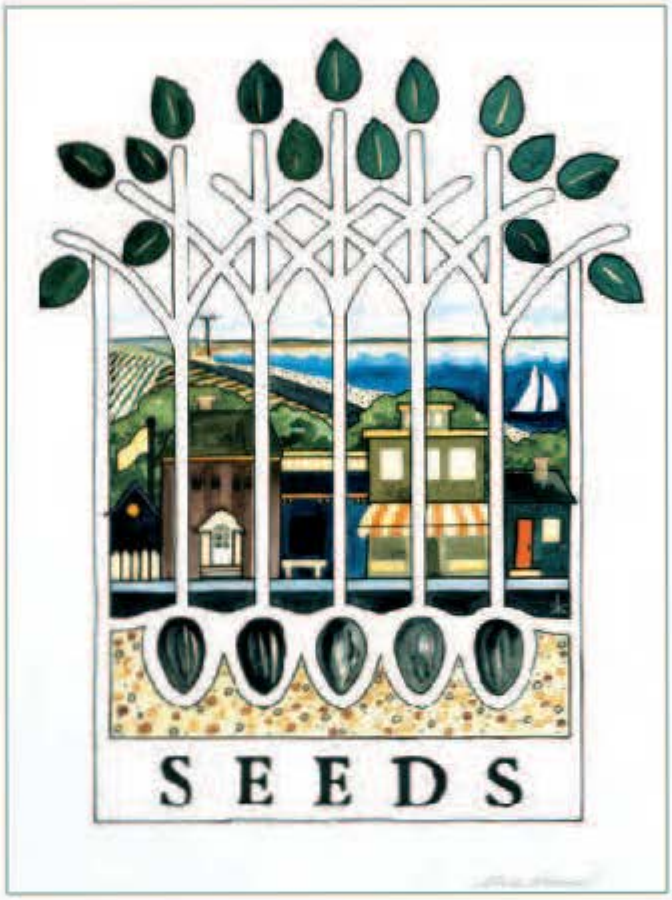
SUSTAINABLE EAST END DEVELOPMENT STRATEGIES

Summary Report



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ACKNOWLEDGEMENTS

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A. OVERVIEW

> ***The results of the Sustainable East End Development Strategies (SEEDS) process show that the combination of reducing overall development potential and concentrating it around higher density nodes, along with providing new transit service, will result in a lower overall growth in population (as represented through the number of housing units) and a clear reduction in new person trips and vehicle miles traveled. At the same time, shorter distances between residential development and transit centers combined with frequent service makes transit more competitive, thereby increasing transit's share of overall trips made by East End residents, workers, and visitors. In this instance, a net increase in transit riders could be expected even though there is an overall reduction in potential housing units.*** *SEEDS Concept Plan*, Chapter 2

The SEEDS process undertaken for Long Island's East End communities is a direct result of previous efforts by the East End Supervisors' and Mayors' Association (EESMA) to grapple with regional transportation and land use issues as a unified group. Before 1996, individual towns and villages had attempted, with limited success, to resolve transportation issues of concern within their own borders. At that time, the EESMA formed an internal research committee, which came to be known as the East End Transportation Council (EETC).

Initial dialogue among the EETC members consisted mostly of complaints about transportation problems as perceived by the local officials. However, in responding to these complaints, the transportation providers and the local officials broadened the dialogue to include potential solutions. To resolve some transportation problems, it was clear that the towns and villages would have to work together on related land use issues. In 2000, the EESMA acted to take part in a pilot program of the New York Metropolitan Transportation Council (NYMTC) to undertake federally funded sustainable development studies as a means to lay the groundwork for regional consensus on the land use and transportation issues and their potential solutions. The resulting initiative was expanded to include the general public as stakeholders, and this became the SEEDS process.

The purpose of the SEEDS process was to evaluate the East End's transportation system in relation to its land use policies and practices through a 2025 horizon year, in order to plan future development patterns and transportation solutions that could sustain one another in the long term.

One of the key tools developed through SEEDS is the set of consensus-based guiding principles that was used to evaluate and recommend future scenarios for development and transportation. These principles included community values (preserving and enhancing villages and hamlets), land use goals (redeveloping and reclaiming land before converting undeveloped land), transportation goals (decreasing dependency on cars, improving pedestrian and public transit

accessibility, and minimizing congestion due to diverted traffic), and environmental goals (protection of natural resources and commitment to regional environmental quality).

Using these guiding principles, the SEEDS process comprehensively examined a wide range of future land use and transportation options. A baseline or "do-nothing" scenario was identified in which no new transportation changes were made and development and land use patterns continued under current regulations. Alternative transportation futures were identified and these ranged from modest improvements to the current system to major investments in road capacity, transit capacity, and other large-scale initiatives. Future land use scenarios ranged from restricting the amount or density of development but without changing where development could occur to restricting density and controlling the location of future development. All told, the SEEDS project compared 25 separate land use and transportation combinations. Those combinations which best correlated to the consensus guiding principles became the SEEDS Concept Plan.

B. INTENT OF THE SUMMARY REPORT

The portion of the SEEDS initiative that has been completed to date was unique because it went beyond the traditional "study" approach to regional land use and transportation planning. It did this by including the general public, municipal and agency planning staff, and elected officials in a consensus-building process whereby they could examine inter-related land use and transportation problems, define issues of concern, and explore alternative strategies for resolving them. This approach reflects the new reality: the potential cost of improving transportation services and infrastructure, and the competitive nature of federal and state funding programs for these improvements, requires a greater degree of intergovernmental coordination and local consensus, particularly on the land use side, than has previously existed. Although SEEDS benefited from a pre-existing foundation of cooperative dialogue within the EETC, bringing the public into the planning process required extensive education and consensus-building efforts.

SEEDS has established an effective forum within which the next step can be taken: translating consensus into action. Toward that end, this document is intended to be used as a synopsis of the process and substance of the regional dialogue to date. It should be understood that consensus viewpoints and implementation strategies within the region may evolve as the dialogue continues. Finally, all conceptual examples used in this report are intended to be illustrative, not prescriptive.

C. THE SEEDS CONCEPT PLAN

Through extensive community visioning and quantitative analysis, these future transportation and land use scenarios were first developed, then evaluated and assessed against a variety of performance measures derived from the guiding principles. The resulting Concept Plan provides an illustrative and representative preferred future for the East End in terms of both land use and transportation. This consensus future vision includes the following major components:

PREFERRED LAND USE SCENARIO SUMMARY

- New land use development should be focused in and around a series of hamlet centers in the form of new mixed-use development and by encouraging infill development opportunities.

- Efforts to protect agricultural and open space should continue. Towns and villages should incorporate this vision into their land use plans by delineating large tracts within the East End where future development should be strictly limited.
- The towns and villages should reduce the overall future development potential in their communities.

PREFERRED TRANSPORTATION SCENARIO SUMMARY

- Transportation management strategies should be employed by all agencies and levels of government to maximize the efficiency, safety, and accessibility of the existing roadway system, rather than significantly expanding its physical capacity.
- In coordination with improved rail service, the region should pursue implementation of an intermodal hub system that would accommodate and integrate expanded rail, bus, and demand responsive feeder/distributor services, shuttle bus service, park-and-ride facilities, bicycle parking, and a range of passenger amenities.

IMPLEMENTATION OF THE CONCEPT PLAN

This final version of the SEEDS Concept Plan was presented on December 8, 2005, at a "summit" of elected and planning officials from East End municipalities, Suffolk County, LIRR, and NYSDOT as well as state representatives and other elected officials. The summit served as the first step in the implementation of SEEDS, and resulted in a call for the East End's municipalities to join together in an inter-municipal agreement to work toward the preferred land use future, while the transportation agencies work toward implementing the preferred transportation improvements. Implementation will be challenging, but the existence of a consensus-based concept plan for the future is a significant step in achieving the recommended actions.

D. FRAMEWORK OF THE SEEDS SUMMARY REPORT

The SEEDS Summary Report contains four Sections, beginning with Section 1 "Overview and Introduction." Section 2 outlines the SEEDS Concept Plan and provides illustrative examples of SEEDS recommendations. Section 3, "Summary of Analysis Framework and Methodologies," details the technical aspects of SEEDS, including data collection, scenario formation, analysis, modeling, and scoring. Section 4 "Public Outreach Process" summarizes the extensive public participation by East End residents. An accompanying appendix provides for a compilation of background data and presentations associated with the five-year effort.

A. OVERVIEW

The Sustainable East End Development Strategies (SEEDS) process undertaken for Long Island's East End communities is a direct result of previous efforts by the East End Supervisors' and Mayors' Association (EESMA) to grapple with regional transportation and land use issues as a unified group. Before 1996, individual towns and villages had attempted, with limited success, to resolve transportation issues of concern within their own borders. In the larger political scheme of things, the East End towns were less populated than the rest of Suffolk County; thus, they did not wield the same political influence when trying to compete for money and attention. In 1996, the EESMA decided to change tactics and negotiate as a group. The success of its first endeavor (to forestall the closing of some train stations by the MTA Long Island Rail Road [MTA LIRR] and to negotiate design changes in stations that were proposed to be upgraded and remodeled to accommodate bi-level trains), as well as mounting calls for action on land use and transportation issues, led the EESMA to form an internal research committee, which came to be known as the East End Transportation Council (EETC), to lead an ongoing effort. One outcome of this local collaboration was the SEEDS process.

The EETC was charged with meeting monthly to discuss transportation issues of concern to the EESMA. Almost immediately, the MTA LIRR asked to become a standing member of this group, citing the advantages of meeting with the entire region at one table. Subsequently, representatives of the New York State Department of Transportation (NYSDOT), the Transportation Division of the Suffolk County Department of Public Works and the Suffolk County Department of Planning accepted invitations to be part of the EETC. As with the MTA LIRR, each of these agencies recognized the value of meeting regularly with local and regional officials in one centralized forum.

The initial dialogue among the EETC members consisted mostly of complaints about transportation problems as perceived by the local officials. However, in responding to these complaints, the transportation providers and the local officials broadened the dialogue to include potential solutions. It soon became evident that the land use decisions made by local governments were having significant detrimental impacts, not just on the transportation networks, but on the abilities of the transportation providers to solve the problems. The common denominator was the fact that most transportation facilities and services crossed municipal boundaries.

To resolve some transportation problems, it was clear that the towns and villages would have to work together on related land use issues. However, the EESMA and the EETC lacked sufficient staff and financial resources to affect large-scale consensus within the political arena. Additionally, educating the general public about the value of coordinating local land use plans with regional transportation planning posed a serious challenge. In 2000, the EESMA acted to take part in a pilot program of the New York Metropolitan Transportation Council (NYMTC) to undertake federally funded sustainable development studies as a means to lay the groundwork

for regional consensus on the land use and transportation issues and potential solutions. The resulting initiative became the SEEDS process. The NYSDOT provided the local match for SEEDS and the EESMA pledged the services of the various technical staffs of its constituent municipalities. The SEEDS Steering Committee was drawn from the members of the EETC and reported to the EESMA and to the member agencies of NYMTC.

Since its start in 2001, SEEDS has been a far-reaching and collaborative process of educating the public and exploring preferred development and transportation options, thereby laying the groundwork for reaching regional consensus on the long-term future of the East End. If its recommendations are implemented, the SEEDS process will have established an ongoing and effective forum for regional land use and transportation planning on the East End.

One of the nation's most popular destinations for second homeowners and tourists, the East End's popularity and seasonal economy have created serious problems, among them a lopsided housing market in which year-round residents and workers cannot compete with wealthier second homeowners and retirees for housing. Other problems include chronic traffic congestion, limited public transit options, the continuing loss of open space and farmland, and increasing amounts of suburban sprawl development. Left unchecked, these problems will undermine the very things that make the East End a special place.

The SEEDS process took place within a region that covers approximately 360 square miles, and consists of the five towns of East Hampton, Riverhead, Shelter Island, Southampton, and Southold, and the 10 villages of Dering Harbor, East Hampton, Greenport, North Haven, Quogue, Sag Harbor, Sagaponack, Southampton, Westhampton Beach, and Westhampton Dunes. The region lies 70 miles from New York City at its closest point (the western border of the Town of Riverhead) and 125 miles at its farthest point (Montauk Point, East Hampton). The geography of the East End is unique, extending over two peninsulas that are referred to as the North and South forks, which are separated by the Peconic Bay and Gardiner's Bay and the island town of Shelter Island.

This report describes the principles and concepts that emerged from the SEEDS consensus-building process. It also includes a summary of existing conditions and future issues within the East End region, a review of the SEEDS organizational framework, and an explanation of the key methodologies used in the analysis process, as well as a summary of the extensive public outreach effort that SEEDS employed to develop and analyze various future land use and transportation scenarios. Detailed compilations of existing data, future projections, scenario development, and public workshop presentations are included in the technical appendices to this report.

B. PURPOSE AND NEED

The purpose of the SEEDS process was to evaluate the East End's transportation system in relation to its land use policies and practices through a 2025 horizon year, in order to plan future development patterns and transportation solutions that could sustain one another in the long term. Sponsored by NYMTC, SEEDS has been a collective effort of the area's five towns and 10 villages through their representation on the EETC and in collaboration with NYSDOT, Suffolk County, and the MTA LIRR.

Each of the municipalities and agencies that participated in SEEDS has an important role in planning and investing in the future of the East End. However, the ability of each of the East End towns and villages to effectively manage their respective futures will depend on their ability

to reach a consensus on addressing issues that will impact those futures. From 1996 until April 2001, these municipalities and agencies had been meeting regularly through the EETC to discuss and address common issues. Since SEEDS began in April 2001, this cooperative dialogue was expanded to include various community stakeholders and the general public. The outreach effort was unique to the region and was a significant opportunity for educating the public about how transportation infrastructure money was programmed and spent. This regular and ongoing dialogue between these agencies and the involved public participants has been a cornerstone of the SEEDS process. The resulting consensus-based concept plan should serve as a guide to local and regional decision-making and provide a solid planning rationale for making important policy and funding decisions for the future.

Furthermore, much of the detailed inventory and build-out projections compiled for SEEDS also provide the municipalities and public agencies with a useful baseline data set that is uniform in methodology and assumptions across the entire East End. The build-out analyses can be used in municipal master planning as a starting point to fine-tune the local implementation of land use recommendations.

C. SUSTAINABLE DEVELOPMENT APPROACH

The SEEDS project is related to a growing international approach to planning for a sustainable future. The historic concept of sustainable development emerged from the environmental and conservationist movements of the 1970s. The former prime minister of Norway, Mrs. Gro Harlem Brundtland, who chaired the World Commission on Environment and Development in 1987, officially introduced the term sustainable development to the international agenda. The event produced the most commonly known and adopted definition of sustainable development describing it as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987).

In 1993, President Clinton ordered the formation of the President's Council on Sustainable Development to forge consensus on sustainable development policy in the United States. To that end, the role of the Council was to demonstrate implementation, promote public awareness of policy, and to evaluate and report national progress of sustainable practices. The Council created an official vision statement for national policy regarding sustainable development that reads:

> *A sustainable United States will have a growing economy that provides equitable opportunities for satisfying livelihoods and a safe, healthy, high quality of life for current and future generations. Our nation will protect its environment, its natural resource base, and the functions and viability of natural systems on which all life depends.* -The President's Council on Sustainable Development, 2001.

On a more local level, the EETC recognized that the type of development patterns and transportation problems that have transformed other rural regions into suburbanized sprawl were slowly repeating themselves on the East End. Although individual communities on the East End had taken steps to protect open space and farmland within their own borders and to study transportation problems, it was clear that no one town or village had sufficient leverage to solve problems taking place at a regional level. Toward that end, SEEDS resulted in an integrated sustainable development approach to these problems, using outreach and visioning to build public, agency, and municipal consensus on developing and implementing various sustainable strategies for both land development and transportation within the region.

In terms of land use policy, SEEDS represents the natural progression of measures East End communities have already taken in applying sustainable strategies to manage development and protect open space, parks, and farmland. The Community Preservation Fund, for example, was instituted in 1998 by each of the East End towns, and there have also been various local municipal bond acts for this purpose. The Fund adds a 2 percent fee to the sale of most homes and vacant parcels in the region, and the funds are used to purchase farmland, development rights, and environmentally and historically sensitive lands.

D. GOALS AND PRINCIPLES

An important and ambitious aspect of the SEEDS process has been to develop and maintain an open dialogue with the public and participating stakeholders. As detailed in Section 4, *Summary of the Process and Public Participation*, public stakeholders played a key role in identifying critical issues, establishing the goals and principles of the SEEDS efforts, and establishing the range of potential future land use and transportation scenarios examined in the main SEEDS analyses. Ultimately, the consensus-based scoring and selection of a preferred land use scenario and transportation scenario was achieved through a series of public workshops, a standing stakeholders' advisory group, and a steering committee.

A key tool of this approach was the development of consensus-based guiding principles, which were used to evaluate and recommend development and transportation strategies. These principles articulate the goals which elected officials, local and agency planners, and public agency decision-makers are being asked to consider as they develop and implement planning policy and transportation initiatives on the East End.

SEEDS GOALS AND PRINCIPLES

OVERALL PROCESS GOALS

The two overarching goals established by the SEEDS process emphasized the interconnection of land use and transportation:

1. Create a balanced and sustainable approach to improving transportation in coordination with land development; and
2. Establish a consensus to pursue land use policies consistent with regional goals and to guide regional transportation investment.

Land use and development generate the transportation demand, which is met by public investment in roadway and transit infrastructure. Changes to the transportation system, in turn, often stimulate development activity by creating more capacity or providing access to new land for development. Typically, land use decisions are made at the local level, and major transportation decisions are made at the regional level. The inherent value of SEEDS is that major local and regional players have been working collaboratively towards complementary and agreed-upon goals.

GUIDING PRINCIPLES

The broad-based guiding principles of SEEDS include:

Community Principles

- Preserve and enhance the historic villages and hamlets that make the East End unique.
- Provide for a mix and variety of housing types (rental, affordable ownership, etc), enabling current residents to have more choices and workers to live in the community, and providing economic diversity.
- Redevelop and reclaim land before converting undeveloped land.
- Protect agricultural and open space resources that help define the character of the East End and are primary drivers of the local economy. Reinforce traditional industries, such as farming, fishing, and tourism.

Transportation Principles

- Decrease local community and visitor dependency on cars and improve pedestrian and public transit accessibility.
- Establish short- and long-term solutions to chronic congestion and unsafe road conditions.
- Minimize congestion due to diverted traffic to or from key destinations or from main travelways to local roads and side streets.
- Improve visual character of roadway corridors.

Environmental Principles

- Protect important natural resources, including groundwater, wetlands and surface waters, shorelines, forests, significant habitats, open space, and existing parks and recreational facilities.
- Pursue long-term and sustainable commitment to regional environmental quality (i.e., regional air quality).

A. INTRODUCTION

This section describes the final Concept Plan for land use and transportation that resulted from the SEEDS process.

B. THE SEEDS MATRIX AND SCENARIO SCORING

As detailed in Section 3, "Summary of Analysis Framework and Methodologies," a comprehensive and comparative analysis of future land use and transportation scenarios was completed by using the results of the community visioning to create a land use–transportation matrix. This matrix established a reasonable range of future variations in land development and transportation investment (see **Figure 2-1**) that is largely based on the issues and concerns raised by the public and interested stakeholders of the East End. Using the matrix, future development projections and future transportation system configurations were defined and analyzed using a computer simulation model called the East End Transportation Demand Model.

The results of the detailed projections and the modeling analyses were used to evaluate and score the 25 combinations of future transportation and land use scenarios represented in the matrix. As shown in **Figure 2-2**, the highest-scoring future scenario combinations were clustered around those that emphasized transportation management strategies and transit-focused investment, and a fundamental reshaping of future development patterns and reduction of future build-out potential. The results of the matrix analysis were described and discussed in a series of public workshops in May 2005 as a step toward building consensus on the Concept Plan.

C. RECOMMENDED FUTURE SCENARIOS: THE SEEDS CONCEPT PLAN

PREFERRED LAND USE SCENARIO

As a result of the SEEDS process, a clear consensus emerged among the participants that the East End should fundamentally alter its approach to land use and development. The actual patterns of growth over the past two decades have been essentially the opposite of the stated goals and principles enumerated by the SEEDS participants—namely, that additional development has been occurring in the outlying areas on agricultural or undeveloped lands (see **Appendix III.C**).

Figure 2-3 illustrates these "new patterns" by establishing a clear separation of where growth should and should not occur in the future. This theoretical "growth–no growth" boundary was established with the consideration of current zoning and development patterns, existing and proposed municipal plans and policies, and with the interactive participation of SEEDS steering committee members, stakeholders, and the public. In comparison, **Figure 2-4** illustrates the eventual build-out of the East End under current zoning and development trends.

