

# Railvolution



## Clark Manus, FAIA

87th President

The American Institute of Architects

CEO of Heller Manus Architects

October 18, 2011

# CEO of Heller Manus Architects



Academic



Hotel/Retail



Renovation



Civic



HM International



Residential



Transportation



Master Planning

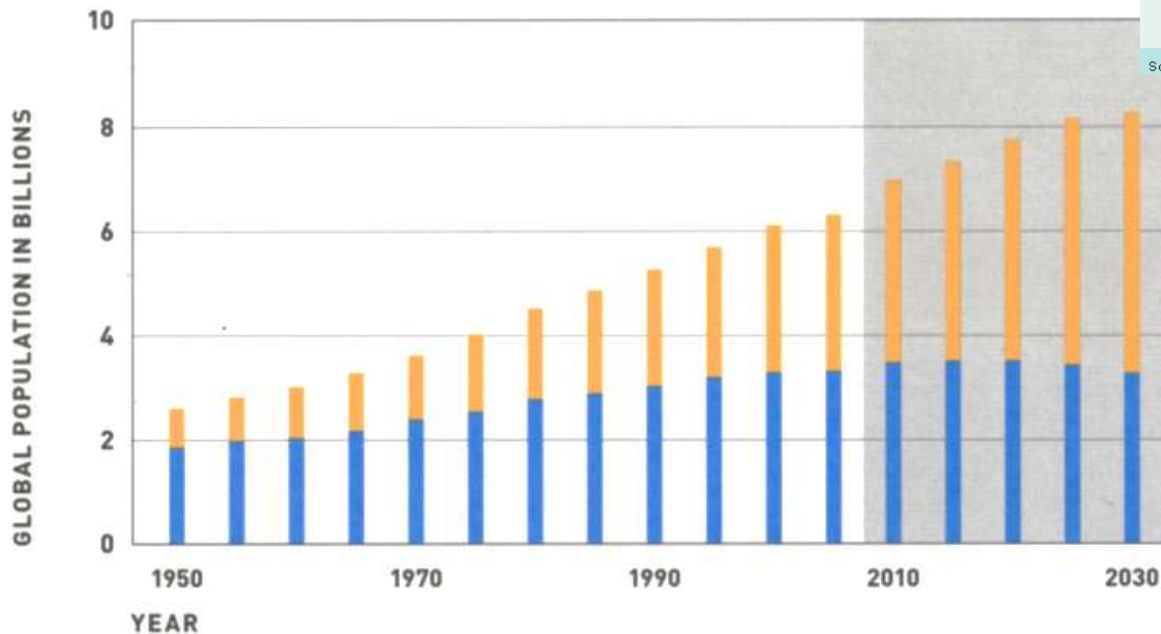


Commercial

“World Population is projected to rise to 9 billion by 2050, with 7 of every 10 people living in urban areas.”

