Walking to LRT Stations: a GIS exploration

Walking is a complementary mode to rail rapid transit. The city of Calgary defines a walkable-to-transit urban area (WUA) as an 800m radius circle centered at the LRT stations. Using a GIS network analysis tool, I attempted to measure the size of actual pedestrian sheds (APS) around stations and the number of people living within these areas.

In the Downtown, where the grid network defines urban patterns, APS equals to 84% of the WUA. In the suburb, where dendritic network champions the city layout, APS can be as small as 20% of the WUA. The study also illustrates that as of 2001, approximately 55,000 people living within APSs and 107,000 people within the city-defined WUAs, accounting for 6% and 12% of the city's total population respectively. The study also suggests that Calgary can achieve the goal of having 10% of Calgarians living within pedestrian sheds of LRT stations through improving and extending walking pathways instead of increasing residential density, which is politically difficult to achieve.