

2007 New Partners for Smart Growth

**Weaving the Fabric of Smart Growth:
Linkages between Crime Prevention, Pedestrian Safety, Public Health,
Social Well Being, Environmental Quality, and Economic Vitality**

Marie Jones - City of Fort Bragg

Tina M. Zenzola, MPH - Safe & Healthy Communities Consulting

Al Zelinka, AICP, CMSM - RBF Consulting's Urban Design Studio

February 9, 2007

Here, neighborhoods are like copies of each other.

NO WONDER

I FEEL AT HOME



TOSHIBA
Don't copy. Lead.

ORANGE COUNTY, HOME OF HARD-WORKING COPIERS.

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- What really works will be determined by better empirical knowledge tempered by local context and experience.
- Smart Growth is not formula driven.

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Weaving

Crime Prevention, Social Well-Being

Principles of Smart Growth

- Create range of housing opportunities & choices
- Create walkable neighborhoods
- Strengthen & direct development towards existing communities
- Preserve open space, farmland, natural beauty & critical environmental areas
- Take advantage of compact building design

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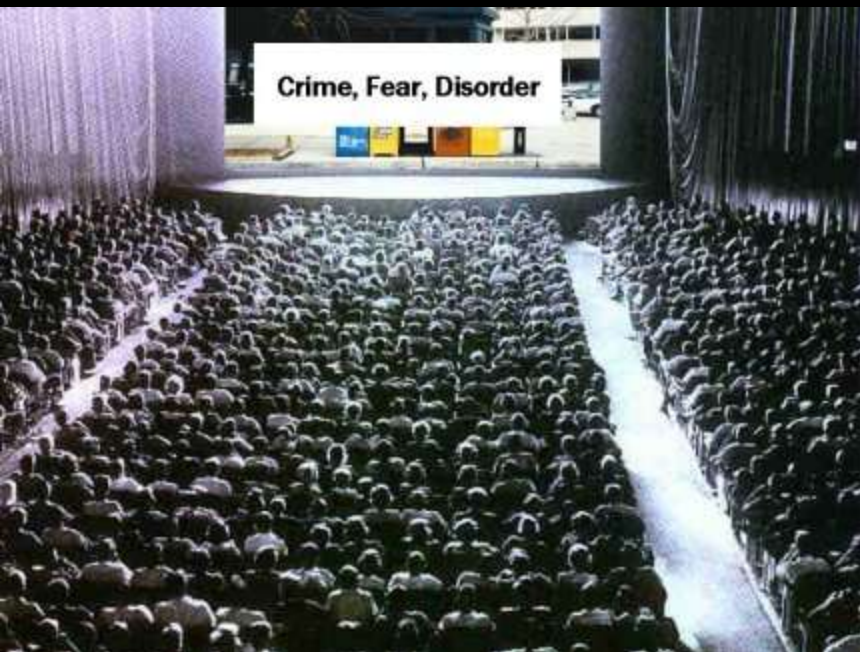
Pedestrian Safety, Public Health

Growth:

Environmental Quality & Economic Vitality

Principles of Smart Growth

- Mix Land Uses
- Provide a Variety of Transportation Choices
- Foster Distinctive Communities with a Strong Sense of Place
- Encourage Community and Stakeholder Collaboration
- Make Development Decisions Predictable, Fair and Cost Effective



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Crime Prevention, Social Well-Being

Research relates crime to

- Specific site, district or neighborhood attributes
- "Neighborliness" and social cohesion
- Traffic and transit patterns
- Changes in demographics or length of occupancy
- Ineffective rules or policies
- Activity schedules or routines
- Educational attainment and economic stability

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Offenders ask themselves

- How easy is the area to enter?
- How visible, attractive or vulnerable do targets appear?
- What are the chances of being seen?
- If seen, will anyone do anything about it?
- Is there a direct and quick route to leave once crime is committed?

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Five "Fear" Basics

- Fear is widespread
- Fear is not evenly distributed
- Fear makes people feel uncomfortable emotionally
- Fear prompts people to adopt defensive measures
- Fear of crime does not parallel actual crime

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Disorder

- Fear is often triggered by conditions of disorder
 - Graffiti, noise, homeless, blight
- When disorder reaches a critical mass, crime conditions and urban decay are typically fostered

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Smart Growth: A Public Health Strategy



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Some Grounding Questions

- Who here lives in a single family home?
- Who has a car that gets more than 35 miles to the gallon?
- Who has chosen to take transit over driving in the past week?

- We all make rational choices, based on....

