Strategic Infrastructure and Maintenance Initiative (SIMI)

Excellence For All

Every student achieving, everyone accountable.

Seattle School Board Work Session
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Photography by Susie Fitzhugh

SEATTLE PUBLIC SCHOOLS

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District Plans and Policies

- Excellence for All Strategic Plan
  - Build an infrastructure that directly supports District goals
  - Align the Facilities budget with District goals and priorities
- 2020 Facilities Master Plan – March 2008
  - Identified / quantified deferred maintenance
  - Developed general fund and capital fund strategies
  - $18 million dollar preventative maintenance fund in BTA III
- Natural Resource Conservation Policy (H25.00) and Procedure (H25.01)
  - Resolution #2006/2007-18 regarding Seattle Climate Partnership

Background

- SPS performed facility surveys in 2006 and 2009
  - The 2009 facility survey produced a Facilities Condition Index (FCI) and Backlogged Maintenance and Repair (BMAR) amount of $535,210,000 (“Meng Report”)
  - Between the 2006 and the 2009 facility survey the FCI of the sample buildings decreased approximately 3%. (Suggests all buildings currently deteriorate at a rate of 1% per year)
- BEX and BTA capital levy amounts have only increased by 4% per year *(approximately EVEN with the rate of inflation)*
  - Levies were “Roll-Over” amounts from previous levies since BEX I and BTA I
  - Exception is the request for BTA III which includes $48 million for the opening of schools

Background

- Building square footage increased by 660,000 square feet in past 20 years (8%):
  - 1990: 8.47 million
  - 2000: 8.96 million
  - 2010 estimate: 9.13 million
- General fund maintenance spending has only increased an average of 1.7% per year for the last 20 years
- Since 1990, the Maintenance Department workforce has decreased from 165 workers to 99 workers today *(additional 4 FTE reduction planned for 2010 budget gap Sept. 2010)*

➢ *Current general fund budget level supports all emergency and some priority 1 work orders*

Background

- Legislative Changes:
  - Washington State Sustainable Schools Protocol (WSSSP) requires more energy efficient school buildings
  - SHB #1619 - Change in legislation allows use of capital funds for certain types of preventative maintenance
  - New Asset Preservation Plan legislation requires the District to perform third-party facility condition audits and reports on all new schools built after 1994

New State Legislation

- *OSPI legislation on Asset Preservation Plan*
  - Effective January 1, 2011 (delayed from June 1, 2010)
  - Required for continuation of State match construction dollars for new construction
  - Encourages Districts to maintain their buildings constructed with state match funds since 1994
- 19 District sites have buildings that are required to be monitored in accordance with OSPI's Asset Preservation Plan in order to remain eligible for future state match funds:

Ballard	Cooper	Highland Park	Whittier
Concord	Dunlap	John Stanford Int'l	Bryant
Emerson	Stevens	Greenwood	Madrona
West Seattle HS	Coe	Brighton	Cleveland
Garfield	South Lake	South Shore	

New State Legislation

- In order to be in compliance with OSPI legislation on Asset Preservation Plan (APP), SPS must:
  - Have a Board resolution and policy to be in place by 1/1/11
  - Certify it has an asset preservation system by 1/1/11
  - Conduct an initial building condition evaluation by 4/1/11
  - Report on the condition of all participating buildings to their school board annually
  - Perform a third-party facility condition survey on all participating sites once every six years
  - Provide the above mentioned facilities condition report of participating sites to the school board and OSPI once every six years

Building Technology and Academics III

- Successfully passed BTA III February 2010
- $ 140.5 million in Building projects
- $18 million is dedicated to major preventative maintenance as defined by new legislation
  - Includes items such as exterior painting, flooring, roof replacements, HVAC, electrical, plumbing, life safety projects, energy efficiency audits and system inspection
  - Includes new facilities computing systems acquisition

➢ By using these capital funds for major maintenance we can free monies for additional general fund maintenance and directly reduce the District's maintenance backlog

