Chapter 4
Putting It All Together

"Planning of the automobile city focuses on saving time. Planning for the accessible city, on the other hand, focuses on time well spent." Robert Cervero

The previous chapters have described the concepts of the activity based transect and activity patterns, and how they can be used to articulate a community vision that links circulation and the built environment. In this chapter, we will look at some specific tools that can be used to translate that community vision into actual community places. Some of these, such as the master plan circulation and land use elements, are well known tools that get a fresh look. Others, such as the "mobility and community form" element and form based development codes are new ideas or old ideas presented in a new way.

Preparing the Circulation Element

To implement the ideas we have presented here, one need not toss out all that has been done before and start anew. But it is likely that the municipal master plan's circulation element is fertile ground on which to start. New Jersey's Municipal Land Use Law (MLUL) creates the framework for local planning and land use regulation throughout the state. The MLUL requires each municipality to prepare a master plan that contains goals and policies to guide land use and transportation decision making. While the law requires preparation of land use and housing elements, the preparation of a circulation element is currently optional. Further, the MLUL provides only limited guidance for the Circulation Element:
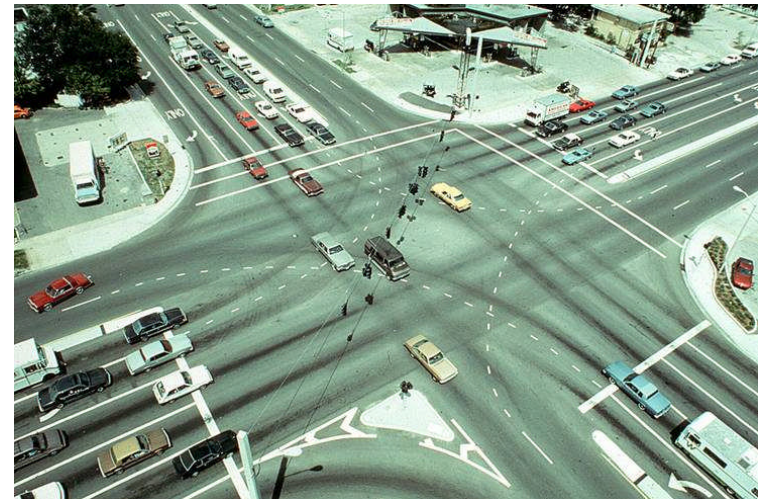
> … a circulation plan element show[s] the location and types of all facilities for all modes of transportation required for the efficient movement of people and good into, about, and through the municipality, taking into account the functional highway classification system of the Federal Highway Administration and the types, locations, conditions and availability of existing and proposed transportation facilities, including air, water, road, and rail. (MLUL Section 40:55D-28)

Consequently, most master plan circulation elements consist of little more than a listing of major roads, rail lines, and airports, together with a few bland statements that pass responsibility for improving these facilities off to NJDOT, NJ Transit or some other outside entity. A map of showing transportation facilities is usually added. Because transportation facilities rarely change in either location or basic function, the circulation element is infrequently updated.
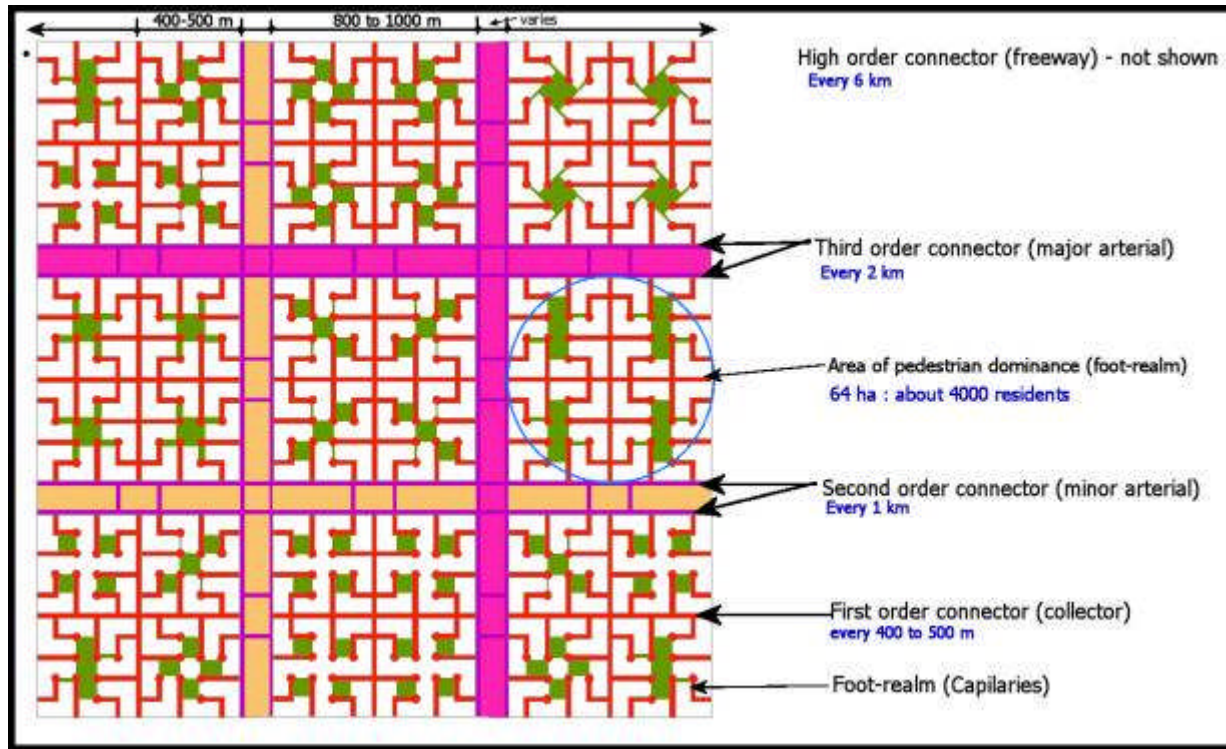
To be useful in today's planning environment, circulation plans need to go beyond the inventory approach and the emphasis on efficiency called for in the MLUL. A study of 24 central New Jersey communities conducted by the DVRPC revealed that the average circulation element is 7 years old (the oldest was 39). One contained a map, but no text. Five included text, but no maps. Six did not address any modes other than auto transportation. Only 3 included consideration of all five principal modes (auto, transit, bicycle, pedestrian, and goods movement) and only 5 included any discussion of land use or zoning. Six of the circulation elements, just one quarter but including two by counties (Somerset and Hunterdon), appear to be comprehensive. While there is some critical thinking going on, much remains to be done to improve both comprehensiveness and linkages to other aspects of community development.

Municipalities have a great deal of flexibility in how they define, prepare, and use the circulation element, but low expectations seem to lead to inadequate results. While the scope of the effort will vary based on local needs and conditions, in general a complete circulation plan will need to consider the connectivity and capacity of the street system, transit services and access to them, bicycle and pedestrian mobility, goods movement, parking, and coordination of transportation and land use, including the potential for creating mixed-use developments and transit-supportive density around major transit facilities. An assessment of impacts and conditions beyond the municipal boundaries should also be included.

