

Supplements to Exhibits 1, 3, 5, and 7

Re-opened Hearing: Petition No. 2013-0250

Presented to the Capital Region-Syracuse Board of Review

September 19, 2013

Jonathan Ochshorn (petitioner)

I. Exhibit 1 - supplement

A. Summary of original complaint: *Inadequate exits from "crit room" assembly space.* The crit room in Milstein Hall is noncompliant because its floor area supports assembly occupancy of more than 500 people, and yet it only has one exit (a second open stair is not "remote" from the first exit, so it doesn't count as a second means of egress). In addition, common path of travel limits of 75 feet are exceeded. These problems are compounded and replicated when permanent, movable partitions in the space are used to create smaller, but equally noncompliant spaces within the larger space.

B. Hearing Board findings: WHEREFORE IT IS DETERMINED that the application for an appeal from 19 NYCRR Part 1221, Section 1004.2.2.1, 1008.2, 1004.2.5, 303.1 and Table 1003.2.2.2, 1005.2.1 and 503 Appendix K, be and is hereby PROPOSED TO BE GRANTED OR DENIED as follows:

1. Inadequate exits from Crit room assembly space, the Board sustains the appeal for the Petitioner and, therefore, reverses the determination of the Code Enforcement Official.

C. New comments pertaining to this exhibit:

1. Cornell has already violated the findings of the Board concerning Exhibit 1, by placing a sign in the Crit Room space limiting occupancy to 49 persons (see Figure 1). The Hearing Board sustained my claim that a single exit is noncompliant and, in sustaining the appeal, implicitly supported the remedies I outlined:

"There are only two remedies for this situation. If one exit is to be maintained, then the floor area of the space must be reduced so that the calculated occupancy, including the occupancy of any accessory spaces that egress through the crit room space, does not exceed 50 [note that the 2010 Code has a maximum occupancy limit of 49; the 2002 Code has a limit of 50]. An alternative remedy would be to add additional, remote, exits from the space, corresponding to the calculated occupancy.

"A third approach—posting a maximum occupancy sign limiting the occupancy to 50 people—is not supported by the Code. While this strategy can be used in existing buildings found to exceed current Code limits (see, for example, Exhibit 7), it is not appropriate for new construction. In new buildings, the number of exits is determined by Section 1003.2.2 (2002 New York State Building Code, Design occupant load), which states: 'In determining means of egress requirements, the number of occupants for whom means of egress facilities shall be provided shall be established by the **largest number** computed in accordance with Sections 1003.2.2.1 through 1003.2.2.3.' The three occupant load numbers,

of which the largest value must be used, are based on 1) actual number of occupants; 2) number per Table 1003.2.2.2 (which contains the various “assembly without fixed seats” values quoted above); and 3) the number by combination (which includes any additional occupants egressing through the space from accessory spaces). Since the values established by Table 1003.2.2.2 are larger than 50, a posted maximum occupant load of 50 cannot be used for this space.” (emphasis added)

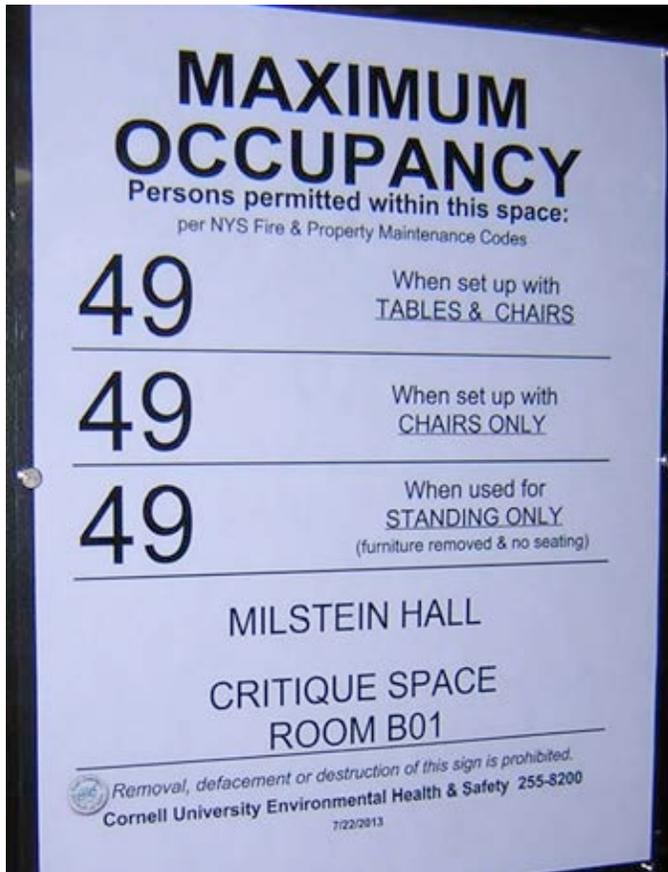


Figure 1. Occupancy sign in Crit Room dated July 22, 2013.

Cornell has used the “third approach” that is expressly forbidden in Exhibit 1 (and that is expressly forbidden by the 2002 NYS Building Code) by posting an occupancy sign that does not even come close to representing the maximum calculated occupant load for the space.

2. Cornell, in its “explanation” about the occupancy of the Crit Room, claims that it can be designed with an occupant load of 100 square feet per occupant when used as a classroom/critique space Group B occupancy. This is how they arrive at their figure of “49 or fewer persons” and their conclusion that, when used as a classroom/critique space, only one exit is required.