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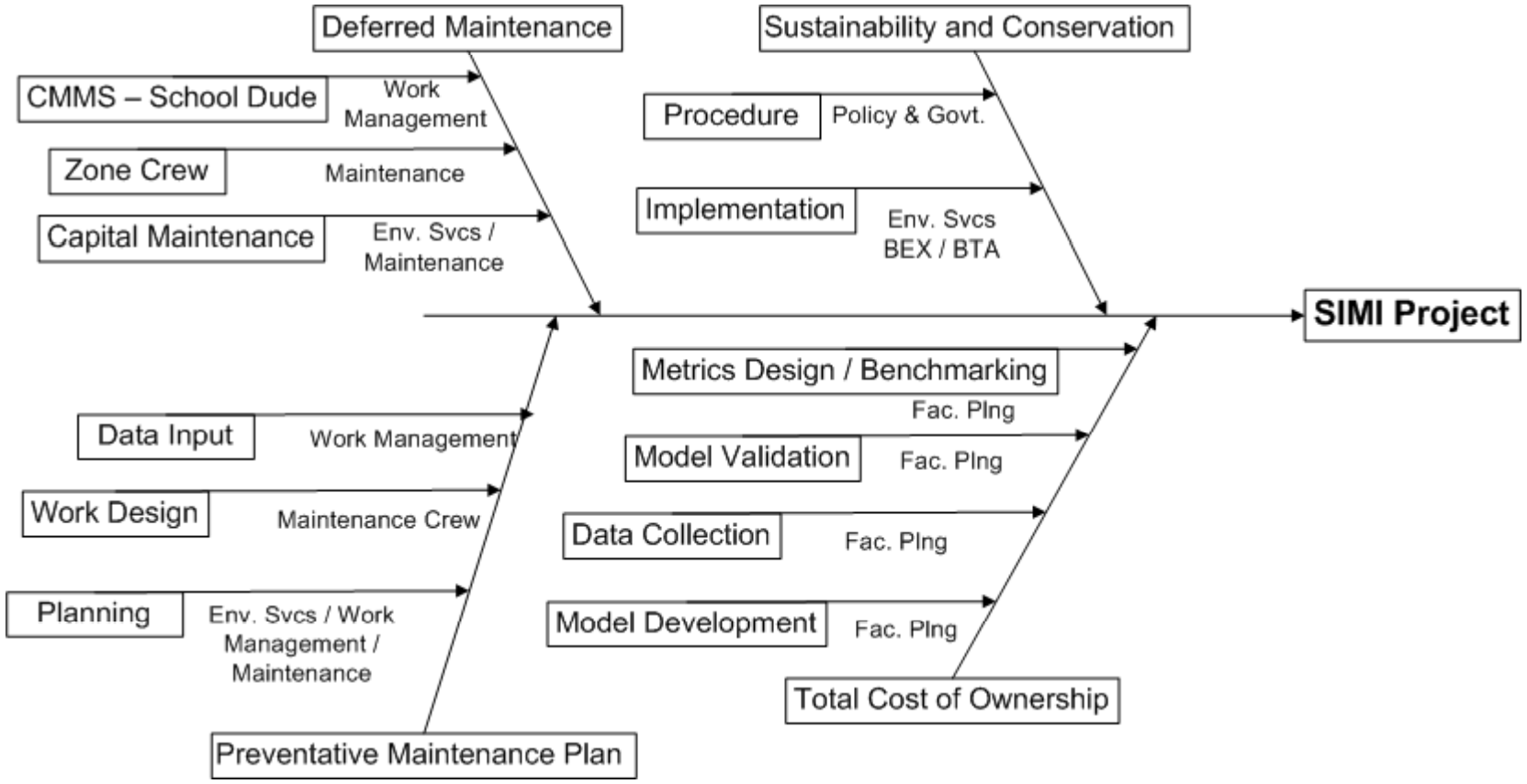
Strategic Infrastructure and Maintenance Initiative (SIMI)

- Four related strategies necessary to address the current backlog, improve preventative maintenance, stabilize funding and comply with APP legislation:
  - Deferred maintenance backlog plan
  - Preventative maintenance plan
  - Sustainability and conservation
  - Total cost of ownership

SIMI Elements



Strategic Infrastructure and Maintenance Initiative (SIMI)

- Ground Rules:
  - Integrated and coordinated effort between Maintenance and Operations, Capital and Planning sections of the Facilities Department
  - Data collection coordinated and shared
  - Schedule of deliverables coordinated
  - Funding will be integrated with future budget development

Deferred Maintenance Plan

- Perform regular facility condition surveys to find deficiencies and monitor ongoing building condition
- Implement new Computerized Maintenance Management System (CMMS) – SchoolDude chosen
  - Validate data (including all 6,000 outstanding work requests) during data migration to new system
  - Separate larger capital-eligible work from the ordinary maintenance work in the CMMS
  - Prioritize work orders according to resources available
- ➢ Implement reporting / metrics on maintenance backlog and performance

