

JACK EVANS POLICE HEADQUARTERS

GREEN BUILDING DESIGN

Project Introduction

The Jack Evans Police Headquarters is the new home of the Dallas Police Department. Located at 1400 South Lamar Street, less than one mile from downtown Dallas, the six story structure just over 350,000 square feet serves primarily as administration offices for the department; with some specialized police functions such as a physical evidence laboratory and a Police Museum. The facility operates 24 hours a day, seven days a week.



At the commencement of the design process, the City of Dallas articulated eight ambitious goals for this project. The new building would (1) replace the current headquarters, an overcrowded facility built in 1918. In doing so would (2) bring all administrative divisions of the department together in one facility that could allow police staff to perform their assignments within a (3) professional work environment that should (4) optimize functional adjacencies and efficiency of operations. The building responds to and, indeed, helps to shape the (5) state-of-the-art for security planning and technology in a major police facility. The City sought to achieve these goals and (6) create an example of Civic Architecture within a program of 350,000 square feet within an aggressive (7) budget of \$140 per square foot. The site selection process provided an opportunity for the City to achieve a broader goal, to (8) leverage the significant capital investment as a catalyst to spur re-development of an economically depressed neighborhood just outside the Central Business District.

As design development progressed, a ninth goal emerged. The City embraced values of energy-conscious design and “green architecture” by setting a goal (9) to achieve LEED Silver level certification for the project. This project then became the test case for a more comprehensive program for future City facilities. In February 2003, the Dallas City Council adopted a resolution that all new facilities owned and operated by the City would achieve LEED Silver certification as a fundamental program requirement. This next generation of public buildings in Dallas, over thirty new facilities, will begin design later this year, with the earliest completion dates expected in 2005.

GREEN BUILDING HIGHLIGHTS

Site Selection

The City configured the project site of 4.3 acres by obtaining a tract of property for the building site and then vacated one block of an adjacent public street into a private drive for enhanced security. An under utilized three-story parking garage across the street from the project site was leased by the City to meet the parking requirement of the Headquarters facility. This reduced the development impact on the site, allowing more open space to remain for public areas. The location of the project also took advantage of the proximity to a light rail mass transit station, one block away, for greater public access and to offer convenience and commuting options for employees.



Storm Water Irrigation

During construction, a non-potable water source was identified and evaluated as a feasible, although unconventional alternative to supply the irrigation system. The design team recognized that a tap off the municipal storm water containment infrastructure represented an opportunity to further reduce water consumption of the facility.

LEED Education Program

To further the public's general understanding of sustainable development principles and describe specific green building improvements made by this project, the owner proposed a display in the Lobby to inform visitors of the building's unseen green features. This idea evolved from an interactive electronic display into a link with the City of Dallas website that would provide taxpayers and other visitors with information on this project as well as updated information on other sustainability initiatives that the City is undertaking.



SUMMARY OF CREDITS

Sustainable Site

- ❑ Project developed on a City of Dallas Brownfields site.
- ❑ Project site located within ¼ mile of DART rail and bus transit station.
- ❑ Incorporated bicycle racks and shower facilities.
- ❑ Provided 36 preferred parking spaces for carpools and vanpools.
- ❑ Restored open area of previously developed site with native landscaping.

Water Efficiency

- ❑ Collect and store storm water for 100% of project's landscape irrigation needs.
- ❑ Reduced use of potable water by over 50%
- ❑ Toilet rooms have waterless urinals that require no water supply or flush valves.
- ❑ Reduced water consumption by installing ionization and filtration system for cooling tower water treatment.
- ❑ Installed low-flow lavatory and shower fixtures.



Energy and Atmosphere

- ❑ Energy efficient design will save the City of Dallas \$246,000 per year in energy costs.
- ❑ Energy efficiency is optimized by a number of features including:
 - [Higher wall insulation values
 - [Lower U-factor insulating glazing units
 - [Reflective roofing material
 - [Electric lighting design to 0.99W/sf
 - [Continuous dimming daylighting controls in perimeter spaces
 - [Occupancy sensors installed throughout the building
 - [Water-side economizer
 - [Optimization of chiller part-load operation
 - [Enthalpy wheels recover sensible and latent heat from the exhaust and outdoor air streams.
 - [Natural gas generator to shed summer peak electricity
- ❑ Additional Commissioning
- ❑ Continuous measurement and verification of building systems to provide for the accountability and optimization of building energy and water consumption.



Materials and Resources

- ❑ Implemented recycling program for project.
- ❑ Diverted over 80% of the construction waste from landfill.
- ❑ Over 25% of the building materials and products used were manufactured regionally within a 500-mile radius of the project site.

Indoor Environmental Quality

- ❑ Incorporated permanent indoor and outdoor carbon dioxide (CO2) sensors
- ❑ Implemented an IAQ management plan during construction
- ❑ Used Low VOC adhesives and sealants, paints, and carpet products in the project.
- ❑ All office areas incorporate daylighting and have views to the exterior.

