New Partners for Smart Growth
Denver
January 26, 2005

Breaking the CODE

12 Code Obstacles to Smart Growth and What Cities are Doing to Remove Them

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12 Code Obstacles

1. Parking and Traffic Code
2. Building Code
3. Uniform Fire Code
4. Clean Water Act
5. Fair Housing Act
6. State Schools Codes
7. Congestion Management Program
8. Zoning & Subdivision Codes: Design and Parking
9. Road Design Code
10. Street Typologies and Transportation Performance Measures
11. Impact Fees
12. Environmental Compliance

1. Parking and Traffic Code

- Residential Parking Permit Districts
  - Critical for addressing spillover parking concerns of infill development
  - Requires neighborhood vote on parking district
- Austin Parking Benefit Districts
  - http://www.ci.austin.tx.us/parkingdistrict/default.htm
  - Allows residents to sell surplus neighborhood parking capacity to commuters
  - Revenue returned to neighborhood for community improvements

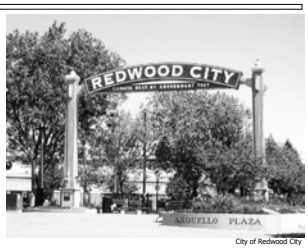
1. Parking and Traffic Code

- Parking management in Old Pasadena
  - $1/hour meters installed 1993
  - Garage fees
  - Annual revenues of $5.4 million
  - Tiny in-lieu of parking fees
- Revenues fund garages, street furniture, trees, lighting, marketing, mounted police, daily street sweeping & steam cleaning
- Focus on availability, not price

Old Pasadena,1992-99:
Sales Tax Revenues Quadruple

1. Parking and Traffic Code

- Redwood City, CA: Meter and garage rates vary to achieve 15% vacancy on all blocks at all times.
- http://www.redwoodcity.org/government/council/packets/2005/0606/Reg_050606-8A.pdf



City of Redwood City

2. Building Code

Many jurisdictions rely on the Building Officials and Code Administrators (BOCA) 1996/1999:

Establishes minimum requirements for materials and methods of construction, addresses loads and stresses, fire protection, special uses, lighting and ventilation, and means of egress.

Major issues when renovating old buildings:

- Many existing buildings were built to comply with an earlier building code or no code, yet are often still safe and sound
- Untapped housing stock in urban areas – old buildings must be brought into compliance with current building codes for new construction
- This is a very expensive process that may not result in better safety

Source: New Jersey's Rehabilitation Subcode http://www.state.nj.us/dca/codes/rehab/pioneerart.shtml

Problem 1: Requirements

- Requirements for new structures cannot be met in existing buildings:
  - Do lumber and bricks meet the current material standards in the code?
  - Existing stairways are too steep and need to be replaced
  - Stairways with shorter risers and wider treads require more room and can often not fit into existing buildings without totally reconfiguring the space
  - Ceiling height requirements
  - Egress window requirements
  - Corridor and doorway width requirements

Source: New Jersey's Rehabilitation Subcode

Problem 2: Predictability

- Code officials recognize that making an existing building meet all of the requirements of the code applicable to new buildings is impossible
- However, there is little consistency among code officials about which requirements are necessary to improve safety
- Building owner has no idea what will be required prior to submitting plans for review or meeting with the code official
- The uncertainty makes building owners hesitant to undertake building improvements because they cannot predict the cost of the project

Source: New Jersey's Rehabilitation Subcode

Problem 3: Partial Renovation

- Rules that aim to impose new construction standards on existing buildings penalize building owners who want to improve their buildings:
  - BOCA Chapter 34 counts life safety improvements only when they are made to an entire structure, not if only one floor of a building is renovated
  - The additional costs for improving the entire structure, instead of just one floor, often make a rehabilitation project financially infeasible. Causes building owner to abandon planned improvements to the floor.

Source: New Jersey's Rehabilitation Subcode

2. Building Code Solutions

- Create a Rehabilitation Code
- Creating the Code is a rigorous process with public hearings etc, including stakeholders from all sectors. Not done overnight.
- The Code should not only be a change in building code requirements, but a change in building code philosophy (if a building owner has money to spend on his building, he should be required to spend a good portion of that money to make the building approach the current code for new structures)
- Main goal: To revitalize older downtowns and neighborhoods, where buildings are currently underutilized due to the costs of rehabilitation

Source: New Jersey's Rehabilitation Subcode

New Jersey's Rehabilitation Subcode (1998)

- Developed by the Department of Community Affairs with guidance from:
  - a 30-member committee under the coordination of the Center for Urban Policy Research at Rutgers University
  - Code officials, fire officials, architects, historic preservationists, advocates for people with disabilities, and government representatives
  - Committee met over two years
  - 2 public hearings and publication of draft in New Jersey Register

