

MAG POPTAC
July 22, 2008



Chandler Fire Administration Building

Chandler Green Building Program



Presentation Overview

- ◆ Why Green Building?
- ◆ LEED
- ◆ Developing a Green Building Program
- ◆ Green Building Program





Building Statistics

- Buildings Consume (Nationwide):
 - **70%** of electricity
 - **39%** of primary energy
 - **25%** of all water supplies
 - **40%** of all raw materials
- Buildings Generate:
 - **35%** of solid waste
 - **36%** of CO₂ emissions
 - **46%** of SO₂ emissions
 - **19%** of NO_x emissions
 - **10%** of fine particulate emissions



Sources: DOE, EPA, U.S. Geological Survey, Worldwatch Institute



Green Building Characteristics

- ✓ Energy Efficiency
- ✓ Water Conservation
- ✓ Environmentally-Sensitive
Material Use
- ✓ Sustainable Site Development
- ✓ Healthy Indoor Environments
- ✓ Smart Investment



Chandler CARE Center:
Pursuing LEED Certification



What is LEED?

- ◆ Leadership in **E**nergy and **E**nvironmental **D**esign
- ◆ Nationally-Recognized Green Building Rating System
- ◆ Established by the U.S. Green Building Council (1998)





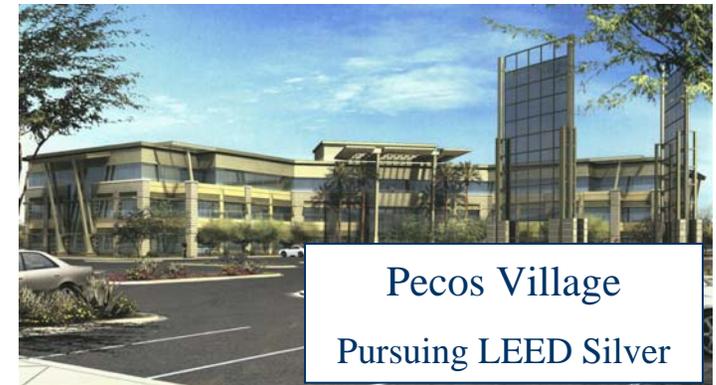
LEED Categories

- ◆ 69 Points and 7 Prerequisites in 6 Categories:
 - ◆ **Sustainable Sites**
 - ◆ **Water Efficiency**
 - ◆ **Energy and Atmosphere**
 - ◆ **Materials & Resources**
 - ◆ **Indoor Environmental Quality**
 - ◆ **Innovation & Design**



LEED Certification Levels

- ◆ **Meet all Prerequisites and Earn Points as Follows:**
 - **Certified (26 – 32 Points)**
 - **Silver (33 – 38 Points)**
 - **Gold (39 – 51 Points)**
 - **Platinum (52 – 69 Points)**





LEED Costs

- ◆ LEED adds 0 – 10% to initial building cost
 - Certified/ Silver Level – 0 – 5%
 - Gold/ Platinum Level – 2% +
- ◆ Higher Costs Result From:
 - More Expensive Materials/ Construction
 - Commissioning of Systems
 - Extra Design Time
 - LEED Certification Fees up to \$17,500
 - Documentation Required



LEED Benefits

- ◆ Initial Costs Paid Back over Life of Building
 - Energy Savings
 - Certified/ Silver: 25 – 30% Cost Reduction
 - Gold/ Platinum: 45% Cost Reduction
 - Water: 30 – 40% Reduction
 - Fewer Service Calls



Pecos Village
Pursuing LEED Silver Certification



LEED Benefits (Cont.)

- ◆ Productivity Increases/ Reduced Absenteeism (1 – 16%)
- ◆ Increased Sales Price (39%)
- ◆ Higher Rents (22%)
- ◆ Higher Occupancy Rates (3.5%)



Chandler Green Building Program



city of chandler
**green building
program**



Chandler CARE Center:
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Developing the Program

- ◆ 2006 - 2007 - P&D Clientele Survey
- ◆ Nov. 15, 2007 – Energy and Green Building Forum
- ◆ 2007 - 2008 – Green Building Task Force Meetings
- ◆ Spring, 2008 – Council and P&Z Briefings
- ◆ June 26, 2008 – Program Adoption



November 15th Energy and Green Building Public Forum

- ◆ 63 Attendees
(Including Staff)
- ◆ Participant Support For:
 - City Green Building
 - Incentives to Encourage Private Green Building
 - Some Minor Regulations





Chandler Green Building Program

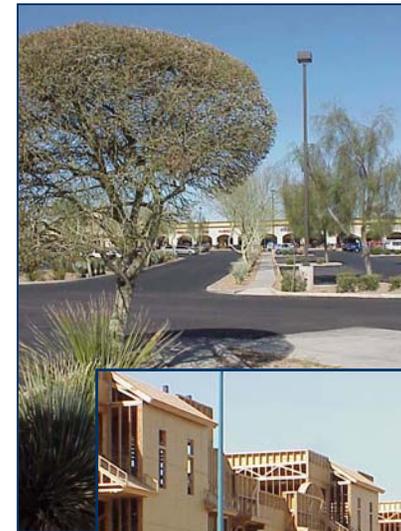
Program Outline

1. Code Modification
 - a. International Energy Conservation Code (2006)
 - b. International Plumbing Code (2006)
2. Incentives for Private Development
3. City Green Building
4. Green Building Education and Outreach



Incentives for Private Development

- ◆ Incentives Awarded to LEED-Certified Projects:
 - Expedited Plan Review
 - Developer Recognition
 - Technical Assistance
 - LEED Certification Fee Reimbursement





City Commitments

- ◆ LEED Silver Certification for New City Buildings
- ◆ Energy Upgrades to Existing Buildings
- ◆ Education and Outreach



Discussion

Questions/ Comments

