters of the building.	☐Yes ☐No
1.9.2	Is there service at least every 15 minutes during rush hour? Tip: Commuters expect public transport service at least every15 minutes during rush-hour periods	☐Yes ☐No
	Cycling Facilities	
1.9.3	Are there bicycle racks? Tip: Providing bicycle facilities for minimum 5% of occupants encourages cycling to work.	☐Yes ☐No
1.9.4	Do tenants have changing facilities and showers for staff? Tip: Although cyclists and joggers can change in washrooms and store their clothes in the workplace, dedicated facilities do more to encourage use of bicycles for regular commuting. Provide changing facilities and showers for minimum 5% of occupants.	☐Yes ☐No
	Other measures	
1.9.5	Are there other measures to reduce car dependency (e.g. car-pooling, purchase of transit passes, auto share services on-site)? Tip: By providing a database where staff and tenants can share postal code information, this enables them to make carpooling arrangements. Building wide purchase of transit passes can provide public transportation at reduced rate. Locating a rental vehicle on the premises reduces the need to take a car to work. Improving the site access for pedestrian and bicycles through signage and/or landscaping can also help to decrease car dependency.	☐Yes ☐No
	Describe:_____	
1.9.6	Are fleet vehicles considered fuel efficient in their class? Tip: Mark “not applicable where there are no fleet vehicles.	☐Yes ☐No ☐N/A
1.9.7	Is there a policy in place specifying that at least 50% of new cars, vans and light trucks purchased in the current fiscal year will be fuel efficient in their class? If yes, indicate the exact percentage. Tip: Mark “not applicable where there are no fleet vehicles.	☐Yes ☐No ☐N/A _____%

	2.0 WATER (10%)				
	2.1 Water Consumption				
2.1.1	Is there a water meter on water mains?				☐Yes ☐No
2.1.2	Please specify the ending month of the 12 month period for which water consumption figures are being entered.				Month _____ Year _____
2.1.3	The reported water consumption covers:				☐Total water consumption for the complex including tenants' areas and common/services areas ☐ Outside use and/or common/services areas only
2.1.4	Are tenants independently metered and billed by the water supplier?				☐ All tenants ☐Some tenants ☐ None
2.1.5	Is the property manager able to get copies of the water bills from the tenants independently metered and billed by the water supplier? Tip: If tenants are not independently billed, mark "not applicable."				☐ Yes ☐ No ☐ N/A
2.1.6	Describe how tenant water-use billing is handled: Billing Description				
2.1.7	Please specify the ending month of the 12 month period for which water consumption figures are being entered.				Month _____ Year _____
2.1.8	What was the building's total water bill for the 12 month period specified? Tip: This will be calculated automatically if detailed data is entered below. If detailed information is not available, please provide an estimate.				$ _____
2.1.9	What was the water consumption and costs, by month, for the 12 month period specified? Tip: Provide water consumption for the specified 12 month period by inputting either total values (in any of the boxes provided), or monthly or bi-monthly amounts.				
	Meter Reading Date				
	Water month 1: … Water month 12:	m3		Cost $	

	2.2 Water Conserving Features	
2.2.1	Are there water-conserving features in tenant spaces? Describe:_____	☐Yes ☐No
2.2.2	Does the landscaping minimize the need for irrigation? Describe:_____ Tip: Landscaping that requires low or no supplemental irrigation, sometimes referred to as xeriscaping involves the use of plant species that require little watering, and techniques that help reduce the amount of water needed for irrigation. If there is no landscaping, mark not applicable.	☐Yes ☐No ☐N/A
2.2.3	Are non-potable sources of water used for irrigation:	
	• Rainwater? Tip: Rainwater is water collected specifically for irrigation in rain cisterns. If there is no landscaping, mark not applicable.	☐Yes ☐No ☐N/A
	• Graywater? Tip: Gray water is treated waste-water from sinks and showers (not toilets) that has had soils and undesirable bacteria removed. If there is no landscaping, mark not applicable.	☐Yes ☐No ☐N/A
2.2.4	Is water efficient technology used for irrigation: Tip: If there is no landscaping, mark not applicable.	
	• Drip irrigation	☐Yes ☐No ☐N/A
	• Root-fed irrigation	☐Yes ☐No ☐N/A
	• Moisture sensors to control irrigation.	☐Yes ☐No ☐N/A
	• Other water efficient technology. Describe:_____	☐Yes ☐No ☐N/A
	2.3 Water Management	
2.3.1	Is there a written policy intended to minimize water use, and encourage water conservation? Tip: This is a minimum requirement for BOMA BESt. A water conservation policy should express a commitment to reducing demand for water and to establish goals and strategies to reduce water consumption.	☐Yes ☐No
2.3.2	Is water consumption being monitored? Tip: Monitoring can only be done provided there is a meter. Metering and checking bills help to verify consumption and to redflag occurrences of unusual and excessive consumption, which should be investigated and corrected - resulting in savings.	☐Yes ☐No
2.3.3	Is there sub-metering of major water users or uses, such as high-usage tenants, landscaping, etc.? Describe:_____ Tip: If there is no major water use, mark not applicable.	☐Yes ☐No ☐N/A