New Jersey's Rehabilitation Subcode (1998)

- Instead of basing requirements on the cost of the work to be performed, it is based on requirements on the nature of the work.
- **Five sets of requirements:**
  - Products and practices (items required and prohibited)
  - Materials and methods (how to use them)
  - New building elements (atriums, corridors, door openings)
  - Basic requirements (egress, dead end corridors, exit signs)
  - Supplemental requirements

- **Three types of projects:**
  - Rehabilitation (repair, renovation, alteration, reconstruction)
  - Change of use
  - Additions

Source: New Jersey's Rehabilitation Subcode

New Jersey's Rehabilitation Subcode (1998)

- Costs and Benefits:
  - Jersey City Building, vacant for eight years, was renovated. 24 apartments (low-, moderate-income senior citizens and daycare center). Estimated cost savings of $391,000, ¼ of total project costs.
  - Vacant Trenton office building (>50,000 Sq. Ft.) renovated for use as charter school. Saved an estimate of $100,000 to $125,000.
  - Largest benefit: Previously vacant buildings are now in use!

Source: New Jersey's Rehabilitation Subcode

Maryland Smart Codes

- Designed to "give a shot in the arm to urban revitalization projects"
- Aim is to help "communities with older sections and dying old town sections that builders don't want to come into because of overlapping codes" (Cliff Lee, senior plans examiner, City of Gaithersburg)
- The rules ease restrictions restrictions somewhat but don't compromise public safety
- Helps create affordable housing at a better value

Source: http://www.dhcd.state.md.us/Website/programs/smartcodes/smartcodes.aspx

2. Other Rehabilitation Codes

- California's State Historical Building Code
  http://www.dsa.dgs.ca.gov/StateHistoricalBuildingSafetyBoard/default.htm
- Rhode Island Rehabilitation Code
  http://www.rbfc.state.ri.us/
- Kansas City Building and Rehabilitation Code
  http://www.kcmo.org/codes.nsf/web/kcbc?opendocument
- Many others…

3. Uniform Fire Code (UFC)

"One critical component of a community's transportation system is effective emergency response. In some instances, fire, ambulance, or police officials have expressed concerns with smart growth neighborhood street designs because of concerns about access." (Source: Getting to Smart Growth II)

- Narrower streets
- Smaller intersections
- Shorter curve radii
- Fire equipments get larger and larger

- UFC: One of several model codes, created by Western Fire Chiefs Association, *NOT* a national standard
- Adopted by California, Oregon, some other states
- Requires 20' clear street width between parked cars

Source: Getting to Smart Growth II http://www.smartgrowth.org/pdf/gettosg2.pdf

3. Uniform Fire Code (UFC)

3. Uniform Fire Code (UFC)

Traditional Neighborhood Development Mission:
Improve Overall Life Safety

	Fire	Traffic
Fatalities	3,671	41,611
Injuries	21,875	3,236,000

Sources:
Traffic Safety Facts 1999, Overview, Publication No. DOT HS 809 092
Fire Loss in the United States During 1999, Michael J. Karter, Jr.

Southgate Neighborhood, Palo Alto

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Conventional
- 30-35 mph speeds comfortable
- Bare, stark, uninviting
- Survivable, but not fun

Traditional
- 20-25 mph speeds comfortable
- Green, sustainable, inviting
- Pleasant for walking, bicycling and driving

3. Uniform Fire Code (UFC) - Solutions

- 1997 Oregon law clarified authority to establish street standards
  - Local government street standards shall "supersede and prevail over any specifications and standards for roads and streets set forth in a uniform fire code adopted by the State Fire Marshal, a municipal fire department or a county firefighting agency."
  - Portland, other cities now allow safer streets
  - Leads to "Consensus Guidelines" book (pictured)

3. Uniform Fire Code (UFC) - Solutions

- North Carolina Traditional Neighborhood Street Guidelines (2000)
  - Supersedes the NCDOT standards in all TND neighborhoods
  - "A street should be no wider than the minimum width needed to accommodate the usual vehicular mix desired of that street"
  - "A high level of accessibility is offered to emergency vehicles by an interconnected TND network"

Source: http://www.doh.dot.state.nc.us/operations/tnd.pdf


Winston – Salem, NC


Regular Code

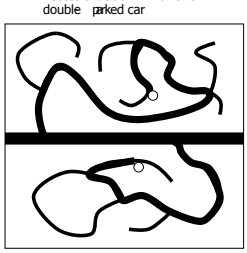
3. Uniform Fire Code (UFC) - Solutions

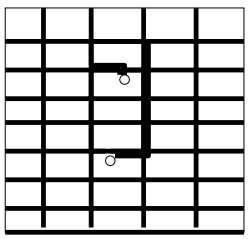
- State of Wisconsin TND Ordinance
  - legalizes "yield" streets

