MILAN: TRANSPORT POTENTIAL

FAST FACTS		Similar To
Metropolitan Area Population	5,600,000	Dallas-Fort Worth, Madrid
Urban Area Population*	3,685,000	Atlanta, Barcelona, Sydney
Urban Land Area: Square Miles	590	Kansas City, Mexico City, Montreal
Urban Land Area: Square Kilometers	1,520	
Population per Square Mile	6,275	San Francisco, Brussels, Sydney
Population per Square Kilometer	2,420	
*Continuously built up area		

30 March 2005

Milan is Western Europe's fourth largest metropolitan area, trailing only Paris, London, the Rhine-Ruhr (Essen-Dusseldorf) and Madrid. That makes it Italy's largest urban area, and though Rome is the nation's political capital, Milan is no doubt the commercial capital. Milan is the capital of Lombardy, which is a part of the affluent north of the country. Few parts of Western Europe are more affluent.

The core is one of Europe's gems. The cathedral is one of the largest and most distinctive. The Gallery Vittor Immanuel is a 19th century forerunner of the enclosed shopping mall.

But Milan has changed radically in recent decades, and the change continues. Since 1970, the core municipality (commune) of Milan has lost more than 400,000 residents. Only three other central cities in the world have lost that many residents over a similar period of time, Detroit, and much larger Chicago and Paris. Milan has lost nearly one-quarter of its population. At the same time, as Italy's population stabilizes, the suburbs of Milan continue to grow.

Depending upon the definition, the Milan metropolitan area has between 5,000,000 and 8,000,000 residents. Only 1,250,000 live in the core municipality of Milan. Milan's suburbs are of a design somewhat between that of the United Kingdom and Germany. Land use regulation has been used in such a way that much of the suburban growth has occurred adjacent to the developed part of villages that are separated from Milan. Thus, there is, at least among the middle and outer suburbs, something of an urban splatter, as well as the urban sprawl that characterizes the city and adjacent suburbs. This means that there is considerable open space in the Milan metropolitan area, with distances of perhaps one kilometer separating pockets of, or more correctly, exurbanization. Most of the suburban development is to the north, west or east of

the city, while little is to the south, where much of the land is legally preserved. At the same time, the natural direction for suburban development was north, given that the Alps are within 30 miles. The south face of the Alps, like the east face of the Sierra Nevada in California or the Rocky Mountains in Canada or Colorado, is very steep. One of the world's most picturesque sites is Lake Como, on which the exurban community of Como is located. A quick stunning view can be caught from the Autostrada just before crossing the Swiss border, but the city is well worth a visit.

Milan is a clear challenger to London as the world leader in "leap frog" development. Interestingly, both urban areas are characterized by what is probably the world's most extensive non-contiguous development, and it appears largely to have been driven by urban planning. This, of course, violates a fundamental tenet of urban planning theology --- that leap frog development is evil (Actually market based leap frog development plays an important role in keeping residential land prices low, making housing more affordable, increasing home ownership rates and creating more wealth.)

The developing villages are much closer than is generally found in Germany, where most of the metropolitan population growth has been in exurban villages.

A cursory review of the area by new urbanists who believe that we should all live as if in a romanticized 1900 American small town might find Milan's exurbs attractive. They have village cores, where to use the hackneyed phrase, one doesn't have to burn a liter of petrol to buy a liter of milk. And, indeed, the odd liter of milk may be sold to people who walk to small stores in the core from their nearby homes. But when they need to shop --- seriously shop --- they to the local Wal-Marts, Carrefour, Gigante or Auchan. In these stores will be found a selection of goods rivaling anything in the world, and at prices that are lower than the village shops. So, while one may see a few people walking with small bags from the village stores, there is little evidence of households lugging 100 or 200 Euros worth of groceries home on foot or bicycle. That function is performed by the car, and increasingly the sport utility vehicle and it is made many kilometers to the commercial centers, which are fewer in Milan than in similar sized urban areas in the United States or Canada, but generally larger. Further, no new urbanist should think that the residents of the villages work there, so that there is a favorable jobs-housing balance. Like their English counterparts, the residents of Milan's exurbs travel to jobs throughout the urban area. In the contiguous core, approximately 80 percent of travel is by car. But including the exurbs, which double the population, the share of travel in the metropolitan area by car appears to be 90 percent or more.

Without a greenbelt, the exurbs are closer together than in the London area, as the one-kilometer spacing would indicate. This spatial arrangement creates two advantages for Milan. The first is that people in Milan are able to access more of the urban area for employment, because they do not have to cross a ten mile wide greenbelt, or a greenbelt of any width for that matter. As a result, many more of the area's jobs can be reached in 30 minutes or 60 minutes than in the Southeast England (London) metropolitan area.

