

**National Institute of Standards and Technology
National Construction Safety Team Investigative of the June 24, 2021
Champlain Towers South (CTS) Condominium Collapse in Surfside, FL
INTERVIEW GUIDE COMPONENT 8: CTS CONTRACTOR**

**OMB Control #0693-0078
Expiration Date: 07/31/2025
[PENDING OMB APPROVAL]**

A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with an information collection subject to the requirements of the Paperwork Reduction Act of 1995 unless the information collection has a currently valid Office of Management and Budget (OMB) Control Number. The approved OMB Control Number for this information collection is **0693-0078**. Without this approval, we could not conduct this information collection. Public reporting for this information collection is estimated to be approximately 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. All responses to this information collection are voluntary. Send comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden to Attn: Judith Mitrani-Reiser, Team Lead for the NIST Champlain Towers South NCST Investigation, Engineering Laboratory, National Institute of Standards and Technology, E-mail: judith.mitrani-reiser@nist.gov or Phone: 301-975-0684.

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

SECTION 1. INTERVIEWEE BACKGROUND AND SECTION ASSIGNMENT

We would like to begin the interview with a few quick questions about your work at the CTS building.

- 1.1.1. When did you/your company perform this work or service at the CTS building (e.g., from month/day/year to month/day/year)?
- 1.1.2. Can you please describe the work or service you/your company performed or planned to perform at the CTS building in as much detail as possible?
- 1.1.3. Let's confirm the areas of the building where you/your company performed or planned to perform this work or service.

[The interviewer marks the second or the third column in the Table below, depending on the status of the work, as Y/N]

<i>Building Area</i>	<i>Work/Service Performed (Y/N)</i>	<i>Planned to Perform Work/Service (Y/N)</i>
Pool Deck (including planters, trees)		
Underground Parking Garage (including rainwater drainage, flooding, electrical issues, underdrain/sump system, basement slab, garage columns)		
Public Areas on the First Story		
Roof		
Individual Units (including the balconies/terraces)	If YES, please specify the unit numbers here.	If YES, please specify the unit numbers here.
Other Areas (Please specify)		

- 1.1.4. How many times did you visit the CTS building while conducting this work/service?
- 1.1.5. When was the last time you were at the CTS building?
- 1.1.6. Were you at the building on June 23, 2021, the day before the collapse?
- 1.1.7. Did you visit any of the units in the building?

If YES, continue.

If NO, skip to the next section.

- 1.1.7.1. Which units did you visit?

Use the table below for section assignment

<i>Answer</i>	<i>Relevant Sections</i>
CTS Contractor	2, 3 (if visited any CTS unit), 4 (if present at CTS the day before the collapse), 5, 6

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. We encourage all opinions, suggestions, theories, and impressions. 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.”

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 causes 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 not being safe while you were there?

If YES, continue:

If NO, skip to Question 2.1.4.

2.1.3.1. What were the signs of the building not being safe? Please provide details about what you noticed (e.g., the time when you noticed them, and where you noticed them). *[The interviewer should use visuals and ask the interviewee to mark where these signs were as necessary here.]*

2.1.4. Did you notice any changes in the structure of CTS building during your visit(s)? Examples are chipping away loose concrete or fragments, rust from exposed reinforcing steel, and patches on concrete slabs, columns, or walls.

If YES, continue.

If NO, skip to Question 2.1.5.

2.1.4.1. What were the changes you noticed? Please provide details about these changes (e.g., the time when you noticed them, and where you noticed them). *[The interviewer should use visuals and ask the interviewee to mark where these changes were as necessary here.]*

2.1.5. Did you notice anything unusual about the CTS building during your visit(s)? 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 2.1.6.

2.1.5.1. What were the unusual issues you noticed about the building? Please provide details about what you noticed (e.g., the time when you noticed them, and where you noticed them). [The interviewer should use visuals and ask the interviewee to mark where these issues were as necessary here.]

The interviewer asks Questions 2.1.6-2.1.6.2 below if the interviewee visited the CTS building in 2021

Now we will be asking you some questions about the months, weeks, days before the collapse.

2.1.6. Did you notice anything unusual in any part of the building a few months, weeks or days before the collapse? The examples of things that are 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 2.1.7.

2.1.6.1. Please provide details about these issues (e.g., what, when, and where). Here is a visual that might help [the interviewer shows the relevant visuals here]. Let us mark where you noticed these issues.