High order connector (freeway) - not shown
Every 6 km

Third order connector (major arterial)
Every 2 km

Area of pedestrian dominance (foot-realm)
64 ha : about 4000 residents

Second order connector (minor arterial)
Every 1 km

First order connector (collector)
every 400 to 500 m

Foot-realm (Capilaries)

A circulation element is the transportation portion of a municipal Master Plan. It is a comprehensive document that defines goals and priorities for all modes of transportation, and relates these to the overall plan for the development of the community's physical, economic, and social environments.

Incorporating the principles of Mobility and Community Form introduces additional considerations for the circulation element, including the identification of focal points and strategies for creating the pedestrian-friendly environments that promote walking, social interaction and civic life. Other considerations include examination of the relationship of streets, intersections, transit stops and parking to public spaces and private development. The design details of transportation facilities and their ongoing management and maintenance become more important in this approach as well. Beyond the "broad strokes" of the community vision, municipalities can use the master plan to promote the design of facilities for greater safety, comfort, place quality, and sensitivity to the surrounding context.

Urbanism works when it creates a journey as desirable as the destination. - Paul Goldberger

Benefits of a Comprehensive Circulation Element

Preparing a comprehensive circulation element that encompasses a fuller consideration of the community's overall vision offers several key benefits to municipalities. A comprehensive circulation element can help strengthen the overall Master Plan by explicitly addressing critical linkages between the land use, housing, recreation and open space elements and the community transportation network.

The circulation element provides goals, objectives, and strategies that form the policy basis for enacting local development regulations, such as zoning ordinances and subdivision regulations, which help the municipality achieve greater control over future transportation patterns. Local governments may create street regulating plans that define future road networks and pedestrian pathways, for instance, as well as ordinances requiring interconnected streets and sidewalks, bicycle parking, and loading zones for deliveries. These actions help the municipality communicate with developers and property owners concerning the future development of the municipal street system, pedestrian network and parking facilities. They help ensure that private development works towards rather than against the community's vision.

The process of creating a comprehensive circulation element is also an opportunity to build community consensus on the development of specific sites or transportation projects, including resolution of longstanding community problems. It provides a basis for working effectively with neighboring communities and state and regional authorities to address common transportation issues. Creating a comprehensive circulation element is also an important step in preparing to apply for Plan Endorsement from the State Planning Commission, by demonstrating consistency with the State Development and Redevelopment Plan.

The Land Use Element

The master plan land use element has traditionally been used as the planning basis for application of zoning districts. As such, it generally has a number of goals (ranging from few to many), objectives, may discuss some implementation strategies, and includes a map depicting the type of development (single family residential, medium density residential, downtown, etc.) anticipated for various areas of the municipality.
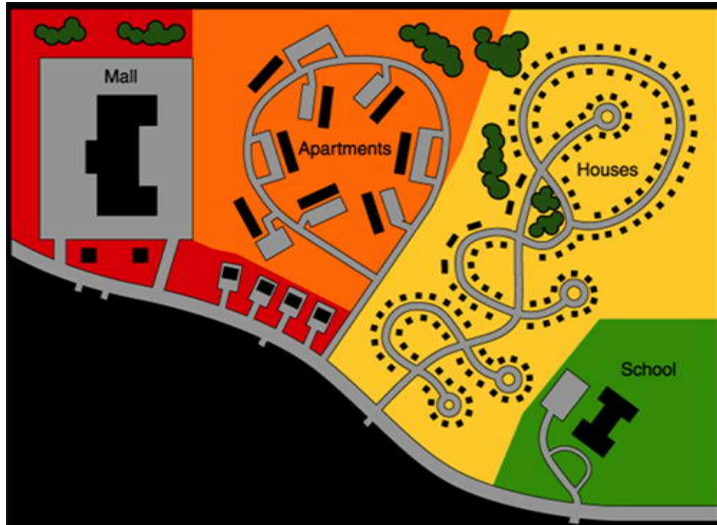
Here too, the MLUL provides little guidance, except that the land use element is a required element:

A land use plan element (a) taking into account and stating its relationship to the [statement of objectives, principles, assumptions, policies and standards upon which the constituent proposals for the physical, economic and social development of the municipality are based], and other master plan elements provided for in paragraphs (3) through (14) hereof and natural conditions, including, but not necessarily limited to, topography, soil conditions, water supply, drainage, flood plain areas, marshes, and woodlands; (b) showing the **existing and proposed location, extent and intensity of development of land** to be used in the future for varying types of residential, commercial, industrial, agricultural, recreational, educational and other public and private purposes or combination of purposes; and stating the relationship thereof to the existing and any proposed zone plan and zoning ordinance; and (c) showing the existing and proposed location of any airports and the boundaries of any airport safety zones delineated pursuant to the "Air Safety and Zoning Act of 1983," P.L.1983, c.260 (C.6:1-80 et seq.); and (d) including a statement of the standards of population density and development intensity recommended for the municipality. (40:55D-28 (b) (2), emphasis added).

Source: Glatting Jackson

The land use plan, in many cases, is simply a broad brush version of the zoning map, which, in most cases simply reflects the uses already in place at the time the plan or the zoning (whichever came first) was put in place. "Planning" occurs through specific project proposals put forward by developers. If a change of zone is required, a land use plan amendment may also be initiated. Frequently, planning and zoning criteria are too inflexible to achieve project goals, so a redevelopment plan is put in place to override existing codes.

New, greenfield communities, of course, are not typically developed in exactly this way and there is more likely to be some integration between land use, environmental factors, housing and economic development goals, and circulation. But the result is almost always the same: blocks of land designated for specific narrow ranges of uses. Roadways are sized according to established standards (e.g., all arterials are essentially the same), a transit line may be extended, the location of a rail station designated. And that's that. But that practice leads to the same sort of segregated, accessibility impaired patterns of land use that other communities have.