2.3.4	Has a water audit been done within the last three years? Tip: This is a minimum requirement for BOMA BESt. The water audit report must include: • Water billing analysis with benchmarking observations • Summary of major water-consuming systems in the buildings • List of potential water conservation opportunities based on walk-through audit of the facility • Building owner and manager information, building name and address, date of study completion • Building description An audit should provide recommendations for maintenance procedures that may need to be revised, and identify water-using equipment that should be upgraded. The water audit report may be incorporated into the energy audit report A BOMA-accepted equivalent may suffice in particular situations as per the conditions and criteria set out in the BOMA BESt Application Guide.	☐Yes ☐No ☐BOMA-Accepted equivalent.
2.3.5	Are there water-reduction targets? Tip: Water targets should be established in litres/m², or as a percentage reduction in litres/person	☐Yes ☐No
2.3.6	Are there regular procedures for checking and fixing leaks? Tip: Periodic checks for leaks can be done by recording the water-meter reading before and after any long period when there is no water use, for example late at night and again early in the morning.	☐Yes ☐No
2.3.7	Does building management, through its design criteria or leases, require tenants to install low-flow fixtures when retrofitting?	☐Yes ☐No

	3.0 WASTE REDUCTION AND SITE (16%)	
	3.1 Waste Reduction and Recycling	
	Recycling, Handling and Storing Recyclable Materials	
3.1.1	Is there a recycling program that incorporates the recycling of office paper, newspaper, cardboard, bottles, plastic and cans at the site, to the extent that local infrastructure is available to accommodate these materials? Tip: This is a minimum requirement of BOMA BESt. The property must have an active recycling program. A BOMA-accepted equivalent may suffice in particular situations as per the conditions and criteria set out in the BOMA BESt Application Guide.	☐Yes ☐No ☐ BOMA-accepted equivalent
3.1.2	Are there collection points for sorting paper, cardboard, glass, metals and plastic in the areas where waste is generated? Tip: Collection points near the areas where waste is generated typically increase recycling rates. All collection should separate recyclables from waste garbage as per local or hauler requirements. OR in multi-tenant buildings, does Building Management provide a central depot for these recyclable materials?	☐Yes ☐No
3.1.3	Does Building Management arrange for periodic collection of small volume hazardous wastes such as toner cartridges, batteries, and small electronics?	☐Yes ☐No
3.1.4	Is there a recycling program for fluorescent lamps and high-intensity discharge (HID) lamps?	☐Yes ☐No
3.1.5	Does the building have a composting program for organic waste? Tip: Composting may be done on-site or off-site at a special centralized facility. Mark “not applicable” where there are no facilities available to divert compost.	☐Yes ☐No ☐N/A
	Waste Reduction Program	
3.1.6	Has a waste audit been done within: Tip: A waste audit can be conducted in-house, or using a waste-management firm. It should identify the types and quantities of waste generated in the building and assess which waste materials are produced in sufficient quantities to warrant recycling.	☐ the last year? ☐ the last 3 years? ☐ No
3.1.7	Is regular monitoring of waste conducted? Tip: This is done by recording the weight or volume of garbage that is leaving the building.	☐Yes ☐No
3.1.8	What is the current diversion rate? Tip: Diversion rate is used by commercial contractors to report the rate at which non-hazardous solid waste is diverted from entering a disposal facility.	☐ 80%-90% ☐ 70%-79% ☐ 60%-69% ☐ 50%-59% ☐ 30%-49% ☐ Under 30% ☐ Unknown

