



Heart of the Triad

The Implementation Program

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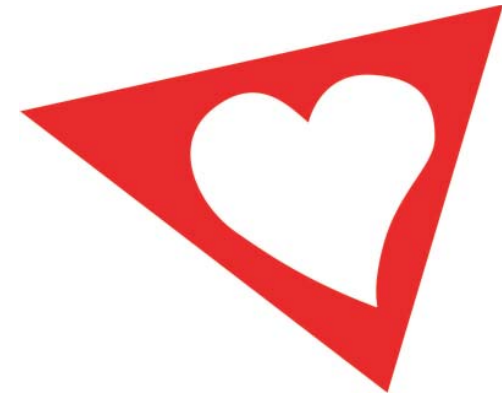
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Heart of the Triad

Implementation Program

INTRODUCTION

From the inception of the HOT process, all agreed that the means of implementation was going to be the most difficult issue to tackle. There is no doubt that this remains the central issue. The difficulty is a function of uncertainty based on:

The direction the communities choose is directly related to the benefits it sees coming from a cooperative, coordinated initiative. The HOT process is about reversing the loss of employment within the Triad and envisioning new ways to attract new employers to the area. Through the cost/benefit analysis, the results show that with the HOT planning concepts and strategy, the total economic benefits are \$310,000,000 annually over the baseline. To enjoy this level of economic return, an aggressive approach to implementation is required.

The Implementation Program has four essential elements – the HOT focused development strategy, branding HOT for success, organizational approaches, and policy action.

FOCUSED DEVELOPMENT STRATEGY

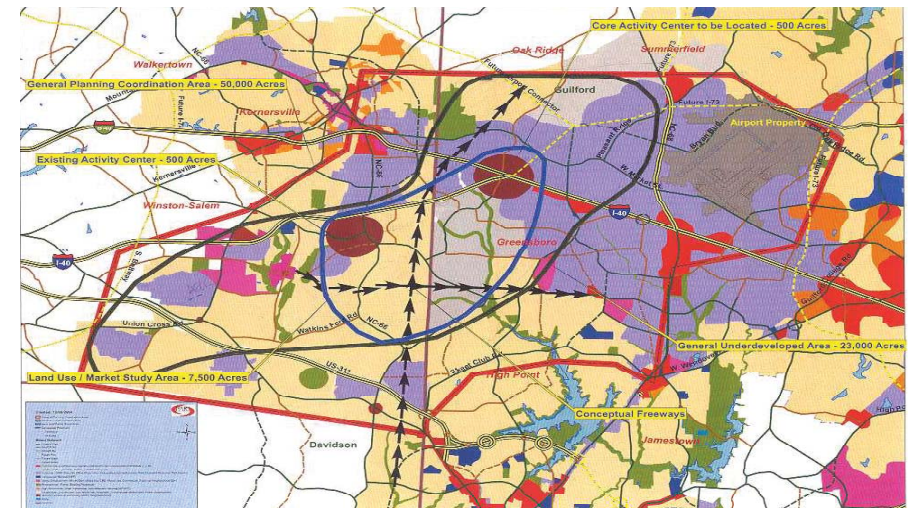
INTRODUCTION

The original intent of the Heart of the Triad (HOT) study was to focus on a 7,500 acre study area that was “the heart of the Heart” (See Figure 1). For the first few weeks of the assignment, the project retained that study area size. As the information began to accumulate, especially for the transportation analysis, there was concern by the team and the Technical Committee that the focus area might be too constrained. Three factors became apparent – the impending development of the FedEx facility in the northeast; the attraction from the Dell facility in the

southeast; and the implications for the transportation system. Since the transportation impact of the project was a critical factor, a review of the transportation data base was conducted. The central source of information was the traffic analysis zones (TAZs). By overlaying the (TAZs) on the existing land use pattern, and due to the generally large TAZ sizes, the 7,500 acre area expanded to approximately 18,000 acres. Planning proceeded using this new “study area”, even though the assumption was that not all of the 18,000 acres was to be “planned”. However, during the charrette the opposite, in fact, happened, and the final concepts (I - III) covered the entire 18,000 acres.

Since implementation is critical to the project’s success, the implications of this expansion led to the concept of a focused development strategy.

Figure 1 – Original Study Area



The idea for a focused development strategy asserts that, given the expanded planning area, an opportunity arose to allow a multi-pronged approach to implementation. In this concept, development concentrations occurred naturally in association with each city. That created a sense that each had positive growth potential, while still providing an opportunity to cooperatively concentrate on a single HOT location. The idea for the concept evolved from the findings of an analysis of the charrette.

The principal charrette themes are embedded in four aspects of the Plan – the Vision, the new “HOT math”, the premises for achieving successful implementation, and the actual distribution of land uses within the concepts.

Heart of the Triad Vision – A Vision Statement guided the development of the land use, transportation, economic development and environmental concepts for the Heart.

Working Together to Envision and Create One Great, Memorable PLACE

...Defined by its Natural Assets

...Dedicated to Celebrate its Regional Traditions

...Designed for Active Ways to Live, Learn, Work, Play and Move

...Driven by Continuous Knowledge-based Innovation

...Delivered by Political Commitment and Private Investment

...Destined for Sustainable Economic, Environmental and Community Development

The emphasis of the Vision is to create **Place**. Given the expanded geography (18,000 acres), the ability to create a “single” place became more complex – not impossible, just more complicated.

The New HOT Math – With two counties and four cities joining together in the cooperative, collaborative planning process, the means of developing a **Place** needed a new paradigm. This is where the

new math came into play. During the charrette, a formula naturally evolved from the process:

The New HOT Formula

$$2 + 4 = 1$$

The Power of Place

This emphasis on **Place** gave freedom for HOT to employ a unified set of development typologies, while retaining the opportunity to choose multiple economic development strategies. The new math’s focus on placemaking yielded a dual focus – opportunities for individual communities, while providing an opportunity for a central **Place** within HOT that could be jointly developed.

The Plan’s Premises – To unleash the Power of Place, the Plan sets forth five fundamental premises.

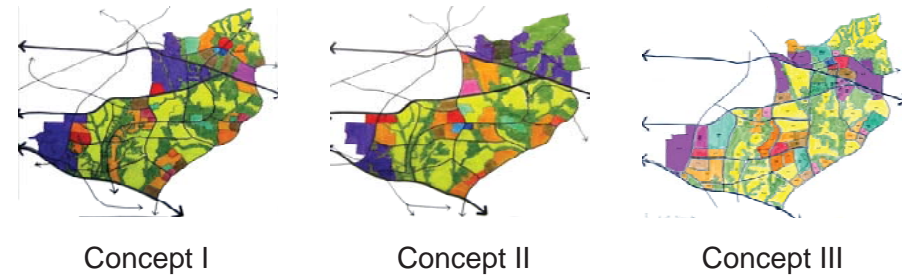
- **Create “Win-Win” Strategy** – Prior to the HOT project even beginning, a principal agreement among the two counties and the four cities was to create a “**Win-Win**” strategy for all. That was the genesis for **2+4=1**. **Each jurisdiction would benefit from opportunities that would flow from the HOT process.**
- **Protect Each Community’s Specific Initiatives** – A corollary premise is that **HOT would not lure away any community’s current or planned initiatives.** During the goal-setting process, this premise was validated. Success of HOT would not be dependent upon creating a competitive environment with the four cities in particular.
- **Give Each Community Expanded Opportunities** – Conversely, a fundamental premise is to foster an environment where complementary initiatives could prosper proximate to each community. Because the study area was expanded to 18,000 acres, **each jurisdiction has expanded land use and economic development opportunities.** This means with the **focus area is smaller, providing greater incentive to create the smaller “shared place”.**

- **Focus a Coordinated Economic Development Strategy**
 - Multiple economic development strategies emerged during the initial phase of work. While having multiple choices was encouraging, the ability to “select” a single strategy became problematic. This was partly due the rapidly changing economic development environment and the diversity of local initiatives already being pursued. **The focused development strategy is easier to concentrate on 2-3 key economic development initiatives.**
- **Locate a Potential “Single Place” that is a “Central Shared Place”** – The core idea of HOT from the beginning has been to create a central place that goes beyond what any one jurisdiction can do alone. Likewise, **with expanded opportunities for greater revenue potential for each jurisdiction, the smaller area means each gives up less** to get a part of a greater return within the core area.

Land Use Distribution – While the original intent was not to completely fill the entire 18,000 acres, a side benefit was the result. As each community considers its role within a HOT strategy, the “Win-Win” premise becomes clearer. The Plan unfolded in such a way that each jurisdiction could see what it might expect from the overall growth strategy – and the opportunity from participating in the “central shared place”. This is fundamental to the idea of a focused development strategy.

For each concept, the analysis reveals a natural attraction of uses to areas of strong (existing or planned) concentrations. Figure 2 shows Concepts I, II, and III and the “centrifugal” nature of the land use distribution – the location of uses toward the edges of the study area and in clear relationships to Greensboro, High Point, Winston-Salem, and Kernersville.

Figure 2 – Charrette Concepts I – III



In effect, the original idea of a “central shared place” for HOT re-emerged, while each jurisdiction enjoyed significant development opportunities outside the core area. This allows a dual focus – **the “gains” each jurisdiction’s enjoy** and the ability to develop a **shared central place**.

