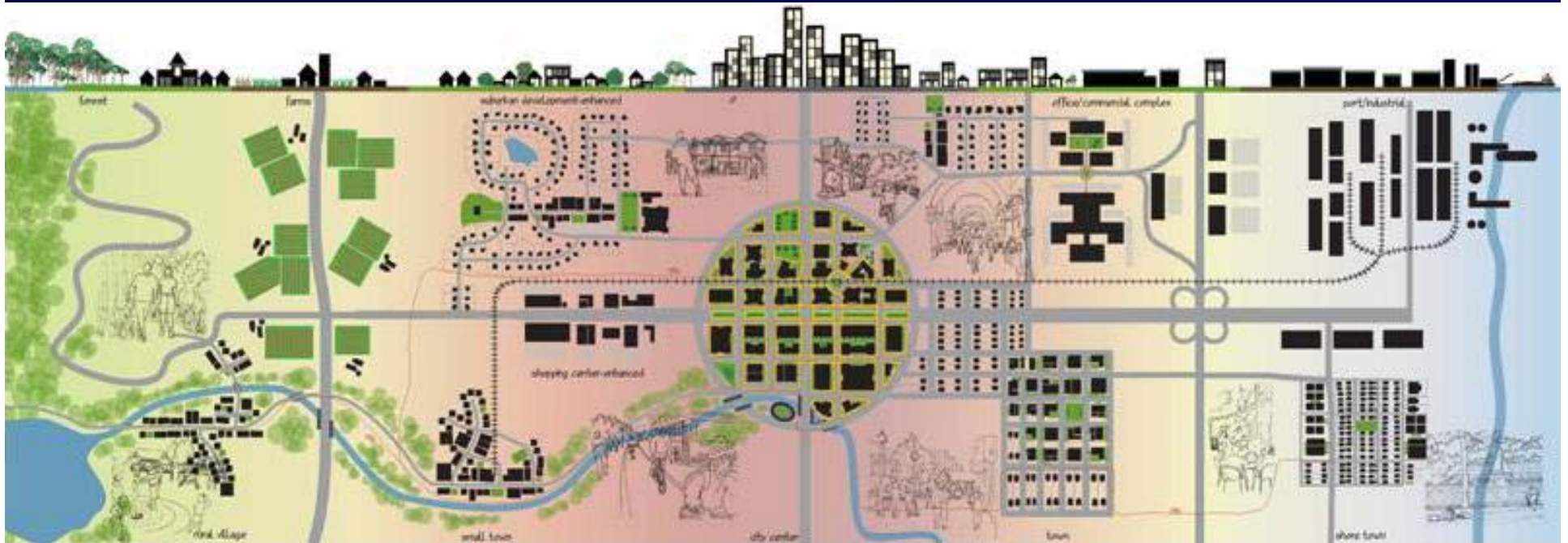


Mobility & Community Form

A Guide to Linking the
Circulation and Land Use Elements
of the Municipal Master Plan



**The
Timeless Way of
Building**



Christopher Alexander

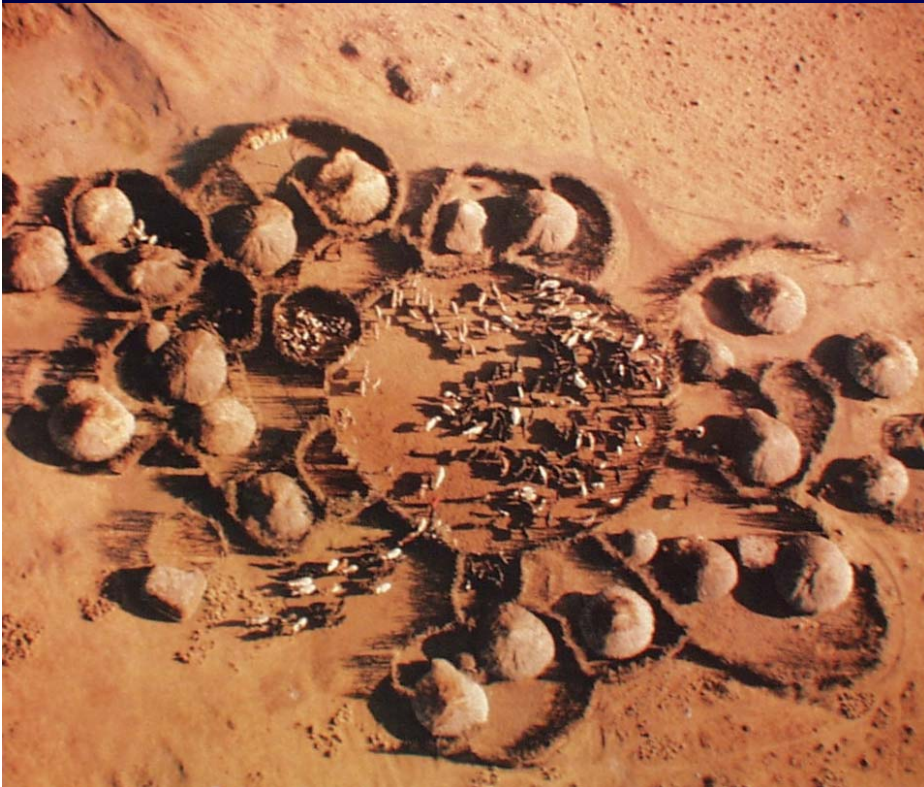
A Pattern Language

Towns · Buildings · Construction



Christopher Alexander
Sara Ishikawa · Murray Silverstein
WITH
Max Jacobson · Ingrid Fiksdahl-King
Shlomo Angel

**“A building or town is given its character,
essentially, by those events which keep on
happening there most often.” *Christopher Alexander***

