1023-11-165   **Alison Setyadi*** (`alison.setyadi@dartmouth.edu`). *Buildings and Combinatorics: Preliminary Report.* Preliminary report.

We consider two combinatorial aspects of the affine buildings naturally associated to $SL_n(K)$ and $Sp_n(K)$, where K is a local field. In particular, we indicate how a certain Hecke operator acts as a generalized adjacency operator and mention a relationship between the number of vertices given by the Hecke operator and the number of chambers containing a given special vertex. We also connect the subgraphs of the buildings induced by their special vertices with families of expanders. (Received August 18, 2006)