3.1.9	Are there waste-reduction targets? Tip: A waste reduction workplan should identify resources needed to achieve waste reduction targets and assign responsibilities.	☐Yes ☐No
3.1.10	Is there a written policy intended to minimize construction waste being sent to landfill? Tip: This is a minimum requirement of BOMA BESt. Construction and demolition waste - which accounts for about 30% of Canada's landfill - can be reduced by implementing source separation and recycling programs on-site. The program should meet the minimal requirements of the jurisdiction (e.g. 3R Code of Practice). The waste specification should identify the materials actually addressed (e.g. corrugated cardboard, metals, concrete blocks, clean dimensional wood, plastic, glass, gypsum board and carpet.	☐Yes ☐No
3.1.11	Are there Tenants' Construction Guidelines that include the policy on construction waste?	☐Yes ☐No
	3.2 Site	
	Site Pollution	
3.2.1	Is the property free of contamination? Tip: There should be evidence that the site is free of contamination; or that it has been remediated to an acceptable level	☐Yes ☐No ☐ Unknown
3.2.2	If the property is known to be free of contamination, which of the following is this based on:	
	• Document Search? Tip: A document search has been conducted and there is no reason to suspect that the site is contaminated (i.e. it has never had underground storage tanks (USTs) or outside storage tanks (ASTs), it was always an office or other facility that did not use chemicals, it is not situated near gas stations or other problem industries, there have been no previous potential problem businesses on the site).	☐Yes ☐No
	• Phase 1 Environmental Assessment? Tip: A Phase 1 Environmental Site Assessment has been conducted that proves the site to be free of contamination	☐Yes ☐No
	• Confirmation Phase 2 clean site or Phase 3 Clean Up Report? Tip: The site was once contaminated, but has been remediated to an acceptable level, as indicated by a Phase 3 Cleanup Report	☐Yes ☐No
3.2.3	If the site is known to be contaminated, are efforts being made to clean it up? Tip: If the site is known to be uncontaminated, mark "not applicable".	☐Yes ☐No ☐N/A
	Describe: _____	
	Site Enhancement	

3.2.4	Are there indications that the site ecological value has been enhanced? Describe measures: _____ Tip: The ecological value can be enhanced by increasing rooftop vegetation and the number of indigenous plant species, by reducing outdoor light pollution, by participating in the FLAP program or by creating a small natural oasis on the site. Examples more applicable in suburban areas include reduction of heat reflectance by shading with landscaping or shading structures, re-establishment of vegetation corridors or implementation of stormwater management measures.	☐Yes ☐No

	4.0 EMISSIONS AND EFFLUENTS (17%)	
	4.1 Ozone Depletion	
	Refrigerants	
4.1.1	What type of refrigerant is used for most of the cooling in the building HVAC system? Tip: Mark all that apply. The Ozone Depleting Potential (ODP) for a substance is the measure of its contribution to ozone depletion relative to that of CFC11 - the higher the value, the more damaging it is to the ozone layer. Another concern with regards to refrigerants is global warming potential (GWP). If there are no ODS, or if the building is using a distributed system (e.g. heat pumps) mark "not applicable".	Select applicable ☐ R11 ☐ R12 ☐ R22 ☐ HCFC123 ☐ HFC134 ☐ R410A ☐ R410B ☐ Other Describe: ☐ N/A
	Management of Ozone Depleting Refrigerants	
4.1.2	Is there a documented management plan for Ozone Depleting Substances (ODS) that includes: Tip: This is a minimum requirement for BOMA BESt. Maintenance of the refrigeration system can reduce operating costs by improving the chiller performance, avoiding costly repairs, and reducing the need for refrigerant replacement. If there are no ODS, mark "not applicable".	
	• Inventory of refrigerants and records? Inventory should include the present ODS and records should show the historical quantities of ODS	☐Yes ☐No ☐N/A
	• Maintenance reports, loss reports, and leak test results?	☐Yes ☐No ☐N/A
	• Operational staff training?	☐Yes ☐No ☐N/A
	• Periodic leak testing?	☐Yes ☐No ☐N/A
4.1.3	Is there a phase-out plan for ozone-depleting refrigerants? Tip: This is a minimum requirement for BOMA BESt. Until December 31, 2009, charging a chiller with CFCs following an overhaul will still be authorized if the owner agrees to convert or replace his system within 12 months after it has been charged so that it no longer contains CFCs. Effective January 1, 2015, operating or allowing the operation of a chiller containing CFCs will be prohibited. If there are no ODS, mark "not applicable".	☐Yes ☐No ☐N/A
4.1.4	Is there a maintenance contract for the cooling system with a certified contractor? Tip: The contract should be for regular maintenance and monitoring of the refrigeration system, the pipework and the leak detection system. If there are no ODS, mark "not applicable".	☐Yes ☐No ☐N/A