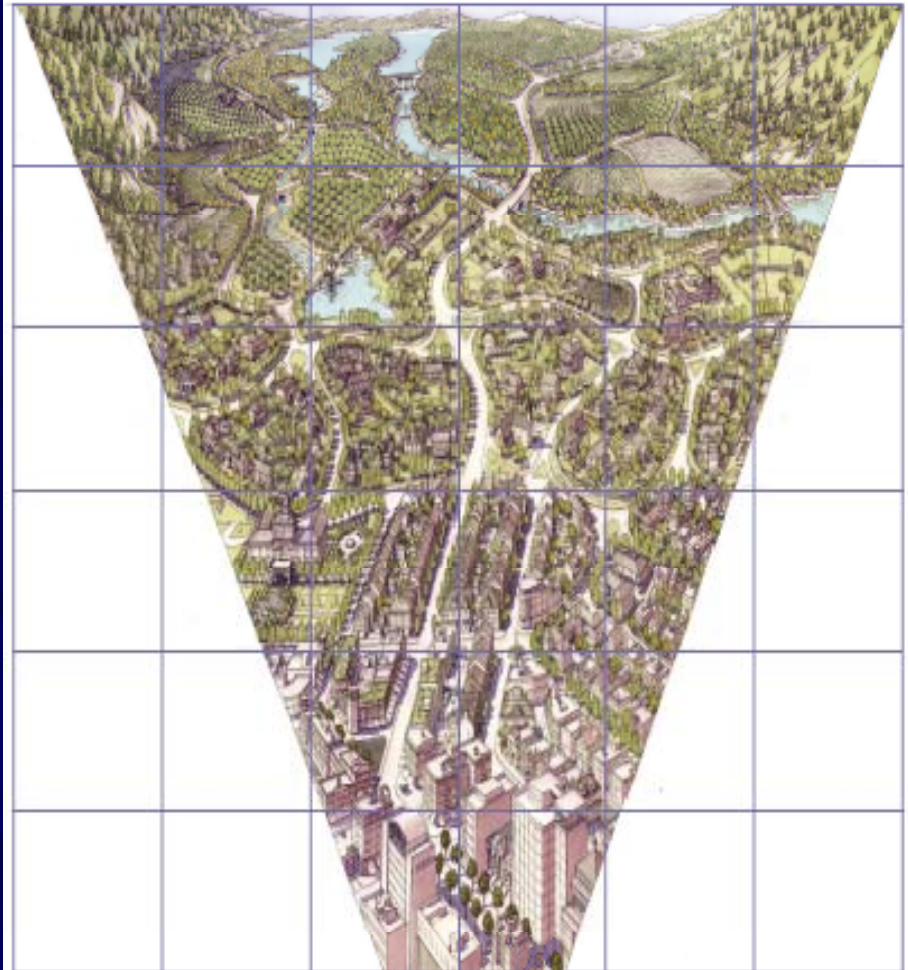


**“A building or town is given its character,
essentially, by those events which keep on
happening there most often.” *Christopher Alexander***



SMARTCODE

A COMPREHENSIVE FORM-BASED PLANNING ORDINANCE



There is a quality even meaner than outright ugliness or disorder, and this meaner quality is the dishonest mask of pretended order, achieved by ignoring or suppressing the real order that is struggling to exist and to be served.”

Jane Jacobs



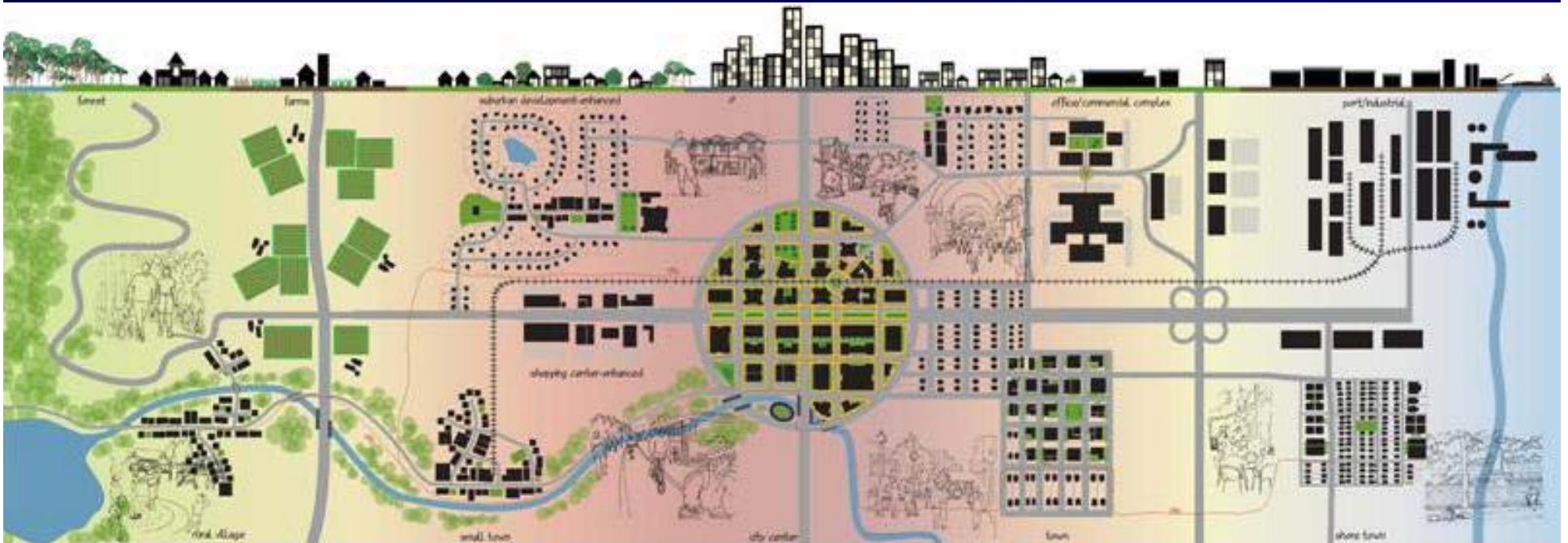
There is a quality even meaner than outright ugliness or disorder, and this meaner quality is the dishonest mask of pretended order, achieved by ignoring or suppressing the real order that is struggling to exist and to be served.”



