Sustainability Toolkit for Family-Friendly Cities

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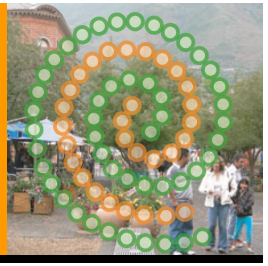
Human Sustainability



Nature and the family form an interlocking support structure to sustain cities.

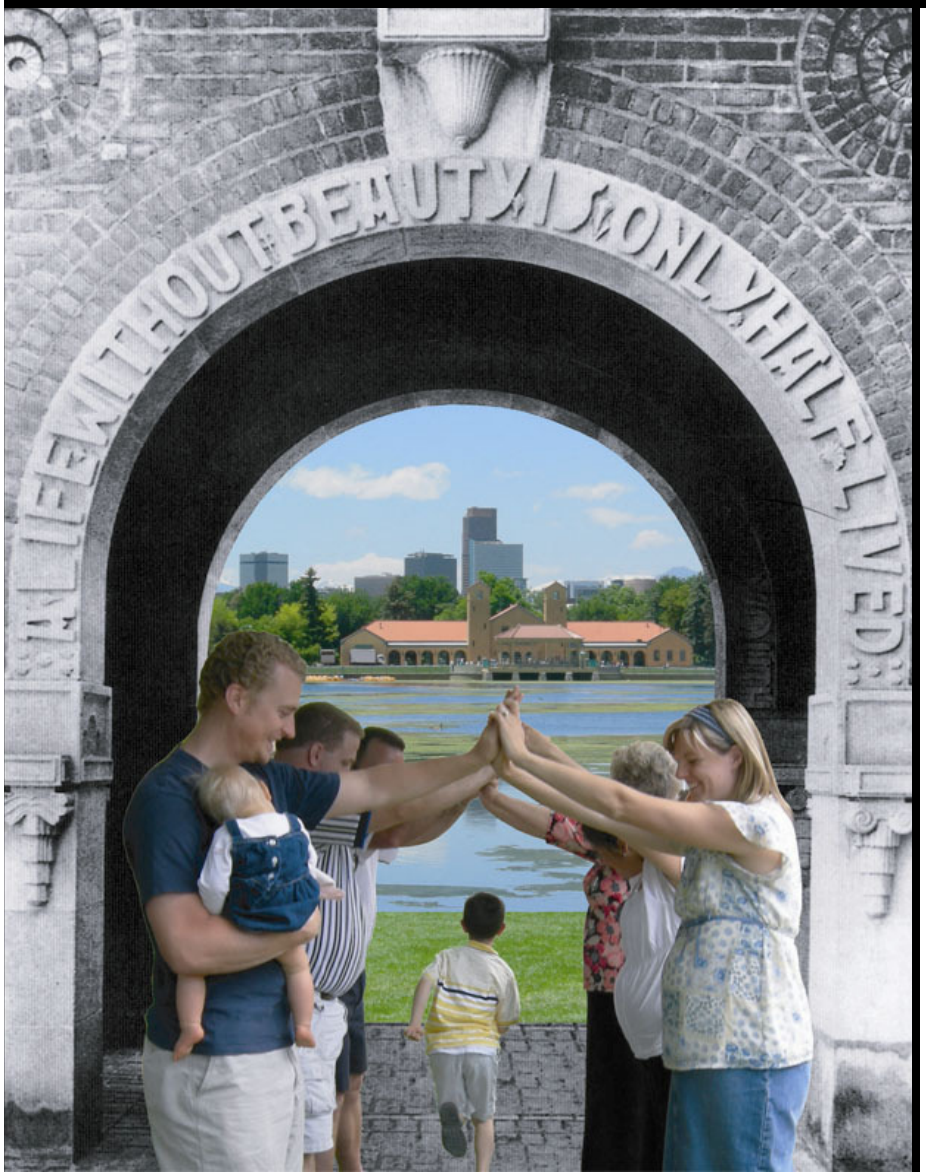
Natural and Built Environment

- Renewable Energy
- Green Building
- Public Transportation
- Recycling
- Biodiversity
- Parks and Recreation
- Pedestrian and Bicycle-Friendly
- Local Food

What is missing?

- Family
- Culture
- Social
- Education

2+ Generations



Households with 2+ generations are essential for a city's human sustainability.

2+ Generation Household Groups

- **Parents Raising Children**
- **Adult Children Caring for Aging Parents**
- **Extended Family including Senior Adults, Adults, and Children**

Multi-Generational Planning
Motivation from American Planning Association

Multigenerational Planning: Using smart growth and universal design to link the needs of children and the aging population

- "By 2040, the proportion of people over the age of 65 will top 20 percent, and people under the age of 18 will make up almost 23 percent of the population. As result, **the oldest and youngest populations combined will make up almost half of all U.S. residents**."

- "Older citizens, families with young children, and the young adult population **share many common needs, interests, and concerns**…safe, walkable neighborhoods, a complete range of services nearby, an opportunity for civic engagement, affordable and mixed use housing, and adequate transportation options."

- **"Research by AARP has shown that most aging Americans do not want to live in communities separate from younger people."**

http://www.planning.org/research/family/briefingpapers/multigenerational.htm

Guiding Principles for Family-Friendly Cities

Human Sustainability: Cities endure over time by designing for the youngest to the oldest resident, acknowledging the interdependency between families, businesses, and natural resources.

1. **Community:** Enliven social interaction with community events and central gathering spaces
2. **Education**: Improve lifelong learning opportunities
3. **Culture**: Enhance daily living by museums, performing arts, and places of worship
4. **Recreation**: Offer recreational opportunities for people of all ages
5. **Housing**: Build a diversity of housing that includes 3 bedrooms and accessible units
6. **Employment**: Offer a diversity of employment opportunities in close proximity to housing
7. **Cost of Living**: Expand availability of cost effective housing and basic services
8. **Services**: Provide convenient services for daily living
9. **Transportation**: Expand modes of transportation
10. **Safety**: Ensure personal safety of residents and maintain low crime rates
11. **Health:** Encourage active living and quality health care
12. **Resources**: Increase local access to universal resources: food, water, energy, land, and materials

City Centers Mapping Exercise

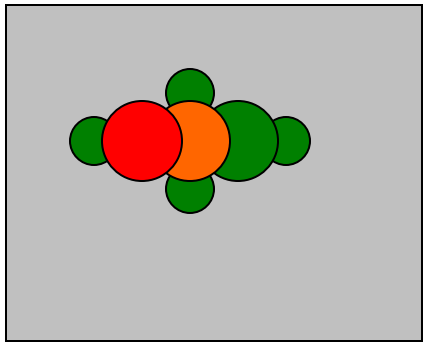
Planning the city center and business center is not complete without the integration of the family center and resource centers.

Family Center: Hub of Daily Living Activity

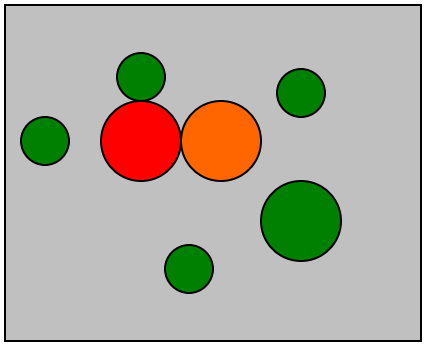
Business Center: Hub of Economic Activity

Resource Centers: Hub of Supply Activity

High Connectivity



Medium Connectivity



Low Connectivity

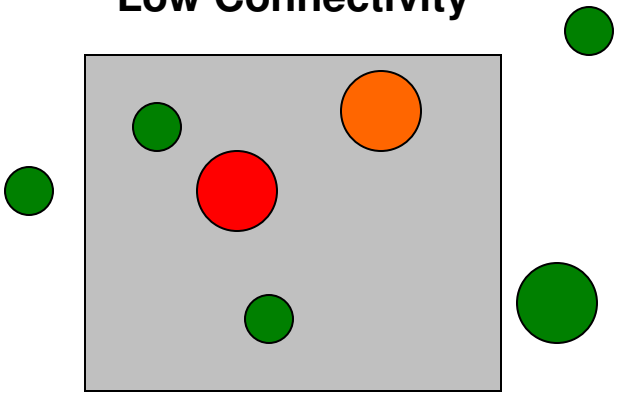
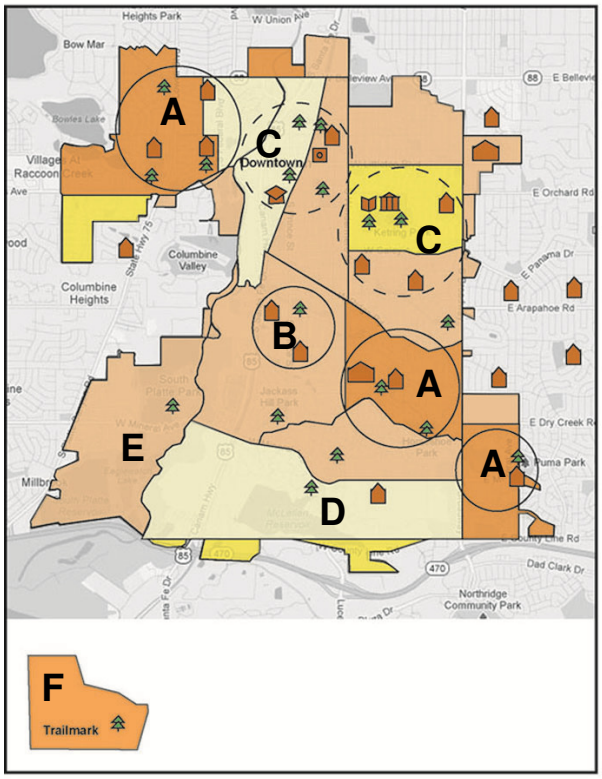


