



THE PORT AUTHORITY OF NY & NJ

November 22, 2004

Engineering Department

Hon. Fatma M. Amer, P. E.
Acting Deputy Commissioner, Technical Affairs
NYC Department of Buildings
280 Broadway, 7th Floor
New York, NY 10007

Re: World trade Center – Freedom Tower - Passenger Elevators


Dear Commissioner Amer:

Thank you for the meetings on October 1 and November 12, 2004, to discuss the elevator arrangement in the Freedom Tower, which is currently in the design phase. As discussed at the meetings and explained in the attached October 7, 2004 letter from Jaros Baum & Bolles (JB&B) to SOM, architects for the tower, five-car passenger elevator groupings in the tower are proposed.


The Port Authority agrees with JB&B's explanation in the letter that the objective behind Rule 100.1d (2) of RS-18 in the New York City Building Code, for not permitting more than four elevators in a hoist way in buildings with multiple hoist ways, is to have access to a floor available in case of emergency even if a hoist way is lost. The Port Authority also concurs with JB&B's position that with two separate fireman's elevators, two separate service elevator groups that serve all floors of the building, and other safety enhancements as explained in the letter and shown in the enclosed drawings, the intent of the rule in Rs-18 is met.

You stated at the meetings that since the Fire Department responds to the emergencies, you might seek their opinion on the design. If you agree with our understanding of the code as explained above, and the Fire Department has no problem with the design, I would appreciate your concurrence.

Very truly yours,


Saroj Bhol, P. E.
Manager, Design Standards
att.

*See attached Fire Dept letter
dated 1/13/05*

 1/24/05
Fatma M. Amer, P.E.
Acting Deputy Commissioner
Technical Affairs

Gateway 3
100 Mulberry Street
Newark, NJ 07102



FIRE DEPARTMENT BUILDINGS
9 METROTECH CENTER BROOKLYN, N.Y. 11201-3857

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Fatma Amer, P.E.
Acting Deputy Commissioner
New York City Department of Buildings
280 Broadway
New York, NY 10007

January 13, 2005

Re: Freedom Tower Elevators
The use of a 5-car passenger elevator grouping in a single hoistway

Dear Commissioner Amer:

We have reviewed all the documents forwarded to this Department along with your letter dated November 23, 2004 regarding the above referenced subject. The documents included copies of letters from Port Authority, Skidmore, Owings & Merrill LLP, and JB & B Consulting Engineers. A meeting of all concerned parties was held at the Fire Department headquarters on January 6, 2005 to further discuss the above subject and related issues.

Based on the information provided in the JB & B letter dated October 7, 2004 and the meeting held on January 6, 2005, we concur with your decision to grant a waiver of Rule 100.1d(2) of Reference Standard 18 of the New York City Building Code. The following information was provided by Mr. Saroj Bhol, P.E. from Port Authority, Mr. Steve Kinnaman and Mr. Mitchel W. Simpler from JB & B Consultants at the meeting with regard to the suggested design and installation of elevators in the proposed new Freedom Tower Building:

1. The use of 5-car hoistway as compared to 2-car and 3-car hoistways will provide for sufficient area to deal with air displacement, aerodynamic buffeting and minimizing the noise caused by the high-speed cars.
2. Hoistways and elevator machine rooms will be vented independently of each other.
3. 5 Service elevators that serve all floors of the building will become dedicated for fire fighters use during emergencies.
4. The 5 Service elevators will be in two separate hoistways serving a common lobby (3-car and 2-car hoistway).
5. The 5-car Service elevators grouping will be in a fire protected and pressurized lobby. Also the stairways served by these service elevators will be fire protected and pressurized.
6. All elevator hoistways will be in reinforced concrete shear-wall construction on three sides of the hoistways.
7. All elevators in the building will be provided with fireman service operational capability.
8. All elevators will be compliant to ADA requirements.

Please be advised that by allowing the 5-car grouping in a single hoistway instead of the maximum of four cars permitted by the current RS-18 rule, the number of hoistways available for

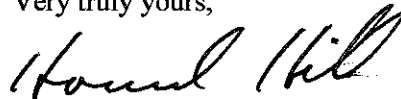
use in an emergency will be reduced. Therefore, we further recommend that the 5 car Service elevator grouping be provided with the following additional features to be more reliable during an emergency:

- a) Protection of machine rooms from smoke and fire.
- b) Protection against the flow of water into the hoistway.
- c) Protection of all electrical equipment and other control devices in all parts of elevator cars and hoistways from water damage.
- d) Dedicated primary and secondary power supply.
- e) Secondary power supply shall be capable of operating these 5-car service elevators at full operating capacity and with automatic transfer capability.
- f) Capable of full operation of the elevators at elevated temperatures.
- g) Means for easy access and safe evacuation of trapped personnel in elevators
- h) Dedicated three-way communication between elevator cars, machine rooms and fire command station.

Additionally, with regards to both passenger elevators and service elevators, building equipment shall be provided with protection from possible damage due to sudden and simultaneous high-speed descent of multiple elevators to the designated floor during Phase I recall.

As previously stated in the foregoing, we concur with the Department of Building's decision to grant the applicant's request for a waiver from Rule 100.1d(2) of RS-18. We are providing these preliminary recommendations in response to DOB's request for Fire Department input on these proposed Freedom Tower elevator issues. Be advised, however, that we have not been afforded the opportunity to review detailed technical specifications related to the design, installation and safety features for these proposed elevators. The Fire Department would welcome the opportunity to assist the Department of Buildings in such review.

Very truly yours,



Howard Hill
Assistant Bureau Chief
Bureau of Fire Prevention

c: Tamara Saakian P.E., FDNY
Saroj Bhol P.E., Port Authority, NY & NJ
Robert Carroll, Elevators, NYC Buildings
Steve Kinnaman, Jaros, Baum & Bolles
Mitchel W. Simpler, Jaros, Baum & Bolles
Carl Galioto, Skidmore, Owings & Merrill LLP