

National Institute of Standards and Technology
National Construction Safety Team Investigation of the June 24, 2021
Champlain Towers South (CTS) Condominium Collapse in Surfside, FL
INTERVIEW GUIDE COMPONENT 6: CTS MAINTENANCE STAFF

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[PENDING OMB APPROVAL]

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Do you have any questions for us? May we proceed with the interview?

SECTION 1. INTERVIEWEE BACKGROUND AND SECTION ASSIGNMENT

We'd like to begin the interview with a few quick questions to understand your experience with the collapse of Champlain Tower South.

1.1.1. Which of the following best describes your role as a staff member at the CTS building?

- Building Manager
- Building Maintenance Staff

1.1.2. Please describe your roles and responsibilities at the CTS building as (a)_____ [*insert the role here*].

1.1.3. When did you start working at the CTS building?

1.1.4. How often did you work at the CTS building?

1.1.5. Were you a CTS staff member at the time of collapse?

If YES, skip to Question 1.1.6.

If NO, continue.

1.1.5.1. When was your last day of work at the CTS building?

1.1.5.2. Was that the last time you were at the building?

If YES, continue.

If NO, skip to Question 1.1.6.

1.1.5.2.1. When was your last visit?

1.1.6. Were you at the building on June 24, 2021, at the time of collapse?

1.1.7. Were you at the building on June 23, 2021, the day before the collapse?

1.1.8. Did you visit any of the units in the building?

If YES, continue.

If NO, skip to the next section.

1.1.8.1. Which units did you visit?

Use the table below for assigning sections to the CTS Maintenance Staff

<i>Stakeholder Status</i>	<i>Relevant Sections</i>
CTS Maintenance Staff	2, 3, 4 (if present at CTS the day before the collapse), 6, 7, 8, and 9

SECTION 2. CTS BUILDING CONDITION (PRE-COLLAPSE)

Thank you for providing this information. Now, we will move into a more in-depth conversation. Please keep in mind that we are here mainly to listen to you. Feel free to tell us what happened, without waiting for us to ask questions. Please report everything, even if it seems irrelevant. We understand that it may be difficult to remember some of the specifics we may ask you about, but we will be working together to help you recall them. If you cannot remember specifics, that is fine too. You can let us know that “you don’t recall” or “you are not sure.”

Let’s first talk about your perception of the CTS building’s condition as a staff member prior to the collapse. We have several drawings and photos that might help with our discussion. We should note that some of our questions may seem technical or unusual, but they will help in understanding the cause of the collapse.

2.1.1. Tell us what you remember about the condition of the CTS building.

2.1.2. Did your perspective of the building’s condition change over time from the time you were there?

If YES, continue.

If NO, skip to Question 2.1.3.

2.1.2.1. Please tell us about what led to the changes in your perspective of the building’s condition.

2.1.3. Did you have any concerns about the CTS building or an area of the CTS building being unsafe while you were there?

If YES, continue.

If NO, skip to Question 2.1.4.

2.1.3.1. Please explain the concerns you have had in as much detail as possible.

2.1.3.2. What made you think this way?

2.1.4. Did you notice anything unusual about the pool deck, including the deck itself, planters, and private patios? Some examples of observations that may be considered unusual are cracks; sagging, and puddles on top of the pool deck; discoloration; exposed steel reinforcement bars; peeling paint; new smells or sounds; and areas that were or needed to be repaired.

If YES, continue.

If NO, skip to Question 2.1.5.

2.1.4.1. Please explain what you noticed in as much detail as possible (e.g., what, when, and where).

2.1.4.2. Here is a visual of the pool deck [*the interviewer shows the drawing and/or photos, including those with the planter on the west of the pool deck*] in case it is helpful for your recollection. Can you mark the location of the issues you may have noticed?

2.1.4.3. To your knowledge, how were these issues addressed?

2.1.5. Are you aware of any changes that were made to the pool deck, including the deck itself, planters, and private patios at the CTS?

If YES, continue.

If NO, skip to Question 2.1.6.

2.1.5.1. Please explain these changes in detail (e.g., what, when and where).

2.1.5.2. Here is a visual of the pool deck [*the interviewer shows the drawing and/or photos, including those with the planter on the west of the pool deck*]. Can you mark the location of the changes that were made to the pool deck?

2.1.6. Did you notice anything unusual about the underground parking garage, including its floor, ceilings and columns? Some examples of observations that may be considered unusual are cracks; sagging, puddles on the garage floor; discoloration; leaks dripping onto cars or the floor; exposed reinforcing bars; peeling paint; hanging or broken pipes; unusual smell or sounds; and areas that were or had to be repaired or painted or other precautions taken (e.g., safety cones)?

If YES, continue.

If NO, skip to Question 2.1.7.