We can begin to change that by establishing performance goals within the land use plan:

- *all residences shall be within a five minute walk of public transportation.*
- *a residential village shall include 1000 square feet of retail space.*
- *all schools shall be "neighborhood schools".*

Performance goals go a long way toward making community development predictable, but they still don't get us to what the community will look like or say much about the range of activities we can expect there. To get at those goals, we need to consider the land use and circulation plans in an entirely new light.
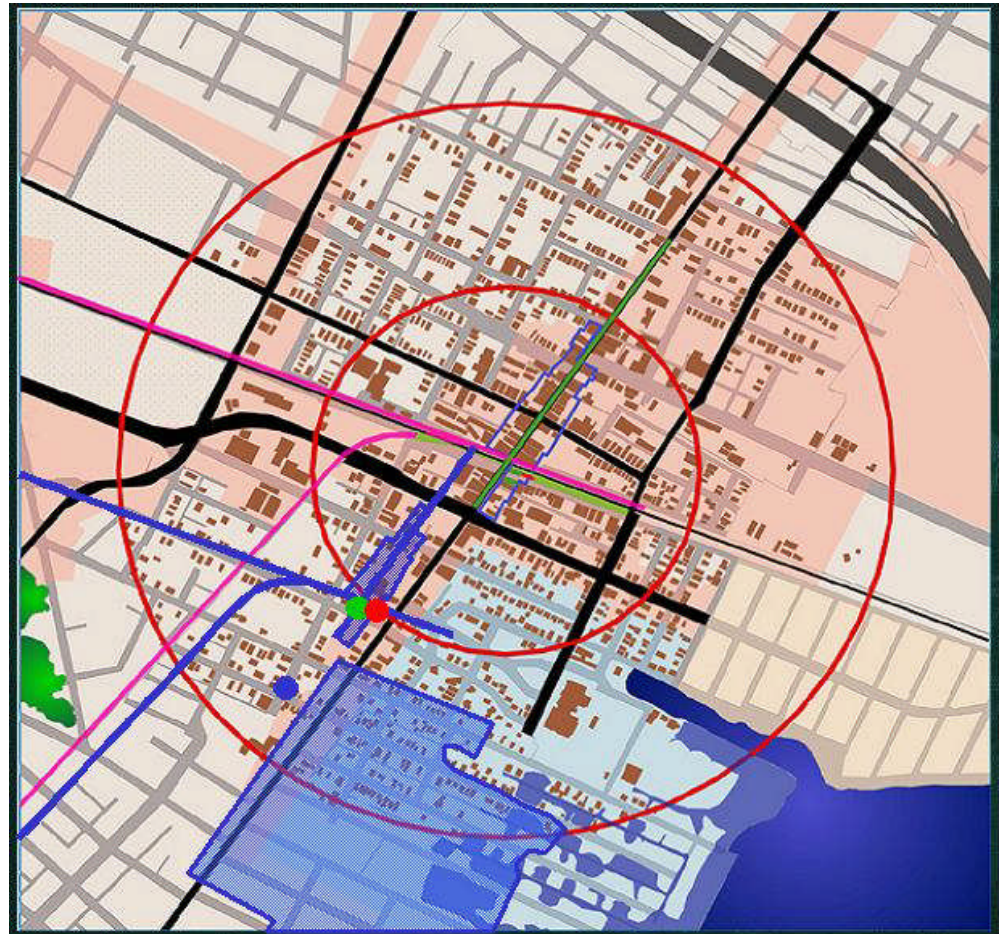
Mobility and Community Form Element

The Mobility and Community Form Element of a municipal master plan replaces both the land use and circulation elements. As the patterns in earlier chapters show, any thinking about land use without transportation or transportation without land use is incomplete. Land development goals and transportation system goals (and their respective implementation strategies) should be joined together in a systematic and balanced approach that respects the public – private partnership required to build a community. Bringing these goals together "under one roof" not only demonstrates the inter-relationships, but emphasizes the partnership.

The Mobility and Community Form Element includes the required and suggested contents of the land use and circulation elements (from the MLUL), so it meets the minimum standards of the law. In this respect, it is perhaps well that the MLUL offers so little guidance and most technical analysis is optional, as it lowers the legal bar that a different way of thinking needs to cross. The MLUL, of course, should be amended to clearly and specifically support integrated analysis and form-based development.

In the meantime, ensure that your local master plan's Mobility and Community Form Element includes the following:

- **A specific statement that the Mobility and Community Form Element functions as the land use element and the circulation element of the master plan.** The MLUL says that a land use plan element is required, but leaves the form of that element to the municipality. This statement simply ensures that the Mobility and Community Form Element is recognized as meeting the requirement for a land use plan element *and the circulation plan element*.
- **A statement showing the relationship of the Mobility and Community Form Element to the community vision statement, objectives, principles, assumptions, policies and standards on which the physical, economic and social development of the municipality are to be based.** The MLUL requires that the land use plan element be based upon a set of broad community development goals. That requirement flows through to the Mobility and Community Form Element. Clearly, the Mobility and Community Form Element will take consideration of goals, objectives, and strategies to a much greater level of detail than has been the practice in most New Jersey municipalities.
- **A statement showing the relationship of the Mobility and Community Form Element to other master plan elements and natural conditions, including at least topography, soil conditions, water supply, drainage, flood plain areas, marshes, and woodlands.** Natural conditions, land forms, and resources should be the starting point for any discussion of community development, so it is likely that these topics will fit seamlessly into Mobility and Community Form goals and objectives. Because the focus of Mobility and Community Form is relationships, the other optional master plan elements should have the same focus.

- **Maps or diagrams showing the existing and proposed location, extent and intensity of development of land to be used in the future for varying types of residential, commercial, industrial, agricultural, recreational, educational and other public and private purposes or combination of purposes.** The land use plan map may not change much or at all as a *policy map*, but should be recast as a "Community Form Map" that supplements "the proposed location, extent and intensity of development" with notation of sectoral growth expectations, community types (including measures of density and intensity), roadway functions, type and location of civic functions and natural resource considerations. It is the explicit layering of this information that gives Mobility and Community Form its power to see synergies and relationships that might otherwise be lost.
- **A statement showing the relationship of the Mobility and Community Form Element to the existing zoning and any proposed zoning or development ordinance.** Mobility and Community Form recognizes that most communities have been built using traditional Euclidian (sector based) zoning, but proposes a conversion to *form-based development coding*, at least for those parts of the municipality expected to grow or aggressively redevelop. Where use of form-based coding is anticipated, the relationship should be much easier to demonstrate, because of the amount of detail and graphical orientation of the plan itself. But at the same time, use of form-based coding in developed areas, even as an optional mode of developing, is likely to raise a number of questions, so this statement should be explicit and clear about old codes and new codes.
- **Maps or diagrams showing the existing and proposed location of any airports and the boundaries of any airport safety zones delineated pursuant to the Air Safety and Zoning Act of 1983.**
- **A statement of the standards of population density and development intensity recommended for the municipality.** It is expected that this information will be depicted graphically on the Community Form Map and other supporting maps and materials. Additional detail (such as jobs/housing ratios, floor area ratios, anticipated trip making by mode, etc.) should be provided in supplemental text.

The Mobility and Community Form Element includes performance goals and measures for both land uses and transportation. As described above, these goals should be integrated and the relationships clearly depicted.