THE TECHNICAL COMMITTEE PROCESS

Given the proposal to return to a smaller focus area, the Technical Committee and the design team held a workshop to a “core” that, in effect, would become the Heart of the Triad. After reviewing the three concept plans, environmental maps, available lands and parcel maps, the Committee recommended a more constrained boundary for HOT. This area was more strategically defined, and it is comprised of approximately 6,300 acres. This makes it somewhat smaller than the initial idea, but this area is based on the overlay of multiple factors. The location is shown in Figure 3, with the balance of the 18,000 acres ghosted behind it.

Figure 3 – Study Area and New HOT Location



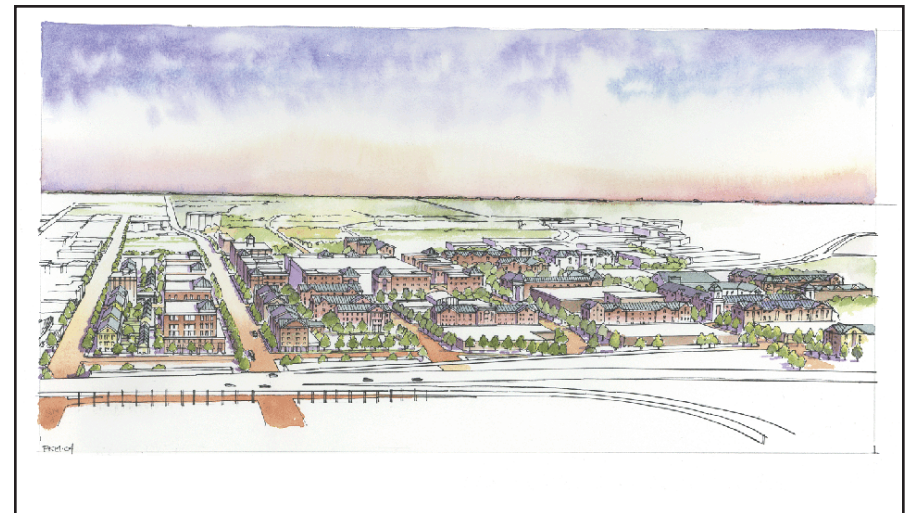
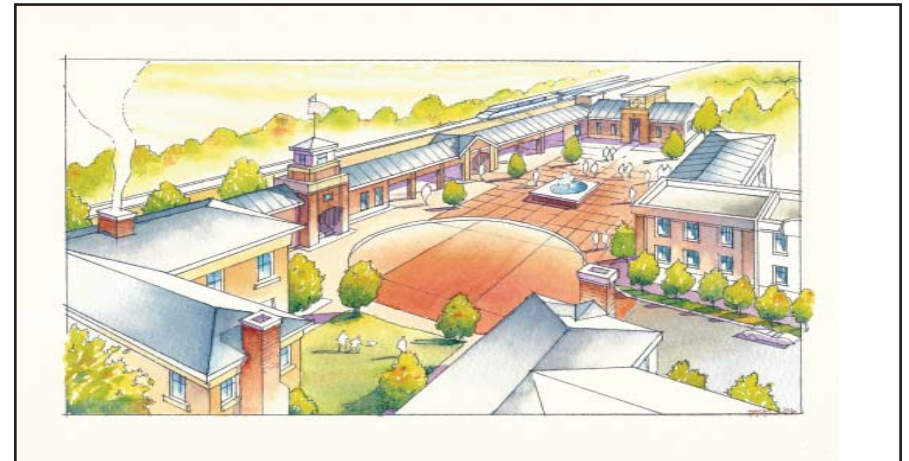
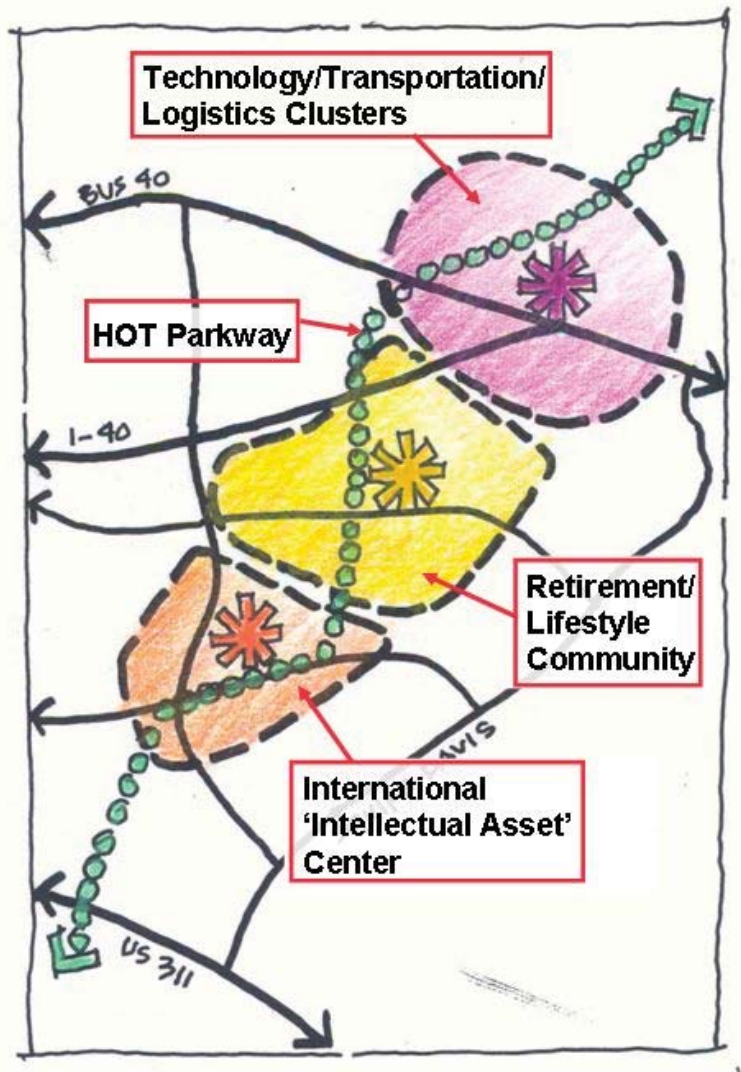
Opportunities Around HOT - As previously discussed, there are expanded opportunities for the communities. Uniformly around the HOT focus area, as shown in Figure 3, are significant development opportunities that fall within the planning purview of a partner community. Implementation of the “surrounding” area is accomplished through coordinated land use planning and development regulations.

The New Hot - The Technical Committee considered the 6,300 acre area large in context of strategy development. Working through the overall study area size, the need to concentrate on a limited number of economic development strategies, and future organizational issues, a “diagram” was developed that reflected the general use area within HOT (See Figure 4).

The diagram locates the primary existing and proposed supporting transportation networks, including the Heart of the Triad Parkway and the general locations for the principal economic development strategies. This diagram corresponds to the 6,300 acres.

Organization Potentials - The focused development strategy allows each community to direct a preferred economic development approach, and it also opens up the issue of a governance structure for HOT’s central place. Whatever the approach, the premise of “Win-Win” must be central. Shared costs and benefits must flow to and from those involved.

Figure 4 - HOT Diagram

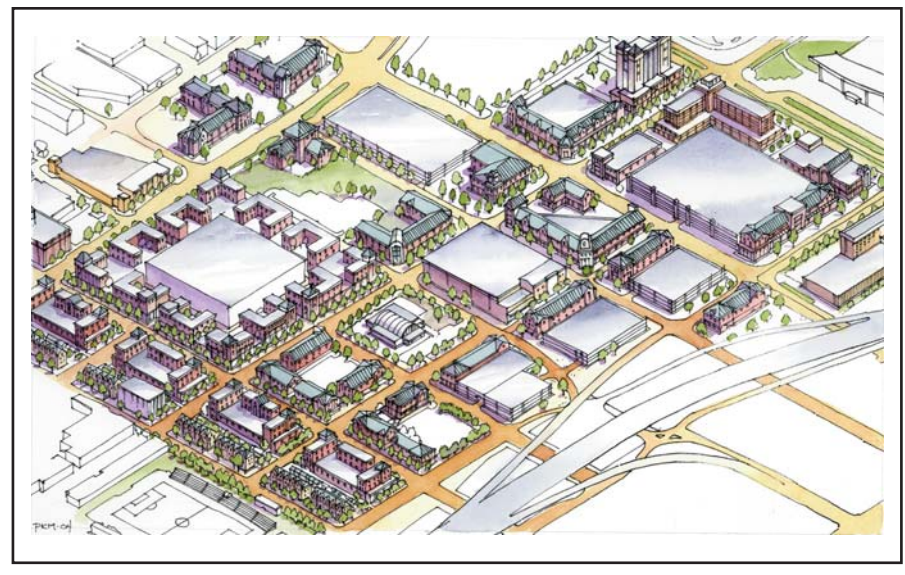
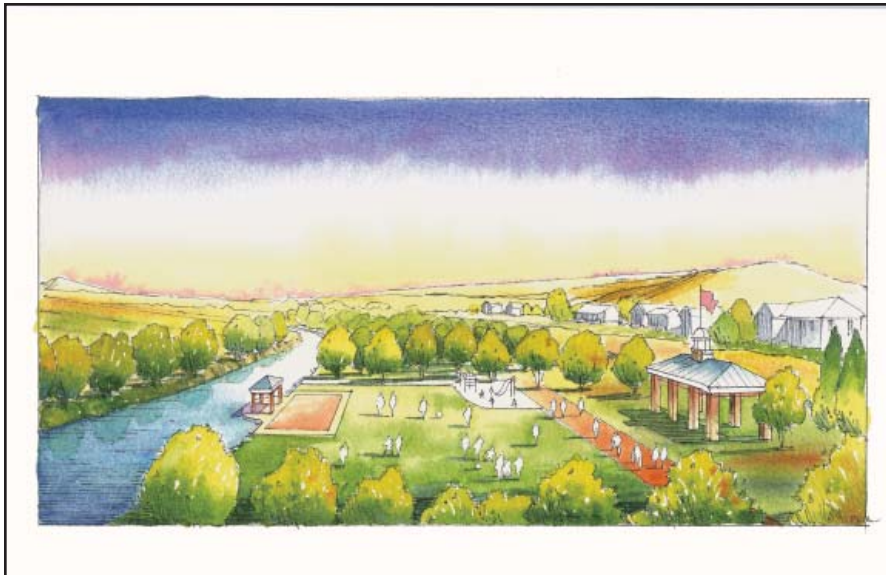


