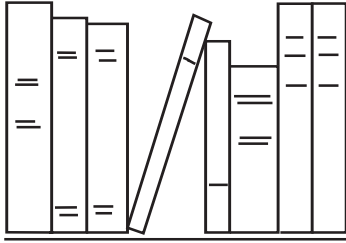


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RESOURCE CENTER

Association of New Jersey Environmental Commissions
P.O. Box 157 ■ Mendham, NJ 07945 ■ 201-539-7547 ■ Fax 201-539-7713

Municipal Planning and Clean Air

New Jerseyans drive an incredible 161 million miles a day. Since automobiles emit roughly half of all air pollution, it is no wonder that all but three of New Jersey's 21 counties exceed federal ozone standards and that the state's northeastern counties rank sixth in the nation for carbon monoxide pollution.

Under the 1990 federal Clean Air Act Amendments (CAAA), New Jersey must meet federal air quality standards by early in the next century. The CAAA outlines various strategies for reducing vehicular and industrial emissions but makes virtually no recommendations for changing the way municipalities use their land — a strategy that will have the most long-lasting impact on air pollution.

After more than 40 years of automobile-based development, most New Jersey residents need a car to do everything from driving to work to buying a quart of milk. Of New Jersey's four million workers, 73 percent drive to work alone.

They do it because they have no choice.

Local Planning Is the Key to Clean Air

Many land use planners are urging municipalities to rewrite their master plans and ordinances so that they can stop building communities that force people into their cars for every journey. Most existing master plans and ordinances do not promote nor permit the kind of development that will free us of our cars. They must coordinate changes in local land use planning with changes in regional transportation planning. Municipalities can break this self-perpetuating pattern of sprawl, congestion and road building and successfully promote walking, bicycling and public transit.

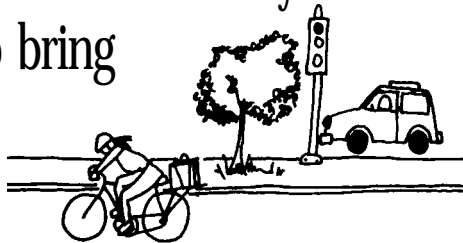
But it will take work.

Air pollution is only one cost of conventional automobile-oriented sprawl. Water pollution, health problems, visual blight and high taxes, the loss of farmland and open space, and the demise of neighborhoods, downtowns and cities are the rest of the price.



There are many ideas about how to change this, and some municipalities, counties and states are implementing programs to do it. Two of the more successful municipalities, Harding and Randolph Townships, are discussed later.

The State Plan encourages development in compact, mixed-use centers and offers many strategies to bring this about.



In most of these programs, the central assumptions are the same:

1. concentrate development in centers and avoid sprawl;
2. zone for mixed uses, rather than separated uses;
3. design streets and developments to promote pedestrian, bicycle and public transit travel to discourage automobile travel.

New Jersey's 1992 State Development and Re-development Plan and the federal 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) are two government initiatives that can help point the way.

The State Plan encourages development in compact, mixed-use centers and offers many strategies to bring this about, including directing more state infrastructure funding to centers and less to sprawl. ISTEA calls for local participation in regional and statewide transportation planning and directs funding toward transportation projects that support clean air goals, including bicycling, walking and transit projects.

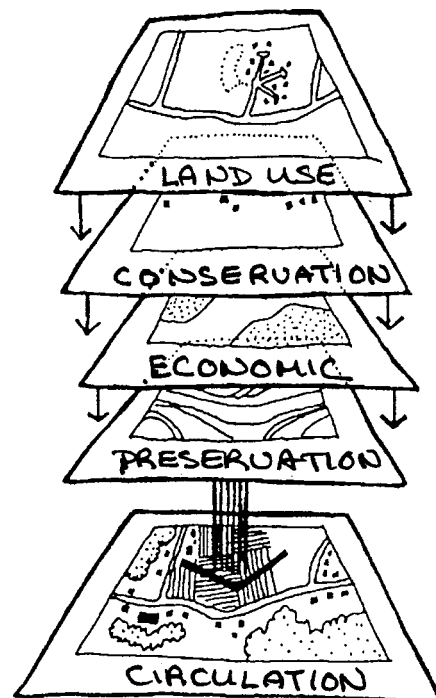
The first step for municipalities is to revise their master plans.

The Master Plan and Clean Air: The Circulation Element

Planners stress the need for municipalities to address clean air goals and the related issue of automobile-oriented development in their master plans.

The framework of the master plan should be the circulation element. Roads are the catalyst for land use. "Streets create the basic form of the community; they define the pattern of development. . .," writes Professor Anton Nelessen of Rutgers University in **Visions for a New American Dream**. (*Some References* on pages 14-15 lists the publications and organizations mentioned in this resource paper.) The network, dimensions and design of roads are powerful factors in determining the nature and location of development, the amount and speed of traffic, the appearance and character of a community.

All this, in concert with the presence of other transportation systems, can help prompt people to bike, walk and use public transit rather than getting into their cars.



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Under New Jersey's Municipal Land Use Law (MLUL), the 1975 legislation that delegates land use powers to the municipalities, the circulation element in a master plan is optional. It may be included to describe "the location and types of facilities for all modes of transportation required for the efficient movement of people and goods into, about and through the municipality" and should list the municipality's roads by function and design under the Federal Highway Classification System (ranging from freeway to local roads).

Streets create the basic form of the community; they define the pattern of development.—Anton Nelessen

Circulation elements typically classify roads, list proposed road improvements (which usually promote traffic capacity and flow) and recommend new roads. Often they offer little analysis of the additional development and traffic those roads might generate. Municipalities perceive roads mostly as a receptacle for ever increasing traffic rather than as a powerful force in generating that traffic.

Peter Wolf, planner and author of **Land in America: Its Value, Use and Control**, describes the often poorly understood motives for building more roads. "The role of the highway as a powerful catalyst to future community development tends to be insufficiently understood. . . . The focus is usually on the immediate consequence to local traffic patterns with too little consideration given the all but inevitable longer-range impacts on land all over town."

