# STARK CONTRAST:

# TWO VIEWS OF THE ROAD AHEAD

**Editors Note**: As with PARTS ELEVEN AND TWELVE, this report has been edited to conform with the Vocabulary found in PART THIRTEEN - GLOSSARY. The original publication - and the current title were selected - 2001. See End Note One

## INTRODUCTION

The citizens of the U S of A have reached a critical crossroad. In a context that is historically unprecedented, important decisions must be made that will impact the shape of every Region's future.

> **It was demonstrated in *The Shape of the Future* that many of citizens' most pressing quality-of-life and survival challenges are the result of dysfunctional human settlement patterns.**

Actions by municipal, state and federal Agencies, as well as by citizens, Enterprises and Institutions will determine the future pattern and density of land use and thus the future prosperity, stability and sustainability of society. These acts (and/or the failures to act) involve decisions regarding Mobility and Access, Affordable and Accessible Housing, food security, energy supplies, air quality, water and land resources and the impacts of emerging technologies. All these directly affect human settlement patterns.

Two groups with radically different collective perspectives have taken positions on opposite sides of many critical issues related to the evolution of functional human settlement patterns.

What is termed the **Stark Contrast** is the difference between these two views concerning what constitutes a desirable and sustainable future. Articulating this **Stark Contrast** is the objective of this report.

> **Competing visions of the future are championed by interests that advocate the pursuit of two divergent paths. One is characterized by Fundamental Transformation; the other by Business-As-Usual**.
>
> **On one hand, there is the future championed by those who advocate more intelligent patterns and densities of land use (aka, smarter growth) and more effective and efficient transport systems. These advocates believe there must be Fundamental Transformation to achieve a sustainable relationship between humans and their environment and thus a sustainable trajectory for civilization as it is currently understood.**

**On the other hand, there are those who support a future which will continue to be driven by political expediency and speculative gain. This is the path of those who advocate continuing the current policies and practices; in other words, Business-As-Usual.**

The later course will benefit a few in the short term but will erode the prosperity of almost all citizens in the longer term. Of course, for those in the bottom half of the economic food chain - the bottom half of the Ziggurat - there is no benefit either short term or long term from **Business-As-Usual**.

**Stark Contrast** highlights the primary indicators of the two alternatives based on:

- The type of development strategies and infrastructure programs advocated.
- The amount of land consumed for Urban land uses.

**Stark Contrast** is presented in three Sections:

- Section One examines the two forces that are in **Stark Contrast**.
- Section Two is a graphic illustration of the **Stark Contrast** applied to a specific, multi-New Urban Region (NUR) area.
- Section Three is an explanation of seven perspectives that illustrate the **Stark Contrast**.

## THE BOTTOM LINE

Before laying out the details of **Stark Contrast**, there is a simple, overarching way to articulate the difference between **Fundamental Transformation** and **Business-As-Usual** which requires an understanding of human settlement patterns.

- **Fundamental Transformation** reflects a fair allocation of the costs and benefits of the contemporary Urban economy by an enlightened market.
- **Business-As-Usual** relies on a complex, least-common-denominator array of subsidies to a chosen few and policies that do not reflect market reality. **Business-As-Usual** results in eroding Enterprise competitiveness, citizen prosperity and Natural Capital.

There is a straight forward first step on the path to achieving **Fundamental Transformation**: Modify existing policies and programs to create a fair allocation of the costs of services necessary to support Urban life. This fair allocation would be reflected in competitive costs-of-doing-business and equitable costs-of-living. See PART FIVE - NEW METRIC FOR CITIZEN WELL BEING.

Citizens, especially the Running As Hard As They Can (RHTC) citizens defined in PART ELEVEN - PROPERTY DYNAMICS will not invest the time and effort necessary to support **Fundamental Transformation** unless they understand that this action is essential to their own self interest.

The **Stark Contrast** has been articulated to demonstrate the need for citizens to support **Fundamental Transformation**. The alternative is continuing to agglomerate the settlement patterns supported by **Business-As-Usual**. These patterns are as detrimental to prosperity, stability and sustainability as a giant asteroid on a collision course with the earth.

The following material presents contrasting views, positions and policies that articulate the **Stark Contrast**. Specific examples follow the general description of the **Stark Contrast**.

## SECTION ONE - STARK CONTRAST BETWEEN TWO PERSPECTIVES

The following subsections compare and contrast the perspectives of **Fundamental Transformation** and **Business-As-Usual**:

### THE URBANSIDE AND THE COUNTRYSIDE

- **Fundamental Transformation**: Those who champion functional human settlement patterns by fostering smarter growth advocate a clear distinction and an intelligent economic and physical demarcation (a Clear Edge) between Urbanside and Countryside. These two classes of human settlement can be characterized as follows:

    - Urbanside within the Clear Edge around the Cores of NURs composed of Balanced Communities which, in turn, are made up of Villages, Neighborhoods, Clusters, Dooryards and Units. These components are configured to create efficient and Balanced Communities that are, in turn, rationally distributed to form functional and sustainable NURs. Communities comprise the majority of the Urbanside. The remainder of the area within the Core is SubRegional and Regional serving Openspace.

    - Countryside is devoted to agricultural, forestal and other extensive resource related activities. Farms, forests and natural areas provide watershed protection and air recharge. Countryside produces the food, fiber and other material necessary to sustain contemporary, Urban human life. WITHIN the Countryside, there are Urban enclaves surrounded by their own Clear Edges that comprise Balanced But Disaggregated Communities. These Urban components or enclaves are NOT scattered in random or dysfunctional locations.

