

EASTWARD HO!  
DEVELOPMENT FUTURES:  
PATHS TO MORE  
EFFICIENT GROWTH IN  
SOUTHEAST FLORIDA

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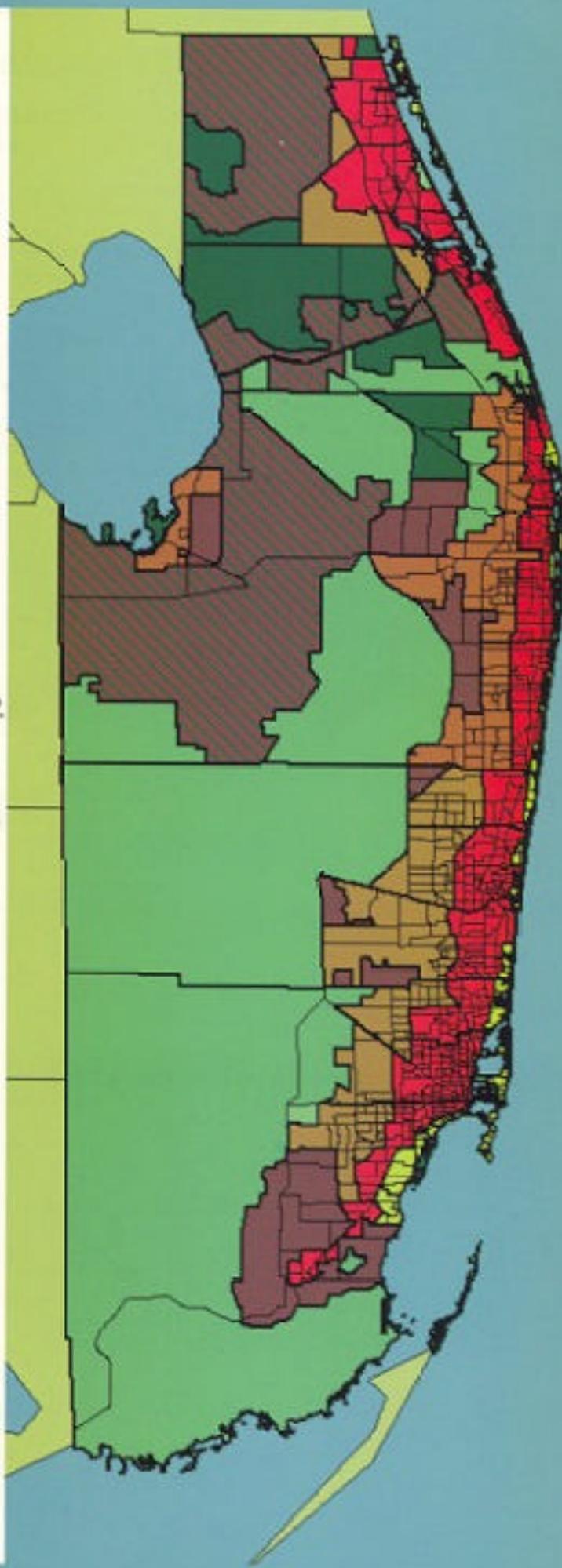
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## EXECUTIVE SUMMARY: STUDY FINDINGS

### SCOPE AND PURPOSE OF STUDY

The U.S. Environmental Protection Agency and the State of Florida Department of Community Affairs commissioned the *Development Futures* study to evaluate alternative development scenarios in and around the Eastward Ho! corridor in five counties of Southeast Florida. Although 46 percent of the region's households currently reside within Southeast Florida's Eastward Ho! areas (primarily developed lands bounded by I-95/Florida Turnpike and Route 1 from St. Lucie County to Miami-Dade County), many new residents are settling outside it. If this trend continues, nearly 70 percent of these areas' future households will choose to reside outside Eastward Ho! areas during the period 1995 to 2020, creating severe impacts on environmental ecosystems and public expenditures for infrastructure.

The study, which will be summarized here and covered in detail throughout the rest of the report, was conducted by the Rutgers University Center for Urban Policy Research (CUPR) during 1998. The study compares the resource consumption and costs of extending two different development patterns into the future. The first is *Existing* development or sprawl, which includes unlimited outward extension, leapfrog development, and low density. The second is *Alternative* or compact development, which holds a portion of development close to previously developed areas, and emphasizes infill and redevelopment usually at a higher density. These costs are viewed in four different substantive areas: (1) land

consumption; (2) public infrastructure (roads, sewer and water lines); (3) housing costs; and (4) fiscal impacts. Five counties, subdivided into seven to 14 jurisdictions each, are analyzed to determine whether differences in costs result if different future development patterns are pursued.