Hence, when new or bigger roads are sought to relieve congestion, "contrary to some expectations, traffic probably will eventually increase as the highway brings with it more development."

Officials and citizens who call for more roads may have mixed motives. "Many who support highway development are aware of these possibili-

ties and stand to benefit from them," Mr. Wolf writes. "Others who seek only the immediate short-term objective of 'cleaning up the traffic jams in town' and therefore endorse the development of new roads, are more naive."

Rewriting the Master Plan for Clean Air

Because the issues are complex and many of the necessary changes contradict conventional planning, municipalities should begin a master plan revision with:

- an understanding of how current and future roads and land use, including road design and site plan standards, promote automobile dependency or encourage other forms of development and transportation;
- a re-examination of the goals of the master plan;
- a re-examination of the principles of the MLUL (many of which speak directly or indirectly to the clean air issue and include guiding development for the general public good, establishing



appropriate population densities, preserving the environment, providing adequate light, air and open space, conserving energy, and avoiding traffic congestion and blight);

- a thorough inventory of existing transportation and development, including roads, bikeways, walkways and public transit, and the location of homes, jobs, shopping, schools, services, recreation, as well as open space, historic sites and environmentally sensitive areas;

The first step for municipalities is to revise their master plan.

- “build-out” projections for population, traffic and the appearance of the municipality if everything is developed as zoned.

Inventories and maps for a review of the circulation element should include:

- **existing roads** (their classifications, widths, traffic counts and speeds, points and times of congestion and safety problems, their maximum capacity and whether this is adequate for build-out, a map highlighting cul de sacs and disconnected back roads that help force local traffic onto congested main roads);
- **planned road projects and proposed improvements**, including those to be sought from developers, either at specific projects or as generally recommended under the ordinances;

- **parking facilities** (the number of parking spaces that now exist and that current zoning requires in both residential and commercial districts, the location of on-street parking, and counts of the number of commercial parking spaces filled at average and peak times);

- **existing bikeways and pedestrian paths** (their widths, surfacing, bike racks, benches, lighting and other amenities, lists of obstacles, safety hazards or vandalism, descriptions of road crossings and intersections, including lights and signs for bicyclists and pedestrians and usage counts);

- **existing public transit** (commuter buses and trains, local para-transit routes, usage counts, descriptions of transit stops, a survey of van pools used by local commuters, and school bus routes);

- **any specific municipal measures aimed at reducing vehicular traffic or congestion.** The most typical and direct of these measures requires employers and developers to reduce traffic by providing bicycling and walking facilities, allowing workers to commute at non-rush hours or organizing ridesharing, adding transit stops, charging for SOV (Single Occupancy Vehicle) parking, or cutting back on the number of parking spaces.

Once the planning board has made and analyzed these inventories, it can rewrite the circulation element to emphasize clean air goals, including alternatives to automobile travel, and to recommend a road system that is in concert with the land use, conservation and historic preservation elements of the master plan.



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BIKEWAYS THAT WORK

Americans are wedded to their cars, but they are also ardent bicyclists. About half of all Americans ride bikes, and bike sales have surpassed auto sales every year since 1972.

But for bicycling to become a serious alternative to driving, like it is in Germany, Holland and Sweden, municipalities will have to dedicate more planning and funding to bicycle routes. The N.J. Department of Transportation's Bureau of Suburban Mobility has published a statewide bicycle/pedestrian master plan and a municipal handbook. The Bureau also offers some technical assistance, as does the National Park Service through its Rivers, Trails and Conservation Assistance Program. The first step in a good bikeway plan is to make an inventory of existing paths, rights-of-way and roads (with traffic counts), existing and future housing, shopping and job sites, and scenic or historic features. The next step is to distribute a questionnaire asking residents where and when they might bicycle or walk, what routes they recommend, what kind of bikeway they would prefer (separate paths or existing roadways), whether they might use rental bikes supplied at commercial or transportation hubs.

The bikeway plan should be included in the circulation element of the municipal master plan. A separate, more detailed document should specify routes and easements, connections with other forms of transportation (especially public transit), phasing and funding and proposed ordinances. (Developers of residential or commercial parcels can be required to provide good bikeways, which also can be required along all new roads.) The plan should also spell out approaches to these critical issues: design criteria, including crossing and intersection management. Proper widths,

slopes, visibility, curves, surfacing, lighting, maps and signs help make bikeways popular and safe. Traffic light timing, signs, pavement painting, or physical alterations to intersections and crossings may be necessary. NJDOT permits for these changes are usually fairly easy to get, although permits for physical alterations to the roadway can be more complicated.

Bikeroutes vs. Bikelanes vs. Bikepaths.

The type of bikeway helps determine how safe and attractive the system is. "Bikeroutes" usually refer to those mapped along existing roadways; "bikelanes" to those that reserve the road shoulder for bikes only; and "bikepaths" to separate trails, which may or may not parallel roads. Bikepaths usually cost more but keep bikes and cars separated better. Bikepaths that meander too much or that go through isolated areas may not be well used.

Bike Parking. Adequate parking facilities for bikes are a must. At destinations such as railroad stations or schools, bike racks can be concentrated in one area. In shopping or office areas, racks should be scattered to provide quick access to the various destinations.

Traffic Speed. "Traffic calming" strategies can help make bikeways safer by slowing down nearby automobiles. Among these strategies are: priority for bikers and walkers (including separate crossing lights); narrower traffic lanes and intersections; on-street parking; humps in the road or plantings in the middle of intersections; pavement painting to alert drivers to the bikeway. Well planned and well managed bikeways are also the least likely to have these problems because they are better used and better policed.



Two Municipalities' Plans

Harding Township

Harding Township revised its master plan in 1993 and recodified it in 1994 to clarify how the elements of the plan relate to one another. Although the circulation element is almost entirely about roads, it does emphasize the importance of the road network in defining the community and how roads relate to land use, conservation and historic preservation. The entire section is unique in being clearly organized around these principles and in recommending that conventional road "improvements" be minimized to protect Harding's character and quality of life.

