University of Missouri
College Avenue
2009 Pedestrian Study

October 23, 2013
Pedestrian Study

Given continual concerns, MU hired an independent consultant to identify the most effective means of facilitating safer pedestrian crossings

- CBB performed pedestrian counts and observations September 2009
- Findings and recommendations provided in October 2009 report
Roadway & Traffic Conditions

- Study area
  - University Ave to Bouchelle Ave
  - Approximately 1,200 feet

- Characteristics
  - 5-lane arterial
    - Typical width of 50 feet
  - Speed limit of 35 mph

- 2011 average daily traffic: nearly 19,000 vehicles
Pedestrian Conditions

- Very high pedestrian volumes
  - Over 7,500 pedestrian crossings in 2 days
    - 2,500 crossings at University Ave (signalized)
    - Remaining 5,000 not at signalized crosswalks

- Crossings do not align with campus pathways
  - 72% of pedestrians south of Rosemary Ln cross midblock
  - Typically execute 2-stage crossing
Pedestrian Safety

- Pedestrian Related Crash Analysis
  - 11 accidents from June 2005 to September 2009
  - 8 of these occurred in marked crosswalks at signalized intersections
  - 9 accidents from October 2009 to June 2012
  - All reported with injuries

- Average pedestrian crossing delay
  - 1 minute *per direction* of traffic
  - *Unsafe* according to nationally accepted references
Study Recommendations

- Establish crosswalks with colored/textured pavement & install vertical element in middle lane
  - Located:
    - Between Rosemary Ln & Wilson Ave
    - North of Service Drive by Physics Building
- Consider HAWK signals
  - High-Intensity Activated CrossWalk
Conclusion

- Pedestrian study found:
  - Unsafe conditions for pedestrians resulting in numerous accidents, often resulting in injuries

- Pedestrian study recommended:
  - Establishing 2 midblock crosswalks, installing a vertical element & consider HAWK signals

- Achieve study goals by:
  - Channeling pedestrians to crosswalk locations & discouraging midblock crossing
  - Providing a pedestrian refuge
  - Alerting motorists to presence of pedestrians
Questions?

Thank You
Pedestrian Crossing Patterns
Spatial Distribution of Pedestrian Crossings

- **University Avenue**: High number of pedestrians, indicating a significant pedestrian crossing location.
- **Mid-Block Intersection**: Moderate number of pedestrians, suggesting a mid-block crossing area.
- **Mid-Block Rosemary Lane**: Low number of pedestrians, indicating less pedestrian activity in this area.
- **Mid-Block Wilson Avenue** and **Mid-Block North/South**: Moderate to high number of pedestrians, indicating active pedestrian areas.
- **Bouchelle Avenue**: Low number of pedestrians, indicating less pedestrian activity.

The chart indicates the distribution of pedestrian crossings and the number of pedestrians at various locations.
Temporal Distribution of Pedestrian Crossings - Wednesday

Number of Pedestrians per 15 Minutes

Time of Day

- Eastbound
- Westbound
Temporal Distribution of Pedestrian Crossings – Thursday

- **Eastbound**
- **Westbound**

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**University of Missouri**

**CBB** Crawford, Bunte, Brammeler
Traffic and Transportation Engineers
Example HAWK Signal

- Advantages:
  - Stops traffic to provide opportunity for pedestrian to cross
  - Minimizes the duration that vehicles are stopped
  - [http://www.youtube.com/watch?v=x92c5SHc8yM](http://www.youtube.com/watch?v=x92c5SHc8yM)