2.1.6.1. Please explain what you noticed in as much detail as possible (e.g., what, when, and where).

2.1.6.2. Here is a visual of the underground parking garage [*the interviewer shows the drawing and/or the photos*]. Can you mark the location of the issues you may have noticed?

2.1.6.3. To your knowledge, how were these issues in the garage addressed?

2.1.7. Please tell us what you recall about the condition of the columns in the garage.

2.1.8. Do you recall any vehicle accidents involving the parts of the basement structure such as garage columns or walls?

If YES, continue.

If NO, skip to Question 2.1.9.

2.1.8.1. Please share as many details as possible about these accidents (e.g., who, when, and where).

2.1.8.2. Here is a visual of the underground parking garage [*the interviewer shows the drawing and/or the photos*]. Can you mark the location of these accidents?

2.1.9. Do you recall noticing anything unusual in the public areas inside the first story of the building, including the recreation room, exercise room, saunas, the lobby, and the corridor? Some examples of things that are unusual are cracks; sagging, puddles; discoloration; exposed rebars; peeling paint; hanging or broken pipes; unusual smell or sounds; and areas that were or had to be repaired.

If YES, continue.

If NO, skip to Question 2.1.10.

2.1.9.1. Please explain what you noticed in as much detail as possible (e.g., what, when, and where).

2.1.9.2. Here is a visual of the first floor [*the interviewer shows the drawing and/or the photos*]. Can you mark the location of the issues you may have noticed?

2.1.9.3. To your knowledge, how were these issues addressed?

2.1.10. Have you ever been to the roof of the building?

If YES, continue.

If NO, skip to Question 2.1.11.

2.1.10.1. Did you notice anything unusual about the roof of the building? The examples of things that are unusual are heavy equipment or materials placed on the roof or water puddles.

If YES, continue.

If NO, skip to Question 2.1.11.

2.1.10.1.1. Please explain what you noticed in as much detail as possible (e.g., what, when, and where).

2.1.10.1.2. Here is a visual of the roof [*the interviewer shows the drawing and/or the photos*]. Can you mark the location of the issues you may have noticed?

2.1.10.1.3. To your knowledge, how were these issues addressed?

2.1.11. While at CTS, did you notice any changes in the structure of the building?

Examples are loose concrete spalls or fragments, rust from exposed reinforcing steel, and patches on concrete slabs, columns, or walls.

If YES, continue.

If NO, skip to Question 2.1.12.

2.1.11.1. Please explain what you noticed in as much detail as possible (e.g., what, when, and where).

2.1.11.2. Here is a visual that might help [*the interviewer shows the relevant visuals here*]. Let us mark where you noticed these changes.

2.1.12. Did you or others who lived or worked there experience any unusual swaying, shaking, vibrations or sounds in the CTS building prior to the night of the collapse? You might have experienced these while the former Howard Johnson Dezerland Hotel was being demolished or while the neighboring 87 Park was being constructed or during beach nourishment projects and/ or during a hurricane or a storm (e.g., Hurricane Andrew, Frances, Wilma, Katrina, Irma), for example.

If YES, continue.

If NO, skip to Question 2.1.13.

2.1.12.1. We would appreciate as much detail as possible about these experiences (e.g., what you/they experienced, when you/they experienced them, including how long you/they experienced them, where you/they experienced them, and what was done about these issues).

2.1.12.2. Here is a visual to help us mark your experiences [*the interviewer shows the relevant visuals here*].

2.1.13. Did you work in the building during the 40-year recertification process?

If YES, continue.

If NO, skip to Question 2.1.14.

2.1.13.1. Please tell us about your experiences involving the 40-year recertification process.

2.1.13.2. As part of the 40-year recertification process, what was shared with CTS residents/staff about what needed to be done at the building?

2.1.13.3. Do you recall any discussions involving the structural safety of the building as part of the 40-year recertification process?

If YES, continue.

If NO, skip to Question 2.1.14.

2.1.13.3.1. What concerns were raised with respect to the structural safety of the building?

2.1.13.3.2. What was planned to address these concerns?

2.1.14. Did you notice anything unusual in any part of the building a few days or weeks before the collapse? The examples of observations that may be considered unusual are cracks; sagging; puddles; discoloration; leaks; exposed rebars; peeling paint; hanging or broken pipes; doors or windows not operating smoothly or jamming; unusual smell or sounds; and areas that were or had to be repaired.

If YES, continue.

If NO, skip to Question 2.1.15.

2.1.14.1. Please provide details about these issues (e.g., what, when, and where).

2.1.14.2. Please explain what was done about these issues.

2.1.14.3. Here is a visual that might help [*the interviewer shows the relevant visuals here*]. Let us mark where you noticed these issues.

2.1.15. Based on what you know about the building's condition, what do you think may have contributed to the collapse of the Champlain Towers South?