	4.2 Water Effluents	
	Waste Water Effluents	
4.2.1	Are roof drains connected to sanitary or combined sewers? Tip Disconnecting roof drains from sanitary or combined sewers avoids unnecessarily loading the community wastewater treatment facilities.	☐Yes ☐No
4.2.2	Are stormwater management measures implemented to reduce water run-off from roofs and hard surfaces, such as parking areas? Describe the measures:_____ Tip: Measures include allowing the water to soak into the ground or collecting and re-using it. If the building covers more than 80% of the site, mark "not applicable".	☐Yes ☐No ☐N/A
4.2.3	Is there a program to clean catch-basins annually? Tip: Catch basins "catch" or collect dirt and other debris. This debris requires periodic removal, particularly before the rainy season.	☐Yes ☐No
4.2.4	Is there on-site treatment of water run-off from hardscapes, using such measures as oil interceptors/filtration? Describe:_____	☐Yes ☐No
4.2.5	Are there documented policies for snow and ice management that aim to minimize damage to the environment (e.g. contaminated run-off)? Describe: Tip: In concentrations, road salts pose a risk to plants, animals and the aquatic environment. The application of chemicals to control ice hazards should be minimized while still protecting the safety of personnel and customers?	☐Yes ☐No
4.2.6	Are snow piles located to minimize the effects of spring run-off on the environment (i.e. run-off is controlled)? Describe: Tip: Contaminants can build up in large snowpiles and lead to "shock" doses of pollutants into waterways during spring runoff	☐Yes ☐No
	4.3 Hazardous Materials	
	Hazardous Materials Survey	
4.3.1	Has a hazardous building materials survey been completed and has an inventory of these materials been maintained? Tip: This is a minimum requirement for BOMA BESt. The survey should indicate if asbestos-containing materials, PCBs, lead paint or mercury are present in the building	☐Yes ☐No
	Asbestos	
4.3.2	If there is asbestos present, is there an up-to-date inventory based on an asbestos survey that includes records of locations and the condition of all asbestos? Tip: Buildings constructed before 1981 are more likely to contain asbestos. If there is no asbestos in the building mark "not applicable".	☐Yes ☐No ☐N/A
4.3.3	Is there any friable asbestos in the building that has not been encapsulated (i.e. Is there any possibility that asbestos fibers could become air-borne)? Tip: The presence of asbestos-containing materials does not, in itself, constitute a health hazard, provided the asbestos is intact. Friable asbestos can crumble. Encapsulating it avoids the health hazards, which can occur when asbestos fibers become airborne. If there is no asbestos, mark "not applicable".	☐Yes ☐No ☐N/A

4.3.4	Is there a documented asbestos management plan that includes training and the precautions to be taken during repairs and renovations? Tip: If there is no asbestos, mark "not applicable".	☐Yes ☐No ☐N/A
	PCBs	
4.3.5	Are there any PCBs present in the building? Tip: Until the early 1980s, PCBs were used in fluorescent lamp ballasts for interior lighting and in some high-intensity discharge (HID) ballasts for exterior lighting. There are also electrical transformers and capacitors still in operation that contain PCBs.	☐Yes ☐No
4.3.6	Does Building Management ensure that tenants maintain an inventory of any PCBs present in the building? Tip: If there are no PCBs mark "not applicable".	☐Yes ☐No ☐N/A
4.3.7	Can Building Management confirm that tenants have in place a PCB management plan that designates responsibilities, requires inventory of all materials containing PCBs, including transformers, as well as records showing locations of major PCB-containing equipment, stipulates storage requirements, and describes a strategy for phasing out and disposing of PCB-containing equipment? Tip: If there are no PCBs mark "not applicable". Mark "yes" only if the plan contains all of the above elements.	☐Yes ☐No ☐N/A
	Storage Tanks	
4.3.8	Are there any above-ground or under-ground storage tanks? Tip: Most tank systems are used for storing heating fuel, but they are also used to store fuel for electric generators and vehicles; solvents, lubricants and other petrochemicals; and other hazardous substances, such as corrosive or noxious chemicals.	☐Yes ☐No
4.3.9	Does Building Management maintain a storage tank management plan, and/or monitor whether tenants maintain a Storage Tank management Plan, which ensures legal compliance and includes the following operation and maintenance procedures: Tip: Choose as many procedures as apply. If there are no storage tanks mark "not applicable".	
	• Tank system registration and annual reporting as required under CEPA Regulations? (e.g. AST greater than 4,000 L and/or all UST)? Tip: All underground storage tank systems and all outdoor aboveground storage tank systems that have a single or combined capacity of 4,000 litres or more should be registered. If there are no storage tanks or if the single or combined capacity of the storage tank systems is less than 4,000 litres, mark "not applicable".	☐Yes ☐No ☐N/A
	• Inventory control? Tip: Establishing an inventory of tank systems is the first step in preparing tank management plan. If there are no storage tanks, mark "not applicable".	☐Yes ☐No ☐N/A
	• Tank upgrading and replacement schedule? Tip: The components that are subject to upgrade are leak detection, secondary containment, corrosion protection, overfill protection and spill containment. Mark "non-applicable" if there are no storage tanks. Mark "yes" if tanks were already replaced or upgraded.	☐Yes ☐No ☐N/A