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Our values, motivations and class

- Law & order
- Safety/comfort zone
- Consumption of Stuff
- Personal responsibility
- Family obligation
- Randomness
- Tolerance/diversity
- Consumption of experience
- Community responsibility
- Individual freedom
- Suburban Development
- Smart Growth

Smart Growth may not be for everyone.....

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**CREATE RANGE OF HOUSING
OPPORTUNITIES & CHOICES**

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Housing:

A Social Determinant of Health



Physical conditions & access to housing



Concentration of poverty

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Planning for Healthy & Connected Seniors



Health benefits of housing
& transportation options:

- Increased mobility
- Maintain social networks
- Fewer falls & injuries
- Improve physical functioning, lifespan and quality of life
- Lower health care and social costs



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Health-Promoting Community Design Solutions



- True mix of incomes
- Economic development plans must include an explicit affordable housing component
 - Inclusionary zoning
 - Fair Share Housing
 - Housing Trust Funds
- For seniors:
 - Home Sharing
 - Accessory Apartments

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Range of Housing Choices:

Inclusionary Housing: mix of unit size, mix of income levels

- Require developer to set aside a percentage of units or SF for affordable housing
- Many California cities have adopted inclusionary requirement
- Must include density bonus, watch FAR and lot coverage ratios to insure that development is feasible and affordable units can be added
- Set the inclusionary requirement by square feet (10-20% of SF)
- Have a minimum unit size (750-850 SF)
- More affordable units and less expensive for developer (low income households can afford more \$/SF with smaller unit)

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**CREATE WALKABLE
NEIGHBORHOODS**

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What Do We Know About "Place" & Crime ?

- "Place" plays as important a role in the drama of crime as do "victims" and "offenders"
- There are three basic types of "places," each amenable to specific types of prevention strategies:
 - locations (i.e. specific addresses)
 - places (i.e. parks, schools, etc.)
 - areas (i.e. neighborhoods)

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- Neighborhood features & conditions contribute to residents getting out and about (Nassar & Julian 1995; Kelling & Coles 1996)
- Neighborhood blocks are essentially behavior settings that can influence social relations (Mayo 1979)

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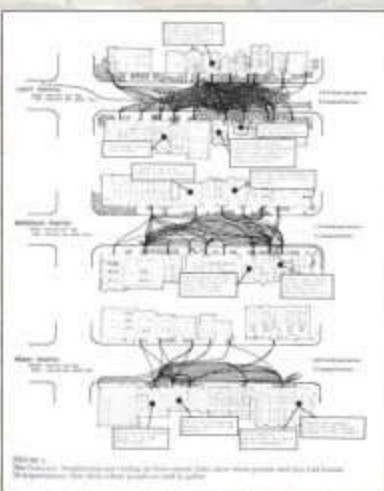
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Crime Prevention, Social Well-Being

- Neighborhoods that balance vehicular & pedestrian needs increase residents' familiarity & interaction with one another (Appleyard 1981)
- Walkability contributes to self policing by neighbors - "keep the peace through peaceful means" (Newark, NJ Foot Patrol Experiment, Diggs Town, Minnie Street, etc.)



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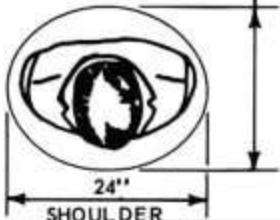
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BODY ELLIPSE

18" BODY DEPTH



24"
SHOULDER
BREADTH



Human Widths

- Walkway Width Min.
- 5 feet, 6 feet pref.

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Have we designed for those most in need?



School kids: being hit by a car is a leading cause of injury death

Seniors: represent 23% of pedestrian deaths but only 13% of US population



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The forgotten pedestrian

- Standards and policies prioritize traffic flow over pedestrian safety
- Minimal funds devoted to pedestrian/bike projects
- Traffic laws reinforce bias against pedestrians
- Lack of understanding of (child) pedestrian behavior



If drivers were treated like pedestrians...

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Battery Hens
A Life Lived
Indoors

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Battery Hen or Free-Range Kids?



- The "cradle-room-house-doorstep-neighborhood" sequence is interrupted
- Smaller "Cognitive maps"
- Social isolation of teens
- Determines future attitudes about driving, walking

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Health-Promoting Community Design Solutions

- Adopt traffic calming programs
- Revise local street standards
- Increase funding for pedestrian projects
- Home zones
- Change social values

Withdraw the threat
from children, rather than
withdraw children from
the threat

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Create Walkable Neighborhoods Revitalize Commercial Corridors

- Hundreds of miles of low-quality auto-oriented commercial corridors across the nation have suffered huge divestment as chains and malls have abandoned them.
- Walkable streets when combined with rezoning can result in revitalized neighborhoods
 - Mixed use projects with residential that "subsidizes" ground floor commercial
 - Re-energize the neighborhood with new residents who increase demand for retail and other services



