“The Pedestrian Opportunity: Solving the Challenges and Reaping the Benefits of Walkable Places”
the time is ...

...NOW
communities should invest in walkable places now
the pedestrian
this is who we are:

• recently descended from nomadic hunter/gatherers...
• ...who walked extensively... and burned lots of calories
• ...who experienced the world @ 2 – 3mph
• ...whose bodies were designed for collisions @ < 10 mph
we evolved as “walkers”
we are still “walkers”
human history

24

villagers

00:06

nomadic hunter-gatherer

23:54

12
this is what we do...

…but it is not who we are.
we cannot escape our DNA...
...no matter how hard we try
why do we walk?
rambling
Prospect

rambling
Prospect

rambling
accessing
accessing Upcountry Maui
accessing

Redmond
strolling
Boulder

strolling
Winter Park, FL
Boulder strolling
promenade
promenade

Boulder
Oxford (Cornmarket) promenade
where do we walk?
“pedestrian-friendly”
pedestrian place

pedestrian supportive

pedestrian tolerant

pedestrian intolerant
pedestrian place
pedestrian place

Boulder
Miami Beach, FL

pedestrian place
pedestrian supportive
Mt. Vernon, IA

pedestrian supportive
Redmond

pedestrian supportive
pedestrian supportive
pedestrian supportive
pedestrian tolerant
Redmond

pedestrian tolerant
pedestrian tolerant
pedestrian tolerant

Kapalua, Maui
Wailuku, Maui

pedestrian tolerant
Pedestrian tolerant

Boulder, CO
pedestrian intolerant
somewhere

pedestrian intolerant
somewhere

pedestrian intolerant
somewhere

pedestrian intolerant
somewhere

pedestrian intolerant
somewhere

pedestrian intolerant
Flagstaff, AZ

pedestrian tolerant
pedestrian intolerant

Flagstaff, AZ
there are no cities that are entirely “pedestrian friendly”

making progress requires setting priorities
the time is ... 

...NOW
now is the time to invest in walkable places
why?

five reasons...
1
size of the challenge
<table>
<thead>
<tr>
<th>Hundreds of Years:</th>
<th>200</th>
<th>400</th>
<th>600</th>
<th>800</th>
<th>1000</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Transportation Corridors</strong></td>
<td></td>
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<tr>
<td>Major Roads</td>
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<tr>
<td>Rail</td>
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<td>Pathways</td>
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<td><strong>Architecture</strong></td>
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<td>Civic</td>
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<tr>
<td>Residential</td>
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<tr>
<td>Commercial</td>
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<tr>
<td><strong>Landscaping</strong></td>
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<tr>
<td>Trees</td>
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<td></td>
<td></td>
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<tr>
<td>Other Plantings</td>
<td></td>
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</tr>
</tbody>
</table>
put sidewalks on both sides of every street now
first and last mile
25% of all vehicle trips are less than one mile in length
3

our elders will need walkable neighborhoods
United States: 1950

Source: U.S. Census Bureau, International Data Base.
United States: 2020

Population (in millions)

Source: U.S. Census Bureau, International Data Base.
aging of the US population

% over 65

- 2010: 13%
- 2020: 16%
- 2030: 19%
- 2040: 20%

% over 50

- 2010: 32%
- 2020: 35%
- 2030: 36%
- 2040: 37%

Source: Population Division, U.S. Census Bureau
Release Date: August 14, 2008
In-Migration – Ages 65 +

Net In-Migration per 1,000 Population > 65

US Census Bureau
Figure 4.
Net Migration Rates for the Population 65 Years and Over:
1995 to 2000

(Data based on a sample. For information on confidentiality protection, sampling error, nonsampling error, and definitions, see www.census.gov/prod/cen2000/doc/sf3.pdf)

Source: U.S. Census Bureau, Census 2000.
Retirement Preferences

- Suburban: 19%
- Rural: 30%
- Urban: 51%

Source: National Association of Realtors and Smart Growth America American Preference Survey 2004
4 essentials: elder mobility
AARP: a livable community has...

