Review of "Urban Weather Modeling using WRF: Linking Physical Assumptions, Code Implementation, and Observational Needs" by Joshi et al.

This paper provides a thorough review on the urban parameterizations implemented in WRF version 4.5.2. The inherent shortcomings in the urban parameterizations are discussed and corrected. More importantly, the paper offers guidance on the observational strategy, which potentially benefits a better representation on the urban canopy layers in numerical models.

The reviewer really likes this paper, as it holds important implications for the experimental design in the urban boundary layers. The contribution of this paper is sufficient to merit publication in GMD. But before that, the reviewer has several comments for the authors to respond as listed below:

1. Line 100: (FLHC) seems to be a typo.
2. The reviewer finds numerous typos in the paper (e.g., lines 240-242, 249, 275, 379, 409). The reviewer suggests the authors to thoroughly proofread the editing of the paper.
3. Appendix A is important and should be moved to the main text.
4. Section 3.3: The difficulties in evaluating and modeling the flux-gradient relation over the heterogeneous surface are beyond the arguments that the authors mentioned. For example, the heterogeneity could lead to the space-dependent flux-gradient relation. To evaluate the existing flux-gradient relation, one has to carefully design the setup of the field campaign. The authors can have an in-depth discussion on this topic.