To help visualize the three HOT focus areas, the following pictures depict how they might develop.

Retirement/Lifestyle Community



International "Intellectual Asset" Center



BRANDING HOT

Regardless of the organizational approach the Steering Committee elects to pursue, the manner in which HOT is presented externally is of prime importance. The branding of HOT is based on three components – Targeting, Marketing and Placemaking. These three have been emphasized from the inception of the project.

TARGETING

Enhancing the opportunities within the Heart of the Triad must occur from altering population growth and historical market capture. Current economic and population trends would result in growth within HOT, but that growth would be highly concentrated toward suburban residential development. New employment opportunity, place making, and regional branding could be expected to create the incremental growth needed to enhance the HOT area. Based on the market analysis, three probable situations were examined:

- Status quo or ‘do nothing’ – While this is certainly not likely, it does represent a baseline scenario to understand potential benefits of alternative growth scenarios
- Enhanced logistics and transportation cluster
- Enhanced research and development and medical technology cluster

Development of a unique ‘place’ plus the creation of an industry cluster would support a defined regional brand that would be capable of altering the future potential of HOT. Under current conditions, residential development at relatively lower density could absorb the entire HOT study area of approximately 18,000 acres (see Table 1 in the Appendix). Supportable non-residential development could be either interspersed among residential development within HOT, the study area or provided around existing developed areas outside of the study area. An enhanced employment cluster involving logistics, distribution and transportation; research and development; and medical and pharmaceutical technology would provide the more

intensive non-residential development balanced with a mix of higher density activity centers (see Table 1 in the Appendix). This enhanced demand for both non-residential and residential development provides more opportunity for creating a unique living and work environment that is essential to completing the attributes for a strong regional brand.

A final plan for the HOT area becomes a matter of local choices. A well executed, targeted economic development plan creates more job and population growth than would otherwise occur. Creating a unique place within HOT by attracting certain uses happens by balancing non-residential and residential mixes that meet community needs. As a result, the HOT study area would capture a greater share of non-residential and residential uses without detracting from existing local efforts for economic development outside of the HOT study area.

Targeting Future Employment Opportunities - Based on a market analysis, the development of the Heart of the Triad (HOT) study area under the status quo is expected to be influenced by an estimated capture of some portion of 280,000 new residential dwelling units and 134,000,000 square feet of non-residential development projected for the Greensboro and Winston-Salem MSAs (Piedmont CMSA) between 2006 and 2035 (see Table 1 in the Appendix). This demand results from an estimated growth in total area population of 639,000 and employment growth of more than 286,000 between 2006 and 2035 reflecting growth rates of 1.35% and 1.45%, respectively. The estimated unconstrained potential market capture for the HOT study area under the status quo scenario results in a calculated demand for the development of more than 18,000 acres. Development within the area would therefore be expected to naturally allocate a mix of residential and non-residential uses resulting from individual highest-and-best-use. Thus, it is expected that the HOT study area would tend to develop as lower-density residential under the status quo.

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Figure 5 - Future Employment Types

BASELINE	HOT AREA DEMAND		
	Units	Ac	FAR/Density
	----- in thousands -----		
Residential	37.5	18.8	2.0
Non-residential			
Warehousing, logistics, distribution and industrial	8,250	1.3	0.15
Retail	4,763	0.6	0.20
Accommodations and food service	3,875	0.3	0.30
Healthcare	1,863	0.1	0.34
Office	2,175	0.1	0.36
Subtotal	20,925	2.4	0.20
TOTAL ACRES (in thousands)---->		21.1	

As a result, depending on the mix of residential and non-residential development, the HOT study under the status quo scenario would be expected to accommodate up to 95,000 new area residents (total of 102,500 with existing population) and some portion of up to 42,000 new jobs (total of 45,000 with existing employment). While not entirely practical, the HOT study area could be developed entirely as low density residential thereby reducing the amount of non-residential development and new employment. Conversely, if accommodation of the non-residential development is maximized, residential development would be required at higher densities to accommodate up to 95,000 new residents (total of 102,500 with existing population); otherwise fewer new residential units would be developed.

Under an enhanced employment cluster scenario, population and job growth for the entire region (Piedmont CMSA) would be expected to increase significantly above the status quo. The development of the HOT study area under the enhanced employment cluster scenarios is expected to be influenced by an estimated capture of some portion of 360,000 new residential dwelling units and between 133,000,000 and 158,000,000 square feet of non-residential development between 2006 and 2035 (see Table 1 in the Appendix). This demand results from an estimated higher growth in total area population of 821,000 and greater employment growth of more than 350,000 between 2006 and 2035.

Each enhanced development scenario is estimated to provide more new growth opportunities than can be supported within the defined HOT study area (roughly 18,000 acres). At minimum, the HOT study could be expected to achieve its status quo growth and capture a majority of the incremental population and employment growth since the enhanced development would be targeted within that area. **Thus, the enhanced development scenarios could, at minimum, result in development to accommodate up to 140,000 new residents and some portion of 100,000 new jobs. More intensely planned development and a higher capture rate of base and enhanced employment growth could result in development to accommodate as much as 150,000 to 175,000 new jobs.** If accommodation of the non-residential development is maximized, residential development would be required at higher densities to accommodate the 140,000 new residents; otherwise fewer new residential units would be developed.

The close relationship between population and housing helps provide a balance, thus providing opportunities for reduced travel impacts and high internal trip capturing. The range of housing types should be available for all income levels.

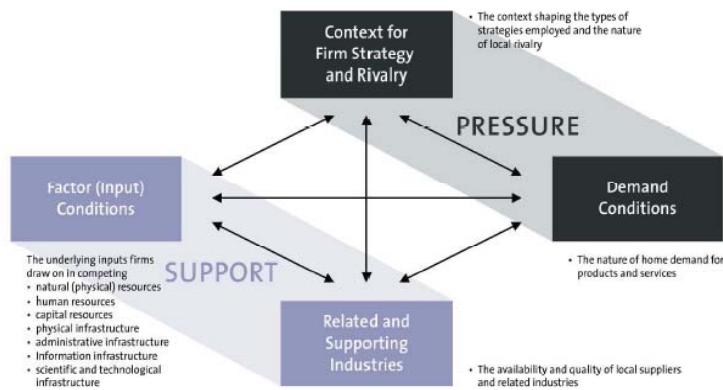
The potential mix of residential and non-residential development within the HOT study area, therefore, can be targeted to meet community needs at the same time as creating the necessary industry cluster and unique place required to deliver the enhanced development scenarios. Growth within the total Piedmont Triad would be expected to increase sufficiently from the development of a strong regional brand and enhanced employment opportunities and unique live-work environment in the HOT study area to avoid competing with the Triad's existing economic development initiatives.

Targeting Future Industry and Knowledge Clusters - A cluster is a concentration of competing or complementary firms and their related supplier networks with common needs for employment, technology, and infrastructure. This concentration of interrelated firms and

industries has a defined geographic proximity and their relationships are dynamic and evolve as a result of market or other forces. The interconnected flow of goods and services within a cluster is stronger than the linkage to the balance of the local economy.

Porter's illustration of the inter-related factors that shape a cluster's competitiveness is one of the most recognized descriptive tools of an industry cluster (Figure 6). The stronger the elements of input conditions and supporting industry factors and the linkage with demand and firm interaction, the more competitive the cluster is relative to other related, national clusters.

Figure 6 - Porter's Cluster Diamond



Source: Porter, Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School

Clusters that provide a driving force on local, regional, and state economies exist among firms and industries that create wealth in a region primarily through the export goods or services outside of their local region. These types of clusters provide better regional employment opportunities and are better positioned to adapt to external competitive pressures than isolated firms. Knowledge-based clusters have a high propensity of accumulating in a small geographic area since knowledge is more efficiently developed, transmitted, and shared in close proximity. As a result, a region with a mature technology, knowledge-based cluster will have more retained

innovations and commercialization of new technologies than would otherwise occur.