IF: Form follows Function

AND: Function is derived from Activity Patterns

THEN: Activity Patterns determine Form



Rural

Low Density

Town

Dense Suburb

City

Center



Corridor

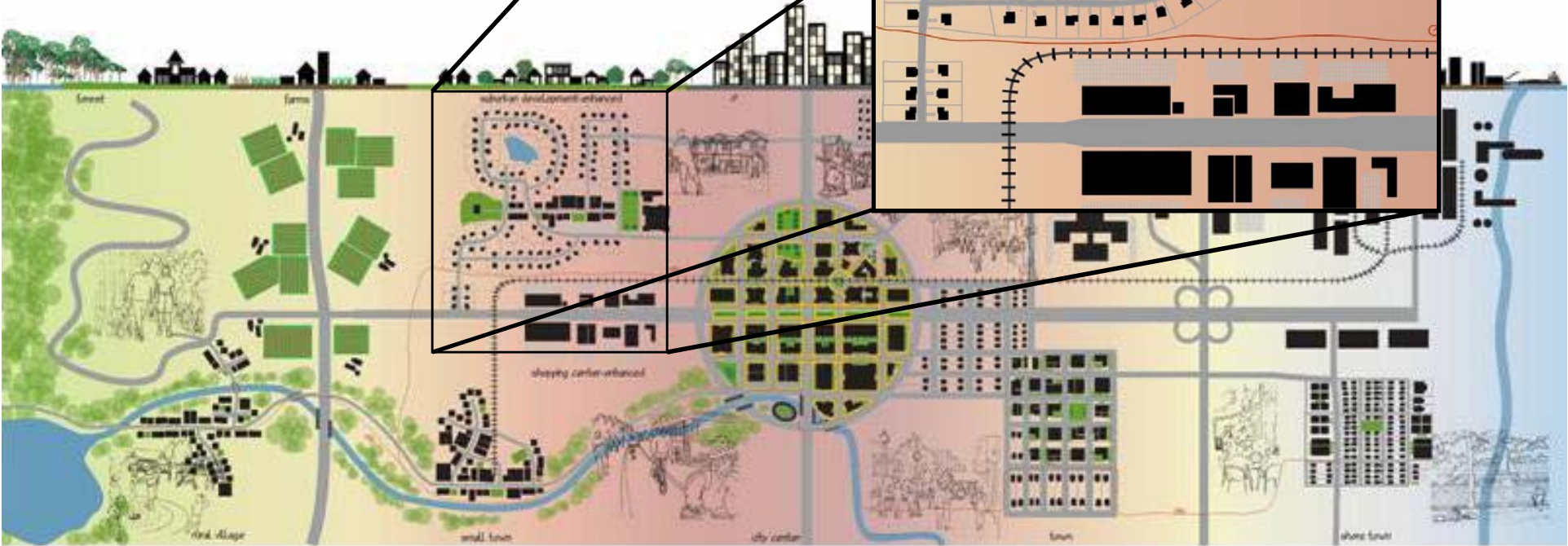
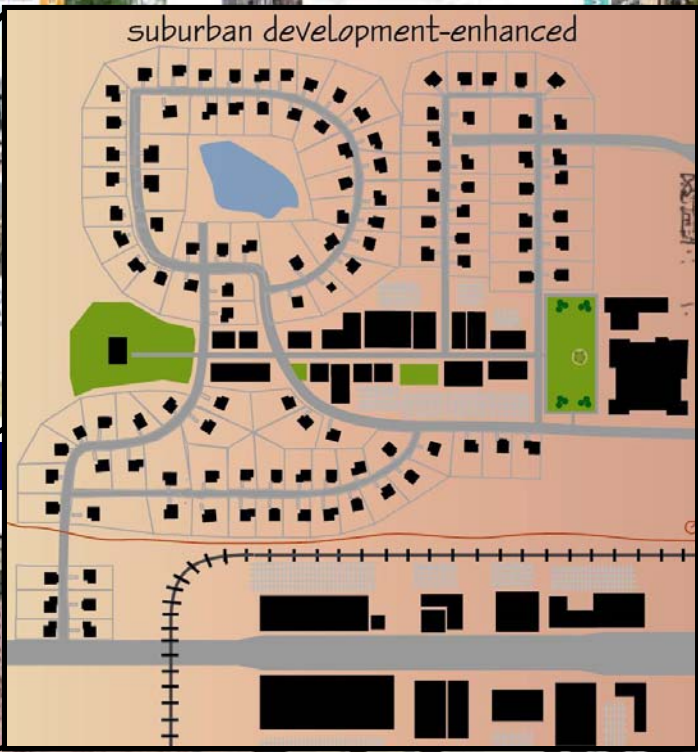


Waterfront



Pattern Groups:

- Circulation
- Shopping Streets
- Parking
- Transit Stops
- Neighborhoods
- Public Places
- Natural Environment



Circulation Principles:

Connectivity

Create interconnected street networks with frequently spaced intersections and interconnected pedestrian pathways and bicycle networks.





9°17.63' N 121°56'54.78" W elev 135 ft

Streaming ||||| 100%

Eye alt 1774 f

Circulation Principles:

Multi-Use Streets

Design “complete streets” and intersections that serve pedestrians, persons with disabilities, bicyclists, transit vehicles, and trucks as well as motorists.





