Effective Transportation Demand Management (TDM) in Congested Corridors

US 422 TDM Best Practices Policy Brief and Recommendations

Presentation Outline

- Transportation Demand Management
- The US 422 Corridor in SE Pennsylvania
- Why TDM for US 422?
- Recommendations
- Discussion
What is TDM?

- A comprehensive approach to addressing traffic congestion
- Many policies and programs are TDM, depending upon the context
- We use the definition provided by The Center for Urban Transportation Research (CUTR):
  
  TDM “focuses on helping people change their travel behavior to meet their travel needs by
  - using different modes,
  - traveling at different times,
  - making fewer trips or shorter trips,
  - or taking different routes.”

Communities of the US 422 Corridor
Regularly congested in peak hours, AADT ~70,000, increasing traffic as pop’n / empl have grown.

### Table 3.1-1: Existing Demand (2010) vs. Year 2035 No-Build

<table>
<thead>
<tr>
<th>Location/Limits</th>
<th>Lanes</th>
<th>Daily Capacity</th>
<th>Year 2010 Volume</th>
<th>Capacity Used</th>
<th>Year 2035 Volume</th>
<th>Capacity Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Grosstown Road and PA 100</td>
<td>4</td>
<td>88,280</td>
<td>54,960</td>
<td>62%</td>
<td>65,440</td>
<td>74%</td>
</tr>
<tr>
<td>Between Sanatoga (Evergreen Road) and Limerick / Linfield (Lewis Road)</td>
<td>4</td>
<td>85,800</td>
<td>53,090</td>
<td>62%</td>
<td>84,110</td>
<td>98%</td>
</tr>
<tr>
<td>Between PA 29 (Phoenixville / Collegeville) and Oaks (Egypt Road)</td>
<td>4</td>
<td>85,800</td>
<td>66,410</td>
<td>77%</td>
<td>93,470</td>
<td>109%</td>
</tr>
<tr>
<td>Schuylkill River Bridge</td>
<td>5</td>
<td>113,110</td>
<td>99,095</td>
<td>88%</td>
<td>118,660</td>
<td>105%</td>
</tr>
</tbody>
</table>


- **Increase Supply** with Capacity Additions
- **Manage Supply and Demand** with Transportation System Management Tools
- **Reduce Demand** with Transportation Demand Management Tools
TDM Supportive Policy Environment

- Regional TDM policies
- Many and good travel mode choices
- Timely and accurate travel information
- Incentives and disincentives
- Coordinated multi-modal transportation and land use planning policies

Policy Environment in the US 422 Corridor

- Regional TDM policies
- Many and good travel mode choices
- Timely and accurate travel information
- Incentives and disincentives
- Coordinated multi-modal transportation and land use planning policies

- Some, voluntary
- Transit / bike / ped inconvenient
- Provided, but could be strengthened
- Guidance provided, not widely adopted
- Supportive LU patterns in some boroughs; overall, travel convenient only by car
Key Decisions to Discuss and Make

- What performance measures and TDM goals?
- Favor shared and non-motorized transportation?
- Require land use and transportation coordination?
- Make single occupant vehicle travel more costly?
- Promote private shared modes of transportation?

Recommendations for the US 422 Corridor
## Bike and Pedestrian Infrastructure

<table>
<thead>
<tr>
<th></th>
<th>Short Term (0 to 2.5 Years)</th>
<th>Medium Term (2.5 to 5 years)</th>
<th>Long Term (5+ years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support regional efforts for infrastructure improvements</td>
<td>Commitment to “complete streets guidelines”</td>
<td>Land Use planning</td>
<td></td>
</tr>
<tr>
<td>Secure funding to expand current network</td>
<td>Comprehensive approach to bicycling planning</td>
<td>Encouragement of TOD and Smart Growth Development</td>
<td></td>
</tr>
<tr>
<td>Improve current infrastructure</td>
<td>Construction of facilities and infrastructure</td>
<td>Trip Reduction Ordinance</td>
<td></td>
</tr>
<tr>
<td>Identify ped / bike transportation connections</td>
<td>Enforcement of policies and regulations</td>
<td>Regional and State planning for trail connections</td>
<td></td>
</tr>
<tr>
<td>Outreach and education</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Bike & Pedestrian Infrastructure