Diagram Your City - Family Centers
Case Study: City of Littleton

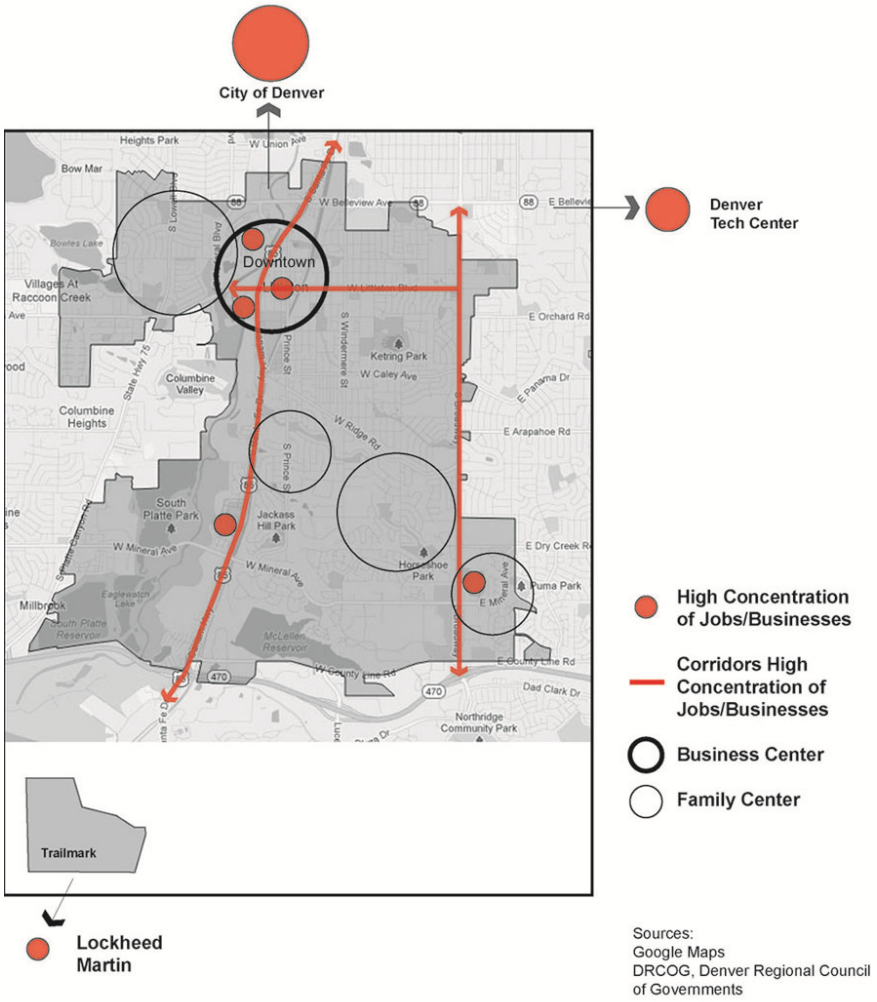


Sources:
Google Maps
Littleton Public Schools
U.S. Census Bureau

Locate Your Family Centers

- **Step 1**: Locate Major Infrastructure for Families
- **Step 2**: Determine Infrastructure Centers
- **Step 3**: Locate Where Larger Households Live
- **Step 4**: Determine Family Centers = Highest Concentration of Infrastructure **and** Larger Households
- **Step 5**: Analyze and Determine Inconsistencies
  - 5A: Area High Infrastructure and Low Families
  - 5B: Area Low Infrastructure and High Families
- **Step 6**: Determine Action Items

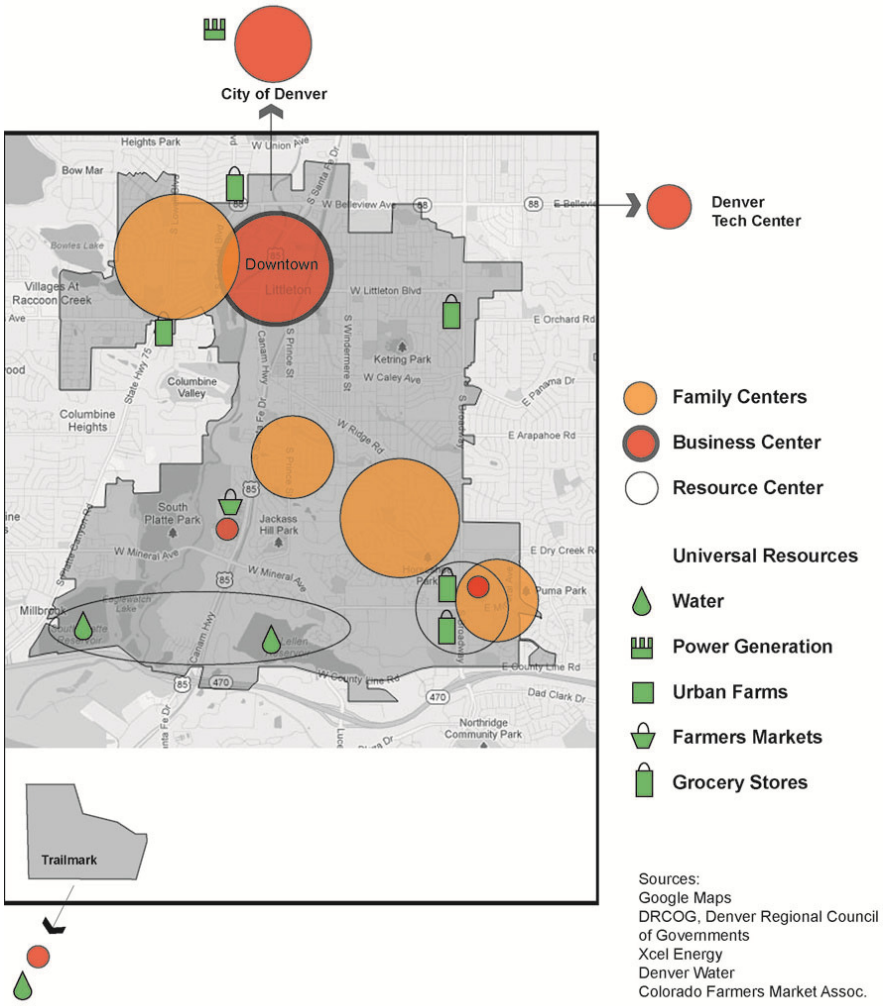
Diagram Your City - Business Centers
Case Study: City of Littleton



Locate Your Business Centers

- **Step 1**: Locate Major Businesses/Areas for Employment
- **Step 2**: Determine Business Centers = Highest Concentration of Jobs
- **Step 3**: Locate Major Business Corridors
- **Step 4:** Overlay Family Centers
- **Step 5**: Determine Level of Connectivity
- **Step 6:** Analyze and Determine Inconsistencies
- **Step 7:** Determine Action Items

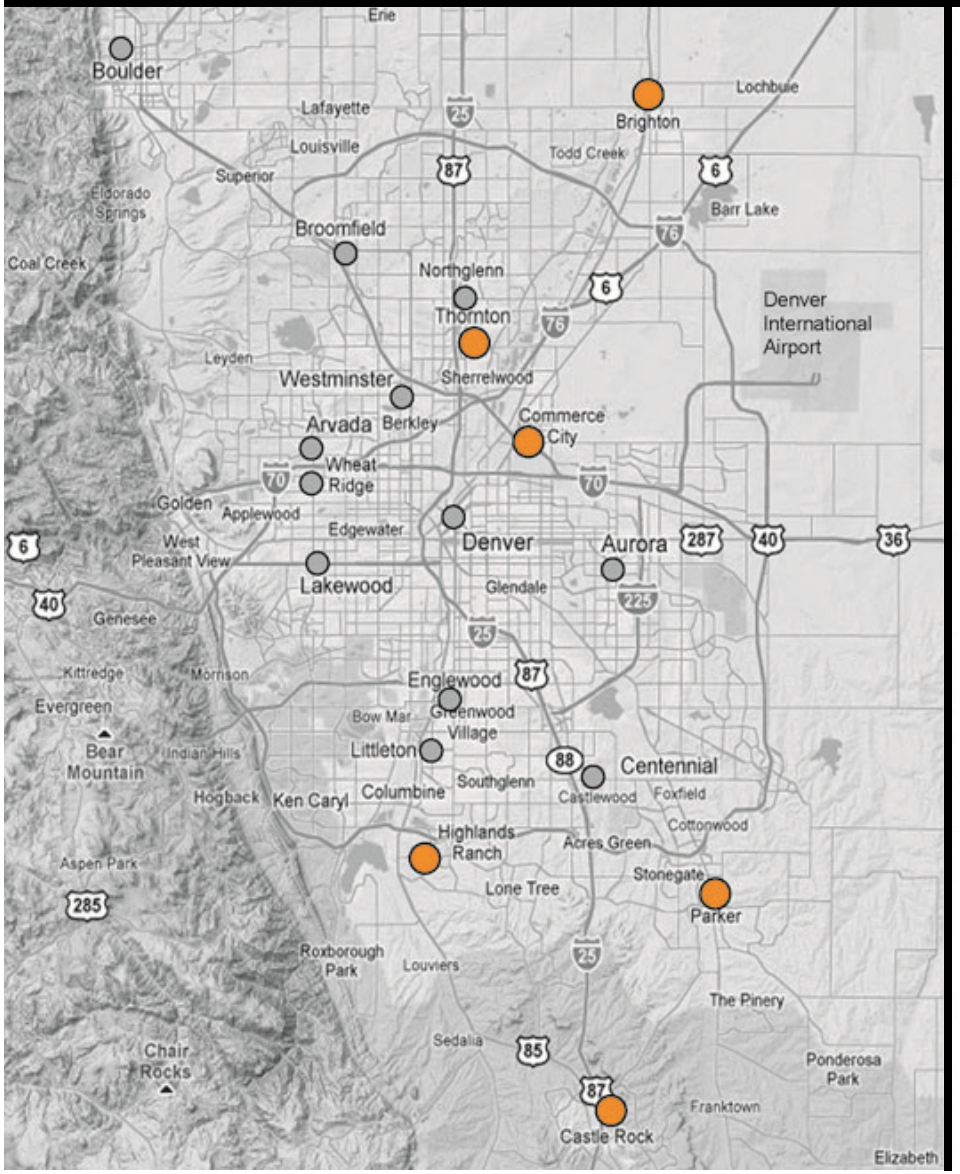
Diagram Your City – Resource Centers
Case Study: City of Littleton



Locate Your Resource Centers

- **Step 1**: Overlay Family and Business Centers
- **Step 2**: Locate Universal Resources
- **Step 3**: Determine Resource Centers = Highest Concentration of Resources
- **Step 4**: Determine Level of Connectivity
- **Step 5**: Analyze and Determine Inconsistencies
- **Step 6**: Determine Action Items