How do we get there?



Community Visioning

How would we like to live
in the future?



Community Visioning

What activity patterns should be encouraged in our community?



Community Visioning

What community forms & features
Will help support those activities?



Community Visioning

How should our transportation system be formed to support desired activities and community form?



Implementing The Vision

- “Mobility and Community Form”
Element of the Master Plan
- Form-Based Development Codes
- Infrastructure Planning
- Regional Context
- Working With State Partners

Implementing The Vision

Replace the traditional Circulation and Land Use Elements of the Master Plan with a combined “*Mobility and Community Form Element*”.



What is an MCF?

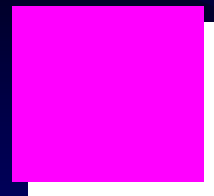
Conventional Land Use Element



Use

Management

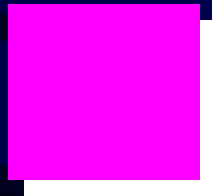
Form



Conventional Circulation Element

What is an MCFE?

Mobility & Community Form Element



Use



Management



Form

What is an MCF?

FRONTAGE KEY for BUILDINGS

The frontage is the interface between the street and the building.

The frontage is the semi-private space between the street edge (property line) and the front wall of a building. The City regulates the form, size and quality of frontages by specifying a range of common frontage types for each property. This Frontage Code can be used to find the range of Frontage Types allowed for new development on any given property. Frontage Types are assigned independently to Streetscape Types and Land Use Types, which are mapped for each property and each property line. This allows for offering arrangements of the three types in different parts of the city. To use this code, find your property on the Streetscape and Land Use Plans, and then follow the 3 steps below.

STREETSCAPE

PUBLIC REALM TRANSECT

Plan Colors	Entry Boulevards	Clear River Lanes	Big Box Lanes	Gateway Streets	Downtown District Streets	Civic Core Plaza Drives	Main Street Ways	Main Street
step 1								
Using the Map and this table, find the Frontages allowed for the Streetscape that your property is in.								

LAND USE

PRIVATE REALM TRANSECT

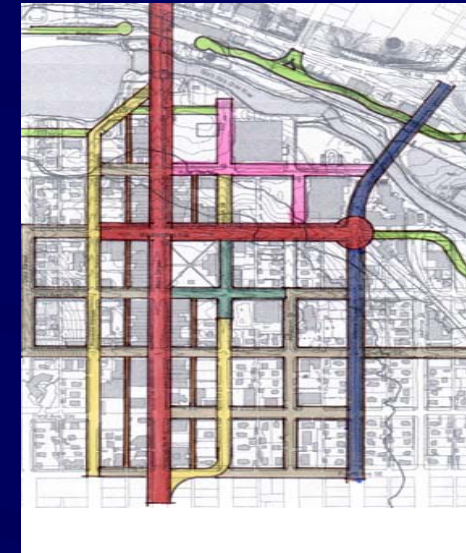
Plan Colors	Main Street Commercial	General Commercial	Transitional Commercial	High Density Residential	Medium Density Residential	Industrial	Parking	Civic/Institutional	Park/Open Space
step 2									
Find your Land Use Type using the Land Use Map, then use this table to find allowed Frontage Types.									

Entry (Address) Spacing	36'-7"	33'-7"	30'-7"	27'-7"	24'-7"	21'-4"	18'-4"	15'-4"
step 3								
Find the range of Frontage Type(s) allowed for your property by cross-referencing the common Frontages allowed by both Step 1 and Step 2. Then refer to Frontage Design Guidelines for specific requirements.								

15'-4"	15'-4"	15'-4"	15'-7 1/2"	15'-4"	15'-3 1/2"	n/a	per project	n/a	Height Limit

VERTICAL USE ZONES

low office studio	low office studio	low office studio	low office studio	low office studio	low office studio	low office studio	low office studio	low office studio	low office studio	low office studio	low office studio	low office studio	low office studio



What is an MCF?

TRANSPORTATION, LAND USE AND DESIGN

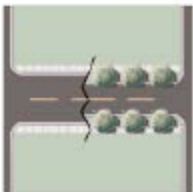
NARROWING THE STREET



Stripe Lanes



Parking



Rebuild Street



Bulbout

DEFLECTING THE VEHICLE PATH VERTICALLY



Speed Hump



Speed Table



Textured Crosswalk



Platform Intersection

DEFLECTING THE VEHICLE PATH HORIZONTALLY



Chicane



Modified Intersection



Knockdown



Roundabout

Traffic Calming

Given that reductions in vehicular speed do not necessarily dictate lower capacities, traffic-calming programs are becoming very commonplace as a means to re-create safe, slow neighborhood and commercial streets. Generally, the purpose of traffic calming is to control the speed of traffic while not restricting mobility.

Traffic calming is a comprehensive set of design elements that reinforce the appropriate driving behavior. The appropriate traffic calming techniques and roadway design speed are dependent on the context. Generally, traffic calming techniques generally fall into three categories: narrowing the street; deflecting the vehicle path vertically; and deflecting the vehicle path horizontally. In addition to these changes to the cartway, changes to the pedestrian realm and to the visual field can also slow drivers. 'Visual Friction', elements that create a sense of enclosure or elements that break up views, serve to slow drivers. Landscaping and building placement can be used in conjunction with, or independent of, physical changes to the cartway to slow travel speeds.

The purpose of traffic calming is to retrofit existing streets for slower traffic speeds. Where new streets are to be built, however, they can be planned for slow speeds at the outset. The general principles are the same as for traffic calming, with an emphasis on narrow street widths.