The concept of industry and knowledge clusters is a central policy paradigm in regional and local economic development over the past decade. The rise of popularity of this concept is not difficult to understand. Regions such as Research Triangle Park and Silicon Valley demonstrate how a geographic location devoted to a high degree of science, technology, and knowledge-based innovation can succeed in creating sustained economic growth.

Logistics/Distribution - Based on the comparative analysis of regions recognized for their development and evolution of 'Logistics and Transportation' clusters, firms were found to participate in a variety of diverse trade and service markets. The development of these activities centered around a pattern of global just-in-time distribution, a relatively strong manufacturing sector, an integrated transportation system, and knowledge and air travel networks. For the purpose of this analysis, a Logistics and Transportation Cluster was defined as being inclusive of two main trade and service sectors - Wholesale trade, and Transportation/warehousing. A logistics and transportation cluster does not have to result in "acres of warehouses" or "low-wage" jobs. The umbrella of logistics support includes a number of technically advanced occupations and companies that create demand for office development and generate above average wages.

- **Wholesale Trade.** This sector comprises two main types of wholesalers: merchant wholesalers that sell goods on their own account and business to business electronic markets, agents, and brokers that arrange sales and purchases for others generally for a commission or fee. As such, this sector includes establishments that:
 - o Sell goods on their own account are known as wholesale merchants, distributors, jobbers, drop shippers, and import/export merchants. Also included as wholesale merchants are sales offices and sales branches (but not

retail stores) maintained by manufacturing, refining, or mining enterprises apart from their plants or mines for the purpose of marketing their products. Merchant wholesale establishments typically maintain their own warehouse, where they receive and handle goods for their customers. Goods are generally sold without transformation, but may include integral functions, such as sorting, packaging, labeling, and other marketing services.

- o Arrange for the purchase or sale of goods owned by others or purchasing goods, generally on a commission basis are known as business to business electronic markets, agents and brokers, commission merchants, import/export agents and brokers, auction companies, and manufacturers' representatives. These establishments operate from offices and generally do not own or handle the goods they sell.
- **Transportation and Warehousing.** The Transportation and Warehousing sector includes industries providing transportation of passengers and cargo, warehousing and storage for goods, scenic and sightseeing transportation, and support activities related to modes of transportation. Establishments in these industries use transportation equipment or transportation related facilities as a productive asset. The type of equipment depends on the mode of transportation. The modes of transportation are air, rail, water, road, and pipeline.

The Transportation and Warehousing sector distinguishes three basic types of activities: sub sectors for each mode of transportation, a sub sector for warehousing and storage, and a sub sector for establishments providing support activities for transportation. In addition, there are sub sectors for establishments that provide passenger transportation for scenic and sightseeing purposes, postal services, and courier services.

- **Logistics Management and Consulting.** This sector also supports a variety of technical and logistical management and consulting activities. These are high technology services including computer system design, computer programming services, customs consulting services, efficiency management services, inventory planning and control, logistics management consulting services, manufacturing management consulting services, transportation management consulting services, operations research consulting services, manufacturing operations improvement consulting services, and tariff rate consulting and information services.

Medical Technology Cluster - Based on the comparative analysis of regions recognized for their development and evolution of 'Research and Development', 'Medical Technology', or 'Life Science Industry' clusters, firms were found to participate in a variety of diverse research and development, medical product manufacturing, and service markets. The development of these activities centered around a pattern of local knowledge spillover, an abundance of a highly educated workforce, and world-class facilities exploring and commercializing medical and technological innovations. For the purpose of this analysis, a Medical Technology Cluster is defined as being inclusive of five product and service markets:

- **Physical, engineering, and biological research.** This industry group comprises establishments primarily engaged in conducting original investigation undertaken on a systematic basis to gain new knowledge (research) and/or the application of research findings or other scientific knowledge for the creation of new or significantly improved products or processes (experimental development).
- **Pharmaceuticals and medicine.** This industry group comprises establishments primarily engaged in supplying raw materials or pharmaceutical preparations or manufacturing in-vivo diagnostic substances and pharmaceutical preparations intended for internal and external consumption. Included are establishments primarily engaged in manufacturing in-vitro diagnostic substances for

diagnostic tests and vaccines, toxoids, blood fractions, and culture media of plant or animal origin.

- **Medical Devices and Equipment.** This industry group comprises establishments primarily engaged in manufacturing electromedical and electrotherapeutic apparatus, instruments and instrumentation, irradiation apparatus, and laboratory apparatus. Examples include magnetic resonance imaging equipment, ultrasound equipment, pacemakers, and endoscopic equipment.
- **Medical Instruments.** This industry group comprises establishments primarily engaged in manufacturing medical, surgical, ophthalmic, and veterinary instruments and apparatus. Included are establishments primarily engaged in manufacturing surgical appliances and supplies.
- **Bioinformatics.** This industry comprises establishments that are engaged in providing research, development, or application of information technologies and approaches for the use within biological, medical, or healthcare markets. This activity includes utilizing technologies to acquire, store, organize, analysis or visualize medical, biological, and health related data.
- **Biomanufacturing.** This is a fast-emerging industry that makes or processes a finished product of, related to or caused by, or affecting life or living organisms, especially by means of a large-scale industrial operation. A large percentage of bio-manufacturing jobs involve the production of bio pharmaceuticals. At least 16 state companies have biomanufacturing plants in the state, producing a wide range of products including enzymes, vaccines, drugs, amino acids, high fructose corn syrup and vitamins. North Carolina is focusing on biomanufacturing, including the creation of the Biomanufacturing and Pharmaceutical Training Consortium, a collaboration between industry and the university system (including community colleges).

Preferred Economic Development Initiatives - Through the evaluation process since the charrette, there has been much discussion about the economic development direction for HOT. As a result of extensive debate, the direction recommended, especially by the economic development members of the Technical Committee,

for HOT is to pursue – the **Logistics and Transportation Cluster**, including the logistical management and consulting sector, and the **Technology Cluster**, emphasizing pharmaceuticals, medicine, and biomanufacturing.

Because HOT has the capacity to accommodate several different economic development opportunities, the Steering and Technical Committees recommended advancing two other identified initiatives: A **Retirement Lifestyle Community** that includes residents with higher disposable income, supports continuing education, includes a major golf course and outdoor recreation facilities, with a town center that offers a conference center, timeshare ownership, lodging, and retail, food and entertainment.

A second opportunity is the **Collaborative International 'Intellectual Asset' Center** that houses specialized state and federal facilities, and International Technology Center, specialized healthcare, and a combined university campus. A unique idea is to partner with a country such as India or China to anchor the Intellectual center.

BRANDING

The concept of branding of HOT is designed to represent the “idea” as well as the “place”. This, in effect, is a process of co-branding, and this approach can be used to uniquely position HOT within the national marketplace. Within the overall 18,000 acre study area, HOT occupies approximately 6,300 acres. This represents an area defined by the Technical Committee in a post-charrette working session. There are three general sectors – Northeast, Central and Southwest – and each has a specific orientation and role.

Features and Theme – Positioning HOT as an attractive location for dynamic new employment opportunities is a function of creating a place that combines a unique set of qualities and attributes. HOT offers the foremost example of sustainable development. Here, sustainability means a high level of environmental enhancement, integrated community planning and design, and exciting and

innovative employment and educational opportunities to attract and support a diverse workforce.

Blessed by a major concentration of colleges and universities, the Triad's knowledge-based economy drives innovation. HOT's continuous success is linked to its ability to respond to constantly changing technology. The ability to create "brain draw" reinforces HOT's attractiveness to the technology sector.

HOT's development process has focused on high quality job creation that is sustainable over time and responsive to the cutting edge nature of technology. HOT represents an understanding the base market, with targeted technology clusters.

The Triad's mobility network - air, highway, railroad, and transit - is fundamental to moving HOT forward. Few communities have this existing and proposed system for fast and efficient movement of people, goods and services. The finer grained system is completed by a pedestrian and bicycle facilities that support sustainable community life.

For HOT to be a successful venture, the environmental setting must be an equal partner with its technological and infrastructure capabilities. The area's natural environment is an valuable, existing asset, and the community design must properly integrate with environmental design.

These features – innovation, technology, mobility, and the environment – combine to form the branding theme.

“HOT...Moving Innovation and Technology Forward...Naturally”

PLACEMAKING

The third component of branding HOT is placemaking. The discussion of the Power of Place began at the charrette, and it has been reinforced throughout the process. To attract the type of employers, delivering

the desired level of wages, HOT must be planned and designed as a place where people want to be. This is consistent with the design team's philosophy that the entire study area receives the same level of attention and details as HOT itself. This is the integration and coordination of land use planning, and augmented by the urban design recommendations.