[Images of bike and pedestrian infrastructure]
## Employer Incentives

<table>
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<tr>
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<td>Detailed info to employers and employees</td>
<td>Development of internal TDM program</td>
<td>Commitment to a Sustainability Plan</td>
</tr>
<tr>
<td>Private Public Partnerships</td>
<td>Commuter amenities and infrastructure</td>
<td>Proximity to trails and public transportation</td>
</tr>
<tr>
<td>Incorporation of existing Commuter Programs</td>
<td>Shuttle/ Bussing service</td>
<td>Parking Policies</td>
</tr>
<tr>
<td>Incentives to use modes other than SOV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flexible Work Schedules</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Employer Incentives Examples

![Image of Employer Incentives Examples](image-url)
### Public Transportation

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<tr>
<td>Disseminate information</td>
<td>Analysis of multi-modal facilities</td>
<td>Statewide transportation planning policies</td>
<td></td>
</tr>
<tr>
<td>Development Task Force or Coalition</td>
<td>Implement new technologies</td>
<td>Long term funding mechanisms</td>
<td></td>
</tr>
<tr>
<td>Evaluation and Prioritization of current and future services</td>
<td>BRT, bus service expansion</td>
<td>TOD and Smart Growth Development</td>
<td></td>
</tr>
<tr>
<td>Advocacy for funding</td>
<td>Consideration of private provision of shared modes</td>
<td>Trip Reduction Ordinances</td>
<td></td>
</tr>
<tr>
<td>Incorporation into long-term plans</td>
<td>Upgrade facilities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Public Transportation Examples

- [Image of train station]
- [Image of bus]
- [Image of mobile phone with transportation app]
- [Image of bus stop]
- [Image of city bus]

- BRT, bus service expansion
- TOD and Smart Growth Development
- Trip Reduction Ordinances
- Statewide transportation planning policies
- Long term funding mechanisms
- Consideration of private provision of shared modes
- Upgrade facilities

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**10/22/2015**
### Land Use

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<tr>
<td>Advocacy and engagement</td>
<td>Study transit / land use coordination opportunities</td>
<td>Parking pricing policies</td>
<td></td>
</tr>
<tr>
<td>Build on sub-regional planning initiatives</td>
<td>Incorporate TDM measures into plans</td>
<td>Trip reduction ordinances</td>
<td></td>
</tr>
<tr>
<td>Development of stakeholder coalitions</td>
<td>Regional land use planning efforts</td>
<td>TOD and Smart Growth policies</td>
<td></td>
</tr>
<tr>
<td>Develop clear, measurable TDM goals</td>
<td></td>
<td>Multi-use high density development zoning</td>
<td></td>
</tr>
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### Land Use Examples

![Land Use Examples Image 1](image1)

![Land Use Examples Image 2](image2)

![Land Use Examples Image 3](image3)
Key Decisions to Discuss and Make

- What performance measures and TDM goals?
- Favor shared and non-motorized transportation?
- Require land use and transportation coordination?
- Make single occupant vehicle travel more costly?
- Promote private shared modes of transportation?

Timeframe: Short-term (0 – 2.5 yrs) to long-term (5 yrs and beyond)
GVF Follow-Up

- Dissemination of Policy Brief
- 422 Corridor Coalition
- Establishment of Goals
- Employer Engagement
- Recognition

Similar Corridors

- Pittsburgh: 447,000+ hrs, $1,130,000,000
- Philadelphia: 157,000+ hrs, $3,600,000,000+
- Allentown: 17,000 hrs, $393,000,000
- Erie: 3,445 hrs, $87,000,000
- Harrisburg: 10,342,000 hrs, $254,000,000
- Lancaster: 7,800,000+ hrs, $187,000,000
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