Access Management

Access management is one of the tools recommended in this handbook to manage transportation and land use. Access management is defined as a process that provides or manages access between development and surrounding roadways. As development occurs along highly traveled commercial roadways, certain policies and guidelines need to be in place to manage access within the corridor.

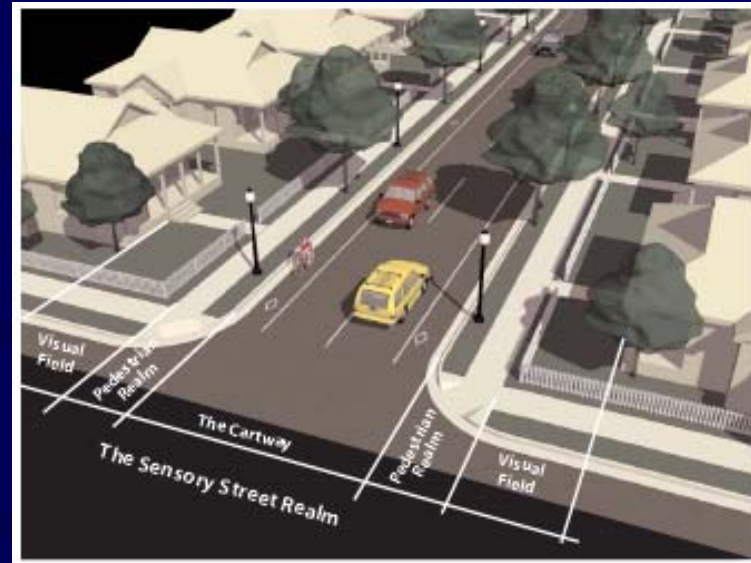
What is Traffic Calming?

Traffic calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users.

Source: Institute of Transportation Engineers

Landscaping	Median - wide	Median - narrow	R.O.W. Street Tree	Residential	Screening
Tree Form					
Tree Names	Zakia Yew Chinese Elm Kobura Tree Common Hackberry American Elm (improved varieties)	Greige Karyok Red Maple Pyramidal European Hornbeam Columnar Norway Maple Fastigiat American Linden	Fraserian Maple Norway Spruce Thornless Norway Spruce Norway Spruce Red Maple	European Linden Tulip Tree Thornless Red Oak Sugar Maple	White Spruce Colorado Spruce Norway Spruce Eastern Spruce Douglas Fir White Fir
Tree Form					
Tree Names	White Oak Linden Plane	Velvet Pillar Columnar Catalpa Columnar Margot Cherry Yoshino Cherry Tree Troy Oak Japanese Tree Lilac	Rugosa Scholai-Tree Columnar Tree Korean Endive Cotony Pear Himal Maple	Catalpa Linden Flowering Dogwood Kousa Dogwood Weeping Hawthorn	Servicberry Arbutus Weid Colorado Juniper Eastern Red Cedar Pyramidal Juniper

TOWN OF EAST GREENBUSH ROUTE 9 AND 20 CORRIDOR MASTER PLAN



Definitions

Sensory Street Realm: the space experienced by a motorist, bicyclist or pedestrian

Cartway Realm: the physical space devoted to vehicular and/or bicycle travel

Pedestrian Realm: area where pedestrian travel is a priority

Visual Field: private or public uses abutting the street

Elements of the Cartway Realm

Vehicular travel lanes
 Medians
 Bicycle Lanes
 Pavement type
 Parking
 Transit stops
 Traffic calming measures
 Pedestrian crossings
 Intersection design
 Gutter

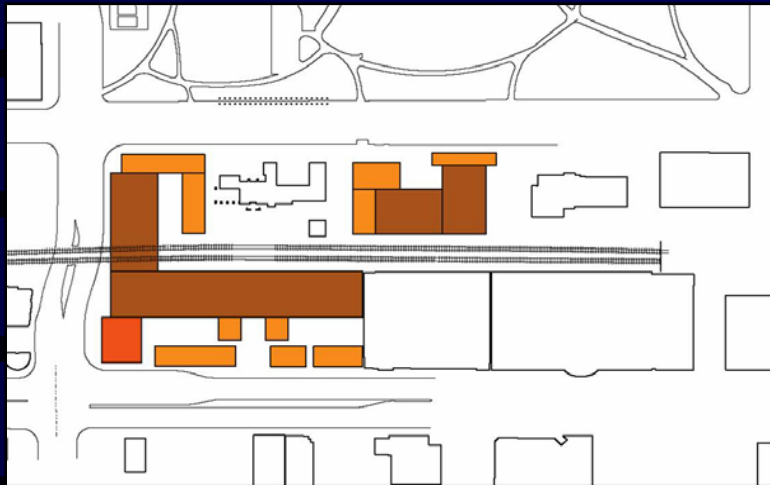
Elements of the Pedestrian Realm

Curb
 Landscaping
 Streetscaping
 Signs
 Lighting
 Sidewalks
 Transit amenities
 Utility
 Open drainage system

Elements of the Visual Field

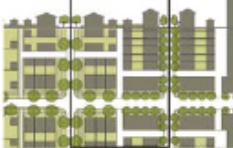
Pedestrian access
 Vehicular access
 Setbacks
 Building massing
 Bicycle facilities
 Open spaces
 Signage
 Landscaping

What is an MCF?



T5 URBAN CENTER ZONE

SMARTCODE SPECIFICATIONS



4.6 LOT OCCUPATION

a. Lot Area	1,500 sq ft avg.
b. Lot Coverage	80% max

4.8 BUILDING DISPOSITION

a. Edgeyard	prohibited
b. Sideyard	permitted
c. Rearyard	permitted
d. Courtyard	permitted

4.16 BUILDING HEIGHT

a. Principal Building	4 stories max, 2 min.
b. Outbuilding	2 stories max.