3.28.06

TRANSPORTATION \ LAND USE	MAINTAIN CURRENT LAND USE AND ZONING		CREATE "PRESERVATION" AND "DEVELOPMENT" AREAS		
	1 Current Buildout (Do Nothing)	2 Reduce Current Buildout By 50%	3 Maximize Hamlet Center Densities	4 Maintain Current Hamlet Center Densities	5 Maximize Buildout Reduction (Over 60%)
1 Current Improvements Only					
2 Transportation Management Strategies					
3 Transit Focused Investment					
4 Roadway Focused Investment					
5 Large Scale Investment					

Figure 2-1
Scenario Matrix

1.23.06

Aggregate Quantitative Scores

Max Score is 61

TRANSPORTATION \ LAND USE	1	2	3	4	5
1	23.01	37.05	33.82	37.05	40.04
2	24.06	40.04	36.61	40.04	41.90
3	28.99	44.98	40.95	46.02	46.02
4	24.05	39.09	34.06	39.00	41.99
5	24.05	39.00	33.02	39.00	40.95

Aggregate Qualitative Scores

Max Score is 59

TRANSPORTATION \ LAND USE	1	2	3	4	5
1	10.01	14.08	27.94	30.25	32.23
2	17.82	22.00	34.54	39.60	38.72
3	23.76	27.06	40.81	46.53	47.41
4	12.87	15.73	30.80	29.37	31.68
5	10.56	13.85	27.17	29.04	31.68

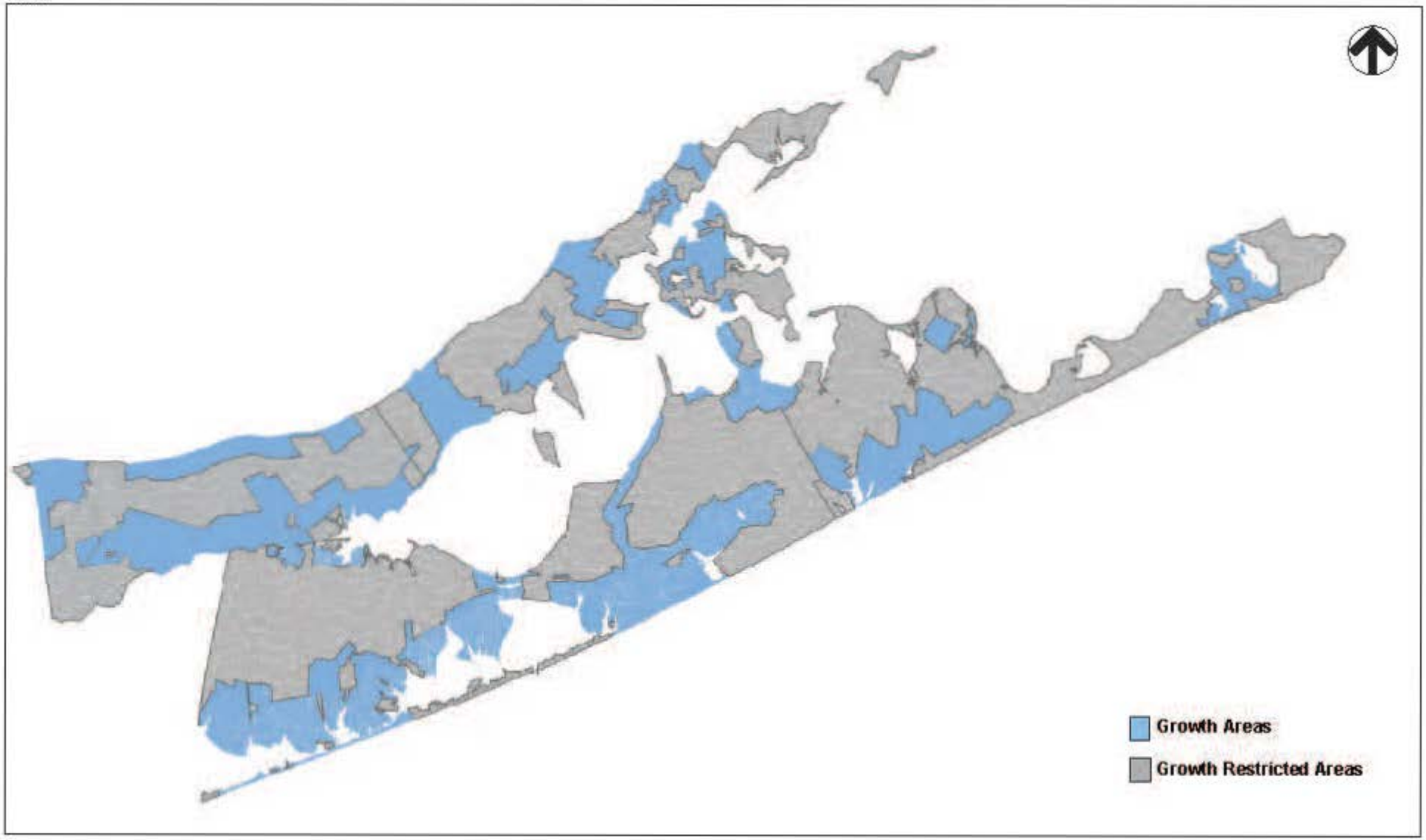
Aggregate Combined Scores

Max Score is 120

TRANSPORTATION \ LAND USE	1 Current Buildout (Do Nothing)	2 Reduce Current Buildout By 50%	3 Maximize Hamlet Center Densities	4 Maintain Current Hamlet Center Densities	5 Maximize Buildout Reduction (Over 60%)
	MAINTAIN CURRENT LAND USE AND ZONING		CREATE "PRESERVATION" AND "DEVELOPMENT" AREAS		
1 Current Improvements Only	33.84	51.12	60.96	67.20	72.24
2 Transportation Management Strategies	42.96	61.92	70.56	79.68	80.64
3 Transit Focused Investment	52.80	72.00	81.84	92.64	93.36
4 Roadway Focused Investment	36.96	54.72	64.80	68.40	73.68
5 Large Scale Investment	34.56	52.80	60.24	68.16	72.72

Figure 2-2
Scored Matrix

3.28.06

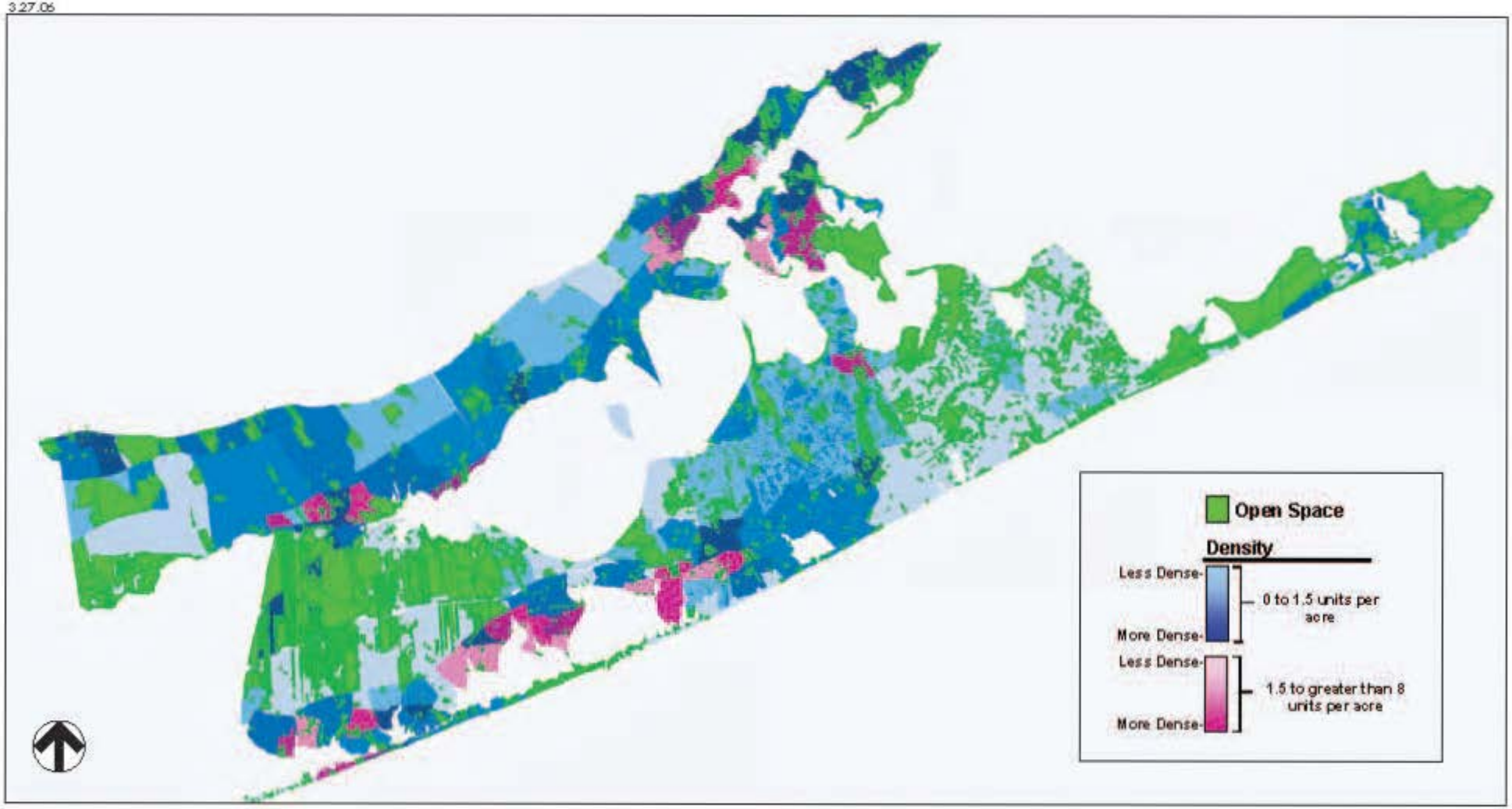


SEEDS Sustainable East End Development Strategies

Figure 2-3

2025 Preferred Scenario Regional New Development Patterns

3.27.06



SEEDS Sustainable East End Development Strategies

Figure 2-4

2025 Do Nothing Scenario Densities

As illustrated in **Figure 2-3** the SEEDS process defined three clear recommendations that municipalities (as supported by county, regional, and state initiatives) should pursue in managing growth and regulating land use and development.

1. REDUCE TOTAL DEVELOPMENT POTENTIAL

In addition to closely managing and directing where future growth can occur, the preferred land use scenario also recommends that municipalities effectively reduce the overall development potential in their communities. This is the pivotal balancing act of strategically managing future growth. The goal is to create municipal plans that combine an overall reduction in total future building potential through substantial restrictions in specified areas while other specified areas are targeted for additional growth, possibly at even greater densities than currently allowed. The challenge is to achieve a balance of reducing overall potential with finding the best places to encourage diverse development opportunities.

As examined in SEEDS, the preferred land use scenarios contemplated reductions of 20 percent and 40 percent in overall development potential. These proportions could vary from community to community based on regional collaboration, so that areas appropriate for growth and those with the greatest restrictions should ultimately be determined regionally, although the regulatory implementation would be on a municipal basis.

The hard work of the municipalities will be to coordinate the implementation of zoning measures and land preservation activities to effect such changes. Nonetheless, the outcome of the SEEDS effort provides a clear framework and planning rationale for tackling these critical development issues. Implementation would likely include a municipality-by-municipality exercise to:

- Use the SEEDS "new patterns" configuration as a starting point to identify those areas that can and should accommodate future growth. One of the reasons that transfers of development rights, or TDRs, have proven so difficult to implement is that it is easy to mark the "sending areas" worthy of preservation but much harder to identify the "receiving areas," which need to absorb more than their base share of anticipated growth.
- Determine how many new residential units and square feet of commercial growth should be accommodated in the future based on this new distribution of where growth can occur.

An important first step in this process is adopting more restrictive zoning and establishing equitable compensation for land owners through TDRs, acquisitions, or other mechanisms.

2. PRESERVE AGRICULTURAL AND OPEN SPACE

The gray areas shown in **Figure 2-3** are currently the areas of lowest population and housing density. They are primarily characterized by the open spaces and agricultural uses that are of important value to the East End and its residents. However, as noted above, these areas are also experiencing the most growth and change on the East End. Municipalities are using several planning and development tools to preserve open space and agricultural lands, including the acquisition of lands through existing funding sources, use of easements, and other programs, including the relatively complex process of TDR. Non-governmental organizations such as local and regional not-for-profit land trusts (i.e., Peconic Land Trust) are also active in acquiring and preserving open space resources. The preferred land use scenario identifies substantial land areas in which agriculture and open spaces should be targeted as areas with restricted development potential and areas ripe for creating TDR opportunities.

One of the critical requirements of creating areas of preservation is to define the edges or transitions of one type of area into another. SEEDS clearly recommends that local communities and transportation agencies collaboratively plan for those key transition zones, or gateways, that mark departure from built-up areas and entry into open spaces and agricultural lands. Currently, these gateway intersections tend not to put either side of the line in its best light. Since they are located at the edge of a hamlet center, such intersections are often not the strongest market locations for development, resulting in typical fringe commercial uses such as gas stations and convenience stores, or perhaps vacant or underutilized commercial or agricultural buildings, which do little to define the edges of the centers, thus allowing new development to sprawl ever outward. East End towns and villages should manage these transitions by "hardening" the edge through better land use controls and by concentrating development potential at the gateway intersection.

Edge Intersection Example

Figure 2-7 uses a prototypical intersection at the edge of a center that applies principles of mixed use, TDR, and careful management of access points such as driveways to create a very different image of a gateway between the center and the surrounding area:

- The critical corners should have very specific allowable uses. In this instance, it may be a cultural/commercial use—for example, a Vineyard Gateway, perhaps with a regional visitor's center (possibly a point of access for bus/trolley tours of vineyards), small-scale retail, or a small inn along with residential infill.
- High-value, but small-lot single-family residences (i.e., Vineyard Villas) that look back over the open spaces. The density represents the transfer from these lands back into the growth areas adjacent to the main roadway.

3. FOCUS DEVELOPMENT IN AND AROUND HAMLET CENTERS

New development and activity would be better focused back into the region's existing hamlet centers and established corridors. This can be accomplished by seeking new mixed-use development (i.e., both residential and commercial) and encouraging infill development opportunities, where appropriate.

To analyze this concept, potential future growth was specifically allocated into the hamlets and well-established built areas for the modeling exercise. Allocating or reallocating development potential in terms of residential or mixed-use opportunities in these defined growth centers (within the County Road 58 area of Riverhead, for example) served two important purposes. First is the redirection of broadly mapped commercial development to more focused nodes. This permits a breaking up of the linear corridor sprawl that is emblematic of undesirable and inefficient development patterns most notably in the ever worsening traffic congestion experienced along key corridors in the East End. Second, this allows new residential and mixed-use development within the hamlet to absorb residential and commercial demand as well as to receive TDR from downsized and protected areas outside the growth boundary.

Hamlet Center Example

While hamlet centers are generally more built-out and established, there are opportunities to find pockets of underutilized land within and adjacent to current centers that can be developed in keeping with the SEEDS principles. In particular, the critical opportunity would be to take

advantage of the location of LIRR tracks and stations most of which are located near downtown areas.

Figure 2-5 shows a prototypical hamlet-oriented development site using underutilized lands adjacent to the LIRR. The rendering also incorporates several transportation and infill development concepts that could work well in any number of East End villages, including:

- Consider modern roundabouts to manage traffic flow and establish gateways at key intersections.
- Use existing train stations (even if they are not now hubs of activity) as organizing points for infill development.
- Ensure that bus services connect to the train station.
- Provide pedestrian amenities that tie new and old centers together and to the transit hubs.
- Co-locate and link services with amenities (i.e., Post Office or bank branch, etc., within walking distance of transit).
- Provide for a mix of uses with some village-style single-family homes, townhouses, small-scale retail, and commercial.
- Provide for new amenities such as a village green or enhancing existing amenities.
- Create a clear boundary line between hamlet centers and infill development and regional roadways. Define areas of open space, agriculture, and lower-density areas, while providing opportunities to enhance pedestrian access to such areas.

Infill Example

From the beginning of the process, the SEEDS participants clearly favored reusing previously developed land before converting open land or farmland into residential or commercial uses. There are opportunities to reuse previously developed land on the East End, and municipalities are encouraged to create zoning and development regulations to foster such re-use. The so-called "grey fields" approach to reinvigorating aging developed areas is an increasingly prominent and readily accepted development model.

The infill example presented in **Figure 2-6** considers an all too familiar template, an underutilized commercial property or vacant shopping center. Such older centers—often closer to downtown or more developed areas compared to the newest and largest centers—can be reinvented based on innovative zoning and a creative vision to enable exciting and well-connected mixed-use development opportunities, taking advantage of land that is typically relatively close to residential neighborhoods and community amenities, such as parks, streams, and woods. In a shopping center format, these elements rarely interconnect or relate to each other. As they are revitalized, the following characteristics emerge:

- Parking is placed behind buildings and "green" frontage is provided between buildings and sidewalks.
- Opportunities are provided to create better connections to open spaces and parks, shopping for residents, a variety of housing, and commercial development.
- The commercial strip is broken up, a critical step in making commercial corridors more attractive community assets.
- Transit access to development sites is improved.

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SEEDS Sustainable East End Development Strategies

Figure 2-5

Enhancing Hamlet Centers Conceptual Sketch - Mattituck

Figure 2-6

Infilling with Mixed-Use Development Conceptual Sketch - Route 58

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Figure 2-7

Transitional Agricultural-Rural Gateway Conceptual Sketch - Riverhead

PREFERRED TRANSPORTATION SCENARIO

SEEDS establishes a preferred two-fold transportation scenario: manage and enhance the existing roadway system rather than expanding roadway capacity, and focus new transportation investment in transit-oriented facilities and systems. This is a clear statement of a collective regional vision and enables local communities as well as county, regional, and state transportation agencies to set priorities and avoid potential conflicts.

1. TRANSPORTATION MANAGEMENT STRATEGIES

Transportation management strategies seek to maximize the efficiency, safety, and accessibility of the existing system, rather than significantly expanding its physical capacity. For the East End, there are a wide range of appropriate local, county, and state management strategies that were defined through SEEDS, including:

- Enhance intermodal efficiency and coordination between existing rail, bus, ferry, taxi, bicycle, and pedestrian traffic.
- Target intersection improvements, including turning lanes/pockets and signal optimization.
- Manage access along key roadway corridors that emphasize retail driveway consolidation and back-lot parking (see **Figure 2-8**).
- Calm traffic for residential side streets to minimize their use as shortcuts and bypasses of through traffic. This may also require appropriate operational improvements on major through-roads.
- Calm traffic in hamlet centers.
- Improve hamlet pedestrian, bicycle, and parking facilities, including high-visibility crosswalks, bicycle lanes and paths, and parking management plans for downtown areas.
- Improve regional gateways (operationally and aesthetically) at the Long Island Expressway (LIE)/Route 58 and the Route 27/Sunrise Highway interchanges. This would include consideration of a new LIE direct entrance/exit connection with the Enterprise Park at Calverton and a recommended major regional intermodal hub in its vicinity.
- Provide park-and-ride lots in hamlets and at transit hubs (including the lot under consideration for the vicinity of the LIE and Route 58) to facilitate ridesharing, shuttles, or interhamlet transit services.
- Improve local gateways at or near hamlet centers and at critical locations defining transition areas from hamlets to surrounding areas (also as noted for the preferred land use scenario, above).
- Among the alternatives for improving the operation of Route 58 on the North Fork and Routes 27 and 39 on the South Fork, above and beyond any alternatives already under consideration that pre-dated SEEDS, consideration should be given to using peak period traffic management options such as intelligent transportation systems (ITS), directional contra-flow lanes, directional premium lanes for HOV or transit, and/or one-way pair segments with Old Montauk Highway on the South Fork.

2. TRANSIT-FOCUSED INVESTMENT

The preferred transportation scenario lays out an aggressive and comprehensive vision of an East End that is served by an integrated multi-modal transit network. In doing so, the SEEDS process has established a basis for the ongoing regional dialogue on the best manner to invest in, and

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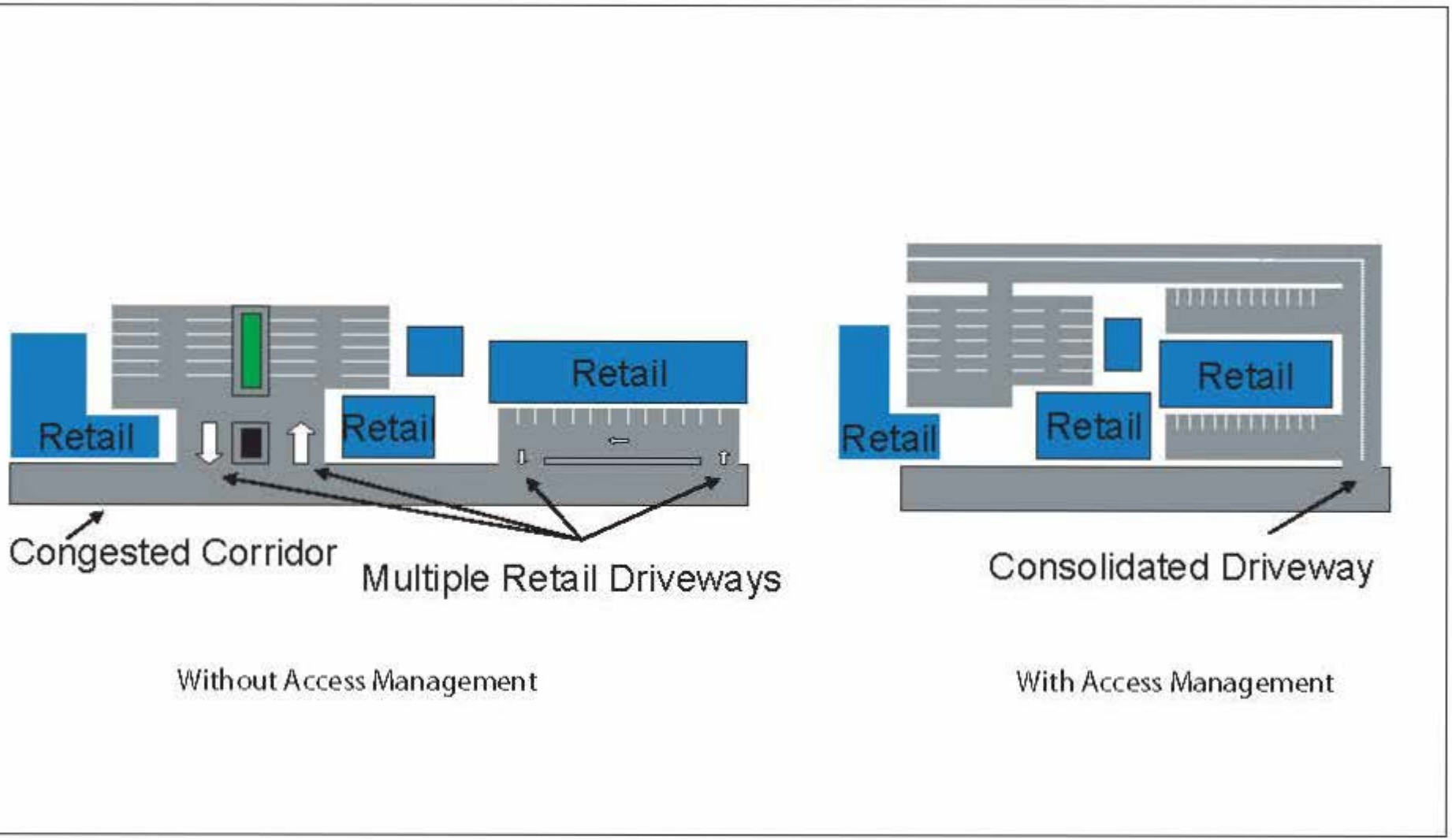
Retail
Retail
Retail
Congested Corridor
Multiple Retail Driveways
Without Access Management
Retail
Retail
Retail
Consolidated Driveway
With Access Management

manage, such an enhanced system over time. Key elements of the preferred transit concept are described below.