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Make Walkable Streets sustainable

1. **Serve multiple users**
 - Place pedestrians/cyclists on equal footing with automobiles
 - Provide aesthetics and a community living room* - garage sales, block parties, farmer's markets, play area, events, etc.
 - Equity - quality streets in all neighborhoods, different communities want different street programming
2. **Reduce stormwater** - swales, infiltration planters, curb cuts, pervious surfaces...
3. **Include greenways** - dedicated paths to bicyclists and pedestrians
4. **Street design** - traffic circles and curb bulges provide pedestrian refuge and reduce stormwater
5. **Improve the urban forest** to reduce heat island effect, provide habitat, Water efficient native landscaping
6. **Use energy efficient** lightening



One large shade tree can provide cooling equal to a five-ton air conditioner

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MIX OF LAND USES

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- Homogenous land use patterns create predictable patterns



- Criminals like predictable patterns to maximize reward & minimize risk

- 25% of American parents said they would be less concerned about leaving children home alone if they had a nearby neighbor who could help with emergencies or problems



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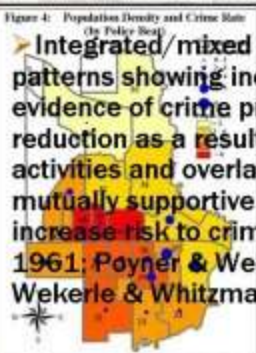
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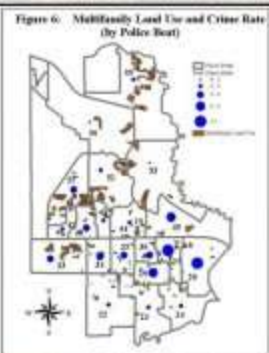
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Population Density



Single Family Residential



Multifamily Residential

Integrated, mixed and use patterns showing increased evidence of crime prevention and reduction as a result of increased activities and overlapping, mutually supportive patterns that increase risk to criminals (Jacobs 1961; Poyner & Webb 1991; Wekerle & Whitzman, 1995)

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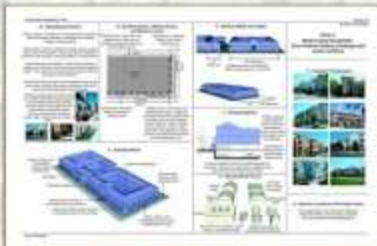
➤ Allow/Promote In-Law Units in SF Neighborhoods

- See: www.ci.santa-cruz.ca.us



➤ Prepare Amendments to General Plan and Zoning/Create Form-Based Code Allowing Mixed Use

- See: www.ci.rocklin.ca.us



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History of Mixed Use



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Mix of Uses Economics

- **Greater risks that create a higher "price of admission."**
 - complex entitlements process
 - financing from multiple sources
 - enter different markets simultaneously
- **Greater Benefits**
 - Better performance in economic downturns (one market will always be up)
 - Synergism between uses
 - Place making

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Mix of Land Uses

➤ Retail has Gone Wild

What is the cost of retail on the bottom floor of every mixed-use infill project?

- Economic cost to developer
 - Social cost to community
- How many roof-tops are needed to create demand for 1,000 SF of retail?



Required Residents Per Supportable Store in a Mixed Use Project

	Annual Sales/SF	Store Size (SF)	Store Revenue	CA Sales Per Capita	Residents / Store	Units/ Store
Apparel Stores	\$ 206	1,000	\$ 206,000	\$ 422	488	163
Stationary/Gifts/Novelty	\$ 140	1,000	\$ 140,000	\$ 51	2,745	915
Jewelry	\$ 264	1,000	\$ 264,000	\$ 67	3,940	1313
Grocery Store	\$ 720	30,000	\$21,600,000	\$ 540	39,993	13331
Restaurants	\$ 270	4,000	\$ 1,080,000	\$ 511	2,114	705
Home Furnishings	\$ 230	4,000	\$ 920,000	\$ 302	3,046	1015
Personal Services	\$ 230	1,000	\$ 230,000	\$ 302	762	254

Source: Marie Jones Consulting 2005, U.S. Mail Merchandise Index, California EDO, 2005

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Mix of Land Uses

What else goes on the ground floor ?

