

CRCA Replies to “The Hutchinson Files “, from Roofing – The Industry Voice Magazine

Last month, there was an article published in “Roofing, the Industry Voice” Magazine, written by Tom Hutchinson, Hutchinson Design Group, Barrington, IL. (Check it out at www.CRCA.org)

We at CRCA have great respect for Tom and all he’s done over the years as a roofing specialist architect. He’s had many great projects, given back to the industry as RCI International President and much more. We even call him a friend.

In his article, Tom has for some reason presented incorrect information about CRCA’s view on several issues. We don’t know where he was informed of what CRCA is, or what CRCA believes in. In fact, we are probably more aligned on several issues than even he thinks we are.

Here’s what was said:

Tom Hutchinson states: “CRCA, for example, is fighting the new code increases in roof insulation.”

CRCA Responds: “Insulation thicknesses have doubled in 10 years. CRCA is not fighting the new code mandated, increased insulation thicknesses in new construction and where it is technically feasible for existing buildings.”

Tom Hutchinson states: Although the organization states a variety of reasons, it appears that the fear of owners delaying work that costs more because of increased insulation thickness is the greatest concern.

CRCA Responds: CRCA is concerned about technical infeasibility. If it costs more to roof the building due to flashing heights than it does to close the building down, where are we? We’ve hurt the community the building is in. If technical infeasibility exists, then a variance should be sought from the Authority Having Jurisdiction.

Tom Hutchinson States: “I believe the CRCA’s position is foolish. Why would a predominately union-based contractor organization fight a code mandate that allows their members to increase profits?”

CRCA States: First, CRCA’s Contractor Members are both Union and Non Union Roofing Contractor Companies. We’ve had non union companies as an active part of CRCA for years.

The CRCA Member Roofing Contractors are in business to provide great roofs that don’t leak. CRCA Contractors are after providing the building owner and manager the optimum value at the best price. We believe it is great to add insulation to buildings saving energy up to the point of diminishing returns.

CRCA agrees with Tom on several fronts. New construction and where it is technically feasible, install the code mandated minimum R-30 continuous insulation. Where not feasible, apply for a variance reducing to the maximum amount possible given the 8” minimum flashing height requirements in manufacturers installation instructions and NRCA’s Manuals.

CRCA’s Union and Non Union Contractors Agree with Tom

CRCA’s Union and Non Union, low and steep slope professional roofing contractors, distributors, manufacturers, reps and service providers have all invested in capital, equipment, labor, and money in an industry they believe in.

We at CRCA agree that insulation provides value up to a point where the technology does not deliver gains greater than returns. CRCA believes that where it is technically feasible, as much insulation as is required by the 2015 International Energy Conservation Code (IECC) – on low sloped roofs, minimum R-30 continuous insulation (ci) - mandated in Illinois for both Commercial and Residential Occupancies shall be followed.

We agree that good design is imperative. Where Technically feasible to meet wind uplift, fire resistance, and other requirements , edges can be raised and accommodate the new thickness of insulation AND provide 8” minimum height from the roof covering for flashings.

We agree that mock ups and inspection at the beginning of the project to get everyone on the same page is key. We agree that installation by professional roofing contractors is key to success in addition to working with competent, specifiers, architects/engineers, roof consultants and code officials. After all is said and done, we want a leak free roof assembly for the ultimate customer, the building owner and manager and the occupants of the building.

Existing Building Conditions Mean Technical Infeasibility

Yes, there are many things we agree on. First, in new construction, the flashing heights that accommodate the increased insulation are possible and supported by CRCA.

For existing buildings, that’s not always the case. We simply cannot always have that perfect building where roof flashings can meet the industry standard, manufacturer required, 8” tall flashing heights. Raising roof edges, flashings at abutting doors, windows, curbs, roof top units (RTU), plumbing stacks and doors, glass windows at abutting roof surfaces is sometimes not physically possible. This is where it becomes technically infeasible.

Why? The building sometimes cannot technically be altered enough to accommodate the insulation thicknesses needed to meet minimum R-30 continuous insulation specified by the IECC. This is especially true when it comes to tapered insulation systems.

More agreement with Tom

In new construction on low sloped roofs where min. R-30 ci can be designed into the structure, we’re all for it. On existing buildings where it is technically possible, we agree the building should comply with the code mandated min. R-30 ci.