- affordable & appropriate housing
- supportive community features & services
- adequate mobility options

...which together facilitate personal independence and the engagement of residents in civic and social life.
AARP livable communities model

- Supportive community features & services
- Adequate mobility options
- Suitable home
4 essentials: elder mobility

- land use mix
- pedestrian supportive environment
- connected street network
- high frequency transit service
4 essentials: elder mobility

- land use mix
- pedestrian supportive environment
- connected street network
- high frequency transit service
land use mix

4 essentials: elder mobility
supportive community features & services

1. active living
2. third places
3. convenience retail
4. provisions & services
5. family
6. shopping
7. medical
8. cultural
1. active living

- pedestrian-oriented environments
- trails, parks and open space
- gyms and exercise facilities
2. third places

- coffee shops, cafes
- bookstores, libraries
- churches
- bars
- plazas, parks
- senior centers
3. convenience retail

- corner market
- convenience store
4. provisions & services

- grocery
- bank
- cleaners
5. family

- grandchildren
- other family
6. shopping

- hardware
- clothing
- book store
- optical
- electronics
7. medical

- clinics, doctors
- hospitals
- pharmacy
- physical therapy
- opticians
- other specialists
8. cultural

- theater
- movie Theater
- museums
- symphony
- art gallery
- restaurants
## destinations

<table>
<thead>
<tr>
<th></th>
<th>daily</th>
<th>weekly</th>
<th>monthly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. active living</td>
<td>X</td>
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<tr>
<td>2. third places</td>
<td>X</td>
<td></td>
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<td>3. convenience</td>
<td>X</td>
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<td>4. provisions</td>
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<td>5. family</td>
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<td>6. shopping</td>
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<tr>
<td>2. third places</td>
<td>X</td>
<td></td>
<td>should be within walking distance</td>
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<tr>
<td>3. convenience</td>
<td>X</td>
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<td>4. provisions</td>
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</table>

*should be accessible by fixed route transit*
neighborhood completeness
Portland “20-minute neighborhood”
4 essentials: elder mobility

- land use mix
- pedestrian supportive environment
- connected street network
- high frequency transit service
note: ADA & universal design
elderly walking environment factors

• safety & security
• street crossings
• universal access
• street design – scale, speed
• pedestrian realm – scale, layout
• urban design – street walls, building scale
• land use mix
• trees, canopies, awnings
pedestrian survival rates & vehicle speed

<table>
<thead>
<tr>
<th>Speed (mph)</th>
<th>20mph</th>
<th>30mph</th>
<th>40mph</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Survive</td>
<td>95%</td>
<td>55%</td>
<td>15%</td>
</tr>
<tr>
<td>% Die</td>
<td>5%</td>
<td>45%</td>
<td>85%</td>
</tr>
</tbody>
</table>
St. Louis region
4 essentials: elder mobility

• land use mix
• pedestrian supportive environment
• connected street network
• high frequency transit service
Windsor, CO – Old Town
Windsor, CO – after 1990
walk propensity

utilitarian trips
walk distances @ 250 fpm

- 5,000’ in 20 min
- 3,750’ in 15 min
- 2,500’ in 10 min
- 1,250’ in 5 min

1/4 mile, 1/2 mile, 1 mile
path index

shortest feasible route on streets & trails

straight line distance (as the crow flies)
2100 feet

500 feet

2100 feet

Path Index: 4.2
5 – 7 minute walk

1. active living
2. third places
3. convenience retail
5 – 7 minute walk

path index: 1.4

* home

1. active living
2. third places
3. convenience retail

¼ mile
5 – 7 minute walk

path index: 4.5

1. active living
2. third places
3. convenience retail
good connectivity expands the range of walking trips, increasing pedestrian activity
optimum block size for efficient traffic flow

