



ABN AMRO – DOZ INTERIOR WORKS

CASE STUDY

ABN AMRO – DOZ Interior Works

– Pursuing LEED Certification



Worldwide, Buildings account For...

17% fresh water withdrawals

25% wood harvest

33% CO₂ emissions

40% material and energy use
45% in china

U.S. ENERGY CONSUMPTION

INDUSTRY

29%

BUILDINGS

39%

TRANSPORTATION

32%

PERCEIVED ADVANTAGES OF BUILDING GREEN

8-9% decrease in operating costs

7.5% increase in building values

6.6% improvement in ROI

3.5% increase in occupancy

3% rent increase

THE NEXT GENERATION'S PERSPECTIVE WILL INCREASE GREEN BUILDING

89% choose brands aligned
with social cause

74% listen to brands aligned
with social cause

69% shop for brands aligned
with social cause

66% recommend brands aligned
with social cause

Benefits of Green Building

- ✓ **Reduction of operating cost by more than 40% to 60% due to lower Energy and Water consumption.**
- ✓ **To incorporate best operational practices and latest technologies from day one.**
- ✓ **To enhance occupant comfort**
- ✓ **Reduce sickness and improve health & safety of occupants**
- ✓ **Improve productivity of occupants by up to 16%.**
- ✓ **Reduce liability and improved risk management.**
- ✓ **Green Corporate Image and marketing exposure through USGBC website.**

Green Building Features

- ✓ **Energy Efficient & Eco Friendly.**
- ✓ **Use of Renewable Energy.**
- ✓ **Use of recycled / recyclable materials.**
- ✓ **Efficient Use of Water.**
- ✓ **Effective Control & Building Management Systems.**
- ✓ **Effective Use of Landscapes.**
- ✓ **Improved indoor air quality for Human safety and Comfort.**

Green Buildings

worldwide are certified with a voluntary, consensus-based rating system.

ENERGY CONSERVATION



"We recognize that preserving our energy resources will be one of the greatest challenges in our drive towards sustainable development. This, however, will not materialize unless the different facets of our society adopt energy conservation principles in their core values. The future generations will be the chief beneficiary of our achievements and the best judge of what we accomplish in this field"

H.H. Sheikh Mohammed Bin Rashid Al Maktoum
UAE Vice President, Prime Minister & Ruler of Dubai