2.1.6.2. To your knowledge, what was done about these issues?

We will now ask about specific areas of the building to get a better sense of their condition. If you feel you are not able to answer some of these questions, please let us know. That is perfectly fine.

2.1.7. Now please tell us the areas of the CTS building that you personally visited [The interviewer marks the second column in the Table above as Y/N].

Building Area	Visited (Y/N)
Pool Deck (including planters, trees)	
Underground Parking Garage (including rainwater drainage, flooding, electrical issues, underdrain/sump system, basement slab, garage columns)	
Public Areas on the First Story	
Roof	
Other Areas (Please specify)	

The interviewer asks Questions 2.1.8-2.1.13.3 below depending on CTS areas visited

POOL DECK

2.1.8. While performing your work/service at the CTS (or “visiting the CTS building” if the work had not yet started), did you notice anything unusual about the pool deck, including the floor, the planters, and the 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 2.1.9.

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

2.1.8.2. 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?

2.1.8.3. To your knowledge, how were these issues resolved?

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

If YES, continue.

If NO, skip to Question 2.1.10.

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

2.1.9.2. 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?

UNDERGROUND PARKING GARAGE

2.1.10. 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 2.1.11.

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

2.1.10.2. 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?

2.1.10.3. To your knowledge, how were these issues in the garage resolved?

PUBLIC AREAS ON THE FIRST STORY

2.1.11. Do you recall noticing anything unusual in the public areas on the first story of the building, including the recreation room, exercise room, saunas, the lobby, and the corridor? The 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 2.1.12.

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 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?

2.1.11.3. To your knowledge, how were these issues resolved?

ROOF

2.1.12. 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 2.1.13.

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

2.1.12.2. 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?

2.1.12.3. To your knowledge, how were these issues resolved?

OTHER AREAS

2.1.13. Did you notice anything unusual about _____?

If YES, continue.

If NO, skip to the next section.

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

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

2.1.13.3. To your knowledge, how were these issues resolved?

Now, let's turn to what you might have heard from others about the CTS building.

2.1.14. Did anyone who is familiar with the building tell you about seeing signs of CTS not being safe prior to its collapse?

If YES, continue.

If NO, skip to Question 2.1.15.

2.1.14.1. What were these signs? Please provide details about what they mentioned to you (e.g., the time when they noticed them, and where they noticed them). *[The interviewer should use visuals and ask the interviewee to mark where these signs were as necessary here.]*

2.1.15. Did anyone familiar with the building mention about the changes they noticed in the structure of the building to you prior to its collapse?

If YES, continue.

If NO, skip to Question 2.1.16.

2.1.15.1. What were the changes they noticed in the structure of the building? Please provide details about what they mentioned to you (e.g., the time when they noticed them, and where they noticed them). *[The interviewer should use visuals and ask the interviewee to mark where these changes were as necessary here.]*

2.1.16. Did anyone familiar with the building mention anything unusual about the building to you prior to its collapse?

If YES, continue.

If NO, skip to Question 2.1.17.

2.1.16.1. What were these unusual issues? Please provide details about what they mentioned to you (e.g., the time when they noticed them, and where they noticed them). *[The interviewer should use visuals and ask the interviewee to mark where these unusual issues were as necessary here.]*

2.1.17. Did anyone familiar with the building mention noticing something unusual in any part of the building a few months, weeks or days before the collapse?

If YES, continue.

If NO, skip to Question 2.1.18.

2.1.17.1. What were these unusual issues they noticed? Please provide details about what they mentioned to you (e.g., the time when they noticed them, and where they noticed them). *[The interviewer should use visuals and ask the interviewee to mark where these issues were as necessary here.]*

We have a few questions related to the 40-year recertification and maintenance issues in the CTS building.

2.1.18. Please tell us about your knowledge of ongoing construction work at CTS building at the time of collapse (e.g., related to 40-year recertification).

2.1.19. Did you become aware of any building maintenance issues in the building because of your individual observations there (e.g., while working at or visiting the building)?

If YES, continue.

If NO, skip to Question 2.1.20.

2.1.19.1. Please explain these issues in detail (e.g., the extent of the issue, the impact, the date). Let's mark the location of these issues here [*the interviewer shows the relevant visuals here*].

2.1.20. Did someone else in the building or someone with the knowledge of the building tell you about any maintenance issues at the CTS building?

If YES, continue.

If NO, skip to Question 2.1.21.