- Non-profit, commercial & arts
 - Social service organizations, day care, elder care
 - Arts, active live-work
 - Other commercial
- Pedestrian-friendly residential entrances
- Attractive parking

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**FOSTER DISTINCTIVE, ATTRACTIVE
COMMUNITIES WITH A STRONG
SENSE OF PLACE**

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- Physical design influences probability for sense of place and community (Talen 1999)
- Visual appearance of public and private spaces and places correlates with neighboring (Skjaeveland and Garling 1997)
- Collective efficacy - cohesion among residents - leads to lower rates of crime and disorder (Sampson and Raudenbuch 1999)

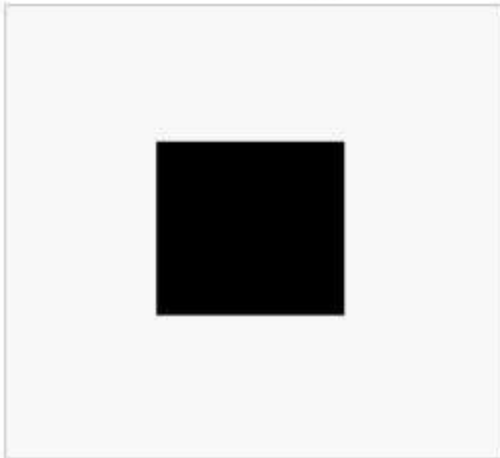
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Centrifugal





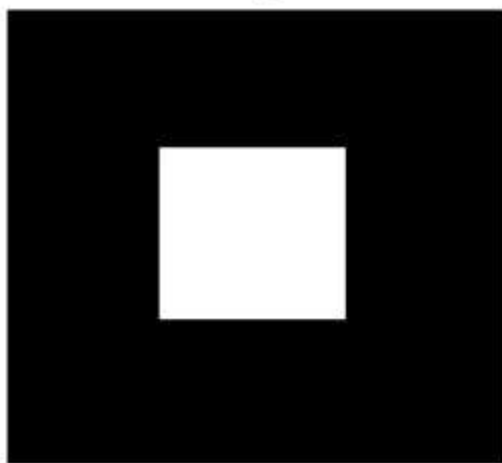
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A grid of white fabric squares, each with a subtle, slightly different pattern or texture, creating a woven effect. The squares are arranged in a regular grid pattern, filling the majority of the slide area.

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Centripetal





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Ideal - 1:3 height-to-width ratio



Challenging - 1:7 height-to-width ratio



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Healthy Neighborhoods Promote Social Capital & Social Networks

People with strong social networks:

- Live longer
- Have fewer heart attacks & heart disease
- Are less depressed and use alcohol and drugs less
- Have fewer teen births
- Are healthier overall

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Distinctive, Attractive, Tolerant Communities with Strong Sense of Place

- Three T's of economic growth: **technology, talent, tolerance**
- Educational attainment is the single strongest predictor of economic success for the individual and the region.
- Talent gravitates towards places that are inclusive, diverse, and offer abundant high-quality experiences. Talent is diverse.
- Firms cluster to capitalize on talent and are born out of it.
- Weaker social capital ties, less stable, more innovative
- Urban form reflects the cultural mix
- Cities like Portland, Seattle, Minneapolis, New York, San Francisco, Santa Cruz, Austin, Ann Arbor, San Jose, Madison, Kalamazoo

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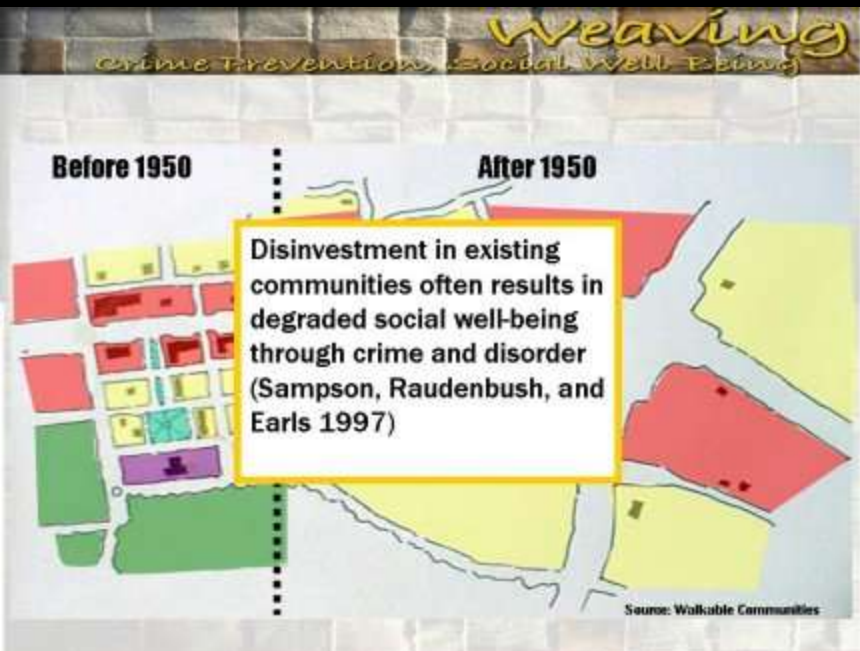
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**STRENGTHEN & DIRECT
DEVELOPMENT TOWARDS
EXISTING COMMUNITIES**