Denver Metro Family Centers

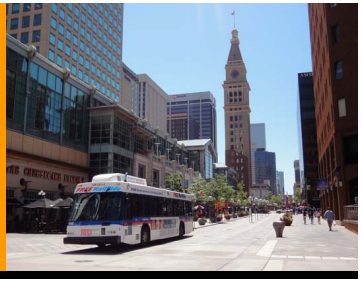


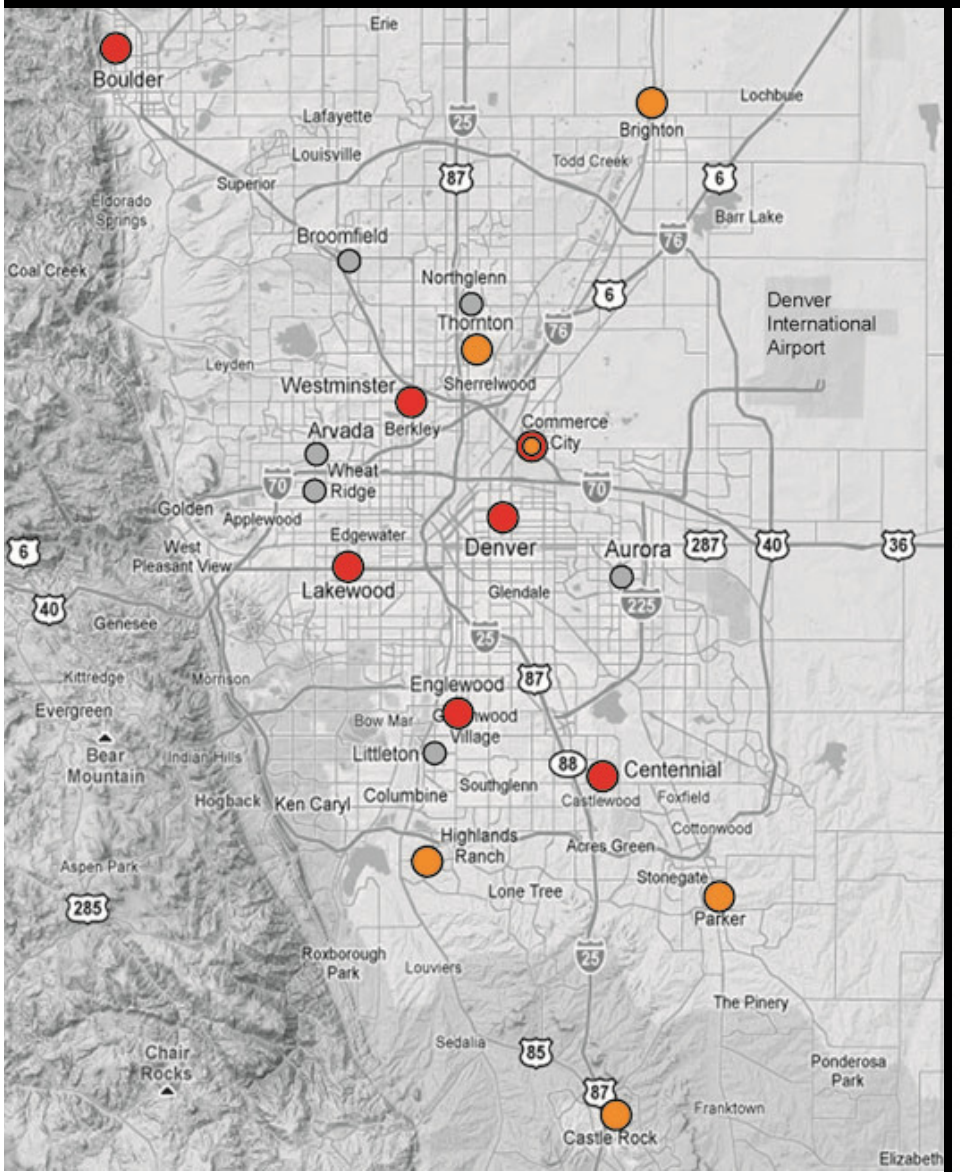
3 or More People Per Household %

● 50 % +

Cities with the highest percent of family households offer more cost effective housing options. One prominent contributing factor is land availability to accommodate new growth.

Denver Metro Business Centers





3 or More People Per Household %

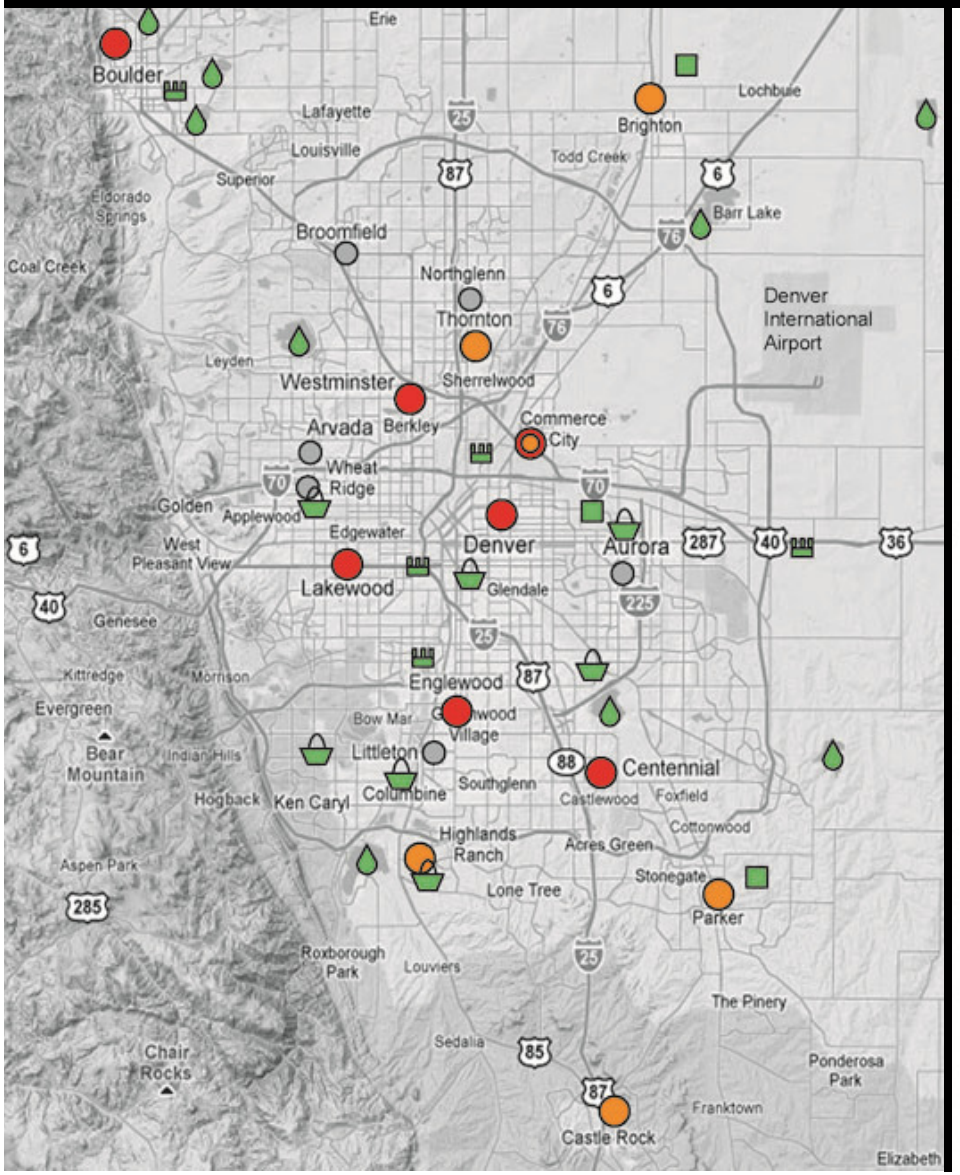
- 50 % +

Jobs Per Square Mile

- More than 3,000

Cities with the most jobs are not the cities with the highest percent of family households. The relationship between prominent business and family centers is essential to cities sustainability. The closer the two are located the greater the benefits including supporting business growth, reduction in commute time to work, and reduction in resource usage.

Denver Metro Resource Centers



3 or More People Per Household %

- 50 % +

Jobs Per Square Mile

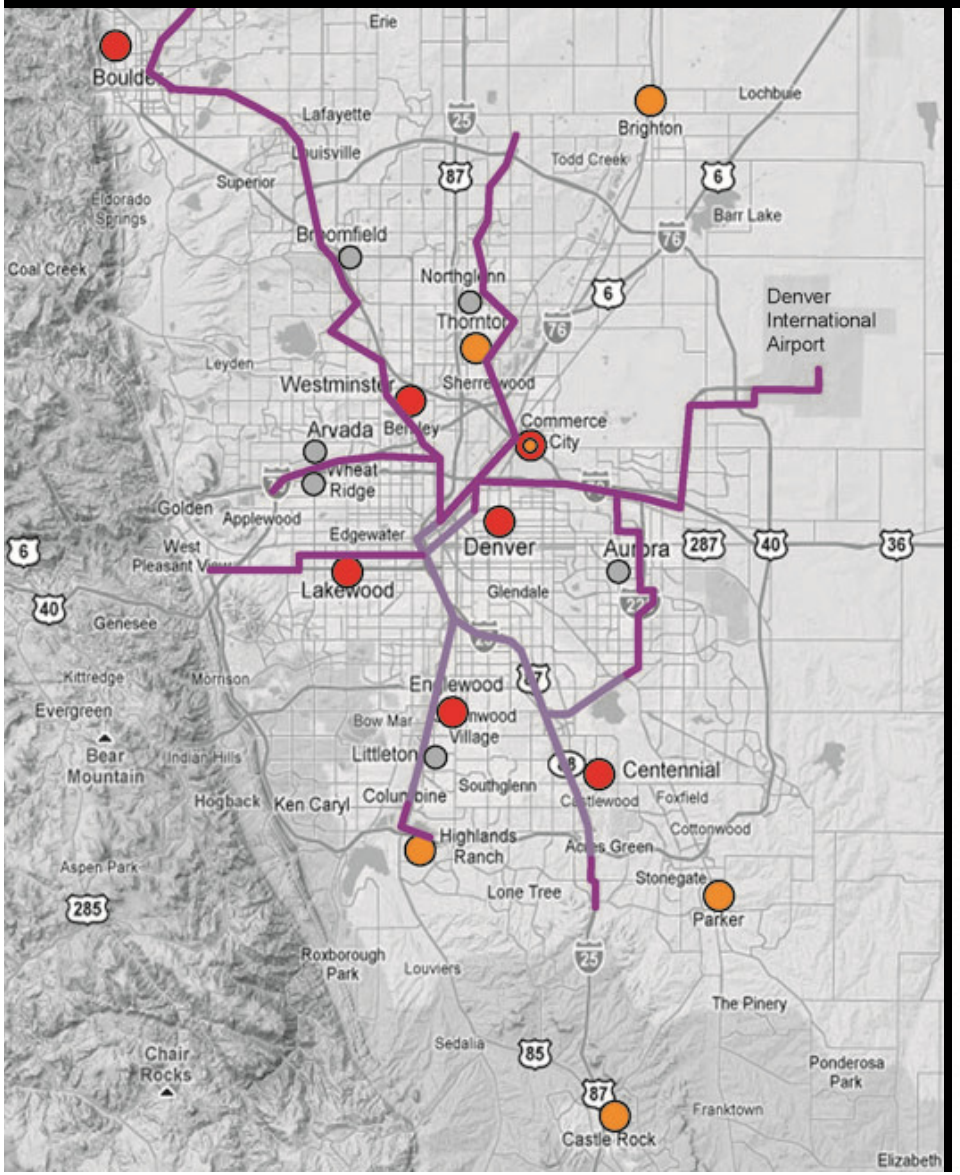
- More than 3,000

Universal Resources

- Water
- Power Generation
- Urban Farms
- Farmers Markets

In a metropolitan area, universal resources are shared between cities. Again, the closer the resources are located to the people the greater the overall human sustainability.