  Even on a planet dominated by an Urban civilization, human settlement patterns organized in sustainable NURs made up of viable, Balanced (Alpha) Communities leave the vast majority of the Earth's surface devoted to a green and blue Countryside.

  The small area of actual human habitation must not be confused with “the human ecological footprint.” Due to the need for food, fiber and other resources from the Countryside, this ‘footprint’ is much larger than the Urban area. To achieve a sustainable Balance this ‘footprint’ should be as small as possible. Limiting the size of the ‘footprint’ will be much easier once the area for Urban habitation is rationally established.

- **Business-As-Usual**: Those who support **Business-As-Usual** favor policies and practices that separate components of Communities in the Urbanside and scatter the components of Urban structure across the Countryside. These scattered Urban land uses agglomerate in dribs and drabs of jobs and services along highways, at expressway interchanges and

along interregional energy grids. This is because developers and project sponsors have access to cheap land in outlying areas and because the public and private costs for their scattered land uses are subsidized by others. This pattern of scattered jobs and services generates demand for ever more scatterization of Urban residences.

The unsustainable scatterization of Urban components supports a lottery of land speculation. Current practice widely dissipates the potential benefit of Urban activity and allows some individuals and Enterprises to cash in on the vast public and private subsidies necessary to support dysfunctional locations of Urban activities. As a result of their actions, the advocates of **Business-As-Usual** waste public resources on infrastructure that is inappropriate, frequently because it is in the wrong location. This waste of land has been financed and subsidized by burning through billions of years of Natural Capital - desertification for thousands of years and consumption of stored energy since 1712.

It is axiomatic that the Urban and nonUrban parts of human settlement are two interconnected organic subsystems that make up a complex system called `contemporary civilization.' It is also axiomatic that to preserve the ecological and economic viability of the Countryside, the Urbanside must be improved and enhanced to stem a continuing outward expansion and a dissipation of Urban activities that result in the erosion of the Countryside. See PART ONE - ROOTS OF THE HELTER SKELTER CRISIS and PART EIGHT - Chapter 27 as well as the PowerPoint “New Urban Region Conceptual Framework” in PART FOURTEEN - Chapter 49.

**Urban activity and the prosperity that it generates cannot be sustained if Urban land uses are scattered across the Countryside.**

Intelligently locating Urban land uses is not just a strategy to protect or preserve cherished or historic Countryside. This is the central strategy to maintain the sustainability of Urban activity. Regions with scattered Urban activities cannot survive in competition with regions having compact, efficient settlement patterns. Creating a functional distribution of economic activities to achieve Urban sustainability is an economic, social and physical fact based on science. The application of the science of human settlement patterns is termed Regional Metrics. See PART FOUR - USE AND MANAGEMENT OF LAND

**It is just as important to keep the components of Urban systems in close, synergistic proximity within Clear Edges as it is to keep the organs that make up a mammal in functional locations within the organism.**

The locational reality controlling Urban activity is dictated by market competition and reflected in market value of human settlement patterns. The components of Urban fabric with the highest values are the compact, Urbane components. Not that all the Urban fabric is dysfunctional, but that too much of it is. This propels outward expansion in a fruitless attempt to escape the negative impacts of dysfunctional human settlement patterns - traffic congestion, high service costs, fear of crime, etc. See PART ONE - ROOTS OF THE HELTER SKELTER CRISIS.

**Improve the Urbanside so that all Urban components are places citizens want to live, work, seek services and recreation. Functional human settlement patterns naturally serve as magnets for productive human activity.**

## THE NECESSITY OF A CLEAR DEMARCATION

The concept of a clear demarcation between the Urbanside and the Countryside is NOT new. This is a long and well-founded principle of human settlement which is now gaining fresh support. See End Note Two.

> **With clear evidence of the failure of Autonomobiles to provide Mobility and Access the evidence is overwhelming.** See PART THREE - THE PROBLEM WITH CARS

One can see applications of the Clear Edge in prosperous NURs throughout the European Union. The view from an airplane over most major Urban centers and over the countryside in Yorkshire, Alsace, Bavaria or Tuscany confirms that much of the First World continues to maintain a clear demarcation between the Urban side and the Countryside. This is not the only physical characteristic of the **Stark Contrast**, but it is the most obvious. See PART TEN - **Chapter 34 - Dialogue with Fahmah** concerning Sally and Jim's trip to Barcelona.

- The advocates of **Fundamental Transformation** argue that defining and taking action to support a Clear Edge is critical to creating Balanced Communities.

- A clear demarcation is a fundamental departure from the results of programs and projects advocated by **Business-As-Usual**.

## RELATING TO THE DISTRIBUTION OF NON-URBAN AND URBAN LAND USES - UNDERSTANDING THE 95% - 5% GUIDELINE ONE

Much of the recent discussion of a the role of a Clear Edge is couched in terms of 'Urban Growth Boundaries.' If there is not a logical, scientific based process to determine how much land should be inside the Clear Edge, then the Clear Edge is just an arbitrary line across which to toss brickbats. This reality characterizes much of the current debate about Urban Growth Boundaries and about the need for a 'greenbelt.'