East End Rail Service

The long-term objective for which there was considerable consensus among SEEDS participants is that service frequency on the LIRR should be substantially increased. For modeling purposes, it was assumed that future residents, employees, and visitors would have more frequent train service.

Intermodal Transit Hub System

As shown in **Figure 2-9**, and in coordination with improved rail service, the transit concept envisions implementation of an integrated intermodal hub system that would accommodate expanded rail, bus, and demand responsive feeder/distributor services, park-and-ride facilities, bicycle parking, and a range of passenger amenities, such as newsstands, tourist information centers, and accessory retail. In terms of the level of activity and amenities or services provided, there are four tiers of potential transit centers: regional, primary, secondary, and tertiary. In all, the system would include:

- Regional hubs that would be created at new focal points for transportation and mixed-use development opportunities, including at Enterprise Park at Calverton (already slated as a large regional commercial and industrial development center) and at Gabreski Airport with a broad potential to create a mixed-use hub with good rail, road, and air connections.
    - Recommendations at Enterprise Park at Calverton include restoration or realignment of rail service into the heart of the new development, and interconnection of a new LIE ramp to the industrial development and to a regional park-and-ride facility. It is also recommended that the two regional hubs at Calverton and Gabreski be connected by a dedicated bus/rail transit link, thereby enhancing the interconnectivity of the two forks. In addition, the regional hubs would be the primary link between localized East End service and express LIRR rail service currently originating at Ronkonkoma and Speonk.
- Primary hubs serving the largest centers in the East End, including Riverhead and Greenport on the North Fork and Hampton Bays, Southampton, and East Hampton on the South Fork.
- Secondary hubs that enhance intermodal connections and include features such as park-and-ride and ancillary development in such centers as Mattituck and Southold on the North Fork and Water Mill, Amagansett, and Montauk on the South Fork.
- Tertiary hubs at local station and hamlet centers of the East End's smaller hamlets and those without rail service, including Sag Harbor, Shelter Island, and Cutchogue.

Coordinated Interhamlet Bus and Shuttle Services

In coordination with the intermodal hub systems described above, and in addition to county bus routes already provided, the SEEDS preferred transportation scenario incorporates an extensive system of shuttle bus networks to enhance transit opportunities for residents, workers, and visitors. As shown on **Figure 2-10**, the combination of existing and new bus routes was conceptually established to provide extensive local coverage. It is assumed that the bus routes would be fine-tuned and seasonally adjusted to account for employment centers, tourist attractions (i.e., beach shuttles), and intermodal hub connections. It is also anticipated that demand responsive routing (where local service can accommodate variable stops, routes, or

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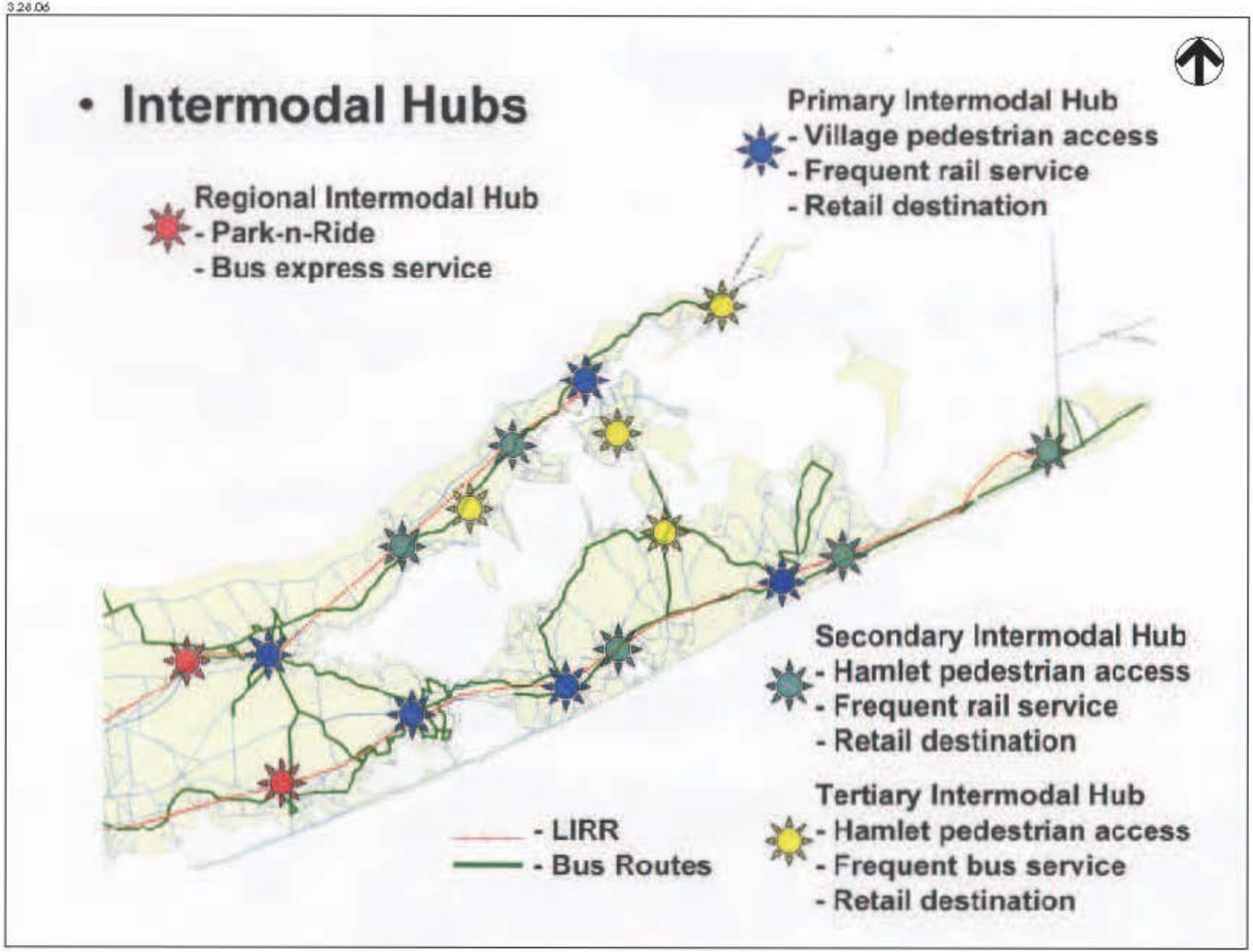

Figure 2-9
2025 Intermodal Hubs

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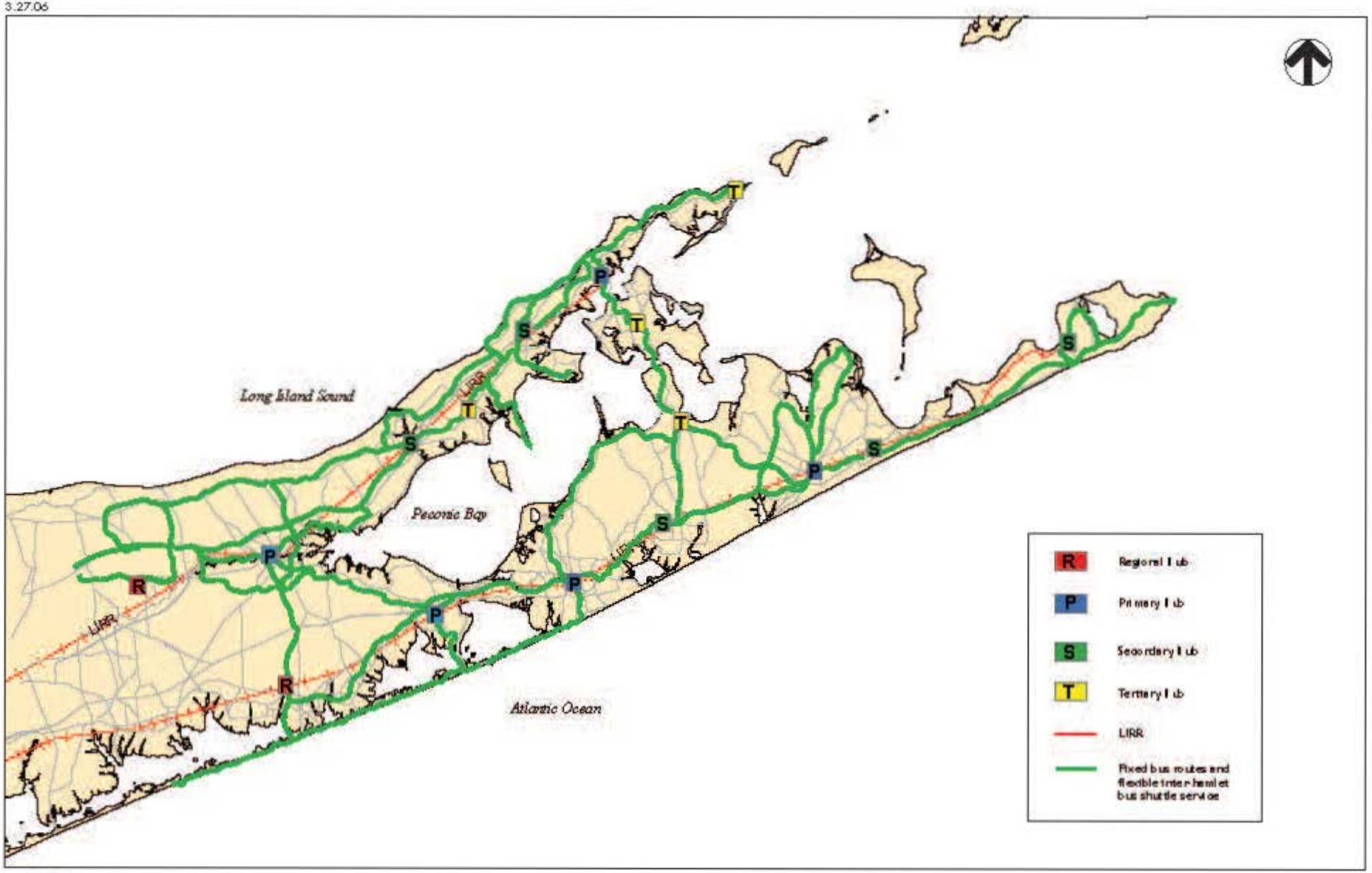

SEEDS Sustainable East End Development Strategies

Figure 2-10

2025 Transit Service

schedules based on the specific need of individual transit riders) should be considered in developing the routes and schedules of the recommended interhamlet routes.

Waterborne Transportation Services

The SEEDS preferred transportation scenario reflects the consensus that a seasonal Peconic Bay water taxi passenger service would enhance non-auto mode choices and should be considered in response to private operator interest in providing such a service. While there was no consensus on additional Long Island Sound ferry service to and from the East End itself, SEEDS participants did encourage the continued assessment of potential ferry service connecting points west of Riverhead with Connecticut.

D. COMPARING THE COMBINED PREFERRED AND "DO-NOTHING" SCENARIOS

As shown in substantially more detail in the appendices to this summary report, each of the land use and transportation scenarios were comparatively analyzed using a regional transportation demand model that was developed for the SEEDS project. The modeling results were used to evaluate future land use and transportation scenarios based on an array of quantitative and qualitative performance measures that helped lead to the consensus adoption of the preferred scenarios summarized above. As with all future projections, the core comparative value is against the baseline, or "do-nothing," scenario, which assumes no change in land development patterns or zoning regulations and no new transportation improvements beyond what is currently programmed on the Transportation Improvement Program. The do-nothing scenario paints a picture of what will occur in the relatively near future unless changes are made to land use policies at the local level and transportation planning and investment at all levels of government.

The model results show that the combination of reducing overall development potential and concentrating it around higher density nodes, along with providing new transit service, will result in a lower overall growth in population (as represented through the number of housing units) and a clear reduction in new person trips and vehicle miles traveled. At the same time, shorter distances between residential development and transit centers combined with frequent service makes transit more competitive, thereby increasing transit's share of overall trips made by East End residents, workers, and visitors. In this instance, a net increase in transit riders could be expected even though there is an overall reduction in housing units. The critical variations between the preferred combination and the do-nothing scenario are summarized in Table 2-1.

DESIRED OUTCOME OF THE PREFERRED SCENARIO

In summary, the desired outcome of the preferred land use and transportation scenario includes a well-defined regional development pattern containing:

- focused hamlet growth;
- reduction in overall development potential;
- increased local and regional open space acquisition initiatives;
- introduction of local and regional TDR programs;
- reduced dependency on vehicular travel in both the number of vehicle trips and fewer vehicle miles traveled;
- increased public transportation utilization; and
- increased housing diversity and affordability.

Table 2-1
Comparison of the Do-Nothing and Preferred Scenarios

Performance Measure	Do Nothing	Preferred	Change
LAND USE			
Total housing units	118,597	92,597 to 101,548	21.9% to 14.4% reduction
Regional commercial area (square feet)	46.4 million	44.9 million	3% reduction
Acres of preserved land/open space	225,652	389,264	73% increase
TRANSPORTATION (Weekday Peak Period)			
Vehicle miles traveled	1.04 million	900,028 to 934,413	14% to 11% reduction
Corridor vehicle miles traveled	755,388	655,407 to 677,281	13% to 10% reduction
Auto trips	93,242	78,749 to 83,736	16% to 10% reduction
Vehicle hours of delay	35,326	28,280 to 29,798	20% to 16% reduction
Transit trips	1,579	1,663 to 2,086	5% to 32% increase
Transit trips as percent of total	1.5%	1.8% to 2.2%	20% to 47% increase

Source: AKRF, Inc. Land use results from calculated land use build-outs as part of model development. Transportation results from direct and post-processed East End transportation demand model output.

E. IMPLEMENTATION STRATEGIES

Implementing the preferred land use and transportation scenarios established by SEEDS will require an ongoing and long-term commitment by each of the project's participants. The goal is to strategically set priorities and set in motion the detailed and specific plans necessary to realize the concepts presented above (see **Figure 2-11**). There are many opportunities for early-action changes—and, in fact, some ideas generated by SEEDS have already been implemented, such as a bike safety initiative generated by the Spanish-language workshops. Commitments to land use changes should coincide with detailed planning of major transportation investments to ensure the latter are cost-effective and will be sustained. Funding for transportation improvements should be derived from conventional and innovative mechanisms, which may include public–private partnerships and special transportation development districts.

INTER-MUNICIPAL AGREEMENT

A critical element for transitioning from a regional planning forum to real policy change is a commitment of the East End municipalities to work together to achieve the ambitious land use strategies established by SEEDS.

For starters, the towns and villages of the East End must agree to conform to the SEEDS principles and to incorporate them into local decision-making. Second, formal inter-municipal agreements should be sought on a wide range of planning initiatives, including:

- setting resource protection and identifying areas appropriate for development on a regional basis and not by municipal boundary;
- using the established EETC forum to collaborate on planning along municipal boundaries; and
- collective advocacy for regional issues.

IMPLEMENTATION COMMITTEE

It is recommended that the EESMA empower the EETC to continue its work in inter-municipal planning and coordination with county, regional, and state agencies. Since the EETC served as

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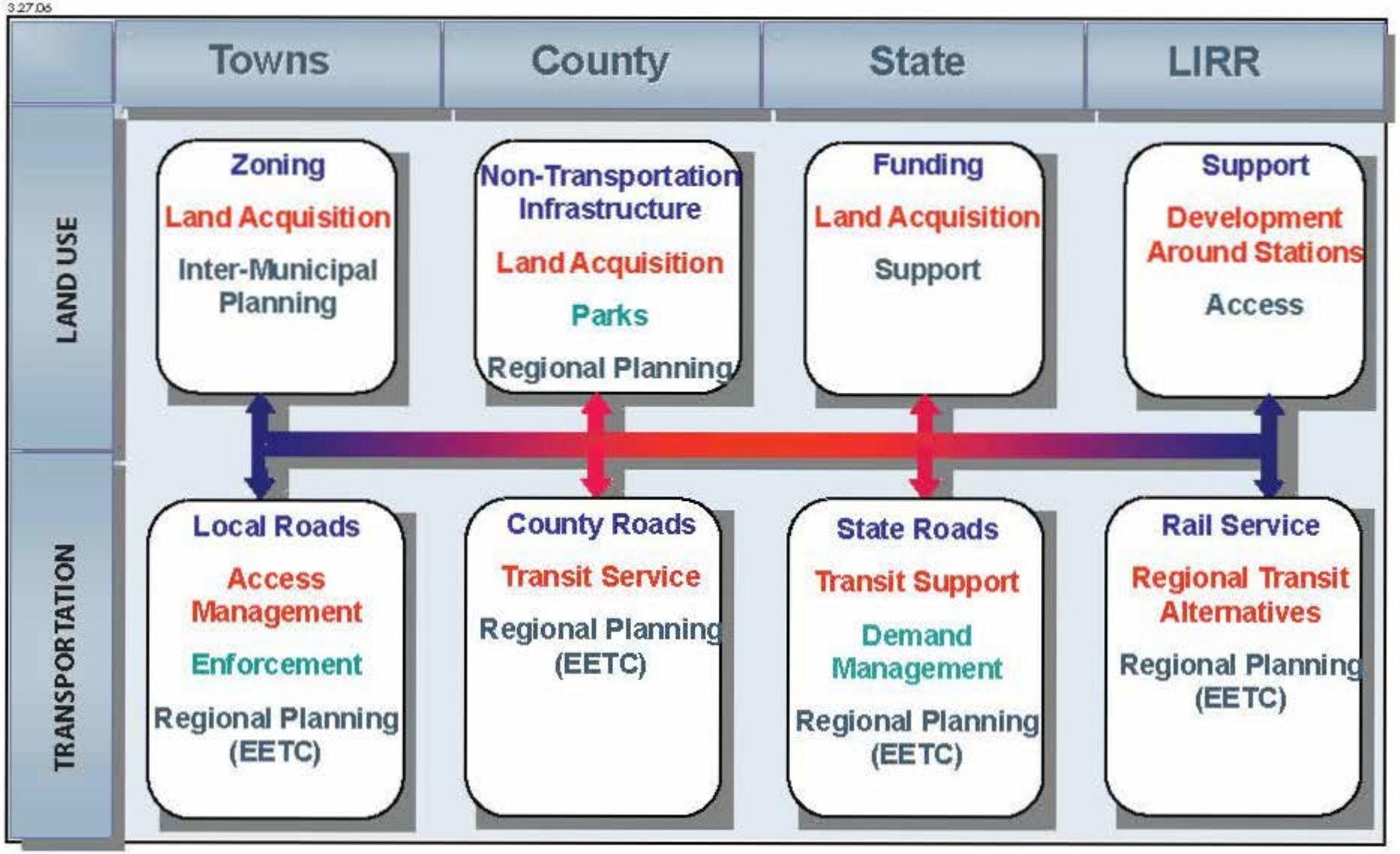


Figure 2-11
Cooperation and Coordination

the primary SEEDS steering committee, it would also be able to manage the implementation process.

The EETC, working as an Implementation Strategy Committee, should establish a work plan to:

- facilitate analysis by the appropriate entities to determine appropriate densities for hamlet centers, location and densities of mixed-use and commercial districts, infrastructure needs to implement plan elements (i.e., schools and sewers), and roadway and intersection operational improvements;
    - since land use decisions are the function of local municipal governments, the coordination of infrastructure necessary to support changes in allowable densities would require the interagency cooperation of local government with Suffolk County (i.e., Department of Health Services), and state agencies;
- pursue development of design guidelines and parameters such as parking management, access management strategies, and traffic calming techniques;
- support and help manage local and regional TDR initiatives;
- assess feasibility of plan elements;
- explore and advocate for financing options for the SEEDS Concept Plan;
- develop a timeline for action items (i.e., short, medium, and long term);
- facilitate municipal relationships and collaboration;
- manage and facilitate the creation of special transportation districts or other pan-municipal initiatives; and
- pursue improvements to transportation services and facilities.

Transportation investments and service improvements should be defined in a collaborative process involving members of the implementation committee as well as the public, as appropriate. However, the final decisions for transportation improvements will remain with the respective implementing agencies, which are responsible for ensuring that all federal and state requirements are met, including safety, environmental, and design standards. The use of any federal transportation funding must be approved by NYMTC and the appropriate federal agency (i.e., the Federal Highway Administration and the Federal Transit Administration). State funding for transportation must be approved by NYSDOT in coordination with Suffolk County.

A. INTRODUCTION

One of the most important initial steps in the SEEDS process, in addition to the implementation of an extensive public outreach effort, was the undertaking of a comprehensive data collection program and inventory of existing conditions. Data collection for SEEDS occurred in two phases. The initial phase was designed to create an accurate profile of the study area's existing demographic, land use, and transportation conditions, which were compiled and published in the white paper *Sustainable East End Development Strategies: Inventory and Analysis* by AKRF in March 2002. SEEDS stakeholders contributed valuable local knowledge in developing the regional profile. The second phase involved updating, revising, and supplementing the original data where necessary with individual towns and villages in the SEEDS study area during the transportation and land use scenario development task.

