

GIS BASED PRIORITIZATION OF BICYCLE, PEDESTRIAN, AND TRAIL PROJECTS

Jean Crowther, Aileen Daney, John Cock
638 E. Washington Street, Greenville, SC 29601
864.205.5650
jeancrowther@altaplanning.com

Whether through a MPO Long Range Transportation Plan, a countywide master plan, or a local municipality plan, crafting a vision for a connected pedestrian, bicycle, and trail network is the first step. But what happens next? Ensuring a practical, feasible, and fundable strategy for implementing a proposed active transportation network is critical to moving from concept to reality. This paper uses Charleston County, SC and the City of Columbia, SC as case studies for innovative and customized approaches to prioritizing a bikeway, walkway, and trail network.

In 2015, Charleston County Parks & Recreation Commission (CCPRC) began an effort to prioritize a countywide bikeway and trail network developed originally as part of the county's Parks, Recreation, Open Space and Trails master plan (2012). CCPRC contracted with Alta Planning + Design to develop a GIS-based approach to creating a capital improvement plan. The resultant effort includes two phases of analysis. A set of prioritization criteria was established and weighted, and then used to determine project priorities across the county based on need and demand. Following this analysis, Alta developed a feasibility scoring methodology to refine the prioritization not just on need and demand, but based on the practicality of funding and building each proposed facility. Through this process, Alta worked with CCPRC and a stakeholder committee to develop a phased capital improvement plan that is objective, defensible, and broadly supported.

In 2014, the Central Midlands Council of Governments commissioned a Pedestrian and Bicycle Master Plan and Bike Share Plan for the City of Columbia. The Plan focused on improving access to transit across the Columbia metro area and included a robust Pedestrian Level of Service Analysis and Pedestrian Suitability Analysis. Through this intensive GIS-based analysis, the entire roadway network of the City could be evaluated based on both "supply" (the safety and condition of the existing pedestrian environment) and "demand" (estimated pedestrian activity). The results provide a unique tool for prioritizing the universe of pedestrian needs in a community including sidewalk gaps, new construction, midblock crossings, and intersection improvements.

This paper explains the methodologies used in each community's prioritization process, the resultant capital improvement plans, and how the plan is being used to seek funding and implement new projects.