4.7 BUILDING SETBACK

a. Front	8 ft. min, 12 ft. max
b. Side	3 ft. min, 24 ft. max
c. Rear	3 ft.
d. Frontage of Setback	70% min.

OUTBUILDING SETBACK

a. Front	25 ft. min.
b. Side	9 ft. min.
c. Rear	3 ft. min.

4.5 PRIVATE FRONTAGE TYPE (see 22)

a. Concrete Lawn	prohibited
b. Pools & Fence	prohibited
c. Terrace or L.C.	permitted
d. Forecourt	permitted
e. Shop	permitted
f. Shopfront Signage	permitted
g. Gallery	permitted
h. Arcade	permitted

ENCROACHMENT

a. At Bldg. Frontage	6 ft. max (+12 ft. min. arched)
b. At Bldg. Side	3 ft. max.
b. At Bldg. Rear	0 ft.

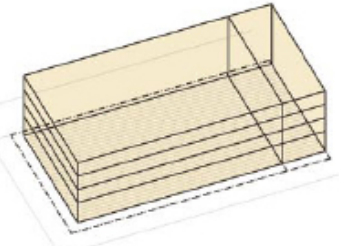
4.11 BUILDING FUNCTION (see 24.13.16)

a. Residential	open use
b. Lodging	open use
c. Office	open use
d. Retail	open use

GRAPHIC SPECIFICATIONS

BUILDING HEIGHT

- Building height shall be measured in number of stories, not including a raised basement, or inhabited attic. Each story shall not to exceed 14 ft. clear.

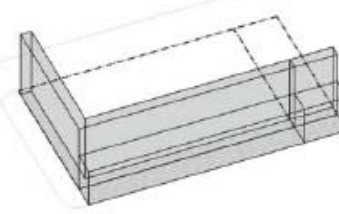


BUILDING PLACEMENT

- Buildings shall be placed within the areas hatched as shown in the diagram.
- Buildings shall have facades along frontage lines and elevations along lot lines.
- The facades and elevations of a building shall be distanced from the frontage and lot lines as shown in the diagram.

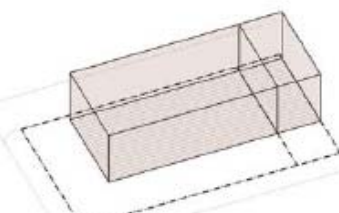
BUILDING ELEMENTS

- Scoops, bay windows, open porches and balconies may encroach into the setbacks as shown in the diagram.
- Arcades should overlap the sidewalk as shown in the diagram.



PARKING PLACEMENT

- Parking spaces shall be provided within the third layer as shown in the diagram.
- Covered parking shall be provided within the third layer as shown in the diagram.
- Trash containers shall remain within the third layer as shown in the diagram.



Implementing The Vision

Form-based codes replace traditional Euclidian (use based) zoning with massing and design criteria based on the function of the adjacent public spaces.



What is a Form-Based Code?

5.3.020 - Frontage Type Standards

A. Purpose. This Chapter identifies the frontage types allowed within the Specific Plan area, and for each type, provides a description, a statement as to the type's intent and design standards, to ensure that proposed development is consistent with the City's goals for building form, character, and quality within Downtown Newark.

B. Applicability. The provisions of this Chapter work in combination with the underlying Zone as identified on the Regulating Plan.

C. Allowable Frontage types by zone. Each Zone identifies the Frontage Types allowed and refers to this Chapter for the appropriate information.

D. Definitions and Standards

1. Frontyard / Porch - Frontyards are a common frontage associated with single family houses, where the facade is set back from the right of way with a front yard. An enclosing porch may also be appended to the facade. A fence or wall at the property line may be used to define the private space of the yard. The front yard may also be walled from the sidewalk, creating a small retaining wall at the property line with entry steps to the yard.

- (A) A great variety of porch designs are possible, but none shall be less than 6 feet deep (rear), 12 feet wide (rear) and 10 feet tall (clear).
- (B) Porches may be at grade or raised to transition into the building. In no case shall porches be raised more than 3 feet from the adjacent grade.
- (C) Fences defining the front yard shall not exceed 4 feet in height from the adjacent sidewalk.

2. Stoop / Dooryard - Stoops are elevated entry porches/terraces placed close to the facade 3 or 4 feet from the ground story entrance for the sidewalk, serving primarily for the ground and first floors. Dooryards are depressed entries to sub-basements, and are usually paved with a stoop. This type is suitable for ground floor residential uses at short setbacks. This type may be interspersed with the adjacent frontage type. A porch or stoop shall rise above the top of the adjacent sidewalk.

- (A) In no case shall the ground story be elevated more than 3 feet above the adjacent sidewalk.
- (B) Stoops must connect directly to the building entrance(s) and be at least 3 feet wide (perpendicular to or parallel with the adjacent sidewalk).
- (C) Sub-basements accessed by a dooryard shall not be more than 6 feet below the adjacent sidewalk.

3. Forecourt - Forecourts are a recessed court within a storefront, gallery or arcade frontage. The court is suitable for gardens, vehicular drop off, and utility of loading. This type should be used sparingly.

- (A) In no case shall the forecourt be deeper than 20 feet.
- (B) A 4-way fence or wall at the property line may be used to define the private space of the yard.
- (C) The court may also be raised from the sidewalk, creating a small retaining wall at the property line with entry steps to the court, but should not exceed 2' above the sidewalk grade.

4. Storefront - Storefronts are facades placed at or close to the right-of-way line, with the entrance at sidewalk grade. This type is conventional for retail frontage and is commonly equipped with cantilevered shed roof(s) or awning(s). Retail storefronts are also acceptable. The absence of a raised ground floor precludes residential use on the ground floor facing the street, although such use is appropriate above.

