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Project: Safe and Accessible Pedestrian Facilities Inventory Model (SAPFIM): Development

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Summary

Safe, accessible, and well-maintained pedestrian facilities are a fundamental community investment that enhance public health and maximizes social capital; however, many facilities lack maintenance and are deteriorating. Without readily available and accurate information, pedestrian improvements to provide and ensure accessibility for seniors and people with disabilities cannot be easily prioritized. Therefore, there is a need to develop a software tool that can keep track of pedestrian facilities to assist local agencies in prioritizing investments.

The main objective of this research is to develop a tool to collect, store, query, and report pedestrian facility conditions. The Florida International University (FIU) research tram proposed a series of work tasks to develop, test, deploy, and produce the training materials and user's guide.

The first step of this effort was to develop the software criteria. The criteria, including simple yes or no and nominal evaluators, are represented in Figure 1.

Figure 1- Facility Evaluation Criteria

Sidewalks	Curb Ramps	Street Crossing
Width, running slope, cross slope, vertical change, horizontal opening, protruding object, physical constraint, connecting to other facility, gap, material, condition, roadway cross section, sidewalk separation, drop-off hazard, obstruction, lighting	Running, slope, gutter slop, cross slop, flare slope, ramp length, ramp width, top landing, bottom landing, detectable warnings, detectable warning placements, type of ramp(s)	Horizontal opening, island/median, pedestrian signal, material (concrete, asphalt, etc.), condition

After determining the evaluating criteria, the research team developed the software with four sections: data collection, reports, data management, and maps. The data collection section would allow users to input sidewalks, ramps, and street crossing data using GPS, camera, and wireless capabilities. In reports, users would be able to generate and print report on infrastructure in a geographic region. This also includes compliance reports of all the data collection fields to quickly assess whether comply with ADA and PROWAG or not. The data management section would allow users to generate queries based on the available data. This would allow the export of data and retrieve information on a specific request.

Next steps in this effort include marketing. At the time of this report, a task is being carries out by representatives of the FHWA and FDOT who are promoting the software application as a means for local agencies to develop system-wide plans for transitioning noncompliant pedestrian rights of way. Further efforts could involve technical assistance. The best model for this is still under investigation; however, FIU is willing to provide full support and technical assistance to agencies for a nominal fee.

The future development of this application will be adding new features to be added or modified. The user experience can also be enhanced by adding new features such as a search function to find a particular address.

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