Denver Metro Transit Connections



3 or More People Per Household %

- 50 % +

Jobs Per Square Mile

- More than 3,000

Public Transporation

- Existing Light Rail
- FasTracks Light Rail & Commuter Rail

FasTracks

One of the largest regional transit expansion programs in North America, planning to build in Denver Metro 122 miles/196 Km of new commuter rail and light rail by 2018.

FasTracks, once fully complete, will connect all the major business centers and most cities with a population over 30,000. The exercise of identifying the family and business centers in conjunction with public transportation shows the possibilities and opportunities for future transit expansion. FasTracks is a major step towards reducing reliance on the automobile as the primary mode of transportation.

Sustainability Toolkit for Family-Friendly Cities

Social
- Multi-Generational Public Spaces

Housing
- Multi-Generational Housing
- Affordable Eco-Friendly Living

Mobility
- Multi-Modal Streets
- Personal Transportation Hubs

Education
- Purposeful Education

Universal Resources
- More Land for Living and Food
- Water Scarcity Leads to Abundance

Multi-Generational Public Spaces Overview and Checklist

Description: Community gathering space designed for all ages including pedestrian streets, plazas, and parks.

Goal: Enliven public spaces & encourage economic development

Design Considerations

- Destination
- Attractive Appearance
- Interactive Play Areas
- Seating & Shade
- Accessibility & Walkability
- Wayfinding
- Public Restroom

Multi-Generational Public Spaces
Stakeholder Benefits

City

- Builds Community with Social Gathering Spaces
- Attract and Retain Families and Businesses
- Attract Tourist
- Increase in Tax Revenue

Businesses

- More People Come to Shop & Eat = Increasing Profits
- Enjoyable Place to Work Improves Employee Retention

Residents

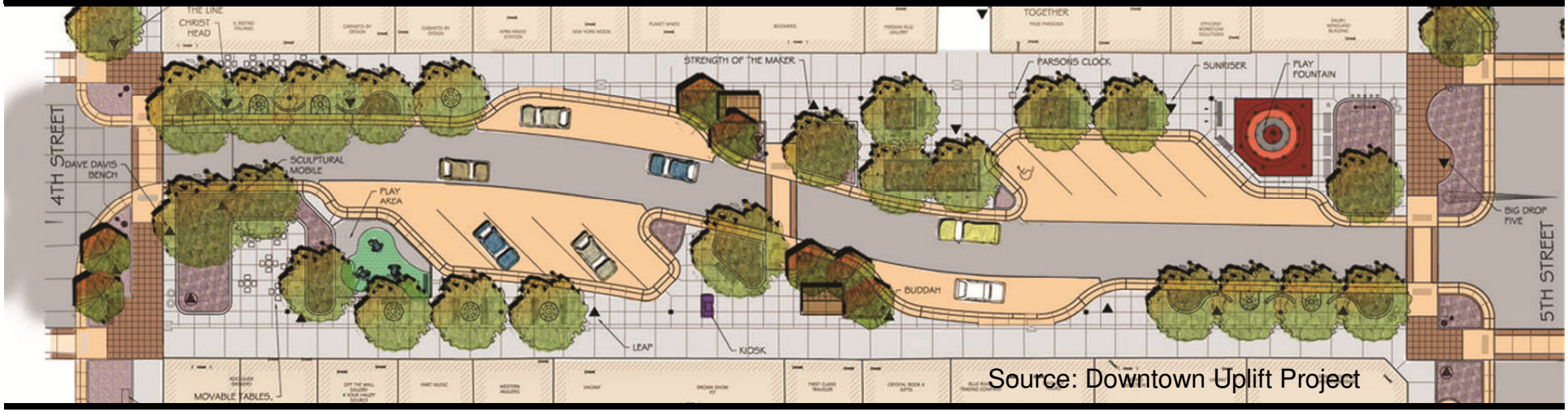
- Enjoyable Place to Meet People, Shop, Eat, and Play
- Destination for Residents and Visitors

Multi-Generational Public Spaces
Case Study – City of Grand Junction

Downtown Uplift Project – Main Street

- City Population: 58,566
- Project Completion: June 2011
- Cost: 5 Million
- Replace Aging Infrastructure
- Enhance Streetscape
- Children Play Areas
- Restaurant Outdoor Seating
- Information Kiosks

Multi-Generational Public Spaces
Case Study – City of Grand Junction



"They are seeing more families visiting downtown."

– Kathy Dirks, Grand Junction Downtown Development Partnership

Multi-Generational Public Spaces
Case Study – City of Wheat Ridge

38th Street Revitalization – Main Street

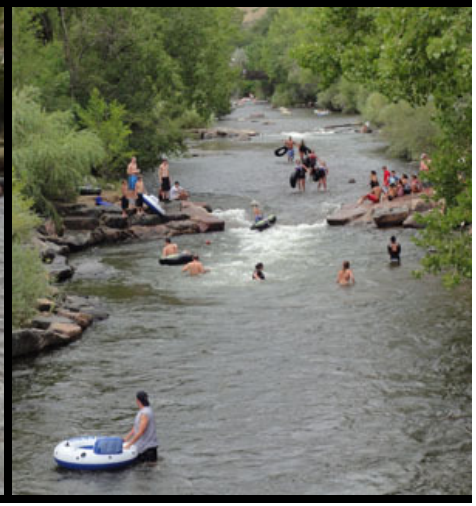
- City Population: 30,166
- Project Completion: Aug. 2012
- Cost: $250,000
- “Road Diet” 4 Lanes to 2
- Parallel Parking
- Bicycle Lanes
- Streetscape
- Pop-up Cafes
- **14 New Businesses Open 2012**

Multi-Generational Public Spaces
Case Study – City of Golden

Downtown Golden

- City Population: 18,867
- Pedestrian – Friendly
- Streetscape
- Washington Avenue Bridge
- Clear Creek Water Park
- Parfet Park
- Visitor Center
- Community Events
- Public Restrooms

Multi-Generational Public Spaces
Case Study – City of Golden



Community Values "A family and kid friendly town."

– Orton Family Foundation, Heart and Soul Case Study Golden Vision 2030

Multi-Generational Public Spaces
Case Study – City of Salida

Downtown Salida

- City Population: 5,500
- Pedestrian – Friendly
- Whitewater Park on Arkansas River
- Riverside Park
- Amphitheater
- Playground
- Climbing Wall
- Skate Park
- Community Events
- Public Restrooms

Multi-Generational Public Spaces
Case Study – City of Salida

“The city should strive to maintain a healthy and safe community that ensures opportunities for a multi-generational community to live, work, play and raise a family.”

– City of Salida Comprehensive Plan, Community Character Draft

Multi-Generational Housing Overview and Checklist

Description: Housing design for all ages and household sizes within the same neighborhood or development.

Goal: People can find housing options that meet their changing needs

Design Considerations

- Affordability
- Flexibility
- Accessibility
- Family Size Housing (3+ Bedrooms)
- Older Adult Housing (Ground Floor or Elevator)
- Privacy & Noise
- Eco-Friendly
- Nature/Outdoor Connection

Multi-Generational Housing Checklist

Neighborhood Design Considerations

Distance To:

- Schools
- Child Care
- Jobs
- Grocery Store & Shopping
- Medical & Dental
- Senior Center & Senior Care
- Parks
- Recreation Opportunities
- Library
- Places of Worship
- Cultural Opportunities

Multi-Generational Housing
Stakeholder Benefits

City

- Attract and Retain Families with Children
- Help Older Adults Live Independently
- Ensures Human Sustainability of City for Future Growth

Businesses

- Economic Stability with Balance of Ages
- More Families = More Consumers for Increasing Profits

Residents

- Able to Find Housing that Meets Changing Needs
- Able to Live, Work, Shop, and Play in City