Source: http://www.wisc.edu/urpl/people/ohm/projects/tndord.pdf

3. Uniform Fire Code (UFC) - Solutions

- Sprawl:
  - One fire route
  - Long distances
  - Access shut down with one double parked car
- Smart Growth
  - Many fire routes
  - Better response time
  - Redundant system can't be blocked





3. Uniform Fire Code (UFC) - Solutions

- When planning for Smart Growth, consult emergency responders during the design phase instead of at the end of the process
- For instance, by consulting with emergency teams:
  - road designers can create midblock bulb-outs that provide adequate space for staging
  - parking can be moved further back from crucial intersections
  - shoulders and curbs can be designed for emergency equipment use
- If necessary, resolve arguments by taking equipment out for real-life tests or by driving emergency equipment through cones laid out to simulate the design of an intersection or street

Source: Getting to Smart Growth II http://www.smartgrowth.org/pdf/gettosg2.pdf

4. Clean Water Act – Section 303

- Requires states to set and then achieve Total Maximum Daily Load limits, limiting total pollution into each waterbody
- Problem: Resulting state and/or local requirements discourage infill
  - On-site storm water retention requirements even on downtown lots
  - Lot coverage limits (often 45% max.) favor sprawl on outlying farmland
  - River setbacks even in town centers
- Solution: Think regionally, act locally
  - Build vital, compact towns

Source: Belle Hall Study
http://www.doverkohl.com/project_graphic_pages_pfds/Belle%20Hall%20project%20page.pdf

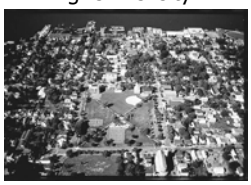
4. Water Quality and Smart Growth

Which is Better for Water Quality on a Watershed Basis?

Low Density

OR

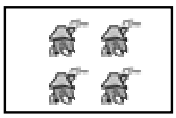
Higher Density



Reference: Department of Community and Economic Development

4. Water Quality and Smart Growth

EPA Research on Smart Growth & Water

Scenario A: 1 unit/acre	*Scenario B: 4 units/acre*	*Scenario C: 8 units/acre*
		
• **Impervious cover = 20%** • **Runoff/acre = 19,000 ft³/yr** • **Runoff/unit = 19,000 ft³/yr**	• **Impervious cover = 38%** • **Runoff/acre = 25,000 ft³/yr** • **Runoff/unit = 6,000 ft³/yr**	• **Impervious cover = 65%** • **Runoff/acre = 40,000 ft³/yr** • **Runoff/unit = 5,000 ft³/yr**

4. Water Quality and Smart Growth

But watershed managers are not dealing with 8 houses…

10,000 houses on 10,000 acres produce 187 million ft^3/yr stormwater runoff Site: 20% impervious Watershed: 20% impervious	10,000 houses on 2,500 acres produce 62 million ft^3/yr stormwater runoff Site: 38% impervious Watershed: 9.5% impervious	10,000 houses on 1,250 acres produce 49.5 million ft^3/yr stormwater runoff Site: : 65% impervious Watershed: 8.1% impervious

The lower density scenario creates more run-off and consumes 2/3 more land that the higher density scenario

Reference: Department of Community and Economic Development

5. Fair Housing Act & Other Disability Law

- If a building with 4+ units has an elevator and opened after 3/13/91, then ALL units and ALL public and common areas must be wheelchair accessible
- Conflict: Accessibility vs. courtyard housing and other compact housing
- Courtyard housing: For privacy & cost-savings, 2nd floor units have private entrances via stair – no outdoor hallway past your windows
- If ALL housing must be wheelchair accessible, only ranch houses & corridor-loaded apts. can be built

Reference:http://www.hud.gov/offices/fheo/FHLaws/yourrights.cfm

5. Fair Housing Act & Other Disability Law

Partial Solution:

Redesign projects as multiple separate buildings.

