Redefining Transportation Excellence

Transportation Planners
My 3 Proposals

1. Transportation should be about building communities, not facilities
2. Energy prices will soon change everything we are doing
3. Engineers could be leading the way, but aren’t

Proof by assertion
10 Principles

- Mobility Balance
- Street Connectivity
- Community Character
- Forecasting is not Planning
- Transit will not Alleviate Congestion
- Active Living
- Multimodal Streets
- Sustainable Mobility
- Empowerment
- Monitoring & Reporting

Redefining Transportation Excellence

1. Mobility Balance

Mobility Elements

<table>
<thead>
<tr>
<th>Travel</th>
<th>Moving over distances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circulation</td>
<td>Moving within areas</td>
</tr>
<tr>
<td>Access</td>
<td>Getting in the door</td>
</tr>
</tbody>
</table>
### Facilities

<table>
<thead>
<tr>
<th>Facilities</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel</td>
<td>Freeways, arterials, rail transit, express bus lanes</td>
</tr>
<tr>
<td>Circulation</td>
<td>Collectors, connectors, transit routes, bike trails and lanes</td>
</tr>
<tr>
<td>Access</td>
<td>Local streets, parking, sidewalks and crosswalks</td>
</tr>
</tbody>
</table>

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**Travel – Circulation – Access**

**Built for…**

- Seattle
- Redmond
- Denver

..travel
We build too much for travel and too little for circulation and access.
Good circulation and access are far more important to cities and towns than travel capacity

2. Connectivity
It’s the connectivity, stupid

Impacts of Poor Connectivity
- Massive, congested arterials
- Increased VMT/household
- Transit voids
- Inactive living
- Poor emergency service access
- Reduced travel safety
Streets are the principal infrastructure for all modes of travel.

“You can’t get there from here . . .” (without driving)
A well-connected network of small streets provides better mobility, is safer and is more efficient than a poorly-connected network of wide streets.
We are forcing bad design with public policy
Functional Classification

- Freeway
- Major Arterial
- Minor Arterial
- Commercial Collector
- Residential Connector
- Commercial Local
- Residential Local
- Alley
Nothing useful is achieved by the **inexorable widening** of community streets

3. **Community Building**
We can’t build a street that looks like this…

…and expect this to result.

The design of transportation corridors has a profound effect on the character of abutting land uses.
4. Forecasting is not Planning

- Predict Growth
- Widen Streets
- Forecast Traffic

Boulder
1. What do we want?
2. How much traffic will there be?
3. What should we do?
1. How much traffic will there be?
2. What should we do?
3. What do we get?

Induced Traffic
“Induced Traffic”

Def.
The additional traffic that results directly and indirectly from transportation capacity or travel time improvements – traffic that would not otherwise have occurred at that location.

Types of Induced Traffic

Changes in travel route ………………… Immediate
Changes in mode of travel ……………… < 6 months
Changes in time of travel ………………. < 6 months
Changes in amount of travel ………… < 6 months
Changes in origins & destinations …… < 10 years

% of new capacity consumed by induced traffic…

Long Term: five to 10 years
Short Term: less than five years
Expanding streets to accommodate traffic growth is self-fulfilling and self-defeating at the same time.

5. Transit will not Alleviate Congestion
Good Reasons to Invest in Public Transit:

- Improve mobility (travel, circulation and access) in the face of growth.
- Avoid over-building roads and streets and destroying character.
- Improve personal travel choice and family flexibility.

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6. Active Living

Walking

...is not an “alternate mode”
Walking
...is Human

We Walk Because We are Human

We are Human Because We Walk
Because We Walk…

- We speak
- We sing
- We use tools
- We orient spatially at 3 mph

Human History

Nomadic hunter-gatherer
23:54
We cannot escape our DNA…
Pedestrian Science

- Types of Walkers
- Types of Pedestrian Environments
- Practical Strategies
Boulder’s pedestrian mall works because …

… it is supported by a multimodal transportation system
7. Multimodal Streets
8. Sustainable Mobility

Annual Household Spending
Minneapolis-St. Paul
(Percent of Total Household Expenditures)

<table>
<thead>
<tr>
<th>Category</th>
<th>Spending</th>
<th>Percent</th>
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</thead>
<tbody>
<tr>
<td>Transportation</td>
<td>$8,683</td>
<td>18.4%</td>
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<tr>
<td>Shelter</td>
<td>$8,135</td>
<td>17.2%</td>
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<tr>
<td>Food</td>
<td>$5,507</td>
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<tr>
<td>Utilities</td>
<td>$2,292</td>
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<tr>
<td>Other Household</td>
<td>$4,338</td>
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<td>Insurance &amp; Pensions</td>
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<td>Health Care</td>
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<td>Entertainment</td>
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<td>Apparel &amp; Services</td>
<td>$1,927</td>
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<td>Education</td>
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<tr>
<td>Miscellaneous</td>
<td>$4,121</td>
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</table>

31.3%
Total Household Expenditures on Transportation in 2000 in Minneapolis-St. Paul: $10.9 billion

Worldwide supply of oil

Daily production capacity

Daily demand

Wholesale price/barrel

$50

$100

Time

mblday

50%

100%

45

90
Sustainable Transportation Systems:

- Enable families to reduce daily VMT without sacrificing income
- Provide a high degree of choice in mode of travel
- Are resilient to economic fluctuations

Things we Are Not Doing to Ensure Future Resiliency

- Providing a collector/connector street network for bus transit and bike
- Preserving rail envelopes in freeway and major arterial corridors
- Planning for dense, mixed-use areas as part of our land use planning
- Requiring walkable pedestrian

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9. Empowerment
The public is empowered when...

...they have access to the information they want, not just the information we think they
The public is NOT empowered when…

...the project schedule cannot be revised

The public is NOT empowered when...

...standards prevent creative design solutions

The public is NOT empowered when...

...the project must fit within or fully spend a predetermined budget
The Tools of Power

- Budgets
- Schedules
- Standards

Most public process in transportation planning and design today strives to obtain consent rather than to enlist the public in creative development of their own communities

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10. Monitoring & Reporting
Reporting Tools

- Annual Transportation Performance
- Mobility Report Card
- Transportation Chapter in City Report

Continuing public and political support for transportation programs requires accurate, honest monitoring and reporting of trends and outcomes

Summary
3 Proposals

1. Transportation should be about community building
2. Energy prices will soon change everything
3. Engineers could be leading the way
Challenge to Engineers:

- Do you know what the CNU urban “transect” is?
- Could you adapt your local design standards to this format?

![Transportation Corridors](image1)

Challenge to Engineers:

- Do you know what “TOD” is?
- Would you know how to handle access and circulation in and around a rail station?

![Challenge to Engineers](image2)

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<th>Hundreds of Years</th>
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<th>400</th>
<th>600</th>
<th>800</th>
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<td>Other Plantings</td>
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Thank You

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