There is a science-based guideline to determine the appropriate mix of countryside and Urbanside. The 95%-5% Guideline One relates to the distribution of NonUrban and Urban land uses. ***The Shape of The Future*** documents why viable human settlement patterns are important and how the application of the Five Natural Laws of Human Settlement Pattern results in the 95%-5% ratio for the US of A. The second topic summary in ***Understanding the Facts and Concepts*** outlined in **Stark Contrast** (located in the second Section of this report) provides more information on the 95%-5% Guideline One. It turns out there are several different relationships or guidelines that exhibit a similar ratio. The three 95%-5% Guidelines are defined in PART THIRTEEN - GLOSSARY under "Percentage Guidelines."

Citizens and their Organizations must move quickly to distribute land uses in a way that reflects effective human settlement patterns if they are to sustain competitiveness, social stability and ecological viability. This means 5%+/- devoted to Urban uses and 95%+/- devoted to openspace, conservation and non-Urban land uses including land for farm preservation, useable openspace and natural area to insure ecological diversity. See PART FOUR - USE AND MANAGEMENT OF LAND

> **This Balance of functional and efficient Urbansides and viable Countrysides (including the supporting Urban components in Balanced But Disaggregated**

**Communities') will provide the basis for a prosperous, stable and sustainable future.**

- Advocates of **Fundamental Transformation** urge the application of the 95%-5% Guideline One in determining the location of the Clear Edge.

- Advocates of **Business-As-Usual** would distribute uses across the countryside without regard to the creation of Balanced Communities defined by Clear Edges between the Urbansides and the Countryside.
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**WATER QUALITY AND QUANTITY, AIR QUALITY, RESOURCE PROTECTION, ENERGY CONSERVATION**

The topics of water quality and quantity, air quality, resource protection (prime agricultural lands, natural diversity, et al.) and energy conservation are four topics that are frequently cited as reasons for the need to create fundamentally new patterns and densities of land use. It turns out that by applying 95%-5% Guideline One, most of the contentious issues related to these topics disappear. This demonstrates the importance of understanding the Urbanside/Countryside relationship.

- **Fundamental Transformation** embraces the protection of water and air quality, adequate water supplies and the protection of other natural resources which are treated as natural capital.

- **Business-As-Usual** has been proven to endanger nature's capital resources and thus requires a contentious `environmental impact' evaluation for every major action to implement **Business-As-Usual** infrastructure.
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**TRANSPORT AND LAND USE**

Perhaps the most dramatic difference between **Fundamental Transformation** and **Business-As-Usual** is in the area of transport. As noted in Chapter 13 of ***The Shape of The Future***, "transportation is the canary in the mine field of dysfunctional human settlement patterns."

- **Fundamental Transformation** embraces a transport system that effectively serves human settlement with a balance of land uses. The transport system must be designed so that the system capacity matches the distribution of travel demand generated by the patterns and intensity of land use.

- **Business-As-Usual** advocates an ever-expanding ganglia of expressways and feeder highways that provide access to hundreds of thousands of acres of land where least-common-denominator decisions result in scattered Urban land uses. See End Note Three

Transportation/land-use issues are complex. They can, however, be subjected to quantitative analysis. For this reason, they provide a path to citizen understanding of human settlement patterns.

## SPECIFIC EXAMPLES

The following are three specific examples of transport infrastructure and energy-related `projects' championed by proponents of **Business-As-Usual** and opposed by advocates of **Fundamental Transformation**. In these examples, the **Business-As-Usual** proposed `solution' is noted first. It is important to understand that even if the **Business-as-Usual** recommendations provided a desirable result, there are no resources (and thus no political will) to implement them. See End Note Four

1. **Business-As-Usual** supporters champion the rebuilding of expressway interchanges to increase Autonomobility capacity.

   **Fundamental Transformation** advocates would spend far less money and build platforms at selected locations OVER existing rights-of-ways and interchanges where evolution of shared-vehicle system's station areas could be the catalyst for improved settlement patterns. These station areas would provide Zentra for of new "transit-related" development.

2. **Business-As-Usual** advocates would extend and expand radial expressways, add new interchanges and build more bridges. (No travel demand professional one suggests these programs would NOT generate millions MORE vehicle miles of travel or that they would improve Mobility and Access on a SubRegional or Regional scale.)

   **Fundamental Transformation** supporters would incrementally build circumferential transit with Urbane Village-scale Zentra at some stations and place some sections underground (out of the right-of-way) to serve new and renewed Village Zentra in other locations. This approach would cut vehicle miles of travel, improve air and water quality and reduce the cost of living and the cost of doing business in the region.

3. **Business-As-Usual** proponents would scatter new power-generation facilities and new power-dependent employment centers in remote locations that are not subject to Regional air quality standards or enlightened land-use controls. Municipal governments in these locations lack the institutional capacity and the market potential to create sustainable, Balanced settlements in these locations.

   **Fundamental Transformation** partisans would create new cleaner power-generation facilities close to the need to prevent line loss, improve competitiveness and foster sustainable human settlement patterns.

## SUMMARY OF STARK CONTRAST - THE DIFFERENCE BETWEEN BUSINESS-AS-USUAL AND FUNDAMENTAL TRANSFORMATION

A way to summarize the specific examples and the impact of the two contrasting views of the future is that:

- **Fundamental Transformation** advocates would build Balanced Communities within functional, sustainable Regions.

- **Business-As-Usual** champions would continue to build `projects' in least-common-denominator locations without concern for evolving Balanced Communities.