The Mobility and Community Form Element includes consideration of a full range of applicable transportation options, using a "walk first" approach. "Walk, ride, drive" is the preferred approach to personal mobility. This implies that land uses should be mixed so that everyday needs can be met within a short walking distance of home and/or employment. Where distance, constraints or travel conditions make walking inappropriate, riding public transportation or, alternatively, as a passenger in a car, is preferred to driving alone.
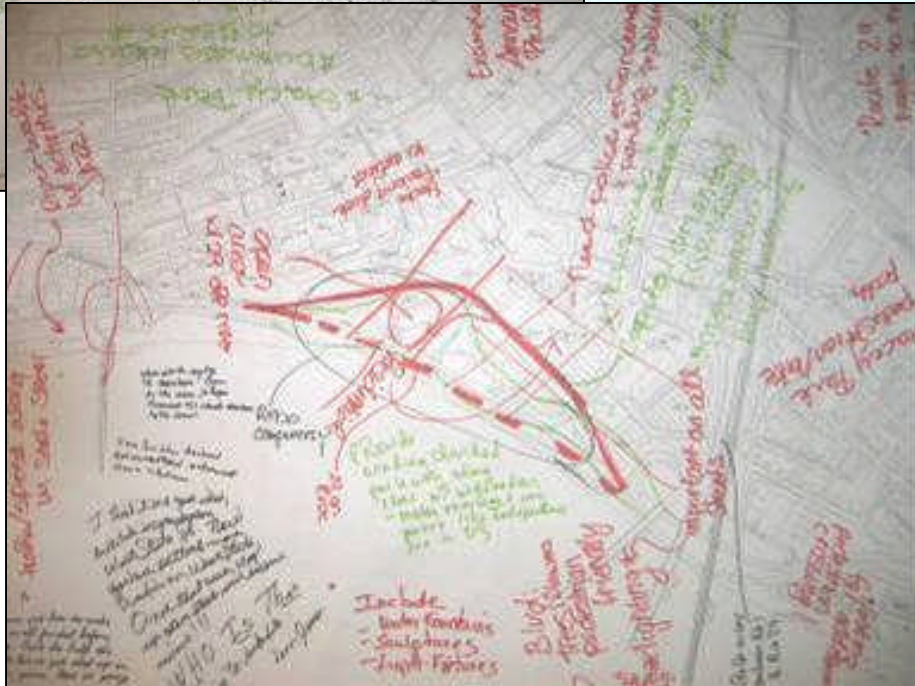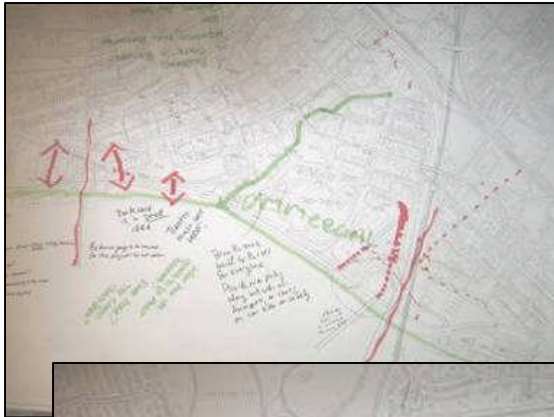
Transportation and land use concepts for Trenton evolved together through the charrette process.

The Mobility and Community Form Element includes a detailed, multi-modal transportation system, including a roadway classification system that is linked to the needs of surrounding land uses. Ideally, discussion of the transportation system should *begin* with making walking the mode of first choice and develop pedestrian mobility systems to the fullest extent possible. Next, and closely linked, is integration of public transportation with land development. This should follow quite naturally if the community is developed around the concept of centers or nodes and their environs. Goods movement must also be considered in this context. Automobile trips have their place, but should be relegated to long distance trips that cannot effectively be made by public transit.
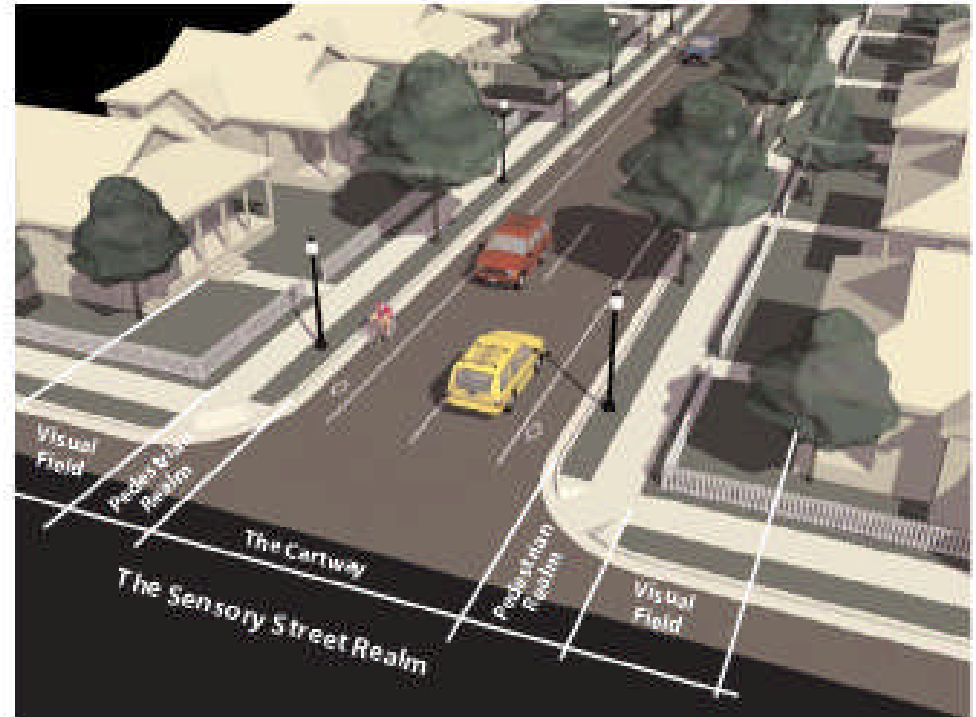
The Mobility and Community Form Element is <u>activity based</u> in that it seeks to encourage specific classes of activities (and discourages or manages others) by influencing the built form of the community. The Mobility and Community Form Element influences community form in several ways. First, focusing on development of multi-use centers increases the range of activities that is available in those places. This is not to say that the range of activities in the environs of centers is decreased, rather, there is a greater differentiation between centers and environs and an emphasis on moving away from single-use lands. Secondly, Form-based coding, the set of regulations that actually govern what gets built, works to manage the range and type of activities in particular places. For example, the coding would be different for a suburban center in an intended growth sector from that of a similar center in an infill growth sector or a controlled growth sector. Third, using a "walk, ride, drive" strategy makes a specific statement about the automobile's role in the community, helps prioritize activity options and hence brings certain aspects of community form to prominence.

The Mobility and Community Form Element closely manages infrastructure development (transportation, utility services, community facilities) so that it happens in concert with land development. Infrastructure development, especially planning, financing, and engineering of major transportation infrastructure projects, takes years. On the other hand, land development decisions typically happen "right now" because funding and competitive decisions are made in a dynamic market setting. Consequently, there is frustration from planners on both sides about the pace of decision making. Grouping transportation and land development into a single set of goals, objectives and strategies may not speed up infrastructure investment (and is not intended to slow down land development decisions), but can certainly impart some predictability to both. In laying out strategies and timing for transportation infrastructure, it is an easy and natural extension to include utility services and community facilities, both of which should be part of the land development discussion anyway.

