

# CNU XVI – Education Task Force – Call for Papers

1. Your paper's title: **New Urbanism and New Pedestrianism in the 21<sup>st</sup> Century**

2. ABSTRACT: New Pedestrianism (NP) takes what has been learned from new urbanist projects, and then revives and expands upon some old pedestrian-oriented experiments in urban design that have become increasingly relevant. At the same time, NP anticipates the rapidly accelerating pace of science and technology. New pedestrianism is an attempt to bridge the gap between the automobile age and the information age by building towns for the future that meet everyone's needs.

Reviewer use only

Illustrations incorporated into the text in are strongly preferred, however they can be sent as additional attachments with the email so long as they do not exceed a total of 5mb.

2. Paste your paper into this document.

New urbanism (NU)<sup>1</sup> and new pedestrianism (NP)<sup>2</sup> respectively draw upon old urbanism and old pedestrianism for inspiration. New urbanism revives and expands on principles of town planning that were ubiquitous prior to WWII, while new pedestrianism is a further iteration of lesser-known, pedestrian-oriented experiments. Examples of where pedestrian networks were built completely separate from streets include the “walk streets” and canal lanes in Venice, CA (c.1910), San Antonio’s *Paseo del Rio* (1929), and most notably, Radburn, New Jersey (1929).<sup>3</sup>



Walk-street in Venice, CA.<sup>4</sup>

Pedestrian-oriented designs probably did not take hold for these reasons:

1. Lack of development from 1929 to 1946 due to depression and WWII.
2. Growing infatuation and dependency on the automobile.
3. The flight to the suburbs.
4. Persistence of traditional street patterns.
5. Traffic engineers and transportation agencies began designing towns.
6. Walking or biking became marginalized, or done mostly for recreation in designated areas.

Additionally, some NU planners have held the position that vitality and safety is gained by combining cars, bikes, and pedestrians on one corridor,<sup>5</sup> even though the presence of cars

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<sup>1</sup> <http://www.cnu.org>

<sup>2</sup> [http://en.wikipedia.org/wiki/New\\_Pedestrianism](http://en.wikipedia.org/wiki/New_Pedestrianism)

<sup>3</sup> <http://www.radburn.org>

<sup>4</sup> Unless otherwise noted, all photographs and illustrations are by the author. Note that the walk-street in Venice, CA is not wide enough for both pedestrians and cyclists.

tends to drive away pedestrians and cyclists. New pedestrianism addresses this, as well as other current and future issues:

1. Cities are dominated by the sight, smell, sound, and dangers presented by cars. They are ugly, dysfunctional, unsustainable, unsafe, and unhealthy.
2. Health: Two-thirds of Americans are now overweight or obese, and weight-related medical issues cause 112,000 excess deaths per year in the U.S.<sup>6</sup> A 2003 study estimated the economic costs at \$92.6 billion, which includes 9.1% of all U.S. health costs.<sup>7</sup> Having car-free lanes in front of every building would make it easy and fun to walk off the excess pounds.
3. Safety: Automobile accidents kill and injure over 3 million people each year in the U.S. with car insurance costing around \$243 billion.<sup>8</sup> This does not include the cost of oil dependency, resource wars, pollution, global warming, lost productivity, and other issues.
4. Fully immersive virtual reality will soon make cyberspace the dominant reality. Because of this trend, we should focus on making an ideal, sustainable physical world that will compete with cyberspace and help maintain the body.

The old pedestrianism usually existed in niche applications, isolated within a car-centered city, allowing few provisions for connectivity. Usually the walk-streets or lanes were only wide enough for pedestrians, and they were more oriented toward recreation, rather than purposeful travel. The most common form of old pedestrianism is the bungalow court, many examples of which still exist. While still charming and much sought after today, they usually exist as pedestrian islands with the pedestrian-oriented features ending at the streets that surround them. The best connectivity can be found at Radburn, where superblocks were created with a central park that was almost like an expanded bungalow court. These superblocks were joined up with pedestrian underpasses.

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<sup>5</sup> The claim of safety is related to violent crimes and robberies against persons, not traffic-related safety. The idea is that people in cars can observe and deter criminals from preying upon cyclists and pedestrians. The problem with that idea is that streets designed for cars discourage alternative travel, so that a lone pedestrian often feels even less secure, especially since criminals drive cars just as much as anyone else. Pedestrian lanes would be better in this regard for at least four reasons: 1. Residences would be closer to the pedestrian lane, encouraging social interaction from their front porch or from the front garden. 2. It is more likely that residents will consider the linear park in front their home to be an extension of their living room and take a greater interest in what's going on outside than if they faced a street full of cars. 3. More people would be walking and cycling. 4. Cars would be killing fewer passengers, pedestrians, and cyclists.

