

## IBPI RESEARCH DIGEST

### Establishing a Measure of Pedestrian Activity

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November 22, 2006

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## BACKGROUND

In recent years, the Portland Metropolitan area has experienced phenomenal growth and development. Unfortunately, many of our existing transportation systems have not been able to keep up with the accompanied increase in population, use, and need for improvements.

Oregon law requires vehicle drivers to yield to pedestrians in crosswalks, regardless of whether the crosswalk is marked or not. An unmarked crosswalk is generally considered any intersection of streets where a crosswalk is not identified by lines on the roadway or by a sign. One of the problems with this law is that drivers will not always be aware of their responsibility to yield. Plus, in some cases drivers are unable to see pedestrians in time to safely yield.

In order to address the pedestrian crossing issues that face these rapidly developing neighborhoods, it is necessary to determine the demand and criteria for marked crosswalk installation.

## RESEARCH

Samples of five major city streets in Portland were examined under close detail. They were selected based on the nature of the neighborhood, i.e. primarily residential, business, school, etc., residential density, pedestrian flow data, and locality. The five locations were: Northwest 23<sup>rd</sup> Ave, from NW Irving to NW Johnson; NW 21<sup>st</sup> Ave, from NW Hoyt to NW Glisan; Northeast Alberta St from NE 28<sup>th</sup> to NE 29<sup>th</sup>; North Mississippi, from N Beech to N Failing; and NE Fremont, from NE 41<sup>st</sup> to NE 42<sup>nd</sup>.

Measured data included pedestrian flow, vehicle flow, visibility, and crossing demand.

## FINDINGS

A small distance of about 15 feet (one car length) greatly improved visibility at crosswalks and provided pedestrians with a good sight distance to observe oncoming traffic without stepping into the flow of traffic.

Due to the prevalence of bus stops located near intersections, and to the number of pedestrians who may not exercise proper safety procedures when crossing streets in order to get to bus stops, it appears safest to mark all crosswalks at those intersections.

## CONCLUSIONS

These conclusions were based only upon this preliminary investigation, and could change upon information found in future investigations.

In all, the following criteria provide a sound analysis of any particular urban area in which a pedestrian crosswalk is being considered:

Pedestrian flow; Traffic flow / gap analysis; Proximity of schools and parks; Length of block in question; Parking conditions; Zoning; Public facilities; Mass transit activity

Since parking spaces would likely be removed in order to install a safe crosswalk, nearby businesses could potentially be considered less attractive destinations by customers traveling by car. In addition, the City of Portland would lose significant revenue from a decreased number of parking spaces (where parking fees are assessed) – revenue that ultimately ends up going towards repairing and maintaining transportation infrastructure.