B. DATA COLLECTION

To create an accurate profile of existing conditions in the study area, the SEEDS team collected various land use, demographic, population, employment, traffic count, development pattern, and historical trends data from a variety of sources, including the Suffolk County Planning Department (SCPD), the U.S. Census Bureau, and a number of independent studies. Although AKRF's library included an extensive collection of planning and transportation-related reports, studies, graphics, and other information relevant to the East End that was used in this effort, it was important to update and supplement this reference material for the SEEDS data collection task. The following is a list of additional sources used to compile and inventory existing conditions:

LAND USE AND DEMOGRAPHICS

- Long Island Population Survey 2000, Long Island Power Authority
- SCPD 1999 Land Available for Development Eastern Suffolk County, October 2000
- SCPD 1999 Existing Land Use Inventory
- SCPD Saturation Population Analysis—Eastern Suffolk County, June 2001
- SCPD Shopping Centers and Central Business Districts, July 2001
- Town of East Hampton Comprehensive Plan, November 2000
- Village of East Hampton Comprehensive Plan, October 2001
- Town of Riverhead: Draft Comprehensive Plan Update Executive Summaries, Draft Business Districts Element, Downtown Strategy, April 2001
- Southampton Tomorrow Comprehensive Plan Update, 1997
- Village of Southampton Comprehensive Plan, May 2000

- Town of Southold Comprehensive Implementation Strategy
- Village of Westhampton Beach, N.Y., Business District Comprehensive Plan, December 1998

TRANSPORTATION

- LIRR East End Transportation Study, September 2000
- NYSDOT Long Island Transportation Plan 2000 (LITP2000)
- Suffolk County Department of Public Works and Town of Southampton, County Road 39 Corridor Study, 1994 and 2000
- Metropolitan Transportation Authority (MTA) Long Island Rail Road (LIRR), East End Access PDEIS
- Town of East Hampton Comprehensive Plan Transportation Element
- Traffic Impact Study: Village of East Hampton Commercial Districts Study
- East Hampton Village: Ross School Traffic Data
- Town of Riverhead: miscellaneous traffic counts
- Various local EISs and traffic impact studies

SUPPLEMENTAL ORIGIN AND DESTINATION SURVEY

To complete the detailed origin and destination assumptions used in a travel demand model, the SEEDS project required supplemental survey work to complete a weekend-basis for trip assignment purposes. The new survey work complemented earlier surveys as part of the North Fork weekend study by focusing on the South Fork. The survey was conducted to assist with the calibration of the traffic simulation network model that will be used to forecast future volumes and test improvement plans. The original simulation model was developed for weekday peak period travel as part of the LITP2000 project and was used for the SEEDS project. Surveys were conducted on summer Saturdays since the model sufficiently simulates weekday peak traffic but was lacking in weekend data. The survey methodology and questions were similar to the procedures and questions that were used for the North Fork survey conducted for the LITP2000 study.

During the summer of 2002, an origin-and-destination survey was conducted on several modes of transportation that serve the South Fork. A postage-paid postcard survey form was distributed to auto drivers; LIRR passengers; Sunrise Coach, Hampton Jitney, and Suffolk County Transit bus passengers; and Shelter Island South Ferry passengers. The survey included questions about the respondent's origin, destination, trip frequency, travel party/vehicle occupancy, residency status, attitudinal questions about bicycle and sidewalk usage, and demographic questions. The surveys were conducted on a typical summer Saturday between 11 AM and 3 PM. A detailed summary of the survey results is presented in **Appendix V.E**.

Of the 1,796 responses to the survey, 1,651 provided useable information regarding both origin and destination. According to these responses, 52 percent of the auto drivers surveyed had an origin and destination within the South Fork, 30 percent had an origin within the South Fork but a destination outside of the South Fork, and another 10 percent had an origin outside South Fork and a destination within South Fork. About 47 percent of the local bus riders surveyed had an origin and destination inside South Fork. About 37 percent had one of their trip ends inside the

South Fork and one outside the South Fork. Nearly all (97 percent) of the express bus riders had either an origin or destination outside the South Fork. About 90 percent of the LIRR riders had one of their trip ends outside the South Fork and one inside the South Fork. About 6 percent of the LIRR riders had both an origin and destination outside the South Fork. About 31 percent of the riders on the South Ferry had both an origin and destination outside the South Fork. About 64 percent had either an origin or destination outside the South Fork.

Most of the survey respondents (about 77 percent overall) indicated that their origin was home or a summer/vacation home, as shown in **Table 4** in **Appendix V.E**. The destinations were more varied by travel mode. About 27 percent of the auto respondents were destined for shopping, about 18 percent were traveling to a social or recreational activity, about 16 percent were traveling home, and 20 percent indicated other destinations. Most (56 percent) of the local bus respondents were destined for work and 19 percent were traveling to a shopping location. The top destinations for express bus passengers included home (37 percent), summer or vacation home (27 percent), and social or recreation (18 percent). Most of the LIRR passengers were destined for either a summer or vacation home (42 percent) or a social or recreational activity (39 percent). The top destinations of ferry passengers included social or recreation (33 percent), home (16 percent), or other (23 percent).

Most of the auto respondents were either driving alone (42 percent) or driving with one passenger (30 percent). Most of the transit passengers (local bus, express bus, LIRR, or ferry) were either traveling alone (about 70 percent of the bus passengers and about 45 percent of the LIRR or ferry passengers) or with one other person.

C. PROFILE OF EXISTING CONDITIONS

DEMOGRAPHICS

POPULATION

The SEEDS *Inventory and Analysis* (see **Appendix I.B**) revealed that concerns about growth in the East End are not unfounded—it is the fastest-growing region of Suffolk County. According to the 2000 census, the current population of the East End is 124,938, which represents a 17.6 increase from 1990 and three times the growth rate of Suffolk County. In general, the population of the study area is getting younger, even though 18 percent of the population is over 65 years of age and the median age is 43.3, compared with 36.3 for Suffolk County as a whole. As evidence of this trend, there has been a one-quarter rise in the population of residents under the age of 18 in the region in the past 10 years.

Population densities are often used as tangible benchmarks of smart growth and sustainable development practices. Although the East End is considerably less dense than Suffolk County as a whole (362 vs. 2,292 residents per square mile), three towns in the SEEDS study area—East Hampton, Riverhead, and Southampton—have had density-per-acre increases of 20 percent or more since 1990.

SEASONAL/SECOND HOME POPULATION

One of the defining characteristics and alternately polarizing issues relative to the East End is the marked increase in the area's population during the summer months. The U.S. Census Bureau indicates that the East End seasonal population more than doubles the year-round population,

particularly in South Fork communities of East Hampton and Southampton. SEEDS research indicates that second homeowners represent the largest component of the seasonal population and arguably the most significant force in the local economy. The seasonal population is a major contributor to the demand for local retail goods, cultural and recreational facilities, and contracting and domestic industries. Conversely, the same sector also contributes greatly to the congestion and excessive vehicular traffic that have begun to characterize the East End as much as the region's sandy beaches and quaint villages.

LAND USE CHARACTERISTICS

The SEEDS *Inventory and Analysis* report indicates that 57 percent of the East End's 221,000 acres of developable land is divided into three categories: recreation and preserved open space (24 percent), agriculture (16 percent), and vacant (17 percent). While approximately 75 percent of the recreation and open space and vacant property is located on the South Fork, almost 75 percent of the region's agricultural land is located on the North Fork. The remaining portion of land is divided into commercial (1,145.7 acres) and industrial (7,531.4 acres) use zones. While agricultural uses, such as wineries and private farms, remain important to the region, only 36,000 acres of total farmland remain in the SEEDS study area.

TRANSPORTATION

TRANSPORTATION NETWORK

The *Inventory and Analysis* report identifies the primary transportation network of the study area as Interstate 495, or the Long Island Expressway, which terminates south and west of Riverhead town center; New York State Route 25 (Main Road), which traverses the North Fork; and New York State Route 27 (Sunrise Highway-Montauk Highway), which travels the length of the South Fork. New York State Route 24 generally runs northwest to southeast, connecting Riverhead with Hampton Bays. An important north–south arterial road in the study area is New York State Route 114, which travels from Southold, through Shelter Island via ferry, and connects with the South Fork, also via ferry, in the Village of North Haven, then continuing on to East Hampton.

As with land use, the existing traffic and transportation conditions in the SEEDS study area are greatly affected by both commutation and by the seasonal population. By and large, residential development is the primary traffic generator. Other contributing factors include seasonal residents' guests and visitors to the area's recreational facilities, who most likely drive to the East End, and visitors to the area's hamlets, village centers, and vineyards.

Development patterns of the region also play a significant role in influencing the current traffic conditions. The predominantly low-density development patterns that characterize much of the SEEDS study area make public transportation less viable and contribute greatly to an increase in both car dependency and ownership. In Suffolk County, for example, 27 percent of all households own three or more vehicles (LITP2000).

EXISTING TRANSPORTATION FACILITIES AND SERVICES

The East End has several modes of transportation, including rail, bus, ferry, air, and bicycle. According to the *Inventory and Analysis* report, the non-auto transportation modes include:

Rail Transit

- MTA Long Island Rail Road

Bus Transit

- Hampton Jitney
- Hampton Luxury Liner
- Sunrise Express
- Suffolk Transit

Airports and Airport Facilities

- Gabreski Airport, Southampton
- Town of East Hampton Airport
- Charles Rose, Southold
- Mattituck Airbase, Southold
- Elizabeth Field, Fishers Island
- Montauk Airport, East Hampton

Ferries

- Cross Sound Ferry
- Viking Ferry (passenger only)
- North Ferry Company
- South Ferry Company

Designated Bicycle Routes

- Designated bicycle routes provided by the NYSDOT (see *Inventory Report*).

D. DEFINING THE FUTURE CONDITION, DEVELOPING THE MATRIX

After the completion of 14 separate visioning sessions, more than 2,000 comments were collected and the first major process objective needed to be met: synthesizing the data from the visioning sessions into a cohesive and comprehensible package of information, or "themes," that could be used to inform the rest of the SEEDS process. These themes ranged from a call for simple and low-cost transportation solutions to the much larger need for an entirely new approach to the transportation network. With regard to land use, the themes ranged from preserving current development patterns with limited density through upzoning and open space preservation, to a widely understood need to look at innovative ways of regulating where and how development should occur.

Analyzing these various themes in terms of future impacts was a major methodological challenge for the SEEDS process. First, the raw data had to be disaggregated into a series of distinct land use and transportation future scenarios, ranging from continuing as is (i.e., doing nothing new) to large policy changes and ambitious improvements. Once these preliminary

scenarios were conceived, further discussions were needed between local and agency interests to ensure that the scenarios represented consensus on alternative futures.

THE SCENARIO MATRIX ANALYSIS

The land use and transportation elements that encompassed the issues and visions identified in the community participation process then had to be meaningfully tested using simulation modeling tools so that their impacts on transportation and development on the East End could be better understood.

To do this, the SEEDS project developed a scenario matrix so that each of the various scenarios could be analyzed against each other in all possible combinations. As shown in **Figure 3-1**, the matrix organized the scenarios by transportation and land use so that their corresponding points of connection result in 24 possible future alternatives. As the control in the matrix, a future baseline year, or "do-nothing scenario," was also considered for both land use and transportation, thus establishing a baseline future against which all the other combinations could be compared.

The matrix approach went beyond simply organizing the analysis of the future scenarios developed through SEEDS. It also enabled the analysis results to be presented clearly and meaningfully to public stakeholders, ultimately helping to guide them to a future consensus vision.

TRANSPORTATION SCENARIOS

Starting with the rows to the left, the matrix begins with the transportation scenarios. As described previously, Transportation Scenario 1 represents the baseline scenario, in which only current planned improvements taken from the state's Transportation Improvement Plan (TIP) would be analyzed. Transportation Scenario 2 represents many important low-impact, low-cost, and easily implemented system improvements. Examples of these measures are multiple driveway access management, improved intersection processing, hamlet parking management, intermodal connectivity, and increased transit service using only the existing infrastructure. This scenario is defined as the transportation management scenario.

There are generally two points of view about how to best improve adverse vehicular traffic and transit conditions. On one side are those who believe that additional roadway capacity should be used to relieve congestion, while others believe that investment should be focused on transit rather than roadway improvements. Transportation Scenarios 3 and 4 represent each of these points of view. Transportation Scenario 3 represents a focused and innovative approach to investing in dramatically redesigned public transit infrastructure, while Transportation Scenario 4 deals with major corridor roadway widenings.

Throughout the visioning and planning session, the public comments expressed an interest in analyzing cost-intensive large-scale improvements, such as a cross-sound bridge and a shared transit and limited-access highway corridor on the South Fork. Transportation Scenario 5 embodies all of these large-scale investment elements.

All of the assumptions and model inputs used to define the various transportation scenarios are identified and described in **Appendix V.B** on the accompanying CD.

3.28.06

TRANSPORTATION \ LAND USE	MAINTAIN CURRENT LAND USE AND ZONING		CREATE "PRESERVATION" AND "DEVELOPMENT" AREAS		
	1 Current Buildout (Do Nothing)	2 Reduce Current Buildout By 50%	3 Maximize Hamlet Center Densities	4 Maintain Current Hamlet Center Densities	5 Maximize Buildout Reduction (Over 60%)
1 Current Improvements Only					
2 Transportation Management Strategies					
3 Transit Focused Investment					
4 Roadway Focused Investment					
5 Large Scale Investment					

Figure 3-1
Scenario Matrix

LAND USE SCENARIOS

The land use scenarios are depicted horizontally in the scenario matrix (from left to right). The first and second scenarios represent little or no change in current development practices. The essential difference in these scenarios is that Land Use Scenario 1 represents the do-nothing condition, in which there is no change in current land use trends and all undeveloped parcels would eventually be developed according to current zoning and trends. Land Use Scenario 2, however, represents current land use trends in terms of where development can occur but with a uniform reduction in density through upzoning.

Land Use Scenarios 3, 4, and 5 represent a dramatic change in current development patterns, based on the sustainable practice of developing density in existing centers through the use of infilling, transit-oriented development, or TDR. This manner of focused development allows for the preservation of large tracts of open space, by recommending that particular study area zones impose a moratorium on future growth. Land Use Scenario 3 represents the highest density of development in which all of the development potential under Land Use Scenario 1 is focused in and around hamlet centers, transit stations, or in targeted growth areas. Land Use Scenarios 4 and 5 generally represent a 40 and 60 percent reduction, respectively, in the total development potential available under Land Use Scenario 1 in and around the target growth centers.

E. GEOGRAPHIC INFORMATION SYSTEM (GIS) ANALYSES

TRAFFIC ANALYSIS ZONES

Traffic Analysis Zones (TAZs) are small geographical areas, usually coterminous with census block groups, used primarily to tabulate traffic-related data, such as journey to work and place of work statistics. For the SEEDS scenario development and testing, they are equally instrumental in breaking down the study area into more detailed units of analysis for determining existing and future land use, growth patterns, and population densities. To this end, the first operation using Geographic Information Systems (GIS) for the scenario testing process involved overlaying the TAZ layer on the SEEDS study area layer.

EVALUATION OF CARTOGRAPHIC AND CENSUS DATA

The SEEDS team evaluated each TAZ in the study area using land use and zoning maps and aerial photography, as well as housing and socioeconomic information gathered from the U.S. census, to determine land use trends and population growth patterns. This information was stored in spatial databases that were developed in GIS for each town. In addition, population growth maps were prepared for each town to illustrate the percentage distribution of population growth by TAZ from 1990 to 2000. The evaluation process also involved examining relevant studies and comprehensive plans to indicate East End areas that have seen increased development and growth. The SEEDS *Inventory and Analysis* report provided the statistical basis by which critical growth indicators, such as existing traffic volumes, land use patterns, and demographic trends, relative to the East End were assessed.

LAND AVAILABLE FOR DEVELOPMENT

To locate developable land within each town, the SEEDS team acquired the 1999 land available for development (LAD) GIS files from the SCPD for the five towns and nine villages on the East End. According to SCPD's *1999 Land Available for Development* report (the "Report"), LAD is

defined as "vacant land or land that has not yet been developed to its maximum extent as permitted by municipal zoning law." Essentially, the Report illustrates how the East End can be developed in the future according to existing zoning patterns and densities. Similarly, with the exception of the build-out in Land Use Scenario 1, the SEEDS scenario testing process illustrates how the East End would be developed in the future according to four different land use development scenarios.

The developable land within each zoning use district for each town was consolidated into six categories, identical to the categories in the Report:

1. Agriculturally used, residentially zoned, subdividable property;
2. Residentially used, residentially zoned, subdividable property;
3. Vacant or agriculturally used, commercially zoned property;
4. Vacant or agriculturally used, industrially zoned property;
5. Vacant, residentially zoned, non-subdividable property; and
6. Vacant, residentially zoned, subdividable property.

In general, the SEEDS scenario testing methodology corresponds to the LAD methodology employed by the SCPD. However, two modifications were made to the SEEDS methodology in assessing the LAD layers:

- *Residentially used, residentially zoned, subdividable property*—whereas SCPD deducted the existing housing units on a macro level after calculating the town-wide net potential housing units, the SEEDS methodology subtracts the existing units on a parcel-specific level. Thus, the category only considers the remaining amount of subdividable land *after* subtracting minimum lot sizes respective of each existing use.
- *Special cases*—include large, privately owned recreation or conservation parcels capable of further intensified development; government surplus property and large unique parcels, such as Gardiner's Island, were excluded from the database.

Since the Report provided an inventory of existing land use for the year 1999, it was necessary to update the data to reflect the residential and commercial development that has occurred on the East End after this date. This process involved consulting aerial orthoimagery taken in both 2001 and May 2002, reviewing each town's most recent land use map, and meeting directly with each town's planning staff to review any discrepancies in the LAD data.

NEW GROWTH PATTERNS

Based on public input from the SEEDS regional planning workshops and visioning sessions and corroborated by extant land use policies outlined in respective East End town comprehensive plans, the SEEDS team manually drafted new growth patterns and/or growth boundaries for each TAZ in the study area for Land Use Scenarios 2, 3, and 5. The new growth patterns were developed to determine how changes in future land use patterns would affect traffic and transit demand. For the spatial redistribution of future growth, the team employed the "SEEDS Principles" of sustainable development to conceptualize new growth patterns and create intermodal hamlet centers for each town.

Once drafted on poster-sized town aerial maps, the new growth patterns were electronically converted into shapefiles using GIS. All parcels in the LAD layers were assigned either

"residential development permitted," "development restricted," "mixed use," "commercially developable," or "transportation" land use codes.

INTERSECTION OF SPATIAL DATA IN GIS

The final step of the spatial analysis involved intersecting the respective LAD, TAZ, and new growth pattern layers of geographic data for each town to compare and contrast the data in each layer. Developable parcels within the new growth patterns were sorted according to their particular land use codes to determine the total amount of acreage in each new growth pattern category. Subsequent queries and operations were performed on the intersected database files in a database management application to yield the net potential housing units for each scenario.

Thus, the SEEDS project team used the traditional analysis format of TAZs only as a starting point. The expression of future land use patterns that explicitly reflected public consensus about curbing sprawl and creating a new land use template was translated into growth potential down to the TAZ level. The first level of analysis was to define areas within or outside of a theoretical growth area boundary (which is shown in **Figure 3-2**). From this point, each TAZ was examined for its relationship with the proposed "New Patterns" map, and future growth assignments were varied by scenario density and by limitations on where that could occur within each TAZ (represented by a shift in the TAZ centroid used to assign traffic generated within the TAZ).

LAND USE SCENARIO CALCULATIONS

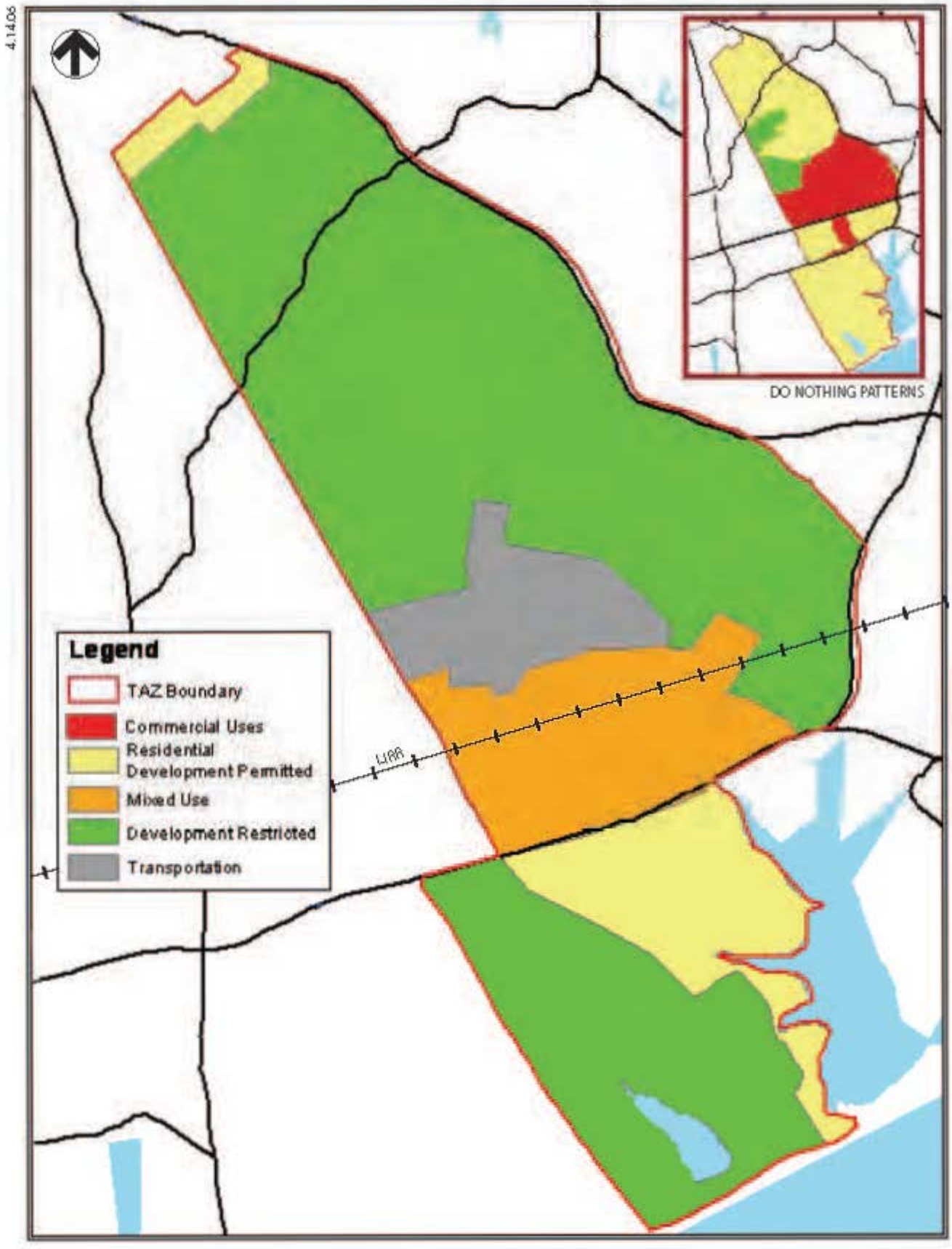
EXISTING PATTERNS

The first step of determining the future development potential of each town involved calculating a build-out under existing zoning patterns. The build-out estimate served as a baseline or frame of reference illustrating the maximum extent to which each town can be developed as permitted by existing zoning densities. The LAD data played a pivotal role in the calculation of the build-out estimate. In addition, a dwelling unit yield factor derived by the Long Island Regional Planning Board was employed to calculate the potential number of dwelling units that could be accommodated on all developable parcels.

