I inspected your building today and noted the use of metal framing on the exterior walls. Table C402.1.4.1 covers the effective R values for cavity insulation used on metal framing. The building has R-19 fiberglass insulation in 2x6 metal studs. The table drops the effective value of that insulation to R-7.03 because of the conductivity of the metal studs. This is a problem we are running across regularly in the DFW area. I have generated two sample ComCheck energy reports to demonstrate the problem. One is using the 2015 IECC and the other is using the 2016 ASHREA 90.1 performance software calculation. I did a rough estimate on the glass size, U values and SHGC values. I did not install the doors. This is a sample only

The IECC version fails the code by 15% where as the 2016 ASHREA 90.1 only fails by 1%. The real U / SHGC values for the windows and U values for the door can easily make the 90.1 version compliant. I have requested the U / SHGC values for the glass on this project.

I am attaching our Commercial Commissioning Handout for you to read to better understand the reason and the need for the Preliminary Commissioning document and the Final Commissioning document. I am also attaching our Residential Energy Path document for your review. It does not apply to these projects but could apply to multi family projects if you do those in the future. It does a better job of explaining the different energy paths for residential construction. Please understand that both the 2015 IECC and 2016 ASHRAE 90.1 are approved paths for your commercial projects. You just need to select one for your projects. You can change paths in mid stream, but you have to be compliant in one of those paths at the end of the projects. In this case the ASHREA 90.1 path is the best for your project. It may not always be that way.

Also keep in mind that the ASHREA path has DFW as Zone 2 and that affects the insulation values and HVAC efficiency values (including dropping the economizer requirement).

It has gotten to the point that everyone has to show their homework on the planning of your projects to show compliance before you start. That means generating a ComCheck on all your projects before permitting. The Commissioning requirements are phasing in to fill the cracks that many have been

using to evade the energy code for years and the municipalities are starting to fill those cracks by requiring the Commissioning projects.

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