IMPLEMENT THROUGH COORDINATED LOCAL PLANS AND REGULATIONS

To ensure that HOT grows in a unified manner, all jurisdictions must adopt coordinated land use and regulatory mechanisms. While there may be limited variability, for HOT to be a complementary and coordinated place, new categories developed during the charrette must be adopted. These include:

- Traditional Neighborhood
- Urban Neighborhood
- Village Center
- Town Center
- Retail/Entertainment Center
- Employment Center
- Employment District
- Critical Open Space

For each category, the Plan will recommend the appropriate mix of uses, intensities, densities and general development standards. In addition to the recommendations for land use categories, there will be additional ones for coordinated:

- Land Development Regulations
- Roadway Design Standards
- Access Management Standards
- Special facilities
 - o Incubators or accelerators
 - o Testing/research labs
 - o Advanced IT capability
 - o Shared meeting and conference space

- Specialized services
 - o Industry-specific workforce training
 - o Marketing/export promotion
 - o Regulatory review/adherence
 - o Business assistance
- Recommend alternative strategies for longer term marketing initiatives
- Identify key persons responsible for marketing initiatives
- Identify benchmarks for marking progress and “updating” the theme, as necessary
- A map showing the “regional branding” concept

ORGANIZATIONAL APPROACHES

If implementation in general was anticipated to be a challenge for HOT, the specific organizational approach was deemed to be even more problematic. In approaching organization options, issues from the very beginning included:

- How to control a large real estate venture
- Who would, own, operate, and manage the project
- How to provide initial and continuing project financing
- Concern over what each community might “lose”
- Questions about the benefits – what each community might “win”
- The ability, or inability, to define cost and revenue sharing mechanisms between communities

CASE STUDY FINDINGS

One of the first tasks of the market and economic study was to consider existing large scale economic development projects across the nation. The intent was to provide guidance on the composition and structure of various research parks, industrial parks, and logistics districts or areas. The case studies can be used in part to gauge the success, implementation issues, and growth of these areas, thus offering instruction for implementing the HOT concept.

Case Study Locations – Six cases studies that bore relationship to HOT, with variable locations, use mixes, and governance structures, were completed:

- Research Triangle Park (RTP)/Raleigh-Durham – 7,000 acres, 45 years, 3 counties, RTP Foundation, steady growth
- Miami Valley Research Park/suburban Dayton (MVRP) – Top 10 university research park, 1,250 acres, 20 years, started by community leader
- Alliance Texas/Fort Worth – 17,000 acre logistics district, 20 years, includes multiple uses, cargo airport, privately developed
- Rickenbacker International Airport/Columbus, Ohio – 15,000 acre area, cargo airport, 20 years, special authority
- FedEx logistics areas/Memphis and Indianapolis – Catalyst for supportive warehousing and distribution, privately developed, growth over time

Case Study Results – The case studies reveal several general findings, growth factors, physical qualities and use mix, and governance and operating models

• General Findings

- o Well implemented large-scale projects can lead to thousands of jobs and thousands of acres of development
- o Research parks employ greater numbers per acre compared to distribution districts
- o Research parks developed over a long period of time – long term undertaking

• Growth Factors

- o Logistics/warehousing parks grew faster than research. For example, after 20 years:
 - RTP - 6.5 million square feet
 - MVRP - 1.8 million square feet
 - Rickenbacker - 26 million square feet
 - Alliance - 22.6 million square feet

• Physical Qualities and Use Mix

- o There are limitations in scale for new research parks

Implementation Program

- o Projects generally located in rural/suburban areas due to land needs
- o Most used master planning process as part of park/area development – FedEx districts the exception
- o Alliance - districts separate land uses and provide for efficient industrial usage. Industrial, office, retail, and residential planned in the 17,000 acre project.
- **Governance and Operating Models**
 - o RTP – Land use districts allow prescribed activities and jurisdictions control their respective land uses
 - o Well developed transportation system and other infrastructure are keys to effective and efficient logistics parks; continuous infrastructure investment is needed to maintain market advantage
 - o Public and private investment is needed
 - o Typically parks/areas not legislatively created, but support from government and community are essential to success
 - o Logistics districts are generally privately developed
 - o Research parks generally are run by non-profits
- o Reliance on private sector implementation
- o Planning and development notification
- The Collaborative Approach
 - o Designated focus area for location of targeted industry clusters
 - o Organized marketing and recruitment
 - o Structured planning and development coordination
- The Legislative Approach
 - o Legislatively provided unified ownership, organization, management, recruitment, and marketing of HOT as a defined “economic development district” within the study area
 - o Formalized intergovernmental planning and development review and recommendation

There are several factors that drive each approach. The approaches have varying degrees of difficulty and/or ease, depending upon the desired results. There are two fundamental factors - the level of commitment from the partner communities and the level of public/private participation. The alternatives address the implications of each.

ALTERNATIVE APPROACHES

For HOT, three basic approaches the communities may choose to implement are outlined – Cooperative, Collaborative, and Legislative. These approaches take advantage of the findings from other similar facilities and locations. The alternatives blend several of the attributes described, and they represent a mix of options. Debate by the Steering and Technical Committees, along with the funding partners, can yield an approach specifically suited to HOT. Within each approach are the means to organize and manage HOT, as well as the planning and regulatory policy implications for each community. The agreed upon approach for HOT may include one or more of the elements embodied in the various approaches.

- The Cooperative Approach
 - o Cooperative marketing and recruitment

THE COOPERATIVE APPROACH

Cooperation represents the basic level of implementation. It is the lowest-cost, minimal effort that can be made to implement the vision for HOT. Even with the cooperative approach, a unified land use system and transportation network is necessary if benefits are to accrue to the communities. Without this minimum level of commitment, communities will continue going their own ways, and the overall development pattern will continue to unfold in a random fashion. The three features of this approach are marketing and recruitment, reliance on private sector implementation, and planning and development notification.

Marketing and Recruitment - The ability to attract the targeted industries remains a core activity. The cooperative approach is informal in nature. In the cooperative approach, the communities:

- Agree to the branding concept for HOT
- Target the preferred industries in the desired industry cluster – bio-manufacturing, pharmaceuticals, and logistics/distribution
- Develop a well-orchestrated internal and external marketing plan
 - Prepare a cooperative agreement between the chambers of commerce and economic development entities as to the targeted industries and clusters
 - Strike an accord that protects an individual community's current economic development initiatives
 - Develop individual, but coordinated, community marketing campaigns based on the target industries and the branding concept
- Aggressively engage the private sector
 - Market to developers with specific industrial sector expertise
 - Encourage and facilitate parcel aggregation
 - Provide proper land use and regulatory entitlements
 - Offer a variety of incentives
- Support the implementation of regional transportation improvements that cross jurisdictional boundaries and are essential to the plan's success
- The various Chambers of Commerce and economic development groups should meet quarterly to assess the status of the efforts over that period.

Planning and Development Notification - The planning and development role in this approach depends on a minimal level of cooperation. It recognizes HOT as an “economic development area”, but its implementation is based upon each local community's interpretation. In this approach, communities are encouraged to:

- Follow the vision, goals and objectives of the HOT plan
- Adopt applicable land use and transportation recommendations
- Amend Future Land Use and Transportation Plan Maps and make

applicable text amendments

- Adopt coordinated codes and ordinances, standards, and design guidelines for plan implementation
- Provide courtesy notification to other HOT communities when plan and zoning changes are made that vary from the vision
- Provide courtesy notification when land development applications are under review

THE COLLABORATIVE APPROACH

The collaborative approach recognizes that “business-as-usual” is no longer acceptable, and that there are substantial social and economic benefits to a unified approach by the participating communities. This approach can help position HOT as a viable location for attracting high wage technology industries, as well as a recognized livable area. The features of this approach are collaborative organization and intergovernmental planning and development coordination.

Collaborative Organization - The ability to identify HOT as an attractive location for the preferred targeted industries is a priority. In the collaborative approach, the communities move beyond a cooperative mode to one more organized and coordinated. Under collaboration, the communities actively consider a hybrid approach that combines a public/private partnership to advance the HOT concept:

- Agree to the branding concept for HOT
- Target the preferred industries in the desired industry cluster – bio-manufacturing, pharmaceuticals, and logistics/distribution
- Create a HOT Economic Development Council from the Chambers of Commerce and economic development entity representatives to define a unified approach for implementing the collaborative approach
- Designate PART (Piedmont Authority for Regional Transportation) as the “lead” agency to serve as the coordinator for future planning, research, and coordination activities until the Council or some other designated entity is chartered to perform those functions

Implementation Program

- Enter into a memorandum of understanding or other joint participation agreement that addresses the Council's
 - o Membership structure
 - o Roles and responsibilities
 - o Frequency and placement of external marketing media
 - o Convention and trade show representation
 - o National and international trade "missions"
 - o Recruitment activities
 - o Cost sharing
 - o Dispute resolution
- Develop an Action Agenda to include
 - o Organization and election of Council leadership
 - o A schedule of required actions
 - o Outline of legislative actions and requests
- Prepare a fully-coordinated internal and external marketing plan
 - o Adopt a cooperative agreement between Council representatives as to the targeted industries and clusters (include an agreement to protect the individual communities' current economic development initiatives)
 - o Develop a Council marketing campaign based on the branding concept, including
 - The design of marketing materials
 - Inventory of an available site data base
 - The means of marketing and distribution
 - A cost sharing arrangement
 - o Identify three target zones within HOT – North, Central and South – with the North as the initial focus
- Aggressively engage the private sector
 - o Market to developers with specific industrial sector expertise
 - o Encourage and facilitate parcel aggregation
 - o Provide proper land use and regulatory entitlements
 - o Offer a variety of incentives
- Explore and take advantage of any applicable state legislation (Part 1, Article 20, Chapter 160A and Article 2, Chapter 158-7.3 [Joint undertaking enter into agreements to finance projects]; the Project Development Finance Act; Article 2, Chapter 158-14 [Establishment of Regional Economic Development Commissions],

