



PA DEP Southeast Regional Office Building

Derek James

ENVS 634-660

March 23, 2004



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| Architect: | John Boecker, L. Robert Kimball & Associates |
| Developer: | Tiger Norristown, LLC |
| Energy Consultants: | 7 Group |
| Owner: | Vision Properties |
| Lessee: | PA Department of Environmental Protection |

Green Design Attributes



- ✓ Pursuing LEED Platinum Certification
- ✓ Part of Norristown Urban Redevelopment
- ✓ Adjacent to SEPTA Transit Center
- ✓ Re-use of historical building

Green Design Attributes



- ✓ Annual energy cost reduction of 43% (designed)
- ✓ Water consumption reduction of 58% (designed)
- ✓ 75% of building materials of recycled content
- ✓ 40% of building materials locally manufactured
- ✓ High indoor air quality

“It’s sort of the cornerstone of Norristown’s fresh start.” –
Jerry Nugent, Executive Director, Montgomery County
Redevelopment Authority



Source: Philadelphia Inquirer, Feb.9, 2004



Re-use of P&W Building



Brownfield Re-use



Underground Storage Tank Leak – 80 tons of contaminated soil taken off-site

Source: PA DEP

Energy Efficiency

- Cooling capacity reduced by 50%
 - Shading devices
 - R-25 insulated metal panels
 - Triple-glazed windows
- High efficiency lighting
 - 0.75 watts/sq.ft. compared to 1.3 watts/sq.ft.
- Occupancy sensors and thermal comfort control at every desk



Daylighting



Water Efficiency



- Rainwater collection system
- 4,000 gallon wooden cistern
- Non-potable rainwater used for toilet flushing
- Low flow fixtures and automatic faucet controls

Building Materials



- 75% of building materials by cost contain high recycled content
- Over 40% of building materials by cost manufactured locally
- FSC-certified sustainably harvested wood products
- Low-VOC and solvent-free paints, coatings, adhesives, and sealants

Source: PA DEP



- Green roof and PV system not included in final design/construction

- Determined that it was not cost-effective

Design vs. Reality

- Total Cost:
\$98/sq.ft.
 - Green Roof
 - PV array
 - LEED Platinum
- Total Cost:
\$125/sq.ft
 - Conventional Roof
 - Grid Reliance
 - LEED Gold



Sources

- 7 Group, “Project Profile: DEP Southeast Regional Office Building, Norristown, PA
- Jeff Shields, Philadelphia Inquirer, “Borough Counts on a ‘green’ infusion,” February 9, 2004.
- www.dep.state.pa.us
- www.lrkimball.com
- Illumination Engineering Society of North America