330’ to 528’
common connectivity standards

• intersections/square mile (min 200)
• maximum block perimeter (1400’ – 1800’)
• block length (330’ – 528’)
• links/nodes
4 essentials: elder mobility

- land use mix
- pedestrian supportive environment
- connected street network
- high frequency transit service
high frequency transit networks

- peak service < 15 minute headways
- network of routes
- accessible vehicles
- easy access to stops and stations
boulder community transit network
community transit network
Portland, Oregon
example: Santa Fe “Elder Grace”
mobility criteria: ElderGrace

- mixed use development pattern – limited
- pedestrian supportive environment - no
- connected networks – no
- high frequency transit network - no
elders

- spend money
- cost money
- read newspapers
- vote
- belong to AARP
elder mobility

“universal mobility”
placemaking builds value
Driven to the Brink

How the Gas Price Spike Popped the Housing Bubble and Devalued the Suburbs

Joe Cortright, May 2008
core vitality & annual housing price change

Core Vitality Strongly Related to Housing Price Change

Housing Price Change, Annual, through Fourth Quarter 2007

$R^2 = 0.4464$
core vitality & foreclosures

Core Vitality Strongly Related to Foreclosures

Foreclosure Rate (Per 1,000 Households)

$R^2 = 0.5126$
effect of location on housing value

Los Angeles

4th quarter 2006 – 4th quarter 2007

- region: -10%
- close-in: -6%
- distant: -11%
effect of location on housing value

Chicago

4th quarter 2006 – 4th quarter 2007
Effect of location on housing value

- Region: +2%
- Close-in: 0%
- Distant: -5%

Pittsburgh

4th quarter 2006 – 4th quarter 2007
effect of location on housing value

Portland

region close-in distant
- 1% + 3% - 5%

4th quarter 2006 – 4th quarter 2007
effect of location on housing value

Tampa

region: -13%
close-in: -9%
distant: -14%

4th quarter 2006 – 4th quarter 2007
Walking the Walk

How Walkability Raises Home Values in U.S. Cities

Joe Cortright, Impresa, Inc., for CEOs for Cities
August 2009
## Walkability and House Value

<table>
<thead>
<tr>
<th>City</th>
<th>Walkability Premium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austin, TX</td>
<td>+ $24,871</td>
</tr>
<tr>
<td>Dallas, TX</td>
<td>+ $4,278</td>
</tr>
<tr>
<td>Fresno, CA</td>
<td>+ $7,427</td>
</tr>
<tr>
<td>Phoenix, AZ</td>
<td>+ $18,689</td>
</tr>
<tr>
<td>Sacramento, CA</td>
<td>+ $34,345</td>
</tr>
<tr>
<td>San Francisco, CA</td>
<td>+ $32,837</td>
</tr>
<tr>
<td>Seattle, WA</td>
<td>+ $19,789</td>
</tr>
<tr>
<td>Tucson, AZ</td>
<td>+ $10,841</td>
</tr>
</tbody>
</table>

* *difference in house value: citywide median WalkScore compared to 75 percentile and above*
elders creative class

same housing market: mixed-use, transit-served, walkable neighborhoods with embedded pedestrian places
5

you cannot afford further delay
Household Economics

Available for:
- Food
- Health care
- Education
- Consumer expenditures
- Recreation
- Savings

Needed for:
- Housing
- Transportation
share of family income spent on housing & transportation

family income = $35,000 - $50,000

- **central city**: 23% housing, 16% transportation, 39% total
- **near jobs**: 26% housing, 23% transportation, 49% total
- **away from jobs**: 25% housing, 26% transportation, 51% total