Chapter 47F, NC Statutes [North Carolina Planned Community Act], and others) to support development of HOT

- Seek state and federal financial assistance to continue advanced planning and program development for HOT
- Support the implementation of regional transportation improvements that cross jurisdictional boundaries and are essential to the plan's success
- Support a coordinated capital improvements program between the communities to deliver the required infrastructure system to HOT

Intergovernmental Planning and Development Coordination

- The planning and development role in the collaborative approach moves beyond the minimal level of cooperation. It recognizes HOT as a special district within the study area (18,000 acres), and its implementation is based upon coordinated community action. In this approach, attention is given to the study area as a means of securing an integrated land use system and transportation network to support HOT. This allows full, coordinated development of the study area, as a means of "protecting HOT's edges" In the collaborative approach, communities agree to:

- Follow the vision, goals and objectives of the HOT plan
- Identify HOT a special district within the applicable Future Land Use Plans
- Adopt the applicable land use and transportation recommendations
- Amend Future Land Use and Transportation Plan Maps and make applicable text amendments
- Adopt implementing codes and ordinances, standards, and design guidelines
- Create a HOT Planning Council made up of the six (6) jurisdictions to develop a unified approach to implement HOT
- Enter into a memorandum of understanding or other joint participation agreement that addresses the Council's
 - o Membership structure
 - o Roles and responsibilities

Implementation Program

- o Mechanisms for receiving and processing applications for development approval within the affected jurisdiction
- o Notification by the jurisdictions when plan and zoning changes are made that vary from the vision
- o Procedures for required intergovernmental review and recommendations of plan and zoning changes to the affected jurisdictions
- o Tracking of land use and zoning changes
- o Cost and revenue sharing arrangements

THE LEGISLATIVE APPROACH

The legislative approach recognizes moves beyond the collaborative approach by creating a private non-profit entity own, govern, and market HOT as an inter-jurisdictional business venture, pursuant to state law (Part 1, Article 20, Chapter 160A and Article 2, Chapter 158-7.3 [Joint undertaking enter into agreements to finance projects]). The approach is based on the understanding that there are social and economic benefits accrue to participating communities. This approach can help position not only HOT, but the greater Triad region, as a recognized leader – and a truly competitive force – within the state. The two features of this approach are unified ownership and governance, and an integrated planning and development structure.

Unified Ownership and Governance - The ability to identify HOT as the core location for the preferred targeted industries is the highest priority. In the legislative approach, the communities move beyond the cooperative and collaborative approaches. Under the legislative approach, the communities:

- Agree to the branding concept for HOT
- Target the preferred industries in the desired industry cluster – bio-manufacturing, pharmaceuticals, and logistics/distribution
- Create a HOT non-profit corporation, pursuant to State law, to own and manage HOT through a multi-jurisdictional agreement. The agreement defines and specifies:
 - o Membership structure
 - o Roles, responsibilities, powers, and duties

- o Cost and revenue sharing formula for all jurisdictions
- o Board consisting of representatives from each city and county
- o Board membership that brings technical expertise
- o A potential legislative agenda
- Develop an Action Agenda to include
 - o A schedule of specific action items
 - o Responsibilities for advancing specific action items
 - o Outline of potential legislative actions and requests for the next General Assembly session
- Prepare a fully-coordinated internal and external marketing plan
 - o Adopt a cooperative agreement between the Chambers of Commerce and economic development entities as to the targeted industries and clusters (include an agreement that protects individual community's current economic development initiatives)
 - o Develop a marketing campaign based on the branding concept, including
 - The design of marketing materials
 - Inventory of an available site data base
 - The means of marketing and distribution
 - A cost and revenue sharing arrangement
- Identify three target zones within HOT for acquisition and control – North, Central and South – with the North as the initial focus
- Explore and take advantage of any other applicable state legislation (The Project Development Finance Act; Article 2, Chapter 158-14, Establishment of Regional Economic Development Commissions, Chapter 47F, NC Statutes, North Carolina Planned Community Act, and others to support development of HOT
- Seek state and federal financial assistance to continue advanced planning and program development for HOT
- Undertake roadway and infrastructure improvements directly related to HOT
- Support the implementation of regional transportation and capital improvements that connect with required improvements within HOT

Integrated Planning and Development - The planning and development role in the legislative approach moves beyond the collaborative level of cooperation. It too recognizes HOT as a special district within the study area (18,000 acres), and its implementation is based upon coordinated action between the HOT non-profit corporation and the abutting jurisdictions. In this approach, attention is given to the study area as a means of securing an integrated land use system and transportation network to support HOT. In the legislative approach, communities agree to:

- Follow the vision, goals and objectives of the HOT plan
- If in multiple jurisdictions, each jurisdiction shall Adopt applicable land use and transportation recommendations
- If in multiple jurisdictions, each jurisdiction shall Amend Future

POLICY RECOMMENDATIONS

Policy recommendations are concerned with the implementing Comprehensive Plan amendments and the supporting land development regulations. To ensure that HOT grows in a unified manner, all jurisdictions must adopt coordinated Future Land Use and Transportation Plans and regulatory mechanisms. While there may be limited variability (such as specific densities, standards, or acreage requirements), for HOT developed in a complementary and coordinated manner, there should be general agreement between the communities as to plan and regulatory consistency. Policy recommendations for HOT include Comprehensive Plan Goals and Objectives, the designation of HOT as a Specific Planning Area, Future Land Use categories, and a series of codes and ordinances.

COMPREHENSIVE PLAN RECOMMENDATIONS

Goals and Objectives – The Heart of the Triad Land Use/Transportation Plan set forth a set Goals and Objectives that can be adapted as part of the Comprehensive Plan. The Goals addressed how the Heart of the Triad communities could:

- Designate the Heart of the Triad as a Specific Planning Area
- Enhance and incorporate environmental features into place-making
- Bring regional attractions and institutions as focal features
- Conceptualize, plan and develop HOT as a place that offers a full range of development opportunities
- Develop a multi-modal transportation system
- Target and recruit internet technology, research & development, health care, knowledge-based industries, and specialized manufacturing facilities
- Develop cooperative organizational approaches to maintain and advocate the vision
- Develop sustainability approaches and standards

HOT Area Designation – In support of the Goal to create a Specific Planning Area for HOT, the communities must agree about the general size and location. The end of the initial phase identified a 6,300 acre area spanning both counties and the proposed annexation agreement areas. As part of the Specific Area designation, the Objectives would be to:

- Activate the proposed Planning Council to begin the evaluation process to determine the appropriate size and location
- Coordinate efforts with the proposed Economic Development Council to assure that the area can accommodate the recommended economic development initiatives
- Undertake an in-depth developed area evaluation as a means of helping determine the final size and location
- Evaluate existing annexation agreements to allow for equity for the distribution of costs and benefits among and between the communities.
- Consider an Interim Development Ordinance to control new development until the required plan and code changes are completed

New Future Land Use Categories – From the charrette and ensuing deliberations, six new Future Land Use categories were recommend-

ed. The categories are essential for “HOT place-making”, the proper mixing of uses, the ability to promote internal trip capture, minimize the use of natural resources, and support transit use. The six new Future Land Use categories are:

- Traditional Neighborhood
- Urban Neighborhood
- Village Center
- Town Center
- Retail/Entertainment Center
- Employment Center
- Employment District

The general intent, size, mix and basic standards are found in Volume 2, *The Land Use/Transportation Plan*, and more specific standards are found in the Appendix of this Volume.

THE FORM- BASED CODE

One of the most important implementation tools is the Form-based Code (FBC). In general, a FBC helps a community achieve a specific vision that is the result of a formal visioning process. That is the case in the Heart of the Triad. Increasingly, these codes are being used in designated areas of communities that are looking for new development patterns that are in keeping with a pre-existing urban form. These are generally older areas of the community, many of which were originally developed prior to World War II, and often adhere to distinctly different urban patterns that post-war development. Occasionally, new developments are developed in accordance with a pre-determined form-based code. Only rarely, however, is an entire community covered by a single form-based code; more often, communities combine conventional zoning with form-based codes for designated areas within the community. **The Heart of the Triad, because of the unique land uses being proposed - and the fact that EACH community needs to enact the same categories - the form-based code is a necessity.**

Ultimately, a form-based code is a tool; the quality of development outcomes is dependent on the quality and objectives of the community plan that a code is established to help implement.

The Form-based Code Factors - At its simplest, a “form-based code” is a method of regulating real estate development so as to achieve a desired overall appearance within a specified district. This district can be as small as a single block or as large as entire community. Form-based codes are designed to help create a predictable public realm by controlling primarily physical attributes of development, but do include a lesser focus on the uses that will occur within developments.