The yield factor estimates the average amount of lots per acre for various zoning densities. In particular, the yield factor accounts for natural constraints and future road construction by deducting 20 percent from each 1-acre lot. According to the yield factor formula, a lot size of 40,000 square feet (approximately 1 acre) yields 0.8 lots per acre, and a lot size of 20,000 square feet (approximately ½ acre) yields 1.6 lots per acre.

The build-out estimate under existing development patterns was calculated by multiplying the acreage of each developable parcel by the dwelling unit yield factor that corresponded to its existing zoning density. This calculation yielded the amount of net potential housing units on the LAD in each town. The total amount of housing units in the build-out estimate were derived by adding the net potential housing units to the number of existing housing units provided by the 2000 U.S. Census.

Although the majority of the scenario testing task focuses on determining net potential housing units, SEEDS places equal importance on determining the net potential square footage of future commercial development in the project area. Due to the unavailability of commercial build-out data in the towns within the SEEDS study area, the SEEDS team referenced *Shopping Centers and Central Business Districts,* an inventory of commercial shopping center development



SEEDS Sustainable East End Development Strategies

Figure 3-2
2025 TAZ Growth Projections - Wainscott

conducted by SCPD in 2001, to determine the total square footage of commercial space within the project area's hamlets and central business districts (CBDs).

To best express the commercial build-out potential of the SEEDS project area as a whole, the commercial square footage totals from SCPD's inventory report were used to calculate a *regional* Floor Area Ratio (FAR). FAR is the relationship between the amount of usable gross floor area of all buildings and structures on a building lot, divided by the total lot area of the site on which the buildings or structures stand. Typically, FAR is used by planners and towns as a reference for effective control over density of commercial development and is often incorporated into a community's zoning code.

To that end, a regional FAR of 0.22 was derived by dividing the total square footage of commercial shopping centers in the region (5,133,500) by the total lot area (545.7 acres or 23,770,692 square feet) of each site (5,133,500/23,770,692 = 0.22). With an FAR of 0.22, all future commercial development in the SEEDS commercial build-out scenarios would occupy slightly less than one-quarter of the total acreage of each particular site.

Application of Regional FAR in Commercial Build-Out

As indicated in **Figure 3-1**, the application of the regional FAR in the commercial build-out was fairly simple. In Land Use Scenarios 1 and 2, the commercial build-out was calculated by multiplying all of the existing commercially zoned acres by 0.22. For Land Use Scenarios 3, 4, and 5, the newly defined "mixed use" parcels were classified as half "residentially developable" and the other half as "commercially developable." The total acreage of the newly assigned "commercially developable" parcels was then multiplied by 0.22 to calculate the total commercial build-out in the new patterns build-out scenario.

NEW PATTERNS

As previously stated, the new growth patterns define areas where future residential development should be permitted and restricted, as well as the locations of mixed use and commercial zones. Accordingly, the new growth patterns modeling exercise allocates future development to specific areas in an attempt to prevent haphazard growth or sprawl. The new growth patterns theoretically replace the existing zoning districts and effectively draw a blueprint for future development within the study area.

The mixed-use growth patterns are designed to balance residential and commercial uses in village and hamlet centers and decrease the vehicle miles of travel between residential and commercial uses. Within the mixed-use patterns, half of parcel area was classified as "commercially developable" and the other half as "residentially developable."

QUERIES AND OPERATIONS

Several calculations and queries were performed on the intersected database files to determine the net potential housing units in the new growth patterns. The following is a list of the steps that were taken in a database management application to calculate the net potential housing units for Land Use Scenarios 3, 4, and 5:

- All parcels coded "residential development permitted" were selected and all parcels coded "development restricted" were eliminated from the database.
- Within newly defined "mixed use" parcels, half of all parcel area was classified as "commercially developable" and the other half as "residential development permitted."

- The newly defined TAZ densities and dwelling unit yield factors were imported and joined to the existing database.
- All "commercially developable" parcel area was multiplied by the regional FAR of 0.22 to determine the commercial build-out for Land Use Scenario 2.

F. THE EAST END TRAVEL DEMAND MODEL

MODEL OVERVIEW

As part of the SEEDS effort, Parsons Brinkerhoff Quade & Douglas, Inc. (Parsons Brinkerhoff) created and managed an East End Travel Demand Model. Travel demand models estimate, or replicate, personal transportation choice behavior with respect to travel. Such choices can vary considerably, conceivably ranging from someone who bikes to work for more than an hour everyday, rain or shine, to others who always use their car. Others might be encouraged to use transit based on the availability and convenience of service both from where they start and end their trip (i.e., at from home to work). Travel demand modeling can consider and incorporate various opinions that reflect choice behaviors.

The East End model was developed from the Long Island Transportation Plan (LITP) Travel Demand Model, which is an Island-wide demand model developed for the NYSDOT and has been specifically adopted for use in projects like SEEDS as well as for the Nassau Hub in Nassau County. This travel demand model is objective in the sense that it gives equal footing to both the highway and other transit options. They share the same TAZ system structure. (As described earlier, TAZs are small geographic areas used in transportation planning to summarize demographic characteristics and travel data.) The computer model treats highway and transit options on an equal basis. They are designed to compete with each other—to discover which one is going to be more effective. Instead of assuming that everyone would take a particular mode of transportation, the model actually calculates the probability of a particular person in a particular TAZ making transportation choices. For instance, for a particular TAZ, it may be projected that 20 percent of the travelers use transit, 70 percent may decide to drive alone, and 5 percent may decide to walk.

Other important factors or components of modeling include socioeconomic forecasts to enable regional transportation demand and travel characteristics to be better understood. Zonal socioeconomic data include income, households, types of employment, and how employment is distributed over a given geographic area. Employment density, in particular, likely affects people's travel choices: there is a significant difference in the travel conditions of a relatively spread-out area with 10,000 employees compared with a small, high-density area with the same number of employees. The levels of service of the transportation system also influence travel choices. Transportation supply includes the frequency and capacity of train and bus service, road capacity, and other issues related to transportation infrastructure.

While this particular model is designed primarily to provide detailed forecast of travel within Long Island, it also recognizes that a significant number of people commute outside Long Island, particularly Manhattan. To accurately represent these diverse travel characteristics, the five boroughs of New York City are also included in the model. This model is very comprehensive, with more than 3,200 TAZs. In most cases, a TAZ represents a census tract. However, the East End gets more detailed treatment. Most of the TAZs representing the East

End are based on census block group or block geography, since a census tract in the East End is generally too large to serve as a single TAZ.

The model transportation network contains over 33,000 highway links on Long Island, including county roads and state highways, and more than 67,000 transit links, including access and egress links. The transit model network actually includes more links than the highway network and represents buses, commuter rail (i.e., LIRR), and ferry systems.

MAJOR STEPS IN A TRAVEL DEMAND MODEL

Travel demand models have several major components: trip generation, trip destination, mode and time period choice, and network assignment. For each TAZ, existing and future growth forecasts as described above are used as the basis for estimating trip generation and trip destination quantities. The purpose of the model is to calculate these trip quantities and then determine the most likely modes, times, and paths of travel.

Trip generation tries to capture important factors, such as trip purpose. Many other factors influence trip generation, including household site, number of workers, income level, and auto ownership. This inventory of potential factors is gathered to determine the relative weight of factors by conducting statistical analyses.

For trip destination, the total employment and employment type—retail, service, or basic (e.g., manufacturing)—and households are determined to accurately reflect conditions in a specific area. For example, retail businesses tend to generate the most number of trips per employee, compared with the other employment types. Other factors that influence travelers' trip-making decisions include trip duration, income compatibility (that is, how much income is there to be earned), and others.

After trip destinations are determined, the model then applies a layer to reflect "travel mode choice." This also depends on socioeconomic factors, such as household income, transportation systems and service performance, and out-of-pocket costs, such as fares, gasoline, and maintenance. The mode choice is also affected by the prevailing land use at the trip destination. For instance, because Manhattan is very dense and walkable, transit may be the preferred mode if one is to travel there. Other destinations, such as suburban or rural areas, may have plenty of parking. So, driving may be the preferred mode for those traveling to these areas.

From the very beginning, the modeling process attempted to consider the broadest range of travel modes, such as drivers traveling alone, drivers sharing a ride, or people taking transit in the form of commuter rail with a fixed schedule, local and express buses, or ferries. The model even considers non-motorized options like walking.

For the model to be an even more useful tool to the SEEDS project, a detailed TAZ system and highway and transit network on the East End was developed. As part of the SEEDS study, various land use scenarios have evolved, and each scenario generates different simulated transportation demand responses in the computer model. Similarly, the different transportation supply scenarios affect regional travel mode and demand.

SUMMARY DATA RESULTS

The output from the East End Travel Demand Model provided a variety of data that was used to establish performance measures and evaluation criteria for the land use and transportation scenario combinations. The model's primary output are based in estimating the number of

"person trips" that occur during the analysis period and defining the mode of transportation used to complete such a trip. **Table 3-1** summarizes the overall East End trip generation comparing the various scenario combinations.

One of the most critical elements of the model output from a regional planning perspective is estimating the amount of travel on East End roadways. Using the estimated number of vehicle trips in consideration of estimated trip lengths based on trip purpose and origin and destination, the travel demand also generates one of the most common regional transportation planning measures of vehicular traffic, known as "vehicle miles traveled" (VMT), on East End roadways. **Tables 3-2 through 3-6** provide a summary overview of how regional VMT varies by town, by land use/transportation combined scenario, and in comparison with the "do-nothing," or baseline, scenario (Land Use Scenario 1 by Transportation Scenario 1). **Appendix VII** includes a comparative assessment of the weekend model output.

G. POST-MODELING ANALYSIS AND ASSESSMENT

The SEEDS East End Travel Demand model was completed for the weekday peak period in spring 2005 and for the weekend and final preferred scenario in spring 2006. The SEEDS project team then conducted extensive post-processing analyses to present the results of the model in a usable and measurable manner.

SCORING TOOL AND PERFORMANCE MEASURES

On completion of the critical weekday model runs and post-processing, an extensive public review and consensus feedback effort was completed in May 2005. To facilitate this effort, a new methodology was devised to allow the empirical data outputs from the model to be easily understood, and so that an entirely new round of public outreach could begin almost three years after the start of the project.

Reacting to the issues described above, the SEEDS project team created performance measures and the use of the SEEDS scenario scoring tool as a means of interpreting the modeling results. In preparation for the completion of the first round of modeling, a set of performance measures was developed directly from the SEEDS guiding principles. The development of these measures was again very protracted and took nearly six months to complete. Both the Stakeholder and Steering Committees created performance measures whereby the outputs from the model could be organized and judged based on how well it would achieve the SEEDS guiding principles.

SCENARIO SCORING TOOL

With the performance measures complete, a scoring tool needed to be developed. The scoring tool is a method of scoring each scenario combination from the matrix into three different scores.

Table 3-1 (continued on following page)
Forecast East End Person Trips[1] by Travel Mode: 1995 Base Year, 2025 Baseline, and 2025 Alternatives (Weekday 6 AM–10 AM Peak Period)

	Auto Person Trips	Auto-Person Trips Percent Share	Transit Person Trips	Transit-Person Percent Share	Auto and Transit Person Trips Total
Base Year (1995)	57,155	98.1%	1,127	1.9%	58,282
Future Year (2025)	105,363	98.5%	1,579	1.5%	106,942
Baseline					
Change in Trips[2]	48,208		452		48,660
(FY Baseline vs. Base Year)	84.3%		40.1%		83.5%
Future Year (2025) Alt. T3 & L1	104,422	98.0%	2,119	2.0%	106,541
Change in Trips[3]	-941		540		-401
(Alt. T3&L1 vs. Baseline)	-0.9%		34.2%		-0.4%
Future Year (2025) Alt. T4 & L1	106,019	98.5%	1,567	1.5%	107,586
Change in Trips	656.0		(12.0)		644
(Alt. T4&L1 vs. Baseline)	0.6%		-0.8%		0.6%
Future Year (2025) Alt. T5 & L1	105,745	98.5%	1,563	1.5%	107,308
Change in Trips	382		-16		366
(Alt. T5&L1 vs. Baseline)	0.4%		-1.0%		0.3%
Future Year (2025) Alt. T1 & L2	90,169	98.6%	1,251	1.4%	91,420
Change in Trips[3]	-15,194		-328		-15,522
(Alt. T1&L2 vs. FY Baseline)	-14.4%		-20.8%		-14.5%
Future Year (2025) Alt. T3 & L2	89,273	97.8%	2,048	2.2%	91,321
Change in Trips[3]	-16,090		469		-15,621
(Alt. T3&L2 vs. FY Baseline)	-15.3%		29.7%		-14.6%
Future Year (2025) Alt. T4 & L2	90,602	98.6%	1,242	1.4%	91,844
Change in Trips	-14,761		-337		-15,098
(Alt. T4&L2 vs. Baseline)	-14.0%		-21.3%		-14.1%
Future Year (2025) Alt. T5 & L2	90,335	98.6%	1,247	1.4%	91,582
Change in Trips	-15,028		-332		-15,360
(Alt. T5&L2 vs. Baseline)	-14.3%		-21.0%		-14.4%
Future Year (2025) Alt. T1 & L3	104,460	98.5%	1,583	1.5%	106,043
Change in Trips	-903		4		-899
(Alt. T1&L3 vs. Baseline)	-0.9%		0.3%		-0.8%
Future Year (2025) Alt. T3 & L3	103,206	97.8%	2,317	2.2%	105,523
Change in Trips[3]	-2,157		738		-1,419
(Alt. T3&L3 vs. FY Baseline)	-2.0%		46.7%		-1.3%
Future Year (2025) Alt. T4 & L3	104,797	98.5%	1,583	1.5%	106,380
Change in Trips	-566		4		-562
(Alt. T4&L3 vs. Baseline)	-0.5%		0.3%		-0.5%
Future Year (2025) Alt. T5 & L3	104,528	98.5%	1,580	1.5%	106,108
Change in Trips	-835		1		-834
(Alt. T5&L3 vs. Baseline)	-0.8%		0.1%		-0.8%

Table 3-1 (continued from previous page)
Forecast East End Person Trips[1] by Travel Mode: 1995 Base Year, 2025 Baseline, and 2025 Alternatives (Weekday 6 AM–10 AM Peak Period)

	Auto Person Trips	Auto-Person Trips Percent Share	Transit Person Trips	Transit-Person Percent Share	Auto & Transit Person Trips Total
Future Year (2025) Alt. T1 & L4	95,889	98.6%	1,404	1.4%	97,293
Change in Trips[3]	-9,474		-175		-9,649
(Alt. T1&L4 vs. Baseline)	-9.0%		-11.1%		-9.0%
Future Year (2025) Alt. T3 & L4	94,622	97.8%	2,086	2.2%	96,708
Change in Trips[3]	-10,741		507		-10,234
(Alt. T3&L4 vs. Baseline)	-10.2%		32.1%		-9.6%
Future Year (2025) Alt. T4 & L4	96,326	98.6%	1,397	1.4%	97,723
Change in Trips	-9,037		-182		-9,219
(Alt. T4&L4 vs. Baseline)	-8.6%		-11.5%		-8.6%
Future Year (2025) Alt. T5 & L4	96,247	98.6%	1,402	1.4%	97,649
Change in Trips	-9,116		-177		-9,293
(Alt. T5&L4 vs. Baseline)	-8.7%		-11.2%		-8.7%
Future Year (2025) Alt. T1 & L5	89,993	98.6%	1,304	1.4%	91,297
Change in Trips[3]	-15,370		-275		-15,645
(Alt. T1&L5 vs. FY Baseline)	-14.6%		-17.4%		-14.6%
Future Year (2025) Alt. T3 & L5	88,986	98.2%	1,663	1.8%	90,649
Change in Trips[3]	-16,377		84		-16,293
(Alt. T3&L5 vs. FY Baseline)	-15.5%		5.3%		-15.2%
Future Year (2025) Alt. T4 & L5	90,453	98.6%	1,300	1.4%	91,753
Change in Trips	-14,910		-279		-15,189
(Alt. T4&L5 vs. Baseline)	-14.2%		-17.7%		-14.2%
Future Year (2025) Alt. T5 & L5	90,241	98.6%	1,292	1.4%	91,533
Change in Trips	-15,122		-287		-15,409
(Alt. T5&L5 vs. Baseline)	-14.4%		-18.2%		-14.4%

Notes:
[1] Represents person trips that are made to, from, or within East End.
[2] Represents the incremental change in trips from Base Year to Future Year Baseline.
[3] Represents the incremental change in trips from the Future Year Baseline to Future Year Alternative.

Table 3-2

Forecast VMT[1] for East End: 1995 Base Year, 2025 Baseline, and 2025 Alternatives (Weekday 6 AM–10 AM Peak Period)

	Base Year (1995)	Future Year (2025)			Future Year Alt. T3 & L1			Future Year Alt. T4 & L1			Future Year Alt. T5 & L1		
		Baseline	Change[2]	Percent Change	Alt. T3 & L1	Change[3]	Percent Change	Alt. T4 & L1	Change	Percent Change	Alt. T5 & L1	Change	Percent Change
Riverhead	147,491	308,759	161,268	109.3%	304,991	-3,768	-1.2%	324,945	16,187	5.2%	310,172	1,414	0.5%
Southold	58,065	91,266	33,201	57.2%	89,790	-1,476	-1.6%	95,959	4,693	5.1%	91,257	-9	0.0%
Southampton	315,068	554,901	239,833	76.1%	548,066	-6,835	-1.2%	549,583	-5,318	-1.0%	564,844	9,943	1.8%
Shelter Island	1,473	3,080	1,607	109.1%	2,723	-357	-11.6%	3,073	-7	-0.2%	3,010	-70	-2.3%
East Hampton	42,882	87,048	44,166	103.0%	85,529	-1,519	-1.7%	87,815	767	0.9%	93,166	6,117	7.0%
Total	564,980	1,045,054	480,074	85.0%	1,031,100	-13,955	-1.3%	1,061,376	16,322	1.6%	1,062,448	17,394	1.7%

Notes:

[1] Represents the VMTs of the trips that are incurred within East End.

[2] Represents the incremental change in VMT from Base Year to Future Year Baseline.

[3] Represents the incremental change in VMT from the Future Year Baseline to Future Year Alternative.

Table 3-3

Forecast VMT[1] for East End: 1995 Base Year, 2025 Baseline, and 2025 Alternatives (Weekday 6 AM–10 AM Peak Period)

Future Year Alt. T1 & L2			Future Year Alt. T3 & L2			Future Year Alt. T4 & L2			Future Year Alt. T5 & L2		
Alt. T1 & L2	Change[3]	Percent Change	Alt. T3 & L2	Change[3]	Percent Change	Alt. T4 & L2	Change	Percent Change	Alt. T5 & L2	Change	Percent Change
263,108	-45,650	-14.8%	260,375	-48,383	-15.7%	276,139	-32,619	-10.6%	265,828	-42,930	-13.9%
79,973	-11,293	-12.4%	78,330	-12,936	-14.2%	82,434	-8,832	-9.7%	79,852	-11,414	-12.5%
499,434	-55,468	-10.0%	494,428	-60,473	-10.9%	493,855	-61,047	-11.0%	503,762	-51,140	-9.2%
2,368	-712	-23.1%	2,211	-869	-28.2%	2,421	-659	-21.4%	2,408	-672	-21.8%
87,048	-13,565	-15.6%	73,122	-13,926	-16.0%	74,927	-12,121	-13.9%	79,470	-7,578	-8.7%
Totals:											
918,367	-126,687	-12.1%	908,468	-136,587	-13.1%	929,776	-115,279	-11.0%	931,321	-113,734	-10.9%

Notes:

[1] Represents the VMTs of the trips that are incurred within East End.

[2] Represents the incremental change in VMT from Base Year to Future Year Baseline.

[3] Represents the incremental change in VMT from the Future Year Baseline to Future Year Alternative.