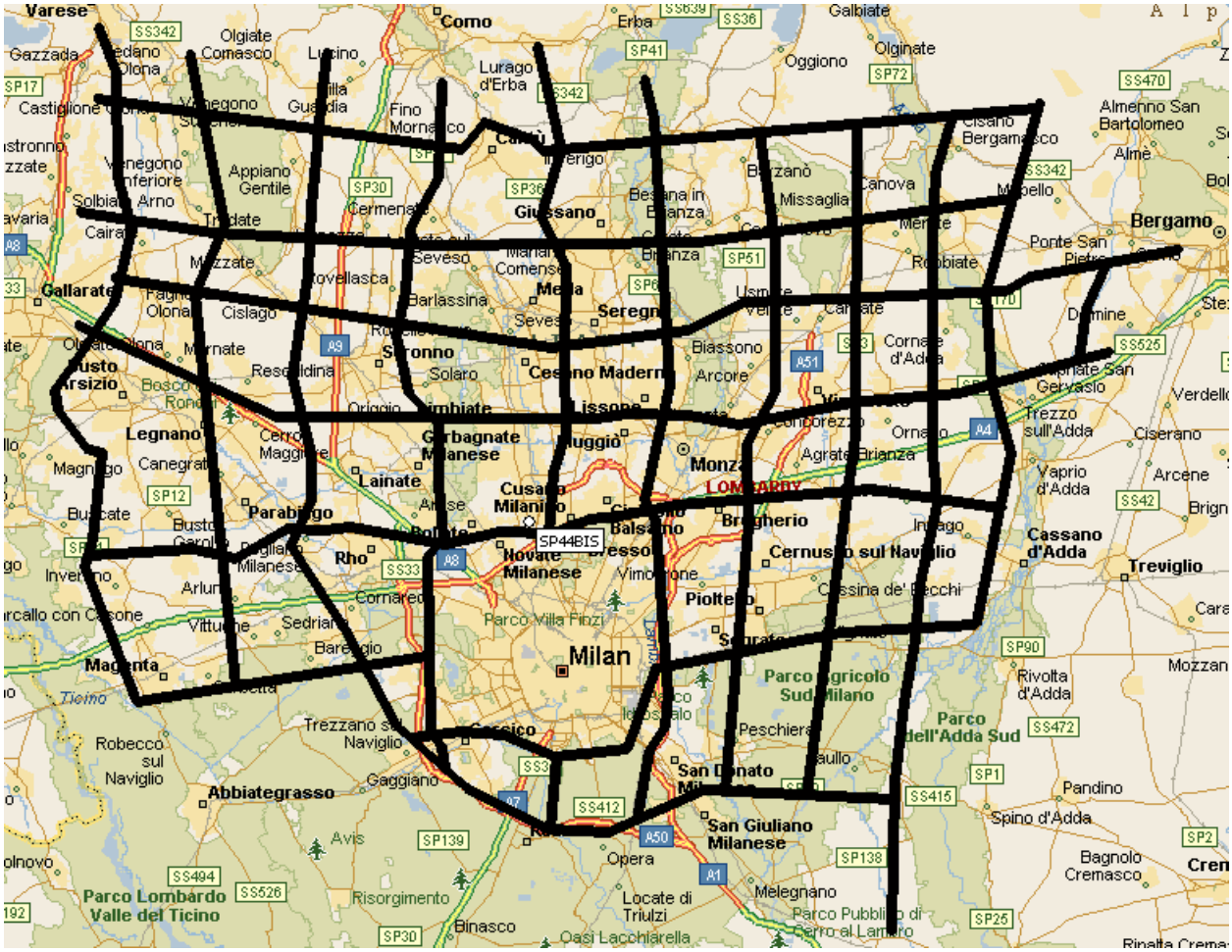
The second advantage may not have yet dawned on local officials. Because the exurbanization is separated, there are dozens of undeveloped corridors that could be used to improve

transportation. This is an important issue, because traffic congestion in the historic village cores is substantial, because the road systems were not built with sufficient capacity to handle the growth that has occurred. Some might suggest that these corridors could be best used by rail lines or busways. They could not be more wrong. Urban areas the geographic size of Milan can only be efficiently served by cars and highways. Indeed, the core can be served well by mass transit modes, and Milan is well served by a core-oriented rail system. But for the complex, near random pattern of origins and destinations in the area, there is no mass transit system that could conceivably do the job for any price that could be afforded. Milan's suburbs could well have an opportunity to develop a regional high capacity roadway system using only small parts of the available corridors. This does not mean a freeway system. Milan has a serviceable freeway system --- not good, but not the worst.

But as the experience of Atlanta demonstrates, urban areas cannot live on freeways alone. In 2000, I proposed that Atlanta build a regional one-mile express street grid in a report for the Georgia Public Policy Foundation. Since that time the Atlanta Regional Commission has adopted plans for such a system, though on a less dense grid.

Milan has the potential for development of such a system, which would be grid based in concept, which would generally follow available corridors. The grid arterial system would be virtually all new and should be built in a minimum configuration of four lanes (two in each direction). Right of way should be reserved for eventual expansion to eight traffic lanes (four in each direction) where that capacity is not yet required. All intersections should either be grade separated or should force left turns through right side loops, similar to the pattern on US-1 and US-22 in northeastern New Jersey, so that there are no left turns. Some tunneling would be necessary where corridors are discontinuous or where there are sensitive lands, and some current freeways rights of way would need to be shared (tunnel or overhead). The result would be to free the village cores of traffic congestion, while greatly improving mobility throughout the metropolitan area in the only way this can be accomplished --- with highways (Figure: Conceptual Express Street Grid). Such a grid would fit travel patterns well, which are increasingly random throughout the area.