Other municipalities include clean air issues more directly in their circulation elements but few attempt to analyze how roads define a community and to argue against the "more-and-better-roads" agenda.

Harding is designated an environmentally sensitive area in its own master plan and in the State Development and Redevelopment Plan; 40 percent of the township's 20.6 square miles is public land and the population is only 3,600. The goals and policies of the circulation element reflect the town's character and call for:

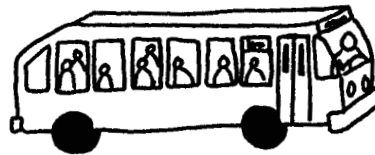
- controlling and limiting long-term public investment in roads and bridges for fiscal prudence but also out of an awareness of the impact of "over-designed" road improvements on the rural and historic character of Harding;
- maintaining existing roadways and bridges in their current configuration and design and building new roads in a similar configuration wherever possible. The roads should be small-scale, terrain-following, curvilinear, with pavement widths of 20-22 feet or 18 feet on "rural historic roads" (a classification introduced by Harding). Roads like this encourage walking and biking by limiting traffic speeds and creating attractive streetscapes.
- setting speed limits to suit the nature of existing roads and to protect wildlife, pedestrians

and cyclists; avoiding improvements (such as widening, straightening and adding shoulders) that encourage faster speeds; seeking reduced limits and lowered road classifications in some places;

- encouraging regional highway plans that minimize new through-traffic in the township.

Randolph Township

On the other hand, Randolph Township has 20,000 people in 22 square miles. Its circulation element, the longest chapter of the 1992 master plan, reflects the typical problems of a suburban,



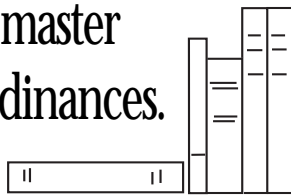
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commuter township with a lot of traffic. However, nearly a third of the chapter covers clean air issues, including inventories and maps of transit, bike and pedestrian systems and recommendations for:

- new commuter bus routes and also bus routes to a proposed town center development;
- increased shuttle bus service throughout residential neighborhoods, perhaps funded by merchants at commercial destinations, and from the train station to one of the municipality's large employment centers;
- bicycling and pedestrian networks throughout the municipality, made attractive by well designed streetscapes and public spaces and connected to public transit;
- strategies that link land use decisions and transportation policies, including traffic reduction ordinances for office and industrial sites, preferential parking for car-pools, developing commercial establishments in employment centers to keep workers out of their cars at lunchtime;
- a study of commuter traffic through the township that could be used to establish car-pools and a new park-and-ride facility to serve as a staging area for car-pools.

Making meaningful changes in a municipality's development patterns requires a thorough master plan and detailed ordinances.



Other elements in Randolph's master plan tie in with the clean air agenda — mixed-use centers (office, commercial and residential) with increased transit and reduced parking, "infill development" (building on scattered vacant sites in a built-up area) and open space conservation. The township has asked the Office of State Planning to designate a proposed mixed-use, compact development zone on Sussex Turnpike in Mt. Freedom as an official center under the State Plan. This center will require developers to add stops for future bus service and to consider flextime, vanpooling and other traffic management measures, including reducing the amount of parking.

Even though studies show that the average parking space in a commercial or office lot costs \$4,972 to build and \$955 each year to maintain (in multi-level parking, it is \$20,125 plus \$2,756 to operate) and that the average maximum parking lot use is only 67 percent, commercial developers have been reluctant to reduce the number of spaces.

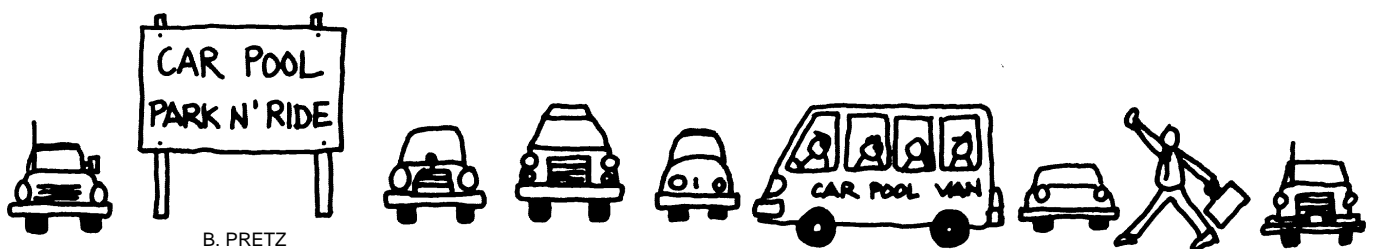
At another site where Randolph hopes to develop a regional center with Dover, Denville and Victory Gardens, Randolph's Assistant Planning Director David Troast counted average parking lot use during peak holiday shopping hours at only 60 percent. The regional center plan recommends that those unused parking areas be used as

commercial and office sites, the kind of infill development recommended to create centers that promote pedestrian and transit travel. There is a need for redevelopment in these vast parking lots and in the empty office and industrial space around New Jersey. Municipalities could rezone these areas for commercial and even residential use. This "land banking" has been an inadvertent benefit of sprawl development, saving sizable parcels in central locations for redevelopment as mixed-use centers.

Along with concentrating development in centers, Randolph is also looking to conserve open space. The township is one of the fastest growing municipalities in the region. "It's suburban yet rural, and that's what people want," says Mr. Troast.

The township's open space tax, passed in 1993 by referendum, generates about \$150,000 each year. Randolph will use it to buy parcels from a prioritized list directed at creating an open space network.