2.1.15.1. Please explain what makes you think that.

SECTION 3. CTS BUILDING SERVICE

We would like to have a conversation with you about your service at the CTS building. Please keep in mind that our only goal is to understand what was happening with the structure at the time and that this is a technical investigation, as opposed to a fault-finding investigation. All you say is confidential and will not be shared with anyone outside this technical investigation. We would really appreciate any details you could share with us.

3.1.1. What were the building issues you had to deal with during your service? Please explain in as much detail as possible (e.g., what, when and where).

3.1.2. How were these issues addressed?

3.1.3. Did any of these issues involve the safety of the building?

If YES, continue.

If NO, skip to Question 3.1.4.

3.1.3.1. Please explain what these issues were in as much detail as possible.

3.1.3.2. How were these issues addressed?

3.1.4. During your service, was any work conducted at the pool deck?

If YES, continue.

If NO, skip to Question 3.1.5.

3.1.4.1. Please explain such work in as much detail as possible (e.g., what, why, when and where) *[the interviewer uses visuals as necessary]*

3.1.5. During your service, was waterproofing membrane installed or replaced at the pool deck?

If YES, continue.

If NO, skip to Question 3.1.6.

3.1.5.1. Please provide as much detail as possible on the installation process (e.g., when, why, where, and how).

3.1.5.2. What were the condition of the planter boxes at the time of the installation (e.g., in terms of leakage of water, chemicals used)?

3.1.6. Was any work conducted involving the planters and the trees in the planters (e.g., removal of palm trees) during your service?

If YES, continue.

If NO, skip to Question 3.1.7.

3.1.6.1. Please explain this work in as much detail as possible (e.g., when, why, where, and how).

3.1.6.2. Please explain the process (e.g., removal of palm trees) step by step in as much detail as possible.

3.1.6.3. What were the condition of the planter boxes (e.g., in terms of leakage of water, chemicals used)?

3.1.7. When was the last remodeling of the pool deck during your service?

3.1.7.1. Please tell us what the latest remodeling of the pool deck involved.

3.1.8. Do you have knowledge of any heavy vehicles (e.g., fire trucks) ever being present on the parking or patio area of the plaza slab (pool deck)?

If YES, continue.

If NO, skip to Question 3.1.9.

3.1.8.1. Please tell us what you remember about these heavy vehicles (e.g., where they were, when).

3.1.9. During your service, was any work conducted at the underground parking garage (e.g., fixing of garage ceiling, floor and/or columns)?

If YES, continue.

If NO, skip to Question 3.1.10.

3.1.9.1. Please explain such work in as much detail as possible (e.g., what, why, when and where) *[the interviewer uses visuals as necessary]*

3.1.10. During your service, what were the most common maintenance requests and complaints that you had to deal with? Please explain in as much detail as possible (e.g., what, why, when and where).

3.1.11. How were these issues addressed?

3.1.12. What were the maintenance requests and complaints you typically received with respect the pool deck?

3.1.12.1. Please explain the nature of these requests and complaints in detail (e.g., what, when and where).

3.1.12.2. How were these requests and complaints addressed?

3.1.13. What were the maintenance requests and complaints you typically received with respect the underground parking garage (e.g., leakage, cracking or discoloration)?

3.1.13.1. Please explain the nature of these requests and complaints in detail (e.g., what, why, when and where).

3.1.13.2. How were these requests and complaints addressed?

3.1.14. Was there regular flooding in the underground parking garage from rainstorms, tides, or groundwater, or more extreme and/or sustained flooding?

3.1.15. What was the longest time-period the underground parking garage was flooded before the water pumped out?

3.1.16. Were there any electrical issues due to water entering conduits?

If YES, continue.

If NO, skip to Question 3.1.17.

3.1.16.1. Please explain these issues you experienced (e.g., where, how often).

3.1.17. Did the building have an underdrain/sump system beneath the basement slab to control water?

3.1.18. When was the last time the underground parking garage columns were repainted?

3.1.19. Please explain if any maintenance work was conducted simultaneously while the columns were being repainted.

3.1.20. There was a set of circular cuts made in the basement slab on its east end that were backfilled with concrete. Please tell us what you know about these cuts (e.g., their purpose, when they were made, and by whom).

3.1.21. Were towing vehicles ever allowed in the garage?

If YES, continue.

If NO, skip to Question 3.1.22.

3.1.21.1. Were any columns ever side-swiped in the process of towing?

If YES, continue.

If NO, skip to 3.1.22.

3.1.21.1.1. Please share as much detail as possible about these accidents.

3.1.21.1.2. Here is a visual of the underground parking garage [*the interviewer shows the drawing and/or the photos*]. Can you mark the location of these accidents?

3.1.22. Did anything else come to mind related to changes of the garage that we didn't already cover?

3.1.23. Were there other building related issues we have not yet discussed that the CTS residents complained about while you were working there?

If YES, continue.

If NO, skip to Question 3.1.24.