Deferred Maintenance Plan

- Identify and plan implementation of capital-eligible maintenance funded in BTA III preventative maintenance $18 million dollar fund
  - Ensure compliance with legislative boundaries – procedure for administration created
  - Identify specific projects including exterior painting, conservation and restoration (tuck pointing, window caulking, masonry sealing), energy savings, plumbing and HVAC systems and assets, roofing, etc
  - Acquisition and implementation of a new computerized maintenance management system (CMMS – "School Dude")

Deferred Maintenance Plan

- Re-energize Zone Crew Strategy
  - Identify workloads through detailed evaluation of existing open work orders based on priorities – coordinate with on-site requestors
  - Group the schools to be serviced in order to establish like-work packages and gain efficiencies
  - Scheduling of trades to complete and coordinate schedules with on-site requestors as needed
- Fund first Zone Crew out of existing resources, with plans to expand up to a maximum of three Zone Crews if successful

Deferred Maintenance Plan

- Capital Fund Strategy
  - Maintenance backlog will be reduced by deducting all dollars driven by poor conditions in buildings that are being rebuilt or renovated as they complete
  - Database maintained and RESOURCE REQUIREMENTS updated annually
  - BTA major maintenance projects will assist in reducing maintenance backlog
- Incorporate correct maintenance practices to reduce building deterioration

Preventative Maintenance Plan (PM)

- Leverage CMMS technology to create service intervals, automate work orders and develop budgetary information
  - Use data to identify trends, track backlog reductions and generate cost information
  - Ensure CMMS data reflects correct PM processes and intervals
  - Create reports to track workloads and assign resources, schedule PM, and manage stock of replacement parts

Preventative Maintenance Plan

- Explore advanced maintenance practices such as condition-based maintenance and predictive maintenance and incorporate as appropriate
- Participate in updates to design standards using service interval criteria to reduce operating costs
- Develop a seamless process to incorporate new / renovated buildings and assets into the maintenance plan as they are completed
- Communicate resource requirements associated with new facilities *in budget cycle prior to opening*

Sustainability and Conservation

- Developing an SPS Sustainability Action Plan to establish actionable strategies that will guide the District towards sustainable, healthy school environments.
  - Includes transportation, student and staff education, operations and maintenance, capital projects, and others
  - Establishes framework for evaluating proposed actions and tracking progress
  - Identifies funding mechanisms and financing strategies
  - Sets goals for implementation of actions
  - Update and Refine Board Policy and Superintendent's Procedure (H25.00 Adopted NOV 1, 2006) to reflect best practices

Sustainability and Conservation

Example Strategies:

- High performance building standards
  - Ex: LEED, Energy Star, 2030 Challenge, Living Building Challenge, Net Zero Energy Buildings, and others.
- Energy Service Company
  - Ex: engineering study of conservation project feasibility including finance, constructability, maintainability. Guaranteed energy savings.
- Commute trip reductions
  - Ex: telecommuting, alternative work shifts, ORCA cards, videoconferencing

Total Cost of Ownership

- Create a Total Cost of Ownership (TCO) model for district facilities – District overall and individual facilities
- Model elements:
  - Construction/purchase costs +
  - Renovation/renewal costs +
  - Maintenance costs +
  - Central admin allocation+
  - Utilities =
    - ➢Total cost of ownership

TCO - Methodology

- Identify TCO for buildings in a common metric (i.e. $ per square foot per year)
- Analyze differences in metrics between buildings – complete a root cause analysis
- Generate best practices and incorporate in future capital projects
- Provide ability to benchmark metrics to other locations

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SIMI Project Deliverables

- Quantify District deferred maintenance
- Create a plan to manage backlog
- Implement CMMS (School Dude)
- Schedule preventive maintenance tasks
- Meet asset preservation plan requirements
- Establish sustainability and conservation projects with estimated paybacks
- Establish a total cost of ownership for District-wide average and for each facility

SIMI Project Schedule

- Implement Zone Crew by 9/1/2010
- Implement CMMS by 9/1/10
  - Maintenance Direct Module will be rolled out on 9/1
  - PM Direct Module is dependent on asset inventory
- Establish plan for the sustainability and conservation projects by 9/10/2010
- Quantify 2010 level of district deferred maintenance by 9/17/2010
  - incorporate impacts of current BTA/BEX projects
- Schedule all preventive maintenance items by 12/6/2010
- Establish a Total Cost of Ownership by 2/4/2011
- Meet all Asset Preservation Plan requirements 4/1/2011

Next Steps

- Winter 2010: Identification of deliverables, data update, data collection, master project schedule and milestones – on going
- Spring 2010: Public involvement and Board update
- Fall 2010: Publish draft plan for review
- Winter 2011: Include in budget planning

Discussion