<sup>6</sup> Flegal KM, Graubard BI, Williamson, DF, Gail MH. Excess deaths associated with underweight, overweight, and obesity. *Journal of the American Medical Association*. 2005; 293(15):1861-7.

<sup>7</sup> Finkelstein EA, Fiebelkorn IC, Wang G. National medical spending attributable to overweight and obesity: How much, and who's paying? *Health Affairs Web Exclusive*. 2003; W3:219-226. Available at <http://content.healthaffairs.org/cgi/content/full/hlthaff.w3.219v1/DC1>.

<sup>8</sup> 243 million U.S. vehicles x \$1,000 in annual insurance = \$243 billion. This does not include the wide range of other costs associated with automobile travel.

Bungalow courts have made a comeback in recent years. Examples include “cottage homes” in Washington State, and “Phoenix Court” in DeLand, FL, which is incorporated into the redevelopment of a former slum neighborhood into a pedestrian friendlier neighborhood.



Cottage homes<sup>9</sup>



Phoenix Court in DeLand, FL. Before and After:<sup>10</sup>

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<sup>9</sup> “Umatilla Hills” This bungalow court in Port Townsend, WA has homes from 1,000 to 1,200 sq. ft. The rest of the subdivision has streets with alleys. The bungalow court sold out first.

<sup>10</sup> Phoenix Court was part of a neighborhood revival that I led from 2000 to 2007. Once known as “Cracktown,” I renovated 30 homes and businesses and renamed the neighborhood The Garden District.