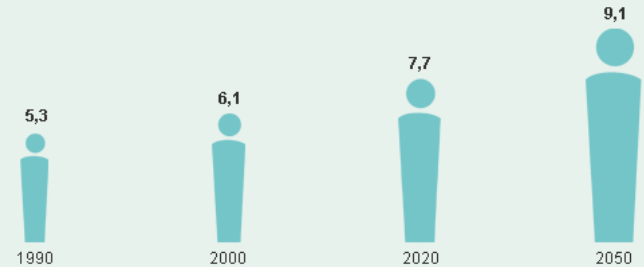
## The Future Is Urban

■ In Rural Areas ■ In Urban Areas



Source: United Nations

### Growing world population



Source: UN, World Population Prospects: The 2008 Revision, März 2009

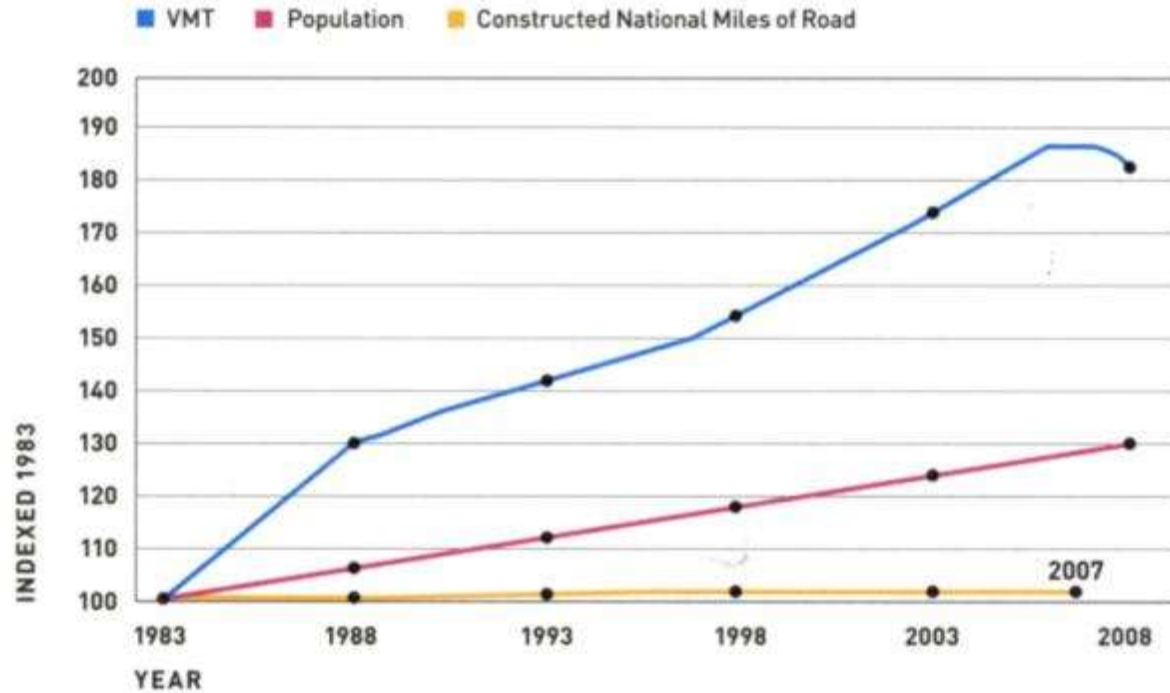
Source: *The City in 2050: Creating Blueprints for Change* by ULI (2008)





Credit: Szymon Kochanski (Beijing 2008)

## Traffic Congestion in the U.S.: Use Has Far Outpaced Road Construction



**This chart would look different with more compact development.**

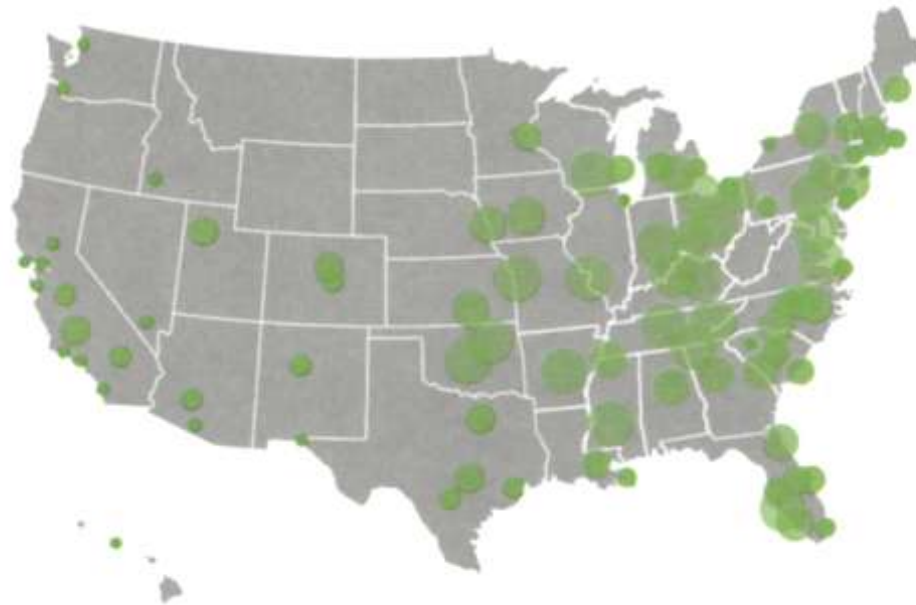
Source: Federal Highway Administration-Highway Statistics Reports, U.S. Census Bureau-Population Data

Note: VMT = Vehicle Miles of Travel

Image: *The City in 2050: Creating Blueprints for Change* by ULI (2008)

