

## BRIDGES



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### District 8 Bridge Overview

- Bridge Profile
- 2006 Letting Results
- 2007 Letting Goals
- Bridge Preservation
- Bridge Replacements
- Department Force Program
- Inspection/BMS 2
- Major Bridge Related Issues

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### State Bridge Profile (8-0)

- 3430 state bridges
- 18.34% SD deck area
- 20.03% FO deck area
- 67 posted
- 6 closed

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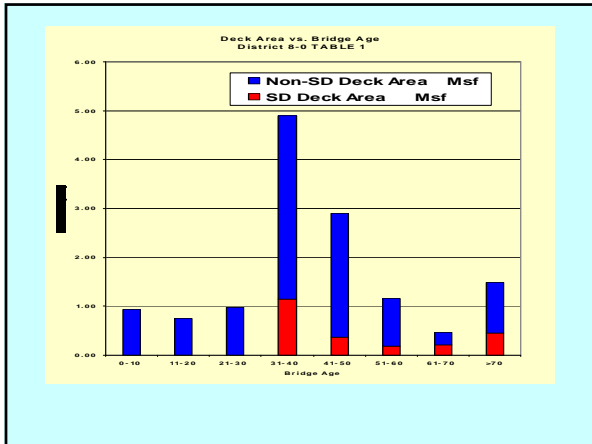
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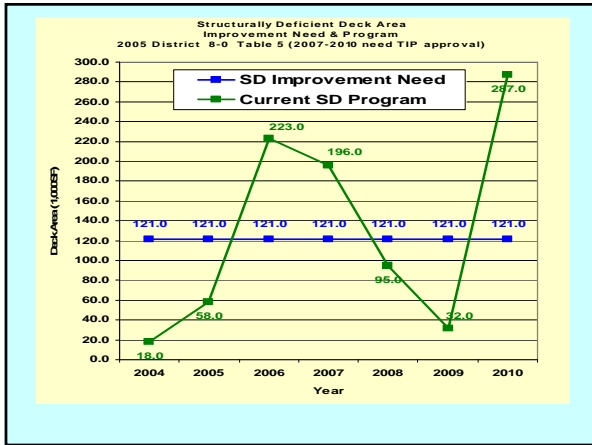
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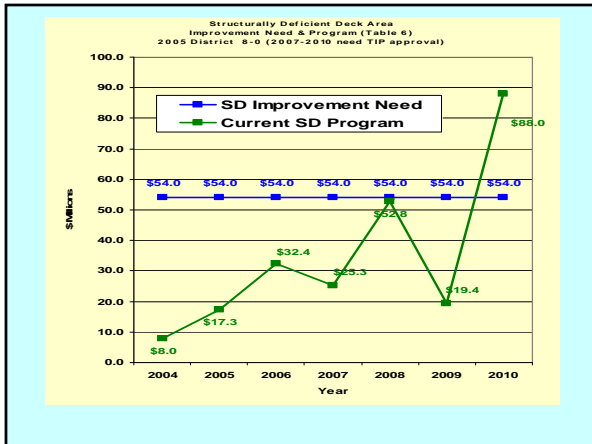
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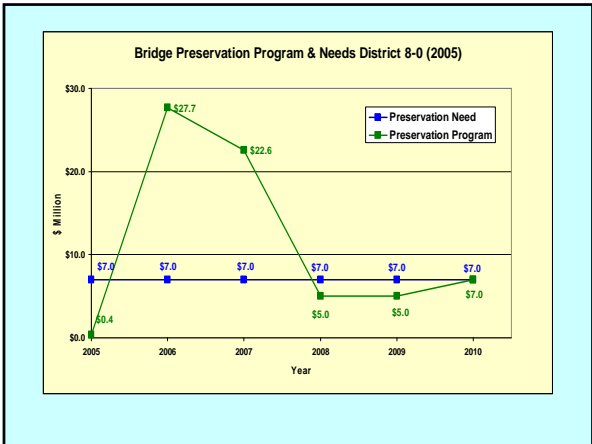
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- ### Bridge Issues
- 10% SD goal (20 year goal from 2005)
  - Staffing in District Office
  - Experience in District Office
  - Permitting requirements
  - QA in inspections, timely follow-up processes
  - Emergencies
  - Funding

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- ### Bridge Problems in 8-0
- Pedestals/bearing issues on major expressway overpasses
  - Expansion dams and delamination
  - Cross-section of steel structure items
  - Trusses

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## 2006 Letting Results

- Bid 104 Bridges for \$68 million (#1 in state).
  - 14 replacements for \$30 million.
    - 250 year replacement cycle
  - 9 rehabilitations for \$9 million
  - 75 preservations for \$36 million.
  - 6 emergencies for \$2 million
- Covers about 3% number of bridges, or about a 34 year cycle average for replacement/rehab/preservation combine.

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## 2007 Letting Goals

- 77 Bridges Planned for \$109 million
- 22 replacements at \$55 million
- 35 preservations at \$32 million
- 19 rehabilitations at \$21 million
- 1 new bridge at \$1 million

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## Bridge Preservation

- 07/08 target for \$2 million in construction projects funded by state budget. Focus on larger structures and corridors.
- Continue to target TIP updates in future.
- Use open-end consultant agreements and modified selections.
- Address SD conditions in many cases

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## Bridge Replacements

- Four waves of consultant selection process in 2006 with 92 structures.
- Have large part of construction funds in 2010. Need to clear and deliver design projects on schedule.
- E&E at scope clarification.
- Need to rightsize early in process. Consider permit issues.

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## Bridge Replacements

- DEP/105 Permits
  - **Maximize Use of GP-11.**
  - **Use Pre-app meetings and Pre-submission meetings**
  - **Consultants submit directly with ADE signature.**
- Minimize the TS&L process.
- Add more projects in 2009 TIP Update.

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## Bridge Rehabilitations

- Do more Rehabilitations with goal to reduce SD%.
- May go to Design/Build in these type of projects
- Use open-end agreements to deliver projects

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## Department Force Bridge Program

- Design Division working closely with Maintenance Division.
- Selected consultant to deliver 50 box culverts for DF installation (5 years).
- DF Program needs assistance in obtaining permits.
- Investing in more equipment to complete more bridge maintenance activities.
- Consultants may need to advise on appropriate maintenance for structures.
- Target Scour prevention.

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## Bridge Inspection

- Hired consultant team in 2007 to do in-depth inspection on 200+ bridges.
- Staff turnover is an issue.
- BMS 2 is more in-depth, elements defined in system.
- Need consultants to assist in BMS 2 update for new projects.
- Need to keep BMS2 current!

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## Bridge Inspection

- BMS2 will help program maintenance/rehab projects in future, target elements for a project.
- The non-composite adjacent box beam issue is basically addressed in 8-0 as of now, however guidelines may change
- Improve inspection to analysis time frame.

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## BMS 2

- On line November 13, 2006
- Phased approach to implementation
- AASHTO's Pontis Bridge Management Software
- Element level inspection
- Need data input for element definitions

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## BMS 2

- Key features
  - Predict conditions and costs
  - Model funding and work scenarios
  - Planning tools for maintenance
  - Improved integration with other PENNDOT systems
  - Improved access for external partners
  - Better reporting capabilities

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## Major Bridge Related Issues

- DEP Coordination on projects
  - Document Pre-Application meetings
  - Temporary Construction issues
  - Quality of submissions
- Community impacts on projects
  - Effects of closures (schools, business, etc.)...project team coordination is key
  - Bike/pedestrians/traffic calming/rightsizing...work with Design Review Committee

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