Designing Main Streets

MICHIGAN TRANSPORTATION BONANZA
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MKSK
Typical Downtown Street Conditions + Challenges

- Inappropriate vehicle speeds
- Confusing one-way streets
- Unsafe and infrequent pedestrian crossings
- Conflicts between...
  - Through traffic and everyone else
  - Trucks and pedestrians
  - Pedestrians and vehicles/bikes
  - Parking/loading and bicyclists
  - Engineers and everyone else
New Approaches

- Recognition of relationship between street design and business vitality
- Emphasis on pedestrian travel and safety
- More acceptance of lower auto LOS in downtowns
- More supportive engineering manuals
- Innovate design options

- NAACTO
- ITE Designing Walkable Urban Thoroughfares
- MDOT Main Street Guidance for Trunkline Main Streets
- ITE Implementing Context-Sensitive Design on Multimodal Corridors
- MDOT/SEMCOG Multi-Modal Road Design Toolkit (in progress)
Best Practices
Things to Consider

- Evaluate the entire street network!
- Changing acceptable standards (e.g. 10-11’ lanes instead of 12’+)
- Pedestrian crossing options
- Ridehailing space/curbside management (Uber, Lyft)
- Accommodating electric vehicles
- Emergence of scooters and e-bikes
- Flexibility for future mobility
Right-of-Way Design Changes Can Have Dramatic Results
First - Determine Your Goals and Priorities

• What issues do you want to resolve?
  – Economic vitality
  – Add on-street parking
  – Improve pedestrian environment
  – Upgrade streetscape
  – Ease wayfinding

• Determine modal priorities for different streets in the network

• Agree on traffic forecast methodology
Applicable Design Standards

- Lane widths – autos, transit, bikes, parking
- Minimum/preferred sidewalk amenity zone
- Pedestrian crossing locations and types
- Parking setbacks from intersections and pedestrian crossings
- Target speed
- Minimum Vehicle Level of Service or Travel Time metric
- Transit amenities
- Type of bike facilities
Determine Priorities that Fit into the Right-of-Way
Michigan Downtown Case Studies

• Birmingham, Michigan
• Midland, Michigan
• Kalamazoo, Michigan
• Lansing, Michigan
Birmingham, Michigan

- 21,000 cars daily on two-lanes with highly used parking
- Narrow sidewalks with little room for amenities
- Collaboration of traffic engineers, planners and landscape architects

New Design
- Narrowed lanes to 11 feet (some 10)
- Narrowed parking
- Removed some turn lanes
- Widened sidewalks, added crossings
Midland, Michigan (US-10)

- One-way US-10 runs on edge of downtown
- Study demonstrated excess traffic capacity
- City and MDOT explored options (two-way or lane reductions)
Midland, Michigan (US-10): ROAD DIET TEST
Downtown Main Street, Midland, Michigan

• BEFORE
  – Angled parking
  – Narrow sidewalks
  – Traffic signals

• AFTER
  – Parallel parking
  – Wide sidewalks, cafes
  – Curbless, stop signs
  – Green infrastructure
Downtown Main Street, Midland, Michigan

Rain Gardens – In Progress

Rain Gardens – Completed
Kalamazoo, Michigan

- Began as MDOT-led process “Planning & Environmental Linkages (PEL)”
- City’s Downtown Streets Analysis
- Combination of one-way to two-way conversions and “road diet” options
Decades of debates on one-way streets
Lots of support to convert one-ways to two-way
Began with an MDOT Planning & Environmental Linkages Study (PEL)
MDOT design standards constrained the options (lane widths, parking standards, LOS)

ISSUES:
Continuous trunkline
Cost to maintain streets
Cost to convert to two-way

### Evaluation Criteria

<table>
<thead>
<tr>
<th>Important to MDOT</th>
<th>Important to the City</th>
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<tbody>
<tr>
<td>Auto LOS</td>
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<td>Favor Through-vehicles</td>
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<td>Pedestrian Safety</td>
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<td>On-Street Parking</td>
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<td>Space for Amenities</td>
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<td>Protected Bike Facilities</td>
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Kalamazoo, Michigan

- Increased emphasis on pedestrian and bicycle travel & safety
- City assumed jurisdiction over key streets from MDOT
- Integrating economic development with street design
- City began a new evaluation with commitment to implement
- Extensive engagement program
City and MDOT both motivated to transfer jurisdiction

- Joint determination of MDOT costs for “basic maintenance” for next 7-10 years (incl. inflation)
- $11 Million
- 60% up front
- 40% after 6 years or if improvements are completed before then.
Kalamazoo Turnback: LESSONS LEARNED

- "Positive Experience"
- Lots of negotiation
- Briefings to City Council
- Public transparency
- Keep advocates in front of media and social media
Lansing, Michigan

Street Design Manual
City of Lansing
August 2018
Lansing, Michigan: PILOT PROJECT

Add images from the Lansing street design manual.
• One-way MDOT streets
• Wide streets, well under capacity, high vehicle speeds
• Desire for easier wayfinding and slower traffic speeds
• Goal to convert to two-way and better accommodate bikes without losing key on-street parking
• City received a $3.3 million grant
Lessons Learned So Far

• Need agreement on outcome desired
• Agree on design standards and process
• Explore modal network results
• Build champions
• Gain engineering support
• Jurisdictional transfer option