U.S. Department of Labor

Occupational Safety and Health Administration
1150 North Curtis Road, Suite 201
Boise, Idaho 83706
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May 18, 2001

Attn: Safety Director
Ormond Builders Inc.
PO Box 1814
Idaho Falls, ID 83403

Dear Ormond Builders Inc.:

If you can prevent the collapse of masonry walls, then you can be a more profitable company. In addition, you will prevent injuries, fatalities, and protect yourself from the legal ramifications that are created when a masonry wall collapses, as well preventing OSHA enforcement actions.

The Occupational Safety and health Administration (OSHA) has received several inquires concerning OSHA's position on bracing of masonry walls. OSHA's construction standard 29 CFR 1926.706(b) states:

> *"All masonry walls over eight feet in height shall be adequately braced to prevent overturning and to prevent collapse unless the wall is adequately supported so that it will not overturn or collapse. The bracing shall remain in place until permanent supporting elements of the structure are in place."*

The aforementioned standard is a performance standard, which requires both the controlling employer (general contractor/construction manager) and the creating employer (the masonry contractor) to develop a plan to support the masonry wall. Appendix A to Subpart Q of Part 1926 provides a non-mandatory appendix of consensus standards that can be used for concrete and masonry construction. The American National Safety Institute (ANSI) Safety Requirements for Concrete and Masonry Work (ANSI A10.9-1983) is one of the listed non-mandatory standards, and it provides guidance which may be helpful to a competent person or a competent registered professional engineer (RPE) in developing a bracing plan for masonry walls. Paragraph 11.5 of ANSI A10.9-1983 states:

> *"**Shoring and Bracing.** Masonry walls shall be shored and/or braced until the designed lateral strength is reached, or the top supporting members are in place to prevent collapse due to wind or other forces. The support of bracing shall be designed by or under the supervision of a qualified person to withstand a minimum of 15 pounds per square foot. Braces or shores shall be secured in position."*
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> *NOTE: Approximate wind loads can be determined in accordance with the following equation: $W=0.00256V^2$ Therefore, a wind speed of approximately 75 mph would result in a wind load of approximately 15 pounds per square foot.*

Keep in mind that ANSI A10.9-1983 is listed as part of a non-mandatory appendix. Another consensus document that is not listed in the OSHA standards and provides some design criteria for a competent person/RPE in designing a bracing system to support a masonry wall to prevent a collapse is the Standard Practice for Bracing Masonry Walls Under Construction-July 1999. This consensus document was developed by the Council for Masonry Wall Bracing. It is also indorsed by the Brick Industry Association, Laborer's International Union of North America, Mason Contractors Association of America, National Concrete Masonry Association, and the Portland Cement Association. The document developed by the Council for Masonry Wall Bracing provides guidance for only bracing masonry walls to 40 miles per hour wind speeds, or approximately 4 pounds per square foot. OSHA feels following the guidance established by the Council for Masonry Wall Bracing would be adequate, even though the wall is being braced substantially below the guidance provided by ANSI A10.9-1983. The Council for Masonry Wall Bracing requires the contractor to monitor wind speeds and remove employees from the area adjacent to masonry walls when wind speeds approach established guidelines; therefore, if the wind speeds exceeded the design capacity and causes the wall to collapse, following the guidance published by the Council for Masonry Wall Bracing there would not be any employee exposure.

Every masonry wall under construction that exceeds eight feet in height should have a bracing plan developed by a competent person. Prior to starting construction on the wall, the contractor shall establish a limited access zone as required by 29 CFR 1926.706(a)(1). The limited access zone shall be equal to the height of the wall to be constructed plus four feet, and shall run the entire length of the wall as required by 29 CFR 1926.706(a)(2). The limited access zone shall be established at a minimum on the unscaffolded side of the wall as required by 29 CFR 1926.706(a)(3). The limited access zone shall restrict entry of employees who are not actively engaged in construction of the wall as required by 29 CFR 1926.706(a)(4). The limited access zone shall remain in place until the wall is adequately supported to prevent overturning and to prevent collapse as required by 29 CFR 1926.706(a)(5). If the height of the wall is over eight feet the limited access zone shall remain in place until the bracing requirements have been met as required by 29 CFR 1926.706(b).

Due to the potential seriousness of wall collapses and the history of wall collapses in Idaho, we feel that it is imperative that masonry walls are braced adequately. The Boise Area Office plans to conduct a local emphasis program that will focus on bracing of masonry walls; therefore, one could expect to see greater inspection activity for this area of concern.

A copy of the Standard Practice for Bracing Masonry Walls Under Construction, dated July 1999 can be obtained by calling (630) 705-4200. A copy of the ANSI A10.9 can be obtained by calling (212) 642-4900. Our OSHA standards can be reviewed by accessing our internet site at: www.osha.gov. The aforementioned standards can be reviewed at our office as well.

Sincerely,

Ryan E. Kuehmichel

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Area Director