Helena: Growing Up or Growing Out

Sustainable Mobility for a Growing Downtown
Our Work
Sustainable Mobility

➢ Why Build In Downtown?
➢ What Works – Peer Experiences
➢ Suggested Priorities

Copies Available @ www.charlier.org
Why Build In Downtown?

Sustainable Mobility
Why Build In Downtown?

- Energy Security
- Climate Change
- Economic Viability
Energy Security
Sustainable Mobility
Are we running out of gas?
The stone age did not end...
...because we ran out of stones
The end of the age of...

...cheap oil
Worldwide supply of oil

Time

100 %

50 %

42 years

1.3 trillion barrels
Worldwide supply of oil

Time

Daily demand

Daily production capacity

mbls/day
Price of a barrel of oil

Adjusted for inflation

Sources: Federal Reserve; Energy Information Administration; Bloomberg Financial Markets

Graphic: New York Times
Summary: Energy Security

- The supply/demand relationship for energy has changed fundamentally & permanently
- Energy prices & especially motor fuel prices will rise inexorably
- Montana’s economy will be directly & significantly impacted
- Citizens expect governments to address these issues
Climate Change

Sustainable Mobility
Stranded Polar Bears
Receding Glaciers
Greenhouse gases associated with human activities are contributing to global warming with potentially serious consequences.
Scientific consensus:

- We must limit global temperature increases to no more than 2° to 3° C
- To do that we must cut GHG emissions by 60% to 80% below 1990 levels by 2050
Basics: Climate Change 3

- GHGs persist in the atmosphere – we do not start over each year
- If we hesitate to begin reducing GHG emissions, the amount we have to reduce in later years increases EXPONENTIALLY
- What we do now is more important than what we do in 2050
Basics: Climate Change 4

- The Western US
  - Will Be Hotter
  - Will Be Drier
  - Will Have More Volatile Weather
U.S. Greenhouse Gases

- Transportation: 28%
- Utilities: 33%
- Industrial: 19%
- Commercial: 6%
- Residential: 5%
- Agriculture: 8%
- Other: 1%
Colorado:

- Transportation: 24%
- Electrical Generation: 37%
- RCI: 18%
- Industrial: 2%
- Agriculture: 8%
- Waste Management: 2%
- Ind. Process/Fossil Fuel: 9%
Montana

- Res/Com Fuel Use: 6%
- Transport: 20%
- Industrial Process: 3%
- Waste: 1%
- Agric.: 26%
- Electricity: 26%
- Fossil Fuel Industry: 11%
- Industrial Fuel Use: 6%
Potential Responses to Climate Change

- Ignore ✔
- Mitigate ✔
- Adapt ✔
Figure 3. The Interior West: Epicenter of Warming in the Contiguous U.S. (2000 - 2007 Average Temperatures Compared to 20th Century Averages)
Ambient Temperature Change
1908 – 2007 (° F)

- World: + 1.0°
- Western US: + 1.7°
- Montana: + 2.1°
White "bathtub rings" show the pre-drought water level of Lake Powell.
Montana Climate Change

Hotter
- Higher average temperatures
- Longer “hot” season

More Volatile
- More intense storm events
- More intense heat waves

Drier
- Earlier snow melt
- Higher % of precip as rain
- Prolonged droughts

Transportation Impact

Higher ambient urban temperature
Increased energy demand
Less walking & bicycling
Increased fire frequency & severity
Increased frequency of flooding
Reduced agriculture
Reduced tourism
Figure 6. The Rising Tide for Global Warming Solutions

LEGEND:
- Green: Commitment to Mandatory Cap (24 States) (41% of total U.S. emissions)
- Light Green: Considering Mandatory Cap (6 States) (8% of total U.S. emissions)
- Mayor Signed on to Climate Agreement (793)
- Capped/Implementing Cap on Vehicle Emissions (18 States) (47% of U.S. vehicle emissions)
Hotter and Drier

The West's Changed Climate

Principal Authors
Stephen Saunders
Charles Montgomery
Tom Easley
The Rocky Mountain Climate Organization

Contributing Author
Theo Spencer
Natural Resources Defense Council
Economic Viability

Sustainable Mobility
Maui gas hits $4

Some residents wonder why prices are at least 40 cents higher than on Oahu.