The cumulative impact of **Fundamental Transformation** can be seen in Graphic One in Section Two of this Report. The support of counterproductive projects by **Business-As-Usual** insures that Urban land uses will be scattered in dysfunctional locations.

Time for enlightened action is running out. Petroleum prices (the largest share is used for achieving Autonomobility) have shown their potential for volatility; the `long-boom' economy based on infinite capacity of new technology is a pipe dream unless there are sustainable human settlement patterns. The New Economy was 'new' in appearance but wan not tied to functional and sustainable human settlement patterns. Simple, feel-good solutions are the currency of pandering politicians.

For example, with respect to 95%-5% Guideline One relating to the distribution of nonUrban and Urban land uses:

> **Yes, citizens and their Agencies could devote more than 5% of the land resources in the US of A, but if they do, EVERYONE will pay the cost of dysfunction. The rising cost of oil/gasoline is a clear example of how a region with dysfunctional, auto-dependent human settlement patterns can become noncompetitive in the global marketplace.**
>
> **Similarly, the cost of energy (e.g., electrical rates) is directly tied to the human settlement pattern. Communities with dysfunctional patterns and densities of land use are already noncompetitive within the regional economy without subsidies.**

Human settlement patterns are not rocket science; they are far more complex. In a democracy, there is no alternative to creating citizen understanding. The need is for the implementation of real science, such as the Five Natural Laws of Human Settlement Patterns and Regional Metrics, to help citizens understand the importance of location and arrive at sound public judgments concerning the future.

## SECTION TWO -THE STARK CONTRAST ILLUSTRATED

As noted in the Introduction to this section, there are two ways to demonstrate the **Stark Contrast** between the **Fundamental Transformation** proponents as opposed to those who support **Business-As-Usual**:

- The type of development strategies and the infrastructure projects the two sides support which are outlined above.
- The difference in the amount of land (number of acres) each side would devote to Urban land uses which is illustrated in the following graphic.

Graphic One illustrates the difference in the amount of land consumed for Urban settlement patterns from the perspectives of **Fundamental Transformation** and from **Business-As-Usual**. At the same time, this graphic reflects the two perspectives impact on the conservation of natural resources.

> **This sketch demonstrates the difference between intelligent growth that would result from Fundamental Transformation and the dysfunctional distribution of Urban land uses that is now occurring as a result of Business-As-Usual.**

Graphic One covers a 50,000,000+/- acre area of the Eastern US of A between the Washington-Baltimore NUR on the northeast (upper left) and the Central Carolina (Charlotte-Greensboro-Triangle) NUR on the southwest (lower right). A similar graphic could be developed for every part of the United States. The area illustrated demonstrates the impact of settlement patterns that have evolved since 1870 and especially since 1950.

The small circles (orange and blue/green) are the Cores of NURs and larger Urban agglomerations and represent the MAXIMUM area of Urban development at MINIMUM sustainable densities for the actual year 2000 population of each Metropolitan Areas in the territory covered.

In the northeast are the Baltimore SubRegion and the National Capital SubRegion of the Washington-Baltimore NUR that fall in Pennsylvania, West Virginia, Maryland and Virginia. (The base map does not include Pennsylvania, West Virginia or Maryland.)

To the south are the Richmond and Hampton Roads NURs and the Charlottesville, Lynchburg, Roanoke and Danville Urban agglomerations (MSAs) in the Appalachian USR in Virginia. Far southwest Virginia is not shown on the map.

Further south are the four Metropolitan Areas that constitute the SubRegional Cores in the Central Carolina NUR in North Carolina as well as Fayetteville MSA that falls in the East Carolina USR. Parts of Danville and Hampton Road MSAs also fall in North Carolina.

The area enclosed by gray circles that spreads out around the orange and blue/green Cores represent the territory across which Urban land uses that are related to these Urban concentrations are currently being scattered by **Business-As-Usual**. These scattered Urban land uses are supplanting the economic and aesthetic resources of the Countryside in which they are scattered.

**TECHNICAL NOTES ON STARK CONTRAST GRAPHIC ONE**

Graphic One is a sketch based on the application of Regional Metrics to 1:500,000 State Series, US Geologic Survey Planimetric maps of Virginia, North Carolina. These maps also outline the Federal District of Columbia and part of Maryland. The total area of the NURs that spillover into Pennsylvania, West Virginia and South Carolina is NOT within the 50,000,000+/- acre area illustrated.

In this exercise, Regional Metrics was applied to year 2000 metropolitan area (MSA and CMSA) populations. The size and density of a sustainable Urban system varies depending on many factors. It was assumed that each NUR Core (Urban area) would contain 50% Region-serving Openspace (the blue/green) and that the Urban fabric in the Cores are made up of Communities with a Balance of Jobs/Housing/Services/Recreation/Amenity at the MINIMUM sustainable density. WITHIN the area denoted to Urban fabric (orange on the map), 40% of that area would also be green and blue to meet the Dooryard-, Cluster-, Neighborhood-, Village- and Community-scale Openspace needs.

It is obvious that all the Urban concentrations on this map already have some organic components of Urban fabric - at the Neighborhood-, Village- and Community-scales - with much HIGHER density. That is true not just for the Zentra but for residential areas. For instance Fells Point (Baltimore), Georgetown (Federal District), Old Town (Alexandria) and for “mixed use:

areas such as Bethesda (Montgomery County) and the Rosslyn Ballston Corridor (Arlington County). Similar high density areas can be found in each of the Urban cores illustrated.

