The RED Letter
RED Engineering & Design

Structural Engineers

April 2014

About the Red Letter

The Red Letter is a monthly e-newsletter containing "news-you-can-use" concerning the built environment. There will be a short feature article along with dates and events where Red Engineering will be. Feature articles will consist of interviews with clients, peers, and industry folks. Our features will also speak to industry trends and directions that affect us---all with an editorial emphasis on helping better serve our clients and communities.

With our first publication, we want to take this opportunity to tell you a little about us and why The Red Letter. Red Engineering & Design is a Raleigh, North Carolina, structural engineering firm. Brian Moskow, PE, CWI, founded the firm in 2009 and serves as principal-in-charge. Brian loves what he does and takes every opportunity to advance learning about structural engineering and the business of serving clients. We hope you will enjoy our monthly e-newsletter.

This Month's Feature Articles

About

Bricks and Lintels

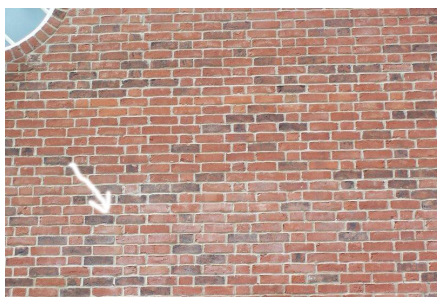
Brian Moskow.com

Dates & Events

April 9, 2014
AIA Triangle: Small Business Roundtable
Buildsence
502 Rigsbee Ave., Ste. 201
Durham, NC 27701

Bricks & Lintels

Deflective stress



When designing buildings using exterior brick and decorative brick patterns, below are some things to remember when sizing lintels:

Exterior brick bonds (e.g., Monk and Sussex) laid in running bonds create a natural corbelled arch. Taking this into account, lintels need to be designed to carry their own weight in addition to the weight of the masonry inside the triangle formed by the line of arching action. (Generally, the triangular area has sides at 45-degree angles to the lintel where the triangle height is one -half the span length.)

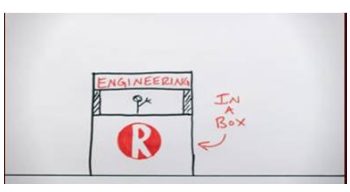
Outside the triangle formed by the arching action, the weight of the brick and any uniform loads from the floor or roof are assumed to be carried to the supporting abutments by natural arching.

If the arching action cannot be assumed because the brick is not laid in running bond (i.e., a decorative pattern), then the lintel must be designed to carry the full weight of the wall above it and all the weight outside the triangle.

When the total load on a lintel is known, it can be sized to resist calculated stresses and avoid cracking the brick and mortar above the lintel.

When a decorative brick pattern is used above a lintel, the lintel needs to be specially sized to deflect load stress.

(Sources: Christine Beall, NCARB; Brian Moskow, PE)



Engineering in a Box

Introducing
www.BrianMoskow.com

What is BrianMoskow.com? BrianMoskow.com is a mix between a commercial and personal website. There is "Engineering in a Box" and "The Red Blog." These are places where Brian illustrates and writes about engineering.

We invite you to log on to BrianMoskow.com and go to The Red Blog to find out the What & Why.

STAY CONNECTED

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