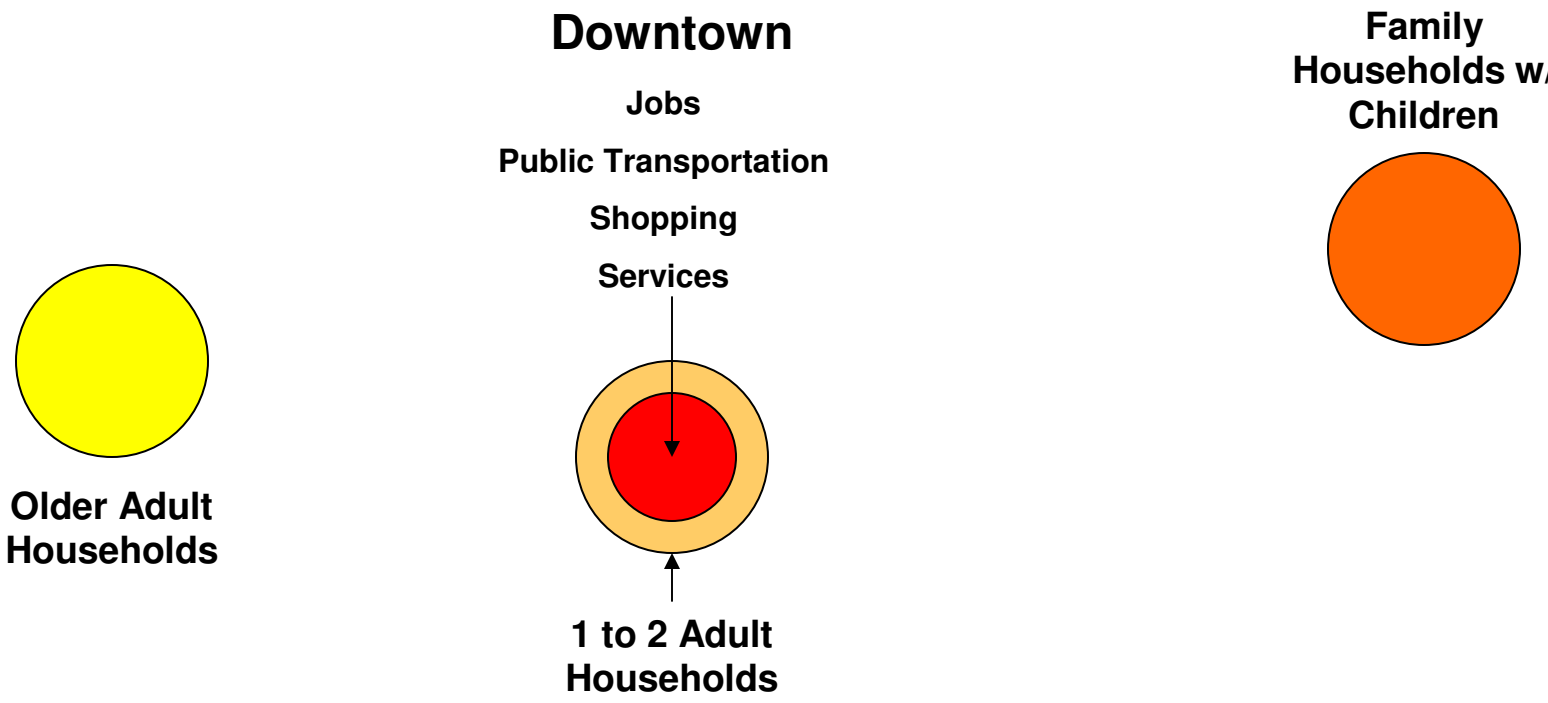
Multi-Generational Housing Motivation

Youngest Children and Oldest Adults Share Many Common Needs

- Social Interaction
- Child Care and Senior Care
- Slower Mobility
- Dependant on Others for Transportation
- Safe and Easily Accessible Outdoor Spaces
- More Frequent Medical Visits
- Neighborhood Social Support Network

Multi-Generational Housing Motivation

Prevalent Housing Trends for Cities



Why design separate housing if the youngest and oldest residents share many of the same needs?

Multi-Generational Housing Motivation

Design for the Youngest to Oldest Resident

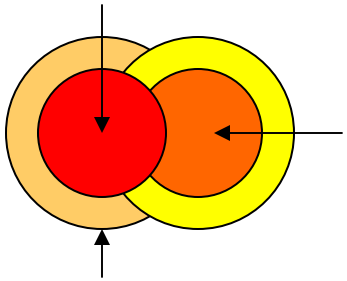
Downtown

Jobs

Public Transportation

Shopping

Services



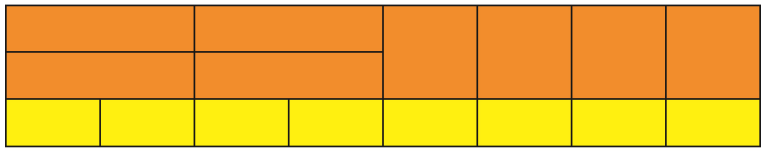
Family Households w/ Children and Older Adults

1 to 2 Adult Households

Multi-Generational Housing
High Level Multi-Family Configuration Examples

Low Density Housing Diagram

Medium Density Housing Diagram



High Density Housing Diagram

Mixed-Generation Concept

Low Density – Senior units on first floor and family units two stories, all units first floor access

Medium Density – Older adults on first floor and family units above with stairs

High Density – Retail on first floor, family and senior units above with elevator

*** Many configurations possible**

Family Dwelling Units, 2-4 Bedrooms

Older Adult Dwelling Units, 1-2 Bedrooms

Commercial Retail

Multi-Generational Housing
Family Specific Design

Design Considerations

- **3+ Bedrooms and 2+ Baths**
- **Sound Transmission Between Multi-Family Units**
- **Usable Storage Space**
- Spacious Living Areas
- Indoor Running Circle for Children
- Visual and Vocal Connection to Outdoor Play Areas
- Easy to Load and Unload Car
- Covered Entry and Mud Room
- Convenient Laundry
- Separate Living Space or ADU for Extended Family

Multi-Generational Housing
Older Adult Specific Design

Design Considerations:

- **Accessibility and Universal Design**
- **Covered Zero-Step Entry**
- **All Basic Living Spaces Main Floor or Elevator**
- **Kitchen and Bathroom Special Attention to Design**
- Flexibility for Storage Heights
- Everything User-Friendly and Easy to Reach
- If Stairs, Stack Closets Future Elevator
- Good Lighting Inside and Outside
- Non-Slip Surfaces to Prevent Falls
- Low Maintenance
- Visually See Visitors At Door

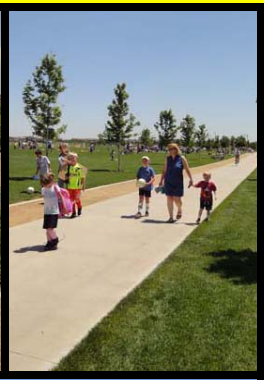
Multi-Generational Housing
Case Study - Stapleton Development, Denver

Stapleton Development

- Diversity of Housing Options
- Land Area: 4,700 Acres
- High Percent 3+ Bedrooms
- Over 50% Family Households
- Designed to Conserve on Resources

  40-70% Water and Energy Saving
- Community Gardens
- Recreation Center and Parks
- Schools
- Public Transportation
- Pedestrian and Bicycle-Friendly
- Town Center + Shopping

Multi-Generational Housing
Case Study - Stapleton Development, Denver



Multi-Generational Housing
Case Study – Harmony Village, Golden

Harmony Village Cohousing Community

- 27 Households (48 Adults & 18 children)
  Ages: 1 to 90 Years
- 5.5 Acre Site w/2.5 Acres Open Space
- Dwelling Units 800 to 3,000 s.f.
- Active Participation Required
- Ecologically Reasonable Community
- Energy-Efficient Buildings
- Pedestrian-Friendly
- Social Common Spaces

Multi-Generational Housing
Case Study – Harmony Village, Golden

Multi-Generational Housing
Case Study –Wild Sage, Boulder

Photos Wild Sage

Wild Sage Cohousing Community

- Singles, Families, Couples, Empty-nesters, & Seniors
- Mixed-Income Condominium
- Common House 3,500 s.f.
  - Kitchen, Dinning, Patio w/Grill
  - Children's and Family Room
  - Exercise Room
  - Guest Rooms
- Pedestrian and Child-Friendly
- Ecologically Responsible Community
- Walking Distance to Shopping, Park and Trials, Community Garden, & Bus Stops

Multi-Generational Housing
Case Study – Washington Park Cares, Denver

About: Village Housing Model

- Non-profit w/Yearly Membership Dues ~$600
- Aging in Community
- Serves 11,000 People Over Age of 60
- 12 Denver Neighborhoods Participating
- Number to Call for Help with:
  - Occasional Chores
  - Minor Home Repairs
  - Rides
  - Computer Assistance
- Healthy Social Life

Affordable Eco-Friendly Living
Overview and Checklist

Description: Cost of living affordable and utilizes earth's resources wisely in addressing core needs: housing, utilities, food, transportation, and health/fitness.

Goal: Move beyond the traditional concept of "affordable housing" to think about affordable living.

Design Considerations

- Mixed-Income & Maximize Living Space
- Eco-Friendly Building = Saving on Utility Costs
- Garden and Edible Landscaping = Saving on Food Costs
- Pedestrian & Bicycle-Friendly, Car Sharing, Public Transit = Saving Transportation Costs
- Recycle and Compost Reduce Waste
- Ability to Live Close to Work to Reduce Travel Distances
- Core Daily Destinations Centrally to Reduce Travel Distances
- Account for Life-Cycle Costs

Affordable Eco-Friendly Living
Stakeholder Benefits

City

- Attract and Retain Families with Children
- More People Able Live on Income without Additional Financial Support
- Conserves Resources & Healthier Environment

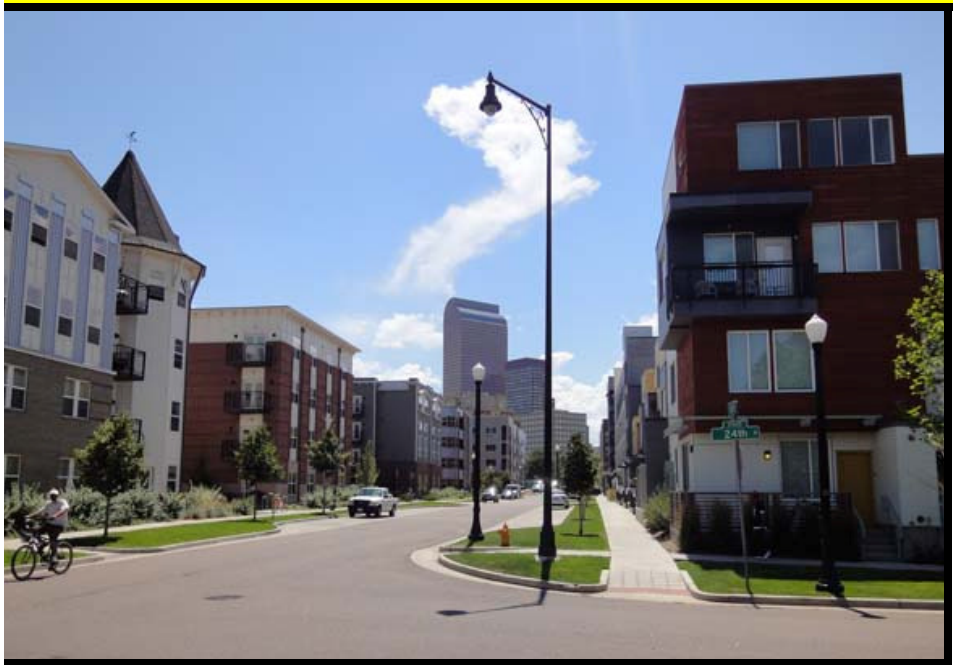
Businesses

- Economic Stability
- More Families = More Consumers for Increasing Profits

Residents

- Able to Find Affordable Housing
- Overall Cost of Living Affordable: Lower Utility, Transportation, and Food Costs
- Physically Healthier

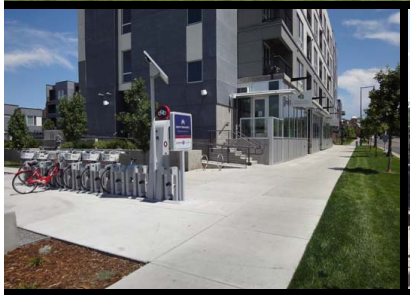
Affordable Eco-Friendly Living
Case Study - Benedict Park Place, Denver



Benedict Park Place

- Downtown Denver
- Mixed-Income Housing with 585 Units
- Rental Units: Studio, 1,2, & **3 Bedrooms**
- All Ages + Senior Housing Tower
- Retail: 15,000 S.F.
- Land Area: 14.9 Acres
- Park and School Across Street
- Urban Garden & Playground
- Fitness Center & Patio/Grill
- Walk to Bus and Light Rail Stop
- LEED for Homes Pilot Platinum and LEED ND Pilot Gold

Affordable Eco-Friendly Living
Case Study - Benedict Park Place, Denver



Multi-Modal Streets
Overview and Checklist

Description: Design Streets for all modes of transportation including pedestrians, bicycles, motor vehicles, low speed vehicles, and public transportation.