For this reason, the colored circles representing the Urbanized area are LARGER than would result from an intelligent transition of the existing Urban fabric to a system of Balanced Communities. The new, Balanced Community with an average overall density of 10 persons per

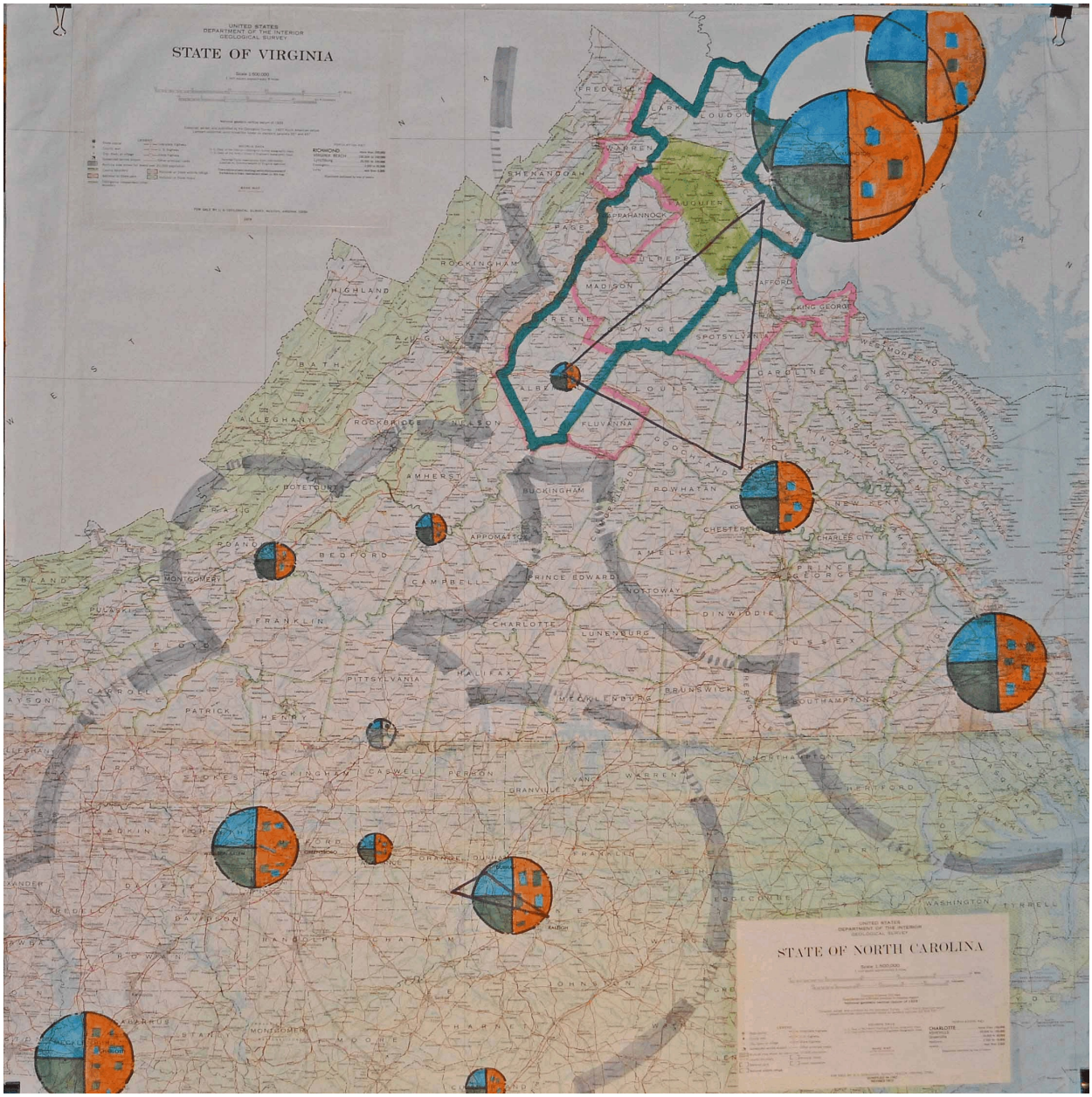
acre would not take up all that area unless the densities of some existing components were LOWERED.

> **Due to the impact of the $A=\pi r^2$ Rule, the population of these centers in 2025 or 2050 would make the orange and blue/green circles imperceptibly larger at the scale of this map.**

The only Cores (Urban areas) highlighted on Graphic One are the year 2000 Metropolitan Areas with over 50,000 population in the 1990 census. There are many other, smaller Urban places, especially in USRs that are not shown. These Urban places also distribute Urban land uses across the Countryside. However, the smaller the Urban system, the less scatteration it generates. Many of the smaller Urban systems are subsumed by the centrifugal force of large Urban Agglomerations.

**GRAPHIC ONE-THE STARK CONTRAST ILLUSTRATED**

Graphic One does not address the scatteration of Urban land uses that result from the concentration of recreation uses of land and water by Urban residents. These recreation uses agglomerate primarily in USRs and are concentrated in scenic areas - mountains, pastoral Countryside (Appalachian USR) and near water bodies, especially the Atlantic Ocean (DelMarVa and East Carolina USRs).



Further insight into the context, detail and importance of the **Stark Contrast** Graphic One will be found in the PowerPoint "New Urban Region Conceptual Framework" found in PART FOURTEEN - Chapter 49 and in PART EIGHT - **Chapter 27 - Building Blocks**.