	• System testing? Tip: System tests include leak tests and dipping for diesel in water and for water in diesel. If there are no storage tanks, mark "not applicable".	☐Yes ☐No ☐N/A
	• Filling, transferring operations and spill protection (e.g. Overfill protection and spill containment)? Tip: The Technical Guidelines and Codes of Practice may require property managers to install systems for spill containment, overfill protection, secondary containment, dispenser sump and leak detection. Various systems are available for both aboveground and underground storage tank systems. If there are no storage tanks, mark "not applicable".	☐Yes ☐No ☐N/A
	• Emergency preparedness? Tip: An emergency preparedness plan should identify response personnel who are to be trained, and their responsibilities in the event of a leak or spill. If there are no storage tanks, mark "not applicable".	☐Yes ☐No ☐N/A
	• Record keeping? Tip: All inspections and maintenance, alterations and upgrading should be documented. If there are no storage tanks, mark "not applicable".	☐Yes ☐No ☐N/A
	• Tank closure, abandonment or removal? Tip: A storage tank system must be properly decommissioned when replaced or taken out of service. If there are no storage tanks, mark "not applicable".	☐Yes ☐No ☐N/A
	4.4 Emissions – Hazardous Products and WHMIS	
	WHMIS Program	
4.4.1	Is there a policy that Building Management does periodic checks to ensure that tenants have, (as needed), MSDS sheets that are les than 3 yrs old, spill clean-up kits, and safety equipment such as eye-wash stations located in an accessible place near the chemical storage areas? Tip: Material Safety Data Sheets (MSDS) contain information about the properties and safe handling of each hazardous product.	☐Yes ☐No
	Health & Safety and Management of Hazardous Products	
4.4.2	Does Building Management monitor tenants' compliance with relevant regulations regarding hazardous materials? Tip: Managers may be potentially liable for non-compliance.	☐Yes ☐No
4.4.3	Is a hazardous products (hazardous chemicals) management plan in place? Tip: This is a minimum requirement for BOMA BESt. A hazardous products management plan should indicate how controlled products are received at the facility, how they are to be used and disposed of. It should also include WHMIS sheets for all products identified in the inventory. Chemicals used in buildings that are classified as hazardous include oils, biocides, solvents, insecticides, pesticides and herbicides. They should be stored in rooms with proper ventilation, controlled temperatures, drain protection and adequate shelf space. Containers should be capped to avoid possible spills and fumes, properly labeled and kept in securely locked areas	☐Yes ☐No
	Pesticides	

4.4.4	Do landscaping practices minimize the use of pesticides, herbicides, fertilizer and petroleum based products? Describe the extent to which these products are used, and any alternative methods being employed on both the exterior and interior:_____ Tip: “Pesticide” refers to insecticides, herbicides, fungicides, rodenticides, disinfectants, anti-foulants and plant growth regulators. Use of local, resistant plants in landscaping and integrated pest management may lead to a minimal need for pesticides. If there is no landscaping or pest management is not required, mark as “not applicable	☐Yes ☐No ☐N/A
4.4.5	Do pest control contracts for Building Management require that the contractors’ staff be licensed and use integrated pest management methods AND/OR does Building Management have a policy and program to conduct periodic checks to ensure that Tenants’ pest control contracts also require that the contractors’ staff be licensed and use integrated pest management methods? Tip: The contract should require that records be kept on the type and frequency of applications of pesticides, alternative pest management approaches, compliance with legislation, and communication to tenants to notify them of pesticide applications in locations that they use. If there is no landscaping, mark as “not applicable”.	☐Yes ☐No ☐N/A