Table 3-4

Forecast VMT[1] for East End: 1995 Base Year, 2025 Baseline, and 2025 Alternatives (Weekday 6 AM–10 AM Peak Period)

Future Year Alt. T1 & L3			Future Year Alt. T3 & L3			Future Year Alt. T4 & L3			Future Year Alt. T5 & L3		
Alt. T1 & L3	Change[2]	Percent Change	Alt. T3 & L3	Change[2]	Percent Change	Alt. T4 & L3	Change	Percent Change	Alt. T5 & L3	Change	Percent Change
289,929	-18,830	-6.1%	268,141	-22,618	-7.3%	302,480	-6,279	-2.0%	292,231	-16,527	-5.4%
84,015	-7,251	-7.9%	82,807	-8,459	-9.3%	88,498	-2,768	-3.0%	83,316	-7,950	-8.7%
548,763	-6,138	-1.1%	541,267	-13,635	-2.5%	540,023	-14,878	-2.7%	555,530	629	0.1%
2,920	-130	-5.2%	2,599	-481	-15.6%	2,890	-190	-6.2%	2,922	-158	-5.1%
90,223	3,174	3.6%	88,434	1,386	1.6%	90,350	3,302	3.8%	95,370	8,322	9.6%
Totals											
1,015,849	-29,205	-2.8%	1,001,247	-43,808	-4.2%	1,024,241	-20,813	-2.0%	1,029,370	-15,685	-1.5%

Notes:

[1] Represents the VMTs of the trips that are incurred within East End.

[2] Represents the incremental change in VMT from Base Year to Future Year Baseline.

[3] Represents the incremental change in VMT from the Future Year Baseline to Future Year Alternative.

Table 3-5

Forecast VMT[1] for East End: 1995 Base Year, 2025 Baseline, and 2025 Alternatives (Weekday 6 AM–10 AM Peak Period)

Future Year Alt. T1 & L4			Future Year Alt. T3 & L4			Future Year Alt. T4 & L4			Future Year Alt. T5 & L4		
Alt. T1 & L4	Change[2]	Percent Change	Alt. T3 & L4	Change[2]	Percent Change	Alt. T4 & L4	Change	Percent Change	Alt. T5 & L4	Change	Percent Change
273,801	-34,958	-11.3%	268,796	-39,962	-12.9%	285,183	-23,183	-7.6%	276,911	-31,848	10.3%
79,572	-11,694	-12.8%	77,920	-13,346	-14.6%	81,797	-9,469	-10.4%	79,676	-11,590	-12.7%
514,627	-40,274	-7.3%	509,026	-45,875	-8.3%	510,672	-44,230	-8.0%	520,794	-34,107	-6.1%
2,349	-731	-23.7%	2,037	-1,043	-33.9%	2,275	-805	-26.1%	2,358	-722	-23.4%
77,654	-9,395	-10.8%	76,633	-10,415	-12.0%	77,850	-9,199	-10.6%	82,984	-4,064	-4.7%
Totals											
948,002	-97,052	-9.3%	934,413	-110,642	-10.6%	957,776	-87,278	-8.4%	962,723	-82,332	-7.9%

Notes:

[1] Represents the VMTs of the trips that are made to, from, or within East End.

[2] Represents the incremental change in VMT from Base Year to Future Year Baseline.

[3] Represents the incremental change in VMT from the Future Year Baseline to Future Year Alternative.

Table 3-6

Forecast VMT[1] for East End: 1995 Base Year, 2025 Baseline, and 2025 Alternatives (Weekday 6-10 AM Peak Period)

Future Year Alt. T1 & L5			Future Year Alt. T3 & L5			Future Year Alt. T4 & L5			Future Year Alt. T5 & L5		
Alt. T1 & L5	Change[2]	Percent Change	Alt. T3 & L5	Change[2]	Percent Change	Alt. T4 & L5	Change	Percent Change	Alt. T5 & L5	Change	Percent Change
254,902	-53,857	-17.4%	252,242	-56,517	-18.3%	264,017	-44,741	-14.5%	257,946	-50,813	-16.5%
74,026	-17,240	-18.9%	72,417	-18,849	-20.7%	76,050	-15,216	-16.7%	74,368	-16,880	-18.5%
506,154	-48,747	-8.8%	499,060	-55,842	-10.1%	506,994	-47,907	-8.6%	510,991	-43,911	-7.9%
2,141	-939	-30.5%	1,913	-1,167	-37.9%	2,097	-983	-31.9%	2,125	-956	-31.0%
75,425	-11,624	-13.4%	74,396	-12,652	-14.5%	77,003	-10,046	-11.5%	81,432	-5,617	-6.5%
Totals											
912,647	-132,407	-12.7%	900,028	-145,026	-13.9%	926,162	-118,893	-11.4%	926,878	-118,176	-11.3%

Notes:

[1] Represents the VMTs of the trips that are made to, from, or within East End.

[2] Represents the incremental change in VMT from Base Year to Future Year Baseline.

[3] Represents the incremental change in VMT from the Future Year Baseline to Future Year Alternative.

QUANTITATIVE SCORES

The first scoring is quantitative in origin. It summarizes and breaks down all of the empirical data taken directly from the model. This data is statistically distributed into quintiles and given a ranking of "1 through 5." "1" represents the given scenario's inability to achieve the SEEDS principles, and "5" represents the ability of the scenario to successfully achieve the SEEDS principles. This ranking allowed each public participant a better understanding of how well the empirical modeling data from each scenario compared to the project's guiding principles or even how they compared to each other.

QUALITATIVE SCORES

However, not all goals can be easily expressed in numerical terms. Many performance measures dealt with the implied impact a scenario might have on the community. All of the performance measures that were judged subjectively were grouped into qualitative scores. An example of a qualitative performance measure is the effect of a particular scenario on such factors as community character and quality of life issues. To quickly and efficiently judge these characteristics, learning from past mistakes, the project required creative problem solving. Sensitive to the public's concern that outside influences were at work behind the scenes, the SEEDS project team developed the online scoring tool. This online tool enabled each individual public participant to vote directly for all of the qualitative performance measures for all scenario combinations. This not only removed any potential concerns that the consultant team was responsible for making such subjective decisions but also allowed those who actually lived in the community to weigh in on the final decision, as detailed below.

The Online Scoring Tool

The online scoring tool provided was a unique method for evaluating the qualitative performance measures and reviewing the results of the quantitative modeling. An example of the online scoring tool is presented in **Figure 3-3**. The online scoring tool was developed using an ASP.NET powered Web application that stored the resulting answers in a SQL Server database. The application featured a login system enabling stakeholders to take breaks and restart the scoring tool where they left off. A scoring sheet function provided a snapshot of all of the answers in real time so that participants could review all of their answers at once, as well as see which scenario combinations were yet to be scored. The flexibility of this system provided a user-friendly platform where all participants with a wide range of computer technical expertise could record and manipulate their answers while providing several resources that explained such various aspects as individual scenario elements, descriptions of how the scenario might work together, and several different types of maps.

One of the most important benefits was the accessibility and ease that the Internet afforded, in contrast to a paper scoring tool, which would have required mailing the scoring sheets, retrieving them (with the responsibility on the scorers to send them back), and then analyzing them. With 25 difference scenario combinations and 11 performance measures to score per combination, there was a significant chance that many participants would not make the effort to complete the survey, given traditional questionnaire techniques.

The online scoring tool also provided the SEEDS project team the ability to use the SQL Server database to extrapolate average scores per scenario combination in a fraction of the time it would have taken to complete by hand. Therefore, this particular scoring platform proved to be an

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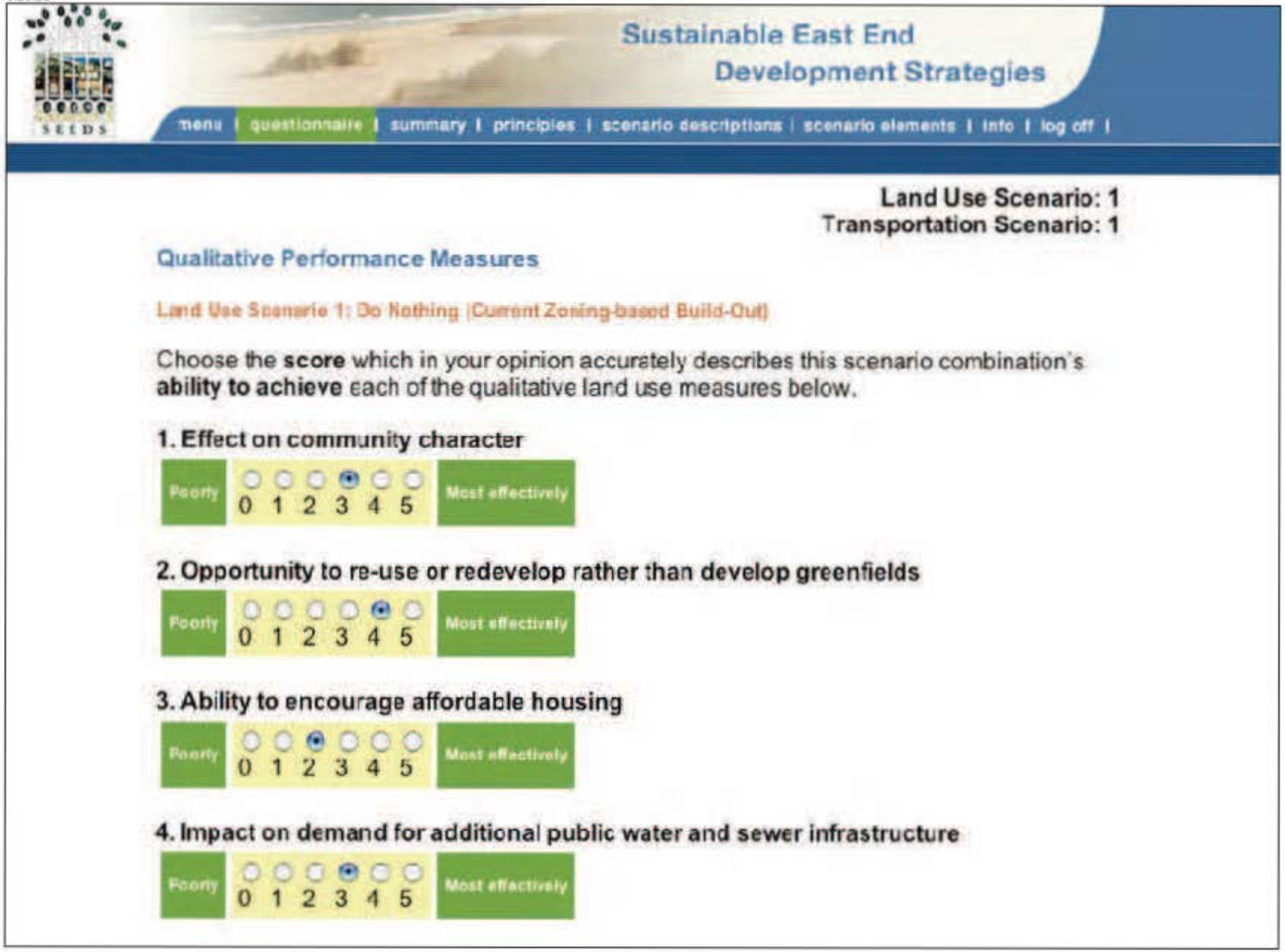

Figure 3-3
On-Line Scoring Tool

integral part of the process and provide significant time and cost savings. Similar to the quantitative scores, all qualitative scores for each scenario combination were scored on its ability to achieve the goals and principles set forth by the SEEDS project.

COMBINED AGGREGATE SCORES

The third and final score is based on the combination of both the quantitative modeling scores and the qualitative survey scores. This combination became the final score or aggregate combined score, which was used to fill in each cell in the matrix. These scores provided a public understanding of how the evaluation of many future scenario combinations was achieved.

System of Checks and Balances

Developing scores for both the quantitative and qualitative performance measures had many interesting advantages. The advantage of this system was that the quantitative and qualitative scores acted as a system of checks and balances, whereby the modeling results did not stand alone in their recommendation for a particular scenario. This is especially important when evaluating more subjective factors, such as how a particular scenario might affect community character. Additionally, when modeling results are taken to the policy makers there is an understanding that implementation may be met with less resistance, primarily because these results have a degree of public support.

This concept can be better understood through a detailed look at the three categories of scores produced by the scoring tool. For example, scenario combination Transportation Scenario 1 by Land Use Scenario 1 (future baseline) resulted in a quantitative score of 23.01, a qualitative score of 10.01, and a combined score of 33.84 (see **Figure 3-4**). Due to the statistical distribution of the modeling results, the future baseline condition resulted in a quantitative score that represents a 23-point deviation from the lowest to highest scores. However, the qualitative scores with a 37.4-point deviation represented a broader range in scores from lowest to highest. This trend alludes to the notion that while the inherent analysis framework of the model may have scored the future baseline scenario somewhat too high, the qualitative scores from the online scoring tool that were developed by the public balanced the combined scenario score to accurately express how well a particular scenario combination truly reflected the principles of the project.

Another example of this system of checks and balances in the scoring system can be seen by looking at scenario combination Transportation Scenario 3 by Land Use Scenario 5. This particular scenario embodies many of the public participants' perceived ideal scenario combination. It aims to provide the minimum of new development with a dramatically improved transit infrastructure. However, from a modeling and technical standpoint, the limited density makes it difficult to support transit options with ample ridership. Therefore, the combination Transportation Scenario 3 by Land Use Scenario 5 resulted in a quantitative score of 46.02 out of 65, a qualitative score of 47.41 out of 55, and a combined score of 93.36 out of a total of 120 points, providing a reality check to public enthusiasm, as compared to the empirical modeling results.

In other words, the sentiments raised in the original public visioning sessions can now be empirically supported through the use of modeling. In either case, the final scenario(s) decisions seem to accurately represent a regional vision.

Transportation Scenario 2 by Land Use Scenarios 4 and 5, and Transportation Scenario 3 by Land Use Scenarios 3, 4, and 5 have the highest combined scores. The SEEDS project team

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Aggregate Quantitative Scores

Max Score is 61

TRANSPORTATION \ LAND USE	1	2	3	4	5
1	23.01	37.05	33.82	37.95	40.04
2	24.96	40.04	36.61	40.04	41.99
3	28.99	44.98	40.95	46.02	46.02
4	24.05	39.00	34.06	39.00	41.99
5	24.05	39.00	33.62	39.00	46.95

Aggregate Qualitative Scores

Max Score is 59

TRANSPORTATION \ LAND USE	1	2	3	4	5
1	10.01	14.08	27.94	30.35	32.53
2	17.82	22.00	34.54	39.60	38.72
3	23.76	27.06	40.81	46.53	47.41
4	12.87	15.73	30.60	29.37	31.68
5	10.56	13.85	27.17	29.04	31.68

Aggregate Combined Scores

Max Score is 120

TRANSPORTATION \ LAND USE	1 Current Buildout (Do Nothing)	2 Reduce Current Buildout By 50%	3 Maximize Hamlet Center Densities	4 Maintain Current Hamlet Center Densities	5 Maximize Buildout Reduction (Over 60%)
1 Current Improvements Only	33.84	51.12	60.96	67.20	72.24
2 Transportation Management Strategies	42.96	61.92	70.56	79.68	80.64
3 Transit focused Investment	52.80	72.00	81.84	92.64	93.36
4 Roadway focused Investment	36.96	54.72	64.80	68.40	73.68
5 Large Scale Investment	34.56	52.80	60.24	68.16	72.72

Figure 3-4
Scored Matrix

labeled these combinations as the five targeted scenario combinations. While these target combinations represented a significant interest in dramatically changing the current land use development patterns as part of the regional vision (as expressed by the high scores for Land Use Scenarios 3, 4, and 5), the only true variation in opinions was the decision of how much density should be allowed to occur. The targeted scenarios also represented an interest in transit investment while limiting and focusing investment on specific roadway improvements around transportation management strategies and particular trouble spots, not region-wide corridor widenings. As indicated in **Figures 3-5** through **3-10**, the modeling results support this determination. **Figure 3-5** shows how future development in accordance with Transportation Scenario 3 would lead to higher transit ridership, while **Figures 3-6** and **3-7** show a concurrent drop in vehicle miles traveled and person hours of delay, respectively. **Figure 3-8** shows the effect of restricting commercial development potential, while **Figure 3-9** shows a similar effect for restricting residential development potential. **Figure 3-10** shows the effect of designating areas for preservation and development and the resulting changes in density for each area.

PRESENTING THE REGIONAL VISION: FINAL CONSENSUS BUILDING

The results of the performance measure analysis were used as a basis for continued consensus building. In May 2005, SEEDS conducted and completed 10 public workshops in the five East End towns (see **Appendix III.E** for the workshop presentation and a summary of all of the comments made at the 10 workshops). These workshops provided an open forum for nearly 200 area residents, local officials, and the public at large. The workshops reviewed the results of computer simulation modeling of alternative future land use and transportation scenarios developed through SEEDS as a step toward building consensus on a preferred future scenario. Workshop participants generally supported land use scenarios that reduce the future development potential and focus it in and around hamlet centers. They also supported elements of the transportation scenarios that improve transit services, particularly in the hamlet centers. However, there was no agreement among the participants about specific elements of these scenarios, such as the level of density in future hamlet centers, the level of reduction from the future build-out scenario, and the development of new ferry services.

The May 2005 workshops established the final preferred scenario that represents a summary statement of the recommended regional planning strategies developed through the SEEDS process and presented to a regional assembly of SEEDS participants.

SUSTAINABLE DEVELOPMENT STRATEGY: THE REGIONAL SUMMIT

The final scenarios described in Section 2, "Summary of the SEEDS Concept Plan," were presented on December 8, 2005, in a broad "summit" with elected and planning officials from East End municipalities, Suffolk County, MTA LIRR, and New York State agencies and elected officials.

The summit served as the first step to the implementation of SEEDS, in the hope that the municipalities will join together in an inter-municipal agreement to work toward the preferred land use future, while the transportation agencies will work toward securing federal and state funding to implement the transportation improvements.

Figure 3-5
Transit Ridership

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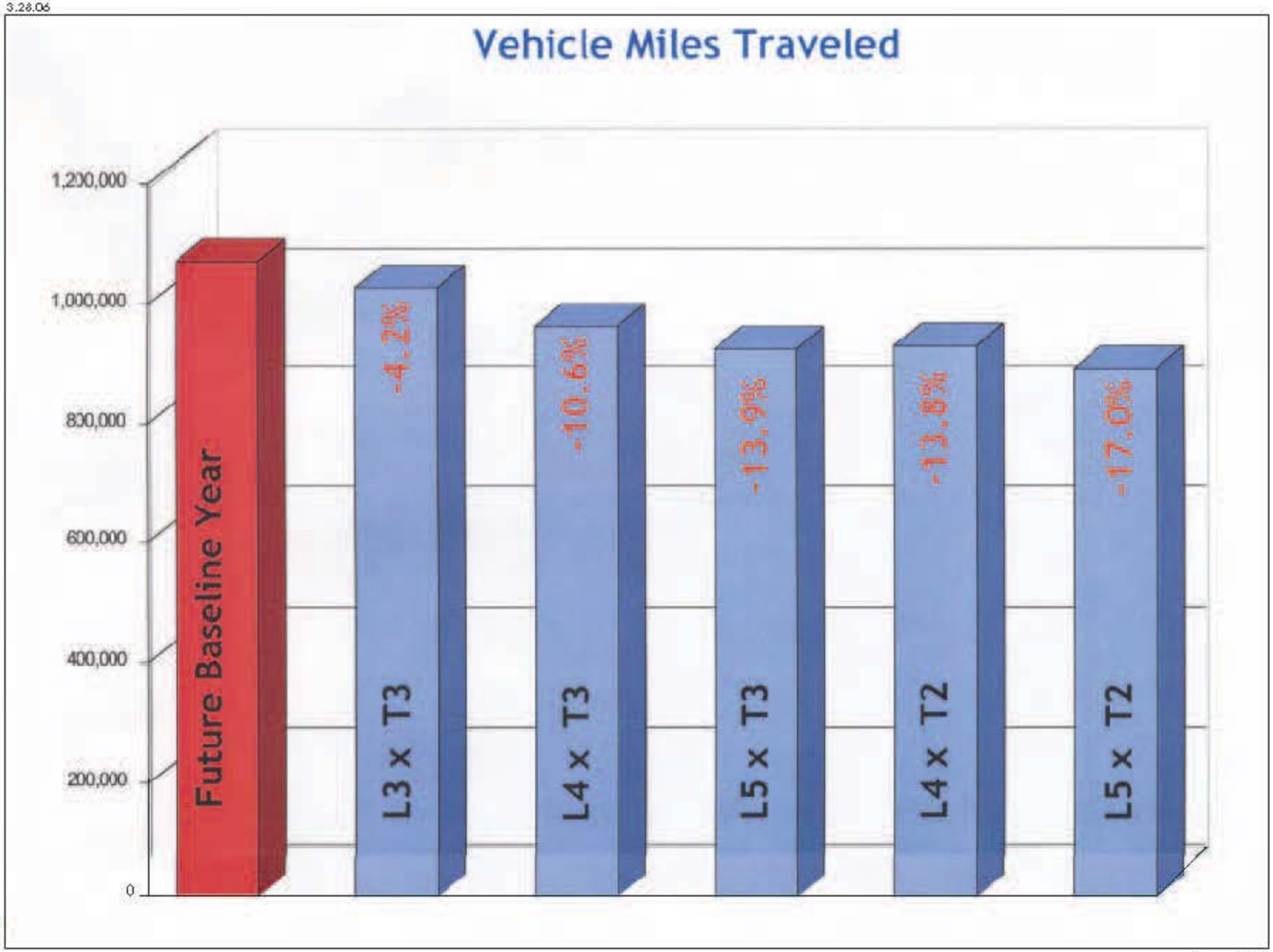