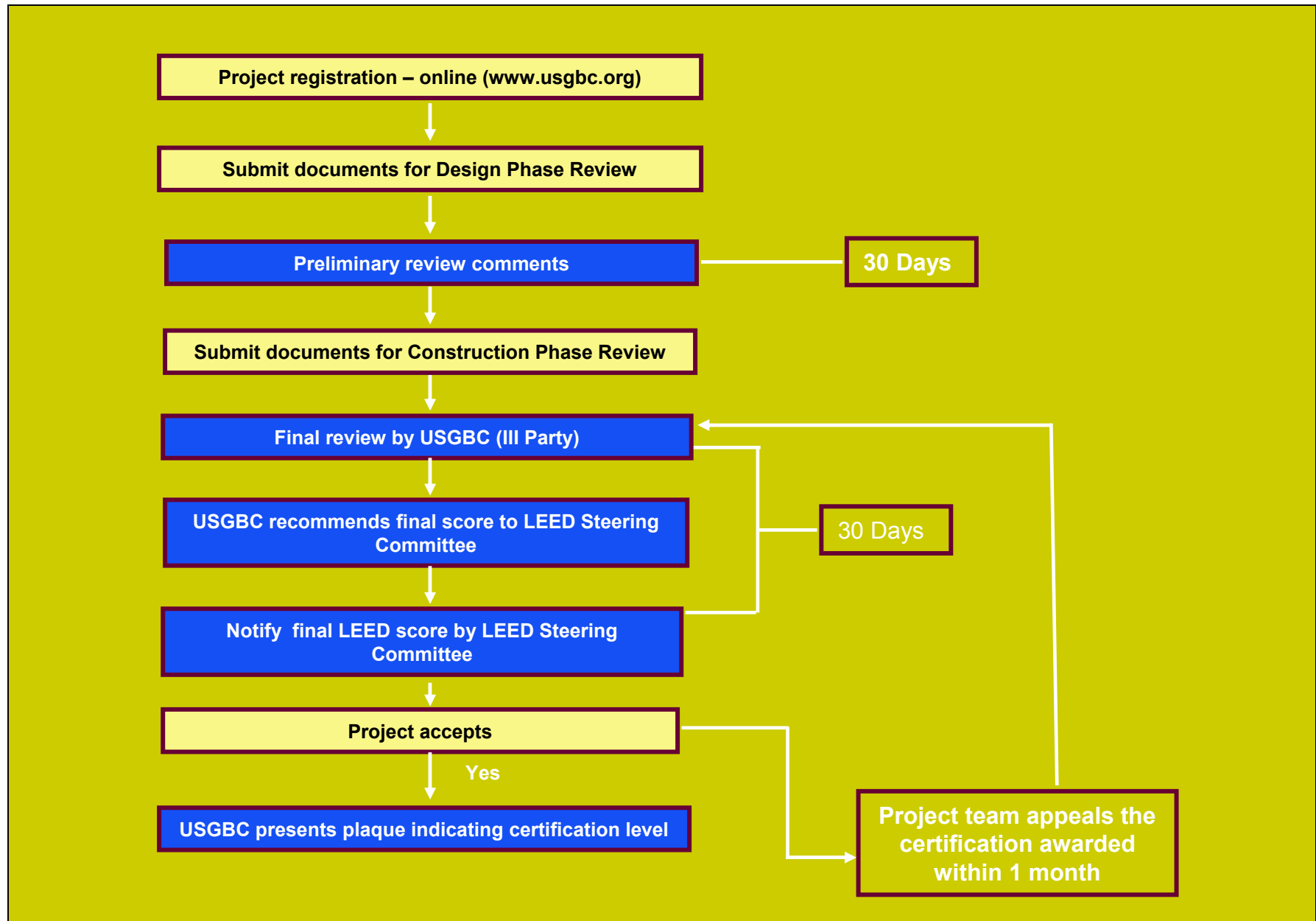
REPORT

ABN AMRO Holding N.V.

2006



LEED Certification Process



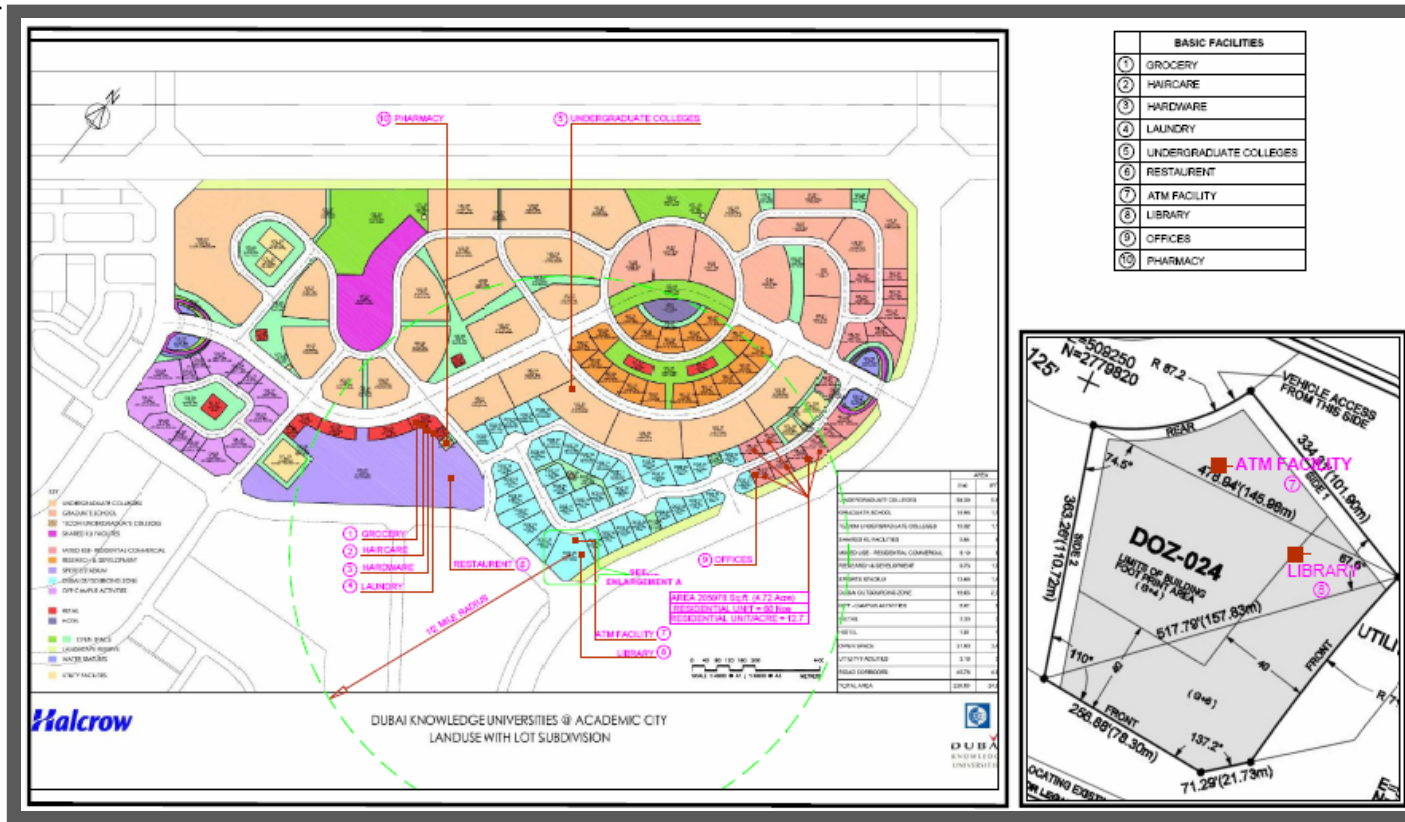
The Green Building Rating System

Points for Individual Credits – LEED for Commercial Interiors

S No	Credits	CI
	Prerequisites	6
1	Sustainable Sites	7
2	Water efficiency	2
3	Energy and Atmosphere	12
4	Materials and Resources	14
5	Indoor Environmental quality	17
6	Innovation and Accredited Professional points	5
	Total	57