However, Cornell's analysis contains a fundamental misreading of the Code: it confuses the occupancy classification (in this case Group “B”) with the actual use of the space (in this case “classroom” or “assembly” use), and incorrectly assumes that every function or use within a Group B occupancy can be designed with an occupant load of 100 square feet per person. This assumption is not supported by any section of the New York State Building Code. The 2009 IBC *Code and Commentary* confirms the importance of the distinction between an occupancy group and the actual use of the space: “Table 1004.1.1 [Table 1003.2.2.2 in the 2002 Code] establishes

minimum occupant densities based on the **function or actual use of the space (not group classification)**...” (emphasis added)

In other words, the use of 100 square feet per occupant — a number appropriate for actual “business use” — is not appropriate for a classroom/critique space, where the density of occupants is far greater. Whether a value is chosen based on “classroom” use (20 square feet per occupant), unconcentrated assembly use (15 square feet per occupant), or some other rational value, it is clear that far more than 50 people can occupy the space, and that at least two exits are needed, even when the space is configured for classroom or critique functions. For example, if classroom use is assumed, there are over 200 calculated occupants ($4500 / 20 = 225$).

3. Moreover, the Crit Room space was initially permitted for assembly (exhibition, reception, etc.) as well as classroom use. It's use as an assembly space for reception and exhibitions is absolutely central to the building's conception and operation. Cornell describes the space as follows: "The double-height space in the lower level, created under the dome, **is the center of Milstein Hall — a multi-use space** for students and faculty. **The bridge links the main public entry of Milstein Hall to the auditorium** and the lower plate." The Crit Room was, and is, directly connected to the Milstein Hall auditorium and will still function as a reception and/or exhibition space for large events, such as lectures, since the hundreds of people attending events in the auditorium are able to *move directly into the adjacent Crit Room space* through two prominent glass doors (Figure 2 and Figure 3). Additionally, a lower-level exit from the auditorium leads into the corridor that connects directly to the Crit Room space. This space was, and is, configured for reception and exhibition events, since it is directly and prominently connected to the auditorium, and it is both dangerous and unrealistic to pretend that such events will never again occur in the space.



Figure 2. Prominent and direct connections between the auditorium and the Crit Room have been provided at the mezzanine level of the Crit Room (left) and the lower level (right).

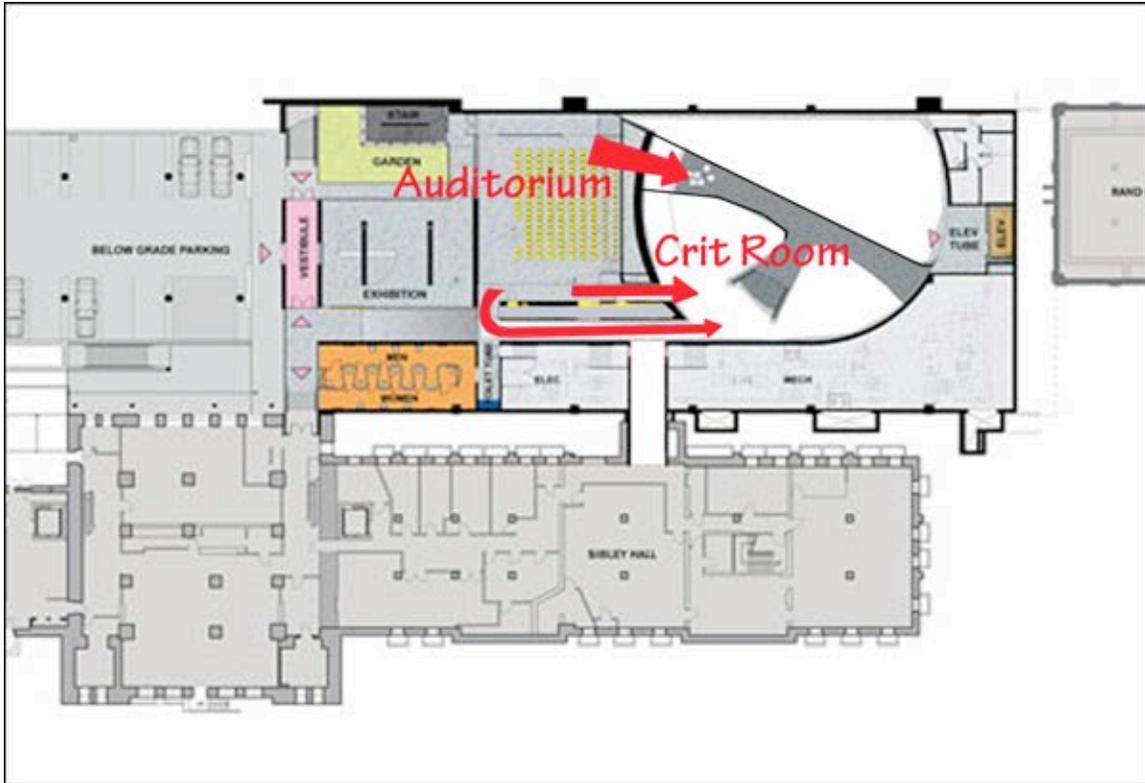


Figure 3. Plan of the auditorium and crit room showing multiple and prominent connections between the two spaces.

The Crit Room was, and is, a room with more than 4,500 square feet of area and only a single compliant exit. Posting a sign limiting occupancy to 49 persons is not consistent with the requirements of the New York State Building Code. I request that the Board clarify its findings with respect to this Exhibit, and address Cornell's continued occupation of the space with only a single exit.

II. Exhibit 3 - supplement

A. Summary of original complaint: *Inadequate fire barrier between Milstein and E. Sibley Hall.* The fire barrier between Milstein Hall (the addition) and Sibley Hall was never built per Code specifications, and so is noncompliant. The Tyco 5.6 K-Factor Model WS Specific Application Window Sprinklers added later appear to be noncompliant for this application as well.