Courtyard housing pictured – 10 townhouses in four buildings

5. Fair Housing Act & Other Disability Law

- Fair Housing Act - If a building with 4+ units has no elevator and opened after 3/13/91, then ALL ground floor units must be wheelchair accessible
- Conflict: Wheelchair Accessibility vs. ground-floor privacy
- Partial solution: Vermillion in Huntersville NC: alleys graded to create no-step entries

Privacy in front, zero-step entry at rear

6. State Schools Standards

6. State Schools Standards

Barriers to Smart Growth Schools

1. Acreage Standards
2. State Funding Biases
3. Conflicts Between Community Planning and School Planning
4. Building Codes

Reference: National Trust for Historic Preservation, Why Johnny Can't , Walk to School, 2002. http://www.nationaltrust.org/issues/schoolsRpt.pdf

6. State Schools Standards

Barriers to Smart Growth Schools

1. Acreage Standards

(Recommended by Council of Educational Facility Planners International (CEFPI))

- Elementary School: At least 10 acres of land plus one acre for every 100 students
- Middle School: At least 20 acres of land plus one acre for every 100 students
- High School: At least 30 acres of land plus one acre for every 100 students

School children are unable to walk or bike to school as schools are located in outlying areas to comply with acreage standards.

6. State Schools Standards

Barriers to Smart Growth Schools

2. State Funding Biases

- State reimbursement policies can favor building new schools over upgrading existing schools
- "Two-thirds rule:" If the cost of renovating an older school exceeds the two-thirds of the cost of a new school, the school district should build a new school if the district wants to receive financial assistance from the state.
- The Two-thirds rule is arbitrary, if all new construction costs are factored into the cost analysis, renovation projects may meet the rule more easily.

6. State Schools Standards

Barriers to Smart Growth Schools

3. Conflicts between Community Planning and School Planning

- School districts may choose to ignore community zoning, planning and other growth management laws
- Construction of new schools in outlying areas can alter a community's future growth patterns, paving the way for residential sprawl.

6. State Schools Standards

Barriers to Smart Growth Schools

4. Building Codes

- Architects specializing in renovation can retrofit older schools to provide a level of life safety and ADA compliance.
- However, if architects overestimate retrofitting costs, the school district will choose to build a new school even though renovation may be cheaper.
- School districts and school renovation advocates should hire consultants experienced in renovation and code compliance to assist in cost estimates.

6. State Schools Standards

Solutions to State School Standards

- Eliminate acreage standards.
- Encourage State laws that provide funding for renovations and good maintenance of existing schools.
- Establish lines of communication between land use, transportation and school planning offices.
- Recognize that multiple story school buildings, wooden frame buildings and existing buildings can be brought up to safety and ADA codes.
- Promote smaller schools. The Gates Foundation has funded 1457 new small high schools.

7. Congestion Management Systems

- California approved a 9c gas tax increase in June 1990:
  - introduced transportation blueprint for more flexible and effective transportation planning and programming
  - required urbanized counties of 50,000+ to develop Congestion Management Programs (CMPs) to identify and fund "comprehensive strategies needed to develop appropriate responses to transportation needs" (32/58 counties)
- Federal requirement for CMSs under ISTEA (1991):
  - aim to "provide for effective management of new and existing facilities through the use of travel demand reduction and operational management strategies"
  - include methods to monitor/evaluate system performance, identify alternative strategies to alleviate congestion/enhance mobility, assess/implement cost-effective actions, and evaluate effectiveness

Reference: http://ntl.bts.gov/DOCS/153IAW.html

CMS Requirements

- Designate roadways e.g. arterial, highway (vehicle use)
- Adopt traffic LOS standards no lower than LOS E or current (if worse than LOS E)
- Establish standards for transit frequency, routing and operator coordination
- Adopt and implement local ordinances for trip reduction and travel demand
- Set up program to analyze transportation impacts of local land use decisions
- Develop 7-year capital improvement program to maintain or improve traffic LOS and transit performance

Reference: http://www.fhwa.dot.gov/resourcecenter/teams/planning/cms.cfm

CMP Obstacles to Smart Growth

- Focuses on short range and congestion management
- Requires local agency prepare a "deficiency plan" for locations that fall below the adopted LOS standard
  - Smart growth housing or mass transit projects with any discernable traffic impacts in congested main streets
  - Plans usually include costly intersection enhancement/road widening
- Employs traditional LOS analysis methodology which:
  - Uses ITE method & studies based on a suburban model
  - Does not consider policies to effect mode shift
  - Does not consider regional benefits of infill and reduced car use
  - Have thresholds set too low for a smart growth context
- Forces development to areas with no major traffic impacts e.g. greenfield sites far from city and town centers

Reference: http://www.abag.ca.gov/planning/smartgrowth/technical%20sessions/1/Session%20Materials/PolicyCapsule.pdf

Overcoming CMP Obstacles

- California's SB1636 (Figueroa, signed 2002) "infill opportunity zones" law for counties of 400,000+
  - –Designates infill opportunity zones which are zoned for compact residential or mixed-use within 1/3 mile of a transit stop with frequent service
  - –These zones can be declared exempt from LOS traffic standards specified in State Congestion Management Act
  - –Cities can either employ alternative CMP LOS standards or approve a list of flexible LOS mitigation options that would enhance walkability and transit service