Making meaningful changes in a municipality's development patterns requires a thorough master plan and then detailed ordinances "to prevent developers from doing big isolated developments," advises Mr. Troast. Like other planners who want to see new approaches to land use, Mr. Troast has thought about some unusual possibilities. Citing a planning method used in some European countries, he says municipalities might buy the development rights on important parcels, make detailed plans for those parcels that meet environmental goals, and then sell back the rights to developers who could build only what the municipality has stipulated. This would work well for developers, Mr. Troast suggests, because they would know exactly what the development costs would be and not go through a lengthy process to get municipal approvals.



A FEW CAR FACTS

In addition to the direct expenses every car owner pays, the public pays for many other costs generated by our automobile-centered society. According to the Worldwatch Institute in Washington D.C., "The surest way to lessen overdependence on cars is to force drivers to bear more of the true costs of driving." By some estimates, if all these costs were reflected in the price of gasoline, drivers might have to pay \$4.50 a gallon. Here are some hard facts about motor-vehicle use.

Individual and Public Costs

Buying, running and maintaining a car costs the average U.S. driver about \$34 per 100 miles and takes 20 percent of the average household budget. The average public transport fare is \$14 per 100 miles.

Local governments in the U. S. spend roughly \$60 billion a year on auto-related services, especially police, fire and emergency calls; federal, state and local governments spend roughly \$70 billion to build, operate and repair roads and bridges.

Traffic delays cost \$73 billion each year in lost productivity—110 million commuters spend two billion hours in traffic jams.

In 1989, imported oil and automobiles accounted for 62 percent of the U.S. trade deficit.

Health Costs

Motor vehicle pollution is responsible for \$40-50 billion in medical costs and 85,000 premature deaths each year in the U.S. Almost half of all U.S. residents live in areas that violate federal air standards for auto emissions.

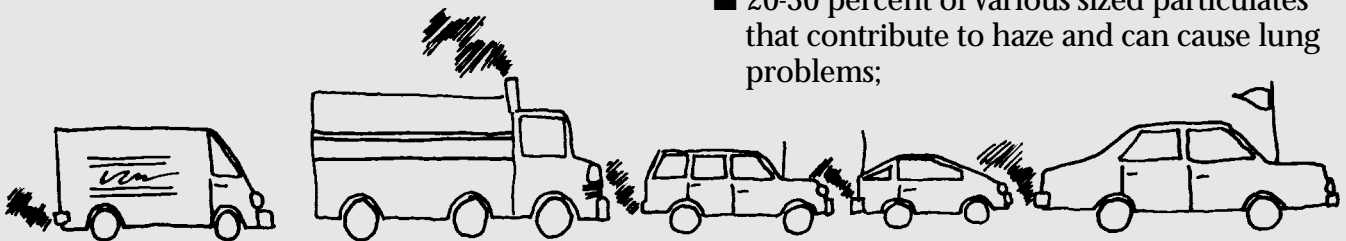
U.S. Automobile Dependency

The U.S. has 5 percent of the world's people and 36 percent of its motor vehicles. Each year, Americans drive more than two trillion miles (double the miles driven 20 years ago) and use about 500 gallons of gas per person; Europeans use 200. In the U.S., 82 percent of all travel is by automobile, 11 percent is by walking, and 3 percent by public transit. In Europe, 35-48 percent is by car, 30-50 percent by walking, 5-20 percent by transit.

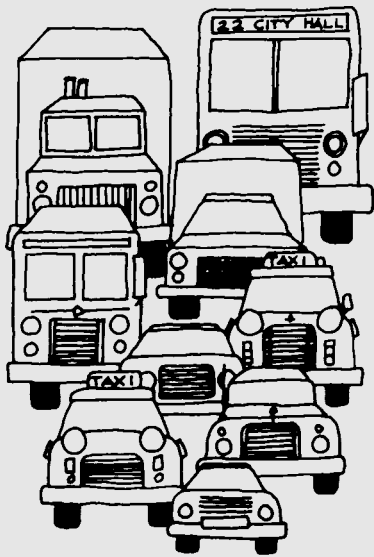
Pollution

Motor vehicles are the world's single largest source of air pollution, producing half of all U.S. air pollutants, including:

- more than 33 percent of carbon dioxide emissions, responsible for half the global warming "greenhouse" effect; the average U.S. household is responsible for 12,600 pounds of carbon dioxide emissions each year;
- 66 percent of all carbon monoxide (90 percent in some cities), which in low concentrations can cause dizziness, fatigue, headaches, irritability and in high concentrations, vomiting, collapse and death;
- 31 percent of all hydrocarbons and 43 percent of all nitrogen oxides, which combine in sunlight to form ground-level ozone, the major component of smog. Ozone can cause respiratory problems and permanent lung damage; hydrocarbons and nitrogen oxides also contribute to global warming; nitrogen oxides contribute to acid rain;
- 20-30 percent of various sized particulates that contribute to haze and can cause lung problems;



ILLUSTRATIONS BY BARBARA PRETZ



■ chlorofluorocarbons from vehicle air-conditioners that help destroy the stratospheric ozone layer, which protects earth from the sun's ultraviolet rays.

A commuter driving alone is responsible for

30-40 times more pollution than a rail commuter, four times more than a bus rider, and three times more than a commuter in a car pool. In New Jersey, 73 percent of all commuters drive to work alone.

Accidental spills dump 2.9 million barrels of oil into the sea each year—but roughly six times more oil reaches the oceans through flushing of carrier tanks, road runoff and everyday automobile use.

In the U.S. each year we discard nine million vehicles, 250 million tires and 80 million lead batteries.

Congestion

One subway line can move about 35 times more people than one lane of single-passenger automobiles.

From 1965 to 1987, New Jersey's population increased about 12 percent, the number of registered autos increased more than 80 percent.

From 1983 to 1990, the U.S. population increased 4 percent but the number of vehicle miles travelled increased 29 percent.

One half of all urban space is used to accommodate cars.

The Master Plan: Land Use and Conservation Elements

The circulation element must be carefully tied to the land use and conservation elements to prevent sprawl and the destruction of important natural lands.