### STUDY AREAS

The Eastward Ho! study area was originally divided into two areas. The southern part included:

a corridor of land between Southeast Florida's two railroads, the FEC and CSX, beginning in southern Dade County and traveling to north-central Palm Beach County, including major seaports, airports, and downtowns. (South Florida Regional Planning Council and Treasure Coast Regional Planning Council 1996)

The northern part covered:

the lands lying east to U.S. 1 and west to the Palmetto Expressway, the Florida Turnpike, State Road 7, and Military Trail. (South Florida Regional Planning Council and Treasure Coast Regional Planning Council 1996)

After the original designation by the South Florida Regional Planning Council, the Eastward Ho! area was expanded southward to Florida City in Miami-Dade County and northward to include the balance of Palm Beach, Martin, and St. Lucie counties, approximating the area between Route 1 and I-95/Florida Turnpike. For purposes

of simplifying data gathering, the original boundaries of the study area were drawn to coincide with Southeast Florida census tract boundaries. These were further modified to meet the analytical needs of county, regional, and state planners.

Figure 1 shows the modified Eastward Ho! corridor study areas, which currently include Miami-Dade, Broward, Palm Beach, Martin, and St. Lucie counties.

**GROWTH IN SOUTHEAST FLORIDA’S COUNTIES**

Southeast Florida will grow by about 2.4 million people over the 25-year period 1995 to 2020. This will include a growth of over 853,036 households and approximately 1.03 million jobs (Table S-1). This amounts to about 4 percent of the nation’s population and household growth and 2.5 percent of the nation’s employment growth over the period. *The five counties of Southeast Florida will grow faster than 28 states of the United States in population and faster than 34 states in employment.*

percent in Palm Beach County, 20 percent in Broward County, 5 percent in St. Lucie County, and 3 percent in Martin County. With regard to employment growth, the distribution will be significantly different, yet more equal between the larger and the smaller counties. One-third of overall employment growth will take place in Miami-Dade County, 31 percent in Palm Beach County, and 28 percent in Broward County; 4 percent will take place in both St. Lucie and Martin counties.

Numerically in household growth (Table S-1), over the period 1995 to 2020, Miami-Dade County will grow by 369,614 households, Palm Beach County by 220,773, Broward County by 182,134, St. Lucie County by 51,413, and Martin County by 29,102. Numerically in employment, Miami-Dade County will grow by 338,795 jobs, Palm Beach County will grow by 316,895, Broward County by 290,199, St. Lucie County by 42,809, and Martin County by 38,036.

**Table S-1**

Growth in Population, Households and Employment Entire County Growth 1995-2020			
County	Population Growth	Household Growth	Employment Growth
Miami-Dade	1,223,652	369,614	338,795
Broward	452,220	182,134	290,199
Palm Beach	514,401	220,773	316,895
Martin	64,415	29,102	38,036
St. Lucie	114,644	51,413	42,809
<b>Southeast Florida</b>	<b>2,369,332</b>	<b>853,036</b>	<b>1,026,734</b>

Source: See Tables II-I, II-K, II-M, II-O, and II-P.

The distribution of this growth will be disproportionate, however, among the five counties. About one-half of the population and household growth will take place in Miami-Dade County, 22

Growth will also be disproportionate among counties in the Eastward Ho! areas of the five Southeast Florida counties.

Under the Existing development future (Table S-2), 73 percent of the household growth and 86 percent of employment growth in the Eastward Ho! areas will take place in the southern Miami-Dade, Broward, and Palm Beach counties. The two northern counties will exhibit about 27 percent of the household growth and 14 percent of the employment growth in

he Eastward Ho! areas of the five Southeast Florida counties.

**Table S-2**

Growth in Households Solely Eastward Ho! Areas 1995-2020		
County	Existing	Alternative
Miami-Dade	101,300	185,896
Broward	35,676	76,457
Palm Beach	47,885	118,387
Martin	19,088	25,778
St. Lucie	48,935	50,536
<b>Southeast Florida</b>	<b>252,884</b>	<b>457,054</b>

Source: See Table II-U.