SUSTAINABLE SITE

- The facility is having well connectivity within walk able distance to the community services and residential areas.



- Building is well connected to Public Transport System – access to bus routes.

SUSTAINABLE SITE cont'd..

- **Comprehensive Transport System with Bus / vanpool arrangements within the campus for all occupants**

- **Reduction of Heat Island effect and damage of microclimate by:**
 - **100% Covered Car Parking**
 - **Solar reflective coating on building roof (Cool Roof System)**

- **Use of non-potable water for irrigation / landscaping thereby helping conservation of potable water**

- **Actively increasing awareness of occupants and visitors on sustainability features through Green Education Policy.**

WATER EFFICIENCY

- **Installation of water efficient flush and flow fixtures to reduce water consumption by 30% from EP Act 1992**
- **Advocating and building of awareness of occupants for water saving**

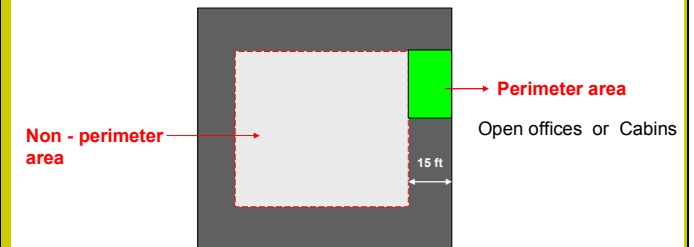


ENERGY & ATMOSPHERE

- Commissioning of Building by 3rd Party Commissioning Authority
- Building consumes 43% lower energy than specified in ASHRAE Standard 90.1 – 2004
- Use of T5 Lamp and Electronic Ballast for lighting fixtures – 15% savings
- Installation of daylight harvesting / controls and occupancy sensors
- All Office equipment and appliances are Energy Star rated consuming significantly lower energy
- Elimination of use of CFC by using R134a as refrigerant for chilled water production to minimize impact on Ozone depletion and Global warming
- No use of Halon in Fire suppression system

Daylight responsive controls –

Perimeter Areas & Under skylights



For more information, visit
www.energystar.gov

MATERIALS & RESOURCES

- **Implemented collection and storage of recyclables**
- **Maximized use of eco-friendly materials**
- **Material used are having high recycled content**
- **Use of regionally manufactured material for 30% of material value**
- **75% of construction waste has been reusable**
- **Use of eco-friendly / Green Housekeeping Chemicals (GS-37) compliant**



INDOOR ENVIRONMENTAL QUALITY (IEQ)

- The whole Building is a “No Smoking Facility” for both indoor and outdoor
- Building ensures ASHRAE recommended 62.1 – 2004 Fresh Air Ventilation requirement for comfort of occupants
- AHU (Air Handling Units) are fitted with highly efficient MERV 13 filters (above 95%) to ensure occupants comfort with clean indoor air.

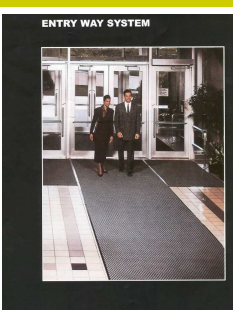
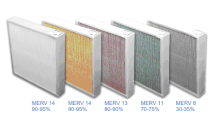


- Installation of Entry Way system for controlling indoor pollutants

MERV - FILTERS

❖ MERV - Minimum Efficiency Reporting Value

- > A number from 1 to 16 - relative to an air filter's efficiency.
- > The higher the MERV, the more efficient the air filter is in capturing particles



- Use of only eco-friendly Green Seal Certified chemicals to ensure no harm to building occupants and maintenance people



IEQ cont'd..

- Zero VOC (Volatile Organic Compound) adhesives and low VOC paints with less than 50g/L has been used to improve indoor air quality and minimize pollutants causing health problems related to allergy and asthma
- All carpets are CRI (Carpet & Rug Institute) certified to improve indoor air quality with reduced pollutants



- Low emitting fixtures and system furnitures
- Construction IAQ management



- Individual task lighting / control for 100% occupants in offices

To Sum Up

- **Green Buildings**
 - Excellent opportunity to reduce operating costs from day one
 - Sustainability of Business
- **Tremendous benefits**
 - Tangible & Intangible
- **Long term benefits**



“Green makes Business Sense”