

**National Construction Safety Team Advisory Committee (NCSTAC)**  
**Hybrid Meeting Summary**  
**National Institute of Standards and Technology (NIST)**  
**Gaithersburg, Maryland**  
**September 7, 2023**

**Advisory Committee Members:**

Ross Corotis, Chair	University of Colorado, Boulder
José Izquierdo-Encarnación, Vice Chair	PORTICUS
Donald Dusenberry	Consulting Engineer
William Holmes	Rutherford + Chekene
Lori Peek	University of Colorado, Boulder
Kimberley Shoaf	Utah School of Medicine
Aspasia Zerva	Drexel University

**NIST Leadership:**

Laurie Locascio	Under Secretary of Commerce for Standards and Technology and Director of NIST
Jennifer Huergo	Director of Public Affairs and Family Liaison, Champlain Towers South NCST Investigation
Joannie Chin	Director, Engineering Laboratory
Jason Averill	Acting Deputy Director, Engineering Laboratory
Therese McAllister	Acting Chief, Materials & Structural Systems Division (MSSD)
Steven McCabe	Associate Chief, MSSD
Matthew Hoehler	Chief, Fire Research Division

**NIST Staff and Associates (listed in alphabetical order):**

Glenn Bell	Champlain Towers South NCST Associate Lead Investigator
Christine Beyzaei	Research Engineer
Tanya Brown-Giammanco	Director, Disaster and Failure Studies
Maria Dillard	Hurricane Maria NCST Associate Lead Investigator
Tina Faecke	Designated Federal Officer
Scott Jones	Champlain Towers South NCST Project Leader
Joseph Main	Hurricane Maria NCST Lead Investigator
Judith Mitrani-Reiser	Champlain Towers South NCST Lead Investigator
Rich Press	Director, Media Relations
Fahim Sadek	Champlain Towers South NCST Project Leader

**Public Speakers:**

Martin Langesfeld  
Kevin McOsker–International Code Council

## **I. Welcome and Opening Remarks**

Ms. Tina Faecke, serving as the Designated Federal Officer (DFO), called the meeting to order and noted that seven Committee members attended in person, and one member was absent. She informed everyone the meeting would be recorded. Ms. Faecke then introduced the NIST Director, Dr. Laurie Locascio, who welcomed the Committee and thanked them for their engagement and participation. She noted the importance of the Committee, and highlighted key topics that would be presented. She noted previous successes that NCST investigations have had in making changes to building codes, standards, and practices.

## **II. Review of Meeting Goals**

Committee Chair, Dr. Ross Corotis, described the meeting goals.

- Review Disaster and Failure Studies program scoring of events and readiness of teams,
- Review the status of the NCST investigation of Hurricane Maria's effects on Puerto Rico,
- Review the status of the NCST investigation of the partial collapse of Champlain Towers South in Surfside, Florida, and
- Develop the Committee's annual report to Congress

## **III. Disaster and Failure Studies (DFS) Program Updates**

NIST Director of Disaster and Failure Studies, Dr. Tanya Brown-Giammanco, presented an update on DFS Program's scoring of events and provided an overview of a preliminary reconnaissance mission conducted for the August 2023 Hawaii Wildfires, as well as ongoing wildland urban interface research on the Camp Fire that affected Paradise, California in 2018. The presentation can be found here:

[Disaster and Failure Studies Program Updates](#)

**Discussion:** The Committee and NIST staff discussed the severity of the Hawaii wildfire event, other investigations and studies that may be done by others, and the ability of NIST to engage with other entities should NIST decide not to pursue an independent study. They also discussed the challenges that small and isolated communities in particular face in disasters, and the parallels with the Camp Fire. In addition, NIST Engineering Laboratory (EL) leaders discussed the resource challenges and the need to ensure resources are available to complete the ongoing NCST investigations. The Committee encouraged NIST to be involved in some way and help facilitate other efforts if a NIST-specific effort is not undertaken.

## **IV. Summary of Hurricane Maria NCST Investigation Progress**

Prior to the presentations, the DFO asked if any members of the Committee had a conflict of interest and if so, to recuse themselves. No Committee members recused themselves. Dr. Joseph Main, Team Lead of the Hurricane Maria NCST, then provided a summary of the Hurricane Maria Program, including both the NCST investigation and the National Windstorm Impact Reduction Program (NWIRP) study projects. He described the program goals, and reviewed the supporting contracts that are contributing to the program, and highlighted several new contract actions. Dr. Maria Dillard, the Associate Team Lead of the Hurricane Maria NCST, then described recent advances in geospatial analysis and cross-project analyses, and provided several examples. She also described further analysis of the integrated mortality database and the tree canopy analysis. She highlighted statistical analysis support being provided by the NIST Statistical Engineering

Division, and efforts to quantify uncertainty and develop weighting procedures for surveys. She described recent staffing reappointments and stakeholder outreach. Dr. Main concluded the presentation by providing an update on the investigation's timeline and next steps. The presentation can be found here:

[Summary of Hurricane Maria NCST Investigation Progress](#)

**Discussion:** The Committee and staff discussed the data collection status associated with the NCST and NWIRP projects. They also discussed informal construction (performed without reference or adherence to a building code) in Puerto Rico and the investigation's focus on buildings designed to codes. They discussed communication challenges in the immediate aftermath of Hurricane Maria and the value of systems such as radio communications. The Committee noted the vast data collected from the investigation, the timeline for developing findings and recommendations, and the possibilities for others to extend analyses beyond NIST's work. The timeline for release and the expected structure of the final reports were also discussed, as well as opportunities for public engagement, included in both English and Spanish.