B. Hearing Board findings: WHEREFORE IT IS DETERMINED that the application for an appeal from 19 NYCRR Part 1221, Section 1004.2.2.1, 1008.2, 1004.2.5, 303.1 and Table 1003.2.2.2, 1005.2.1 and 503 Appendix K, be and is hereby PROPOSED TO BE GRANTED OR DENIED as follows:

3. Inadequate fire barrier between Milstein and East Sibley Hall, the Board upholds the decision of the code enforcement official in light of information submitted and testimony given today that adequate code-compliant fire separation does exist, and the Board of Review will expect a submittal from the City of Ithaca on the testified approvals from the compliance testing lab.

C. New comments pertaining to this exhibit:

1. Proposal Request No. 129 (included as Attachment No. 3 by Cornell in the original Hearing), which is “stamped and signed by Architect and mechanical Engineer,” does not qualify under the 2002 Code as acceptable documentation proving that the installation of sprinklers satisfies ASTM E 119. Cornell, in its handout to the Hearing Board, states: “The fire-rated windows are installed by the manufacturer and comply with the testing and their installation requirements.” Reading this, one would get the impression that the installed windows are compliant with the requirements of the 2002 Code. Of course, as was admitted in the same handout: “The Architect’s Office made an error in submittal review and changed the rating of the fire-rated window assembly from 1 hour to 3/4 hour.” Therefore, the claim that the windows “comply with the testing and their installation requirements” is only true for a 3/4 hour fire-resistance rating, and not for the required 1 hour rating. That is, the statement is both irrelevant to the issue being contested as well as being misleading, since it implies that the windows are compliant when they are actually noncompliant.

2. I spoke with Ken Dias (ken.dias@tycofp.com), an Applications Specialist at Tyco (the manufacturer of the sprinkler system), on July 23, 2013. He supported all of my objections to considering the sprinkler installation as satisfying the requirements of NER-516, the "legacy report" concerning Tyco Fire Products Window Sprinkler Model WS. In other words, he agreed that these openings do not count as 1-hour fire-resistance-rated walls per NER-516 or ASTM E 119.

In an email to me dated July 24, 2013 (reproduced at the end of this section), he writes: “You have stated that there is a horizontal mullion projecting more than 5/8” from the glazing. It is likely that this horizontal mullion would impede the smooth continuous flow of water down the glazing and create unacceptable dry spots. Again, **horizontal mullions are not allowed** in accordance with the UL Specific Application Listing... You have stated that the wood framing from the original window is less than 2” from the new glazing. **The UL Listing requires that all combustible material must be a minimum 2” from the face of glazing**... Lastly, this installation is quite unique in nature as it encompasses a ‘new’ piece of glazing located off of an existing window, resulting in an ‘enclosed’ area between two pieces of glazing where one of the two WS sprinklers is located within. This arrangement was not considered in the UL testing nor is it addressed within the evaluation service reports. It should be understood that the intent of the WS Window Sprinkler is to realize activation in a timely enough manner to protect the associated glazing. The existence of two panes of glass on either side of the one WS sprinkler will result in the prevention of hot gasses to that sprinkler until such time that the original pane may rupture. Consideration should

be given to what will happen to the rupturing pieces or sections of glass. Could large pieces somehow be propped up against the newer pane, causing an obstruction to the smooth flow of water down this pane?"

The Tyco specialist concludes his email as follows: "In conclusion, **this installation does not appear to be in compliance with the UL Listing per Tyco data sheet TFP620, ESR-2397 or NER-516**" (emphasis added).

3. Cornell, in its testimony and handouts, has been extremely misleading, if not outright dishonest, in claiming that the fire barrier satisfies Code requirements. The "signed and sealed" drawings are simply engineering drawings for a sprinkler application, and, as far as I can tell, say nothing at all about satisfying requirements for a 1-hour fire rating, per NER-516 or ASTM E 119. The claim that the horizontal mullion is compliant because it is only a "muntin" seems to be a complete fabrication, with no basis in any documentation. This claim is explicitly contradicted by the application specialist at Tyco, the manufacturer of the sprinklers. Cornell's claim in their handout that the "fire-rated windows are installed by the manufacturer and comply with the testing and their installation requirements" is absolutely misleading and disingenuous, as these windows only provide a 3/4-hour fire-resistive rating rather than the required 1-hour rating.

4. Additionally, the drawings supplied by Cornell as Attachment No. 3 show only one-sided sprinklers installed at the first floor and basement levels of Sibley Hall, rather than two-sided sprinklers. Evaluation Report No. NER-516, Section 3.1, referenced by Cornell in their remarks to the Hearing Board, states that: "The sprinklers shall be located on the inside of the glazing assembly located in exterior walls required to be rated for protection and **on both sides of an interior non-load-bearing fire separation assembly**" (emphasis added).