Elements of the Street Realm

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

The Mobility and Community Form Element is strongly graphically oriented, so that non-planners can visualize what the community will look like. A central goal of the Mobility and Community Form process is to make community development decisions accessible to the community. A universal, jargon-free language for doing that is graphics: drawings that depict ideas (especially if done by citizens themselves), photographs that show examples, and so on. This graphical language should be used throughout the planning and coding process so that development decisions grow naturally from it.

The Mobility and Community Form Element establishes the planning policy framework for implementation of a form-based development code that replaces traditional subdivision and zoning codes, including the Residential Site Improvement Standards. Implementing a form-based development code, one that focuses on creating vibrant mixed use *communities* rather than pods of single use lands, is an essential extension of the Mobility and Community Form concepts. A form-based code (see below) (1) establishes community context, (2) envisions community intent for growth, (3) identifies desired community activities and placemaking elements that support those activities, (4) scales the elements to match context and growth expectations, and (5) provides instruction on building scale and form. Where land is already platted, form-based coding can be molded to work with that platting as part of the contextual discussion. Where new lots or streets need to be created, it provides specific guidance.

The Residential Site Improvement Standards (RSIS), a "one size fits all" solution to many community design decisions, reinforces development of single use lands. As such, it reinforces building of single use developments, produces a sprawling development pattern and supports an auto dominated transportation system. For example, the RSIS standards for residential streets with parking – 28 feet – apply whether the street is classified as "low intensity," "medium intensity," or "high intensity." More importantly, minimum parking standards are set for various housing types, without regard to geographic or community context. Fortunately, the RSIS also include a provision for "special area standards", which can be invoked to establish the context and flexibility necessary for working with form-based coding.

Specifically, the RSIS says (at NJAC 5:21-3.5):

> A special area designation may be applied by ordinance by a municipality or group of municipalities to an area or areas of a municipality or municipalities exhibiting or planned to exhibit a distinctive character or environmental feature that the municipality or municipalities by ordinance have identified and expressed a desire to preserve and enhance. Examples of a special area may include:
>
> 1.   Designated redevelopment areas pursuant to N.J.S.A. 40A:12A-1 et seq.;
> 2.   Designated special improvement districts pursuant to N.J.S.A. 40:56-65 et seq.;
> 3.   Designated historic districts pursuant to N.J.S.A. 40:55D-65.1;

4.   Municipalities in the Metropolitan Planning Area (Planning Area 1), and Regional Centers, villages, hamlets, or other Centers identified by the State Development and Redevelopment Plan or designated by the State Planning Commission;

5.   Infill areas in urban settings;

6.   Planned unit developments and planned unit residential developments, and residential clusters pursuant to N.J.S.A. 40:55D-39;

7.   Areas where environmental systems such as watersheds may require special environmental controls;

8.   Designated scenic corridors, pursuant to the Intermodal Surface Transportation Efficiency Act or other similar State or local initiatives; and

Rural preservation areas including but not limited to designated Agricultural Development Areas, pursuant to N.J.S.A. 4:1C, and in support of the rural preservation policies of the State Development and Redevelopment Plan.

The Mobility and Community Form Element should provide the policy support for later adoption of an ordinance that declares the area(s) to which form-based coding are to be applied (or are optional) as "special areas" for the purposes of the RSIS. This was successfully done in conjunction with TDR and a village master plan in Chesterfield Township, Burlington County.

The Coding Process

Moving from vision to plan to development regulation can seem daunting. But breaking the process into discrete steps and concentrating on getting each one done the right way can help make it transparent and help build consensus. And, where there is a clear nexus between planning goals, development regulations and what actually gets built can virtually eliminate successful legal challenges.
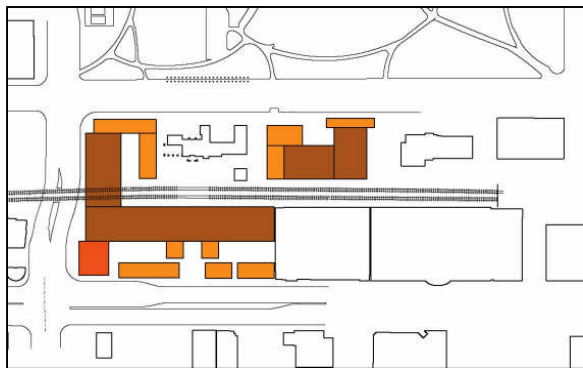
The coding process begins with looking at successful "place" models from within or outside the community. These can be downtown districts, shopping streets, neighborhood types, individual development projects, streetscapes, plazas, and so on.. The best way to gather and begin to organize these is simply to create a photo library. The photo library can be annotated with notes that describe what is desirable (and undesirable) about the individual places. The photos and notes are then used to create groups of desirable activities and place elements that can be translated into planning goals and objectives. Care should be taken to think through the patterns described earlier in this report, keeping community context in mind.

Considering goals in light of the patterns and context will lead naturally to a hierarchy of development intensities, street types and relationship to other transportation systems and services (e.g., rail stations). Development intensities can be understood through the mix of uses (70% commercial – 30% residential, 80% residential – 20% commercial, etc.), the overall massing of structures (2 story street wall, 4 story street wall) and the roadway width and design (2 lanes with on street parking, 4 lanes with median, etc.). For planning purposes, the function and hierarchy of street types should be understood in a lay nomenclature: main street, shopping street, pedestrian way, garden street, bicycle boulevard, big box lane, alley, etc. Some streets, such as those along a river or lake front, may be entirely unique and require special attention. When developing massing criteria, pay close attention to parking needs, increased intensity around major public transportation nodes and vertical mixing of uses.

Keep in mind that there is no set formula. A 3-story building wall can be used with a two lane street or a four lane street; street level retail can be topped by residential or office space. But the resulting *place* will be considerably different in character. The mix of uses, massing and street type inform a context based frontage code, which essentially places a private realm transect alongside a public realm transect, as illustrated in the example from Hutchinson, Minnesota, on the following page.

In the Hutchinson CBD master plan, each property is color coded with a streetscape type (based on function and hierarchy, as above) and a land use type. To find the types of street frontages allowed (which essentially controls both the allowed uses and the form they take), one first finds the *streetscape type* coded for their property (entry boulevard, garden street, etc.) and then the *land use type* (main street commercial, high density residential, etc.) by reading across the top of the two matrices. The allowed frontages are then read *down* the columns. For example, the streetscape type "Main Street" combined with the land use type "Main Street Commercial" may have a storefront entry (type F-1, i.e., not recessed), but may not use any of the deeply recessed entry types (F-2 through F-6). At the bottom of the chart, separate matrices call out entry spacing, minimum and maximum building heights and vertical mixing of uses. To follow the "Main Street – Main Street Commercial" example, entries are to be spaced 28' to 40' apart, in buildings 15' (one story) to 48' (three stories) in height, and be comprised of retail or service uses on the ground level, living or office space in upper stories and parking and service used below grade.

FRONTAGE KEY for BUILDINGS
The frontage is the interface between the street and the building.