## SECTION THREE -UNDERSTANDING THE CONCEPTS ILLUSTRATED BY Stark Contrast

The first two sections of **Stark Contrast** provide a brief summary of complex theses that are critical to an understanding human settlement patterns. While there is agreement on the need for what is termed **Fundamental Transformation** in **Stark Contrast**, some are unclear on the facts underlying the case to abandon **Business-As-Usual**.

**Stark Contrast** addresses topics and uses language that may not be familiar to all readers. This part includes seven `topic summaries' that are intended to provide a threshold introduction to facts and concepts that raise questions among those encountering this information for the first time. See End Note Five

The topics include:

1. Reality Is Clouded by Myths and Misinformation

2. Understanding 95%-5% Guideline One Relating to the Distribution of Urban and NonUrban Land Uses

3. The Fallacy of Composition

4. Strategies to Achieve Viable Human Settlement Patterns

5. Focused Tactics to Support Immediate Action Inside and Outside the Clear Edge

6. Tools That Support the Educational Effort Required to Implement Functional and Sustainable Human Settlement Pattern Strategies

7. The Need for Basic, Fundamental Education

These seven brief topic summaries address issues central to the **Stark Contrast** theses. Additional information on the topics addressed can be found in the material referenced at the end of each summary.

### 1. REALITY IS CLOUDED BY MYTHS AND MISCONCEPTIONS

Creating viable human settlement patterns is a daunting task. First, a comprehensive grasp is clouded by the fact that few understand that human settlement pattern is even 'an issue,' much less a critically important one. Citizens know as much about human settlement patterns in year 2009 as they did about human anatomy or celestial mechanics in year 1509. For this and other reasons, the critical issues impacting human settlement patterns are clouded by Myths.

One of the prime Myths driving uninformed decisions in the region is the belief that *"the Urban area must expand to sustain prosperity."* Simply stated, this Myth suggests *"that the inner jurisdictions are all built out."*

Another Myth is that *"many of the high-tech jobs are fleeing the cores of the region."* Belief in this Myth leads to jurisdictions (those serving areas that fall outside the radius over 20 miles from the Centroid) being told they must scatter Urban land uses across the countryside to support the flood of new jobs.

In fact, the truth is just the opposite for each of these Myths as the facts below indicate.

- There is already too much land devoted to Urban land uses in the region.

- The overwhelming majority (85%) of new and existing jobs in the year 2025 will STILL be primarily concentrated in the Core of each Region.

The market is blamed for the radial expansion of a region. It turns out that the most valuable Urban spaces are found near a Region's Zentra where residential and employment uses demand the highest prices, rents and values.

Perhaps the most damaging Myths relate to the relationship between transportation and land use. A Myth that is particularly counterproductive is *"citizens can have increased Mobility and Access in a large Urban region simply by building more roads (or more rails)."*

The truth is that creating Mobility and Access depends more on creating functional human settlement patterns than on building new transport infrastructure.

For further details on Myths, see PART TWELVE - Chapter 44 - Section One.

## 2. UNDERSTANDING 95%-5% GUIDELINE ONE RELATING TO THE DISTRIBUTION OF NONURBAN AND URBAN LAND USES

There are two categories of land uses that support human life:

- Extensive (NonUrban) uses of land - crop lands, pastures, forests and natural areas. These land uses provide food, fiber and other materials necessary for Urban life. They also provide for watershed protection, aquifer recharge and airshed recharge. They protect natural diversity and provide the sites for non-intensive recreation for individuals, families and small groups.

- Intensive (Urban) land uses of land composed of Communities and intensive Urban actives in every NUR and USR. Communities are composed of interdependent organic components with each being a part of the next larger one (in descending scale of size): Villages, Neighborhoods, Clusters, Dooryards and Units. These components comprise Communities which make up NURs. NURs are the building blocks of the contemporary technology-rich, Urbane civilization.

Two hundred years ago, 95% of the population of the US of A relied on extensive/nonUrban uses of land for the daily activities that supported them. Each citizen in this 95% group needed about 10 acres of land, often in family farms of 40 acres or more, to carry out life's tasks.

Today, the citizens of North America, Western Europe and, in fact, the rest of the world are participants in a complex URBAN civilization. Ninety-five percent of the population in the US of A can efficiently use no more than 1/10th of an acre AT THE ALPHA COMMUNITY SCALE for their daily economic, social and physical activities. Urban citizens' ecological footprint is, of course, much larger, but the 95% of the population that is

Urban relies on less than 5% of the total population to produce food, fiber and other materials that are characterized by extensive uses of land. On a nationwide basis, the 95%-5% Guideline

One is derived by applying the 10-Person Rule of human settlement pattern to the land area of the United States.

The percentage of Urban land needed varies from region to region, but 95%-5% is a good rule of thumb for the US of A as a whole. It should be noted, that because the 95% to 5% ratio changes from Region to Region and even from SubRegion to SubRegion, the 95%-5% Guideline One is NOT one of the Five Natural Laws of Human Settlement Pattern. It is one of many guidelines that can be derived for a specific geographical area from the Five Natural Laws. It is one of three with a 95%-5% ratio. These guidelines are defined in PART THIRTEEN - GLOSSARY - "Percentage Guidelines." Also see PART FOUR - USE AND MANAGEMENT OF LAND.