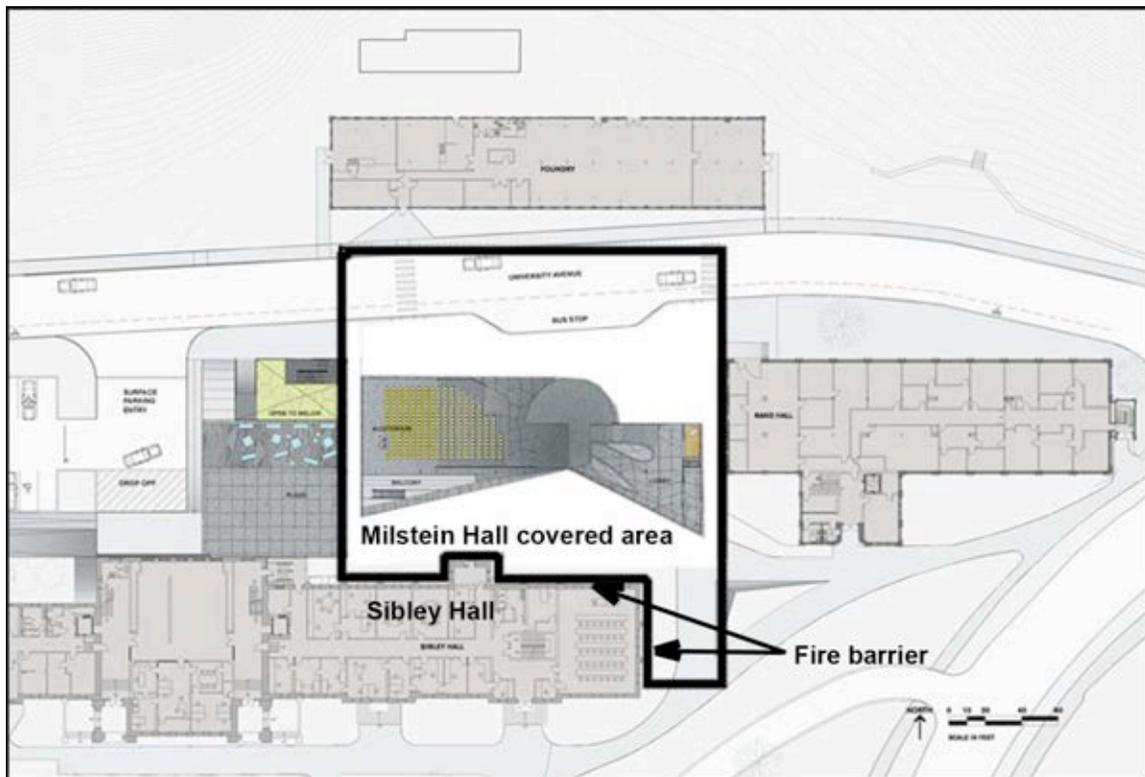


Figure 4. Ground floor plan shows that *fire barrier protection is needed between Milstein and Sibley Halls, not "exterior wall" protection*. Covered areas count as building area, per Section 502.1 of the New York State Building Code.

Even though the first floor and basement windows in Sibley are technically in "exterior walls," these exterior walls are not required to be "rated for protection" (Figure 4). Table 601 in the Building Code has *no exterior bearing wall fire-resistance rating requirement* for Type V-B construction, except as may be required by Table 602. However, Table 602 only requires fire-resistance ratings for exterior walls closer than 30 feet to the closest interior lot line, or centerline of a street. None of this one-sided exterior wall protection applies to the wall between Milstein and Sibley Hall, which instead must be designed to *separate two building areas*, one of which is the covered exterior building area under the upper level of Milstein Hall.

This covered exterior area counts as building area per Section 502.1 of the Building Code, which defines *Building Area* as follows: "...Areas of the building not provided with surrounding walls shall be included in the building area if such areas are **included within the horizontal projection of the roof of floor above**" (emphasis added). The overhanging second floor of Milstein Hall therefore creates "building area" in all the covered spaces below.

In other words, since fire barriers are required to separate portions of the building between this covered area of Milstein Hall and the first and basement levels of Sibley Hall, then the sprinklers at those locations should correspond to the use of fire barriers at those levels. That fire barriers were installed at these locations means they are *separating building areas* on both sides (otherwise they would not be required); hence the sprinklers *should be on both sides* of the fire-rated glazing.

It is true that the Code language here provides no perfectly unambiguous choice. Single-sided sprinklers are to be used for "exterior walls," yet there are no applications for fire barriers in exterior walls, according to Section 706 of the 2002 Code (Fire Barriers). In other words, fire barriers are only used for the separation of two building areas, or fire areas, from each other, and not to provide fire-resistance ratings for exterior walls. On the other hand, double-sided sprinklers are to be used for "an interior... fire separation assembly," and the first floor and basement fire barrier walls, while they separate building areas, do not separate interior building areas. Given these two options, however, it seems clear that the better (and safer) choice is arrived at by examining the purpose of these fire-rated glazing elements: they are not intended to provide exterior wall fire-resistance, but rather to create a compliant fire barrier separating two building areas.

Therefore, the double-sided application seems correct, and the single-sided application actually used appears to be noncompliant.

Email from Ken Dias (Tyco Applications Specialist), dated July 24, 2013, concerning Exhibit 3

From: <Dias>, Ken Dias <ken.dias@tycofp.com>
Date: Wednesday, July 24, 2013 8:40 AM
To: Jonathan Ochshorn <jo24@cornell.edu>
Cc: "Maughan, Kevin" <Kevin.Maughan@tycofp.com>
Subject: RE: Use of Tyco Model WS 5.6 K-Factor Window Sprinklers

Jonathan,

It appears that the intended use of the WS sprinklers per your provided photo is to provide a fire rated "equivalency" to the newer pane of glass (in black frame) located adjacent (in front) of the original window. I will therefore first address my comments with regard to this.

You have stated that the inside vertical WS sprinkler is less than 4 inches from the inside face of glass. The UL Listing requires a minimum of 4" from the face of glass. We have not performed testing at distances less than 4 inches to my knowledge and therefore cannot speculate on the impact of the distribution of water onto the glazing. There appears to be a horizontal mullion running across this new pane of glass. Horizontal mullions are not allowed in accordance with the UL Specific Application Listing.

You have stated that the wood framing from the original window is less than 2" from the new glazing. The UL Listing requires that all combustible material must be a minimum 2" from the face of glazing.