8. Zoning & Subdivision Codes: Design

- Conventional zoning's intent:
  - – limit height & density
  - – segregate uses
  - – require setbacks
  - – provide ample free parking
- Starting to be addressed well in form-based codes
- Solution: To provide assurance to developers and reduce risk:
  - – **Codes must allow transit-oriented development AS OF RIGHT**

8. Zoning Code: Parking Requirements

- Continued over-reliance on ITE *Parking Generation Manual*. Use this only for isolated, auto-oriented uses.
- Requirements often set **50-100% higher** than average demand seen in *Parking Generation* manual.
- Strategies
  - – Adjust based upon local conditions
  - – Incentivize parking strategies to reduce traffic and improve design
  - – Abolish minimums
  - – Establish maximums
- **Examples…**

Palo Alto, CA – parking requirements adopted in 1951

Minimum Parking Requirements

Purpose

- Palo Alto: *"to alleviate traffic congestion"?*
- In reality, minimum parking requirements *prevent spill-over parking problems*

Tailored Parking: Palo Alto

- Existing Requirement: 4.0 spaces per 1000 s.f.
- Need 5,744 spaces above observed demand to bring all downtown to 4.0 standard. At $51K/space, $293 million
- Downtown, Observed peak:1.9 spaces per 1000 s.f.
- Palo Alto updating its zoning code to vary parking requirements by
  - Density
  - Transit Access
  - Income
  - Household size

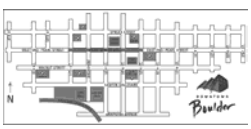
Tailored Parking

- Mountain View and San Jose – parking reductions for TOD
- San Rafael – reduced parking requirements downtown
- Menlo Park and Milpitas – reduced requirements for high-density housing

Incentivized Parking

- Strategies to reduce parking demand:
  - Pricing
  - Unbundling
  - Car-Sharing
  - Other demand management (e.g. EcoPasses)
- Strategies to reduce parking impacts:
  - Shared parking
  - Structured parking
  - Stacked parking/parking lifts
  - Design requirements (e.g. wrap parking in active uses)

Incentivized Parking: Boulder



- Downtown developers discouraged from building parking
- Instead, they pay a parking and transportation in lieu fee
- Fees used to build well managed public garages – and fund transit, bicycle and pedestrian improvements
- Program managed by downtown Business Improvement District, CAGID

Constrain Parking Supply

- Overall principle: encourage less auto-oriented development
- Promotes self-selection – residents with fewer cars live close to transit
- Different approaches:
  - Parking maximums
  - Requirements/incentives for demand management
- Needs to be complemented with Residential Permit Parking or other strategies to stop overspill

Parking Maximums

- Promote alternatives to the private automobile
- Can tackle congestion if related to roadway capacity or mode shift goals
- Maximize land area for other uses
- Appropriate in areas with strong real estate market where priority is to minimize auto dependence
- Examples: downtown San Francisco, Portland, Cambridge

Parking: High & Low Traffic Strategies

	Typical Minimum Requirements	'Tailored' Minimum Requirements	Abolish Minimum Requirements	Set Maximum Requirements
Typical Tools	• Requirement > Average Demand • Hide all parking costs	Adjust for: • Density • Transit • Mixed Use • 'Park Once' District • On-street spaces • …etc.	• Market decides • Garages funded by parking revenues • Manage on-street parking • Residential pkg permits allowed by vote	• Limit parking to road capacity • Manage on-street parking • Market rate fees encouraged/ required
Traffic	**High**	←	→	**Low**
Housing Costs	**High**	←	→	**Low**
Pollution	**High**	←	→	**Low**

9. Street Design Codes

- AASHTO *Green Book*: NOT a standard, fairly flexible
- But state DOT manuals often adopt largest dimensions in *Green Book*
- Major confusion between California Highway Design Manual and local street codes.
- Highway Design: Safe for high-speed rural roads where few pedestrians are present. Accommodates "driver error."
- Urban streets: Accommodating fast auto speeds creates danger for everyone.
- Arterial/Collector/Local framework – no place for main streets or boulevards

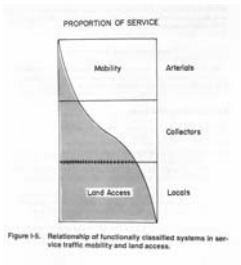


Figure I-5. Relationship of functionally classified systems in service traffic mobility and land access.