Form-based codes address a number of key factors:

- The relationship between building facades and the public realm
- The form and mass of buildings in relation to one another
- The types and scales of streets and blocks
- The location, scale and physical characteristics of parking
- The physical characteristics of streets and rights-of-way
- The location, size, and physical characteristics of designated public spaces

Form-based codes generally include regulations and design standards, presented in both diagrams and words. These are generally associated with a regulating plan that covers a specific designated area of development. This plan indicates, in geographic form, the regulations and standards that apply to specific physical locations. The plan, therefore, helps guide the type, physical form and physical character of future development, and therefore helps communities, public officials and developers, achieve a desired pre-determined overall community character.

Form-based codes generally stand in contrast to conventional (Euclidean) zoning's focus on dictating the permitted uses associated with particular parcels of land and, generally, on the segregation of different land-use types. Conventional zoning codes do, generally, include design parameters associated with different land-uses, but

these tend to be overly simple and quantitative (e.g., Floor Area Ratio (FAR), dwellings-per-acre, height limits, setbacks, parking ratios).

Many communities layer additional physical “design guidelines” on top of conventional zoning codes, particularly within designated areas such as a Downtown or an historic district. Such guidelines can be optional or advisory, or can be mandatory depending on the approach taken by the specific municipality. As the legally-required zoning code for a jurisdiction, form-based codes are regulatory and have all of the same legal and procedural strengths of conventional zoning.

Form-based Code Elements - Form-based codes commonly include the following:

- **Regulating Plan:** A plan or map of the regulated area designating the locations where different building form standards apply, based on clear community intentions regarding the physical character of the area being coded
- **Building Form Standards:** Regulations controlling the configuration, features, and functions of buildings that define and shape the public realm
- **Public Space/Street Standards:** Specifications for the elements within the public realm (e.g., sidewalks, travel lanes, street trees, street furniture, etc.)
- **Architectural Standards:** Regulations controlling external architectural materials and quality
- **Annotation:** Text and illustrations explaining the intentions of specific code provisions
- **Administration:** A clearly defined application and project review process
- **Definitions:** A glossary to ensure the precise use of technical terms

The development standards for the seven land uses proposed in the Land Use Plan are candidates for the FBC. They are in a chart format and are found in the Appendix.

ROADWAY DESIGN STANDARDS

A consistent set of roadway design standards across jurisdictions is essential at preserving the cohesiveness of the area and reinforcing the HOT “brand”. Most jurisdictions have similar standards, but there are variations. Since much of the roadway cost will be borne by NCDOT, and NCDOT has regulations related to the connections to the state roadway system, its standards would be the easiest set to implement throughout the area.

NCDOT’s Traditional Neighborhood Design (TND) standards have been discussed in Volume 2, The Land Use/Transportation Plan, regarding the hierarchy of street types. Profiles for each street type were shown. This information will not be duplicated here, but Figure 7 is provided as a reference.

Figure 7 - Roadway Design Standards

Facility	ROW	Lane Width	Median Width	Design Speed	Bike Lanes	Parking	Purpose
Parkway	118' – 152'	11' – 12'	30'	50 mph	Not adjacent	None	Bring people to town and pass through natural areas; limited access
Boulevard	122' +	11'	20' +	40 mph	Striped	Yes	Provides access to commercial & mixed uses; and carries regional traffic
Avenue	98' +	12'	18' +	30 mph	Striped	Yes	Medium speed connectors between neighborhoods and core areas
Main Street w/o Median	66'	11'	None	25 mph	Optional	Yes	Low-speed access to neighborhoods and commercial areas
Street	50'	~10' 28' total	None	20 mph	None	Informal	Provides access to housing
Lane	40'	~10' 18' total	None	20 mph	None	Informal	Provides access to housing
Alley	20' – 22'	12' – 14' total	None	-	None	None	Provides rear access to housing

The street network should be densely laid out in developed areas with many connections provided among the destinations. One way to evaluate the degree of connectiveness is to establish a connectivity ratio that compares the number of street segments (links) with the number of intersections (nodes). The recommended ratio is 1.3:1 to 1.5:1, which is a dense suburban network. A street connectivity index should be adopted by all jurisdictions and a common index selected for the entire HOT area.

ACCESS MANAGEMENT STANDARDS

In order to maintain smooth traffic flow, the access management best practices should be implemented consistently in the HOT area. NCDOT has published an access management manual, Policy on Street and Driveway Access to North Carolina Highways and the supplemental Median Crossover Guidelines publication that guide intersections and driveways on major roadways. On local streets, this access is not as large a concern since the purpose of the local streets is access, where major streets also handle through traffic.

In summary, the major provisions of NCDOT's guidelines are:

- no driveways or median breaks within "functional area" of an intersection 75' – 200' depending upon speed and location
- an internal street system may be required to eliminate or reduce multiple lot access connections
- access from "out lots" or "out parcels" of a larger development may be denied where reasonable access can be provided via the larger development's internal circulation system
- driveways should have a minimum spacing of 600' between driveways into high-traffic developments; spacing may increase to 1000' where safety, congestion or operational problems exist
- medians must be 16' + wide, with 23' desirable
- medians should be spaced 2000' apart on roadways with 45mph+ speeds; 1200' on slower roads
- developments that generate 15,000+ vehicles per day require traffic study to determine if turn lanes or restrictions are required.

These standards are required on all roadways that are Parkways, Boulevards, or Avenues.

IMPLEMENTATION TOOLS FOR QUALITY DEVELOPMENT

In addition to the adoption of the Form-based Code, there is a series of supporting implementation tools necessary to achieve long-term, high quality development within the Heart of the Triad. These tools are designed to address the conservation of natural resources, which

was high on the public's desires for the Plan; to establish visual quality, especially along key corridors; all supportive of the roadway and access management standards previously discussed.

Many of these tools may be new to the Heart of the Triad, and like the Plan itself, they will require much debate and discussion. However, these types of codes and ordinances have been adopted and applied in many communities across the country. Again, the purpose is to deliver quality development that can help provide the desired, long-term economic benefits to the communities of the Triad.

Corridor Design Standards - With the proposed Parkway and the new east/west and north/south thoroughfares, a whole new image for the Heart of the Triad is possible. The transportation network is the principal public investment state and local governments can make. To retain the area's intrinsic beauty, and to ensure its long-term ability to build value, well-conceived corridor design standards can complement the urban design standards of the Form-based Code. The intent of these standards is to provide context-sensitive solutions along specifically-identified corridors. These standards are an "overlay" to the underlying zoning, and they are only applicable for a prescribed distance (to be determined during the Corridor Design Standards development process). The standards are applicable for:

- **Site Development**
 - Development Width
 - Buffer Widths
 - Lighting
 - Parking
 - Paving of Parking and On-site Walkways
 - Pervious Coverage
 - Curb Cuts
 - Joint Use Curb Cuts
 - Cross-access Easements
 - Coordinated Circulation
 - Utilities
 - Fences and Walls

Implementation Program

- **Architecture**
 - Roof Pitch
 - Siding Materials
 - Colors
 - Canopies and Awnings
 - Accessory Buildings
 - Heights and Stepbacks
 - Balconies, Porches, and Decks
- **Landscape Architecture**
 - Tree Preservation
 - Tree Planting
 - Shrub Planting
 - Landscaping of Vehicular Use Areas
 - Berming Provisions
 - Rear and Side Yard Planting
 - Irrigation
- **Signage**
 - Allowable Signs
 - Prohibited Signs
 - Billboards
 - Non-conforming Signs
 - Temporary Signs
 - Main Identification Signs
 - Tenant/Building Signs
 - Directional Signs
 - Directories and Kiosks
 - Street Signs
 - Sign Permitting

Landscaping/Tree Protection – The purpose of this development regulation is to establish minimum landscape and tree protection criteria to preserve existing canopy, to expand the existing canopy, and to promote the enhancement of quality existing and future development within the Heart of the Triad. The ordinance addresses:

- General Landscape Standards
- Plant Materials Specifications

- Comprehensive Landscape Plan
- Installation and Maintenance Requirements
- Clearing and Grubbing
 - Permits Required
 - Criteria for Issuance
- Tree Protection During Construction
 - General Site Clearance Requirements
 - Tree Removal
 - Tree Relocation
 - Tree Replacement

Right-of Way Protection – Since the ability to develop north/south and east/west corridors is fundamental to the sound development and the distribution of future traffic, there is a need to protect future rights-of way for roadways and utilities. The purpose is to maintain the minimum widths or area to be protected when an easement or right-of-way may exist that is less than the minimum width or area required. Right-of-way protection addresses setback requirements and covers:

- Limitations on Structures
- Determination of Appropriate Setbacks
- Measurement of Setbacks
- Exceptions to Setbacks
- Right-of way Agreement

THE HOT ACTION AGENDA

Implementation of the concept behind the Heart of the Triad just begins with the acceptance of the fundamental recommendations. There are multiple levels of cooperation and collaboration, as is suggested in the Organizational Approaches. Much work is yet to be advanced and fine-tuned before the ultimate goals are achieved. But the following things are certain:

- **Time is of the essence**
- **Change is occurring now**

Implementation Program

- **Change will continue – with or without action**
- **The future of the Heart of the Triad will not be realized** with a “business as usual” approach
- **Without assertive, cooperative action**
 - o Sprawling single family homes will dominate the landscape
 - o Employment opportunities will be lost
 - o Improvements necessary for implementation will be too costly for any one jurisdiction
- **The vision will not be achieved**

To that end, a HOT Action Agenda lays out the necessary actions over the next two years. The HOT Action Agenda is multi-layered. What are the actions, who are the actors, and what are the time frames?