With regard to the WS sprinkler on the other side (outside) of the newer glazing, I have the following comment. You have stated that there is a horizontal mullion projecting more than 5/8" from the glazing. It is likely that this horizontal mullion would impede the smooth continuous flow of water down the glazing and create unacceptable dry spots. Again, horizontal mullions are not allowed in accordance with the UL Specific Application Listing.

Lastly, this installation is quite unique in nature as it encompasses a "new" piece of glazing located off of an existing window, resulting in an "enclosed" area between two pieces of glazing where one of the two WS sprinklers is located within. This arrangement was not considered in the UL testing nor is it addressed within the evaluation service reports. It should be understood that the intent of the WS Window Sprinkler is to realize activation in a timely enough manner to protect the associated glazing. The existence of two panes of glass on either side of the one WS sprinkler will result in the prevention of hot gasses to that sprinkler until such time that the original pane may rupture. Consideration should be given to what will happen to the rupturing pieces or sections of glass. Could large pieces somehow be propped up against the newer pane, causing an obstruction to the smooth flow of water down this pane?

In conclusion, this installation does not appear to be in compliance with the UL Listing per Tyco data sheet TFP620, ESR-2397 or NER-516

Please contact Technical Services if you have any other questions or concerns.

Regards,

Ken Dias / Applications Specialist / **Tyco Fire Protection Products**
Tel: +1 401 781 8220 ext 60499 1467 Elmwood Ave / Cranston, RI 02910 / USA
ken.dias@tycofp.com / www.tyco-fire.com



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From: Jonathan Ochshorn [<mailto:jo24@cornell.edu>] **Sent:** Tuesday, July 23, 2013 11:50 AM **To:** Dias, Ken **Subject:** Use of Tyco Model WS 5.6 K-Factor Window Sprinklers

Hi Ken,

Per our recent phone conversation, I am attaching a photo of an installation using Tyco WS 5.6 K-Factor window sprinklers to achieve a 1-hour (minimum) fire-resistive rating in conformance with the requirements of ASTM E 119.

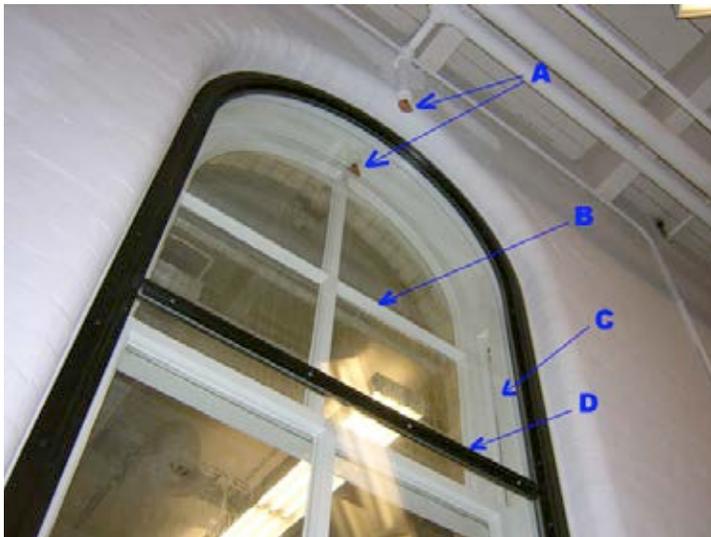
There are four items marked on the photo, and I wish to get your evaluation or comments on each of them: specifically, based on the information I have provided, do they conform to the requirements of ESR-2397 or NER-516.

Item A shows the two vertical sidewall sprinklers. One of the two sprinklers is sandwiched between the new fire-rated glazing (in the black metal frame) and the existing window. This "inside" sprinkler is *less than 4 inches from the face of the fire-rated glazing*.

Item B shows the existing wood-framed window in this installation. The "inside" sprinkler described in Item A is *sandwiched between the existing window and the new fire-rated glazing*.

Item C shows the wood (combustible) frame of the existing window, which is *less than 2 inches from the fire-rated glazing*.

Item D shows a *horizontal mullion* (or muntin) that projects out from the face of the fire-rated glazing more than 5/8 inch.



Thank you for your help.

Jonathan Ochshorn

III. Exhibit 5 - supplement

A. Summary of original complaint: *Milstein-Sibley-Rand Halls exceed Table 503 floor area limits, based on Appendix K.* Milstein-Sibley-Rand Hall is a single building with construction type V-B (based on combustible wood-frame construction of Sibley Hall's third floor exterior bearing walls). As an A-3 or Group B occupancy of construction type V-B, the floor area of the combined buildings greatly exceeds the allowable limit specified in Table 503 of the Building Code. Appendix K of the 2002 Building Code allows additions to increase building areas beyond those specified in Chapter 5 when a fire barrier is provided, but sets no limits on how much additional area is allowed. This makes no sense and is therefore unenforceable—no other known Code permits the combined area of existing buildings and additions to exceed the limits of Table 503 (or equivalent) without providing a fire wall, not just a fire barrier. Even if Appendix K is interpreted as allowing the "addition" to count as a separate building (i.e., as if it were separated by a fire wall—an assumption that is not supported by any provisions in the 2002 Code), the combustible wood-framed third floor exterior bearing wall of adjacent Sibley Hall still is problematic.

B. Hearing Board findings: WHEREFORE IT IS DETERMINED that the application for an appeal from 19 NYCRR Part 1221, Section 1004.2.2.1, 1008.2, 1004.2.5, 303.1 and Table 1003.2.2.2, 1005.2.1 and 503 Appendix K, be and is hereby PROPOSED TO BE GRANTED OR DENIED as follows:

5. Milstein/Sibley/Rand Halls exceeding Table 503 floor area limits, the Board upholds the decision of the code enforcement official.