A Legal Highway

The Esplanade, Chico, CA: Safe, Beloved and Illegal

The Esplanade, Chico, CA: Safe, Beloved and Illegal

9. Street Design Codes - Solutions

- ITE "*Traditional Neighborhood Street Design Guidelines – A Recommended Practice"*
- ITE "*Traffic Calming: State of the Practice"* – its standards directly challenge/ contradict old practices
- Vermont – New flexible state standards invite departures from AASHTO, senior agency engineers transferred
- Maryland – dumped state standards, reverted to *Green Book*

Useful Articles: "From Highway to My Way"
http://www.its.berkeley.edu/techtransfer/resources/newsletter/01spring/myway.html
http://user.gru.net/domz/main.htm
http://www.citebc.ca/Nov97_Asphalt.html

9. Street Design Codes - Solutions

- *Context Sensitive Design Solutions for Major Urban Thoroughfares.* Congress for the New Urbanism, Institute for Transportation Engineers, Federal Highway Administration, US EPA
  - Due in March, 2006

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10. Street Typologies and Performance Measures

- Definitions buried in code language part of the problem, particularly "arterial," "collector," "local" suburban classifications that only describe the auto flow function of streets.
- Seattle's proposed new street typologies include:
  - Priority for each mode
  - Urban context
  - Physical form

10. Proposed Typologies

- Start with urban context:
  - Urban Center
  - Urban Village Center
  - Urban Village
  - Single-Family Residential Neighborhood
  - Manufacturing/ Industrial Centers

10. Proposed Typologies

- Add Transit layer
  - 1st priority transit network
  - 2nd priority transit network
  - 3rd priority transit network

10. Proposed Typologies

- Add automobile layer:
  - 1st priority auto network: freeways and major arterials
  - 2nd priority auto network: arterials and collectors
  - 3rd priority auto network: "local" streets

10. Proposed Typologies

- Add bicycle layer
  - 1st priority bike network
  - 2nd priority bike network

10. Proposed Typologies

- Can also add:
  - Pedestrians
  - Freight
  - Environmental priorities
  - Special place types
- Result: Shorthand classification code that addresses both the context and full function of every street:
  - Broadway: $C_{UC}T_2A_2P_1$
  - Aurora: $C_{UV}T_2A_1$

Classification	Shorthand
CONTEXT	
Urban Core and Urban Center main streets	C_{UC}
Commercial streets in Hub and Residential Urban villages	C_{CS}
Hub urban villages and residential urban villages	C_{UV}
Single family residential areas	C_{SF}
Manufacturing/ Industrial Centers	C_{MI}
TRANSIT ROLE	
UVTN (Primary Transit)	T_1
Secondary Transit	T_2
Tertiary Transit	T_3
AUTO	
Primary Auto	A_1
Secondary Auto	A_2
Tertiary Auto	A_3
BICYCLE	
Primary Bicycle	B_1
Secondary Bicycle	B_2
PEDESTRIAN	
Primary Pedestrian	P_1
Secondary Pedestrian	P_2
TRUCK	
Primary Truck ('Heavy Vehicle')	H_1

10. Seattle Proposed Performance Measures

- Appropriate typologies allow for performance measures that balance all modes. *Quality* of Service rather than *Level* of Service.

MODE / FUNCTION	CONTEXT ZONE	Minimum QOS	Desirable QOS	Preferred QOS
Transit		Transit QOS	Transit QOS	Transit QOS
UVTN	All	≥+1	≥+1.5	≥+2
Secondary transit	Urban Center Village	≥-1	≥-0.5	≥+1
	Urban Village Commercial Streets	≥-1	≥-0.5	≥+1
	Hub/Residential Urban Villages	≥+0.5	≥+1	≥+1
	Single family residential areas	≥+0.5	≥+1	≥+1
Other transit	All	-	≥-1	≥-0.5
Auto		Vehicular V:C	Vehicular V:C	Vehicular V:C
Primary Auto	Urban Center Village	<1.2	<0.8	>0.6
	Urban Village Commercial Streets	<1.2	<1.0	>0.6
	Hub/Residential Urban Villages	<1.0	<0.8	>0.6
	Single family residential areas	<1.0	<0.6	<0.4
Secondary Auto	Urban Center Village	<1.2	<0.8	>0.6
	Urban Village Commercial Streets	<1.2	<1.0	>0.6
	Hub/Residential Urban Villages	<1.2	<0.8	>0.6
	Single family residential areas	<1.2	<0.6	<0.4
Tertiary Auto	All	-	<0.9	<0.8
Bicycle		Bicycle QOS	Bicycle QOS	Bicycle QOS
Primary Bicycle	Urban Center Village	D	B	A
	Urban Village Commercial Streets	D	C	A
	Hub/Residential Urban Villages	C	B	A
	Single family residential areas	B	A	A
Secondary Bicycle	Urban Center Village	D	B	A
	Urban Village Commercial Streets	D	D	A
	Hub/Residential Urban Villages	D	B	A
	Single family residential areas	D	B	A
Pedestrian		Pedestrian QOS	Pedestrian QOS	Pedestrian QOS
Primary Pedestrian	Urban Center Village	B	A	A
	Urban Village Commercial Streets	B	A	A
	Hub/Residential Urban Villages	C	A	A
	Single family residential areas	D	B	A
Secondary Pedestrian	Urban Center Village	C	B	A
	Urban Village Commercial Streets	C	B	A
	Hub/Residential Urban Villages	C	B	A
	Single family residential areas	D	B	A

