Pasadena’s Transportation Impact Review and MMLOS

Monterey Bay Area Complete Streets Workshop
Mike Bagheri, Transportation Manager, Department of Transportation
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About Pasadena

Department of Transportation

Source: Census Transportation Planning Package, ESRI, Strategic Economics
Background

- Land use decisions made in the 1994 and 2004 General Plan updates

  > Developed a limited growth strategy that protected the historic neighborhoods that ring the Central District of Pasadena

  > Embraced the potential for transit-oriented development (TOD) along the route of the Gold Line LRT service.
• Citywide Fee adopted by Council
• Fix Transportation Deficiencies
• Improve service frequency of Pasadena Area Rapid Transit Services (ARTS)
• Increase capacity at a few intersections
City’s 2004 Mobility Element

Objectives

• Promote a livable community
• Encourage non-auto travel
• Protect neighborhoods
• Manage multimodal corridors
• Not aligned with Community Values expressed through the 2004 GP Update Mobility Element Goals and Objectives

• Vehicular-based Intersection Thresholds of Impacts (ICU)

• Vehicular-based Street Segment Thresholds of Impacts (Project Volumes/ADT)
- Pasadena researched several approaches and evaluated them for their effectiveness with implementing city’s Complete Street (MM) vision:

- **Network-based Metrics**
  - Vehicle Miles of Travel (VMT)
  - Travel Time

- **Traveler Experience Metrics**
  - S.F. Pedestrian Environment Quality Index (PEQI)
  - S.F. Bicycle Environment Quality Index (BEQI)
  - Multi-Modal Level of Service (MMLOS)
• Two project types selected
  > Detailed analysis with the MMLOS approach
  > Comparison with the 2005 Transportation Impact Study approach
• Case I - Road Diet in lower density residential area
• Case II - Mixed Use Development in Central District

http://www.kittelson.com/toolbox/complete_streets_los
Interdependency of all modes is evident in the MMLOS model.
A proposed road diet project - removing two lanes of traffic on East Orange Grove Boulevard and installing bike lanes in both directions.
Orange Grove – AM Peak

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Auto

- Existing
- Road Diet
- LOS A/B
- LOS B/C
- LOS C/D
- LOS D/E
- LOS E/F

Hill to Allen
Allen to Altadena
Altadena to Sierra Madre
Orange Grove – AM Peak

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Transit

- Existing
- Road Diet
- LOS A/B
- LOS B/C
- LOS C/D
- LOS D/E
- LOS E/F

Hill to Allen
Allen to Altadena
Altadena to Sierra Madre
Case Studies Findings - 1

- Proposed Orange Grove Road Diet Project between Hill Avenue and Sierra Madre Boulevard
  - Findings showed that road diet project would improve bicycle LOS with minimal impact on other modes LOS
  - Adding a bike lane made a difference of one LOS on all segments (C to B)
A mixed-use project consisting of 125,000 sq. ft. of Retail/Office with a 156-room Hotel
• Compared MMLOS with recent EIR analysis

• Segment MMLOS showed expected range of conditions for each mode
  > Identified need to improve LOS for bicycles on Lake

• Intersection MMLOS results for auto mode were equivalent to the ICU results
  > MMLOS approach reasonably predicted the auto drivers’ perception of the conditions.
Lake Avenue MMLOS Scores

AM Peak

- Existing
- 2015
- 2015 + Project
- LOS A/B
- LOS B/C
- LOS C/D
- LOS D/E
- LOS E/F

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Inclusion of MMLOS analysis resulted in:

- A more robust analytical basis for requiring mitigation measures for transit, pedestrians and bicycles.
- An analytical/quantifiable justification to reject mitigation measures that expand vehicular capacity in ways that would negatively impact other modes.

MMLOS Sensitivity (or lack of):

- Compared to auto-only approach, it’s an improvement and not an immediate problem.
- Going forward, further refinement will be needed.
# Integrated MMLOS into Current Analysis Techniques

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<td>Current Complete Streets Traffic Impact Analysis</td>
<td>Intersection LOS</td>
<td>Multi-Modal (MM) Intersection Pedestrian LOS</td>
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Aligning Metrics and Policies

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Need to better align Pasadena’s General Plan Policies of emphasizing quality of travel experience for travelers using all modes while elevating the importance of safety, accessibility, livability and sustainability
• **Accessibility and environmental performance**  
  > Incorporating Livability via walking conditions  

• **Sustainability**  
  > Focused on Greenhouse Gas Production  

• **Multi-Modal Corridor metrics**  
  > Traveler Experience  
  ▪ Incorporating Livability via Quality of Service for Transit, Bicycle, and Pedestrians
• Retain some current measures
• Elevate safety, accessibility, livability and sustainability
• Emphasize all modes quality of travel experience
• Take advantage of new techniques, tools and concepts
  > Emphasize system performance
  > Address livability
  > Address sustainability

Objectives of New Metrics
• Informing the community
• Assessing and monitoring progress
• Analyzing options
• Synching up with other goals
• Anchoring funding and mitigation requirements
• Guiding operating decisions and strategies
Parting Thoughts

- Methods to assess impacts on pedestrians, bicyclists, and transit are evolving
- MMLOS Sensitivity (or lack of)
- Policy-based Exemptions
- City-wide or district-wide Transportation Impacts Fees to implement non-Vehicular improvements and measure networks performance
- SB 743- new significant impact criteria

“What gets measured gets managed”

- Peter Drucker
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