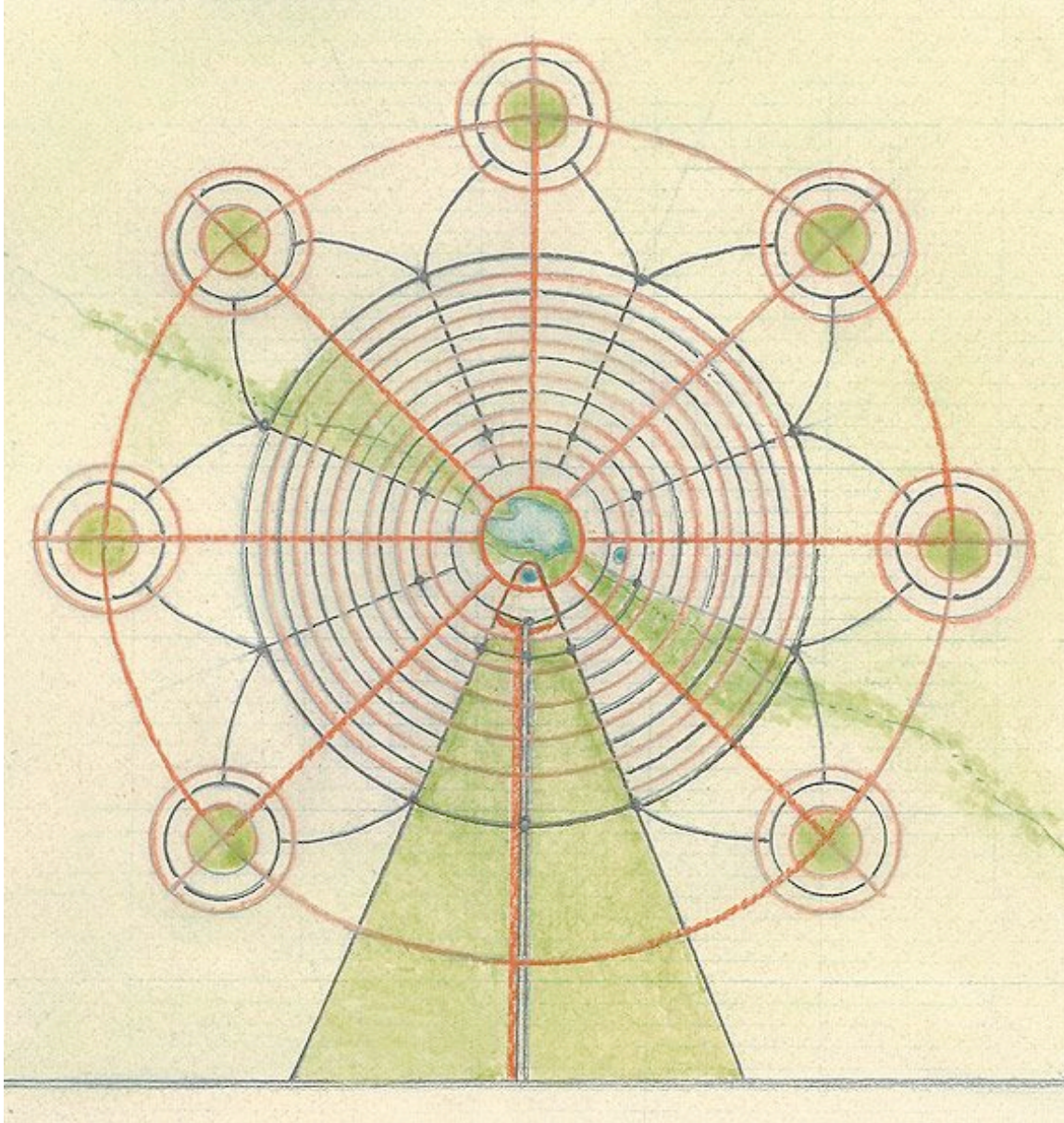


Some later examples of separate pedestrian networks running through greenbelts or park-like settings include Baldwin Park Village (built in '41-'42 and later renamed The Village Green) in Los Angeles, and Village Homes, founded in 1975 in Davis, CA. While all of these examples comprise the old pedestrianism, the new pedestrianism includes these additional elements:

1. Almost all homes have a rear automobile street. The front pedestrian lane offers safe, attractive, car-free, alternative travel. Houses are closer to the lanes than would be expected on a street. This allows for small parks, fountains, plazas and other human scale features to be better protected, utilized, and enjoyed.
2. The minimum 12' wide pedestrian lanes allow purposeful travel for both cyclists and pedestrians. A textured surface indicates pedestrian use, while the broader side of the lane is smooth for rolling conveyances. In higher traffic areas, the lane can be divided into separate corridors for cyclists and pedestrians.
3. Every waterfront, greenbelt, or other attractive amenity is fronted with the pedestrian lane, with the street hidden behind the buildings. No important resource is lined with the back yards of houses.
4. Alternative energy use, green certified structures, and water recycling is encouraged, if not required.
5. A greenbelt surrounds most villages.
6. Each pedestrian village has its own mixed-use center. The highest density is around the center, while the lowest density is on the perimeter of the village. Those on the periphery enjoy the added amenity of having a pedestrian lane that adjoins the greenbelt. Any density can be accommodated and each village can develop its own character.
7. Public transportation (including the future use of autonomous vehicles) is highly efficient because primary travel routes need only connect one village center to another, and an automobile street network is still preserved that connects every home and business.
8. Nearly every home and business has two entrances to serve the two transportation networks. There are carriage houses and formal garden entrances on the automobile side for residences. Businesses still have a traditional entrance with head-in parking at the rear, while also having a pedestrian entrance at the front.
9. Variants of this model would include nearly car-free villages, where the lanes could provide access to special-sized emergency vehicles, or service vehicles only at certain times, or villages where the vehicles can access only from a hidden, lower level. Villages in developing countries, or villages for the homeless or those with special considerations might only provide minimal streets for parking, access, and emergency vehicles.