## 3. THE FALLACY OF COMPOSITION

The current actions that drive human settlement patterns are shaped by an uninformed market. This uninformed market reflects consumer decisions and Organization actions which neglect to consider The Fallacy of Composition. This fallacy articulated by the economist Paul A. Samuelson with respect to economic activity is:

> **What appears good for one is frequently not good for all.**

With respect to patterns and densities of land use, there are several corollaries to this fallacy including:

- When individuals do what they believe is best for themselves individually without taking into consideration the collective impact of similar actions by many, the result is often dysfunctional human settlement patterns.

- What is NOT GOOD FOR ALL in the long run is also NOT GOOD FOR ALMOST ANY INDIVIDUAL OR ENTERPRISE EITHER. For example, there are the impacts of dysfunctional human settlement patterns on the cost of living and the cost of doing business. These factors also drop to the bottom line for citizens and Households - when it is called `quality of life.'

Advertising campaigns, lobbying efforts, uniformed preference polls and the inability to visualize alternative future scenarios obscure the fact that **Business-As-Usual** benefits only a few, and even this privileged minority is helped only in the short term.

> **In a democracy, it must be what benefits the majority which guides policy, plans and practices.**

For a brief and lucid discussion of the central dilemmas facing those who believe democracy is the best governance strategy, see Robert A. Dahl's ***On Democracy*** (New Haven: Yale University Press, 1988). As to how this fallacy relates to human settlement patterns, see Chapters 21, 22, 29 and 30 of ***The Shape of The Future***.

## 4. STRATEGIES TO ACHIEVE VIABLE HUMAN SETTLEMENT PATTERNS

There are comprehensive strategies which can be applied to create functional patterns and densities of land use within NURs. The six overarching strategies for transforming current human settlement patterns into viable patterns and densities are taken from Part Four of ***The Shape of The Future***:

- Establish a rational allocation of location-variable costs for human settlement patterns.

- Transition from auto exclusive to pedestrian and shared-vehicle supported (a.k.a., transit) patterns and densities of land use.

- Facilitate the transfer of property rights and responsibilities.

- Build the future by renewing and rebuilding the past.

- Create affordable and accessible housing in Balanced Communities.

- Restructure governance so that public actions support the building of Communities, not projects.

These are comprehensive, complex, interrelated strategies. ***The Shape of The Future*** devotes a chapter to each of these strategies and 500 pages of text to articulate the setting for introducing these strategies. These strategies are addressed in PART TWELVE - HANDBOOK - **Chapter 43 - Step Three - Balanced Communities within Sustainable Regions**.

## 5. FOCUSED TACTICS TO SUPPORT IMMEDIATE ACTION INSIDE AND OUTSIDE THE CLEAR EDGE

To illustrate the way some of these overarching strategies can be articulated and translated to demonstrate smarter growth in Urban areas, consider the following focused tactics. If followed, these programs will move citizen and Organization actions toward achieving a functional distribution of Urban land uses and Balanced Communities:

- **Rationally allocate the cost of services supporting contemporary Urban life** - Implement programs, policies and controls to insure that there is a rational and equitable allocation of all location-determined costs.

- **Apply Regional Metrics** - Quantify the actual demand for land necessary to create viable human settlement patterns by using Regional Metrics. Based on these calculations, distribute public infrastructure in a way that supports Urban land uses consistent with region, community, village, neighborhood and cluster plans. The total cumulative capacity of municipal jurisdictions should match the projected demand calculated on a regional basis. On a multi-NUR scale, this is creating a "Wright Plan." See PART FOUR - USE AND MANAGEMENT OF LAND

- **Build Communities, not projects** - Create Communities with a Balance of jobs/housing/ services/recreation/amenity that are functionally distributed within NURs and are composed of viable Villages, Neighborhoods, Clusters and Dooryards.

Sustainable human settlement patterns in the Urbanside in the Countryside require that the nonUrban land occupy 95%+/- of the total land area. The strategies to achieve a functional distribution of nonUrban land uses include:

- **Foster parcel reconsolidation** - Reverse the 500-year process of parcel subdivision. Take actions that lead to parcel consolidation. The reverse, parcel subdivision, leads to nonviable agricultural enclaves, forest fragmentation and disrupted ecosystems.

- **Pursue intelligent land conservation** - Assure that the acquisition of easements, as well as the purchase of development rights and openspace for public use, are based on a well-considered, comprehensive Countryside enhancement plan. This plan needs to be based on the reality that 95% of the land area will never be needed for Urban land uses if there are to be sustainable NURs and USRs composed of Balanced Communities. It also must

be based on the reality that the 5% of the land devoted to Urban land uses must be intelligently located and planned. This is an application of 95%-5% Guideline One.

- **Avoid scatterization of dwellings, jobs or services** - Insure that new development contributes to the creation of Balanced Communities. Ideally all new dwellings in NonUrban (Countryside) locations should be within 1/4 mile of daily services that are provided by Village-scale Zentra or Countryside Urban enclaves. Jobs and services not located in dwelling units should be within walking or cycling distance of the dwellings of those who might fill these jobs and seek these services.

- **UnUrbanize land** - UnUrbanize land by reducing the amount of land that is currently:

  - Planned and zoned for Urban uses.

  - Held by speculators for future Urban uses.

  - Currently devoted to Urban uses in inappropriate locations.

  The primary questions raised by this tactic are:

  - How to choose what land is in the 5% that should be devoted to Urban land uses.

  - How to transition from current speculation-based land markets to sustainable reality-based land markets.