On existing buildings where it is technically infeasible, we believe that a review should be done. After the technical review, a request can be made to the designer, if applicable, and Authority Having Jurisdiction (AHJ) for a variance allowing less than the code mandated min. R-30 ci.

The request can be made for a variance that provides the building owner and manager the maximum amount of insulation while still maintaining the minimum 8” flashing heights from the roof covering for rooftop units, equipment curbs, skylights, parapets, under door and window flashings, and other vertical flashings.

Why 8” high flashings? It’s specified in the 1969 “Roofing Specifications”, prepared and reviewed by a joint committee of the Chicago Chapter, Construction Specifications Institute (CSI) and Chicago Roofing Contractors Association. Yes, a 1969 document is still valid today. The National Roofing Contractors

Association (NRCA) still has it in their manuals and has since 1970. The reason is that 8" seems to be the best way to keep the water, wind driven rain and snow out of the flashings.

Can existing buildings with low flashing heights have new 8" high flashings from the roof surface custom built? Many can. Where it is technically feasible, CRCA Contractors work with building owners to get it done and provide the min. R-30 ci.

Where it is technically infeasible, we challenge Tom, the insulation and roof covering manufacturers he consults to, to develop new insulation products. Tom works with Polyisocyanurate Insulation Manufacturers Association and the EPDM Roofing Association and between those associations are some very talented and innovative firms.

New and creative technologies need to be developed by the manufacturers. These new technologies need to have less thicknesses of insulation installed and still meet the min. R-30 ci. Yes, we all have the same goal – help AIA meet their goal of zero energy buildings by 2030 - while providing value to the end customer, the building owner and manager.

We agree on a lot Tom

We agree that min R-30 ci is possible for new construction and where we can fit the insulation on existing buildings. For other situations, we simply are up against the wall of physics and technical infeasibility.

CRCA supported the National Roofing Contractors Association's (NRCA) proposals below in late April at the International Code Council's Energy Code 2018 Development Process. We also supported them at the International Green Construction Code 2012 Development Process where the initial text came from:

C503.3.1 Roof replacement. Roof replacements shall comply with Table C402.1.3 or C402.1.4 where the existing roof assembly is part of the building thermal envelope and contains insulation entirely above the roof deck.

Exception: Where the required R-value cannot be provided because of the thickness limitations presented by existing rooftop conditions, including heating, ventilating and air-conditioning equipment, low door or glazing heights, parapet heights and roof flashing heights, the maximum thickness of insulation compatible with the available space and existing uses shall be installed. [IECC 2015, 503.3.1]

This passage is from the International Code Council's consensus development process. The consensus is industry and code officials and resulted in the 2012 International Green Construction Code (IgCC).

We at CRCA also proposed the same language at the State of Illinois adoption of the 2015 International Energy Conservation Code. The Illinois Energy Conservation Advisory Council edited the proposal and the following is now part of the Illinois 2015 Energy Conservation Code for Residential Occupancies.

For roofs on existing buildings with slopes less than 2"/12", where the roof covering is removed and insulation remains, and where the required R-Value cannot be provided because of thickness limitations presented by existing rooftop conditions, including heating, ventilating and air-conditioning equipment, low door or glazing heights, weep

holes, and roof flashing heights not meeting the manufacturers specifications, the maximum thickness of insulation compatible with the available space and existing uses shall be installed. The insulation used shall have an R-value of not less than R-5.0 per inch. In areas where flashing is terminated not less than 8 inches above the roof covering, including required insulation, insulation shall be as required by Table C402.1.3.

We at CRCA agree much on more than Tom Hutchinson states in his article. We hope Tom will join us in challenging the industry and join CRCA as a Roofing Consultant Member. Come to CRCA and challenge the manufacturers to come up with insulation products that can accommodate the conditions we find on existing buildings. Invent a new insulation that can handle the code mandated minimum R-30 continuous, 5" thick insulation in less thickness of insulation. If we meet the challenge, we'll get to the AIA's goal – zero energy buildings by 2030 a lot faster.

CRCA's Union and Non Union Contractors are after providing the building owner and manager the right combination of roofing, insulation and slope that can be proven through value, a reasonable return on investment and not leak. If the value is there, compliance with code requirements is easier and the need for policing compliance goes away.

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