Offices

Areas of impact
- Indoor Air Quality
- Energy
- Materials
- Water Conservation
- Waste
- Innovation in Design

Space Type Description
Office space includes a variety of spaces such as open and individual offices, meeting rooms, reception areas, office support space (storage rooms, file rooms, mail rooms, copier areas, storage and communication equipment rooms), as well as staff amenity areas such as kitchens and lunch rooms, and washrooms. These guidelines can apply both to faculty and administrative staff office areas.

Indoor Air Quality

Intent
Provide good indoor air quality (IAQ) to promote the health, well-being and comfort and of the occupants and to improve productivity.

Daylight & views
Maximize day light & views to variable offices can boost occupancy comfort & productivity. Use open office concept wherever possible, with glass dividers for individual offices to maximize access to outside views and natural daylight.

Ventilation
- Provide good ventilation during construction, protect the HVAC system from contaminants and absorptive materials from moisture, and flush out bad air before occupancy.
- Provide natural ventilation (operable windows) wherever possible to comply with ASHRAE 62.1-2007.

Communications (Server) Room
Ensure appropriate ventilation and moisture control is provided.

Print /Copy Area
Provide local exhaust to vent out directly and provide supply fresh air to distribute throughout the ‘breathing zone’

Lighting and Controls
- General standard office light fixture is a recessed fluorescent 2x2 fixture with one electronic 120/277V ballast per fixture (for source, refer to SFU Burnaby Project Guide).
- Use CFL (Compact Fluorescents Lights) fixtures or LED (Light emitting diodes) lights.
- Provide a light switch for individual enclosed offices and DDC programmable lighting controls for shared offices with multi-occupants or in multi-occupancy areas (e.g. meeting rooms)

Energy

HVAC System
- Use low ozone-depleting chemicals and zero use of CFC-based refrigerants in new and existing building HVAC systems.
- Cooling is not required in general office areas.
- Provide room thermal controls to allow adjustments for task specific needs and preferences.
- Remind users to close doors and windows to reduce heat loss.

Electricity
- Reduce power consumption by choosing Energy Star appliances wherever possible (e.g. computer monitors)
- Plug equipment into power bars to encourage shut down for equipment to reduce phantom loads
- Shut down copiers, lights etc. overnight or on weekends.
Window Coverings
- Standard window coverings are roller blinds, fabric selected to provide sun and glare control (particularly for monitors).
- Recommend to select Green Guard Seal and PVC free fabrics or post consumer-recycled content materials.
- For older existing buildings where glazing systems are old (e.g. single-pane windows, solar films can be applied on window surfaces to control glare and reduce heat gain in summer.
- Close blinds to reduce heat loss at night.

Kitchens and Lunch Rooms
- Purchase Energy efficient or Energy-Star appliances (e.g. microwaves, dishwashers or refrigerators).
- Implement an area for collecting recyclables and composting where possible.
- Avoid use of disposable cups, individual creamers, etc.
- Drink tap water.

Washrooms
- Provide light switches or occupancy sensors
- Provide a separate recycling container to collect waste paper used in drying hands
- See also: Washroom Detail Function Sheet

Materials

Intent:
Reduce the volatile organic compounds (VOCs) emitted into the atmosphere. These compounds are respiratory irritants that adversely affect the health of workers and occupants.

- When painting drywall surfaces (e.g. ceilings and walls), use low VOC emitting building materials, glues, adhesives, paints and lacquers.
- Choose high post-consumer recycled content materials & increase the use of products that are manufactured within the region.
- Choose environmentally preferred furniture and casework.

Water Conservation

Kitchens /Lunch Rooms
- Use low flow (8.3 L/minute) faucets in the Kitchen area to reduce water consumption.
- Insulation added to the water heater reduces the energy required to keep water hot.

Zero Waste

Intent
Offices produce a lot of waste in paper, office supplies, packaging, etc. Reduce the use of materials and resources and encourage the use of products with high recycled content.

Storage of recyclables
Designate an area for recyclable collection and storage that is appropriately sized and located in a convenient area. Contact SFU Facilities Services for detailed requirements.

Construction Waste Management
Specify as part of the General Conditions in all project specifications that the contractor must meet specific construction waste management goals (e.g. 75% diversion of demolition to be sorted and recycled).

Minimize Packaging
Many furniture and furnishings manufacturers have begun to limit packaging material to the absolute minimum. Require to supplier to return reusable packaging that can be returned to the manufacturer after the product has been installed. Projects should request minimal packaging materials that can be either recycled or composted after use.

* LEED Canada for New Construction and Major Renovations 2009
* BUILD SMART – Greater Vancouver’s Source for Sustainable Building Solutions
Choose recycled
Choose office paper with 30% or higher RC content.

Paper & Battery Recycling
Provide paper & battery recycling containers on each office units & department. Contact SFU Facilities Services for free containers & schedule for pick up.

Innovation in Design

Intent
Environmentally friendly office settings that are flexible, integrate technology, comfort and safety, energy efficiency and a pleasant environmental temperature will provide a productive, cost-effective and aesthetically pleasing working environment that engages occupants and has been shown to increase productivity.

- Office space should be flexible and adaptable to meet the variety of users. Some “green” technology options have been tried but are not widely proven and should only be used with thorough consultation with users:
  - Raised floors allow data cabling and power to be run under floor so offices are “plug and play”. However, at SFU Surrey for example, the raised floors also can create other space limitations due to floor loading.
  - Acoustic privacy can be provided in open offices by sound masking

Other

- Light color palettes for paints and furniture reflect natural light through interior office space.
- Thermostatic valves (replacing on/off valves) on every radiator allows each radiator to provide heat only when the space needs it.
- When specifying wood interior doors, consider Agrifiber board, a composite panel product made from recovered agricultural waste such as rice straw, sunflower husks and walnut shells
  - Bamboo, a renewable material, can be used for door veneers and ceiling panels.

Resources

Green Labeling and Certifications:
- Adhesives – South Coast Air Quality Management District Rule #1168
- Sealants – Bay Area Air Resources Board Reg. 8, Rule 51
- Paints and coatings – Green Seal GS 11 & GC-03
- Carpet – Carpet and Rug Institute (CRI) Green Label Plus
- Hard surface flooring - Floor Score
- Wood – Forest Stewardship Council (FSC)
- Office furniture

Web-site
- Whole Building Design Guide www.wbdg.org

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Last updated: 24 November 2011