Goal: Improve safety and move people faster

Design Considerations

- "Complete Streets"
- Hierarchy in Modes of Transportation
- Pedestrians: Accessible and Safe Sidewalks/Street Crossings & Streetscape
- Bicycles: Safe Bicycle Lanes/Street Intersections
- Public Transportation: Bus Rapid Transit
- Motorized Personal Transportation: Car Sharing, Low Speed Vehicles, Charging Stations
- Connectivity to Key Destinations: Trip Chaining Behavior of Parents with Children
- Convenient Parking

Multi-Modal Streets
Stakeholder Benefits

City

- Reduce Motor Vehicle Travel
- Increase People Walking and Bicycling
- Increase Safety by Better Design of Streets
- Reduce Expansion Need of Motor Vehicle Travel Lanes and Reduce Parking Needs
- Increase in Tax Revenue

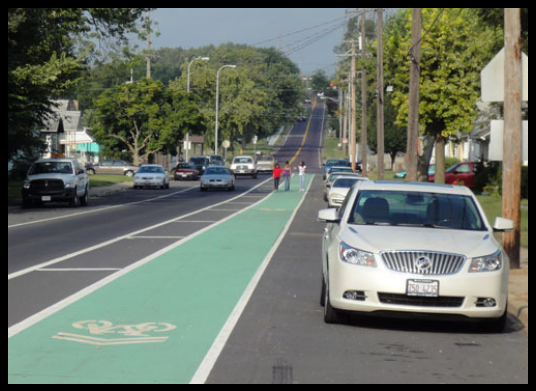
Businesses

- People Frequent Retail Businesses on Pedestrian & Bicycle-Friendly Streets
- Increase in Profits

Residents

- Families Able to Safely and Economically Move About City
- Increase in Property Value
- Enjoyable Place to Live, Work, Shop, and Play

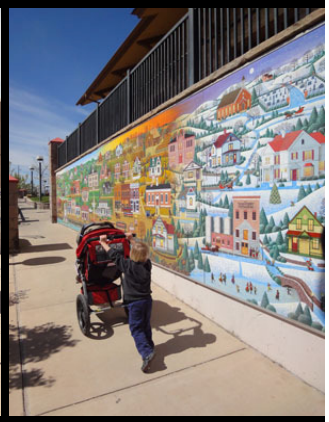
Multi-Modal Streets
Multiple Cities – Bicycle Examples

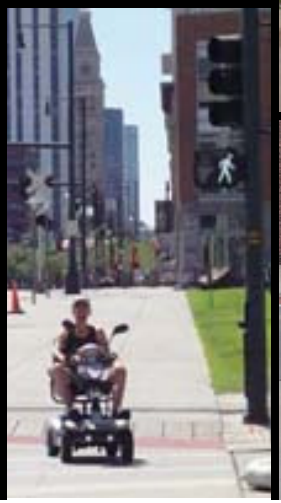








Multi-Modal Streets
City of Denver & City of Littleton
Pedestrian & Transit Examples





Multi-Modal Streets
City of Curitiba, Brazil and City of Denver
Bus Rapid Transit Examples


Photo Public Spaces

Photo RTD Denver

Bus Rapid Transit

- Developed in Curitiba, Brazil in 1972

  Substitute to a Subway
- 75% of Travelers in Curitiba use BRT
- RTD Denver, US 36 Denver-Boulder BRT
- Operate Buses More Like Rail System
- Fast and Affordable
- Minimal Infrastructure Cost
- Dedicated Lanes on Street
- Bus Stations rather than Bus Stops
- Elevated Boarding Platforms

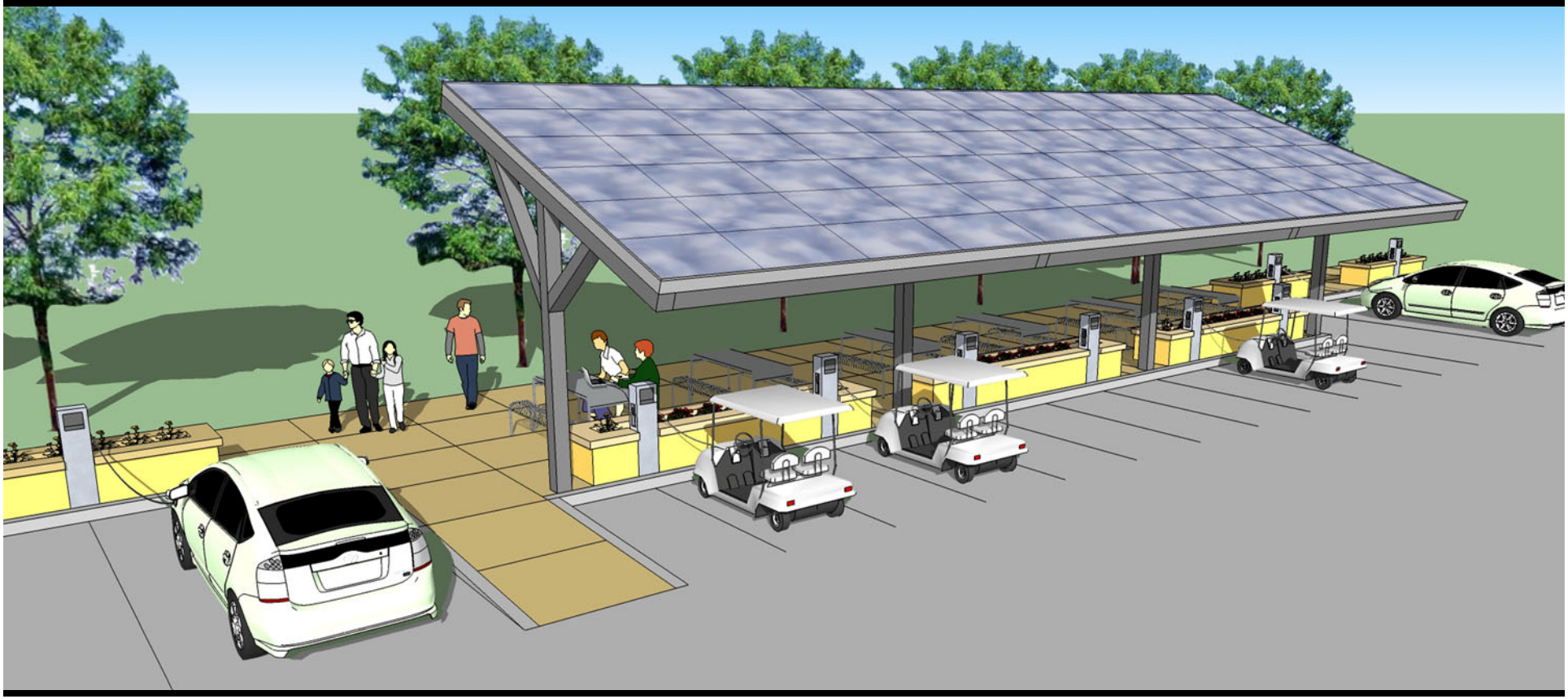
Multi-Modal Streets
Low Speed Vehicle Examples

Photos Multiple Sources

Design Considerations

- Permitted on Roads 35mph Speed Limit
- Top Speed 25mph
- Types: Golf Cars and Neighborhood Electric Vehicles
- Headlights and Taillights
- Parking Space ¼ Size of Standard Space
- Quiet and Emission Free
- Seat 2-8 People
- Ideal for Local Trips
- Cost Effective
- Street Network User-Friendly
- LSV Connectivity Map of City

Multi-Modal Streets
Charging Station Example Diagram



Electric Vehicle Charging Station

Cars, Low Speed Vehicles, and Personal Electronics

Legal in CO as of Aug. 2012

Personal Transportation Hubs
Overview and Checklist

Description: Central location for sharing a variety of wheeled modes of transportation including cars, low speed vehicles, and bicycles.

Goal: Affordable and eco-friendly personal transportation options available for all ages

Design Considerations

- **"1 Shared Car Replaces 9+ Individually Owned Cars"** APA Planning Magazine May/June 2012
- **Golf Car Parking Space ¼ Size of Standard Parking Space**
- Reduce Parking Requirements
- Determine Right Mix of Transportation Types
- Transportation for Short Trips
- More Land for Housing/Retail
- Electric Charging Stations

Personal Transportation Hubs
Stakeholder Benefits

City

- Reclaim Space with Fewer Cars and Smaller Vehicles
- Increase in Tax Revenue
- Electric Charging Stations Income Generator

Businesses

- Electric Charging Stations Income Generator
- Developers Less Parking Demand = More Land for Income Generation

Residents

- More Affordable than Owning Car
- More Transportation Options

Personal Transportation Hubs
Example Transportation Types

Motor Vehicles

Low Speed Vehicles

Electric Scooters

Electric Assist

Bicycles

Photos Multiple Sources

Purposeful Education
Overview

Description: Students graduate high school prepared for the next step in life.

Goal: Adult citizen ready to contribute to the community.

Next Step In Life Examples:

1. Job
2. Trade School
3. College
4. Military
5. Parenthood

Purposeful Education Checklist

Successful Schools from Research to Action Plans
Willard R. Daggett, Ed.D.
President, International Center for Leadership in Education
Presented at June 2005 Model Schools Conference (Abbreviated)

1. Rigorous and relevant curriculum that all children can learn
2. Use data to guide curriculum priorities
3. Provide students real-world applications of the skills
4. Create a framework to organize curriculum
5. Create multiple learning pathways for students
6. Set high expectations and hold students and adults accountable
7. Sustained professional development to improve instruction
8. Obtain and leverage parent and community involvement
9. Establish and maintain safe and orderly schools
10. Offer effective leadership development

Purposeful Education
Stakeholder Benefits

City

- Attract and Retain Families with Children
- Attract and Retain Businesses
- Workforce Ready
- Education Can Help Reduce Poverty

Businesses

- Entrepreneurs
- More Skilled Labor

Residents

- Quality Schools Very Important to Select Place to Live
- Earn a Better Living

Purposeful Education
Examples of Jobs in City

What percent of city jobs require additional training and college?