	5.0 INDOOR ENVIRONMENT (10%)	
	5.1 Indoor Air Quality - Ventilation	
5.1.1	Are there zoned ventilation system controls? Tip: Zoned ventilation helps to minimize the amount of energy used in air systems to operate fans and preheat or cool ventilation air. This helps to minimize the amount of energy used in air systems to operate fans and preheat or cool ventilation air.	☐Yes ☐No
5.1.2	Is there ongoing carbon dioxide monitoring or are there sensors to maintain pre-set levels of carbon dioxide? Tip: Monitoring should be located in areas with high occupant densities and at the ends of the longest runs of the distribution ductwork. CO_2 monitoring can be installed as an independent system or be a function of the building automation system, preferably with feedback on space ventilation performance and operation of the air intake vents. If there are no ducted air systems, mark "not applicable".	☐Yes ☐No ☐N/A
5.1.3	Do occupants have any control over natural ventilation (e.g.: through operable windows)?	☐Yes ☐No
	5.2 Indoor Air Quality - Filtration System	
5.2.1	Are filters rated at minimum efficiency of MERV 8 (Minimum Efficiency Reporting Value)? Tip: The efficiency of filters is usually indicated on filter packages	☐Yes ☐No
	5.3 Indoor Air Quality - Parking and Receiving	
5.3.1	Are there measures to prevent intake of exhaust fumes from the loading dock and parking areas? Tip: Measures include posting notices to turn off vehicles; having well-sealed doors between the parking and occupied areas; ensuring that offices near parking garages and loading docks are under positive pressure; and increasing exhaust ventilation in the garage and loading docks. If there is no loading dock nor parking areas, mark "not applicable".	☐Yes ☐No ☐N/A
5.3.2	Is there carbon monoxide monitoring? Tip: If there are no boilers, enclosed loading dock or parking areas, mark not applicable.	☐Yes ☐No ☐N/A
	5.4 Indoor Air Quality - Control of Pollutants at Source	
5.4.1	Is there a policy that Building Management does periodic checks to ensure that tenants maintain effective local exhaust in areas with potentially high contaminant levels? Tip: Where there are no areas which have contaminants, mark "not applicable".	☐Yes ☐No ☐N/A
5.4.2	Does the contract with the cleaning contractors specifically state that they are to use environmentally preferable cleaning materials? Tip: These are cleaning materials which do not sacrifice performance and which are biodegradable, do not contain phosphates, or do not fall under the Hazardous Products Act. This requirement should be documented in the cleaning contract. When landlord is not responsible for cleaning, mark not applicable.	☐Yes ☐No ☐N/A

5.4.3	Is there a designated smoking area outside that is away from entrances and will limit the spread of smoke to the inside of the building? Tip: Banning smoking is the most effective way to avoid environmental tobacco smoke – a source of irritation and a known carcinogen.	☐Yes ☐No
5.4.4	Is there a policy and a checklist of items connected to IAQ that must be discussed with architects, engineers, contractors, and other professionals prior to renovations and repairs? Tip: Discussion is essential to avoid design features that could interfere with ventilation or thermal comfort, or which could cause condensation, or result in the selection of inappropriate materials or systems. Renovation procedures should also be discussed to avoid the release of dust and hazardous materials and to avoid sealants, finishes, carpets and furnishings that emit volatile organic compounds (VOCs). Describe:	☐Yes ☐No
5.4.5	Does the building's Water System Maintenance Program include measures to eliminate the occurrence of Legionella? Tip: Legionella can be avoided by having point-of-use water heaters or by maintaining water temperatures between 50° and 55° C, avoiding stratification and dead legs in water circulation system.	☐Yes ☐No
	5.5 Indoor Air Quality Management	
5.5.1	Does building management have in place a documented means for addressing tenants/ occupant concerns regarding indoor air quality(such as complaint form and incident log)? Tip: This is a minimum requirement for BOMA BESt. Building management must have in place a documented means for addressing occupant concerns regarding indoor air quality.	☐Yes ☐No
5.5.2	Are there documented procedures for maintaining good IAQ that include: Tip: Building management must have heating, ventilation and air conditioning (HVAC) procedures and a preventive maintenance program in place.	
	• HVAC operations? Tip: There should be daily, weekly and monthly schedules, including a coil cleaning program	☐Yes ☐No
	• Preventive maintenance? Tip: This should include a scheduled program for monitoring, cleaning and repairing/replacing HVAC components such as outside air intakes, outside air dampers, air filters, drain pans, heating and cooling coils, the interior of air handling units, fan motors and belts, air humidification, controls and cooling towers.	☐Yes ☐No
	• Mould management? Tip: Key elements of this program should be: 1) Detect moisture and mould growth early to minimize property damage and liability; 2) Provide guidance for preventing and responding to moisture/water or mold growth conditions; and 3) Outline the minimum required procedures for responding to a moisture/water or mold growth condition	☐Yes ☐No
	• Procedures for unscheduled maintenance? Tip: Procedures for unscheduled maintenance should be documented in the event of equipment failures which may require the prolonged deactivation or modification of the building's HVAC equipment.	☐Yes ☐No