The frontage is the semi-public 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 differing 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 -

	Entry Boulevards	Crow River Lanes	Big Box Lanes	Garden Streets	Downtown District Streets	Civic Core Plaza Drives	Main Street Alleys	Main Street

step 1: Using the Map and this table, find the Frontages allowed for the Streetscape that your property is in.

Entry (Address) Spacing	36'-72'	36'-72'	36'-72'	36'-72'	24'-72'	24'-48'	24'-48'	24'-48'

Frontage Types
- **F1** STOREFRONT
- **F2** ARCADE
- **F3** DOORWAY
- **F4** DOOR YARD
- **F5** PORCH YARD
- **F6** COURT YARD
- **F7** COMMON LAWN
- **F8** ALLEY
- **F9** GARAGE ENTRY
- **F10** PARKING YARD
- **F11** SERVICE YARD
- **F12** LOBBY ENTRY

LAND USE
- PRIVATE REALM TRANSECT -

	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

SPECIAL REVIEW REQUIRED FOR EACH BUILDING - SEE FRONTAGE DESIGN GUIDELINES

NO FRONTAGE REQUIRED

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.

Height Limit	15'-40'	15'-40'	15'-40'	15'-75'	15'-40'	15'-30'	n.a.	per project	n.a.

VERTICAL USE ZONES

Upper Level Uses	live office studio	live office studio	live office studio	live gather	live	office	n.a.	office gather service	n.a.
Ground Level Uses	service retail	live office service retail	live office studio service	live office service gather	live gather studio	office work wkshop	parking	office gather service	green
Below Grade Level Uses	parking service	parking service	parking service studio	parking service	live parking service	n.a.	n.a.	parking service	n.a.
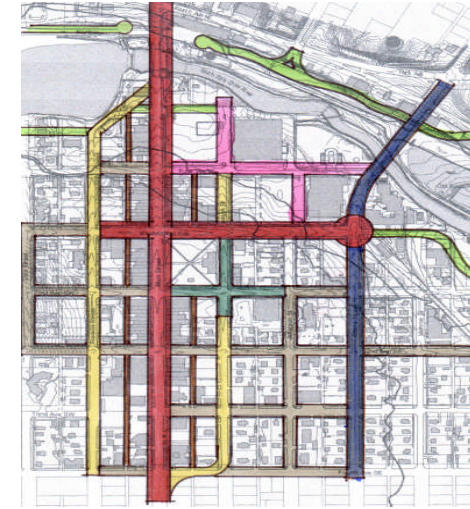
Streetscape Plan

Land Use Plan

Source: Hutchinson, Minnesota, Downtown Revitalization Master Plan
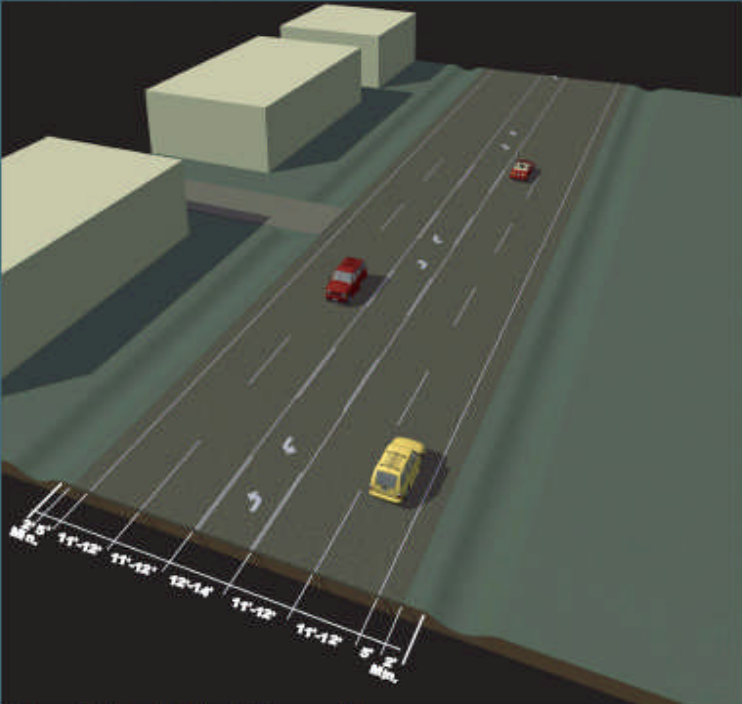
141

Form Based Development Codes

The development code itself consists of the land use and streetscape maps, the frontage key matrix on the previous page, coupled with another matrix of design guidelines for buildings and a similar matrix for streetscape elements, all adopted by ordinance. Taken together, these directly link master plan goals and objectives to both public and private land development. Note that civic and institutional development is <u>specifically called out</u> in the Hutchinson example.

In Alachua County, Florida (Gainsville area), the form code specifies a number of required street design elements, lists optional elements and sets very specific standards for many of these (following page). Different standards are established for streets of similar function (e.g., arterials) according to their land use context.

CORRIDOR TYPE: ARTERIAL

Industrial

DESIGN SPEED: 45-55 MPH

LAND USE CLASSIFICATION: INDUSTRIAL

REQUIRED	OPTIONAL

• If transit service is provided
  - Transit stops with benches
  - Sidewalks
	• Bicycle lanes
	• Curb and gutter
	• Planting Strip
	• Lighting
	• Sidewalks
	• Medians
	• Continuous left turn lane
	• Bus Shelter

DESIGN ELEMENT	MINIMUM Width (feet)	MAXIMUM Width (feet)
• Vehicle lanes	11	12
• Bicycle lane		
- curb and gutter	4	6
- no curb present	5	6
• Median	12	50
• Continuous left turn lane	12	14
• Sidewalk	6	8
• Planting strip	4	8
• ROW width	50	130

Continuous left turn with wide outside lane open drainage

Source, this and following page: Alachua County Florida Form Code

142

CORRIDOR TYPE: ARTERIAL

Urban Activity Center

LAND USE CLASSIFICATION: URBAN ACTIVITY CENTER

REQUIRED
- Curb and gutter
- Street and pedestrian scale lighting
- Shade trees
- Sidewalks
- Transit stops with benches (if service is provided)
- Pedestrian activated crossing signal at signalized intersections
- Bicycle lane or wide outside travel lane

OPTIONAL
- On-street parking
- Planting strip
- Mid block pedestrian crossing
- Raised median
- Continuous left turn lane
- Bus Shelters

DESIGN ELEMENT	MINIMUM Width (feet)	MAXIMUM Width (feet)
Vehicle lanes (when bicycle lane is present)	10	12
Outside vehicle lane (no bicycle lane present)	14	14
Raised median		
- infrequent driveways and intersections	4	6
- short blocks, left turn lanes	12	30
Continuous left turn lanes	11	14
Bicycle lane	4	5
Parking lane		
- with bicycle lane	7	7
- no bicycle lane	8	10
Planting strip	4	8
Sidewalk		
- on curb	8	12
- off curb	6	10
ROW width	80	130

DESIGN SPEED: 35 MPH - 45 MPH

Continuous left turn line/bicycle lane

Note: Where ROW permits, it is always preferred to provide a bicycle lane.