Figure 3-6
Vehicle Miles Traveled

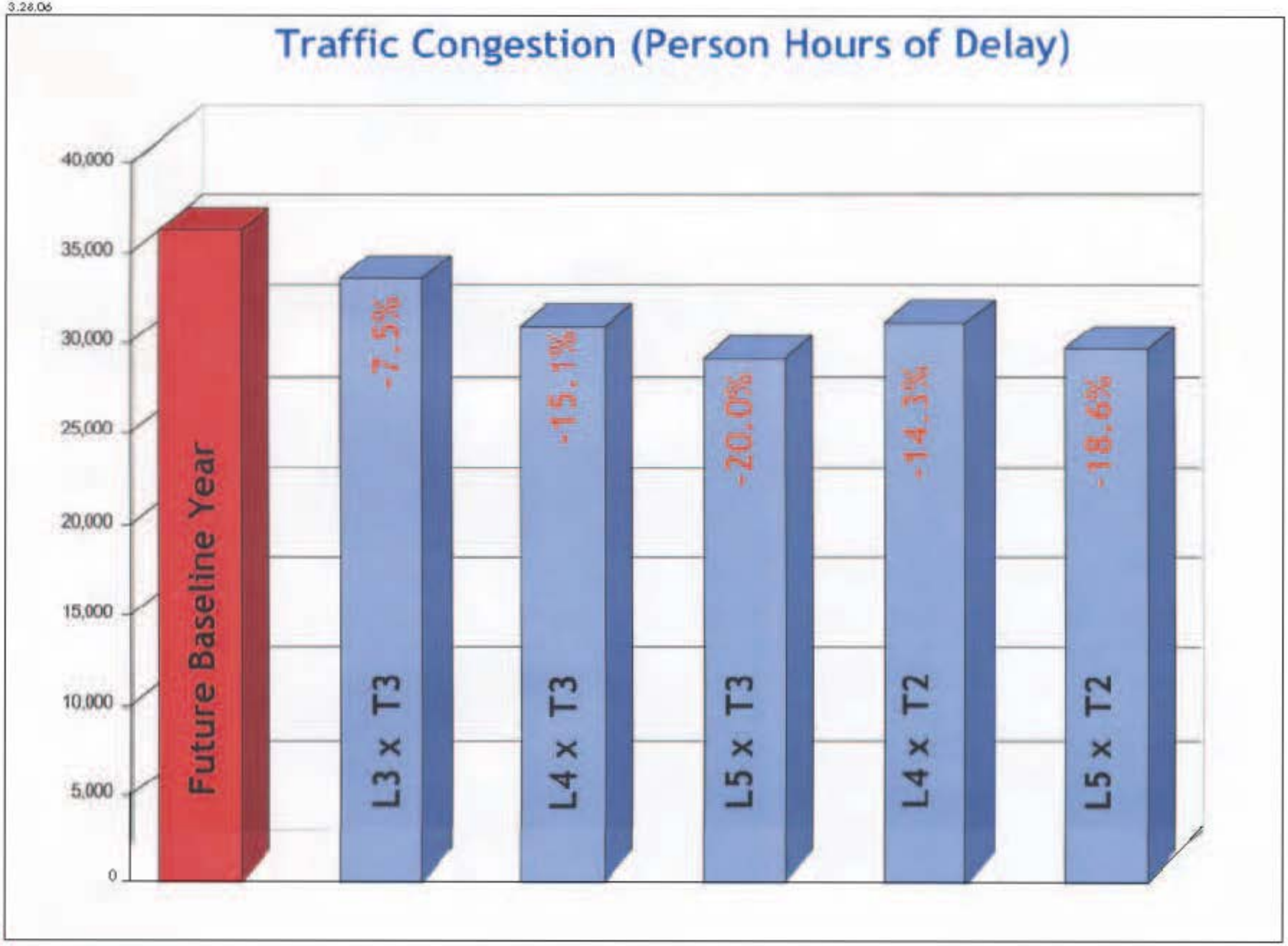

Figure 3-7
Traffic Congestion (Person Hours of Delay)

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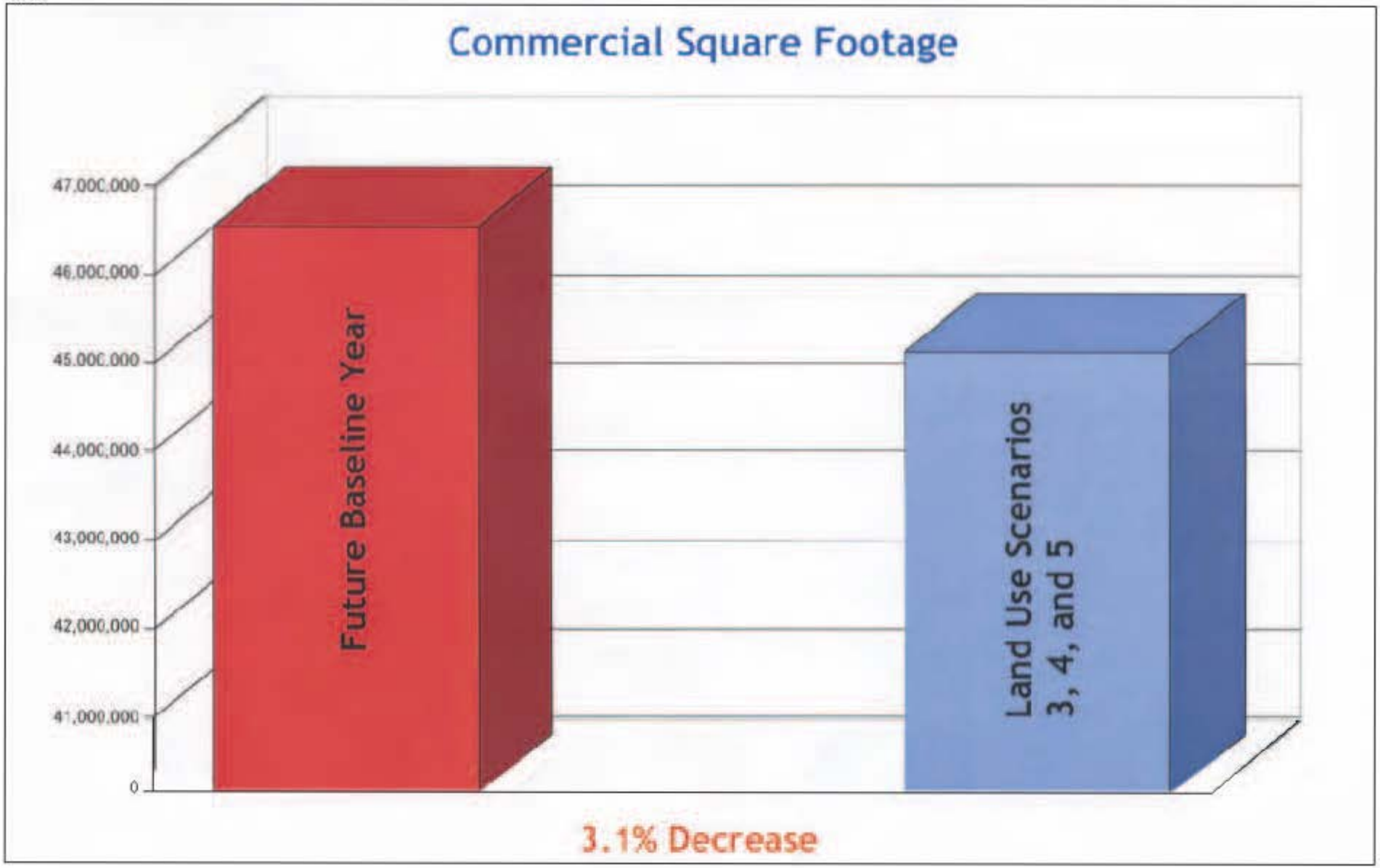

Figure 3-8
Commercial Square Footage

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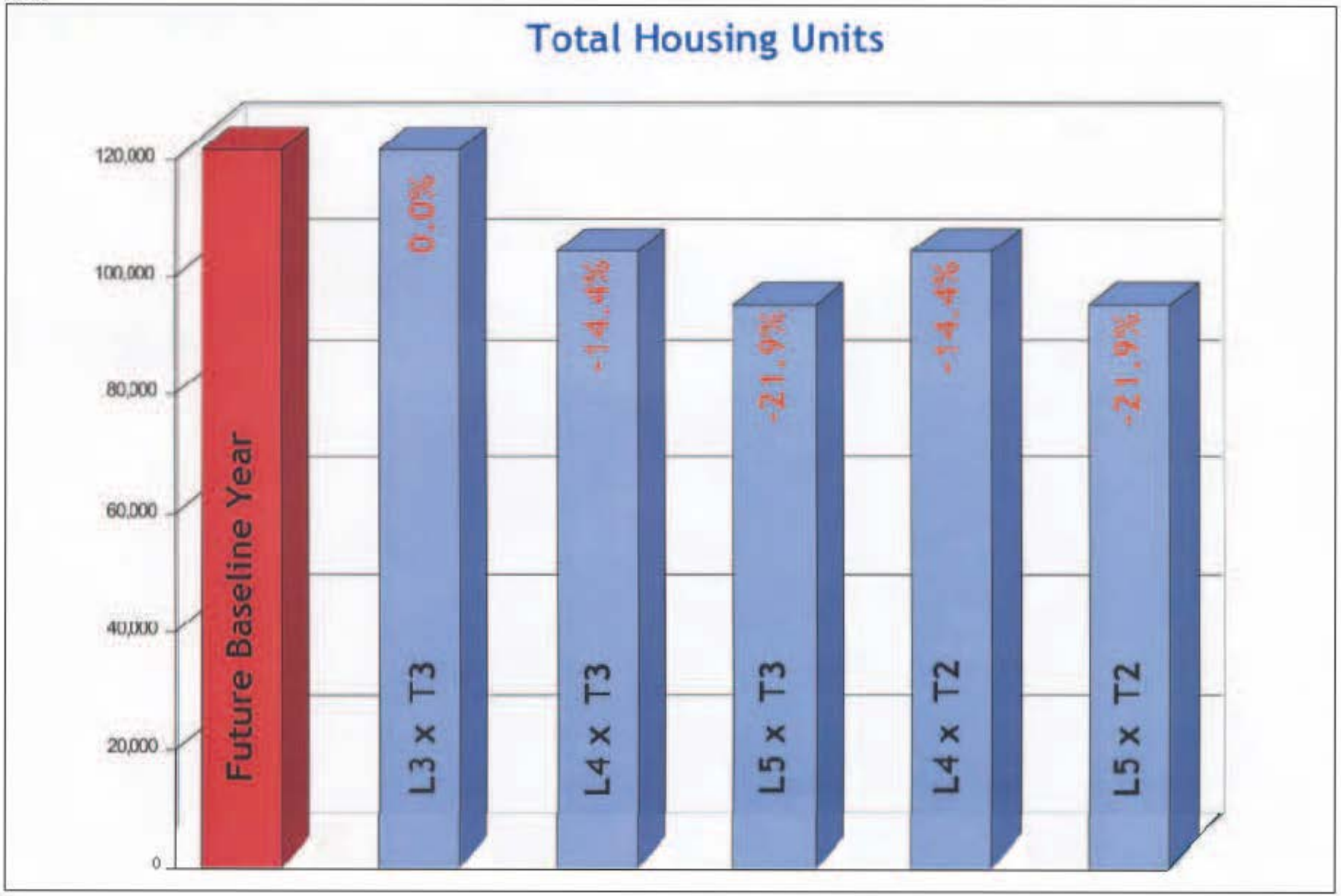

Figure 3-9
Total Housing Units

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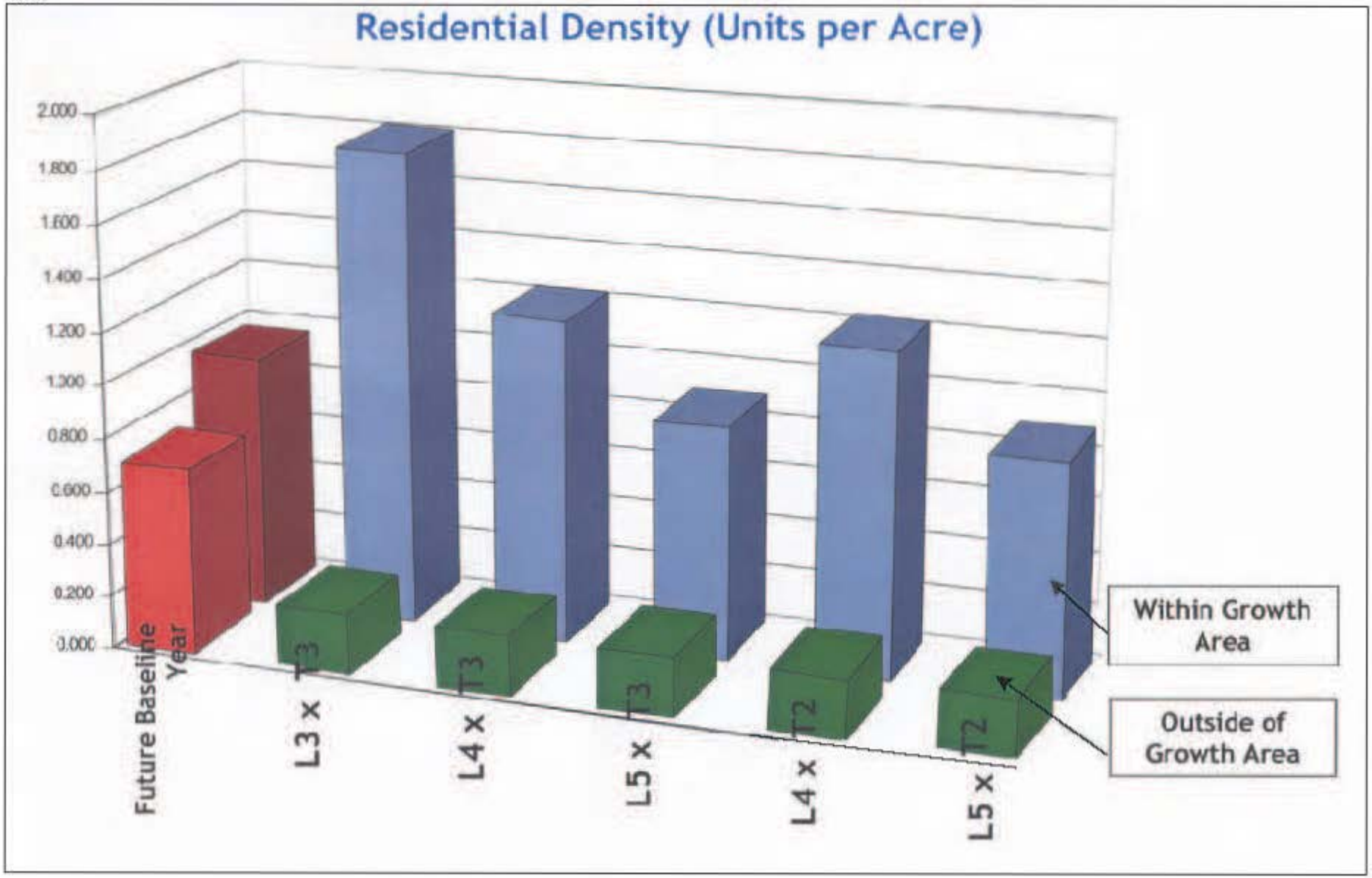

Figure 3-10
Residential Density (Units per Acre)

A. INTRODUCTION

The public outreach process used in SEEDS was one of the most critical components of the initiative and was used to an unprecedented level to formulate future scenarios and guide the progress of the project. The format of the project as a sustainable development study relied on this approach to establish consensus and achieve the goals and objectives of SEEDS. This section describes the public outreach effort undertaken for SEEDS, including the important players and participants, the organizational structure, the various committees and subcommittees, and the project website. Also included is a detailed summary of the SEEDS meeting schedule and an overview of the extensive organization, planning, and implementation of various planning and technical workshops and visioning sessions that were instrumental in gathering vital public input.

SEEDS PARTICIPANTS

The SEEDS public outreach process began with a press conference and a kickoff meeting with the EETC on April 20, 2001. This was followed by a continuous schedule of public workshops and stakeholder meetings over a five-year period. The EETC served as the SEEDS Steering Committee and met monthly throughout the effort. In addition, as summarized below there have been several core participants in the project that made this a true collaborative and team approach.

SEEDS COORDINATOR

A SEEDS Project Coordinator was chosen to assist the Steering Committee by acting as a liaison between the organizational elements of the initiative, including the EETC, the Steering Committee, the Supervisors & Mayor's Association (EESMA), the Community Stakeholders Committee (CSC), the consultant team, and the public at large. The primary duty of the Project Coordinator was to facilitate discussions between the elected officials of the EESMA and the EETC (the research and technical arm of the EESMA) to ensure their understanding of the consensus-building process. Throughout the project, the Project Coordinator assisted the consulting team in promoting public meetings, organizing and facilitating media plans, writing minutes and summaries of various meetings, and coordinating with the subcommittees of the CSC.

COMMUNITY STAKEHOLDERS COMMITTEE

One of the first tasks in the SEEDS process was to form the SEEDS CSC to serve as the public voice of the project as well as an advisory board to the SEEDS Steering Committee. Comprising private citizens who live and work in the area, including local business owners, elected officials, professionals, and concerned residents of the East End, the CSC is the public arm of SEEDS. During the project, a Stakeholder Oversight Committee (SOC) was established to provide more

coordination between the CSC, the Steering Committee, and the consultant team. The SOC assisted in preparing public outreach material and presentations, and their support was valuable and appreciated.

The CSC advised the Steering Committee on certain specific tasks required to carry out the project. The CSC was responsible for the following tasks:

- Synthesizing the ideas and concerns expressed by residents during SEEDS planning workshops and technical sessions.
- Assisting the Steering Committee and consultants in preparing the planning workshops to envision alternative growth and transportation scenarios in each town.
- Attending and participating in public workshops.
- Refining the specific short-term and long-term strategies that would be needed to implement scenarios and work toward consensus in the region regarding sustainable development policies and compatible transportation systems.

In the organizational stage of the SEEDS process, letters were sent to the towns and villages of the East End announcing the commencement of the initiative and inviting people to get involved in the project. New members were added to the CSC sign-up list at subsequent planning sessions and workshops that were held throughout the project. Each member was informed about upcoming SEEDS meeting via letters and e-mail. For most of the project, the CSC met monthly at different venues throughout the East End.

PROJECT WEBSITE

The SEEDS project website (*www.seedsproject.com*), opened in November 2001, gave the project an easily accessible presence and provided interested parties with a wealth of information concerning the East End and SEEDS. Managed, maintained, and regularly updated by AKRF, the site featured background information about the project; up-to-date listings of meetings; research documents, such as the *Inventory and Analysis* report and the sustainable development white papers; the community stakeholders list; workshop summaries and presentations; and links to other related sustainable development studies and websites. More importantly, the website featured an interactive element, a user forum, which allowed people to join discussions online concerning SEEDS or other planning issues. The web site also allowed for participation in a "virtual" planning workshop, where participants could respond online to various SEEDS issues.

The SEEDS project website proved to be an invaluable and cost-efficient way of dispensing critical information and materials, such as presentations from CSC meetings and technical sessions. Planning related articles on sustainable development were posted to the website. In addition, the summaries of raw comments from each visioning session and planning workshop were helpful in informing members of the public who were interested in joining SEEDS throughout the duration of the project.

B. PUBLIC PARTICIPATION MILESTONES

In order for SEEDS to best represent the views of its participants on land use and transportation strategies, the project team placed critical importance on maximizing public input. The effort to accomplish these goals required an effective and comprehensive program of public planning meetings designed to maintain a "continuum of intensity" throughout the process. To that end, SEEDS organized many meetings over the first two years of the project, starting in the summer

of 2001 and extending through the fall of 2003, including preliminary visioning sessions, a "Planning 101" workshop, and SEEDS regional planning workshops. The following section recaps these events; details how each was organized, planned, and facilitated; and describes which action items and outcomes were garnered from the process.

EAST END VISIONING SESSIONS (2001)

Shortly after the CSC was formed, the SEEDS team organized a preliminary set of public meetings, known as the East End visioning sessions. These were held throughout the SEEDS region. Designed as the starting point for the public participation program, the visioning sessions proved to be veritable community brainstorming sessions fostering continuity and encouraging cogent discussions of relevant SEEDS issues. Each session contained the following six steps:

- *Step 1*—Participants identified the most pressing or "top of mind" planning-related issues, such as transportation and development, in their respective communities.
- *Step 2*—Facilitators solicited ideas, concerns, and recommendations from participants using the strengths, weaknesses, opportunities, and threats (SWOT) approach.
- *Step 3*—Facilitators presented key threats and trends relative to the East End that the EETC identified through initial research. Using data drawn from the Suffolk County Planning Department, NYMTC, and census material, the facilitator along with each Town's planning representative walked participants through a projection of the East End landscape in 20 years. Participants were then asked to identify and describe key trends and developments that the SEEDS initiative needs to address.
- *Step 4*—The participants defined their vision of success for the region in terms of transportation system improvements and provided a framework of long-term goals and objectives.
- *Step 5*—Participants were asked to define the term "sustainable development" and how they felt it applied to their particular community.
- *Step 6*—At the end of each session, participants were asked to geographically locate and illustrate specific planning concerns on local area maps of the SEEDS region. This exercise provided additional recommendations on transportation and land use issues.

From the visioning sessions, the SEEDS team was able to identify a number of predominant themes and patterns of ideas, which would be repeated throughout the public participation program at subsequent regional planning workshops. The sessions provided the SEEDS team with its first opportunity to gauge which issues elicited discord and consensus within the SEEDS community. The literal transcripts of comments made by participants for each applicable exercise at each session are included in **Appendix II**.

VISIONING SESSIONS OVERVIEW

Generally, participants expressed concern that the goals and objectives of SEEDS needed to be defined. Participants also indicated that communities needed to control the residential and commercial growth in the region and that they hoped through SEEDS they could influence development patterns across both forks. Following is a brief breakdown of the main points discussed at the visioning sessions by category.