- (A) Storefronts shall be between 10 feet and 16 feet tall, as measured from the adjacent sidewalk.
- (B) The corresponding storefront(s) opening(s) along the primary frontage shall be at least 50% of the 1st floor wall area and not have opaque or reflective glazing.

5. Gallery - Galleries are storefronts with an attached colonnade, that projects over the sidewalk and encroaches into the public right of way. This frontage type is ideal for retail use but only when the sidewalk is fully absorbed within the colonnade so that a pedestrian cannot bypass it.

- (A) Galleries shall be no less than 10 feet wide clear in all directions.
- (B) Along primary frontages, the arcade shall correspond to storefront openings.
- (C) Primary frontage storefront openings shall be at least 50% of the 1st floor wall area and not have opaque or reflective glazing.

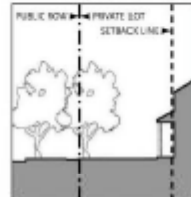
6. Arcade - Arcades are facades with an attached colonnade, that is covered by upper stories. This type is ideal for retail use, but only when the sidewalk is absorbed within the arcade so that a pedestrian cannot bypass it. For Building Code considerations, this frontage type cannot cover the public (i.e., as can the Gallery frontage type).

- (A) Arcades shall be no less than 10 feet wide clear in all directions.
- (B) Along primary frontages, the arcade shall correspond to storefront openings.
- (C) Primary frontage storefront openings shall be at least 50% of the 1st floor wall area and not have opaque or reflective glazing.