One major factor that differentiates European suburbs from their American cousins is that their generally below capacity roadway systems result in unnecessarily high automobile emissions, and one can, as it were, smell the automobile exhaust at an intensity often not even experienced in American cores, much less suburbs. Such a system would also reduce air pollution. My friends, air pollution experts Joel Schwartz and Francesco Ramella will argue that air pollution will get much better anyway, as it has in the past. But even much improved pollution levels are less than tolerable where automobile traffic is unnecessarily concentrated, as in the Milan suburbs. My more substantial experience with 1960's Los Angeles air (as a college distance runner) wasn't much worse. Of course, things are much better now in Los Angeles, and they can be in Milan too.



Conceptual Express Street Grid

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For the most part an express street system would exclude the city of Milan, due to the high cost and disruptiveness of placing new streets in such a highly urbanized area. Milan will soon been less than one-fifth of the metropolitan area and represents a declining share of employment as well. Further, the city itself has a comparatively effective street system, including very wide boulevards and some double deck streets. It is in the city where public transport investment should be concentrated and where it can be more productive, along with the suburban rail routes that serve the central business district. The more peripheral areas of the city and the suburban and exurban areas are best served by an improved roadway system.

Throughout both the adjacent suburbs and the non-contiguous exurbs are single-family detached housing, two-family housing and low rise multiple units. In the city and the adjacent suburbs there are also many high rise residential buildings. And, they tend to be surrounded by parking lots. Generally, it appears that the penetration of single family detached or two-family housing has not reached the levels typical of France or the United Kingdom, with a larger share of people living in multiple units.

But the geographic scattering of the urbanization makes the higher density of suburban development of little account from a transportation planning perspective. The Milan area is

automobile dependent, because there is no way for such a broad expanse of urbanization to be anything else. It is no easier for residents of high-rise buildings in high density areas to reach jobs and shopping throughout the area than it is for residents of low density areas who live in detached housing.

The jobs are suburbanizing and exurbanizing as well. The strongest commercial core remains in Milan, but large “edge cities” are developing on the fringe of the city. There are new high rise office buildings in the south, near Corsico, and significant development at Port Corvetto, outside the city on the east side. Then, of course, there are the low rise employment sites that are not so obvious spread throughout the metropolitan area.

There is more that is changing in the Milan area. A high speed rail system is under construction from Turin to Bologna. Heavy construction is underway on the A4 motorway, to the west of the urban area. The line is being built immediately to the south of the motorway, which means that all of the bridges have to be rebuilt. The scale of the reconstruction is massive. The old bridges were just wide enough to accommodate the six motorway lanes. The new bridges are far wider, and appear to be far longer than necessary to cross both the highway and the high speed rail line, perhaps even wide enough to cross a Paris or Toronto freeway. One wonders whether the full cost fares that the European Union requires be charged will include the full cost of this reconstruction, which would not have otherwise been necessary. Doubtless this will be of interest to discount air carriers.

Perhaps even more interesting, however, is the extent of development along the A4, easterly toward Venice. Between Carugate and Bergamo, much of the adjacent land has been developed for commercial purposes, largely freight and logistic facilities. The development continues, with a few small interruptions until a point 70 kilometers from the core of Milan. This development is similar to what will be found outside Madrid on the motorway to Zarragoza.

Finally, the urban planners of the Milan area are due a compliment. Having traveled to and driven in all but a couple of the high-income world’s largest urban areas, I know of no place with better road signage. Nearly always there are clearly readable street signs at each intersection. One does not have to drive far to find the helpful green signs that point to the Autostradas (motorways). It can only be hoped that some day signs will also point to a grid network of high capacity arterial streets that could make Milan the most mobile urban area in Western Europe, and with the exception of the core, more mobile than most urban areas in North America.

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Lazzate

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Buccinasco

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Buccinasco

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Corrugate
CAROSELLO

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Corrugate

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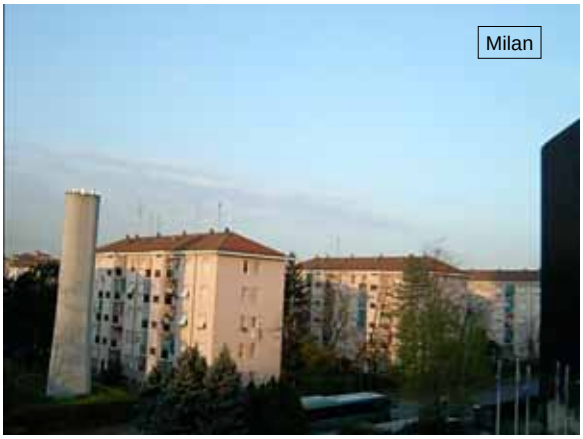

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