Getting That Main Street Feel

NJDOT conducted a "main streets" study that used the visual preference survey technique, asking citizens to rate images of streets against their own idealized concept of what a main street should be. Not surprisingly, the strongest elements in creating a main street feel were continuous building wall, a relatively narrow roadway width, and on street parking. Conversely, wide streets with "dead frontage space" (e.g., surface parking) ranked low.

Another similar, more comprehensive example is the SmartCode, developed by Andrés Duany. The SmartCode, intended as a model development ordinance, begins with the transect concept, identifies growth and preservation sectors, and then steps down through various levels of plan making to reach building scale plans and specific standards for various elements (parking, street trees, lighting, etc.) An example of the building massing criteria for the urban center zone (T5 on the transect) is shown at the right.
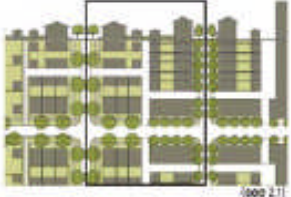
Infrastructure Planning

It can't be stressed strongly enough: land development and infrastructure development operate on different timelines. Even when all of the various permits normally necessary for a complex development are strung together, the approval process normally doesn't take more than a year or two. But a year is the *minimum* time required to plan, design, fund and build even the smallest transportation project. Expensive or complex project can easily consume 5 or more years – and that's if they're not controversial, which is rare.

At the state level, highway construction is largely a thing of the past, although development of rail, light rail, bus, bicycle and pedestrian projects is likely to continue unabated. But that's the central point of this

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T5 URBAN CENTER ZONE

SMARTCODE SPECIFICATIONS

4.5 LOT OCCUPATION

a. Lot Area	1,800 sq.ft. avg.
b. Lot Coverage	80% max

4.6 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	6 ft. min, 12 ft. max
b. Side	0 ft. min., 24 ft. max.
c. Rear	3 ft.
d. Frontage @ Setback	70% min.

OUT BUILDING SETBACK

a. Front	26 ft. min.
b. Side	0 ft. min.
c. Rear	3 ft. min.

4.8 PRIVATE FRONTAGE TYPE (see 2.3)

a. Common Lawn	prohibited
b. Porch & Fence	prohibited
c. Terrace or L.C.	permitted
d. Forecourt	permitted
e. Stoop	permitted
f. Shopfront & Awning	permitted
g. Gallery	permitted
h. Arcade	permitted

ENCROACHMENT

a. At Bldg. Frontage	6 ft. max (+12 ft. min. arcade)
b. At Bldg. Side	3 ft. max.
b. At Bldg. Rear	0 ft.
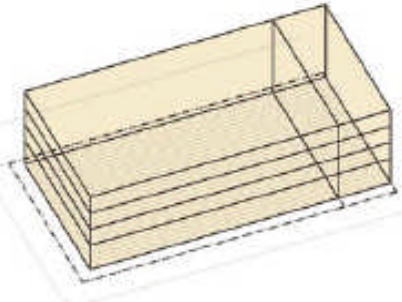
4.11 BUILDING FUNCTION (see 24.15.28)

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

GRAPHIC SPECIFICATIONS

BUILDING HEIGHT
1. 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.
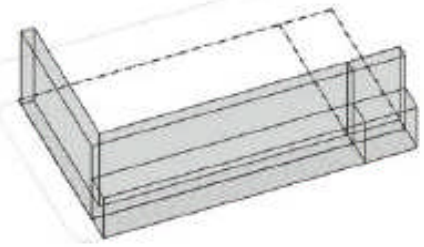
BUILDING PLACEMENT
1. Buildings shall be placed within the areas hatched as shown in the diagram.
2. Buildings shall have facades along frontage lines and elevations along lot lines.
3. The facades and elevations of a building shall be distanced from the frontage and lot lines as shown in the diagram.
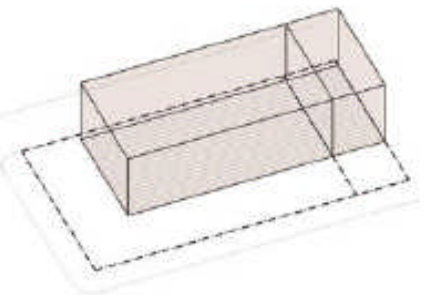
BUILDING ELEMENTS
1. Stoops, bay windows, open porches and balconies may encroach into the setbacks as shown in the diagram.
2. Arcades should overlap the sidewalk as shown in the diagram.

PARKING PLACEMENT
1. Parking spaces shall be provided within the third layer as shown in the diagram.
2. Covered parking shall be provided within the third layer as shown in the diagram.
3. Trash containers shall remain within the third layer as shown in the diagram.

Source: Duany Plater-Zyberk & Company

144

publication: that municipalities and developers need to think about different ways of creating mobility and accessibility, without relying on state highways.

Transportation system development at the local level is typically somewhat faster, less complex and certainly less expensive than for larger scale facilities and systems operated and maintained by the state. Financing options are broader and, since federal funding is usually not involved, procedural requirements are usually less strenuous.

Traditionally, capital improvement programming consists of a one-year "capital budget" and a somewhat longer term needs assessment, as called for in the MLUL. Funding for capital improvements is provided through the annual operating budget and is subject to emergent needs, changing priorities, or the whims of elected officials. For these reasons, it is difficult for municipalities to undertake large or complex capital projects that require more than a year to complete unless special funding is set aside (as in general obligation bonds). Land developers can be asked to contribute to or actually build infrastructure immediately adjacent to or impacted by their property, on a fair share basis. But waiting for developer contributions to, say, a roadway or roadway network can stretch construction out over many years.