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- Fear is often triggered by conditions of disorder
 - Graffiti, noise, homeless, blight
- When disorder reaches a critical mass, crime conditions and urban decay are typically fostered



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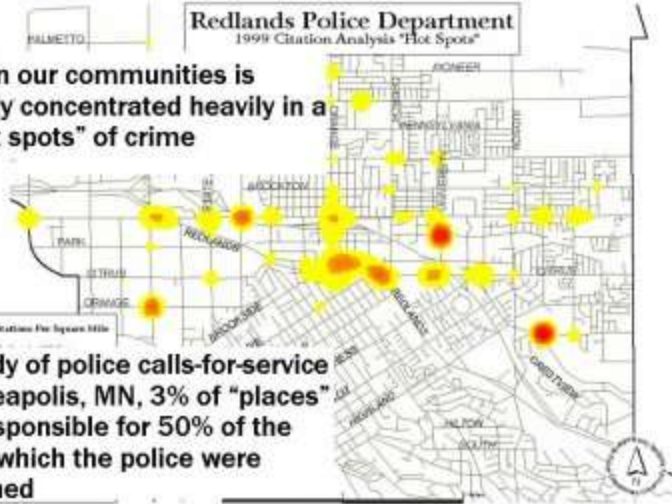
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Redlands Police Department 1999 Citation Analysis "Hot Spots"



➤ Crime in our communities is generally concentrated heavily in a few "hot spots" of crime

➤ In a study of police calls-for-service in Minneapolis, MN, 3% of "places" were responsible for 50% of the calls to which the police were dispatched

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Direct Development Towards Existing Communities

- Loss of 2 million acres of farm land and open space per year
- Ground water recharge and storm water runoff
- Reduce materials use for infrastructure development (sewer, water, roads, lighting, etc)
- Reduce auto-miles and green house gas production

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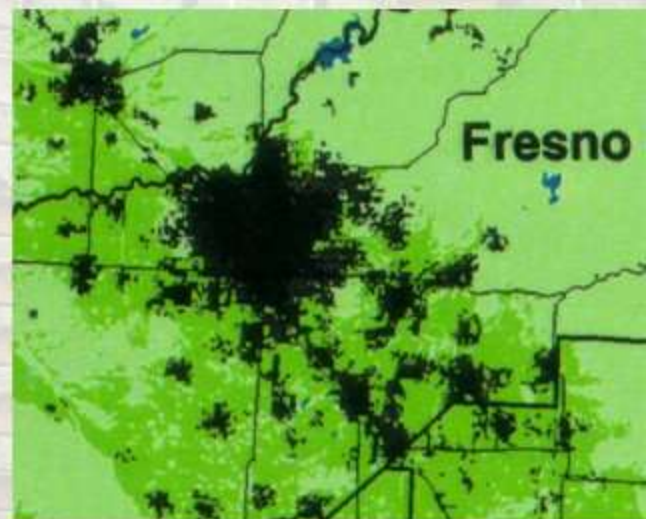
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Compact
Development
Scenario
(6 units/acre)



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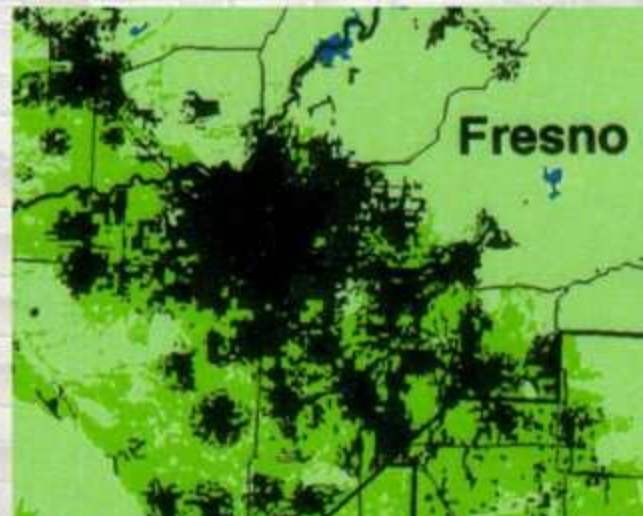
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Low Density
Scenario
(3 units/acre)



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**PROVIDE A VARIETY OF
TRANSPORTATION CHOICES**

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➤ 2 billion+ hours stuck in traffic per year in U.S.