5.5.3	Is there a policy that Building Management does periodic checks to ensure that Tenants have documented procedures for maintaining good IAQ with respect to:	
	• Preventive maintenance?	☐Yes ☐No
	• Housekeeping procedures?	☐Yes ☐No
5.5.4	Is there evidence that Tenants monitor temperature? Tip: The building should conform to ASHRAE 55-1992 Addenda 1995 for thermal comfort	☐Yes ☐No
	5.6 Lighting	
	Lighting	
5.6.1	In office areas, are there controllable internal or external blinds and do light fixtures prevent glare at visual display terminals? Tip: Internal shading devices limit the glare resulting from solar radiation. They should be adjustable to allow occupants to regulate the amount of direct light entering their space. The cut-off angle of downward light should reduce glare on VDT screens.	☐Yes ☐No ☐N/A
5.6.2	Do lighting levels meet the Canada Occupational Health and Safety Regulations? Tip: To measure lighting levels, use an illuminance light meter	☐Yes ☐No ☐Unknown
5.6.3	Does the building employ natural daylighting (e.g. through the use of clerestory lights, roof skylights or light pipes)? Describe:_____ Tip: The use of natural light in a building can reduce energy costs. Daylighting can improve employee productivity and even improve retail sales.	☐Yes ☐No
	Lighting Management	
5.6.4	Is there a policy that Building Management does periodic checks to monitor that Tenants have a planned schedule of cleaning light fixtures? Tip: Cleaning luminaires can increase light output and quality, resulting in the need for fewer lamps and significant energy savings over the life of the facility. Recommended cleaning intervals for luminaires in offices are one or two times a year. Where tenant lighting does not warrant this approach, such as when fixtures are easy to reach of the type of fixtures do not require additional attention, mark ”not applicable.”	☐Yes ☐No ☐N/A
5.6.5	Is there a policy that Building Management does periodic checks to monitor that Tenants have a group-relamping program? Tip: Lamps that are changed before they burn out produce greater light output, resulting in better quality light, the need for fewer lamps and corresponding energy savings. Where tenant lighting does not warrant this approach, such as when fixtures are easy to reach of the type of fixtures do not require additional attention, mark ”not applicable.”	☐Yes ☐No ☐N/A

	6.0 ENVIRONMENTAL MANAGEMENT SYSTEM (17%)		
	6.1 Environmental Management System (EMS) Documentation		
6.1.1	Does building management have a written environmental policy? Tip: The policy should be a public document that is easily accessible to staff and tenants. It should express a commitment to: comply with relevant laws or other requirements; continuous improvement; and pollution prevention. It should also be signed by senior management.		☐Yes ☐No
6.1.2	Are there stated goals and targets documented in the policy manual with respect to each of the following: Tip: Goals and specific targets to improve or maintain the facility's environmental performance should be documented as part of the "environmental vision" for the building.	☐ Energy conservation?	
		☐ Water conservation?	
		☐ Waste reduction and recycling?	
		☐ Environmental purchasing?	
		☐ Reduction in use and proper handling of hazardous products?	
		☐ Training and education?	
6.1.3	Are there action plans to improve the environmental and energy performance of the building? Describe:_____ Tip: The action plans should outline implementation strategies, timelines, training and resources needed to achieve stated targets. They should be reviewed, revised and updated on a regular, scheduled basis.		☐Yes ☐No
6.1.4	As tenants renew their leases or where there is a tenant turnover, do the new leases contain a section on energy and environmental responsibilities (Green Lease)? Tip: Green Leases increase the responsibility of tenants to operate efficiently within their space and to maximize environmental benefits of the building. For owner occupied buildings, mark N/A.		☐Yes ☐No ☐N/A
	6.2 Environmental Purchasing		
6.2.1	Does Building Management have a written policy for the selection of building materials that attempts to reduce any potential negative impact on the quality of the environment? Tip: This is a minimum requirement for BOMA BESt. The policy committing the organization to using low environmental impact building materials and equipment in its facilities should also be part of the tenant construction guidelines or an appendix to a lease where tenant improvement restrictions are mentioned. Examples of low impact building materials include materials with high recycled content or low off-gassing carpeting and furnishings.		☐Yes ☐No

