Can the Purple Line and Pedestrians Coexist at the University of Maryland?

WDCSITE Annual Conference and Business Meeting

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• Campus Model Development
• Purple Line Project
• Study Methodology
• Analysis Results
• Findings
In 2017 Sabra & Associates was contracted by the University of Maryland (UMD) to develop a campus-wide multi-modal traffic model to be used to inform planning decisions related to:

• New campus buildings
• Future traffic patterns changes
• Pedestrian improvements
• Congestion mitigation
On-Campus Transportation Characteristics

- Pedestrian activity creates congestion
- Pedestrian flow rates are non-uniform
- Needed a flexible multi-modal tool
- VISSIM selected
Campus Model Development

While class is in session | 20 pedestrians per hour

Between classes | 150 pedestrians per hour
Campus Model Development

Study Area
The Purple Line is a 16-mile light rail line that will extend from Bethesda in Montgomery County to New Carrollton in Prince George’s County.
Train Operating Characteristics

• 7 ½ minute headways during peak commuting periods.
• Max operating speed on campus of 15 mph
• Train length of approximately 140’
• Signal pre-emption capabilities at each signalized intersection
• Trains will yield to pedestrians in and approaching uncontrolled crossings
Study Methodology

Alternatives

1. **Baseline** – No pedestrians/train interactions present on campus

2. **Existing Crossings** – No changes in crosswalk configurations

3. **Consolidated Crossings** – A modified crosswalk layout where some crosswalks are relocated and/or consolidated
Analysis Results

Impacts of pedestrians on Purple Line trains
Impacts of Purple Line trains on pedestrians
Can the Purple Line and Pedestrians Coexist at the University of Maryland?

Yes, here's how:

• Limit crosswalk consolidation
• Consolidate for safety issues
• Careful crosswalk placement
Questions?