3.1.23.1. Please tell us what those issues were in as much detail as possible (e.g., what, why, when and where).

3.1.23.2. How were these issues addressed?

3.1.24. Did anyone who was familiar with the building before you started working there (and/or "after you stopped working there") talk to you about maintenance issues they had to deal with at the CTS?

If YES, continue.

If NO, skip to Question 3.1.25.

3.1.24.1. Please tell us what those issues were in as much detail as possible (e.g., what, why, when and where).

3.1.24.2. To your knowledge, how were these issues addressed?

3.1.25. Does anything else come to mind related to the pool deck and/or the underground parking garage that we did not cover while discussing what was done in these areas of the building during your service?

If YES, continue.

If NO, skip to Question 3.1.26.

3.1.25.1. Please tell us what you remember about these areas during your service.

3.1.26. During your service at the CTS, was anyone hired to conduct a condition survey?
A condition survey provides information for maintenance work that is required immediately and lays out a plan for maintenance work that is needed over time.

If YES, continue.

If NO, skip to Question 3.1.27.

3.1.26.1. Please tell us more about the condition survey (e.g., who was hired, when, what the findings were).

3.1.26.2. What happened after the condition survey was conducted?

3.1.27. Do you recall any discussions about conducting a condition survey during your service at the CTS?

If YES, continue.

If NO, skip to Question 3.1.28.

3.1.27.1. Please tell us more about the reasons behind a condition survey not being conducted.

3.1.28. Were you working at the CTS while the Howard Johnson Dezerland Hotel was being demolished or the 87 Park building was being constructed?

If YES, continue.

If NO, skip to Question 3.1.29.

3.1.28.1. What issues arose at the CTS building during the demolition of Howard Johnson Dezerland Hotel and/or construction of 87 Park?

3.1.28.2. What can you tell us about the nature of complaints from CTS residents about the adjacent demolition or construction (e.g., vibrations felt, damage to their units or the building)?

3.1.28.3. When were these issues raised?

3.1.28.4. How were these issues addressed (e.g., filing a legal complain, retaining legal advice and/or an engineer, performing a pre-construction survey, setting up of a monitoring system)?

3.1.28.5. Have you noticed any changes in the CTS building or in different areas of the building (e.g., the pool deck, underground garage, the south perimeter wall) during this time?

If YES, continue.

If NO, skip to Question 3.1.29.

3.1.28.5.1. Please tell us what you noticed.

3.1.28.5.2. Let's mark where you noticed these issues here [*the interviewer shows the relevant visuals here*].

3.1.28.6. What was done to the south masonry privacy wall and the south concrete perimeter basement wall that were alleged to have been caused by the 87 Park construction?

3.1.29. Were you working at the CTS building while beach nourishment projects were being undertaken?

If YES, continue.

If NO, skip to Question 3.1.30.

3.1.29.1. Please explain the nature of beach nourishment projects undertaken during your time (e.g., by whom, what, how, when, and where).

3.1.29.2. What can you tell us about the nature of complaints from CTS residents about the beach nourishment projects, if any?

3.1.29.3. When were these issues raised?

3.1.29.4. How were these issues addressed?

3.1.30. While working at the CTS building, was there any storm or hurricane related damage to the CTS building? Examples of such events are Hurricane Andrew (1992), Georges (1998), Irene (1999), Frances (2004), Jeanne (2004), Katrina (2005), Wilma (2005), and Irma (2017).

If YES, continue.

If NO, skip to Question 3.1.31.

3.1.30.1. Please explain the damage in detail (e.g., what [e.g., leaks, cracks], when, and where).

3.1.30.2. Now let's mark the damages on these visuals [the interviewer shows the relevant visuals].

3.1.30.3. How were these damages addressed?

3.1.30.4. Did anyone in the building report hearing the building make noises (e.g., creaking) at the time of any of these events?

If YES, continue.

If NO, skip to Question 3.1.31.

3.1.30.4.1. Please tell us what was reported and by whom.

3.1.31. Did any small fires occur in any of the units?

3.1.32. Were you working at the CTS building during the 40-year recertification process?

If YES, continue.

If NO, skip to Question 3.1.33.

3.1.32.1. Please tell us about the 40-year recertification process undertaken by Morabito Consultants.

3.1.32.2. Were other consultants considered for this work?

If YES, continue.

If NO, skip to Question 3.1.39.3.

3.1.32.2.1. Please tell us about what that led to these other consultants not being selected for the 40-year certification process.

3.1.32.3. What were the various phases of work that were undertaken under Morabito Consultants?

3.1.32.4. How did Morabito prioritize the work to be done?

3.1.32.5. Did Morabito recommend any emergency or urgent work be done?

If YES, continue.

If NO, skip to Question 3.1.39.6.

3.1.32.5.1. What type of work did Morabito considered to be urgent?

3.1.32.5.2. How did Morabito explain the urgency of this work?

3.1.32.6. Did you accompany the Morabito engineers while they were at the CTS building?

If YES, continue.