The conservation element can target lands that should not be developed, aim to connect these lands in greenways to maximize their natural value, target areas for use as bike or pedestrian pathways, and help plan recreational areas that are accessible by bike or foot. These lands can be protected in several ways:

- by seeking permanent open space easements;
- by helping the owners apply for reduced property assessment under the state's Farmland Assessment program;
- by revising the zoning to enlarge lot sizes substantially in environmentally sensitive areas. The Office of State Planning will provide advice on how to substantiate the need for such "capacity-based zoning," which has been adopted in some municipalities and the Pinelands, with lot sizes as high as 10-40 acres;
- through an open space program funded by a municipal open space tax. State law allows municipalities and counties to impose a maximum open space tax of 2 cents per \$100 of assessed property valuation. Morris, Warren, Somerset, Mercer, Hunterdon and Monmouth counties have an open space tax, as does Randolph Township and other local municipalities;
- by seeking state Green Acres funding, perhaps in concert with local and county open space funding;
- through a voluntary Transfer of Development Rights (TDR) program that would remove development rights from conservation areas and transfer them to proposed centers.

Environmental limitations, such as slopes, water supply, septic soils and other well-documented features, may provide adequate legal bases for such zoning. Municipalities also can direct development toward or away from certain areas by carefully planning where services, especially sewers, are provided.

Environmental Commissions can initiate changes by recommending ordinances or transportation control measures or proposing steps toward bike, pedestrian and transit travel.

But the key is zoning for dense, mixed-use centers to accommodate walkers and public transit. Revisions of the master plan must be accompanied by revisions of zoning, subdivision and site planning ordinances to bring this change.

Environmental Commissions can initiate changes by recommending ordinances or transportation control measures, by reviewing development proposals and road policies or proposing steps toward bike, pedestrian and transit travel, such as:

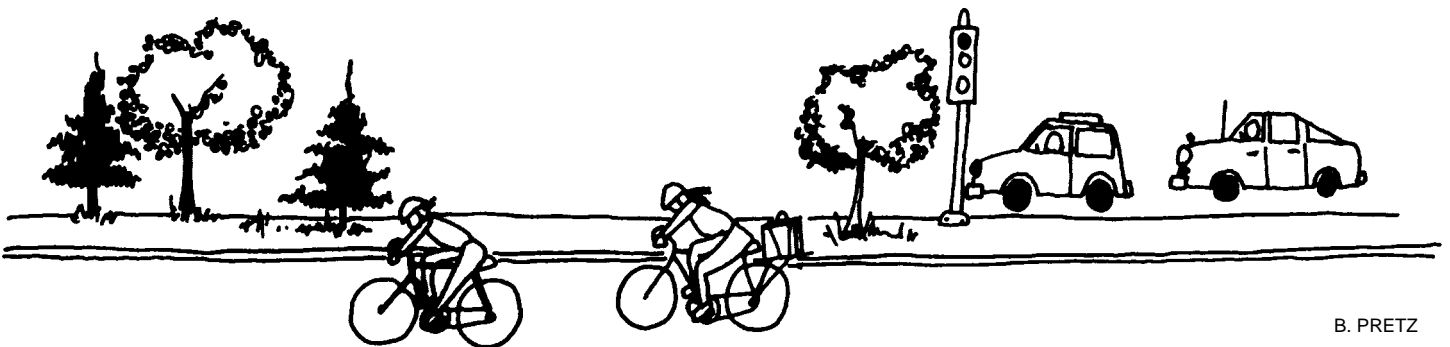
- downgrading road classifications and avoiding over-improvements to protect aesthetic, historic or environmental goals;
- encouraging road connections to help create a network to keep local traffic off main through-roads, as long as the connections don't spur unwanted land development;
- recommending alterations to existing commercial districts and to existing connections between neighborhoods and commercial centers to promote bicycle and pedestrian travel;

- calling for pedestrian and bike paths in all developments and on all new roads;
- working with federal, state and local park and recreation organizations and with school boards to promote connected open space and walking and biking;
- helping educate residents, businesses and employers, and municipal officials, including offering visual images of what pedestrian- and transit-friendly development looks like;
- using surveys to raise awareness about bicycle and pedestrian paths.

Clean Air and More Livable Communities

The land use element in the master plan should be redrawn to create dense, mixed-use centers along major or proposed transit routes and to reduce densities as distances from the center increase, leaving greenbelts and open space in important natural areas.

Professor Nelessen recommends rewriting the master plan and mapping the municipality in a series of circles, each a "pedestrian precinct" with a transit stop. The land in those centers would be automatically granted the right to be changed to mixed-use development. This redrawing would pertain to new and existing development, allowing changes of use and infill building to help retrofit sprawling communities according to clean air goals.