To help rationalize local development of transportation infrastructure, the New Jersey Legislature enacted the "New Jersey Transportation Development Act of 1989" and the concept of the Transportation Development District (TDD) was created. A TDD is a voluntary local enactment, similar to a business improvement district, which assesses participating property owners for development of transportation improvements. Although the fundamental concept is strong, two shortcomings have prevented more than a handful of TDDs from being implemented. First, the TDD cannot recover the cost of planning and implementing the district itself, so there may be sizeable up front costs borne by the municipality or property owners. Second, the TDD cannot assess for operation or maintenance costs associated with public transportation systems, such as shuttle busses, so there is likely to be an impact on the municipal operating budget. Legislation that would correct both deficiencies was proposed in the late 1990s, but has not yet been enacted.
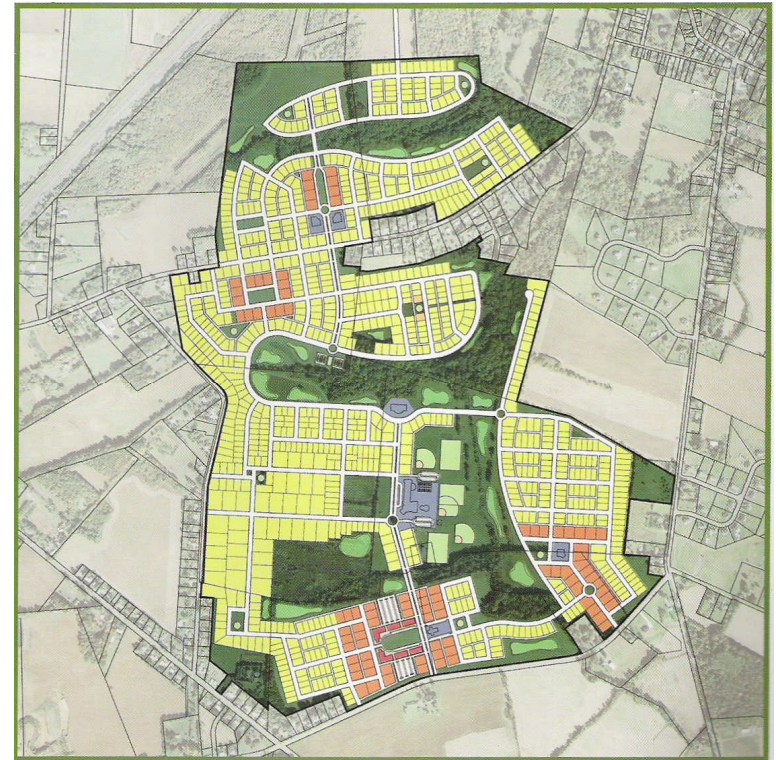
Tax increment financing (TIF) is another approach to directing a greater portion of local tax revenues to particular needs. TIF is usually associated with redevelopment or rehabilitation districts. The TIF is established, by ordinance, for a period of years. At the time it is created, the base tax rate is frozen, creating a "floor" assessment for each property. As properties are redeveloped, rehabilitated or as their values rise because of market conditions, the assessment on the incremental value is calculated separately and captured for use on special improvements called out in the ordinance establishing the district. To finance major capital projects, the municipality may float a bond that pledges the revenues from future increment payments to pay down the

principal and interest. Keep in mind that other users of tax revenues (school districts, counties, utility authorities, etc.) will want to have a say in how much of the increment is diverted to local infrastructure projects.

In Chesterfield, NJ, the municipality decided to cluster development using transfer of development rights (TDR). The idea behind TDR is simple: it uncouples the right to develop land from the land itself. For example, a 30 acre farm with one acre zoning in a "sending area" could sell (transfer) the *right to build* 29 units to another property owner (keeping the farm homestead and the right to farm the land). The new owner can then use those 29 "development credits" in a "receiving area" to build in accordance with the master plan.

This idea has a number of benefits:

- It helps to save farmlands and open space as the "environs" for a community, thus reducing sprawl development.
- In doing so, it offers rural landowners the opportunity to realize profit by selling the development rights to their property.
- It creates an open market for development credits, which does not artificially inflate housing prices.
- It allows clustered development to take place in accordance with a master plan, so the municipality has greater control over what is developed – and when.

Old York Village in Chesterfield Twp., Burlington County

- Clustering development can make municipal and other services more efficient. Schools can be built as walk-to neighborhood schools rather than requiring busing. Land uses can be efficiently mixed around a "core" community, thus reducing auto dependency.
- Clustering trip origins and destinations in a smaller area helps make public transportation more viable and increases commute options.
- And the planning and construction of regional infrastructure, such as transportation facilities and utilities, can be closely linked *up front* to land development.
- One master environmental review can be used to cover permits for all of the planned development, thus saving time later in the development process.
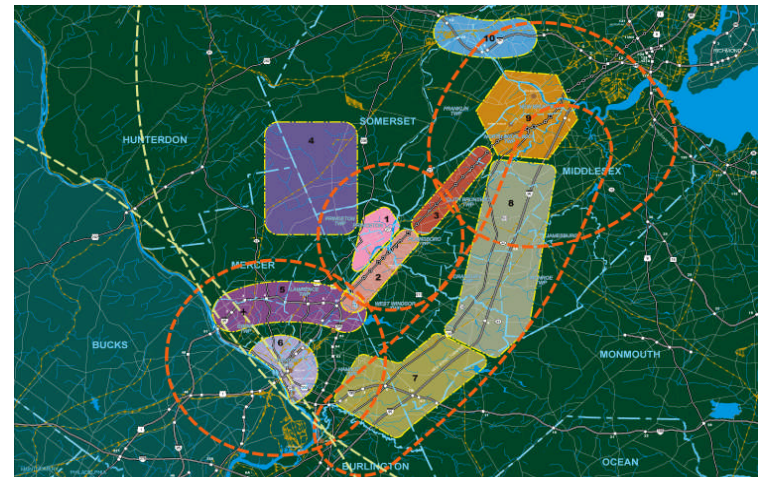
Regional Context

Every community exists in a context. In fact, there are many dimensions to that context. One of those is the regional transportation network, because every community has both regional trip origins and destinations, as well as through trips. Another dimension is the economy: all communities are part of a regional economy that largely disrespects political boundaries. As the map on the previous page shows, New Jersey is at the core of the Washington – New York – Boston "urban lattice." The detail map (this page) illustrates discrete market areas within the central part of the state, clearly showing their "extra-municipal" nature.

The point, for both regional transportation and regional economics, is three-fold:

- No community "stands alone" in either transportation or economics. Making transportation and/or economic development decisions without considering extra-municipal implications (and discussing those implications with regional stakeholders) is shortsighted and, ultimately, expensive in terms of lost synergies and in duplication of costs.
- Maintaining the flow of people and commerce across regional networks is critical not just to the local economy, but to regional and state competitiveness as well. It must be understood that regional mobility has local costs. Sometimes these costs appear to

Source: Michael Gallis & Associates

be high, but they need to be considered *in the regional context as well as the local context*. Conversely, regional benefits are sometimes difficult to disaggregate to the municipal scale, but need to be recognized nonetheless.

- The municipal transportation system and land development plan need to take both regional transportation needs and regional economic needs (and supporting uses, such as worker housing) into account. For this reason, it is imperative that the function of transportation system elements – especially roadways – be clearly understood, articulated and linked to land development types and intensities.

Resources for Putting It All Together

Statutes and Model Statutes

New Jersey Statutes 40:55D*: Municipal Land Use Law*
http://www.policy.rutgers.edu/cgs/PDFrc/NewJerseyMunicipalLandUseLaw12-23-2005v2.pdf

SmartCode 6.5, A Comprehensive Form-Based Planning Ordinance, Dunay Plater-Zyberk & Company, 2005 www.placemakers.com

Residential Site Improvement Standards: http://www.state.nj.us/dca/codes/nj-rsis/sc3.shtml

Policy and Technical Guidance

New Jersey Future in Transportation: http://www.state.nj.us/transportation/works/njfit/about/

Chesterfield Twp., Old York Village: http://www.chesterfieldtwp.com/Smart%20Growth/SmartGrowthPage.htm