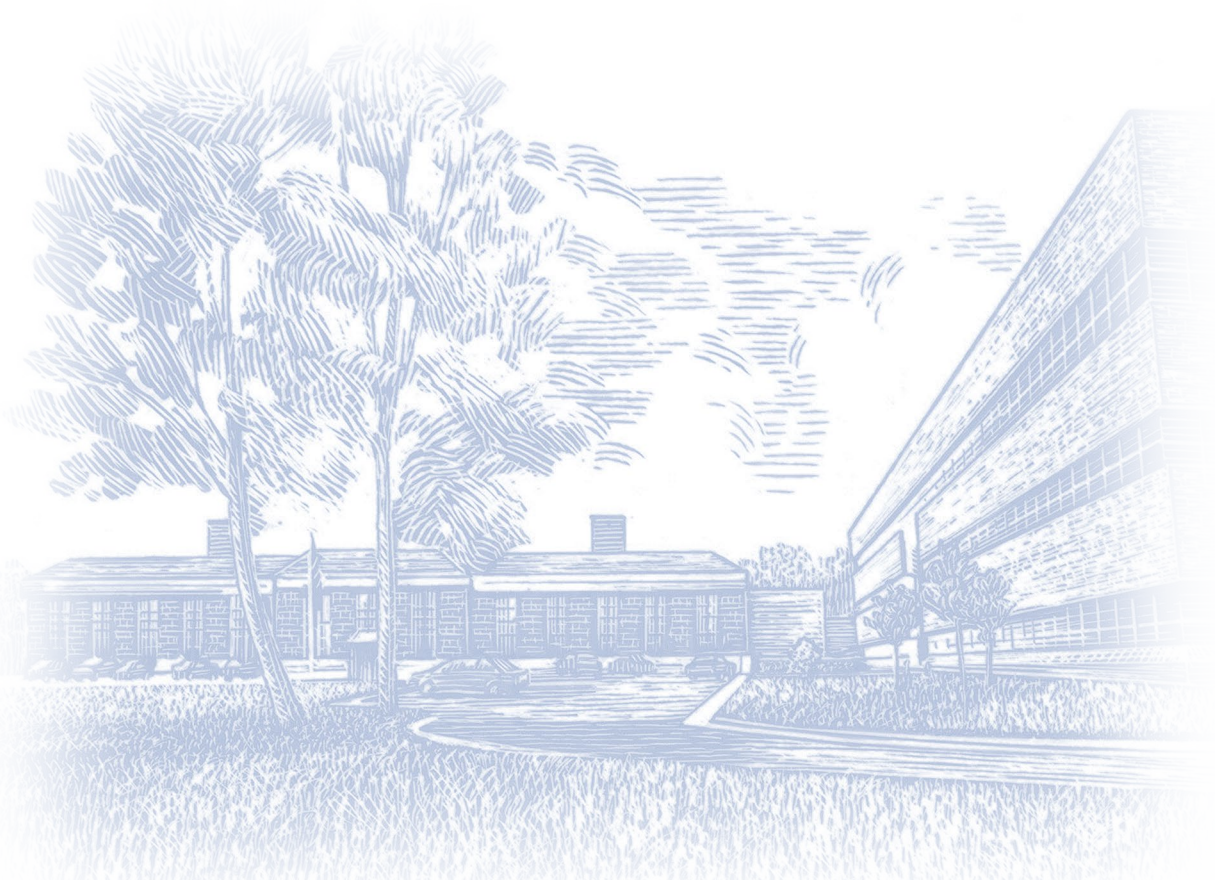


Coatings and Corrosion Laboratory Assessment Summary Report

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Overview Of Laboratories

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The mission of the Paint and Corrosion Laboratory (PCL) is to provide technical support to the Office of Infrastructure Research and Development (R&D) to develop and analyze the effectiveness of innovative coatings test procedures while evaluating the durability of new coating systems, especially environmentally compliant materials for the corrosion protection of steel bridges.

DESCRIPTION

The PCL tests numerous durable and environmentally compliant bridge coatings using both accelerated laboratory tests and natural outdoor exposure. The PCL also develops innovative cyclic laboratory test methods for evaluating bridge coating performance and highly reproducible techniques for evaluating coating failures. In addition, PCL assists State Departments of Transportation (DOTs) to solve a variety of bridge coating problems and recommends appropriate coatings for different environmental conditions.