## Per Capita Carbon Footprints in the U.S.: Emissions per Capita in the 100 Largest Metro Areas

Least  Most

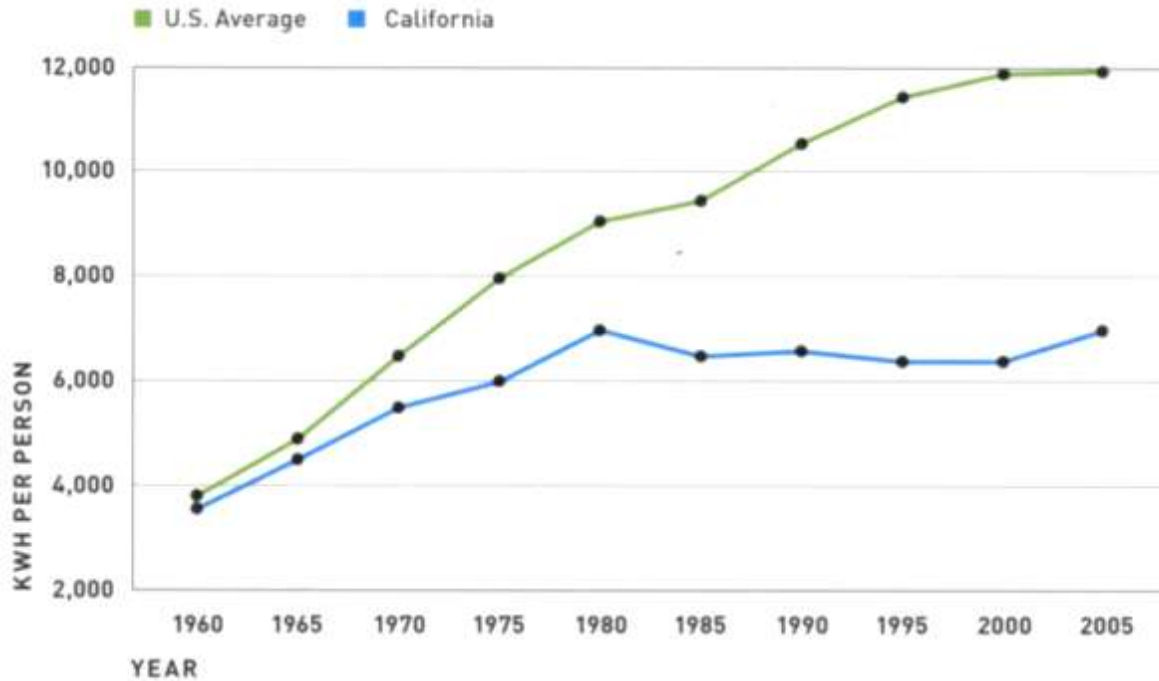


Emissions from the transportation and residential sectors vary by metro area, largely due to how each generates energy.

Source: The Brookings Institution, 2005

Image: *The City in 2050: Creating Blueprints for Change* by ULI (2008)

## Less Is More: California's Annual Electricity Use, 1960-2008



California's per capita electricity use has remained flat since the mid-1970's as a result of aggressive legislation.

Source: *New York Times*

Image: *The City in 2050: Creating Blueprints for Change* by ULI (2008)

