

A photograph of a modern office interior. The wall is a vibrant green. A staircase with metal railings is visible in the upper right. A large, white, rectangular structure, possibly a desk or partition, is in the foreground. A single pendant light hangs from the ceiling.

Go Green and Save Green!
Create an eco-friendly workplace.

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“Green” is Green

- Three tier approach to “Greening” office space.
 - I. Prep for new move to new space.
 - II. Things to implement during the design of a build out.
 - III. Improve current office environment.

What is green? What level of greening do you want to have in your office environment? Why green?

- Limit personal and office impact on the environment.
- Net zero carbon (reduce greenhouse gases). Reduce ozone depletion.
- Improve work environment=better health=more productive=more \$.
- Business strategy?

“Greening” existing office space

- Reduce paper waste.
- Reduce petroleum based plastic use.
- Reduce electrical usage=less carbon=less depletion of ozone layer.
- Select High recycle content–materials and products.
- Improve indoor air quality.
- Change transportation paradigms.

Reduce paper waste

- Go paperless where possible. Put office manuals on line. Print only what you need. Saves money.
- If you get unwanted magazines, get removed from the list, then recycle. No net impact on \$ - might be reduction in your recycling (if you pay for it).
- Use 100% post consumer recycled paper such as Mohawk for copier/printer and fax. Use “processed chlorine free” bleached paper. Small premium.
- Use cloth towels in the bathrooms and kitchen area rather than paper products. Less landfill and less tree cutting, less bleach used to whiten the paper towels. Saves money.
- Set your printer to two sided printing as the default. Copy two sided wherever possible. Saves money.
- Reuse one sided printed paper by Xing out the used side and use for memos. Saves money.
- Eliminate paper plates in the kitchen. Saves money.
- Business cards – print on 100% post consumer recycled paper that has not been bleached. No net cost increase or small premium.
- Donate old brochures/printed materials to schools and for art projects. No cost.
- Digitize documents in lieu of printing and keeping in a file drawer. Also less space used. Saves money.

Reduce use of petroleum based products

- Recycle ink toner cartridges. Purchase remanufactured cartridges. This saves ½ gallon of oil per cartridge. Less expensive.
- Use glassware eliminate plastics, use dishware not paper, use stainless steel flatware. Bring your own mug to reuse. Saves money
- If ordering in lunch, group orders together to have one large platter rather than a series of platters to enter the waste stream. No net cost change
- Use soy-based inks in lieu of petroleum based for toner, ink, letterhead and business cards. No net cost change.
- Eliminate water stored in plastic – i.e. plastic water bottles, water cooler. Drink out of the tap – healthier, better regulated and no plastic! Saves money.

Reduce electrical usage

- Turn off your computer and power strip every night/when not in use. Set computers to sleep after a certain length of activity.
- Use energy star appliances and equipment – less energy usage.
- Lighting – energy star light bulbs, use fluorescent over incandescent fixtures much less energy usage but has an issue that all fluorescent fixtures have mercury so do not throw in the garbage dispose correctly – see your local hazardous materials disposal plan. LED light fixtures are the latest and greatest fixtures long life but expensive up front.
- Install/use motion sensors for lighting to automatically turn off lights when no one is there – less energy usage.
- Maximize the use of available natural light. Reconfigure/configure the workstations near the exterior with private offices on the interior.

Other Material usage ideas

- Reuse as much as possible. Bring furniture from previous office or buy reconditioned furniture.
- Office depot green product catalog. Toxic, recycled, off gassing issues.
- Establish a composting, recycling and trash program.
- Fair trade and organic coffee and tea for the office made with filtered water.

Improve indoor environmental quality

- Use Low VOC (Volatile Organic Compounds) and non toxic cleaners. Pollutant to air, water and land. Greenhouse gas. Aerosols with propellants are a good example. VOC's are eye irritants and can cause headaches.
- No added Urea formaldehyde in wood products (cabinetry and workstations). Urea Formaldehyde is a known Carcinogen.
- Eliminate Chlorine/PVC use – kills aquatic life. Dead zones along the Mississippi.
- Specify and use Low VOC finishes on office furniture, carpet and paint.
- Allow for views to the outside for as many workers as possible. Rethink the need to have private offices at perimeter of the space.
- Provide access to operable windows for the majority of workers.
- Add plants to improve indoor air quality.