Application

- Broadway $C_{UC}T_2A_2P_1$

FUNCTION	CONTEXT ZONE	Minimum	Desirable	Preferred	Measured
Transit					-0.8
Secondary	Urban Center Village	≥-1	≥-0.5	≥+1	
Auto					0.75
Secondary	Urban Center Village	<1.2	<0.8	>0.6	
Pedestrian					B
Primary	Urban Center Village	B	A	A	

Application

- Broadway $C_{UC}T_2A_2P_1$

FUNCTION	CONTEXT ZONE	Minimum	Desirable	Preferred	Measured
Transit					**-0.5**
Secondary	Urban Center Village	≥-1	≥-0.5	≥+1	
Auto					**0.8**
Secondary	Urban Center Village	<1.2	<0.8	>0.6	
Pedestrian					**A**
Primary	Urban Center Village	B	A	A	

- Result: OK to slightly degrade auto QOS to improve transit and pedestrian QOS. Signal prioritization OK, but not dedicated transit lane.
- Goal: Bring all measures into *balance*

11. Impact Fees

- Powerful tool for encouraging good development, discouraging bad development and raising funds for Smart Growth improvements
- Problems with some fees:
  - Raise money only for roadway widening and traffic "improvements"
  - Base impact calculation on square footage, not auto trips. No discount for good location or TDM

11. Impact Fees: Improvements for all Modes

Jurisdiction	% for Alternative Modes	Comment / Usage
Tahoe Regional Planning Agency	100%*	*Used for transit or air quality projects other than development mitigation
San Francisco	100%	Transit impact fee used for both capital improvements and operating costs
Santa Cruz County	50%	Allocated among ped amenities (78%), existing bike facilities (10%), new Class II bike facilities (6%), bicycle signage (4%), and bus pullouts (2%)
Sacramento County	25-30%	Used for buses, P& R lots and LRT station. 7 Districts with fee schedules
City of Long Beach	27%	Allocated to transit (23%) and a Parking Management Program (4%)
Redwood City	25%	Used for bicycle paths, shuttle services, TDM coordinator, and other miscellaneous alternative mode improvements
City of San Luis Obispo	20%	Allocated to bicycle facilities (75%) and transit capital improvements (25%)
Coachella Valley Association of Governments	10%	Used for bus replacement and additional transit service, commuter buses, carpools/vanpools, and discount senior/disabled fares.
South Placer Regional Transportation Authority	6%	Used for rail and bus transit
City of Dublin	6%	Allocated among Class I bikeways (19%), transit (57.5%), P&R (23.5%)
City of Fillmore (Ventura County)	5%	Used for Class I bikeways
San Joaquin County	5%	Projects needed accommodate growth at Comprehensive Plan buildout
City of Bakersfield	4%	Used for transit capital improvements
City of Petaluma	3%	9 alternative modes projects include Class II bike lanes, Class I trails, pedestrian projects, a P&R lot and a transit center
City of Vacaville	2%	Used for Class I bike trails along 3 creeks
City of Woodland (Yolo County)	2%	Used for new bicycle facilities
Monterey County	1%	Used to maintain Class II bikelanes along arterials
City of San Diego	N/A	Fees and use vary based on 49 Community Plans. Used for bike and pedestrian facilities and park and ride lots
City of Irvine	N/A	Uses $3 million of fee revenue for alternative transportation
Walnut Creek	N/A	A variable percentage is apportioned to alternative modes
Santa Barbara County Association of Governments	N/A	Detail unavailable at time of writing

Source: Traffic Impact Fee Survey, Santa Barbara County Association of Governments, May 1997, and follow-up interviews

San Francisco's Transit Impact Development Fee

- Was $5 per s.f. of office
- Enacted 1981
- Withstood legal challenges
- Funds capital and operating – Primarily Transit