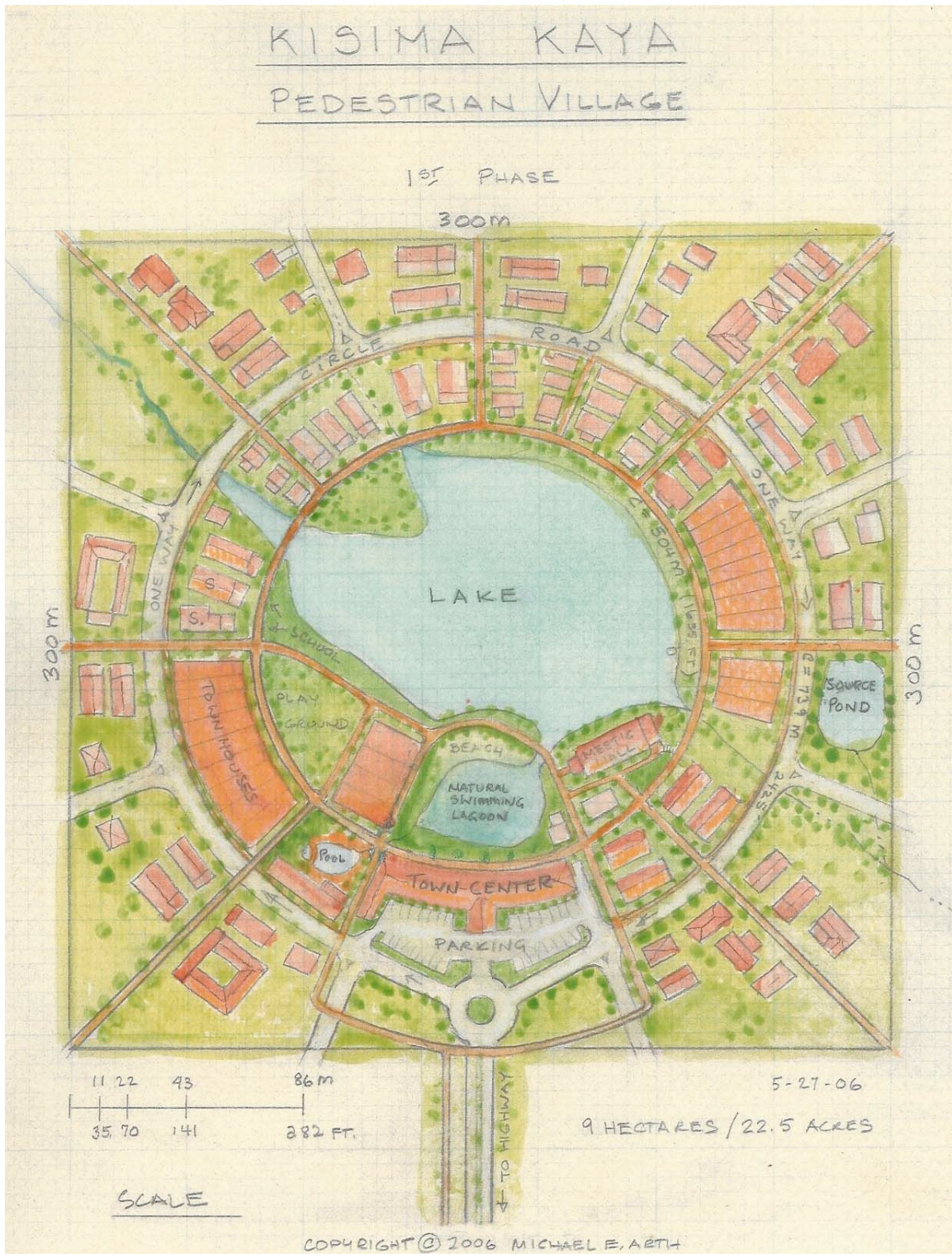


NP for developing countries: *Kisima Kaya* in Kenya. Streets are shown in black, pedestrian lanes in red. The seeds for new villages ring the periphery.<sup>13</sup>