Transportation Issues

Participants spoke of the need for improved inter-hamlet connections with an emphasis on increasing the use of public transit while decreasing automobile dependency. The participants generally shared an inherent understanding that tailoring a public transportation system to a relatively sparse population such as the East End posed many challenges and limitations.

Each session offered numerous solutions on how to link the transportation network in the East End. The concept of establishing transportation hubs was mentioned at virtually every session. In addition, participants identified alternatives to private automobile use in addition to infrastructure changes, such as increasing road capacity and bypasses. Diverse types of transit, including waterborne, the coordination of existing services, and increase in number and frequency of trains and buses in particular were commonly mentioned.

Traffic

In terms of traffic conditions in the East End, one thing was clear at the visioning sessions: the traffic and congestion that has become so common in the SEEDS communities has fostered a general feeling that the quality of life that attracted residents to the area was quickly disappearing. Despite the changes in quality of life, however, there was an expressed sense of realism from the participants about East End traffic. Many residents believe that they could conceivably gain control of it through the success of sustainable projects such as SEEDS.

The visioning session revealed that traffic congestion is clearly a major issue on the South Fork and in many ways appears to be a defining element of life in that area. Residents seem to think that conditions in the North Fork are not far behind. Many participants point out that the reality of more cars and trucks on the roads is evidence of a pervasive sociological and cultural shift in the region. People expressed a sense of nostalgia for when there were fewer houses, fewer people owning second homes, and fewer cars on the road. Despite these changes, the sessions revealed a fairly unified sense that congestion and traffic should be addressed using a range of sustainable tools and approaches and that no one solution exists.

Land Use

The land use issues discussed by the participants overwhelmingly leaned toward sustainable strategies, which emphasized maintaining village and hamlet centers and increasing pedestrian and bicycle access. Participants generally expressed the need for containment of commercial and residential development and that East End communities should be walkable and bikeable.

Development

With the exception of the Town of Riverhead, participants indicated a strong opposition to the continued increase in residential, commercial, or retail development within the primary corridors of the study area. In contrast, Riverhead participants expressed mixed views regarding commercial development. Some people cited the benefits of big-box stores as attractive and convenient places in which to shop, while others favored a more smart growth-oriented approach to development that focused on improved pedestrian access and farmland protection.

Highway Bypass and Ferries

Input from the visioning sessions indicated a significant discord surrounding at least two major capacity improvements that surfaced throughout the SEEDS process, both of which have been

controversial historically: a "bypass" highway on the South Fork and new vehicular ferry service that would connect Connecticut to East Hampton.

Affordable Housing

The lack of affordable housing was identified by a majority of visioning session participants as a significant issue for SEEDS to address. The high value of land and housing in a strong seasonal market combined with limited housing options results in local year-round residents being priced out of reasonable housing and pushed workers and services out of the area, forcing them to live elsewhere and to commute to their East End jobs. Every town and village forum identified the daily movement of employees and services from west to east—from western Suffolk County and even Nassau to the North and South Forks as a major transportation problem. On the South Fork, this phenomenon has been named the "trade parade." The lack of reasonably priced houses or rental units is linked as well to the sense of a loss of community, insofar as residents who were born in the area can no longer afford to live there as they grow older. Participants spoke of losing the generational links that create the very fabric of community partly as a result of the lack of affordable housing.

The Next Step

Over the next several months following the visioning sessions, members of the consulting team compiled the recorded comments and completed a summary that was accepted by the EETC and posted on the SEEDS website. The input from the visioning sessions proved to be instrumental in setting up the categories and themes discussed at the regional planning workshops and in developing the land use and transportation scenarios.

PLANNING 101 WORKSHOP (2002)

By January 2002, the SEEDS team and the CSC focused efforts on the upcoming charrettes or regional planning workshops scheduled to begin in March. At this time, members of the CSC and the EETC expressed interest in a preparatory—or "Planning 101"—session to familiarize future workshop participants with certain planning terms and concepts that would be discussed during the workshops. The Planning 101 workshop was held in Flanders on February 28, 2002, and attended by approximately 30 people. Much of the workshop focused on such topics as the inter-relationship between land use and transportation, the influence of land use and development patterns on travel behavior and modes, and the role of the public in the planning process. The session also featured an overview of general planning concepts, such as cluster development, smart growth, and the elements of sprawl.

REGIONAL PLANNING WORKSHOPS (2002)

After several months of planning and coordinating by both the consultant team and the CSC, the SEEDS regional planning workshops were held during March and April 2002 in all five towns in the SEEDS study area. Because of a poor turnout at the Riverhead workshop, the EETC decided to add an additional workshop in the Calverton area of Riverhead in June 2002. This is discussed later in this section.

The workshops were the most crucial component of the SEEDS public participation program. The input from the over 200 people who attended the six initial workshops led directly to the next important step in the progress of SEEDS: the land use and transportation scenario development, testing, and modeling tasks.

Similar in organizational format to the visioning sessions, the workshops were facilitated and recorded by members of the consulting team and divided into two approximately 90-minute land use and transportation sessions. The participants were broken up into smaller groups of six to eight persons, and one person was asked by the facilitator to be the team leader. Participants were encouraged to use the land use, zoning, and transportation network maps that were placed at each table to illustrate ideas and strategies. At the conclusion of each session, the leaders presented their respective team's main ideas and strategies in front of the entire group. Workshop participants were reminded throughout the process by the facilitators that they were not expected to solve problems but rather suggest a plausible range of possible solutions that could then be evaluated and eventually modeled.

The input culled from the workshops proved to be consistent with that of the visioning sessions, albeit more centered on regional than localized issues (see **Appendix IV**, "Complete Comments Planning Workshops"). As the keystone to the SEEDS public participation program, the workshops gave participants the opportunity to offer strategies designed to mitigate congestion, improve public transit service and facilities, and change driving habits. In terms of land use, participants addressed a wide array of issues, including open space and agricultural land preservation, growth management, zoning, and affordable housing. The following is a brief summary of the primary ideas and strategies discussed by the workshop participants.

TRAFFIC AND TRANSPORTATION

The planning sessions revealed that many people believe that the cars second homeowners brought into the area posed a substantial source of additional traffic. The majority of residents feel this traffic is exacerbated by the "trade parade," which was mentioned in the visioning sessions. In general, participants did not consider capital improvements, such as building new roads or road widening measures, as an antidote to traffic congestion. Instead, participants identified such alternatives as public transit and bicycles as more sustainable solutions.

The Southampton session indicated the need for a park-and-ride system throughout the area, and several locations for such facilities were identified. In other sessions, some participants recommended implementing a toll on Route 27 at Shinnecock Canal to discourage drivers.

In the North Fork, there was a considerable amount of focus on Riverhead as the primary location for a variety of transportation facilities, including an intermodal transportation hub and parking facilities with access to a shuttle bus system through the fork. Opinions were mixed on the idea of using a modern roundabout as a means to calm traffic.

A common traffic strategy mentioned throughout the workshops involved sequencing lights throughout the East End, especially on the South Fork during the summer, to break up traffic bottlenecks. Participants at the Southampton session identified CR 39 as a possible target for both traffic calming measures and rezoning to reduce residential and commercial development and congestion. Other scenarios for CR 39 included: increasing the road to four lanes, one of which would serve as a merge lane for commercial vehicles; eliminating curb cuts for coordinated access; and constructing a landscaped island and bike path.

Other strategies described at the workshops included:

- adding valet parking in East End downtown areas;
- shifting freight toward trains rather than trucks;
- constructing underground parking facilities;

- creating parking facility at the Southampton landfill; and
- increasing water taxi service.

Public Transportation

Public transportation—namely, the LIRR service and the Suffolk County Bus Transit service—dominated the planning workshop discussions. Each session revealed the need for expanded and more frequent train and bus service. Many of the communities feel underserved by the LIRR and Suffolk County transit operations. Participants also expressed the need for improved facilities, such as more visible bus stop locations and more convenient and accessible bus and train schedules. South Fork participants in particular expressed the need for an intra-hamlet light-rail service.

Several communities suggested that trains heading toward the East End should be electrified to increase train speed and improve service. The workshops revealed that a certain stigma exists regarding the use of public transit. Throughout the proceedings, it was evident that many people felt that if public transit (specifically the S92 bus) was made more "attractive" through improvements to the line, facilities, and service, many more people would use it. In virtually every session, participants suggested that the LIRR synchronize the train schedules to correspond with commute patterns (including the reverse peak flows associated with the trade parade). The following is list of additional strategies mentioned during the public transportation discussions:

- Create transportation hubs in Greenport and Riverhead.
- Greenport hub could support train and bus routes to connect to Orient, the Tanger Shopping Center, MacArthur Airport, and the South Fork.
- Synchronize railroad schedule to coincide with ferry connections at Greenport and Orient.
- Use Ronkonkoma as a transportation hub primarily for buses.
- Bus service should run later than 6 PM.
- LIRR should promote and advertise service to increase ridership on the East End.
- Bus schedules (e.g., S92 route) should be coordinated with ferry schedule on the North Fork.
- Increase the frequency of service for the S92.
- Construct railroad station at Tanger Shopping Center in Riverhead.
- Eliminate tracks from Montauk to Speonk and use right-of-way for other transportation purposes.
- Increase the use of railroad for freight.
- Bus from Greenport to Riverhead should leave every hour.
- Establish a shuttle bus system for all beaches and shuttle to and from clubs in Southampton.
- Provide incentives, such as coupons, to encourage use of shuttle for wineries.
- Improve parking at train stations.
- Establish a commuter train for workers from Patchogue to Montauk.
- Establish a beach shuttle along Noyack Road, Flying Point Road, and Coopers Farm Road in East Hampton.
- Bypass Route 27 by constructing a road from Bridgehampton to Amagansett.

- Establish a transportation hub at East Hampton Airport with parking and a commercial zone.
- Expand train service with second track for local service.
- Establish a free shuttle service possibly subsidized by businesses, such as hotels.
- Open an inter-hamlet jitney at $1.50 per customer.

Ferries

The discussion of ferry-related issues was the most polarizing subject at the regional planning sessions. Residents of Shelter Island appear to be chiefly concerned with two issues: ferry commuters from New England and western Long Island passing through the island on the way to the South Fork and congestion at the ferry terminals themselves. Many of the responses from that community's workshop involved establishing a ferry service from New London, Conn., directly to East Hampton and the rest of the South Fork, as well as a dedicated shuttle bus service from Greenport to Orient.

Additional suggested (and often contradictory) strategies regarding ferries included:

- directing Napeague ferry traffic in an eastward direction rather than through Route 114;
- opening an additional ferry terminal west of Orient;
- re-establishing the Manhattan to East End ferry service;
- creating incentives in East Hampton and Connecticut for the construction of additional ferry terminals;
- ferry from Connecticut should travel directly to East Hampton;
- ferry needed from Greenport to South Fork;
- limiting through traffic on Shelter Island by coordinating equal numbers of vehicles at both ferry ramps;
- extending LIE to both forks to discourage passage through Shelter Island;
- constructing bridges from Greenport to Shelter Island and Shelter Island to North Haven;
- decreasing capacity of ferries; and
- constructing ferry terminal at Shoreham and Wading River.

Bicycles

Issues such as bicycle access, safety, and bike lanes/paths were discussed frequently in the planning workshops. In fact, based on feedback from several of the workshops (most notably the Spanish-language workshops, NYSDOT organized a bike safety event and distributed free helmets and reflective vests for bike riders. The prevailing attitude is that the East End is not a safe place to ride bicycles even though a substantial segment of the population would prefer to use bicycles more often. Many participants expressed the need for bike paths and lanes to increase the safety for both motorists and bicyclists alike. The workshops revealed that residents feel several changes are needed to increase bicycle rider safety and accessibility, including: bans on vehicles in certain areas, inclusion of bike lanes, such as the ones in North Haven, and bike paths along railroad lines. Some other strategies for bicycles include:

- widening roads to accommodate bike lanes, e.g., Long Lane and Cedar in East Hampton;
- exploring the idea of setting up "bike hostels," which are popular in Europe;
- designating bike paths on roads using clear pavement markings;

- using bike routes and lanes (similar to what exists in North Haven) with rumble strips and reflectors;
- enforcing speeding and bicycle regulations;
- towns purchasing and providing bicycles for public use;
- towns providing color-coded bikes for people to use near shopping centers;
- widening bike paths along railroad tracks;
- designing bike lanes during construction and repaving of roads in Southampton; and
- requiring bicycle racks on buses and shuttles as well as allowing bicycles on trains.

LAND USE

A wide array of ideas was covered in the land use section of the planning workshops. Participants identified such issues as the transfer of development rights to manage residential development and preserve farmland, increasing the availability of affordable housing, and increasing the densities in commercial hamlets and centers as a sustainable alternative to less dense development patterns.

Affordable Housing

Affordable housing was one of the most commonly identified issues during the planning workshops. Participants regard the lack of affordable housing as the major link between both transportation and land use problems. Similar to the visioning sessions, the general consensus at the workshops is that the high cost of living and housing has forced workers out of the East End, exacerbating the trade parade traffic. Participants also felt that most children of East End residents cannot afford to purchase homes in the area, a condition that contributes to a homogenization of the population. Many people fear that in 10 to 20 years, the East End will be an area where only wealthy elderly people can afford to live.

The following is a list of additional land use strategies suggested during the workshops:

- Cluster affordable housing in mixed-use areas near public transportation facilities.
- Use average lot size as opposed to minimum lot size to promote mixed-income hamlets.
- Encourage government subsidies to help people rent or purchase homes.
- Create commercial districts with second-floor apartments and townhouses.
- Lease spaces in semi-vacant homes as apartments.
- Rent spaces in homes to increase supply and lower prices.
- Acquire substandard housing lots and apply TDRs to these areas.
- Exempt affordable housing from building permit caps.
- Increase availability of affordable housing in East Hampton areas of Barnes Hole, Napeague Harbor, Fort Pond Bay, Ditch Plains, and Stepping Stones Pond.

Residential and Commercial Development

The land use category concentrated primarily on promoting residential and commercial development in areas that are already established rather than using vacant or farmland for new construction. Many participants promoted the expansion of mixed-use, higher-density development in hamlet centers, including using apartments above stores, increasing the amount

of stories on commercial buildings, reusing buildings, and rezoning residential areas for commercial use to preserve open space and manage growth. Many groups at the sessions used the maps to identify areas throughout the study area where densities could be increased to supplement the existing housing stock. Other participants offered suggestions on creating secondary regional shopping hubs that would help eliminate traffic, particularly on the South Fork.

TDR figured prominently throughout the workshops as the best way to preserve open space and farmland. Many people felt, however, that farmers are not fairly served by existing TDR regulations. Participants in East Hampton offered a number of possible TDR sending and receiving locations. With its high percentage of farms, open space, and trailer parks, Riverhead participants felt that other East End communities considered the town to be the "affordable housing capital" of the region. These participants were also reluctant to treat upzoning as a way to preserve farmland because they believe it lowers property value. Route 58, according to participants, could become an important commercial corridor and a primary receiver of TDRs in Riverhead.

Public input at the workshops revealed the general feeling that development should be determined by the limitations of the natural water resources and that East End communities are willing to pay extra taxes to preserve land and limit development. Participants mentioned increasing the Community Preservation Fund tax as possible strategy. Other miscellaneous land use scenarios included:

- establishing a town-wide school district reassessment that includes Gardiner's Island in East Hampton in order to lower taxes and provide more affordable housing;
- increasing amount of recreational fields and ballparks throughout the East End;
- limiting the size of housing to 3,000 square feet;
- upzoning 2 to 5 acres to control growth and development;
- converting second homes to year-round residences to increase municipal income;
- using the Petaluma, Calif., plan to cap the number of building permits based on environmental criteria; establish covenants in deeds to promote affordable housing, limit building permit approvals to one day per year;
- developing 80 acres in Wainscott, East Hampton, as a hamlet center; and
- scattering affordable housing opportunities, not concentrating them in one area.

Spanish-Language Planning Workshop

During the spring of 2002, members of the EETC expressed the need for SEEDS to communicate with the region's Spanish-speaking community as part of the project's community outreach component. As a result, the SEEDS consultant team organized and facilitated five regional Spanish-language planning sessions throughout the East End in the early summer 2002 in the towns and villages of Greenport, Southampton, Hampton Bays, Riverhead, and Montauk. The workshops were promoted by various church groups and facilitated by bilingual speakers from the consulting team and NYMTC. A summary of the sessions is included in **Appendices III** and **VI**.

In general, participants at the Spanish-language planning workshops echoed similar concerns as those of the visioning sessions and regional workshops. The availability and service of public transportation, primarily the S-92 bus, was noted as a primary concern. Many participants do not

own cars and rely on public transportation for virtually all of their needs. In general, participants felt that the S-92 bus was inefficient and limited in accommodating the schedules of the average worker. Consistent with views expressed at the regional planning workshops, participants at the Spanish sessions who did own cars felt that if more reasonable transit options were available, more people would be willing to take public transit.

The availability of affordable housing was another issue raised at the sessions. Participants felt that since housing was prohibitively expensive, many people were forced to endure perceived arbitrary rent increases for having additional people living in their units. Others mentioned their dependence on cars because they cannot afford to live in a village center or within close proximity to public transit or the MTA LIRR.

Unfortunately, the Spanish sessions revealed that many residents perceive a general feeling that they are not welcome in the area. As evidence, many people mentioned being treated rudely by bus drivers and that bus and train schedules were not written in Spanish.

Calverton Workshop

Some members of the EETC were concerned that the poor turnout at the Riverhead planning workshop did not adequately elicit public input from the town. As a result, an additional workshop was held in June 2002 focusing on the planning issues associated with the Calverton Enterprise Park development, on the former site of the Naval Weapons Industrial Reserve Plant leased to the Grumman Corporation in the southwestern area of the town. The results of the Calverton workshop were included in the overall summary of the regional planning workshops.

SCENARIO MODELING AND EVALUATION (2003 AND 2004)

From 2003 through 2004, the SEEDS project actively engaged the CSC and the public at large to participate in developing the scenarios examined in the East End Travel Demand Model. Several public meetings were held to establish the parameters and definitions of the SEEDS matrix and, in turn, to reach consensus on the definitions associated with the various land use and transportation scenarios. Once these were defined, subsequent meetings were used to reach consensus on modeling assumptions, including land use variables (new patterns and densities) and the specific transportation elements to be modeled.

Once accomplished and during the period when the East End model was in its final design and calibration stage, the SEEDS Steering Committee and the public were asked to create a systematic approach to defining the performance measures and evaluation criteria to compare and assess the appropriateness and impact of land use and transportation scenarios.

As described in the methodology overview, this process culminated with SEEDS participants reviewing, comparing, and scoring the various scenarios. Through a series of workshops with the CSC and the innovative use of a web-based scoring tool, the public participation process yielded a clear directive in terms of the highest-ranking scenario combinations

CONSENSUS-BUILDING WORKSHOPS (2005)

With the five targeted scenario combinations in hand, the next stage of the SEEDS public outreach program began in earnest. The major challenge in this next step was how to bring the findings back to the public at large without starting over. Several participants would be joining the SEEDS project for the first time while many others were experienced participants looking to see how their hard work had paid off.

This was accomplished during the first two weeks of May 2005, when SEEDS conducted and completed 10 public workshops in the five East End Towns (see **Appendix III.E** for the workshop presentation and a summary of all of the comments made at the 10 workshops). There was extensive effort to advertise these workshops using several media platforms, including newspaper, radio, TV, and even temporary variable message signs supplied by the NYSDOT that were placed along major corridors to notify residents about the time and place of each meeting. The workshops successfully involved over 200 public participants, ranging from first-time contributors and dedicated volunteers to municipal policy makers and elected officials.

The workshops first reviewed the results of computer simulation modeling of alternative future land use and transportation scenarios developed through SEEDS as a step toward building consensus on a preferred future scenario. At the completion of the presentation, two different workshop formats were used. The first format was the technical session, which outlined all of the modeling results in great detail. The second portion of the workshop provided a detailed look at all of the elements incorporated in each of the five targeted scenarios. Each scenario element was designated as a line item or facilitated discussion point. As each point was discussed, the audience was asked to participate in a consensus-building process designed to determine whether or not each particular item should be incorporated as the final scenario(s). All comments and consensus were recorded at each session.

Workshop participants generally supported land use scenarios that reduce the future development potential and focus it in and around hamlet centers. They also supported elements of the transportation scenarios that improve transit services, particularly in the hamlet centers. However, there was no agreement among the participants about specific elements of these scenarios, such as the level of density in future hamlet centers, the level of reduction from the future build-out scenario, and the development of new ferry services.

Overall, the effectiveness of the matrix, the presentation format, and the scoring tool in focusing and guiding discussion helped create a successful forum for public participation in these final workshops. After all the comments were collected, a final scenario(s) was easy to recognize and was used to perform the second round of modeling. This consolidation into a final scenario represents a summary statement of the recommended regional planning strategies developed through the SEEDS process and presented to a regional assembly of SEEDS participants.

REGIONAL SUMMIT (DECEMBER 2005)

The final scenarios presented in Section 2, "Summary of the SEEDS Concept Plan," were drafted based on the public outreach described above and they represent the proposed sustainable development strategy for the region. This final version of the SEEDS Concept Plan was presented on December 8, 2005, in a broad "summit" with elected and planning officials from East End municipalities, Suffolk County, LIRR, New York State agencies, and other elected officials. The presentation highlighted the results of the analysis, framed by the performance measures, and indicated critical choices and implementation strategies to be made by all SEEDS participants. The summit served as the first step to the implementation of SEEDS, in the hope that the municipalities will join together in an inter-municipal agreement to work toward the preferred land use future, while the transportation agencies will work toward securing federal and state funding to implement the transportation improvements. Implementation will be challenging, but the existence of a consensus-based plan for the future will be a significant advantage in moving the recommendations forward.