C. New comments pertaining to this exhibit:

1. As far as I can tell, the Hearing Board ruled that a fire barrier under Appendix K of the 2002 NYS Building Code *does allow* an addition to increase the area of an existing building beyond the area otherwise permitted by Chapter 5 of the Code. However, the Hearing Board agreed with me that the entire building consisting of Sibley, Milstein, and Rand Halls counts as Type V-B construction, based on the construction type of Sibley Hall. The "Decision" of the Hearing Board dated August 20, 2013, explicitly states: "The petition pertains to a B occupancy and an A-3 occupancy... of **Type VB construction...**" (emphasis added). Charles Bliss, in his testimony at the Hearing, also agreed that, under Code, the entire building is of construction type V-B.

2. The question remains as to what limits should constrain the area of such an addition. Lawrence Burns of KHA Architects answers this question in his letter reproduced as Attachment No. 4: "We believe that the requirements of nonseparated uses applies [sic] *to each portion of the building* and do not restrict the areas of the entire building" (emphasis added). Cornell, in their handout to the Board, makes the same point. In other words, Milstein Hall's per-floor area, taken by itself, must still meet the requirements for nonseparated uses in the 2002 Building Code.

Therefore, even though the Board upheld the City of Ithaca Code Officials' determination (agreeing with the City that an addition can increase the area of an existing building if separated by a fire barrier), the Board disagreed with the contention made by Cornell and the City of Ithaca that fire barriers used under Appendix K allow each fire area to be designed according to its own construction type. By insisting that the entire building be designed with construction type V-B, the Board ruling effectively establishes that Milstein Hall, taken by itself, must not exceed per-floor area limits of the Code based on its nonseparated B/A-3 occupancy and its V-B construction type.

Since Milstein Hall — considered by itself without the added area of Sibley or Rand Halls — *still exceeds area limits* specified in Table 503 of the NYS Building Code, it is clearly noncompliant. This is because Table 503 of the Code sets a per-floor area limit for nonseparated B/A-3

occupancies with Type V-B construction of 6000 square feet, which can be increased to no more than 22,500 square feet when sprinklers and the *maximum* possible frontage allowances are factored in (Milstein Hall's allowable area is actually even lower than 22,500 square feet when the *calculated* area increase due to frontage is used). Because Milstein Hall has a per-floor area of 25,600 square feet, it exceeds this limit and is therefore noncompliant (Figure 5).

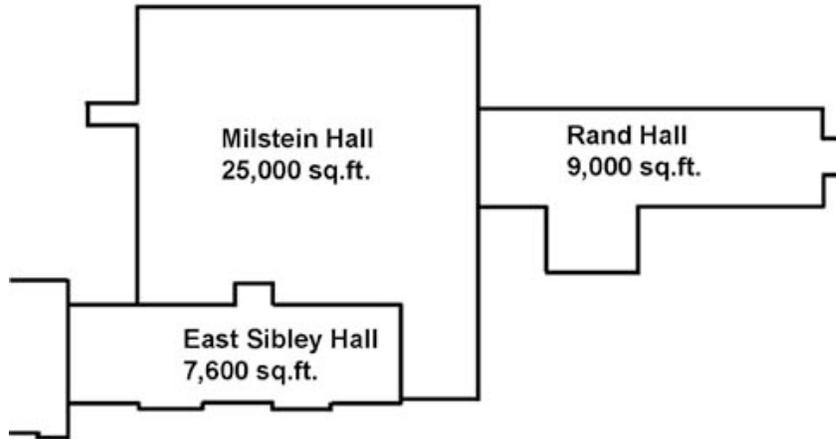


Figure 5. Approximate floor areas of Milstein, East Sibley, and Rand Halls. Milstein Hall's actual upper-floor area is 25,600 square feet, according to "Issued for Construction" permit drawings dated Dec. 5, 2008.

Given the apparent inconsistency between the Hearing Board's decision supporting the code enforcement official's interpretation of Appendix K, and the noncompliant floor area of Milstein Hall (even when the allowances of Appendix K are accounted for), I request clarification as to the compliance of Milstein-Sibley-Rand Hall with respect to Table 503 floor areas limits.

IV. Exhibit 7 - supplement

Summary of original complaint: *Inadequate exits from 261 E. Sibley Hall.* When the Fine Arts Library was recently moved from Sibley Hall, a space formerly occupied by the library was changed into a different type of assembly or classroom space. This space can be occupied by as many as 240 people, yet has only a single exit. New York State's "Code Interpretation 2008-01" ruled that such spaces with more than 49 occupants must have two exits, even if they were compliant ("grandfathered") under older Codes.

Hearing Board findings: WHEREFORE IT IS DETERMINED that the application for an appeal from 19 NYCRR Part 1221, Section 1004.2.2.1, 1008.2, 1004.2.5, 303.1 and Table 1003.2.2.2, 1005.2.1 and 503 Appendix K, be and is hereby PROPOSED TO BE GRANTED OR DENIED as follows:

7. Inadequate exits from 261 East Sibley Hall, the Board upholds the decision of the code enforcement official, and testimony today seemed to confirm that currently there is a business occupancy in this area and changes in the future will require proper review and permission from the city of Ithaca Building Department. The Board notes that the posting of the occupant load as stated today needs to be immediately reviewed for the current use and altered as required.

C. New comments pertaining to this exhibit:

The Hearing Board upheld the decision of the code enforcement official, but it is not clear what that decision was, and why it was upheld by the Board.