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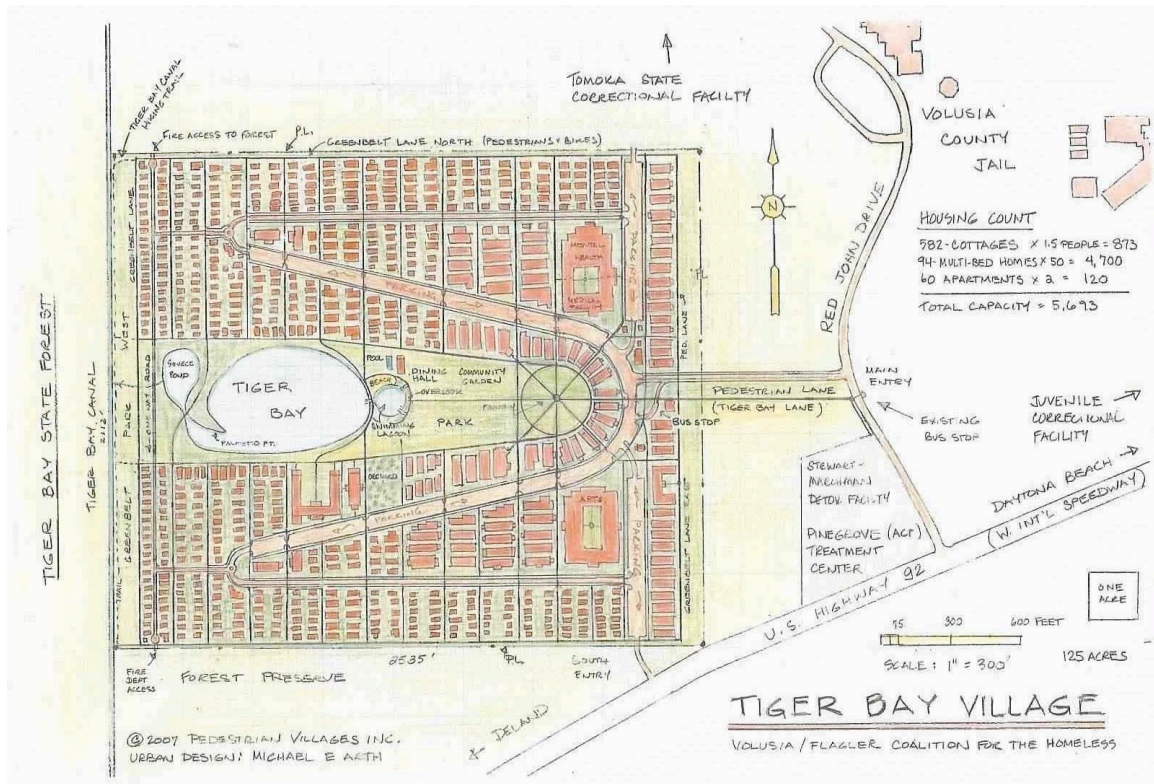
<sup>13</sup> Design for a pedestrian village in Kenya by Michael E. Arth. When coupled with land title reform, and low cost housing, sustainable villages like this can help stair-step whole countries out of poverty.





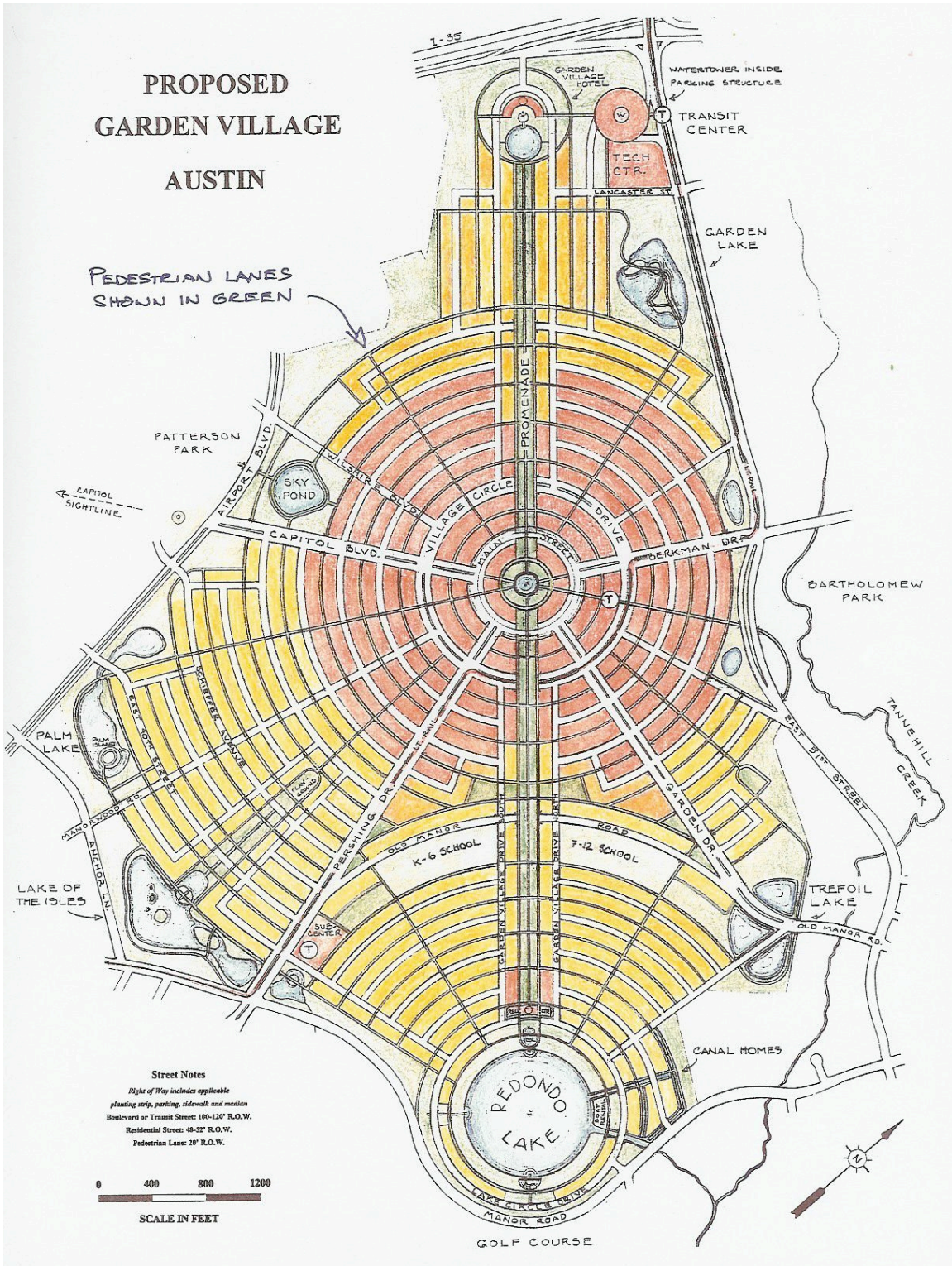
Kisima Kaya's Village Center<sup>14</sup>