SF's Revised Impact Fee

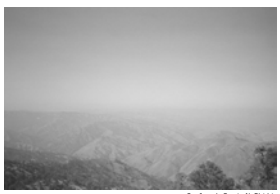
- From downtown only to citywide
- From office only to all non-residential uses
- From peak-hour service only to anytime
- From service increases only to maintaining or improving service
- From $5/s.f. to $10, indexed to inflation

Charleston-Arastradero Corridor Impact Fee

- New development along the Palo Alto, CA, Charleston-Arastradero Corridor over the next ten years is expected to significantly increase pedestrian and bicycle use.
- The City of Palo Alto has identified a set of pedestrian and bicycle safety improvements for the Corridor, and adopted a development fee to appropriately allocate the costs of improvements to new development to the extent that costs will be incurred to mitigate the impacts of that development.
- A fee level $930 per new residential unit and $.27 per square foot of new non-residential development is estimated to raise up to $819,000.
- The fee is:
  - Restricted to capital improvements associated with the Charleston Arastradero Corridor Plan.
  - Limited to a 1/2-mile radius of the Corridor
  - Refunded if they are not used for their intended purpose

San Joaquin County Impact Fee

- Based on forecast NOx and PM10 emissions
- Requires developers to reduce NOx emissions by 33% and PM10 by 50% or pay fee for off-site mitigation.
- Grants substantial reductions for density, transit accessibility, pedestrian connectivity, as calculated by URBEMIS – www.urbemis.com
- Baseline fee of ~$780 per home doubles in later years.
- See http://www.valleyair.org/Recent_news/News_Clippings/Rls%20ISR%20approved%2012-15-05.pdf
- or http://www.valleyair.org/rules/currntrules/Rule%209510%201205.pdf



San Joaquin County Air District

12. Environmental Compliance

What does a "mitigation measure" for environmental impacts look like?

12. Environmental Compliance

- In NEPA, more parking, wider roads and less density always result in better environmental compliance!
- Why is parking availability considered an "environmental impact" of statewide concern?
- Regional impacts are not considered, so greenfield sprawl easier to do than infill
- Obsessive focus on Auto LOS – seconds of delay for cars – with little interest in other modes or in person delay or person capacity.
- Forces "worst case scenario" analysis, often with same auto trip rates for TOD as for sprawl.
- Induced trips rarely considered – roadway widenings "improve" air quality!
- Minor bike lane projects often require expensive, time-consuming environmental review – costing more than the project itself.

12. Environmental Compliance – California Approach

- California Resources Agency State CEQA Guidelines allow local jurisdictions to set own screening criteria, significance thresholds and impact methodologies.
- All cities can:
  - Set multimodal standards
  - Examine *person* delay rather than *vehicle* delay
  - Say they don't care about congestion in certain areas (like downtown Livermore) or citywide, or vary significance thresholds
  - Identify overriding considerations for when it's OK to have poor LOS

12. Environmental Compliance: California Approach

- California Assembly Bill 1387: Allows downtown housing projects without analyzing traffic impacts if they comply with city's zoning and growth plans.
- California State Bill 832: Exempts projects <10 acres, <300 homes in cities with >200,000 residents from CEQA.
- California State Bill 948: Allows home builders to prepare a short-form environmental impact report rather than expensive full-blown report for residential projects.
- Association of Bay Area Governments starting to address: http://www.abag.ca.gov/planning/smartgrowth/sessions.html

12. Environmental Compliance: SF Approach

- Identify all projected land use changes for next 20 years
- Identify transportation improvements necessary to accommodate that growth
- Create impact fee based primarily upon auto trip generation
- Eliminate all transportation analysis from CEQA process
- Exempt "reversible" projects like bike lane striping.
- See http://www.sfcta.org/SARs.htm

12. Environmental Compliance: Oregon Approach

- Each of Oregon's 241 cities is surrounded by an "urban growth boundary" or "UGB."
- Drawing an urban growth boundary is a joint effort. The city, adjoining county, special districts and citizens draw a UGB. The state's Land Conservation and Development Commission (LCDC) reviews it to make sure it is consistent with Goal 14.
- Goal 14 is the statewide planning goal adopted by LCDC on December 27, 1974. It requires each city to adopt a UGB, "in a cooperative process between a city and the county or counties that surround it." The goal lists seven "factors" that must be considered in drawing the UGB.
- Oregon's 15 years of experience have shown urban growth boundaries to be highly effective. UGBs have helped to reduce costs of public services and facilities, saved farmland from urban sprawl and have led to better coordination of city and county land-use planning.

Reference: Department of Land Conservation and Development (DLCD), http://darkwing.uoregon.edu/~pppm/landuse/UGB.html

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