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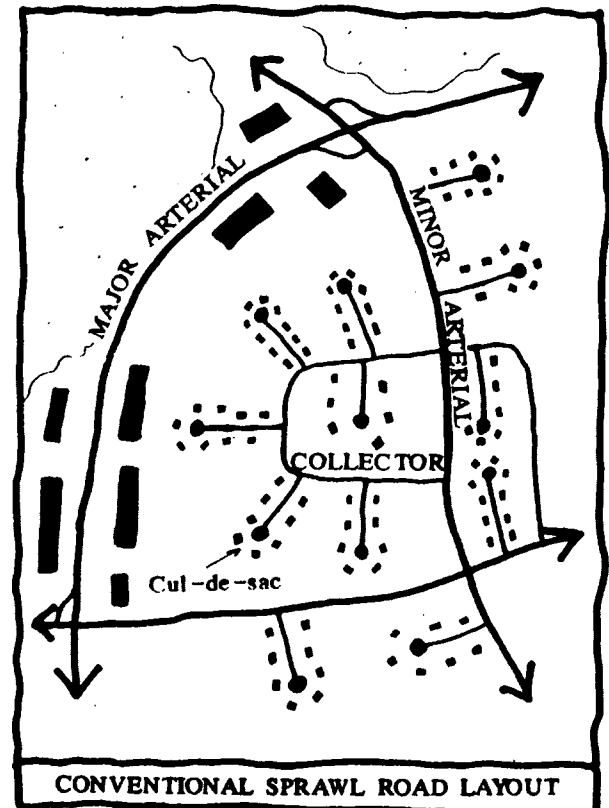
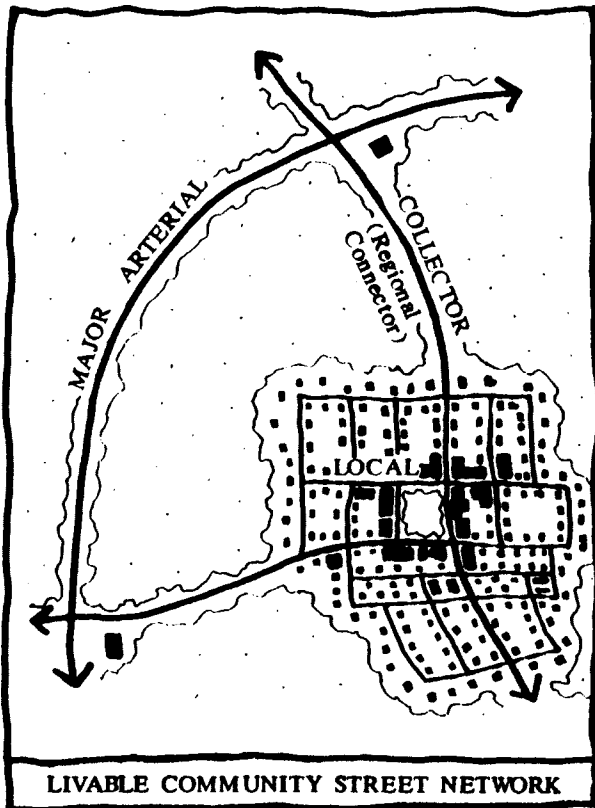


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Comparison of Two Street Networks, from *Visions for a New American Dream*, by Anton Clarence Nelessen

The size of a development center should be based on the average distance a pedestrian will walk, usually estimated at five minutes or 1,000-1,500 feet (or 10 minutes for children walking to school). Based on this measure, centers should not exceed 162-230 acres. Centers and outlying neighborhoods must be designed for the pedestrian rather than the automobile. (*Some References* includes books that provide extensive studies and detailed recommendations, including the size and nature of centers, the necessary jobs-to-housing ratio to make centers work, the redevelopment of existing sprawl and various design details.)

Redrawing land use areas provides the basic plan, but new land use ordinances, including detailed design standards, are necessary to create communities that offer real alternatives to automobile-oriented development.

Often people don't really like what they get out of zoning laws. All the test surveys say people like centers, but present zoning ordinances don't

allow them to be built. Planners have to visualize the development that will occur if things are done one way or the other. The master plan can include images of what the community should look like, to make sure the ordinances will produce it.

The size of a development center should be based on the average distance a pedestrian will walk.

Nelessen uses a Visual Preference Survey (VPS) to help municipalities initiate new approaches to development. He finds that few planners or citizens are able to visualize what kind of community their current planning and zoning will produce. By seeing images of development ranging from typical post-50-through-90s sprawl to typical pre-40s neighborhoods, most people

intuitively prefer what is no longer built. The VPS produces a model that is more intimate, livable and walkable, a community that would help resolve clean air problems. It is compact with mixed-use neighborhoods, where walking, biking and public transit are the best ways to get around.

After remapping land use in “pedestrian precincts,” the next step is a thorough redesign of neighborhoods, streetscapes and public places. These recommendations, like those from many other planners, would reverse standards that have been conventions for decades.

In residential areas:

- narrower lots (as narrow as 30-35 feet);
- smaller front setbacks (as little as 5-10 feet);
- garages at the back of houses and porches on the front, with fences, hedges or walls along the sidewalk;
- narrower streets (as little as 18-24 feet);
- street trees every 30 feet or less;
- a planted area between sidewalk and curb.

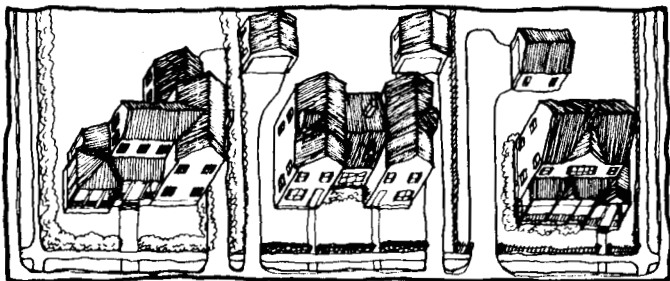


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For commercial as well as residential areas:

- traffic lanes nine feet wide — once a car is in a lane wider than nine feet, it goes faster, the noise is greater and pedestrians feel less safe;
- parallel street parking on all streets, except freeways, to slow traffic and produce a more attractive pedestrian environment;
- streets that terminate or come to a visual point every 600-1,000 feet;
- reduced curb radii (sight distances) at intersections to allow pedestrians to cross more

To help bring about local clean air policies, municipal officials need to participate in regional transportation planning.

safely — instead of the conventional 35-44 foot radius, to as little as a four to eight foot radius;