On the one hand, if the Ithaca Building Department approved a building permit to convert Room 261 East Sibley Hall from an A-3 library to another kind of assembly or business occupation, then this permit was issued in violation of the New York State Building Code, since it permitted the room's occupancy load to be increased from 17 persons – the prior condition based on 100 square feet per person for a library stack area – to 240 persons, even though there is only one compliant exit for the space. Because the room's prior occupancy had never exceeded 49 persons, no recourse to a "grandfathered" condition can be invoked to justify such an occupancy increase. Furthermore, even if the prior occupancy *had exceeded* 49 persons, New York State Code Interpretation 2008-01, which is applicable to all buildings and spaces in New York State, prohibits the continued occupancy of such rooms with more than 49 persons unless additional exits are provided.

On the other hand, if the occupancy in this room was changed *without a building permit*, then the same violations are present, as well as the additional violation of executing a change of occupancy without obtaining a building permit.

In any case, as of Sept. 18, 2013, Cornell has still not changed the posted occupancy sign in Room 261 East Sibley Hall, as was required by the Hearing Board's decision. As far as I know, a building permit has neither been applied for nor issued to convert the occupancy of this space from an A-3 library use to a B occupancy. Finally, because the space has only one compliant exit and because there is an existing 25-occupant classroom/conference room that exits into and through this space, **only 24 additional occupants should be permitted in the space, rather than the limit of 240 occupants still posted for this room.**

A number of errors in Cornell's handout and testimony about Room 261 in East Sibley Hall during the Hearing may have created the false impression that this room's current occupancy has a legal basis, or can be "fixed" without filing a building permit. There are at least six problems with such a

conclusion:

1. It is absolutely inappropriate and dangerous to compute the remoteness of exits within a room or area by looking only at the remoteness of exits for the building as a whole. The plan provided in Cornell's handout (Figure 6) shows only the remoteness calculation for East Sibley Hall as a whole, but not for Room 261. The idea that this room "is part of a larger space with two remote exits," and therefore does not need to satisfy exit requirements for its own occupancy, is so completely wrong-headed and dangerous that I find it hard to believe that such statements would be put in writing by both the architect of record and the architect managing the project for Cornell.

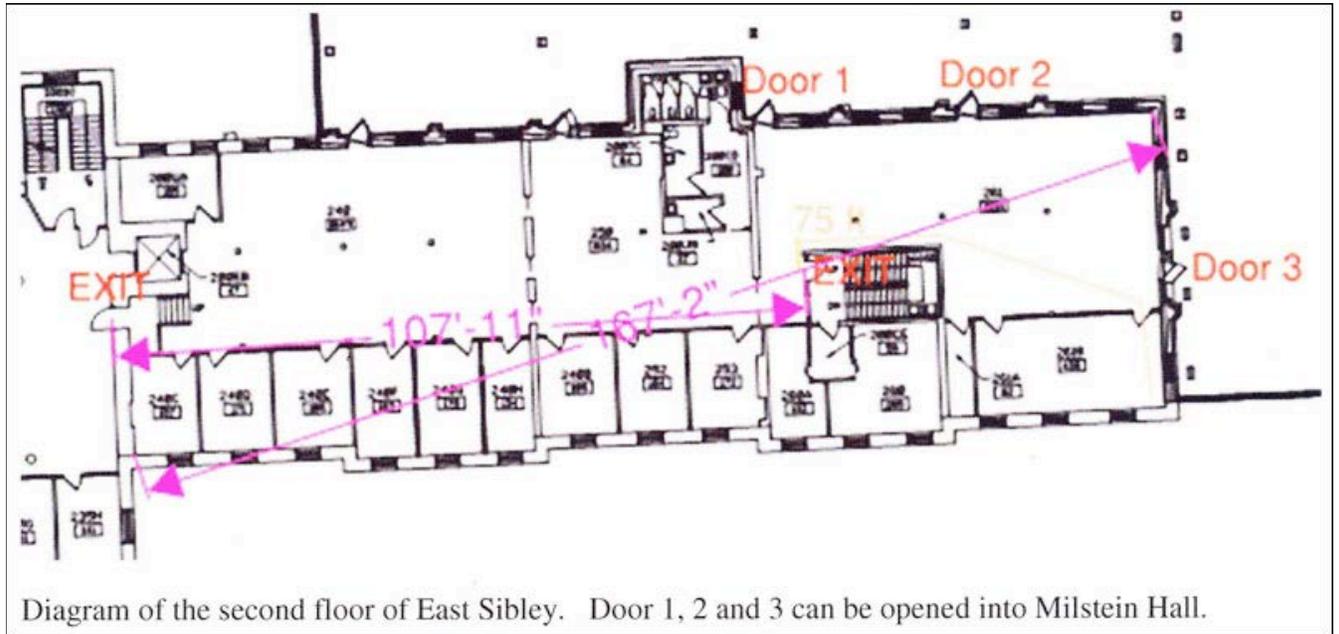


Figure 6. Plan of E. Sibley Hall, 2nd floor, from Cornell's handout.

2. The caption under Cornell's plan (Figure 6), further states that "Door 1, 2, and 3 can be opened into Milstein Hall." First, this is factually inaccurate, as these doors are often locked when the room is occupied. Second, having doors that "can be opened" is not a sufficient specification for a legal exit. For one thing, there are no exit signs marking these doors as exits; and there is no special hardware that guarantees that the doors remain unlocked (in fact, as I have just written, the opposite is true).

3. Such exits, leading into Milstein Hall, would create new exiting conditions in Milstein Hall that were not part of the permitted set of drawings. A *new building permit would be required* and new exiting calculations would need to be provided before the doors leading from Room 261 to Milstein Hall could be used as exit doors from East Sibley Hall.