6.2.2	Are "green" design and operational guidelines provided to tenants? Provide examples:_____ Tip: The guideline may offer specifications or advice on material and product selection, such energy efficient products, environmentally friendly cleaning, snow and ice management products, etc. (e.g. Alternatives to rock salt reduce the harmful impacts on local waterways. Some alternatives include using salt brine, traction materials, and calcium magnesium acetate.)	☐Yes ☐No

	6.3 Emergency Response	
6.3.1	Are procedures documented and staff trained to deal with and obtain prompt assistance for emergencies such as fire, spills, power failures and illness? Tip: Procedures must be detailed for quick and effective action in the event of an emergency. They should include up-to-date contacts to obtain assistance promptly and to report the emergency. There should also be a protocol to assess the risks of re-occupying a building in the case of evacuation. Landlords should be able to see copies of the tenants' Emergency Response Plans, and the plans should be reviewed regularly and updated as required.	☐Yes ☐No
6.3.2	Is there an Emergency Plan that refers to all applicable legislation regarding emergency procedures, reporting and record-keeping? Tip: The emergency response plan must ensure compliance with applicable regulations. A first step is to define accountability with respect to permits, record-keeping and reporting.	☐Yes ☐No
6.3.3	Do all tenants have a copy of the building's Emergency Response Plan?	☐Yes ☐Tenants have their own plan ☐The plan is available to them ☐No
6.3.4	Is there equipment on-site to deal with environmental emergencies? Tip: The environmental emergency response plan should require that equipment such as spill control kits, absorbents, and personal protection equipment be on-site for quick and easy access.	☐Yes ☐No
6.3.5	Are there contingency plans for both short-term and long-term power failures? Tip: Planning for power failures should address the following elements: communication to tenants; security; provision of emergency power and water; and, if necessary, evacuation.	☐Yes ☐No
6.3.6	Is there a site map showing the location of environmentally significant features such as shut-off valves, underground and above ground storage tanks etc.? Tip: Site plans should identify environmentally significant features such as hazardous waste storage rooms, PCB-containing equipment, sanitary and storm sewer lines, CFC equipment, storage tanks as well as emergency equipment. Where there is a fire box on site, the site plan should be in it.	☐Yes ☐No

	6.4 Tenant Awareness	
6.4.1	Is there a well understood system for communicating with tenants/occupants regarding environmental initiatives and practices in the building? Describe the system:_____ Tip: This is a minimum requirement for BOMA BESt. Building management must have in place a well-understood system for communicating with tenants/occupants on environmental issues specific to the building. Tenants should be provided with information, and should have a forum, or hotline to discuss the environmental concerns and to coordinate their activities	☐Yes ☐No
6.4.2	Are there communications to tenants on the environmental measures that they can implement in the building to contribute to:	
	• Energy conservation and plug load reduction? Tip: An inexpensive way to reduce energy costs is by developing energy efficiency procedures and personal habits. Provide information to occupants on energy use and means of saving energy (such as information on turning off lights in unoccupied spaces, after normal office hours and the correct use of blinds).	☐Yes ☐No
	• Water conservation?	☐Yes ☐No
	• Waste reduction and recycling? Tip: This can include promotional materials such as brochures and newsletters to keep tenants informed about how they can reduce the amount of waste being sent to landfill through such things as recycling and composting	☐Yes ☐No
	• Proper handling, storage and disposal of toxic products? Tip: The information should be of a general nature and should communicate that each toxic product has its own characteristics, which require proper handling, storage and disposal. This can include newsletters, postings on bulletin boards, signage, memos or participation in events that promote responsible environmental stewardship	☐Yes ☐No
	• Other initiatives such as: o Earth Day events ☐ o Participation in Earth Hour ☐ o Green tenant events ☐ o Environment Days ☐ o Others. Describe: ☐	
6.4.3	Does building management make an effort to meet with tenants directly on at least an annual basis?	☐Yes ☐No
6.4.4	Are periodic updates given to tenants to inform them of the status or progress of environmental initiatives and programs? Describe when and how the updates are given.	
6.4.5	Has a tenant satisfaction survey been completed in the last 3 years? Tip: Tenant satisfaction survey enables property managers to prioritise efforts and maximise the performance of their assets	☐Yes ☐No