Source: A Heavy Load, Center for Neighborhood Technology
share of family income spent on housing & transportation

family income = $20,000 - $35,000

<table>
<thead>
<tr>
<th>Location</th>
<th>Housing</th>
<th>Transportation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central City</td>
<td>32%</td>
<td>22%</td>
</tr>
<tr>
<td>Near Jobs</td>
<td>35%</td>
<td>31%</td>
</tr>
<tr>
<td>Away from Jobs</td>
<td>33%</td>
<td>37%</td>
</tr>
</tbody>
</table>

Source: A Heavy Load, Center for Neighborhood Technology
household economics

available for:
- food
- health care
- education
- consumer expenditures
- recreation
- savings

needed for:
- housing
- transportation
household economics

needed for:
- housing
- transportation

available for:
- food
- health care
- education
- consumer expenditures
- recreation
- savings
impact on local micro economics

Available for:
- food ...shop for cheaper, less nutritious foods
- health care ...less insurance, less preventive care
- education ...less higher education
- consumer expenditures ...less shopping, sales tax
- recreation ...less sports activity, less exercise
- savings ...lower savings rate, higher cost of capital
US health care costs as % of GDP

1990

No Data

<10%

10%–14%

No Data
1994

No Data

<10%

10%–14%

15%–19%
2004

No Data

<10%

10%–14%

15%–19%

20%–24%

≥25%

[Map showing data distribution across states]
OBESITY TRENDS* AMONG U.S. ADULTS
BRFSS, 1991 and 2006-2008 Combined Data
(*BMI >30, or about 30 lbs overweight for 5’ 4” person)

1991

2006-2008 Combined Data

Source: Behavioral Risk Factor Surveillance System, CDC.
obesity costs the US economy $147 billion annually
Residents of walkable neighborhoods were more likely to meet physical activity guidelines.

Driving is a risk factor for obesity

Lopez-Zetina, Health and Place, 2006
### States with the Highest Rates of Physical Inactivity

<table>
<thead>
<tr>
<th>Rank</th>
<th>State</th>
<th>Percentage of Adult Physical Inactivity (Based on 2006-2008 Combined Data, Including Confidence Intervals)</th>
<th>Obesity Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mississippi</td>
<td>31.8% (+/-0.9)</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Kentucky</td>
<td>30.4% (+/-1.0)</td>
<td>7</td>
</tr>
<tr>
<td>3 (tie)</td>
<td>Louisiana</td>
<td>30.3% (+/-0.9)</td>
<td>8</td>
</tr>
<tr>
<td>3 (tie)</td>
<td>Oklahoma</td>
<td>30.3% (+/-0.8)</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>Tennessee</td>
<td>29.8% (+/-1.2)</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Alabama</td>
<td>29.5% (+/-1.0)</td>
<td>2</td>
</tr>
<tr>
<td>7</td>
<td>Arkansas</td>
<td>28.8% (+/-0.9)</td>
<td>10</td>
</tr>
<tr>
<td>8</td>
<td>Texas</td>
<td>28.4% (+/-0.9)</td>
<td>14</td>
</tr>
<tr>
<td>9</td>
<td>West Virginia</td>
<td>28.3% (+/-1.0)</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>New Jersey</td>
<td>26.7% (+/-0.8)</td>
<td>42</td>
</tr>
</tbody>
</table>

*Note: For rankings, 1 = Worst Health Outcome. 1 = Highest Rates of Physical Inactivity.*
the urban design of US cities is one of the major factors causing the health care crisis
communities should invest in walkable places now
why

1. size of the challenge
2. first and last mile
3. our elders will need walkable neighborhoods
4. placemaking builds value
5. you cannot afford further delay
questions for you

• what is the WalkScore of your home?
• does your city/town have pedestrian level of service criteria? are they used?
• how much of Idaho’s federal STP (surface transportation program funding) is dedicated to improving pedestrian facilities?
• what are your city’s/town’s five highest priority pedestrian projects?
• where will the mixed-use, transit-served, walkable neighborhoods be located in your city/town?
• what % of grade school children in your city/town walk or ride bikes to school?
thanking you

www.charlier.org