

Gus Sirakis*FREEDOM TOWER*

From: Bhol, Saroj [sbhol@panynj.gov]
Sent: Monday, August 20, 2007 4:16 PM
To: Gus Sirakis
Subject: Freedom Tower: Use of AISC 13th(2005) Edition
Follow Up Flag: Follow up
Flag Status: Red
Attachments: FREEDOM TOWER.pdf

Gus,

I would like to get your thoughts on the new request below. Please see attached for previously agreed upon exception for the steel design.

Thanks

Saroj

-----Original Message-----

From: Rahimian, Ahmad [mailto:ahmad.rahimian@wspcs.com]
Sent: Monday, August 20, 2007 9:54 AM
To: Bhol, Saroj
Subject: FW: WTC1: AISC 13th Edition

Dear Saroj, our current variance issued by DOB is in reference to usage of AISC-LRFD 3rd Edition, 2001 and IBC 2003. However, the AISC in 2005 issued an updated design manual combining the ASD & LRDF versions into one manual called 13th Edition. This manual while still consistent with LRFD load and resistant factors of 3rd edition has updated information with respect to the following:

The approach to one of the most popular connections, single shear tab connection and extended single-plate shear connections has been revised and in fact is simplified. A direct calculation method has been added for determining the buckling strength of double-coped members. Design procedures for prying action now make use of the tensile strength rather than yield strength to better align the design provisions with the tested performance of bolted parts subjected to prying action. With the exception of double coped beams, procedures for the design of connection elements subject to bending have been modified to the use of plastic section modulus in the calculation of bending strength, rather than the elastic section modulus.

We would like to see if we can an update to our variance allowing us using the AISC 13th edition, 2006 for WTC1 project.

Regards,

Ahmad Rahimian, Ph.D., PE, SE
 President
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October 18, 2006

Mr. Saroj Bhol, P.E., Manager
Design Standards Unit
Quality Assurance Division

Engineering Department
3 Gateway Center, 3rd Floor
Newark, NJ 07102

Re: Freedom Tower

Dear Mr. Bhol:

The Department of Buildings has reviewed the request to PANY & NJ from WSP Cantor Seinuk, dated September 8, 2006, regarding the seismic design and structural steel for the Freedom Tower.

We have no objections to the use of the AISC-LRFD design standard for the design of the steel components of the structure, including the seismic resisting elements, following the IBC-2003 provisions using the local site and seismic factors. We also have no objection to the use of ASTM A913 Grade 65 steel for the main vertical seismic load-carrying elements as is approved in design standard AISC 341-02 and IBC-2003.

Sincerely,



Fatma M. Amer, P.E.
Deputy Commissioner

cc: Constandino Sirakis, P.E., Project Engineer