Transportation paradigm shift

- Establish a telecommuting program.
- Use on-line meeting platforms such as “gotomeeting.com” to set up working relationships. Might set up teleconferences on dimdim.com or equivalent.
- Make it a policy to maximize teleconference in lieu of air travel.
- Green the commute –use public transport, use a bike (if the office has subsidized parking and 50+ you are entitled to a cash allowance per CA health and Safety Code Sections 43845. Consider commuter checks which are a tax break.
- Establish an office carpool.
- Employers provide bonus for bike riders and carpoolers.
- Join Carshare or Zip car and use car as needed – use hybrids where possible.

New office space:

Sustainable sites-Selecting the right building for you and the environment:

- Locate your office in a building that has storm water management/treatment, has reflective exterior ground surfaces, in the plaza or has 50% of the parking underground,
- a building that has a high reflectance roof or green roof, water efficient landscaping – reduce potable water by 50% or no potable water used for irrigation,
- On site renewable energy (solar).
- Locate your office space in a building that is central and has access to public transportation to limit the use of cars.
- Locate your office in a building that had bike storage and change rooms
- Locate your office in a building that has parking for alternative fuel vehicles, car and van pools.

Water efficiency

- Reduce water usage: Select a building that has, or build out your space with, dual flush toilets, waterless or low water use urinals.

Energy and Atmosphere

- Install Energy Star equipment –appliances such as refrigerators, microwaves, office equipment such as computers, copiers and other electronics and commercial food service items etc...
- Optimize energy performance – lighting – put lighting on occupancy sensors within rooms. Have lighting automatically turn off after 6PM., provide lighting controls that sense day light levels and automatically turn off lights when enough natural light is present.
- HVAC – Provide thermostats (and zoning of the mechanical equipment) for each different orientation (different heat loads). Have the equipment commissioned (tested to make sure it is operating as it should).

Material and Resources

- Commit to a longer lease period.
- Storage and collection of recyclables – designate an area and plan for the recycling of paper, corrugate cardboard, aluminum, plastics and glass (and composting).
- Minimize (50%) the removal and relocation of existing interior partitions, floors and ceilings) in a build out.
- Use refurbished furniture and furnishings for at least 30% of the required desk areas. Move what you have.
- Use high recycled content in new finishes – e.g. carpet/Carpet tile, ceiling tiles etc..
- Recycle the materials taken out of the remodel of the space.
- Reuse construction materials such as countertops made of salvaged glass material or wood that can be repurposed into a finish material for the interiors.
- Use local materials this reduces the transportation and use of petroleum and greenhouse gases.
- FSC (Forest Steward Council) certified wood.
- Use Rapidly renewable materials (e.g. bamboo, wool carpets, cotton batt insulation, linoleum etc..).



Indoor environmental quality

- Specify low VOC (volatile organic compound) emitting materials – Flooring adhesives, caulking, firestopping, cove base, plumbing adhesives and duct sealants.
- Paints and coatings – use low VOC paints and coatings.
- Low VOC flooring – Carpet cushions and adhesives, sealers on wood or concrete, resilient flooring.
- Specify no added Urea Formaldehyde and low VOC in cabinetry and system furniture.
- Implement the use of natural cleaners.
- Place copiers in a well ventilated separate room.



Indoor environmental quality

Thermal and lighting comfort

- Task lighting – individual control
- Control of temperature and ventilation locally in group rooms and at workstations (50% of space)
- Maximize daylighting – 75%, 90%
- Views for 90% of seated spaces



Summary:

- **Reuse** and repurpose.
- **Reduce** waste, water usage, petroleum based products, VOC's, Urea Formadehyde.
- **Recycle** and use high recycle content–materials and products.

And.....

- **Plan** your space right to improve indoor environmental quality.
- **Change** transportation paradigms.

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