If NO, skip to Question 3.1.39.7.

3.1.32.6.1. Which areas of the building did Morabito engineers visit?

3.1.32.7. Please tell us about the status of work involving what is listed below at the time of collapse.

<i>Work Involving</i>	<i>Planned but Not Started</i>	<i>Started but Not Completed (Please explain when the work was started and how much work was done at the time of the collapse)</i>	<i>Completed</i>	<i>Unsure</i>
Building, doors and windows				
Balconies				
Street level parking deck				
Pool deck <u>Ask Question 3.1.32.7.1. as a follow up</u>				
Underground parking garage				
Swimming pool				
South perimeter wall				
Roofing and maintenance anchors <u>Ask questions 3.1.32.7.2.- 3.1.32.7.7. as a follow up</u>				
Installation of the new gas line <u>Ask questions 3.1.32.7.8. if this work was started or completed</u>				
Replacement of the emergency generator <u>Ask questions</u>				

<u>3.1.32.7.9-</u> <u>3.1.32.7.12.</u>				
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3.1.32.7.1. Please let us know what was done at the pool deck with respect to:

- regrading of the pool deck
- adding of new drains
- excavation and re-waterproofing of planters

3.1.32.7.2. A. Please confirm the name of the company that received the contract for the roofing work.

3.1.32.7.3. Please tell us how materials were lifted to the roof.

3.1.32.7.4. If a crane was used to lift materials, where was it situated during the process?

3.1.32.7.5. Do you recall whether roof drains were filled/stopped as part of the roofing contract?

3.1.32.7.6. How was access to the roof controlled after hours?

3.1.32.7.7. Who might have had access to the roof after hours?

3.1.32.7.8. What was the run of that line from the street to the building? Please mark the line on map.

3.1.32.7.9. How was the emergency generator powered at the time of the collapse (e.g., fuel oil, natural gas)?

Ask Questions 3.1.32.7.10-3.1.32.7.12 if the generator was powered by fuel oil

3.1.32.7.10. To your knowledge, where was the storage tank for fuel oil?

3.1.32.7.11. Let's mark its location here [*the interviewer shows the relevant visuals here*]

3.1.32.7.12. Was the storage tank still there at CTS at the time of the collapse? Or was it removed from the building?

3.1.32.8. Did the recertification process involve any activity to fill cracks in the slabs at the following?

- the lobby level
- the basement

If YES, continue.

If NO, skip to Question 3.1.32.9.

3.1.32.8.1. Please mark here where these activities were (or were planned) [*the interviewer shows the relevant visuals here*].

3.1.32.8.2. Were any observations made of the cracks at the lobby level or at the basement over time?

If YES, continue.

If NO, skip to Question 3.1.32.9.

3.1.32.8.2.1. Please share as much information as possible about these observations.

3.1.32.9. How satisfied was the Board with the progress of the 40-year recertification work?

3.1.32.9.1. What aspects of the recertification work was the board satisfied with?

3.1.32.9.2. What aspects of the recertification work was the board not satisfied with?

3.1.32.10. How satisfied was the maintenance staff with the progress of the 40-year recertification work?

3.1.32.10.1. What aspects of the recertification work was the maintenance staff satisfied with?

3.1.32.10.2. What aspects of the recertification work was the maintenance staff not satisfied with?

3.1.32.11. How satisfied were CTS residents with the progress of the 40-year recertification work?

3.1.32.11.1. What aspects of the recertification work were the residents satisfied with?

3.1.32.11.2. What aspects of the recertification work were the residents not satisfied with?

3.1.32.12. Were there any factors that speeded up the 40-year recertification work at CTS?

If YES, continue.

If NO, skip to Question 3.1.32.13.

3.1.32.12.1. Please let us know what helped speed up the work (e.g., residents with expertise).

3.1.32.13. Were there any factors that slowed down the 40-year recertification work at CTS?

If YES, continue.

If NO, skip to Question 3.1.32.14.

3.1.32.13.1. Please let us know the factors that slowed down the work (e.g., financing issues).

3.1.32.14. Were there plans to get (or had you already obtained) second opinions about the necessary repairs?

If YES, continue.

If NO, skip to Question 3.1.32.15.

3.1.32.14.1. Please explain what was planned or done in detail.

3.1.32.15. What were the Board's plans to pay for the work Morabito recommended (e.g., through special assessments, temporary loans)?

3.1.32.16. Who had the final authority to enact the special assessments? The Board or the entire membership?

3.1.32.17. Do you have any records from the time you were working at the CTS? If you do, can you please share those with us?

Our next set of questions relate to different types of construction projects or monitoring that was undertaken at the building.