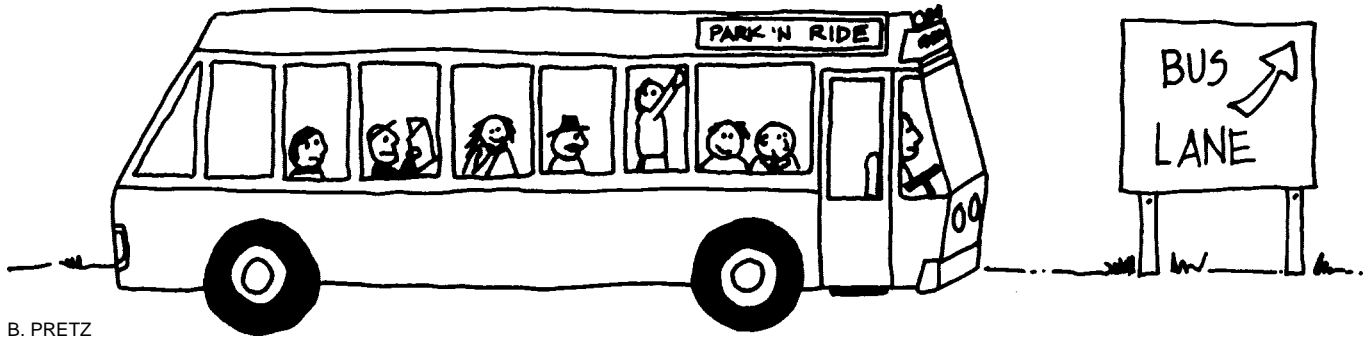
- other strategies to give preference to pedestrians (or bicyclists), “the power of paint” to mark pedestrian or bike routes or to restripe for narrower traffic lanes and parking spaces;
- other “traffic calming” measures to slow cars and reduce the noise and danger to pedestrians — for instance speed bumps or plantings, including planted circles in the middle of intersections.

Local Participation in Regional Planning

To help bring about local clean air policies, municipal officials need to participate in regional transportation planning. Harding Township is seeking lower speed limits, reduced road classifications and limitations on future through-traffic in the township, all of which require county or state cooperation. Randolph is seeking new bus routes and questioning whether the state’s proposal to widen a two lane road to four lanes will interfere with plans for a new town center there.

The 1991 federal Intermodal Surface Transportation Efficiency Act (ISTEA) calls for more local participation in regional and statewide transportation planning, but the law does not specify how it is to be done.

Under ISTEA, New Jersey has three Metropolitan Planning Organizations (MPOs) vested with the authority to adopt transportation plans



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and programs and determine how the state's capital and operating transportation budgets are allocated. Some planners warn that unless local groups participate in MPO discussions, transportation planning will result in automobile-oriented programs that promote sprawl.

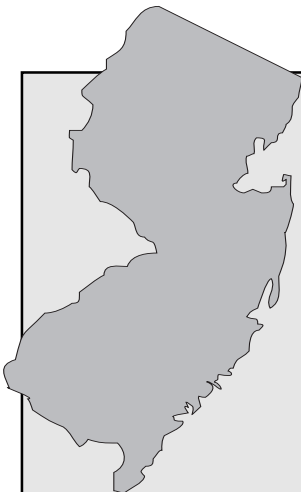
Environmental Commissions and concerned citizens should get themselves on the mailing list of the MPO for their region, get to know MPO staff and attend meetings when possible. (*Some References*, pages 14-15, has addresses and phone numbers of New Jersey's three MPOs.)

It's Time to Change

Municipalities who are reluctant to change the way they develop and continue to build for the automobile will hurt themselves and their neighbors. Local traffic problems will grow as gridlock becomes a common state and New Jersey will be prevented from cleaning up its air.

Waiting for the state to build more roads to relieve the congestion is no longer a possibility. A new approach to land use planning is the long-term solution. It should begin sooner than later.

Municipalities who are reluctant to change will hurt themselves and their neighbors and New Jersey will be prevented from cleaning up its air.



THE STATE PLAN

The State Plan's central goals are to conserve resources and provide affordable services and housing. The strategies are basically the same as clean air strategies, promoting compact development in centers and encouraging non-automobile travel.

Municipalities can get help revising their master plans from the four Area Planning Managers in the Office of State Planning, listed in *Some References*, pages 14-15.

SOME REFERENCES

Publications

ANJEC's Resource Center has many books and articles on municipal planning and clean air. Here are a few, including several from municipalities around the country that are redesigning development to promote alternatives to automobile travel. Most of these references also contain lists of further reading:

Alternatives to the Automobile: Transport for Livable Cities, by Marcia D. Lowe, Worldwatch Institute, Washington D.C., 1990, emphasizes the need for economic incentives to discourage the use of automobiles.

Bikeways: Design-Construction Programs, by Temple R. Jarrell for the National Recreation and Park Association, Arlington, Virginia, 1974, very detailed recommendations.

The Bicycle Planning Book, by Mike Hudson, Open Books/Friends of the Earth, London, 1978, an older book and directed at England but useful.

A Collaboration: Transportation, Clean Air, Land Use, by David Troast, May 1992, master's thesis on the Clean Air Act, ISTEA, and the State Development and Redevelopment Plan, discusses mixed-use or compact centers, bikeways, municipal purchase of open space.

The Environmental Manual for Municipal Officials, ANJEC and NJDEPE, 1992, describes the municipal master plan, the powers of the various local boards and commissions, and has a section on clean air.

Five Steps to an Effective Regional Transportation Plan, by Bruce Hammond for the Natural Resources Council of Maine, 1994, describes what regional transportation advisory committees are doing and has good bibliographies at the end of each chapter.

Keeping Our Garden State Green: A Local Government Guide for Greenway and Open Space Planning, by Linda Howe, ANJEC Greenways Director, NJDEP and ANJEC, 1989, gives the benefits of greenways and how communities can preserve them.

Land in America: Its Value, Use and Control, by Peter Wolf, Pantheon Books, N.Y., 1981.

Land Use Strategies for More Livable Places, by the Local Government Commission of Sacramento, California, 1992, contains a very good bibliography.

Land Use, Transportation and Air Quality: A Manual for Planning Practitioners, the San Bernardino, California, Land Management Department and The Planning Center, 1993, includes a list of 101 ways to get people out of their cars.

Managing Transportation in Your Community: A Municipal Handbook, the N.J. Department of Transportation, 1992, step-by-step description of the master plan/ordinance process with technical information,

but some planners say this manual continues to promote sprawl development.

