

APT – NTC Conference 2017
Saturday October 14, 2017

**Track 3: Delivery – Intervening into Historic Places/
Volet 3: Réalisation – Intervenir dans les lieux historiques**

Session CS3.5: Modern Heritage Materials

In this session, the focus is on the history, significance and conservation issues and approaches for a range of modern heritage materials, including exposed aggregate concrete, pigmented structural glass and clear-coated wood. General strategies and project-specific guidelines will be examined, including federal office buildings, Chicago’s Marina City, the Toronto Subway and a Usonian House.

Learning Objectives

1. On completion, participants will be able to
2. Describe the challenges associated with facade repair projects on high-rise buildings;
3. Understand the quality assurance concerns for site delivery for repair materials, including by tracking successful completion of trials, and potential new products;
4. Better appreciate current best practices for replacement materials in the restoration of a historic (modern) site;
5. Explain a methodology for a long term sustainable approach to building maintenance.

Marina City: The History and Restoration of an Iconic Facade

Brian R. Greve, P.E., S.E., Associate Principal and John F. Duntemann, P.E., S.E., Senior Principal, *Wiss, Janney, Elstner Associates, Inc. Northbrook, Illinois, U.S.A.*

Outline

1. Marina City History
 - a. Project team
 - b. Complex features
2. Design and Construction
 - a. Innovative design features and construction techniques
 - b. Evolution of concrete high rise design
3. Facade Repair Project History
 - a. Repair program scope
 - b. Repair materials and techniques
 - c. Challenges
4. Long Term Performance and Repair Recommendations
5. Summary and Questions

No Lightweight Matter: Developing a custom-made patch repair system for exposed light-weight aggregate precast concrete based on expanded clay materials

Michael P. Edison, President, Edison Coatings, Inc; John A. Fidler, DipArch, MAarch, MAconservation, AAGradDiplconservation, RIBA, IHBC, Intl Assoc AIA, FRICS, FSA, FIIC, FAPT, Principal, John Fidler Preservation Technology, Inc.

1. Background –
 - a. Brutalist Architecture
 - b. Lightweight precast deterioration
2. Specification challenges
3. Analyses
4. Material Sourcing
5. System platform
6. Aesthetic trials
7. Strength trials
8. Results
9. Logistical Challenges
10. Outcomes
11. Questions

Preserving Canada's First Subway Line: Vitrolite and the TTC

Meredith Stewart, MA, School of the Art Institute of Chicago

- APT Student Scholar presentation.

Preserving Wright: A Sustainable Preservative System for the Exterior Wood of the Pope-Leighey House

Andrew Fearon, Pamela Kirschner and Ashley Wilson, AIA

1. Introduction - history of site, chronology of building, ownership /stewardship.
2. Frank Lloyd Wright - the Usonian ideology, examples, related documented exterior surface treatments on wood.
3. Pope Leighey House Deterioration Problems - archival records related to site.
4. Overview of Preservative Project -conditions and methodology for formulation, lab testing, field testing, implementation. Related projects Kahn, Getty, Mount Pleasant.
5. Lab Testing - FTIR, QUV, SEM. termite testing.
6. Field Testing - test panels offsite and in-situ, cleaning preparation, product evaluation.
7. Implementation - scope of conservation project, materials procedures refined, mock-ups, volunteer coordination, cyclic maintenance planning, monitoring and cost analysis.
8. Conclusions - Evaluation after 2 years of implementation. Weathering behavior, intent vs. retention, Environmental impact, health safety, ease of application, longevity. Future research and testing
9. Acknowledgements- The team Pam, Ashley, UPenn, Trust, PLH, volunteers, Jablonski, Getty, APT