3.1.33. While working at the CTS building, did you see any of the following?

- preparatory work for repairs (bracing)
- staging of materials/equipment for renovation
- ongoing or completed maintenance or repairs including:
- the staging anchor installation at the roof
- the general roof repair/replacement project
- concrete and patio repairs at the plaza level

If YES to anyone, continue.

If NO, skip to Question 3.1.34.

3.1.33.1. Please explain what you saw in as much detail as possible.

3.1.33.2. Here is a visual that might help [*the interviewer shows the relevant visuals here*]. Let us mark where you saw these.

3.1.34. While working there, did you see ongoing site monitoring for the following concerns?

- corrosion and spalling
- crack growth
- cracks or vibration from/during nearby construction
- drainage, flooding, or water intrusion, leakage from the patio/plaza slab into the basement garage, and roof leakage into the units below
- other (please explain)

If YES to anyone, continue.

If NO, skip to Question 3.1.35.

3.1.34.1. Please explain what you saw in as much detail as possible.

3.1.34.2. Here is a visual that might help [*the interviewer shows the relevant visuals here*]. Let us mark where these issues were being monitored.

3.1.35. Were you involved in/observed any structural assessment at the CTS building with respect to the following:

- Geotechnical (related to the land itself) and foundation issues
 - subsidence (i.e., settling)
 - floor and wall deflections or cracking
 - other (please specify)
- Structural frame issues
 - corrosion and spalling
 - cracks, settlement, deflections (e.g., doors not closing properly)
 - repairs
 - maintenance
 - other (please specify)
- Plaza level

- Reconfiguration of planters
- Repairs to address draining issues
- Other (please specify)
- Water management issues
 - pool deck and other building areas
 - parking and subgrade (earth surface underneath) levels
 - any issues with surge, waves, groundwater
 - Other (please specify)

If YES to anyone, continue.

If NO, skip to Question 3.1.36.

3.1.35.1. Please provide details of each assessment, including what you saw/observed.

3.1.35.2. To your knowledge, what was done after these assessments?

We would like to a few questions about the remodeling process at the CTS building next.

3.1.36. Please tell us about the remodeling process for unit owners at the CTS. What did they have to do to do remodeling in their units? Please explain the approval process step by step.

3.1.36.1. Did the Board require approval of remodeling projects by CTS owners?

If YES, continue.

If NO, skip to Question 3.1.36.2.

3.1.36.1.1. What were the criteria that the Board enforced for approval of remodeling projects?

3.1.36.1.2. Were the unit owners allowed to change finish materials on their units (e.g., floor and bathroom tiles) without the Association Board's approval? Y/N

3.1.36.1.3. How about repairs to balconies? Were unit owners allowed to conduct any repairs in their unit's balconies? Or were these repairs conducted by the Association only?

3.1.36.2. Are you aware of any repairs to the balcony slabs (balcony floors)?

If YES, continue.

If NO, skip to Question 3.1.37.

3.1.36.2.1. Please explain these repairs (e.g., what was done, why, where and when).

3.1.37. Are you aware of any guidance documents produced by the Association Board which detail what unit owners can and cannot do without their approval?

If YES, continue.

If NO, skip to Question 3.1.38.

3.1.37.1. Can you share a copy of these documents with us, if possible?

3.1.38. Do you recall significant remodeling of CTS units while working there, including installation of new stone floors, and addition or removal of partitions?

If YES, continue.

If NO, skip to Question 3.1.39.

3.1.38.1. Please tell us what you remember about these remodeling projects (e.g., what, when, and where).

Next, we have a few questions about your interactions as CTS staff involving local government officials.

3.1.39. During your service, did local government officials perform any inspections in the building or visit the building?

If YES to either of them, continue.

If NO, skip to Question 3.1.40.

3.1.39.1. Please share as much detail as possible about these inspections and/or visits (e.g., their purpose, what they entailed, when and by whom they were conducted, who accompanied them).

3.1.39.2. What happened after these inspections and/or visits?

3.1.40. Did you have any other interactions with local government building officials with respect to the CTS building?

If YES, continue.

If NO, skip to Question 3.1.41.

3.1.40.1. Please share as much detail as possible about these interactions (e.g., their purpose, what they entailed, when they were, who was involved).

We also would like to learn more about the building/resident records and security cameras in the building.

3.1.41. What building documents were stored under your purview as maintenance staff, and where were those stored?

3.1.42. If there are parking assignments for tenants, where could records of the make, model, year, and color of assigned parked cars spots be found?

3.1.43. To the best of your knowledge, approximately how many surveillance cameras were operational at the time of the collapse?

3.1.44. Where were these cameras located in the building?

3.1.45. Were there any surveillance cameras maintained by building management?

3.1.46. Where were video files of these cameras kept (e.g., on a computer, hard drive, on a server, in the cloud)?

3.1.46.1. Is there any way we could access those files? We appreciate any help you may offer.

We also would like to ask you a few questions about what happened after the collapse.