Regular        $4.11
Plus            $4.13
V-Power         $4.23

Judge jails convicted killer for life plus more

HEATED UP ABOUT THE HEAT
Students demand air conditioning at their school
A HEAVY LOAD:
The Combined Housing and Transportation Burdens of Working Families

October 2006
## TYPICAL HOUSEHOLD BUDGET IN 28 METROPOLITAN AREAS

(Expenses as a share of income)

<table>
<thead>
<tr>
<th></th>
<th>All Households</th>
<th>Working Families Incomes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>$20,000 – $50,000</td>
</tr>
<tr>
<td>Housing</td>
<td>27.4%</td>
<td>27.7%</td>
</tr>
<tr>
<td>Transportation</td>
<td>20.2%</td>
<td>29.6%</td>
</tr>
<tr>
<td>Food</td>
<td>10.6%</td>
<td>15.1%</td>
</tr>
<tr>
<td>Healthcare</td>
<td>4.7%</td>
<td>7.7%</td>
</tr>
</tbody>
</table>
Share of Family Income Spent On Housing & Transportation

Family Income = $35,000 - $50,000

Central City
- Housing: 23%
- Transportation: 16%
- Total: 39%

Near Jobs
- Housing: 26%
- Transportation: 23%
- Total: 49%

Away From Jobs
- Housing: 25%
- Transportation: 26%
- Total: 51%
Share of Family Income Spent On Housing & Transportation

Family Income = $20,000 - $35,000

- **Central City**
  - Housing: 32%
  - Transportation: 22%
  - Total: 54%

- **Near Jobs**
  - Housing: 35%
  - Transportation: 31%
  - Total: 66%

- **Away From Jobs**
  - Housing: 33%
  - Transportation: 37%
  - Total: 70%

- Housing: +15.4%
- Transportation: +13.4%
- Income: +10.3%
Why Build In Downtown?

- Energy Security
- Climate Change
- Economic Viability

Location Efficiency
Location Efficiency

- Shorter Trips
- Fewer Vehicle Trips
- Reduced Petroleum Consumption
- Reduced GHG Emissions
- Reduced Cost of Transportation in Household Budgets
- Improved Employment Security
- Less Money Leaving the Local Economy
Examples of Location Efficiency

- Transit Oriented Development (TOD)
- Mixed Use Centers
- Connected Networks
  - Walkable Neighborhoods
  - Street Connectivity
  - Complete Bicycle System (A, B, C)
- HEALTHY DOWNTOWNS
Growing Cooler: The Evidence on Urban Development and Climate Change

Reid Ewing, Keith Bartholomew, Steve Winkelman, Jerry Walters, and Don Chen

with Barbara McCann and David Goldberg
What Works – Peer Experiences

Sustainable Mobility
“MOBILITY”
Mobility Elements

- **Travel** – Moving over distances
- **Circulation** – Moving within areas
- **Access** – Getting in the door
<table>
<thead>
<tr>
<th>Facilities</th>
<th>Description</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>
Built for…

Seattle

…travel

Redmond
Built for...  

Redmond  

Flagstaff  

...circulation
Built for...

Boulder

...circulation
Built for...

Boulder

Winter Park, Fl

...access
Circulation and access are much more important to downtowns than travel
What Works – Peer Experiences

- Streets
- Parking Management
- Walkable Places – The Intermodal Downtown
- Transit
Peer Examples

HELENA
pop. 26,000
What Works – Peer Experiences

- Streets
- Parking Management
- Walkable Places – The Intermodal Downtown
- Transit
Streets
Newbury, Boston
Neighborhood

Abutting Property

Street

Abutting Property
Peer Example – Redmond WA

Streets
Redmond, Washington
Traditional Focus: Traffic Data