

The Risk Illuminator

A Quarterly publication for our clients by **Lender's Quality Assurance**, a *Critical Edge Group* company

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1ST QUARTER 2000



Dear LQA:

Q: What do insulation ratings mean ?

J.F. Sacramento, CA

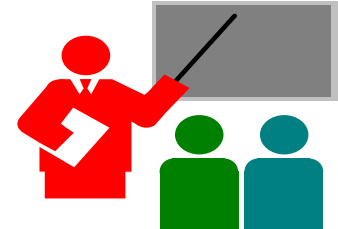
A: Insulation ratings serve as a guide to which type of insulation will be most effective for an intended purpose. There are three categories of ratings for insulation. They are U-value, R-value, and K-value. The **U-value** indicates the degree to which heat will transfer between the cold and warm sides of the insulated surface, be it wall, floor, or ceiling. A lower value indicates a lower transfer of heat between the sides. The **R-value** indicates the ability of the insulation to prevent the transfer of both cold and heat. The higher R-value rated insulation provides greater resistance to both heat and cold transfer through the surface. Finally, the **K-value** provides an indication of the conductivity of heat through the insulation. The lower the rating, the more effective the insulation is at pre-

The Building Design Process

There are typically five phases in the design and construction of a building. The first phase is Schematic Design. At this phase, the site and building footprint, along with a preliminary floor plan is developed. The Design Development phase is next. At this point, relatively accurate dimensions of the site, building, room sizes, door and window sizes and locations are established and the building systems and likely quantities and materials are established. This would include HVAC, structural, electrical, plumbing, utilities, lighting and site grading. At this juncture, a cost estimate can be done. If something is economically prohibitive or infeasible, it should be identified at this point. The third phase involves the preparation of the Construction Documents by the Architect. This will include a complete set of working drawings and specifications. The fourth

phase is the Bidding and Negotiations phase. The Architect and property owner will solicit bids from contractors or have it's preferred contractor price the job. Review of the plans for permit approval and code compliance by the appropriate municipalities should occur at this point. The final phase is the building Construction. It is imperative that the prior steps are completed in a thorough manner, because it is much more expensive to effect changes during the construction phase.

Those of you who talk to our office on a regular basis have noticed several new voices. The people behind those voices are: **Elska Watts, Jill Garvey, and Neta Phillips**. We all look forward to continuing to provide you with the highest quality of products & services.



Hard-Hat University

"POP QUIZ #3"

Match the terms with the definitions:

1. Cantilever
2. Colonnade
3. Coping
4. Course
5. Capstan

- A. The cap on a masonry wall or other structure preventing water penetration.
- B. A continuous row of masonry units installed with mortar.
- C. A structural member or beam supported on one end that projects out from a structure.
- D. A hoist consisting of cable or rope for lifting, which is wound around a drum.
- E. A row of Columns

TOPICS IN THIS ISSUE

| | |
|--|---|
| Hard-Hat University - Pop Quiz #3 | 1 |
| Mortar Mixtures depend on Structure Type | 2 |
| Efficiency ratios as a Building Cost Indicator | 2 |
| The Building Design Process | 1 |
| Ask LQA: What do Insulation Ratings mean? | 1 |

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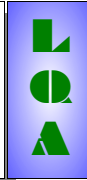
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Efficiency Ratios as a Building Cost Indicator

The efficiency ratio of a commercial building is defined as the **net area** of the interior dimensions (net leasable area) divided by the gross area of a building (the total floor area) based on outside dimensions. The unassigned or common area space generally consists of corridors, stairwells, mechanical rooms, public restrooms, janitor closets, etc. Typically, the higher the ratio of primary space to common area space, the lower the grade or class of the building. An average or moderate

structure will have an efficiency ratio approximating 65/35. Typical efficiency ratios by building grade are listed below. The approximate incremental increase in cost for a higher grade building, as contrasted to an average or moderate structure, can be substantial as the table below demonstrates.

| <u>Bldg. Class</u> | <u>Effic. Ratio</u> |
|--------------------|---------------------|
| Superb | 50/50 |
| Grand | 55/45 |
| Excellent | 60/40 |
| Moderate | 65/35 |
| Economical | 67/33 |
| Austere | 70/30 |

Mortar Mixtures Depend

on Structure Type

There are (5) classifications of mortar types that provide varying strengths for various applications. **Type K** has little bonding strength and is utilized for decorative and non-load bearing areas; **Type M** is a high strength

Cost Ind. (%)

| |
|-----|
| 220 |
| 160 |
| 120 |
| 100 |
| 90 |
| 80 |

durable mortar used for

sub-grade applications, foundations, and reinforced brick masonry, and is used extensively in California and other seismic disturbance areas; **Type N** provides medium strength but high moisture resistance and is used above grade for exterior walls, chimneys, & areas exposed to moisture; **Type O** provides medium strength and limited moisture resistance and is utilized for solid masonry, non-load bearing walls; finally, **Type S** provides relatively high strength and is utilized for walkways or load bearing areas on or below grade.

Answers: 1-C, 2-E, 3-A, 4-B, 5-D