<sup>14</sup> Kisima Kaya Village Center, showing common amenities and street pattern. All homes and businesses face the pedestrian lanes. Automobile access is close by, if not at the rear.



Village for the Homeless<sup>15</sup>

<sup>15</sup> Tiger Bay Village, a nearly car-free pedestrian village near Daytona Beach was designed to house those who are permanently homeless because of disabilities, those coming out of the nearby prisons, and temporarily homeless single people.



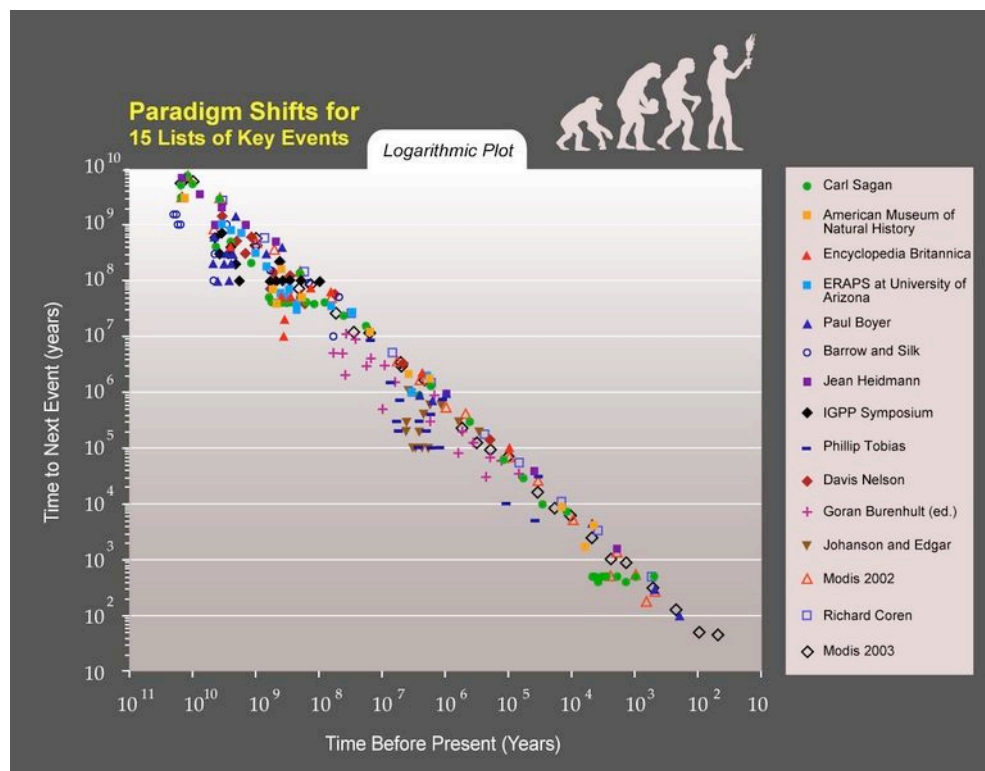
NP for former airport site, Austin, 1999<sup>16</sup>

<sup>16</sup> The Garden Village was proposed for the site of the former Mueller airport in Austin.