Direct Job	Additional Training/Trade School	College
Construction	Firefighter	Teacher
Service Jobs	Police Officer	Nurse
Restaurant	Building Trades	Doctor
Child Care	Automotive Technician	Dentist
Hospitality	Truck Driver	Engineer
Lawn Care	Beautician	Architect
Maintenance	Care Giver	Planner
Agriculture		Accountant
		Lawyer

Purposeful Education
Case Studies – Stapleton High School, Denver

DSST: Stapleton High School

- Highest Performing Public School in Denver Public Schools
- Grades 9-12
- College Preparatory Curriculum
- Focus: Science, Technology, Engineering, and Math
- 100% Graduates Accepted to Four-Year Colleges

Purposeful Education
Case Studies – Collegiate Academy of Colorado

Collegiate Academy of Colorado

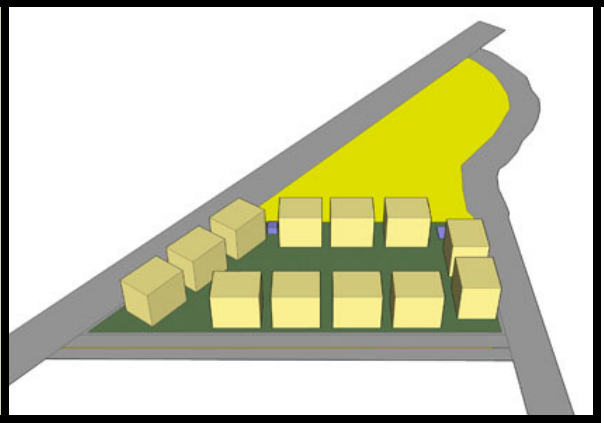
- Jefferson County Charter School
- Grades K-8 Core Knowledge Curriculum
- Grades 7-12 College Preparatory Curriculum
- Advanced placement classes
- Each Student Receives Career & College Planning
- Performance Indicators Postsecondary and Workforce Readiness 91.7% Points
  (School Performance Framework 2011 www.schoolview.org)
- High School Diploma Has Added Value

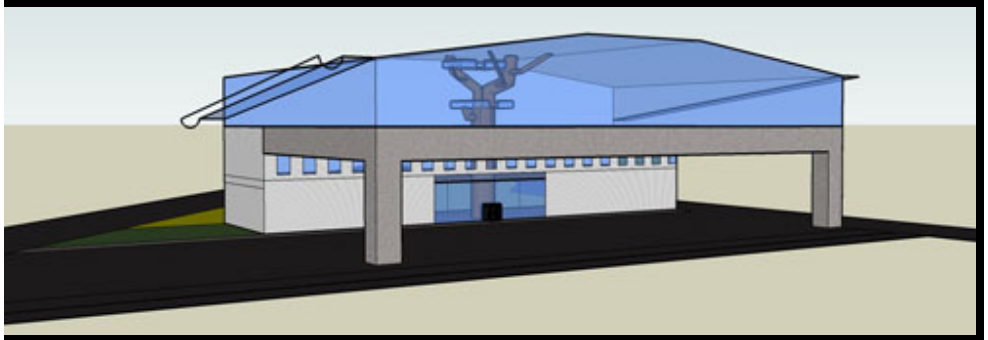
Purposeful Education
Case Study – University of Michigan

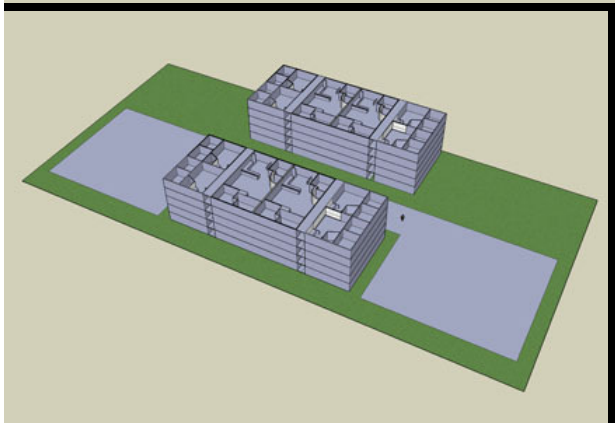
University of Michigan

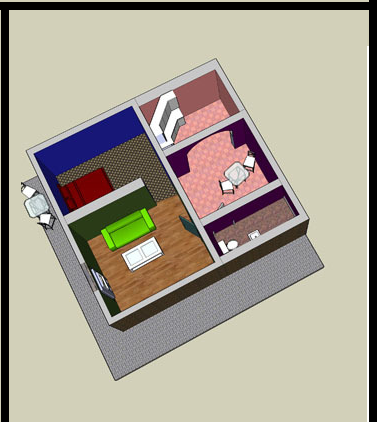
- Large Scale College Example:
  - Total Enrollment 58,947 Three Compasses
  - 14,000 Students Graduate Annually
- Going Beyond a Degree to Purposeful Education:
  - New Degree: Master of Entrepreneurship (Joint Engineering and School of Business)
  - Tech Focused Small Business Ventures
  - Center for Entrepreneurship: Assists Students, Faculty, and Staff to Connect Inventors and Venture Capitalists
  - U-M Tech Transfer: Help Launch New Businesses to Transfer Technology to Marketplace (Start-up Companies)

Purposeful Education
Case Study – HLP Architecture Class, Littleton









Architecture and Drawing Class

- 4th Year Teaching Drawing Skills
- K-12th Grade
- Children Sketch and Build Models
- Older Children and Teens 3D Models
- Learn about Architecture, Urban Planning, Landscaping, and Interior Design
- Example Student Projects: Multi-Family Housing, Museum, and a House

More Land for Living & Food
Overview and Checklist

Description: Rethink land use for buildings, parking, road network, parks and open space to move towards more land available.

Goal: Maximize land for living and producing food.

Design Considerations:

- Use Roof Top for Energy Generation, Growing Food, and Outdoor Living
- Reduce Parking Demand and Requirements
- More Site Area Dedicated to Building
- More Balconies, Porches, Patios, and Decks
- Mixed-Use Two Stories or More
- Reallocate vehicle lanes for other modes of transportation
- Reallocate vehicle lanes for downtown restaurants outdoor seating

More Land for Living & Food Checklist

Are You Moving Towards Less Space for Living?

- More Vehicle Lanes
- More Cars and Parking Lots
- More One Story Buildings
- No Programmed Function on Roof

Are You Moving Towards More Space for Living?

- More Bicycle Lanes
- Pedestrian-Friendly Streets
- More Public Transportation
- More Low Speed Vehicles
- More Two or More Story Buildings with Programmed Roof Space

More Land for Living and Food
Stakeholder Benefits

City

- More Production of Energy Locally
- More Land for Buildings and Public Spaces
- Parking Space and Reduced Vehicle Lanes
- Reduced Dependence on Outside Food
- Healthier Residents with Fresh Food
- Local Food Reduced Emission, and Packaging

Businesses

- More Income Potential Per Acre

Residents

- More Space for Living
- More Attractive City
- Access to Fresh Food
- Healthier Environment

More Land for Living & Food
Case Study – TSR Group/Agriburbia, Golden

Design-Build Agriculture

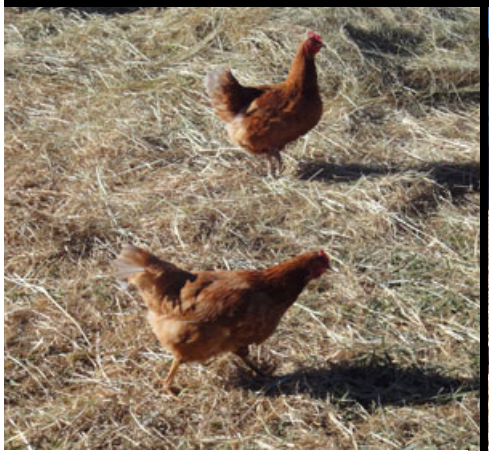
- Commercial Farming for Profit
- Goal: 10% of U.S. Population Farmers
- Farm Private & Public Land
- Food Distribution Network
- Employees: 20-30 people
- Table Mountain Farms, Golden (Model Steward Farm)
- Low Water Usage - Drip Irrigation
- Every Plant on GIS
- “Land not issue rather water and zoning”
- Farm 1/3 Acre Produces 6,000 lbs Food
- Farming Land for Schools to Supply Food for Students (Denver and Salida)

More Land for Living & Food
Case Study – TSR Group/Agriburbia, Golden

Farm Kit – Live + Work + Grow Food

- Building, Site, Training, + Business Plan
- 2 Story 34'x60' Building
- Building Cost: $185,000 - $250,000
- Features: Home, Office, Commercial Kitchen, Walk-in Cooler, Market Pick-up, & Greenhouse
- Additional Restaurant Model Available
- Steel Construction Prefab
- Transported on 4 Semi-Trailers 50' long
- Land: 2-10 Acre Site "Sweet Spot"
- 2-3 years Hands-On Farming Experience
- Supply Chain Network to Sell Food

More Land for Living & Food
Case Study – Gunnison Farm



Gunnison Farm

- 500 Acre Farm Owned by City
- Previously Producing Hay
- Currently Young Farmer with Family Leases Land to Raise Animals
- Cows, Chickens, Pigs & Goats
- Biking Distance from Downtown
- People Pick-Up Organic Food at Ranch
- Supplies Beef to Crested Butte Public School for Student Lunch
- Community Enjoys Local and Organic Milk, Eggs, & Meat

More Land for Living & Food
Case Study – Montreal Convention Center

Culti-vert Project

- Joint project between Montreal Urban Ecology Centre and Palais des congres in Montreal
- Summer 2011, Ecocity World Summit
- 450 Plants On Roof of Palais des congres.
- Three Restaurants Benefited from the Locally Grown Food