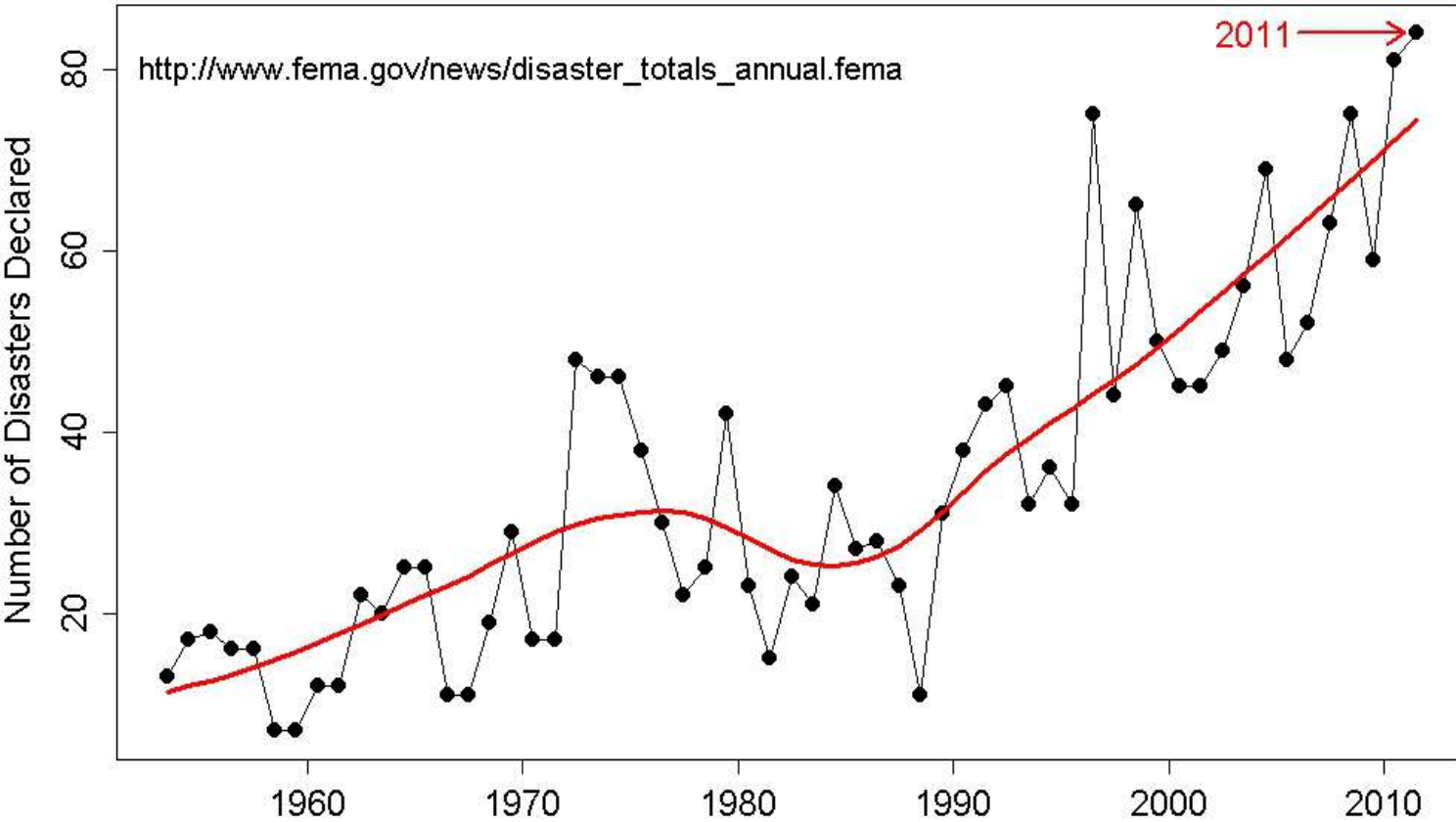


# 2005 Hurricane Katrina





# FEMA



### FEMA ON WARNING WATCH

U.S. NATURAL DISASTERS BLOW THROUGH RELIEF FUNDS

With the beginning of the fiscal year, FEMA's disaster relief funds are running low. FEMA is asking for a record amount of \$1.5 billion to help pay for disaster relief.

**TORNADOES**  
**\$23.5** MILLION  
 593 TORNADOES  
 160 DEATHS  
 875 INJURIES

**HURRICANE**  
**1,100 MILES**  
**\$10 BILLION**  
 4 MILLION PEOPLE

**SNOWSTORMS**  
**\$2 & 36**  
 29.5" SNOW  
 40" SNOW

**WILDFIRES**  
**6.9 MILLION ACRES**  
**\$1 MILLION PER DAY**  
**2,500** FIREFIGHTERS

**EARTHQUAKES**  
**13,000** EARTHQUAKES

**RISE IN NATURAL DISASTERS**

ANNUAL COSTS AND OCCURRENCES

Year	Disasters	Cost (\$ Billion)
2007	63	\$11.0
2008	75	\$17.0
2009	68	\$11.0
2010	80	\$16.0
2011	85	\$17.0

Help. Rebuild. Donate. FEMA, United Way, American Red Cross, American Legion, Salvation Army, Habitat for Humanity, Google.

# The San Francisco Embarcadero Freeway

October 1989 The Loma Prieta Earthquake...The Tipping Point





# The Rebirth of the Embarcadero

*"Build it and they will come"*