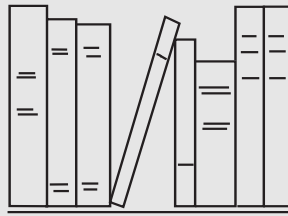
North Brunswick's Traffic Ordinance: Model for Other Communities, by Michael Kish, M.P.A., *ANJEC Report*, Spring 1991.

Suburban Mixed-Use Centers and Transportation, by Donna Bender, Senior Research Associate, for the MSM Regional Council, 1990, good general information and specific plans for the Route 1 corridor; contains a good bibliography, including many technical studies on transportation and demographics.

Transit-Oriented Development Design Guidelines, by Calthorpe Associates for the City of San Diego, 1992.

Transportation Action Guide: Fair and Sustainable Mobility in the 1990s, by Rob Kennedy for the Environmental Defense Fund and Wisconsin's Environmental Decade, 1993, contains a good bibliography and a list of groups involved in transportation and clean air issues.

Visions for a New American Dream: Process, Principles, and an Ordinance to Plan and Design Small Communities, by Anton Clarence Nelessen, The American Planning Association, Chicago, IL, 1994. Mr. Nelessen is associate professor of planning and public policy at Rutgers and president of

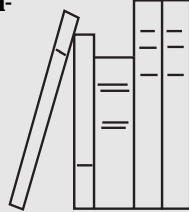


SOME REFERENCES

A. Nelessen Associates, Inc., a planning firm that helps communities in New Jersey and elsewhere redesign for pedestrian and transit travel.

The **ANJEC Resource Center** also has vertical files, with a good file on BIKEWAYS, including: **Guide for Development of New Bicycle Facilities** (1981) by the American Association of State Highway and Transportation Officials; NJDOT's **Bicycle Compatible Roadways: Planning and Design Guidelines** (1982); and several articles.

Organizations and Government Agencies



The National Transit Institute at Rutgers, New Brunswick, 908-932-1700, helps in redesigning communities for transit use and clean air.

New Jersey Department of Transportation Enhancement Program, Trenton, 609-530-8329, determines recipients of ISTEA (federal Intermodal Surface Transportation Efficiency Act of 1991) funding through application process. Deadline is in late fall with between \$6 and \$11 million available annually. The process is very competitive and funding is in the form of reimbursement for capital improvements, not operation or administration.

New Jersey Department of Transportation Bureau of Suburban Mobility, Trenton, 609-530-8062, promotes alternatives to SOV (Single Occupancy Vehicle) travel, publishes Community Resource Manual on developing municipal biking and pedestrian plans, encourages statewide ridesharing data base at 1-800-245-POOL, and develops park-and-rides. This bureau also funds the seven New Jersey Transportation Management Associations which help employers coordinate ridesharing and other traffic reduction programs:

- MC Rides, Morris County;
- Monmouth TMA, Keep Middlesex Moving;
- Meadowlink, Meadowlands;
- Greater Princeton TMA, parts of Somerset, Mercer, and Middlesex counties;

Ridewise of Raritan Valley, Somerset County;
Cross-County Connection, Burlington and Camden counties.

New Jersey Department of Transportation Traffic Engineering and Safety, Trenton, 609-530-3049, redesigning for pedestrian and bike traffic.

Office of State Planning, 609-292-7156: Area Managers for NORTHWEST AREA - Sussex, Warren, Morris, Somerset, Hunterdon; NORTHEAST AREA - Bergen, Middlesex, Hudson, Union, Essex, Passaic; SOUTHWEST AREA - Mercer, Burlington, Camden, Gloucester, Salem; COASTAL AREA - Monmouth, Ocean, Atlantic, Cape May, Cumberland; supplies technical assistance to municipalities and counties to help them coordinate their activities with the State Development and Redevelopment Plan.

National Park Service Rivers, Trails and Conservation Assistance Program, Hyde Park, N.Y., 914-229-9115, technical assistance to establish trails, greenways and riverways and to help write applications for ISTEA funding.

Metropolitan Planning Organizations - prepare Transportation Improvement Plans that detail state transportation planning and funding. MPOs assume federally funded long-range transportation planning including ISTEA funds. Municipalities, individuals and public interest groups should participate at MPO meetings to make their wishes known. For information, call the NJDOT's Authority Coordination Office, 609-530-2860, or contact your MPO directly:

North Jersey Regional Planning Authority, 153 Halsey St., 7th Floor, P.O. Box 47022, Newark, 201-645-8700 - Sussex, Warren, Hunterdon, Morris, Passaic, Bergen, Essex, Hudson, Union, Somerset, Middlesex, Mercer, Monmouth counties.

Delaware Valley Regional Planning Commission, 21 South 5th St., The Bourse Building, Philadelphia (a bi-state MPO), 215-592-1800 - Gloucester, Camden, Burlington, Ocean counties.

South Jersey Transportation Planning Organization, 640 East Wood St., Vineland, 609-794-1941 - Salem, Cumberland, Atlantic, Cape May counties.

The ANJEC RESOURCE CENTER offers the following services to all citizens:

- unique reference collection of more than 6,000 books, pamphlets, documents and government publications ranging from academic texts to environmental resource inventories;
- more than 1,100 individual current material files covering topics from acid rain to zoning;
- extensive material and files on state and federal laws including current legislation and regulations;
- extensive file of municipal and model ordinances covering topics such as air and noise pollution, critical areas protection and hazardous materials;
- extensive file on chemicals and hazardous substances;
- extensive file of newsletters from national, federal, state and county groups and organizations;
- response and referral center for requests and questions for information and materials relating to local, state and national environmental issues, problems and projects.

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ANJEC is a statewide non-profit organization that informs and assists environmental commissioners and interested citizens in preserving and protecting New Jersey's environment.

For further information, contact ANJEC at

P.O. Box 157, Mendham, NJ 07945, 201-539-7547, FAX 201-539-7713

or

P.O. Box 61, Titusville, NJ 08560, 609-737-7263, FAX 609-737-7264

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