



Masonry Advisory Council

# MASONRY ADVISORY COUNCIL

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April 2004

To: School Board Superintendents, School Board Administrators  
Architects, Engineers, GC's, CM's/Mason Contractors

From: Charles Ostrander, P.E. Executive Director of the Illinois Masonry Institute

RE: Ramblings Part 4

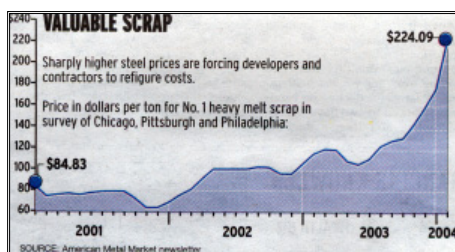
## Steel Price Hikes and Availability affect Construction Industry – Load Bearing Masonry Offers Solution

Construction Industry Searching for Solutions to Steel Price Hikes

Sharp increases in steel prices are affecting architects, contractors, and builders in North America who are looking for solutions that involve using less steel. Global steel and scrap prices have skyrocketed in recent weeks and market analysts point to extraordinary demand and consumption of steel by China as reasons for the increased prices.

A leading supplier of steel market information, MEPS International, reports price hikes as high as 65.5 percent between February 2003 and February 2004. Rebar, which averaged \$254. per ton a year ago, is up to \$412 per ton. Medium sections and steel beams which sold last year for \$336 per ton now sell for \$491 per ton. Wire mesh, which averaged \$249 per ton last year is now at \$403 per ton.

Bob Klee, Director of Technical Services and Architectural Consulting for Clayton Block Co., Inc. in New Jersey, commented, "We've been talking to architects about using load bearing concrete masonry because of the shortages expected and the increasing cost of steel. In our discussions with the architects, we've found this steel price hike is wreaking havoc with their business...they are getting requests for changes in all sorts of projects due to the increased costs. Contractors are caught in the middle on this issue. We're advising the architects we talk with to reinforce and grout the perimeter masonry walls and pilasters, eliminating the perimeter structural steel columns and beams. This is a solution that would considerably reduce the quantity of structural steel shapes required and decrease the lead time required for steel fabrication and erection and also lower the costs."



A report issued last month by architectural firm David Langdon Adams addresses the high demand and prices for steel products and warns of the impact on project schedules. The report says, "As demand increases and supplies shrink, some projects have faced delays in receiving needed materials. This can have a significant impact not only on budget, but also on the ability for the projects to be completed in a timely and efficient fashion."

From a contractors point of view, Chris Payne, an estimator for a major east coast contracting company said, "The huge increases in steel prices are affecting everything and the situation is in such a flux that steel suppliers won't guarantee prices for more than a week. We're also having a problem getting archi-

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fects to agree to loosen some of their specifications. Some of the jobs we're bidding are scheduled in 2005, which makes projecting real costs impossible."

Brian Buehner from Buehner Block Company, Inc. in Salt Lake City reports talking with designers in his market who are looking for cost cutting solutions. Buehner says, "Architects are worried about getting projects moving and constructed before being hit by another round of hikes in steel prices. Architects are in a panic mode."

In the past, some generals, cm's and architects have only designed structural steel framed buildings with masonry infill. This is done sometimes because of habit, history, or perceived faster enclosure and perceived shorter construction duration. If you are using masonry anyway on your project – have it designed to be structure and finish. With rebar, grout and masonry the exterior wall can be started as soon as the foundations are poured. No waiting for steel shop drawings, steel fabrication, steel erection, and then installing the masonry infill. If the design doesn't incorporate load bearing masonry in lieu of structural steel – ask why not? Enclosed is an ad we ran 4 years ago promoting the savings of building with load bearing masonry. Now, there is even greater savings along with the speed of construction offered the end user!

If you are contemplating, building, or planning a perimeter framed steel structure, we invite you to try the available Masonry Design Software. If the masonry is not faster and more cost effective (in Illinois & Indiana) – you can have my 4 tickets to any Bears game. (Sorry Hoosiers – no Colts tickets.)

My bias lies in my confidence in the masonry industry and my 33 years in the construction industry - However, don't just take my word for it - read the attached letters of endorsement from actual users of the software and load bearing masonry.

What do you have to lose? How much time and money can you save!



## NCMA Masonry Design Software

This Software performs concrete masonry designs in accordance with the 95,99 and 02 *Building Code for Masonry Structures* (ACI 530/ASCE 5/ TMS 402) and the 2000 *International Building Code* including allowable stress design and strength design. It considers the effects of combined axial and flexural loads and includes design of lintels. **\$100**

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**Enclosed is a check for \$100 for NCMA Masonry Design Software**

Name \_\_\_\_\_  
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State \_\_\_\_\_ Zip \_\_\_\_\_  
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Please make checks out to Masonry Advisory Council and mail this form to:

Masonry Advisory Council  
1480 Renaissance Drive Ste 302  
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# HOW TO SAVE 15% ON STEEL FRAMING

## USE LOADBEARING MASONRY WALLS FOR YOUR NEXT WAREHOUSE OR COMMERCIAL STRUCTURE

The best wall system is one that performs several functions simultaneously.

A masonry wall serves as a finished wall, but can (and should) also be a structural element.

Today's engineered, taller, thinner masonry bearing walls allow you, the design professional, to give your client more building at a lower square footage cost. This is accomplished by eliminating the perimeter steel columns and beams and using the masonry wall as a wall bearing element.

Masonry walls with vertical reinforcing and grout have a dramatically improved tensile strength (for wind load) while taking full advantage of masonry's compressive strength. Using this innovative engineering concept, you can now design and build 37'0" high walls with 12" masonry units, 26'0" high walls with 8" C.M.U.'s, 21'0" high walls using 6" hollow brick and 12'0" high walls using 4" inch hollow brick.

