

Building Schools You Can Afford to Operate –

How Real-World Operational Issues Affect How or Whether We Can Build and Operate Schools

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Basic Issues

- Construction costs continue to rise
- New Construction focused on relieving overcrowding and returning to traditional calendar
- Existing Facilities is focused on modernization and major repairs
- State funding based on student count, not square footage or condition of facilities
- Enrollment leveling off or even decreasing
- Non-students making more use of facilities via Joint Use Agreements and other mechanisms

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Contributing Factors... Continuing Challenges

- Land is scarce and costly
- Material and labor costs are rising faster than inflation
- Cost to implement Small Learning Communities
- Design process is complex and lengthy
- Newer systems require more sophisticated operations and maintenance
- Lack of comprehensive lifecycle planning
- Joint-Use and civic center permits drive need for more facilities O&M

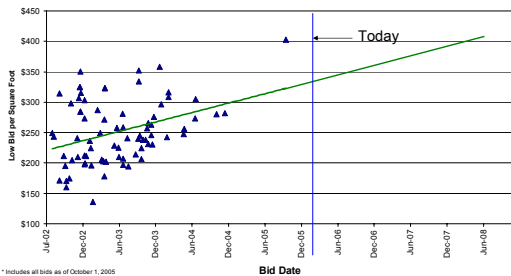
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Rising Building Costs–



- Construction material costs have increased significantly in the last two years
 - Recent pre-Katrina survey indicated that 92% of Owners (like LAUSD) had cost increases of 13.2% in 2004
 - LAUSD bid prices increased 22% in 2004
- Most experts predict between 5 – 20 % increase resulting from Katrina
- Overall, even if housing starts to decline, Katrina impact should keep prices high as rebuilding progresses
- Labor Shortages
 - Active Private Sector Construction Market
 - Skilled Labor at a Premium

LAUSD New Construction Bid Trends



Small Learning Communities

- SLCs add Life-cycle Costs
 - Decentralized administration
 - Separate entrances/ drop-offs
 - Dispersed science laboratories
 - Reconfiguration of Existing Facilities
 - Additional staffing and resources required to operate added "core" facilities (admin offices, cafeterias, restrooms, lunch areas)

Design Process

- Challenges with DSA
- Timeline
- Cost increases due to escalation

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Sophistication of New Construction

- New construction techniques/materials (multistory)
- More sophisticated building systems
 - More systems centrally managed
 - IT systems - Integrated Multimedia in every new San Diego classroom
- Higher level of training required for maintenance staff
 - Specialization
 - Dedicated Building Engineers
- Costs of increased energy usage
- CHPS impacts
 - Sustaining Green systems

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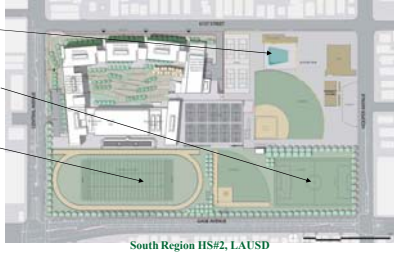
Ongoing O&M Issues

- Routine Repairs – Breakdown Maintenance
- Custodial Challenges
- Lack of Preventive Maintenance
- Rising Energy Consumption/Costs
- Capital Renewal
- Lifecycle Sustainment

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Joint-Use Facilities Increase Utilization Rate, O&M Requirements

- Pools
- Park Facilities
- Athletic Fields



South Region HS#2, LAUSD

Basic Options – Way Ahead

- Get more \$\$\$
- Spend Less
 - Reduce operating costs

Increase Funding

- RRGGM – is 3% a floor or ceiling?
- Williams Case funding
 - Emergency Repair Program
 - Unfunded mandate
- Technology Grants
- State Match modernization funding
- Joint Use Partnering
- New Legislation
 - Raise Cost Escalation to reflect real-world trends
 - Increase new construction and modernization base grant amounts
 - State-match for re-use of existing land
 - Further adjustments to eligibility to reflect seat need for overcrowding relief
- Bonds

Spend Less

- Maximize land use
- Best Value Source Selection contracting
- Streamline Design Review Process
- Sustainable Design
- Use more efficient systems and fixtures
- New approaches to repairs and cleaning
- Energy Initiatives
- Avoid repeating past problems

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Real Estate Solutions

- Build More on Less Land
 - Multistory Buildings
 - Underground Parking
 - Playgrounds on top of Underground Parking
 - High School P.E. facilities on top of above-ground structures
 - Combined Athletic Fields
- Move to Span Schools
- Demo old sites and reuse land
- Convert Middle Schools to High Schools

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Intelligent Design of Athletic Fields

ATHLETICS – 4 Levels

- Equal Access for girls / Women's sports, Title 9
- Stadium including bleachers, restrooms, and press box
- Combination football and soccer field
- Competitive baseball and softball fields
- Practice Gymnasium
- Field Lighting
- All weather track surface
- Synthetic turf

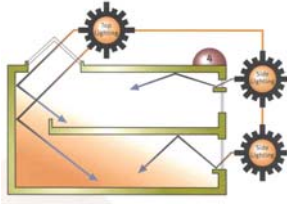


Level 4 - South Region HS#2

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Collaborative for High Performance Schools (CHPS)

- Day lighting
- Light Sensors
- Acoustics
- Orientation/ East West
- Indoor air quality
- High efficiency Mechanical and Electrical systems
- Efficient building envelope
- Lower water use
- Storm water management
- Cool Roofs



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O&M Initiatives

- Team Cleaning Concept
- Anticipating Needs via Lifecycle Modelling
- Track and analyze repair data to target faulty systems, anticipate problems
- Smart Restrooms
- Robust Preventive Maintenance Programs
- Reliability Centered Maintenance
- Facility Condition Index

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Energy Initiatives

- Energy efficient systems
- EMCS
- Energy Auctions

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Lessons Learned Program

- Avoid making the same mistake
- Evolution of our standards
- Continuous improvement



Design Goal

Design Management's "Design Goal" is Somewhere in Between



Walt Disney Concert Hall



Wilton Place ES