Not only is there a difference between growth in Eastward Ho! areas in the southern and northern portions of Southeast Florida, there is also a significant difference in growth in these areas under the two development scenarios. Under Existing development the Eastward Ho! areas would grow by 252,884 households and 499,222 jobs (Tables S-2 and S-3). Under Alternative development the Eastward Ho! areas would grow by 457,054 households and 694,968 jobs. This translates to an increase of about 200,000 households and jobs in Eastward Ho! areas attributable to Alternative development.

**Table S-3**

Growth in Employment Solely Eastward Ho! Areas 1995-2020		
County	Existing	Alternative
Miami-Dade	145,340	215,274
Broward	138,787	191,781
Palm Beach	145,451	208,759
Martin	31,272	37,445
St. Lucie	38,372	41,709
<b>Southeast Florida</b>	<b>499,222</b>	<b>694,968</b>

Source: See Table II-V.

Alternative development steers both household and employment growth away from non-Eastward Ho! areas in the five counties to Eastward Ho! areas in these

same counties. This significantly increases future development markets and tax bases of the Eastward Ho! areas.

**THE RESULTS<sup>1</sup> OF THE ALTERNATIVE FUTURES STUDY**

The two different futures for Southeast Florida are measured with a series of five models including: (1) a residential/nonresidential allocation model; (2) a land consumption model; (3a) a road model; (3b) a utilities model; (4) a development cost model; and (5) a fiscal impact model. These models are driven by future household and employment projections, which differ by the amount of growth taking place in one versus another area. Under *Existing* development, *less* growth will occur in the Eastward Ho! areas and more in the region’s rural portions. Under *Alternative* development, *more* growth will be directed to the Eastward Ho! areas and less will take place in the Hurricane Hazard, Middle, Agriculture and Conservation areas. All of the simulation models are sensitive to these locational differences in growth.

**Residential and Nonresidential Growth**

Existing development results in 283,840 new housing units in Eastward Ho! areas and 669,463 residential units in the Hurricane Hazard, Middle, Agriculture and Conservation areas (non-Eastward Ho! areas). Alternative development increases the number of residential units in the Eastward Ho! areas to 512,626 and reduces the number of residential units in non-Eastward Ho! areas to 440,677. *Alternative development*

<sup>1</sup> Results for all portions of the analysis are explained in detail in Section IV.

*increases residential development in the Eastward Ho! areas by more than 80 percent.*

Under Existing development, 220.7 million square feet of new non-residential space would be constructed in the Eastward Ho! areas, and 251.2 million in non-Eastward Ho! areas. Under Alternative development, 315.8 million square feet of new nonresidential space would be constructed in the Eastward Ho! areas and 156.2 million in the non-Eastward Ho! areas. The net effect over the 25-year development period would be a shift of 95 million square feet of nonresidential space from non-Eastward Ho! to Eastward Ho! areas. *Alternative development increases nonresidential development in Eastward Ho! areas by about 43 percent.*

### **Land Consumption**

Existing development rather than Alternative development in the five Southeast Florida counties would consume 311,155 acres versus 243,430 acres over the 25-year period 1995 to 2020. Ninety-two percent of this land would be taken to accommodate residential development. *Alternative development in Southeast Florida saves 67,725 acres of developable land.*

Existing versus Alternative development in Southeast Florida over a 25-year period would consume 157,968 acres versus 105,112 acres of prime agricultural land. *Alternative development saves 52,856 acres of prime farmland.*

Existing versus Alternative development in Southeast Florida over a 25-year period would consume 50,492 acres

versus 36,605 acres of fragile environmental lands. *Alternative development saves 13,887 acres of fragile environmental lands.*

### **Infrastructure (Roads)**

Existing versus Alternative development in Southeast Florida over a 25-year period would induce construction of 14,284 lane-miles versus 10,063 lane-miles of *local roads*. *Alternative development saves 4,221 lane-miles of local roads.*

Related to this *local road* lane-mile savings is a construction cost savings of \$1.54 billion (regardless of who pays for local roads). *Alternative development saves \$1.54 billion in local road costs.*

Existing versus Alternative development in Southeast Florida over a 25-year period would cause the construction or widening of 929 lane-miles versus 821 lane-miles of *state roads*. *Alternative development saves about 108 lane-miles of state roads.*

Related to this state road lane-mile savings is a cost savings of \$62 million. *Alternative development saves \$62 million in state road costs.*

### **Infrastructure (Water and Sewer)**

Existing versus Alternative development in Southeast Florida over a 25-year period would require 640,492 versus 533,459 water hookups. With the number of hookups a main factor in annual water-system treatment and distribution costs, Alternative growth would save over 107,000 *water* hookups and \$157 million in water capital costs.