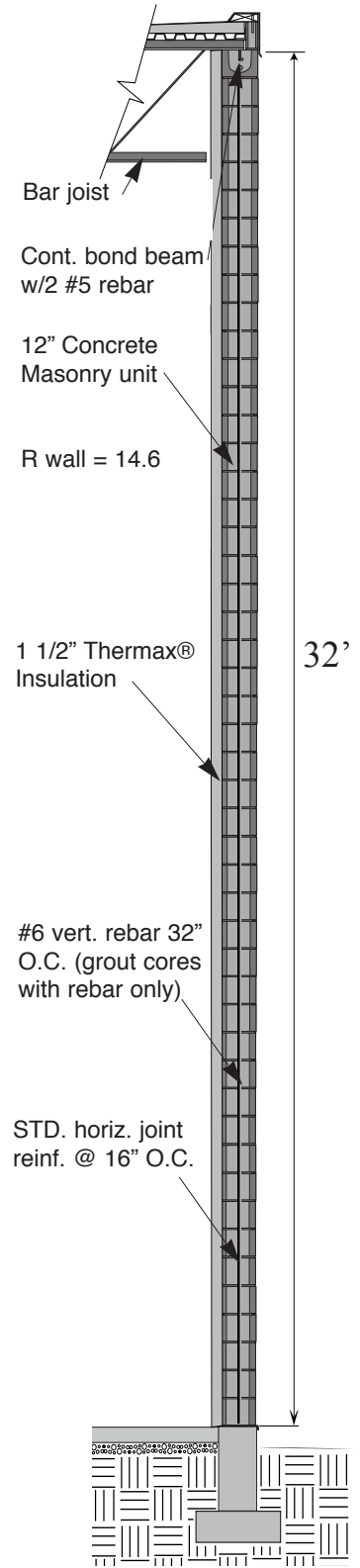
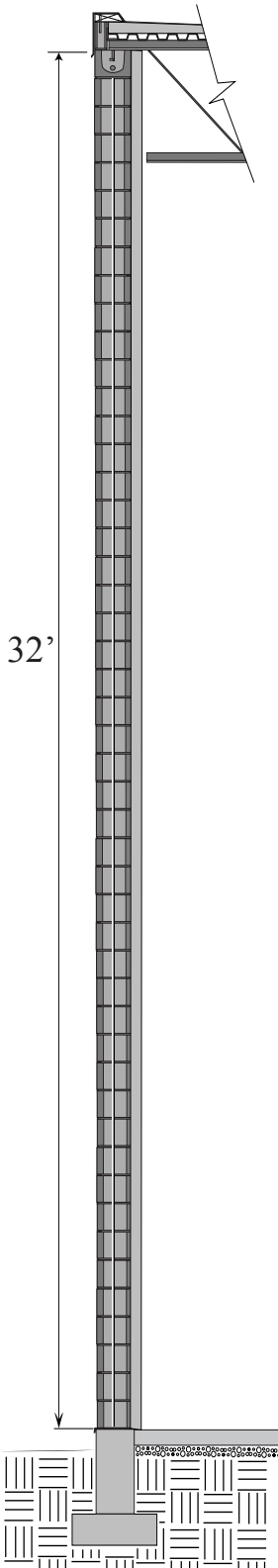
All these engineered masonry walls are available without the 20 - 24 week lead time required by some precast wall systems.

If you wish to design these energy efficient, tall slender masonry walls, call us for a design manual and case histories.

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### LETTERS FROM ACTUAL USERS OF THE SOFTWARE AND LOAD BEARING MASONRY

March 19, 2004

Masonry Advisory Council

Attn : Charles Ostrander P.E., Executive Director

Dear Chuck,

I just wanted to let you know how much I appreciated the Masonry Software Design Seminar back in October. The seminar was one of the most useful I've been to in some time. Most seminars tend to either cover something I already know, or something I don't really have a need to know (like how to use the SMACNA charts to properly select the sheet metal gauge of a 4x8 heating duct, as an architect I must say that in my 24 years of experience, no one has ever asked me that question).

This seminar on the other hand was very informative and applicable. Soon afterward I used the NCMA software to size some masonry lintels at a carwash. My usual solution would be a steel beam with a plate welded on the bottom, supporting a block covering. The software allowed me to use an all masonry lintel, which saved the owner the yearly ritual of painting the steel.

I also used the software to design a masonry wall for a Subway restaurant and strip mall. The wall is supported an eccentric load from roof trusses. Without the software I wouldn't have been comfortable doing that and would probably have used a steel solution instead. I look forward to more seminars of this caliber. Perhaps when the NCMA software is updated to include pilasters and beams?

Thanks again,  
D.K.

August 31, 1988

Mr. Charles Ostrander, Executive Director  
Illinois Masonry Institute

Dear Chuck:

We would like to extend our appreciation for the invaluable assistance you have given us during the design phase of our new 8-story masonry apartment buildings now under construction.

When we originally considered a 10-story building, you provided us with a list of completed projects of similar height and use that helped us with new ideas of masonry capabilities.

But more important, your preliminary calculations of required wall configurations and steel for structural loading involved, made us aware of a major over design of steel and load bearing walls in our 10 building, 7-story apartment complex completed in 1987. This over design and your calculations were confirmed by Vic Coresetti, Structural Engineer for our new phase, and it is estimated that we are effecting a \$400,000 cost savings from the 7-story building design.

Again, many thanks for your assistance and input.

Very Truly Yours,

D. T.

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