FIVE ***things people are actually doing*** *when they're developing technical drawings and likewise, when interpreting them:*

If you're designing a building, a power plant, a bridge, a ship, a machine, an aircraft, designing any complex thing for construction or manufacturing:

- you're formulating a mental and digital model of the thing,
- that model is fuzzy, full of gaps and inaccuracies, and
- you're shepherding the model from its fuzzy state to something functionally adequate.

Soon after project start, we experience a declining ability to answer even basic questions about our models mental, physical, and digital. Questions like:

- Is it done yet? Is it good enough yet?
- Is the model forming a coherent functionally successful whole?
- Is there good fit among the physical items modeled?
- Are any physical items that matter, missing? Where? Where not?
- Is the model good enough in some regions and not in others?
- Where are the regions that are good enough?
- Does anything signify the useful distinction between regions that are good enough and all other regions that may not be?

In accord with the questions above, note the difference, and the interplay between:

- The wider ***field***
  The spatial visual environment of the project's models.
- The narrowing act of attentive ***focus***
  The act, and expression, of paying attention at specific locations within the model.

1 ***Locations of Visual Close Study (Focus)***

At informative locations within modeled environments (within mental and digital models) we sustain attentive visual focus. Very importantly, first of all we **select and designate** these locations within our models. We can call these, locations of Visual Close Study (V.C.S.), or "drawings" (that draw our attention).

2 ***Checks against Omission & for Good Fit***

At V.C.S. locations we conduct physical evaluation of the model. This involves ***two checks:***

- **A check against OMISSION of physical items in the model.** We check that everything that should be shown at a given V.C.S. location, is shown; that nothing that matters, *here*, is missing. This check is repeated numerous times during project design as the project develops.
- **A check for GOOD FIT among the physical items present.** You may of course define good fit however you like. And of course this is what AEC professionals do. Opinions vary. So does quality. Vitruvius defines good fit here.

Checks for omission and good fit comprise both the necessary quality assurance and control (QA/QC) work, and more generally, the interpretive work (do we understand what we're doing and, is it right?) that runs continuously through project development and into construction.

3 ***Affirmation*** *of checks against omission & for good fit*

Omission and good fit evaluations conclude with affirmation of model QA/QC. Who affirms what, where (within models) — about omission and good fit, is made clear.

This supports accountability.

One can affirm that **at these locations** *(1)* attention has been paid as evidenced by the necessary checks having been done *(2) and affirmed (3)* thus demonstrating adequate exercise of professional standard of care.

I repeat again to emphasize that affirmations are made at an already narrowed set of locations within a model, not at all locations, but representative ones. This prevents no one from taking any information they want from ***all other locations*** within the ***field*** of a model, but affirmation is made at ***these locations***. The narrowing comes first. Without it we face an engagement with totality problem that exceeds our cognitive allocation limits. Outstripping our mental bandwidth makes fools of us all.

4 ***Attentive Focus*** *(drawing)* ***within the Field*** *(models mental and digital)* ***sets the mind in motion*** *(gets thought underway)*

Narrowing to a limited set of locations for close study is ***not just*** about shortcutting. It *is* that but it's also more: something fundamental and generative.

Attentive focus (narrowing) within a field (context), reflects the nature of perception and cognition. **Our deployment of a** context/focus ***interplay*** **is the engine of thought itself.** Thought is an interplay between our expansive perception of a modeled environment (the field), and our narrowing act of attentive focus within it, at V.C.S. locations. Adequate project understanding grows there, in the interplay, along with professional competence.

The interplay is thought. In it, we build up understanding of and confidence in, models as we develop them. This is conveyed to others in a manner considerate of their need also, like ours, to engage, interpret, learn, and understand.

It is, as always, about clear thought clearly conveyed.

The narrowing sets out the necessary peaks and valleys of attention. The difference, ***like a voltage drop,*** sets the mind in motion, gets the perception engaged, makes meaning, delivers coherence, makes sense of things.

Two poles are in dynamic interplay:

wide ←→ narrow
field ←→ focus
environment ←→ attention
model ←→ drawing/V.C.S
cosmos ←→ lens/telescope

Polar opposites are not in any way the same kind of thing. And they are mutually irreplaceable; it should occur to no one that one pole obviates the other.

5 ***The Courtesy of Drawing Attention to what's not to be missed***

Finally, expressions of attentive focus supply the courtesy of drawing attention to things not to be missed in the model.

What's drawn by any drawing?
Your attention.