



PEORIA MUNICIPAL COURT EXPANSION

LEED QUICK FACTS



- 28%** ENERGY USE REDUCTION
- 32%** WATER USE REDUCTION
- 86%** CONSTRUCTION WASTE DIVERTED
- 22%** RECYCLED CONTENT





PEORIA MUNICIPAL COURT EXPANSION

PROJECT BACKGROUND

The existing 19,000 square foot municipal court building was undersized to serve the needs of the city. This project added approximately 19,000 square feet of building space and renovated the existing facility to bring it up to code and better utilize the space available. The project goal was to do this renovation sustainably and achieve LEED Silver Certification; the project team was able to surpass this goal without increasing the budget to achieve LEED Gold.

SUSTAINABLE STRATEGIES

Sustainable Sites – The adjacent garage was re-stripped to designate priority spaces for carpool and fuel efficient vehicles in an effort to reduce emissions from the employees commute to the building. The landscaping on campus was adjusted to provide additional stormwater retention so that no rainwater runoff leaves the site. All landscape materials used are native species requiring minimal irrigation.

- **Water Efficiency** – The landscape irrigation system uses only high efficiency drip emitters. Inside the building restrooms, the faucets toilets and urinals are all low flow. The urinals are significantly higher efficiency than building standards using only 1/8 gallon per flush instead of 1 gallon.
- **Energy & Atmosphere** – Every system of the building was selected to maximize energy efficiency. Light fixtures utilize 28 watt T5 lamps instead of the typical 32 watt T8 lamps. The building is cooled by the recently upgraded campus central plant which is more efficient than using a stand-alone system. All of the electrical and mechanical systems in the building were tested and inspected by a third party expert to ensure everything is operating at their maximum efficiencies.
- **Materials & Resources** – Of the building materials used, including structural elements, over 20% of the raw material is recycled. The wood used in doors and millwork was selected from sustainably managed forests, certified by the Forestry Stewardship Council. During the construction process, 85% of the waste was recycled or re-used.
- **Indoor Environmental Quality** – In addition to being recycled, the materials like paint, carpet and sealants were selected for their low VOC content so the building does not have a significant off-gassing odor. To ensure that construction dust did not impact building users during or after the construction process, high efficiency (MERV 8) filters were used to clean the air.
- **Innovations in Design** – To make sure the healthy environment of the building is maintained throughout its life, the cleaning products and processes are done through a Green Housekeeping Program. The program requires cleaning agents be certified by Green Guard and that staff be trained on how to properly use them. This program is being tested in this facility with the intent to expand it to all city buildings.

SUSTAINABLE DESIGN CHALLENGES

One of the challenges of any LEED project is predicting the compliance of construction activities with the intended goal. For example, in construction waste management, one point is awarded for 50% waste reduction and a second is awarded for 75% (with a 3rd innovation credit available at 95%). It can be risky to assume that the project will achieve the higher levels, so the common practice is to over-achieve so that there are some credits available to fill in where others may fail. On this project, we achieved our goals on the project and did not experience the rejection we planned for. As a result, we achieved gold certification instead of silver. The higher success rate for attempted points submitted is largely due to increased awareness of the practices needed on LEED projects.

Even with this increased knowledge of LEED requirements, the documentation process itself is still a challenge on every project. Every subcontractor on the project needs to be able to define the specific cost of each product they install and assign a verifiable recycled content to it. The recycled content on this project is certainly higher than what is reported due to the inability to precisely identify each material. The same is true for weight tickets on construction waste, regional material sources and rapidly renewable materials.



MEASURABLE RESULTS:

1,405 Tons Construction Waste Diverted From Landfills
(2,811,260 pounds)

50,477 gallons Water Saved Per Year

\$13,090 per year Saved In Energy Costs

146,148 kWh Per Year Energy Savings
(509 MBtu)



PROJECT TEAM:

OWNER:	CITY OF PEORIA
<i>Architect:</i>	Dick & Fritsche Design Group
<i>Civil Engineer:</i>	Zell Companies
<i>Structural Engineer:</i>	KPFF Consulting Engineers
<i>Landscape Architect:</i>	Logan Simpson Design
<i>Mechanical Engineer:</i>	Energy Systems Design
<i>Electrical Engineer:</i>	Energy Systems Design
<i>Design Build Contractor:</i>	Layton Construction
<i>Commissioning Authority:</i>	TestMarcx
<i>Sustainable Specifications:</i>	GrEn A/E Consultants