3.1.47. Did you visit the CTS site after the collapse?

If YES, continue.

If NO, skip to Question 3.1.48.

3.1.47.1. What did you see on the site?

3.1.47.2. Who did you speak with on the site?

3.1.47.3. Please recall any conversations you might have had with others on how the collapse might have started and progressed that night.

3.1.47.4. Did you take any pictures or videos of the collapse site?

If YES, continue.

If NO, skip to Question 3.1.48.

3.1.47.4.1. Can you please show those pictures with us?

3.1.48. After the collapse, did any CTS residents reach out to you and bring any building-related issues to your attention?

If YES, continue.

If NO, skip to the next section.

3.1.48.1. Please explain what these issues were in as much detail as possible.

SECTION 4. CTS UNIT CONDITION (PRE-COLLAPSE)

We also would like to ask you a few questions about what you might have seen or heard from others about other units.

4.1.1. Please describe the problems you personally observed or heard about the units within CTS. We would appreciate as much detail as possible (e.g., what, when, and where).

4.1.1.1. Please explain if anything was done about these issues to the best of your knowledge.

4.1.2. Did any CTS resident talk to you about noticing anything unusual in their units a few days or weeks before the collapse?

If YES, continue.

If NO, skip to the next section.

4.1.2.1. Please provide details about these issues (e.g., what, when, and where).

4.1.2.2. Please explain what was done about these issues to the best of your knowledge.

SECTION 5. THE DAY BEFORE THE COLLAPSE (JUNE 23, 2021)

Now we will be asking you some questions about June 23, 2021, the day before the collapse.

5.1.1. Please walk us through what you did that day, starting from when you arrived at the building but before you noticed that something was wrong.

5.1.2. Just to confirm, you were at the CTS building on June 23, 2021 _____ (e.g., from ____ to ____ o'clock). Is that correct?

5.1.3. Did you notice anything unusual (e.g., sights, smells, motions, and sounds) about the building prior to the early morning of June 24, 2021?

If YES, continue.

If NO, skip to Question 5.1.4.

5.1.3.1. Please explain what you noticed in as much detail as possible (e.g., what, when, and where).

5.1.3.2. Here is a visual that might help [*the interviewer shows the relevant visuals here*]. Let us mark where you noticed these issues.

5.1.4. Please tell us if you were in the following sections of the building that day (June 23, 2021).

<i>Building Area</i>	<i>Answer (Y/N)</i>
Underground parking garage	Y/N
Pool deck	Y/N
Public areas on the first story of the building, including the recreation room, exercise room, saunas, the lobby, and the corridor	Y/N
Roof	Y/N
Collapsed section of the building	Y/N

If YES to any of the areas, continue.

If NO, skip to Question 5.1.5.

5.1.4.1. Please walk us through what you have seen at _____ (building area visited) that day, with as much detail as possible.

5.1.4.2. Did you notice anything unusual (e.g., sights, smells, motions, and sounds) at _____ (the building area visited) that day?

If YES, continue.

If NO, skip to Question 5.1.5.

5.1.4.2.1. Please explain what you noticed in as much detail as possible (e.g., what, when, and where).

5.1.4.2.2. Here is a visual that might help [*the interviewer shows the relevant visuals here*]. Let us mark where you noticed these issues.

5.1.5. Did you drive in and out of the underground parking garage on June 23, 2021, the day before the collapse?

If YES, continue.

If NO, skip to Question 5.1.6.

5.1.5.1. Please tell us where you parked that day (i.e., the parking spot #) to the best of your knowledge.

5.1.5.2. How did you park your car that day (e.g., head-in or back in parking)?

5.1.5.3. Here is a visual of the underground parking garage *[the interviewer shows the map of the garage]*. Please mark the path you took to park your car.

5.1.5.4. Let us also mark your walking path that day on this visual.

5.1.5.5. As you were walking through the garage, and entering the building, did you notice anything unusual (e.g., sights, smells, motions, and sounds)?

If YES, continue.

If NO, skip to Question 5.1.6.

5.1.5.6. Please explain what you noticed in as much detail as possible (e.g., what, when, and where).

5.1.5.7. Can we also mark the location of the issues you noticed on this map *[the interviewer shows the relevant visual]*?

5.1.6. Did you notice or hear about anything unusual (e.g., sights, smells, motions, and sounds) about any CTS unit prior to the early morning of June 24, 2021?

If YES, continue.

If NO, skip to Question 5.1.7.

5.1.6.1. Please explain what you noticed in detail (e.g., what, when, and where).

5.1.6.2. Here is a visual that might help *[the interviewer shows the relevant visuals here]*. Let us mark where you noticed these issues.

5.1.7. Is there anything that stood out to you as different in the months, weeks, or days leading up to the collapse?

If YES, continue.

If NO, skip to the next section.

5.1.7.1. Please explain what was different in as much detail as possible *[the interviewer shows the relevant visuals as necessary]*.

