The Level of Service Barrier to Multimodal Transportation

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Forum to Discuss Level of Service Policies
State of California Governor’s Office of Planning and Research
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Oakland General Plan Policies

The City’s General Plan policies promote multimodal transportation:

• *Objective T4 – Alternative Modes of Transportation:* Increase use of alternative modes of transportation (LUTE, p. 58).

• *Action 1C.1 – Bikeways to Transit Stations:* Prioritize bicycle access to major transit facilities from four directions, integrating bicycle access into the station design and connecting the station to the surrounding neighborhoods (BMP, p. 56).
Oakland Thresholds of Significance

...and established practice measures transportation impacts primarily in terms of automobile congestion:

• Cause the baseline level of service (LOS) to degrade to worse than LOS D (i.e., LOS E or F) at a signalized intersection that is located outside of the Downtown area;

• Cause the baseline LOS to degrade to worse than LOS E (i.e., LOS F) at a signalized intersection that is located within the Downtown area (BMP DEIR, p. 4.A-3).
Developing Multimodal Roadways

Implementing multimodal policies while maintaining automobile LOS thus leads to two common scenarios:

• *Existing Roadways and Land Uses*: Reallocate roadway width to include facilities for all modes...
  ... but create significant impacts on automobile congestion.

• *New Roadways and Land Uses*: Build roadways wide enough to include facilities for all modes...
  ... but create streetscapes that may not support walking, cycling, and transit.
MacArthur BART Bicycle Access Study

The example project...
W MacArthur Blvd Cross-sections

...would reconfigure a six-lane street to improve bicycle access to a major transit station:

Existing

Proposed
## Roadway Segment Volumes

But traffic is projected to double and triple by 2030...

<table>
<thead>
<tr>
<th>Street</th>
<th>Endpoint</th>
<th>Endpoint</th>
<th>Direction</th>
<th>2007 Volume</th>
<th>2030 Volume</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>W MacArthur Blvd</td>
<td>Market St</td>
<td>West St</td>
<td>WB</td>
<td>546</td>
<td>1652</td>
<td>203%</td>
</tr>
<tr>
<td>W MacArthur Blvd</td>
<td>West St</td>
<td>MLK Jr Wy</td>
<td>WB</td>
<td>522</td>
<td>1584</td>
<td>203%</td>
</tr>
<tr>
<td>W MacArthur Blvd</td>
<td>MLK Jr Wy</td>
<td>Telegraph Ave</td>
<td>WB</td>
<td>671</td>
<td>1723</td>
<td>157%</td>
</tr>
<tr>
<td>W MacArthur Blvd</td>
<td>Telegraph Ave</td>
<td>Webster St</td>
<td>WB</td>
<td>575</td>
<td>1751</td>
<td>205%</td>
</tr>
<tr>
<td>W MacArthur Blvd</td>
<td>Webster St</td>
<td>Broadway</td>
<td>WB</td>
<td>531</td>
<td>1757</td>
<td>231%</td>
</tr>
<tr>
<td>Average (over WB and EB for all segments)</td>
<td></td>
<td></td>
<td></td>
<td>5912</td>
<td>13755</td>
<td>133%</td>
</tr>
</tbody>
</table>
Level of Service (LOS) Analysis

...creating significant and unavoidable impacts at five of the six study intersections.

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Time</th>
<th>2007 Existing</th>
<th>2007 Project</th>
<th>2030 Existing</th>
<th>2030 Project</th>
<th>Significant Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>W MacArthur Blvd / Market St</td>
<td>AM</td>
<td>B</td>
<td>B</td>
<td>F</td>
<td>F</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>PM</td>
<td>B</td>
<td>C</td>
<td>E</td>
<td>F</td>
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<tr>
<td>W MacArthur Blvd / West St</td>
<td>AM</td>
<td>B</td>
<td>B</td>
<td>E</td>
<td>D</td>
<td>X</td>
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<td>PM</td>
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<td>C</td>
<td>E</td>
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</tr>
<tr>
<td>W MacArthur Blvd / MLK Jr Wy</td>
<td>AM</td>
<td>B</td>
<td>B</td>
<td>C</td>
<td>C</td>
<td>X</td>
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<tr>
<td>W MacArthur Blvd / Telegraph Ave</td>
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<tr>
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<td>C</td>
<td>C</td>
<td>F</td>
<td>F</td>
<td></td>
</tr>
<tr>
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<td>A</td>
<td>B</td>
<td>B</td>
<td></td>
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<tr>
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<td>B</td>
<td>B</td>
<td>D</td>
<td></td>
</tr>
<tr>
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<td>C</td>
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<td>X</td>
</tr>
<tr>
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<td>PM</td>
<td>D</td>
<td>D</td>
<td>F</td>
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</tbody>
</table>
Key Factors

How does this happen?

1. Land use assumptions  
   (Association of Bay Area Governments)
2. Trip generation and distribution  
   (Alameda County Congestion Management Agency)
3. CEQA thresholds of significance  
   (City of Oakland)
Possible Approaches

How can such projects be implemented?

1. Redesign project to avoid significant impacts.
   • Limits connectivity and quality of bikeways.

2. Complete statement of overriding considerations.
   • Requires City Council to sanction congestion in an EIR.

3. Change the thresholds of significance.
   • Creates legal liability if applied inconsistently.

4. Eliminate study of the future year scenario.
   • Creates legal liability if applied inconsistently.

5. Modify the trip generation rates/distribution.
   • Involves regional agencies and state law.

6. Create statutory exemption (e.g. PRC 21080.19).
   • Requires modification to state law.