- US Average: 73 minutes/day driving
- 200% increase in workers commuting to another county
 - 2 hour RT commute/day = 20 days/year
 - 3 hour RT commute/day = 30 days/year

➤ Children: 65 minutes/day in cars



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- The poorest fifth of Americans spend 42% of their annual household budget on the purchase, operation, and maintenance of automobiles, more than twice as much as the national average.
- 1 in 6 American parents leave a child unattended at home for 30 minutes or more for 2 to 3 days per work week (1/2 of these leave their children alone every workday)
- Latchkey kids are at greater risk of truancy, receiving poor grades, and risk taking behavior.



Credits: George Geffen

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Driving Ourselves Crazy: Stress and Mental Health



- Stress
- Physiological problems
 - musculoskeletal symptoms, heart disease
- Road rage
- Depression, anxiety

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Cars, Air Pollution, Kids & Asthma

- Childhood asthma increased 160% since 1980
- 2X greater risk of asthma symptoms in 5-7yr olds living 250 ft or less of major road
- 7% more asthma among children living in neighborhoods with high traffic pollution



Sources: McConnell et. al. 2006; California EPA

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A Variety of Transportation Choices

The high cost of parking

- Assume land costs of \$25/SF and 350SF/Space: a single surface space = \$10K, a 3 story garage space = \$18K.
- Just like in Monopoly everyone wants to hit free parking. 99% of all car trips end in a "free" parking space.
- Non-car users indirectly pay for parking through rents and prices.
- High parking requirements kill great projects.
- Ugly urban form.



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Site Specific Transportation Alternatives

- Reduce parking requirements 1/500SF
- Shared parking in mixed-use projects
- Maximum (not minimum) parking requirements
- Parking in-lieu fee
- Car-share
- Showers/bicycle storage in building design
- Build near transit

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**PRESERVE OPEN SPACE,
FARMLAND, NATURAL BEAUTY
& CRITICAL ENVIRONMENTAL
AREAS**

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Preserve Open Space Economic Implications



- Market value of homes is 20% higher when proximate to parks (500 to 2,000 feet)
- Passive parks increase market value more than active parks
- Well maintained parks with visibility from near-by streets are best
- Pocket parks and linear parks that directly back onto housing, reduce the market value of those homes.

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Preserve Open Space Fiscal Impacts of parks and open space

- Parks generate \$0.37 in cost for every \$1.00 in revenue they generate.
- Residential uses generate \$1.15 in costs for every \$1 in revenue



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**TAKE ADVANTAGE OF
COMPACT BUILDING DESIGN**



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Walking Speeds

- Average Adult
 - 260 feet per minute
- Grades of 6% or less
 - Walking speed unchanged

Walking Distances

- 700' average in U.S.
- 250' to 500' average block lengths
- 1320' = ¼ mile walk
- Interesting environment extends walking distance comfort



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➤ Seeing & Being Seen

- To feel safe, we need to know that others are aware of our presence. Likewise, it is important that we are aware of the people and activities going on around us.



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Growth:
Environmental Quality & Economic Vitality

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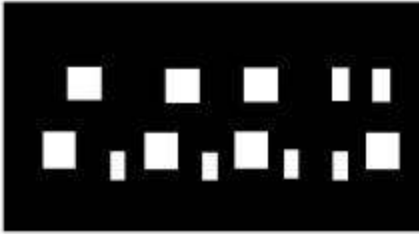
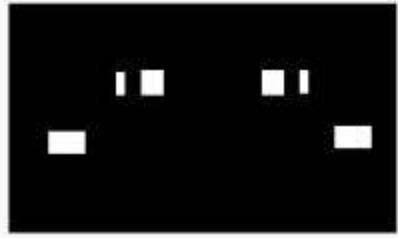
Pedestrian Safety, Public Health



Growth:

Environmental Quality & Economic Vitality





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Weaving

Crime Prevention, Social Well-Being

Obesity Trends* Among U.S. Adults BRFSS, 1985

(*BMI ≥ 30 , or ~ 30 lbs overweight for 5'4" woman)



Slide series produced by Centers for Disease Control and Prevention
Source: Haldan A.H., et al. J Am Med Assoc 1999;282:16, 2001;286:10.

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Obesity Trends* Among U.S. Adults BRFSS, 1990

(*BMI ≥ 30 , or ~ 30 lbs overweight for 5'4" woman)



Slide series produced by Centers for Disease Control and Prevention
Source: Wildcat G.H., et al. J Am Med Assoc 1999;282:16, 2001;296:13.