## Future Trends

Peering into a crystal ball has always been a tenuous venture, but even as late as the 1970s futurists had the reasonable expectation that the next decade would not be significantly different from the previous decade—at least in terms of technological progress. Recently it has become increasingly clear that a new phenomenon is at work that could change nearly every aspect of our lives, to say the least. Extrapolating from current trends and drawing from a wide range of historical charts drawn up by experts from various fields, it appears that the 21<sup>st</sup> century will produce the equivalent of 20,000 years of technological progress, based on the year 2000.<sup>17</sup> Even if there is a drastic slowdown due to unforeseen events, it is clear that we cannot use the past as a guide to the pace of future development. The evolution of technology, taking over from biological evolution, could have implications for the human species that could easily exceed most scientists' wildest speculation.

For this reason, we will set aside any long-term predictions, and focus on near-term, urban-related issues. The NU movement has been an attempt to revive the best of the old and combine it with the new. This trend will continue to some extent, but the force of new ideas will push us to confront the inherently slow-moving nature of urban planning and development, which is hindered even further by the complex tangle of ecological, engineering, social, economic, political, and bureaucratic issues.



<sup>17</sup> Kurzweil, Ray. *The Singularity Is Near : When Humans Transcend Biology*, Viking Adult, 2005, ISBN 0670033847. P. 11. (Because this growth is exponential, expect 20 years of progress based on 2000 by 2014, then 20 more by 2021, then 20 more by mid 2024—and so on.)

## Future Trend<sup>18</sup>

Because of the widening gap between technological innovation and the time it has traditionally taken to remake our physical environment, it appears that the existing infrastructure will be hard pressed to accommodate changing needs. The best way to meet the demands of our rapidly changing world may be with a two-fold path. The high social, historic, and economic value of the existing inner cities compels us to muddle through the morass by re-developing the existing cities from the center outward, preserving or enhancing the best of the old while integrating the new. At the same time, we can ring existing cities with future-oriented, mixed-use developments that serve both as a greenbelt to halt further sprawl, and as places that meet the challenges of the future. If the cities would establish NP-zoning for all new growth, developers would have incentives and guidelines to build these pedestrian villages. As suburban sprawl development deteriorates, the redevelopment can creep inward to meet the revitalized inner city. Pedestrian villages, constructed with transportation networks that completely separate cars from pedestrians and bicycles, will help make the transition into a more ecologically and aesthetically oriented world where cars are no longer the focus of our lives and architecture.

The experiment in Traditional Neighborhood Design (TND) has matured and we can now draw some important conclusions.

1. Putting cars on both sides of buildings with streets and alleys, thus surrounding everything with cars and parking, has been shown to not work so well after all.
2. TNDs are an aesthetic and social improvement over typical sprawl development, but they still garner criticism for being a less dense form of sprawl, only a little less dependent on the automobile.
3. Suburban sprawl often masquerades as NU in an insidious, diluted, hybrid form that adopts the terminology and some of the architecture.
4. TNDs are not affordable. It is inevitable, and not necessarily a terrible thing, that the poor will usually have to contend with older housing that might not be in great shape, and may be in an aging neighborhood with mixed housing stock.<sup>19</sup> Eventually, both NU and NP developments will have aging, more affordable housing. Meanwhile, the problem can be partially addressed by providing housing of different types and sizes in new developments so that people have pricing and rental options.
5. Alternative transportation within TNDs is more efficient than with urban sprawl, but it would be even more efficient with NP, and many would walk or bike.

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<sup>18</sup> This logarithmic graph, which futurist Ray Kurzweil uses to illustrate his “Law of Accelerating Returns,” shows the alignment of 15 different lists of paradigm shifts for key human events in human history. If this double exponential trend continues we will see 20,000 years of progress in the 21<sup>st</sup> century (based on the year 2000). Reproduced here under a 2005 Creative Commons license. Courtesy of Ray Kurzweil and [<http://www.kurzweilai.net> Kurzweil Technologies, Inc.]