Frontyard / Porch



Frontyard / Porch : Diagram



Frontyard / Porch : Section Diagram



Frontyard / Porch : Illustrative Photo

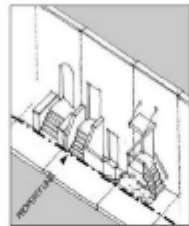


Frontyard / Porch : Illustrative Photo

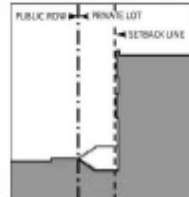


Frontyard / Porch : Illustrative Photo

Stoop / Dooryard



Stoop / Dooryard : Diagram



Stoop / Dooryard : Section Diagram



Stoop / Dooryard : Illustrative Photo



Stoop / Dooryard : Illustrative Photo

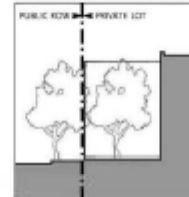


Stoop / Dooryard : Illustrative Photo

Forecourt



Forecourt : Diagram



Forecourt : Section Diagram



Forecourt : Illustrative Photo



Forecourt : Illustrative Photo

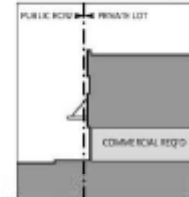


Forecourt : Illustrative Photo

Storefront



Storefront : Diagram



Storefront : Section Diagram



Storefront : Illustrative Photo

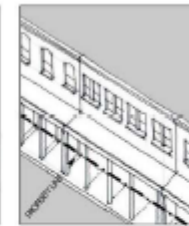


Storefront : Illustrative Photo

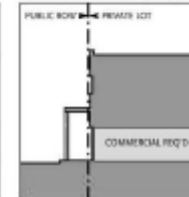


Storefront : Illustrative Photo

Gallery



Gallery : Diagram



Gallery : Section Diagram



Gallery : Illustrative Photo



Gallery : Illustrative Photo

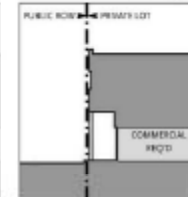


Gallery : Illustrative Photo

Arcade



Arcade : Diagram



Arcade : Section Diagram



Arcade : Illustrative Photo

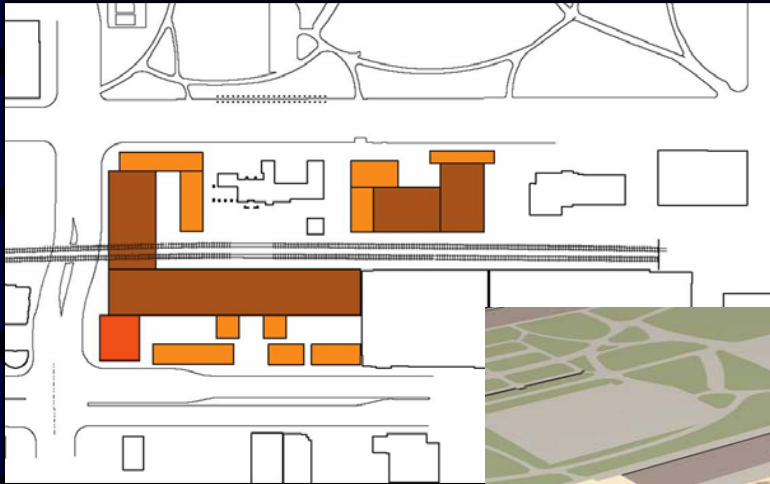


Arcade : Illustrative Photo



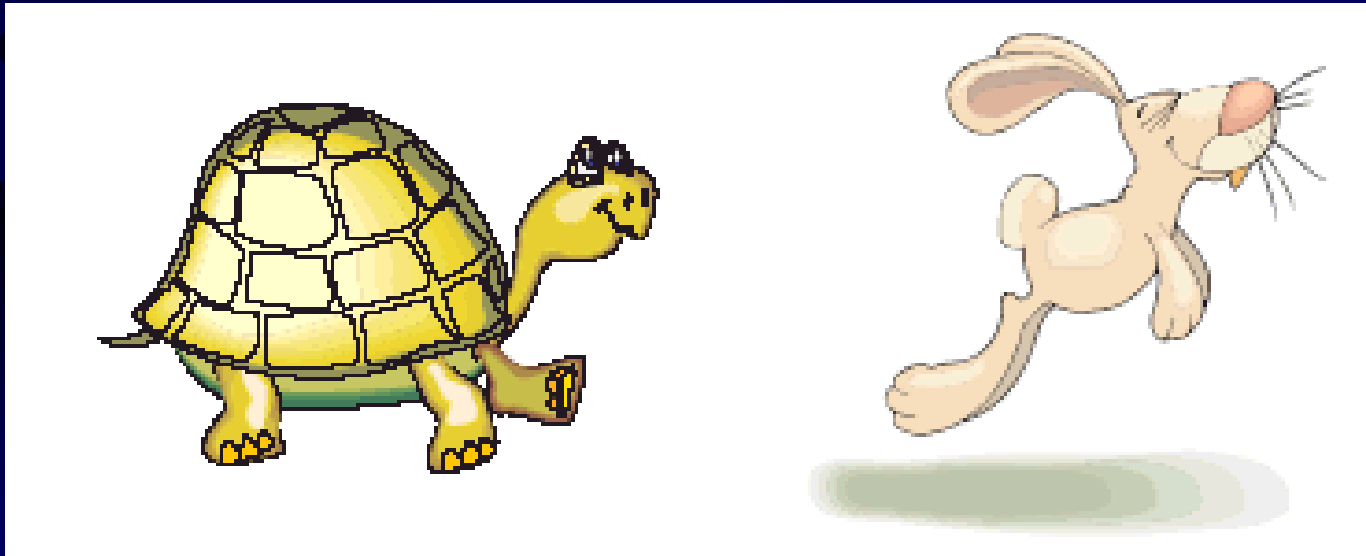
Arcade : Illustrative Photo

What is an MCF?



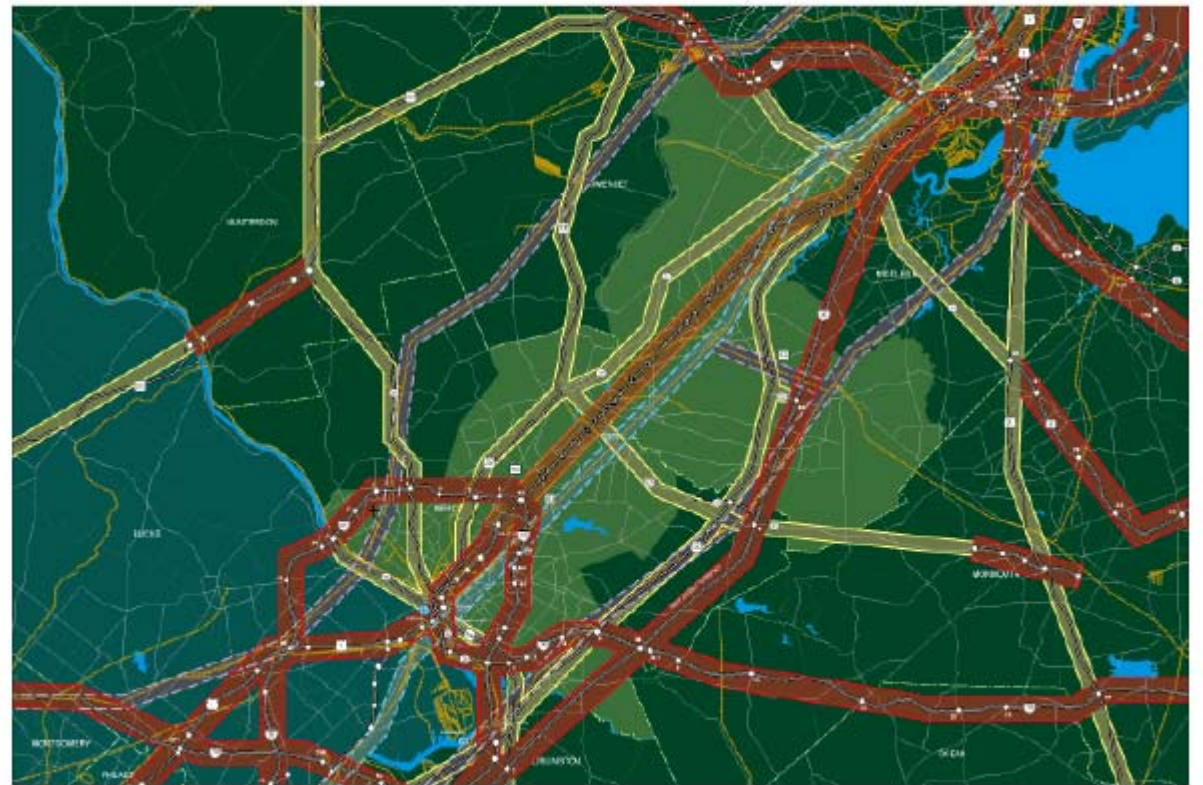
Implementing The Vision

Infrastructure planning proceeds at a different pace from land development, but they should be clearly linked together.



Implementing The Vision

Local transportation planning requires thinking about the regional context.



NEW JERSEY ROUTE 1 CORRIDOR
ROUTE ONE AREA
SMART GROWTH STRATEGY

CORRIDORS
Expressway Transit Local

MICHAEL, GALLIS & ASSOCIATES
PROJECT 1.08
DATE 11/20/08

Implementing The Vision

State agencies, MPOs, counties and other regional planning partners can offer technical assistance, financing, in-kind services, permit expediting and other incentives.





Developed by Steve Price
in association w/ Dover Kohl & Partners
& Glatting Jackson
for Johnson City Tennessee