Key Strengths and Observations

1. *Reputation and quality of work:* Discussion with clients and stakeholders elicited unanimous responses on the relevancy and quality of past performance and continued quality of work, even when funding restricts the number and depth of studies performed.
2. *Competency:* The current Laboratory has a well-qualified and experienced staff that produces useful results at the highest level possible considering the constrained resources.
3. *Dedicated staff:* Laboratory staff was clearly enthusiastic about their work.
4. *Source of independent and credible information for stakeholders:* Interviews with State DOT personnel made it clear that the credibility and expertise of the Laboratory made it an invaluable resource for information and, more importantly, for implementation of new coating products and processes. This is because coatings expertise is disappearing at the State DOT level.

5. *Research has total disclosure unlike the private sector:* Research completed through TFHRC enables the customer to see the successes and pitfalls of technology. When the private sector conducts similar studies, they only report positive outcomes. Enabling the customer to see a comprehensive report permits informed decision making about the implementation of new technologies.
6. *Equipment:* The equipment is maintained and properly calibrated.

Key Recommendations and Status of Current Activities

1. **Panel Recommendation:** The TFHRC should invest in modern equipment and update and replace current facilities including AA, SEM, AFM, and FTIR and photoacoustic spectroscopy accessory, etc.
Action to be taken: Assess current equipment capability and need for next 5-10 year research in bridge coatings, and incorporate into laboratory capital improvement plan.
Status as of 9/26/06: Draft laboratory capital improvement plan developed (8/06). *June '07, Target Completion Date*
Status as of 3/17/07: A new digital microscope and an autotitrator have been purchased. *Target Completion Date-Completed*
2. **Panel Recommendation:** Lack of money for Coatings research.
Action to be taken: Identify additional potential funding sources for research and staffing; could include (1) pooled-fund program (2) exploratory advanced research program; (3) other...
Status as of 9/26/06: Note: This item is tied to the development of the short-and long-term research plans discussed below *Oct '07, Target Completion Date.*
3. **Panel Recommendation:** Recruit a champion at the laboratory level for Coatings.
Action to be taken: Due to limit on FTE's, this will have to be the responsibility of the Coatings Lab Manager.
Status as of 9/26/06: No action required *Target Completion Date – None*
4. **Panel Recommendation:** An additional chemist and technician would allow the development of new analysis techniques and provide the capability of the laboratory staff to achieve its purpose.
Action to be taken: Assess program funding status and other funding sources; depending on current and planned research needs, hire additional contract personnel as required.
Status as of 9/26/06: As work load changes, contract staffing requirements will change. *Target Completion Date-Completed*
5. **Panel Recommendation:** More effective use of coating personnel.
Action to be taken: Work with other laboratories to identify opportunities to share staffing.
Status as of 9/26/06: *June '07 -Target Completion Date.*
Status as of 3/17/07: The next laboratory support contract has been written on the basis of research projects so that each person can be moved to other laboratories such as the Chemistry and the Concrete Lab as needed.
6. **Panel Recommendation:** Continue to be a source of expertise for bridge coatings issues for the State DOTs and other customers.
Action to be taken: Provide on-call technical assistance to State, industry, and others.
Status as of 9/26/06: Continuation of current efforts; no additional actions required *Target Completion Date – None*
7. **Panel Recommendation:** Develop a research plan (long and short term).
Action to be taken: Initiate a process to work with State DOTs and industry, and develop short-and long-term coating research roadmaps.
Status as of 9/26/06: *Target Date Completion Date – Sept '07*

8. **Panel Recommendation:** The laboratory should obtain accreditation.
Action to be taken: Investigate time and cost needed for laboratory accreditation, and identify potential benefits.
Status as of 9/26/06: *Target Date Completion Date – March '07*
Status as of 3/17/07: In the process of collecting information on laboratory accreditation *Target Date Completion Date – December '07*

9. **Panel Recommendation:** Provide better technology transfer to state highway agencies.
Action to be taken: Develop an information dissemination plan Make research data available to State DOTs and Resource Centers.
Status as of 9/26/06: *Target Date Completion Date – Sept '07*
Status as of 3/17/07: Regular participation in AASHTO committee meetings and SSPC DOT Forum, update research products on TFHRC website, initiate dialogue with HRTS Office *Target Date Completion Date – Sept '07.*