<sup>19</sup> Jacobs, Jane. *The Death and Life of Great American Cities*. Vintage. 1961, 1992. “Chapter 10: The need for aged buildings” p. 187-221. ISBN 0-679-74195-X

6. The centers of TNDs are still full of cars, parked cars, and traffic. NP solves this problem by creating separate transportation networks and anticipating how transportation will work in the future.

### Transportation Will Become Information-Based

There are six million motor vehicle accidents per year that produce three million injuries and 42,000 deaths in the U.S. alone.<sup>20</sup> U.S. traffic casualties are roughly equal to re-fighting the entire 20-year Vietnam War every 15 months.<sup>21</sup> The nation still mourns the 3,000 who died on 9/11, but more Americans die each month from car accidents, with many times that number suffering horrible injuries. The human, environmental, and economic costs related to our dominant form of transportation are hard to estimate. Still, we must add the cost of buying, fueling, and maintaining all these cars, combined with the costs of foreign oil dependency, pollution, and the time wasted while being stuck in traffic. This does not even begin to address the quality of life issues created by automobile dominated sprawls, where beauty has been surrendered to the car culture. It is no wonder that the words “developer” and “development” have become curses. Each new development means there will be more traffic and further degradation of the environment. While technology is by itself morally neutral, it is also a tool that can be used for good or bad. The current, automobile-based transportation model, despite many benefits, has proved itself to be an extremely destructive technology in terms of social structures, the environment, health, and safety. Fortunately, there are two major developments that should vastly reduce the number of vehicles on the road, and solve many of problems related to the environment and energy consumption.

One development has to do with fully autonomous vehicles, which have already driven themselves for many thousands of miles in various races. As early as 2020, these vehicles will begin to be available. One hundred privately owned cars, normally parked over 90% of the time, could be replaced by ten self-driving cars, which can be almost continually operating. With this reduction in the number of automobiles, parking garages and parking lots could also be drastically reduced.

At the same time as this very important development is occurring, the growing use of cyberspace for work, socializing, communication, and entertainment will greatly reduce the need for physical travel. This will bring back into focus the importance of our local environment. As long as we still have physical bodies, existing towns will be rebuilt and new towns will be built that reflect the new—human scale—realities.

By the time self-driving cars begin to appear on the road, the development of fully immersive virtual reality (VR) will have greatly reduced the need for cars as we currently use them. Today VR is experienced primarily through cell phones or computers with sound and vision, and even touch, but eventually all the human senses will be engaged on a level compatible with reality. For most people, VR exists today in the form of the telephone, TV, and the Internet, but it is only rarely fully immersive. Two-dimensional worlds, like Second Life

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<sup>20</sup> Arth, Michael E. *The Labors of Hercules: Modern Solutions to 12 Herculean Problems*. Labor IX: Urbanism. [http://michalearth.com/herc\\_IX.htm](http://michalearth.com/herc_IX.htm)

<sup>21</sup> National Highway & Traffic Safety Administration <http://www.nhtsa.dot.gov/>

([www.secondlife.com](http://www.secondlife.com)) where people can walk, fly, or transform an avatar, already exist and anyone can visit them on the Internet.



My avatar, Freddie Olmstead, contemplates a structure on a car-free road inside Second Life. The possibility of my Avatar being harmed by a car on this road, or anywhere in VR, is zero.<sup>22</sup>

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<sup>22</sup> Screenshot from Second Life. There are cars in VR worlds, but they are kept in certain places for recreation only. Transportation is through teleportation, flying, or even walking.



Freddie faces a world where the only road is grown over with trees and plants.<sup>23</sup>

Many young people use these virtual worlds for gaming either alone or with friends, but they are also used for a wide range of other activities. Second Life is the 2-D cartoon version of the future, but even now in existing virtual worlds you can meet and converse with people all over the world, either by speaking normally, or through translatable text. It is also possible to buy land and build virtual buildings, or engage in personal or business-related activities. Eventually VR will encompass everything on the Internet and expand upon it until an entire virtual universe is created. Ultimately real cities of the future may have only a tiny fraction of the vehicles they have now. Because most activities will be taking place through computation, transportation will be information-based instead of involving complicated and potentially dangerous machines moving through physical space using up time, energy, and resources. VR would be a good use of technology and we should welcome it from the comfort of our pedestrian villages where we can balance our outer and inner worlds.

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<sup>23</sup> Screenshot from Second Life.