More Land for Living & Food
Case Study – City of Asheville

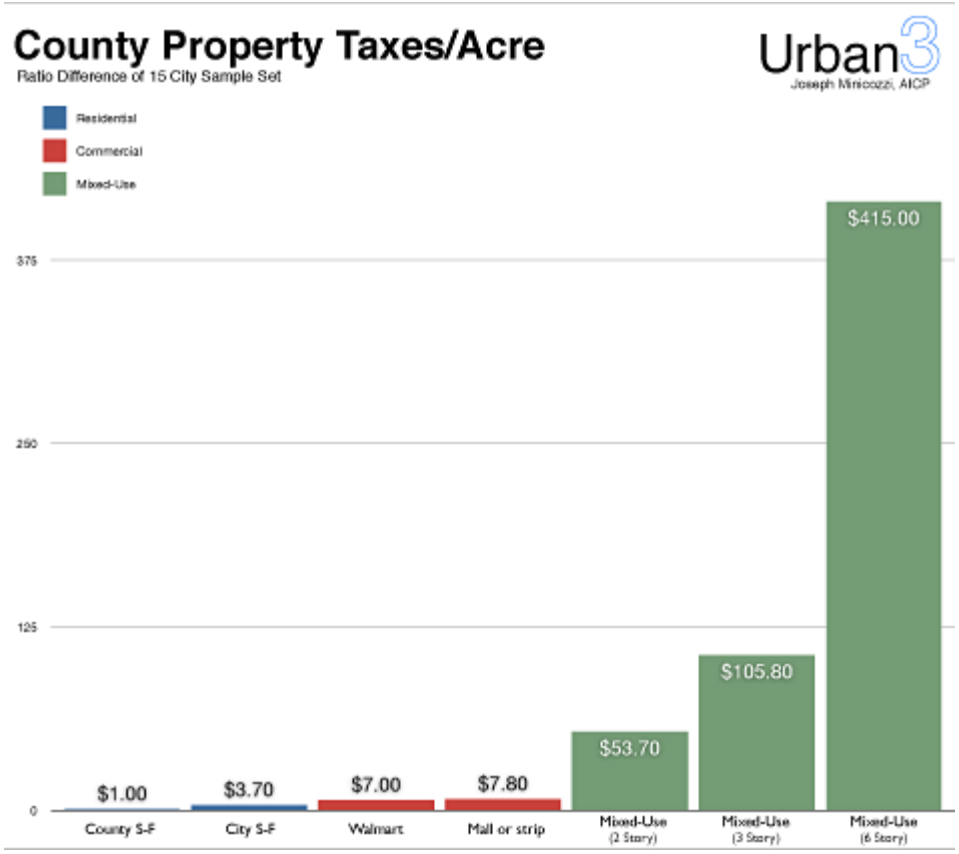
Data Showing Benefit of Mixed-Use

	ASHEVILLE WALMART	DOWNTOWN MIXED-USE
Land Consumed (acres):	**34.0**	**00.2**
Total Property Taxes per Acre:	**$6,500**	**$634,000**
Retail Taxes* per Acre to City:	**$47,500**	**$ 83,600**
Residents per Acre:	**0.0**	**90.0**
Jobs per Acre:	**5.9**	**73.7**

*Estimated from public reports of annual sales per sq.ft..

Urban3

Joseph Minicozzi, AICP
Joe@urban-three.com



Water Scarcity Leads to Abundance
Overview and Checklist

Description: Regions with the least water resources are innovators in utilizing limited resources wisely

Goal: Support more people on less water

Design Considerations

- Grow Food instead of Grass
- Xeriscaping
- Irrigation on Times with Rain Seniors
- Water Saving Plumbing Fixtures and Appliance
- Habits that Conserve Water

Water Scarcity Leads to Abundance
Stakeholder Benefits

City

- Water Available to Support More People and Grow Food
- Ability for City to Expand
- Reduce City Utility Costs

Businesses

- Able to Develop More Land
- Able to Grow More Food
- Reduce Business Utility Costs

Residents

- Reduce Utility Costs

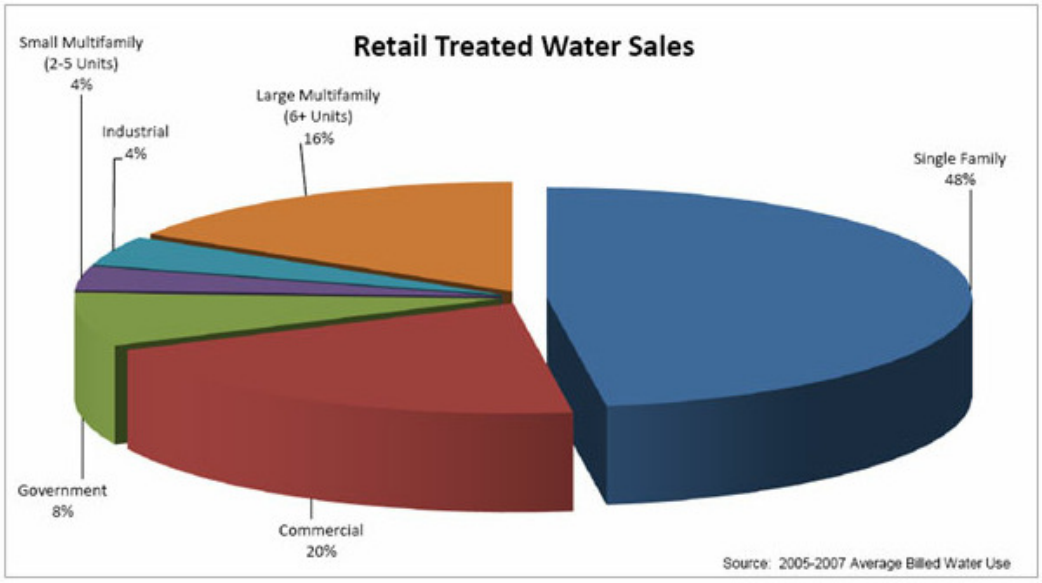
Water Scarcity Leads to Abundance Motivation

What state is a leader for conserving water?

Michigan

Colorado

Water Scarcity Leads to Abundance
Case Study – Denver Water

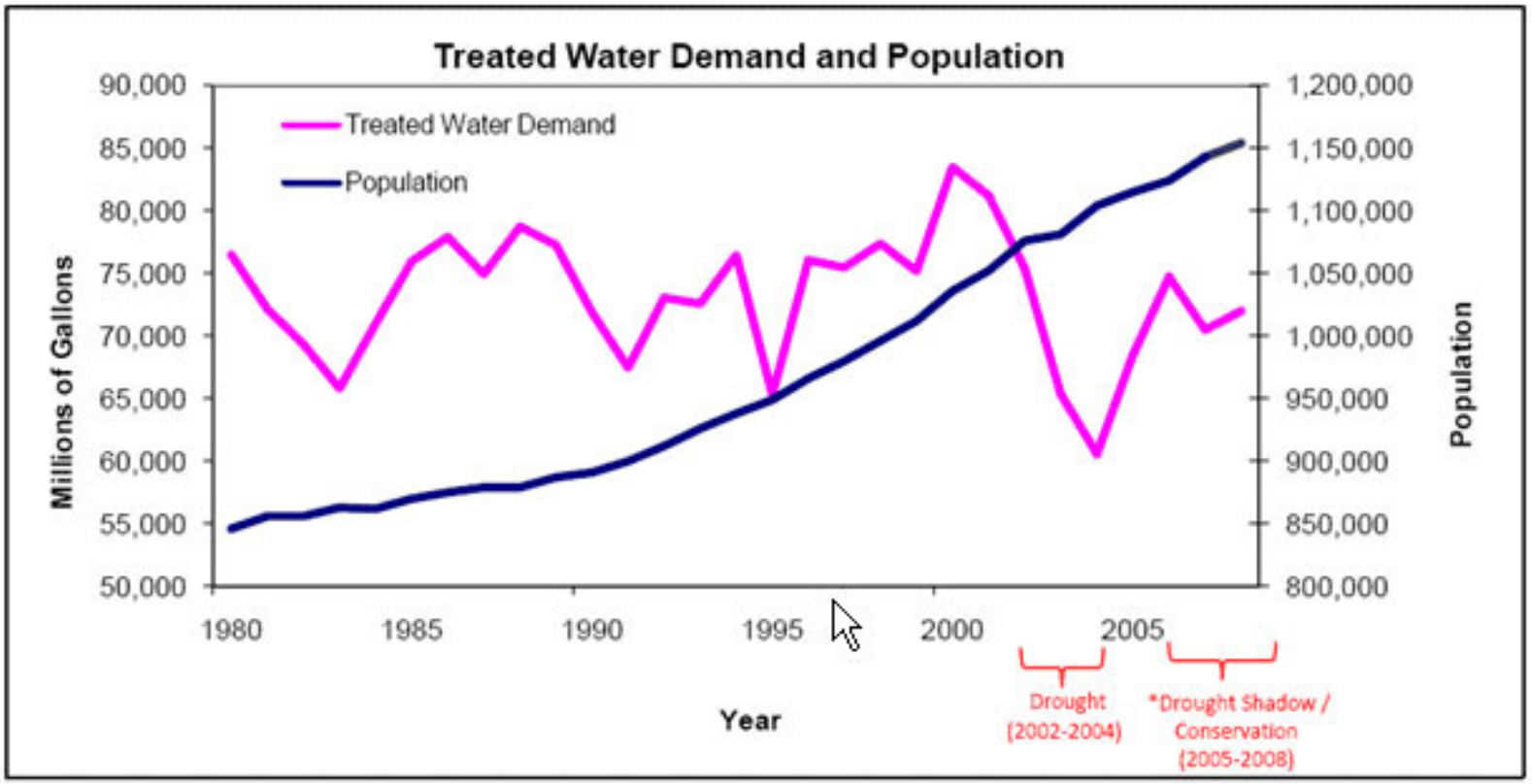


Water Use Average residential customer :

- 55 percent outdoor use
- 11 percent toilet
- 9 percent clothes washer
- 8 percent shower
- 7 percent leaks
- 6 percent faucet
- 2 percent other
- 1 percent bath
- 1 percent dishwasher

Source: Denver Water

Water Scarcity Leads to Abundance
Case Study – Denver Water



Source: Denver Water

Water Scarcity Leads to Abundance
Case Study – Ranville House, Littleton





Goal: Support 4 People on Resources of 2
Renovation of Existing 1970s House

Water

- Xeriscaping
- Dual Flush Toilet
- Front Load Washer & Dishwasher Full/1/2 Load
- New Shower Head Adjusts Water Flow
- Watering Food not Grass

Energy

- PV Solar Panels 100% Electricity
- New Kitchen Appliances
- Energy Star Windows

Waste

- On-site Composting
- Recycling

Food

- Garden – 600 S.F.

Sustainability Toolkit for Family-Friendly Cities

Who thinks one or more toolkit items could help your city?

Social
- Multi-Generational Public Spaces

Housing
- Multi-Generational Housing
- Affordable Eco-Friendly Living

Mobility
- Multi-Modal Streets
- Personal Transportation Hubs

Education
- Purposeful Education

Universal Resources
- More Land for Living and Food
- Water Scarcity Leads to Abundance

Sustainability Toolkit for Family-Friendly Cities

You will have more of whatever you invest in the most.

Jennifer Ranville

Architect + LEED AP

Founder of Human Life Project

www.humanlifeproject.com