4. Wilhelm's testimony at the Hearing described the posted occupancies in Room 261 as a relic of the original pre-Milstein era, presumably when the space was occupied by the Fine Arts Library. Wilhelm stated that this posted occupancy was not something newly contrived, but rather a lingering remnant of the old occupancy. But a library stack area has a load factor of 100 square feet per occupant, or only 17 occupants for the entire room. This clearly has no relationship to the posted occupancy of 112 or 240 persons.

In fact, the posted occupancy sign in Room 261 was not only recently created, but it was revised at least twice within the past year or so — well after Milstein Hall was completed (Figure 7).

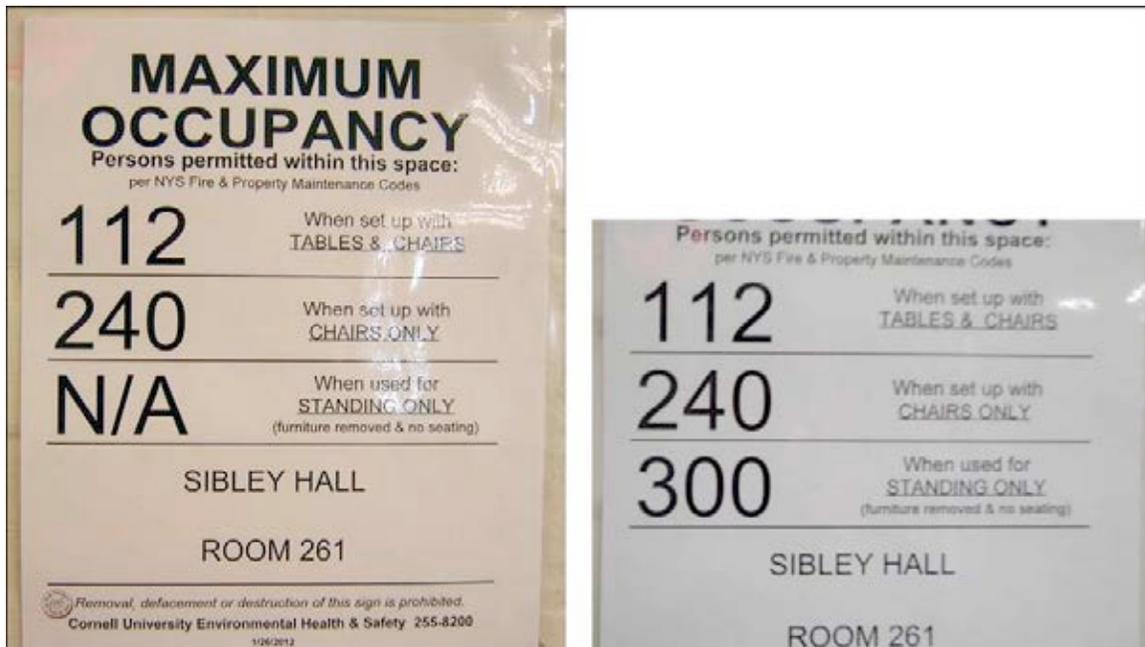


Figure 7. Occupancy signs for Room 261 E. Sibley Hall photographed in July, 2013 (left) and in May, 2012 (right).

As this occupancy sign was edited and re-posted after May 9, 2012, it is clearly something done deliberately — well after the certificate of occupancy for Milstein Hall was issued on Feb. 24, 2012. It therefore **should have triggered a code review under the Existing Building Code of NYS**, since all changes of occupancy — even those within the same A-3 occupancy class — require Code review. Increasing the occupancy of a space from 100 square feet per occupant to 7 square feet per occupant, and thereby increasing the occupant load in the room from 17 to 300 (subsequently changed to 240) clearly is something that the Building Department should have reviewed, especially in a space with only a single legal exit.

5. The Hearing Board findings, based on Cornell's testimony at the Hearing, state that the current occupancy in Room 261 E. Sibley Hall is Group B Business ("testimony today seemed to confirm that currently there is a business occupancy in this area...") even though the posted occupancy sign corresponds to assembly uses, and the use of the space prior to its current occupancy was for Group A-3 library use. No building permit seems to have been filed for a change of occupancy from an A-3 to a Group B use, and, in fact, a new occupancy sign was posted after the library moved from the space, with numbers corresponding to assembly use without fixed seats.

6. Even if this space is newly permitted as a Group B space for educational occupancies above the 12th grade level, it is important to note that there is already a large, 390 square foot seminar room with capacity for approximately 25 persons that exits through this room (shown in Figure 6); therefore, **only 24 additional occupants (i.e., 49 minus the number of occupants in the seminar room) can legally occupy 261 E. Sibley Hall**, and the occupancy sign should correspond to that limit of 24 occupants. The *total* limit of 49 occupants (25 + 24) applies to the combined space of 261 East Sibley Hall and its seminar room (261B East Sibley Hall) because there is only a single compliant exit. Per New York State *Code Interpretation 2008-01*, even a prior legal occupancy of these spaces with more than 49 occupants could not continue under the current Code — that is, could not be "grandfathered." In fact, prior occupancies of the space did not exceed 49 occupants (library stack area from 1974 – 2011; design studio classrooms 1959 – 1974), so the question of a "grandfathered" occupation for more than 49 persons is moot in any

case.

Cornell has had a long-standing habit of making changes to its existing building stock without submitting adequate documentation and without obtaining proper building permits. The City of Ithaca Building Department has gone along with this unsafe and illegal practice. As is evident from this Exhibit, extremely dangerous conditions can result from such lax and illegal practices – in this case, a space with only a single compliant exit was converted into an occupancy for 240 persons. In light of the multiple errors in Cornell's prior testimony, and in order to encourage a proper respect for fire safety regulations and procedures in the New York State Building Code, I request that the Hearing Board reverse its prior decision.