1. **Recommend Approval of the HOT Concepts** – The first action to be taken is for the **Steering Committee to recommend the approval by each local government of the concepts proposed for the Heart of the Triad**. This approval comes by each government adopting a resolution accepting the proposed concepts. The approval also sets into motion the necessary follow-up activities to bring the plan into fruition. **This action should be taken within 60 days of the resolution adoption.**

After the resolutions are adopted, proper authority and priority is given to the managers to cooperatively advance **a coordinated work program** for the next phases of implementation. **This action should be completed within 90 days of the resolution adoption.**

2. **Continue to use PART as the coordinating entity for the next phase of the planning process.** Work with the Technical Committee to develop the specific steps to advance HOT into the next phase of planning.
 - **Formalize the recommendations from this Policy Agenda into a continuing Work Program**
 - **Pursue state funding from the General Assembly for the**

HOT planning process

- **Maintain the momentum by serving as the “Vision Steward” for the overall HOT planning program.**
3. **Create a HOT Planning Council to Continue the Coordinated Planning and Implementation Tasks** – One of the concepts proposed in the Organizational Approaches was a Planning Council to maintain momentum, communication, and coordination as the next phases of the project advance. **This action should be taken within 120 days of the resolution adoption.**
 4. **Amend the Comprehensive Plans to Add the Proposed Land Use Plan Categories** - To ensure that HOT grows in a unified manner, all jurisdictions must adopt coordinated land use and regulatory mechanisms. While there may be limited variability, for HOT to be a complementary and coordinated place, new categories developed during the charrette should be adopted. **The HOT Planning Council and the Planning Commissions of the six jurisdictions are responsible for reviewing, revising, as appropriate, and coordinating the final land uses** (defined in Volume 2, The Land Use/Transportation Plan). After the six jurisdictions have reached agreements, **they will recommend that the elected officials amend their Comprehensive Plans.**

This action item should be accomplished within 180 days of the adoption of the resolution.
 5. **Adopt Coordinated Development and Supportive Design Standards.** To make HOT a special place, new codes, ordinances and standards need to be adopted and followed as development takes place. The intent of these tools is to maintain a high level of quality in order to realize the estimated revenue benefits. At a minimum, the following should be adopted - Land Development Regulations, Roadway Design Standards, and Access Management Standards.

The communities should evaluate, and ultimately adopt, Land Clearing Ordinances, Landscape Ordinances, and Corridor Design Standards.

The Planning Departments are responsible to see that the Form-based Code, the Roadway Design Standards, and the Access Management Standards are prepared as the principal means of implementing the Land Use and Transportation Plans.

This action item should be accomplished 18 month from the adoption of the Comprehensive Plan amendments.

6. **Develop a set of coordinated capital improvements for roadway, utilities, regional parks, and educational facilities that serve the Heart of the Triad.** This is one of the areas that costs and benefits are shared among the six jurisdictions.

The HOT Planning Council and the City/County Managers shall develop the initial list and identify potential fund sources, including shared costs and future revenues. This should be accomplished within one (1) year from the adoption of the Comprehensive Plan amendments.

7. **Create a HOT Economic Development Council from the Chambers of Commerce and economic development entities** to define and recommend a unified approach for implementing the collaborative approach to the local governments.
 - **Enter into a memorandum of understanding** or other joint participation agreement that addresses the Council's
 - o Membership structure
 - o Roles and responsibilities
 - o Frequency and placement of external marketing media
 - o Convention and trade show representation
 - o National and international trade “missions”
 - o Recruitment activities
 - o Cost sharing

- o Dispute resolution
- **Develop an Action Agenda** to include
 - o Organization and election of Council leadership
 - o A schedule of required actions
 - o Outline of legislative actions and requests
- **Prepare a fully-coordinated internal and external marketing plan**
 - o Adopt a cooperative agreement between Council representatives as to the targeted industries and clusters (include an agreement to protect the individual communities' current economic development initiatives)
 - o Develop a Council marketing campaign based on the branding concept, including
 - The design of marketing materials
 - Inventory of an available site data base
 - The means of marketing and distribution
 - A cost sharing arrangement
 - o Identify three target zones within HOT – North, Central and South – **with the North as the initial focus**
- **Explore and take advantage of any applicable state legislation** (Part 1, Article 20, Chapter 160A and Article 2, Chapter 158-7.3 [Joint undertaking enter into agreements to finance projects]; the Project Development Finance Act; Article 2, Chapter 158-14 [Establishment of Regional Economic Development Commissions], Chapter 47F, NC Statutes [North Carolina Planned Community Act], and others) to support development of HOT.
- **Develop a recommended Organizational Approach for HOT implementation**

The Economic Development Council should be formed within 120 days of the adoption of the resolution to approve the HOT concepts. Their Action Agenda should be set 45 days thereafter.

Appendix

Implementation Program

Town Center

The Town Center is a mixed-use, walkable environment, based on new urban town planning principles integrating residential, employment, and civic spaces. It serves as the “hub” of the community connecting villages.

Minimum Size: One hundred and fifty (150) acres

Use	Percentage	Intensity/Density	Acres
Office	20.0	FAR 7.5	30
Retail	20.0	FAR 0.5	30
Hotel	2.5	80 u/ac	4
Multi Family	25.0	40 u/ac	37.5
Single Family	7.5	8 u/ac	11
Infrastructure/ Civic	25.0	N/A	37.5
Total	100%		150

Village Center

Village Centers are mixed-use environments, based on new urban planning principles integrating residential, employment, and open spaces. Village centers occur at a smaller scale than Town Centers and are used to connect neighborhoods together.

Minimum Size: Forty (40) acres

Use	Percentage	Intensity/Density	Acres
Office	5.0	FAR .75	2.0
Retail	25.0	FAR 0.5	10.0
Hotel	5.0	60 u/ac	2.0
Multi Family	25.0	40 u/ac	10.0
Single Family	15.0	8 u/ac	6.0
Infrastructure/ Civic	25.0	N/A	10.0
Total	100%		40

Traditional Neighborhood

This neighborhood is a low to moderate density residential district of single-family houses, townhouses, and low-rise multi-family apartments and condominiums. Limited retail, service and office uses are permitted

Minimum Size: Six Hundred (600) acres

Use	Percentage	Intensity/Density	Acres
Office	1.0	FAR 0.5	6
Retail	1.0	FAR 0.4	6
Multi Family	7.5	10 u/ac	45
Single Family	65.5	5 u/ac	393
Infrastructure/ Civic	25.0	N/A	150
Total	100%		600

Urban Neighborhood

This neighborhood is a moderate to high density residential district offering a mix of townhouses and low- to mid-rise multifamily, apartments and condominiums. Limited neighborhood-serving retail, service and offices uses are permitted.

Minimum Size: Six Hundred (600) acres

Use	Percentage	Intensity/Density	Acres
Office	2.5	FAR 0.5	15
Retail	2.5	FAR 0.4	15
Hotel	1.0	30 u/ac	6
Multi Family	10.0	20 u/ac	60
Single Family	59.0	8 u/ac	354
Infrastructure/ Civic	25.0	N/A	150
Total	100%		600

Implementation Program

Employment District

A large district with a mixture of multiple warehousing, light industrial, research/ development with supporting office, service retail uses.

Minimum Acreage: Five Hundred (500) acres

Use	Percentage	Intensity/Density	Acres
Office	10.0	FAR 0.5	15
Warehouse	27.5	FAR 0.5	137.5
Light Manufacturing	27.5	FAR 0.5	137.5
Retail/Support	5.0	FAR 0.4	25
Multifamily	5.0	20 u/ac	25
Infrastructure/ Civic	25.0	N/A	125
Total	100%		500

Employment Center

This land use type is envisioned to provide high intensity employment. While it may have the character of a business park, it also contains retail, service, multi-family housing, lodging, and food and beverage services. The uses can be mixed vertically or horizontally.

Minimum Acreage: One hundred (100) acres

Use	Percentage	Intensity/Density	Acres
Office/Warehouse/ Light Manufacturing	55.0	FAR 1.0	55
Retail/Support	10.0	FAR 0.4	10
Multi Family	10.0	20 u/ac	10
Infrastructure/ Civic	25.0	N/A	25
Total	100%		100

Retail/Entertainment Destination

This is a mixed use destination that focuses on the sale of merchandise, goods, and commodities, as well as entertainment and dining venues. It can hold between one and two million total square feet. This may include a regional mall, a lifestyle centers, hotels, restaurants, venues, and residential uses.

Minimum Acreage: Two Hundred (200) acres

Use	Percentage	Intensity/Density	Acres
Retail	60.0	FAR 1.0	120
Office/Support	10.0	FAR 0.4	20
Lodging	5.0	60 u/ac	10
Multifamily	10.0	20 u/ac	20
Infrastructure/ Civic	15.0	N/A	30
Total	100%		200