



Cal Poly San Luis Obispo

College of Architecture and Environmental Design +
College of Engineering

Solar Decathlon Competition 2005





The **Solar Decathlon** is a U.S DOE/NREL sponsored competition to design + construct a 500-800 s.f. solar powered dwelling.

An interdisciplinary group of Cal Poly faculty + students will compete in the 10 competitions of the Decathlon in October 2005, including:

- Architecture
- Dwelling
- Documentation
- Communications
- Comfort Zone
- Appliances
- Hot Water
- Lighting
- Energy Balance
- Getting Around





California has a history of energy conservation and activism.....

A successful Cal Poly Solar Decathlon entry could serve not only as a learning tool for the students and faculty directly involved in its inception but also as a focal point for activities around the state to raise awareness about solar energy and sustainability in residential building design.





Some broad initial goals for Cal Poly's entry include:

- Technical innovation + design
- Innovative structure and envelope
- Sensitive use of landscape elements
- Efficient equipment and power strategies
- Pre- and post-competition analyses





Architecture students and faculty developed design concepts over two terms for a design competition that resulted in 3 winning concepts.

These were developed into a single design proposal by a team of students from architecture, architectural engineering, mechanical engineering, and electrical engineering.



Renewable Energy Club



Students from Cal Poly's Renewable Energy club, working in 10 *task groups*, have developed construction drawings and submittals for Cal Poly's Solar Decathlon house. These students represent at least 3 colleges and 8 departments across campus.



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Compact High Performance Housing

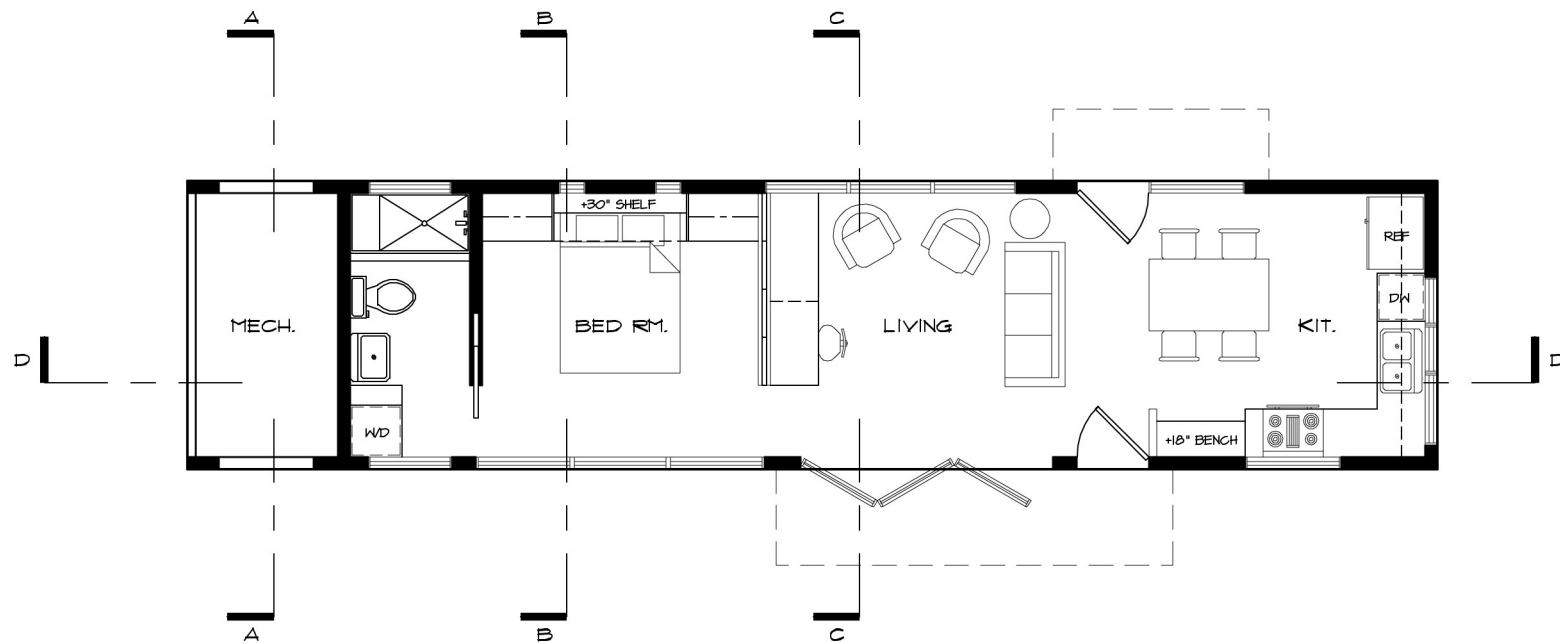
energy efficient • one-truck transport • ready-for-living





Floor Plan

- 624 square feet
- 1 bedroom



CAL POLY SOLAR DECATHLON - BUILDING PLAN

DESIGN DEVELOPMENT - 5/16/04

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www.solardecathlon.calpoly.edu

