This word document precedes the work that is done in the R script “BldgSummary\_WRFdata”

* Before using the R script need to find which netcdf grid cells cover which buildings.
* As of now (09/12/2017) the building shapefiles all need to have unique IDs to be formatted for CESIUM (see word document “Data prep for CESIUM” for those details….)
* Note: In my instances of working with the files, it seems that the csv coordinate value has more digits after the decimal than the netcdf file. This causes issues when trying to merge/match in R. Best thing to do is wait until have the data file and then use the coord values from that (whether it be csv or netcdf). Wait until you have the final data product! Or of course you can round the numbers appropriately but be careful as not all programs round numbers the same.
* Import a netcdf file that has the appropriate grid size for the wrf output you’ll be summarizing.
  + One way to do this is:
    - Netdf to table view (be sure to include the XLAT and XLONG as variables!)
    - Create xy from attribute table
  + A raster view of the netcdf files might work for this as well?
* Can also take a time step from a csv that Melissa exports of the data and use that to view the grids x/y coordinates.
* Next I like to visually see the outlines of the grid cells so I create an appropriately sized buffer around the points, and then create a minimum bounding box (envelope) around the buffer. Throughout this process the original point attributes are kept.
* I join the lat/lon into one field (if this has not already been done) on the created bounding box shapefile. “coord” text field with length 250. Field calc on that field with [XLAT]&” “&[XLONG]
* Spatial join to building shapefile
  + Join one to one
  + BUT in field map of join features right click on “coord” field and from properties change merge rule to join with delimiter “;”
* Export the spatial join output’s attribute table.
* Now have the grid cell coordinates associated with each building and can use the R script to summarize the WRF data!