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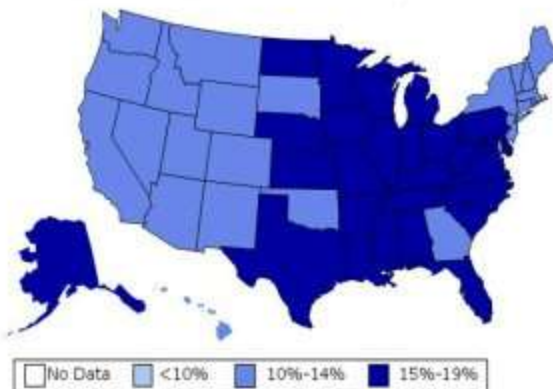
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Obesity Trends* Among U.S. Adults BRFSS, 1995

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Obesity Trends* Among U.S. Adults BRFSS, 1998

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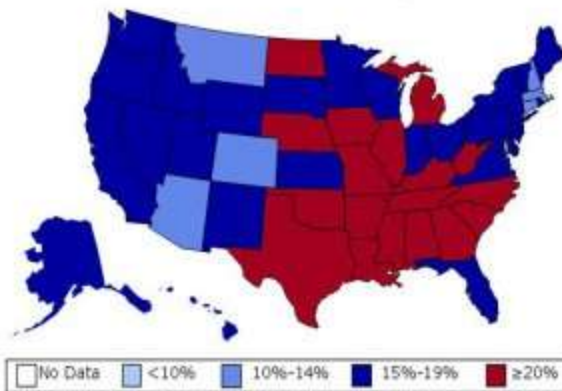
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Obesity Trends* Among U.S. Adults BRFSS, 1999

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Obesity Trends* Among U.S. Adults BRFSS, 2000

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Slide series produced by Centers for Disease Control and Prevention
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Obesity Trends* Among U.S. Adults BRFSS, 2001

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Obesity Trends* Among U.S. Adults

BRFSS, 2002

(*BMI ≥ 30 , or ~ 30 lbs overweight for 5'4" woman)



Slide series produced by Centers for Disease Control and Prevention
Source: Waddell G.H., et al. J Am Med Assoc. 1999;282:16, 2001;296:13.

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Obesity & Our Kids' Future

- Rate of overweight kids has doubled
- Overweight kids likely to will be overweight adults
- 78% are sedentary
- 1 in 4 will be diabetic

First generation of kids in the US that aren't expected to live as long as their parents

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Health-Promoting Community Design Solutions

Proven effective strategies:

- Zoning for compact, mixed-use development
- Transit-oriented development
- Policies related to street design & connectivity
- Traffic calming
- Street lighting
- Improving street crossings

Task Force on Community Preventive Services

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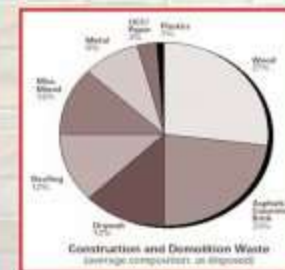
Compact Building Design

Environmental Impacts of Building

- 65.2% of U.S. electricity consumption
- > 36% of U.S. energy
- 12% of potable water
- 40% (3 billion tons annually) of raw materials
- 25% of wood resources



Waste = Lost \$



Waste Generation

- Construction & Demolition debris are 25% of municipal waste, 136 million tons/year
- 12 tons of waste for new construction of a 2,000 sq ft home
- 20 tons/home remodel = 60 years of curbside recycling
- 30% of green house gas emissions

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Compact Building Design Green Building

- Small units = less resource use
- Multifamily units = less resources use
- **Save energy and water:** energy modeling, SIPs, ICFs, high performance windows, energy efficient appliances & equipment, passive solar, low-water use toilets, drip irrigation, etc.
- **Conserve natural resources:** use products that are durable, low-maintenance, recycled, made from rapidly renewable resources: bamboo, cork flooring, natural linoleum, wheat board, recycled carpet tiles, straw board
- **Improve indoor environmental quality:** low VOC paints, adhesives, carpets, composite wood, operable windows, natural light, etc.

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**ENCOURAGE COMMUNITY &
STAKEHOLDER
COLLABORATION**

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- One of the most effective ways of reducing the fear of crime is to raise community confidence and improve social capital.



- Involving and empowering local communities and strengthening the ties between friends and neighbors is fundamental in tackling the fear of crime.



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Declining Social Capital: Trends over the last 25 years

Attending Club Meetings **58%**

Family dinners **33%**

Having friends over **46%**

Surprising Facts

Joining one group cuts in half
your odds of dying next year.