SECTION 6. STAKEHOLDER FEEDBACK ON BUILDING EVACUATION, SEARCH AND RESCUE

Now we will be asking questions about your perspectives on evacuation, search and rescue efforts after the collapse of the CTS building.

6.1.1. Please share with us your perspective on evacuation of CTS staff, residents and visitors that night.

6.1.1.1. What aspects of evacuation efforts went well?

6.1.1.2. What were the challenges CTS staff, residents and visitors had while evacuating on their own?

6.1.1.2.1. To your knowledge, how did CTS staff, residents and visitors manage these challenges?

6.1.1.3. What were the challenges CTS staff, residents and visitors had while evacuation efforts by first responders were underway?

6.1.1.3.1. To your knowledge, how did CTS staff, residents and visitors manage these challenges?

6.1.1.4. What would be your recommendations to enhance evacuation efforts like the one you experienced/witnessed in the CTS building?

6.1.2. Please share your perspectives with us on the CTS search and rescue efforts.

6.1.2.1. What aspects of search and rescue efforts went well?

6.1.2.2. What were the challenges faced while search and rescue efforts were underway?

6.1.2.3. How were these challenges dealt with?

6.1.3. Did you have a chance to observe or interact with international search and rescue teams that were deployed to the site?

If YES, continue.

If NO, skip to Question 6.1.4.

6.1.3.1. Please share your observations on these search and rescue teams.

6.1.4. What might be helpful about responding to events of this nature in the future?

Thank you so much for sharing your story. We really appreciate your detailed accounts of this emotional event.

SECTION 7. INFORMATION SHARING AND SEEKING ON THE COLLAPSE

Now we would like to have a conversation about the information you have received and shared after the collapse of CTS.

7.1.1. In the initial few hours after the collapse, as you were trying to make sense of unfolding events, what information did you receive about what was happening?

7.1.1.1. When was this information shared with you?

7.1.1.2. Who shared this information with you?

7.1.1.3. How was this information shared with you (e.g., via phone, text, phone call or a press conference)?

7.1.2. What aspects of the information you received in the first few hours after the collapse were helpful?

7.1.3. What aspects of the information you received in the first few hours after the collapse were confusing?

7.1.4. How did you deal with the information that was confusing in the first few hours after the collapse?

7.1.4.1. Did you seek information from additional sources during this time?

If YES, continue.

If NO, skip to Question 7.1.5.

7.1.4.1.1. What type of information did you seek during this time?

7.1.4.1.2. Who did you seek information from (e.g., social media, news reporters, CTS residents, government officials)?

7.1.5. Did you share any information (e.g., videos, photos) with first responders or others on the day of the collapse?

If YES, Continue.

If NO, skip to the next section.

7.1.5.1. What was that information?

7.1.5.2. Would it be possible for us to have a copy of this information?

7.1.6. From your perspective, what lesson(s) from this experience can you share on how to receive or transmit information during the initial few hours of a building collapse?

SECTION 8. STAKEHOLDER FEEDBACK ON THE GOVERNMENT'S RESPONSE TO THE COLLAPSE

We now would like to hear from you on the government's role in responding to and preventing calamities like the collapse of the CTS building.

8.1.1. We would like to hear your perspectives on the government's response to the collapse of the CTS building.

8.1.1.1. What aspects of the government's response to the collapse of the CTS building worked well?

8.1.1.2. What were the main challenges CTS staff, residents and visitors faced during the response to the collapse of the CTS building?

8.1.1.3. How did CTS staff, residents and visitors deal with these challenges?

8.1.1.4. What might be helpful in terms of addressing the challenges faced during response to a building failure of a similar nature?

Depending on the interviewee's background, ask about different aspects of response such as evacuation, search and rescue.

8.1.2. What are your recommendations for federal, state and local governments on how to respond to events of this nature in the future?

8.1.3. In your opinion, how can the government (at federal, state and local levels) help prevent future calamities such as the one witnessed in Surfside?

8.1.4. Is there anything else that you think we should study further? Or any other questions we should be focusing on?

SECTION 9. WRAP UP & FUTURE STEPS

9.1.1. Is there anything we have not yet discussed but is important for us to know about?

9.1.2. We welcome submissions of data including photos, video and other documentation associated with collapse of CTS. Do you have any additional photos, videos, or other information (e.g., field notes) that you would like to share with us?

9.1.3. Do you have _____ about the following [*the interviewer may ask about specific materials*]?

If YES, continue.

If NO, wrap up the interview.

9.1.3.1. Would you be able to share these with us? Y/N

Those are all the questions we have. The valuable information you provided will help our engineers and scientists improve building safety. Thank you so much for taking the time to talk with us.

After the formal interview ends, you may remember new details or notice new things about the issues we discussed today. Please feel free to reach out back to us to share that information. We are eager to continue this conversation with you.