2.1.20.1. How did you hear about these issues (e.g., from a resident, building staff members, a building contractor)?

2.1.20.2. Please explain these issues in detail (e.g., the extent of the issue, the impact, the date). Let's mark the location of these issues here [*the interviewer shows the relevant visuals here*].

2.1.21. While performing work/service at or visiting 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 2.1.22.

2.1.21.1. Please explain what you saw in as much detail as possible. Here is a visual that might help [*the interviewer shows the relevant visuals here*]. Let us mark where you saw these.

2.1.22. While performing work/service there or while visiting the building, 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 2.1.23.

2.1.22.1. Please explain what you saw in as much detail as possible. Here is a visual that might help [the interviewer shows the relevant visuals here]. Let us mark where these issues were being monitored.

2.1.23. Were you/your company involved in or observed any structural assessment at the CTS building with respect to the following:

- Geotechnical (related to the land itself) and foundation issues
 - Subsidence (e.g., 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 2.1.24.

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

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

We also would like to ask you about your impressions of the causes of the collapse.

2.1.24. From your perspective, what do you think may have contributed to the collapse of the Champlain Towers South?

2.1.24.1. What makes you think that? Please explain.

2.1.25. Do you recall any conversations you had with others on what might have caused or contributed to the collapse?

If YES, continue.

If NO, skip to the next section.

2.1.25.1. Please tell us about these conversations in as much detail as possible.

SECTION 3. CTS UNIT CONDITION (PRE-COLLAPSE)

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

3.1.1. Did you notice anything unusual in any of the CTS units you personally visited?

If YES, continue.

If NO, skip to Question 3.1.2.

3.1.1.1. Please describe what you observed in these units. We would appreciate as much detail as possible (e.g., what, when, and where).

3.1.1.2. To the best of your knowledge, what was done about these issues?

3.1.2. Did any CTS resident spoke to you about noticing anything unusual in their units a few months, weeks or days before the collapse?

If YES, continue.

If NO, skip to Question 3.1.3.

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

3.1.2.2. To the best of your knowledge, what was done about these issues?

3.1.3. Did any CTS staff spoke to you about noticing anything unusual in any of the units a few months, weeks or days before the collapse?

If YES, continue.

If NO, skip to the next section.

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

3.1.3.2. To the best of your knowledge, what was done about these issues?

SECTION 4. 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. You mentioned earlier that you were at the building that day.

4.1.1. Please walk us through what you did that day, starting from when you arrived at the building until you left the building.

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

4.1.3. Did you notice anything unusual (e.g., sights, smells, motions, and sounds) about the building that day?

If YES, continue.

If NO, skip to Question 4.1.4.

4.1.3.1. Please explain what you noticed in as much detail as possible (e.g., what, when, and where). Here is a visual that might help [*the interviewer shows the relevant visuals here*]. Let us mark where you noticed these issues.

4.1.4. 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 4.1.5 or to the next section.

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

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

If YES, continue.

If NO, skip to Question 4.1.5 if the person was in the underground parking garage or to the next section if the person was not in the underground parking garage.

4.1.4.2.1. Please explain what you noticed in as much detail as possible (e.g., what, when, and where). Here is a visual that might help [*the interviewer shows the relevant visuals here*]. Let us mark where you noticed these issues.

ASK questions 4.1.5-4.1.11 only if the person drove in and out of the underground parking garage that day:

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

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

4.1.7. 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.

4.1.8. Let us also mark your walking path on this visual.

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

If YES, continue.

If NO, skip to Question 4.1.10.

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

4.1.9.2. Can we mark the location of the issues you noticed on this map [*the interviewer shows the map of the garage*]?

4.1.10. Do you recall heavy rain on any of the days leading up to the collapse?

SECTION 5. STAKEHOLDER FEEDBACK ON THE GOVERNMENT'S RESPONSE TO THE COLLAPSE

We now would like to ask a few questions about the government's response to the collapse.

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

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

5.1.1.2. What would be your recommendations to enhance the government's response to a building failure of a similar nature?

5.1.2. In your opinion, how can the government prevent future calamities such as the one witnessed in Surfside?

5.1.2.1. What are your recommendations for the federal government?

5.1.2.2. What are your suggestions for state governments?

5.1.2.3. What are your suggestions for local governments?

SECTION 6. WRAP UP & FUTURE STEPS

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

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

6.1.3. 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?

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

If YES, continue.

If NO, wrap up the interview.

6.1.4.1. 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.