Ten minutes of commuting
reduces social capital by 10%
Robert Putnam, Bowling Alone

- Social networks (who people know) have value
- Through social networks, people do things for one another
- This cooperation drives many community activities - including self-policing - & contributes to social cohesion

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➤ “Community Controllers” are an important component in building social cohesion and controlling crime:

- “intimate guardians” (i.e. parents, family members, etc.)
- “guardians” (i.e. store clerks, teachers, the police, etc.)
- “place managers” (i.e. landlords, apt. managers, etc.)



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The Strategic Purpose of the Redlands Police Department

- *To control crime before it occurs by supporting strong families, resilient youth and safe and sustainable neighborhoods*

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Build Resident Capacity to Participate in Planning Decisions



Chula Vista, CA
Training "Promotoras"
to promote walkability



Salinas, CA
Council adopts 10 TND
policies recommended by
migrant farm workers

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**MAKE DEVELOPMENT
DECISIONS PREDICTABLE, FAIR
& COST EFFECTIVE**

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Predictable, Fair and Cost Effective Development Decisions



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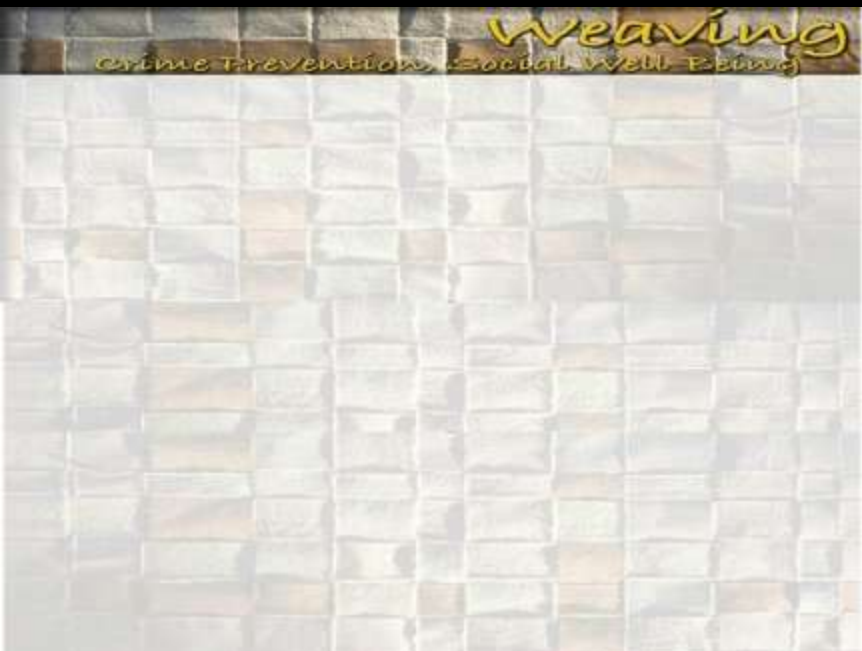
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What does delay do to the IRR?

- **\$37 million mixed-use project**
 - 100 2 BR units
 - 15,000 SF Retail, 10,000 SF Restaurants
 - 5,000 SF Plaza
 - 162 parking spaces
 - IRR = 19%
- **Six month delay IRR = 16%**
- **One year delay = 12%**
- **Two year delay = 9%**



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Enhances Livability
Enhances Community Building
Enhances Public Safety
Enhances

The way we build, rebuild, and maintain our communities affects the behavior of people.

That behavior influences public safety.

The degree to which public safety exists affects the vitality of our communities.

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Public Health Impacts of the Built Environment



- Physical activity
- Obesity & chronic disease
- Pedestrian injuries/death
- Asthma & respiratory disease
- Crime & violence
- Social capital
- Elder health & mobility
- Water quality & quantity
- Mental health
- Health disparities

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Re-integrate public health into the community design process

- Use the public health message to promote walkability/bikability and Smart Growth efforts
- Integrate health as a goal in land use and transportation planning decision-making

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How we measure success

- Tax base
- Job growth
- Retail sales
- Status

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How we could measure success

- Commute time
- Housing variety
- Family time
- Community Involvement
- Air quality
- Housing prices
- Neighborhood activities, events, farmers markets
- Health status
- Open space/resident
- Job quality

2007 New Partners for Smart Growth

**Weaving the Fabric of Smart Growth:
Linkages between Crime Prevention, Pedestrian Safety, Public Health,
Social Well Being, Environmental Quality, and Economic Vitality**

Marie Jones - City of Fort Bragg

Tina M. Zenzola, MPH - Safe & Healthy Communities Consulting

Al Zelinka, AICP, CMSM - RBF Consulting's Urban Design Studio

February 9, 2007