There is a tactic that applies to creating a functional distribution in Urban and NonUrban areas:

- **Insure that all transport and other infrastructure decisions support sustainable human settlement patterns** - Transportation decisions are the most important ones made by organizations in determining human settlement pattern. Every region must evolve to have a balance of transport options to match citizens' economic, social and physical needs. This can happen only if there is a rational (transportable) distribution of origins and destinations. The `solution' is a Balance between transport-system capacity and vehicular travel demand. The pattern and density of land use determines the demand for Mobility and vehicular access.

Land use patterns, density, transportation modes and facilities must be planned and implemented together. To optimize effectiveness this should be done by a single agency. Furthermore the level of decision should be at the level of impact. That means regional transport decisions at the Regional level, Neighborhood decisions at the Neighborhood level.

## 6. TOOLS THAT SUPPORT THE EDUCATIONAL EFFORT REQUIRED TO IMPLEMENT FUNCTIONAL AND SUSTAINABLE HUMAN SETTLEMENT PATTERN STRATEGIES

A threshold requirement is for citizens to understand human settlement patterns and the causes and impacts of dysfunctional human settlement patterns. This understanding requires the use of an agreed-to vocabulary and a comprehensive conceptual framework.

- Human settlement patterns on this planet comprise an organic system with 9 or 10 components (depending on how SubContinents are defined).

- Human settlement patterns are controlled by the Five Natural Laws of Human Settlement Pattern that can be derived from the study of how humans have settled the land over the past 13,000 years and, in particular, the last 70 years.

- The use of `carrying capacity' is a valid way to determine the rational allocation of land, air and water, but citizens have to understand the dynamics of human settlement patterns at least as well as students of the imminent biologist E. O. Wilson understand ant colonies.

An important key is to understand human settlement pattern/transport relationships. Comprehension of shared-vehicle station-area settlement patterns may be the easiest way to understand the need to balance transport-system capacity with travel demand. It should be recognized that from the perspective of a quality Urban life, transport is a waste of resources. What is important is access and not just Mobility. It must also be made very clear that:

> **It is not economically or physically possible to provide a transport system that allows every citizen to live wherever they can afford, work wherever they can find a job and seek services wherever they want. It is not possible for citizens to travel in an automobile wherever they want and to go whenever they want and arrive in a timely manner.**

In spite of the hype by telecommunications advocates and salespersons, citizens must understand that electronic communications is not a substitute for many functions of transport. For the foreseeable future, humans cannot eat, drink or have intimate personal contact with what can be transmitted electronically. One can order food or drink on line, but it must be physically delivered in order to be consumed.

Also see tools found in PART TWELVE - HANDBOOK - **Chapter 43 - Step Three - Balanced Communities within Sustainable Regions**.

## 7. THE NEED FOR BASIC, FUNDAMENTAL EDUCATION

There has been a great deal of media coverage recently on the issue of dysfunctional human settlement patterns. All this `exposure' is not necessarily good. Much of what is being said in the media is just plain wrong. So is a lot of the `information' that citizens get from politicians, builders and developers, land speculators and others.

Polemics are useful to maintain a strategic stalemate that is intended to slow the rate of bad things from happening. Polemics based on Myths, misinformation and ad campaigns are not useful in moving toward a sustainable future. Simple slogans are fine to stop things; they are not useful for creating a consensus on how to achieve functional human settlement patterns. Without using a common vocabulary and an agreed-to conceptual framework, the talk is largely babble. Regional Metrics is a way for citizens to understand the complexity of the patterns and densities of land use.

Over the past two decades, as concern for traffic congestion, air and water quality, escalating service costs and other results of dysfunctional human settlement patterns have become more and more critical, a stalemate has evolved in many regions between **Fundamental Transformation** and **Business-As-Usual**.

That is the reason that following the articulation of the *Stark Contrast*, PROPERTY DYNAMICS, the topic of PART ELEVEN and HANDBOOK, the topic of PART TWELVE have been created.

## END NOTES

(1) Stark Contrast was commissioned by and the title selected by the president of a Regional conservation Institution. At the time there was little understanding of the gulf between conventional wisdom and reality with respect to Regional human settlement patterns. Following the 2007 implosion of the shelter bubble and the 2008 Global financial meltdown, there is no excuse for there to be a "stark contrast" except for the causes noted in PARTS ONE, TWO, THREE and FOUR OF ***FOUNDATIONS***.

(2) The author's favorite evidence is the mural in Sienna but at the time *Stark Contrast* was being written there were two recent publications cited in the first draft: ***Better Models for Development in Virginia*** (2000) by Ed McMahon of the Conservation Fund which identifies "maintain a Clear Edge between town and Countryside" as one of six principals for better development. Roger Lewis, author and professor of architecture, writing in his regular column in ***The Washington Post*** (28 July 2001), argues for a Clear Edge around the Urbanside.

(3) This is called "the tyranny of easy development decisions" in ***Confronting SubUrban Decline*** by William H. Lucy and David Phillips.

(4) The primary reason that there has been an illusion that resources have existed - up until the Global Financial Meltdown (aka, The Great Recession) - is 1) The false 'prosperity' generated by burning through Natural Capital and 2) failure to fairly allocate location variable costs.

(5) **Stark Contrast** was created to address issues coming to the fore in the National Capital Subregion and in the Washington-Baltimore NUR in 2001. The material outlined in Understanding the Facts and Concepts Outlined in **Stark Contrast** are also applicable to NURs and USRs throughout the First World.