## **V. Summary of Champlain Towers South NCST Investigation Overview**

Prior to the presentations, the DFO asked if any members of the Committee had a conflict of interest and if so, to recuse themselves. No Committee members recused themselves. Dr. Judith Mitrani-Reiser, Team Lead of the Champlain Towers South NCST, began her presentation by acknowledging the many lives lost in the collapse. She then provided a summary of activities that had occurred in the months of June, July, and August of 2023. She highlighted the integrated nature of the technical projects; the contracting process, timeline, and efficiencies; the invasive testing program and workflow; updates on the structural testing program; coordination with local officials; efforts to search for additional video footage of the collapse; outreach activities; and progress on evaluating failure hypotheses. Mr. Glenn Bell, Associate Team Lead of the Champlain Towers South NCST, then provided an overview of preliminary data and analysis. He specifically highlighted the as-built conditions of the building compared to the design in the pool deck. He described additional records that have been located on Champlain Towers South as well as 87 Park to the south. He described the steps taken in the invasive testing program to extract and test cores from the building evidentiary debris, and highlighted a data visualization tool the team utilizes to connect various datasets. He then discussed analysis of collapse videos and the geotechnical analysis of the collapse site and foundations, as well as the structural impact of differential settlement. He described details of the structural laboratory tests and the connection to the collapse model that is being developed. He concluded the presentation by describing the integration of analyses across projects, provided an outlook for activities over the next six months, and provided an update to the overall investigation timeline. The presentation can be found here:

[Summary of Champlain Towers South NCST Investigation Overview](#)

**Discussion:** The Committee and staff discussed design problems beyond those associated with the pool deck. The Committee commended the staff on balancing the need for a speedy investigation while ensuring the technical depth needed to bring lasting changes to building codes and standards. The value of security and other videos was discussed. The staffing of the invasive testing program and the contractors associated with the extraction of cores was discussed. The Committee and staff also discussed the resourcing and process to evaluate and rule out failure hypotheses, and how information about the failure hypotheses will be shared. They also discussed a few technical details associated with the proximity of 87 Park and analysis of video frames.

## **VI. Public Comment Period**

Ms. Faecke opened the public comment period and read a comment that was submitted anonymously regarding the Champlain Towers South building. Mr. Martin Langesfeld, family member of Nicole Langesfeld who was killed in the Champlain Towers South collapse, spoke about the families lost as well as concerns with the collapse site having a new building constructed prior to NIST completing its investigation, which could destroy evidence. He noted concerns with potential changes in the flood zone for the property and urged NIST to coordinate with the Federal Emergency Management Agency (FEMA) on this topic. He also questioned the ability of independent investigations to conduct their work, and the value of multiple investigations, and whether any party was investigating criminality or negligence. He noted that families are willing to cooperate with investigators.

Mr. Kevin McOsker from the International Code Council (ICC) described his professional background and codes that are intended to protect existing buildings. The ICC is developing a guideline for a proactive approach to evaluating the safety of existing buildings. He described two codes that cover existing buildings: the International Property Maintenance Code and the Existing Building Code. The new inspection guideline development process includes experts from across the country, and they anticipate releasing a draft for public comment in October 2023. He also described an effort to develop a new standard for inspecting existing properties. He thanked NIST and the NCST for their work.

## **VII. Closing Remarks**

Dr. Joannie Chin, Director of the NIST EL, gave the closing remarks. She thanked those who made public comments, the presenters, as well as the Committee members for their participation and advice. She presented an appreciation letter and certificate of recognition to Mr. William Holmes and Dr. Ross Corotis for their service on the Committee, and noted this was their last meeting. She also noted that Dr. Reginald DesRoches' term was also coming to end, although he was not able to attend the meeting. Dr. Chin also thanked Dr. Kimberly Shoaf for agreeing to be the Vice Chair of the Committee and Mr. José Izquierdo-Encarnación for agreeing to be the Chair beginning October 1, 2023. Dr. Chin also highlighted the progress made for each of the ongoing investigations, the dedication and hard work of the investigation teams, and acknowledged the difficulty for those waiting for answers from the investigations. She noted that thorough investigations ensure the best opportunity to make changes to codes and standards. She concluded by encouraging members of the public to continue to submit data and information to the NIST disaster data portal at <https://www.nist.gov/disaster-failure-studies/data-submission-portal>.

## **VIII. NCSTAC Preparation of Annual Report to Congress**

The Committee used the remainder of the meeting time to revisit their draft of the annual report to Congress that was prepared during the June meeting. They discussed the procedure for completing the report, sharing of the editing responsibility, and the report organization. They reached consensus on the content.

Following the Committee's discussion, Ms. Faecke adjourned the meeting at approximately 3:35 pm ET.