*Alternative development saves \$157 million in water capital costs.*

Because 107,000 or 16.7 percent fewer sewer hookups would be required under this scenario, Alternative development saves \$135.6 million in sewer costs compared to Existing development.

*Alternative development saves \$135.6 million in sewer capital costs.*

### **Housing Costs**

Approximately 953,300 housing units would be built in Southeast Florida over the 25-year period 1995 to 2020. In the Eastward Ho! areas, 512,626 homes would be built under Alternative development versus 283,840 under Existing development. The larger number of homes in the Eastward Ho! areas would be developed at a small (20 percent) density *increase* in those areas. The smaller number of homes to be built in western rural locations and the Hurricane Hazard areas, on the other hand, would effect a more significant *decrease* (40 percent) in density.

*Alternative development diverts 228,786 housing units from rural to urbanized areas.*

Overall, under Alternative development, housing costs would be 2.3 percent, or about \$3,150, less on an average \$139,950 home: 8.5 percent *less* in the Eastward Ho! areas and 10-14 percent *more* outside these areas in rural/western locations. *Alternative development results in 2.3 percent lower housing costs than Existing development.*<sup>2</sup>

<sup>2</sup> This percentage is the result of weighted averages in different directions.

### **Fiscal Impacts**

Public service *costs* under Existing development would be \$1.49 billion and *revenues* \$2.04 billion for an annual fiscal impact of \$546 million by the year 2020.

Because more development would take place in Eastward Ho! areas under Alternative development, where public services are more comprehensive, and somewhat more costly, an average of \$1.65 billion in annual local public-sector service *costs* would accrue. This would be more than offset by an increase in local *revenues* of \$2.24 billion, because tax rates are typically higher in these areas. This would yield an average net fiscal impact surplus of \$595 million annually. In the fiscal year 2025, this would amount to a fiscal gain of \$48.5 million annually under Alternative development versus Existing development. (Over the 1995 to 2020 period, the above fiscal savings would *average* approximately \$24.25 million, or 8.9 percent annually.) *Alternative development saves an average of \$24.25 million annually, or 8.9 percent in annual local public-sector net fiscal impacts.*

### **Monetized Impacts**

Table S-4 summarizes the savings in resources discussed previously. Percentage savings reported here reflect different units: acres, lane-miles, hookups, and dollars. If all savings (including land savings) are expressed in monetary or dollar terms, a total of \$6.16 billion could be saved (Table S-5). Alternative development could save Southeast Florida local governments (county and municipal) \$1.68 billion for



the period 1995–2020. This would take the form of savings in land acquisition and road-building costs as well as annual fiscal impact savings summed for a 25-year period. The State of Florida would save more than \$287.4 million during the period, also in land acquisition and road-building costs.

**Table S-4**

Summary Comparison of Resource Savings Alternative versus Existing Development in Southeast Florida		
Resource	Number of Units Saved	Percent Savings
Developable Land (acres)	67,725	21.8
Agricultural Land (acres)	52,856	33.5
Fragile Land (acres)	13,887	27.5
Local Roads (lane-miles)	4,221	29.5
State Roads (lane-miles)	108	11.7
Water Infrastructure (hookups)	107,033	16.7
Sewer Infrastructure (hookups)	107,033	16.7
Residential Development (\$) (on a \$140,000 home)	3,148	2.3
Nonresidential Development Costs (\$) (on \$64,600 per 1,000 square feet)	678	1.0
Fiscal Impacts (\$ Millions) (annual positive fiscal impacts)	48.5	8.9

Source: See Table IV-W.

**Table S-5**

Monetized Savings of Existing versus Alternative Development in Southeast Florida Counties (Millions of 1995 \$) 1995-2020				
Resource	Home/ Business Owners	County	State	Total
Land Savings	-	304.76	33.86	338.62
Local Roads	575.67	767.56	191.89	1,535.12
State Roads	-	-	61.69	61.69
Water Hookups	157.00	-	-	157.00
Sewer Hookups	135.60	-	-	135.60
Housing Costs	3,001.00	-	-	3,001.00
Nonres. Costs	320.02	-	-	320.02
Fiscal Impacts	-	606.25	-	606.25
<b>Total</b>	<b>4,189.29</b>	<b>1,678.57</b>	<b>287.44</b>	<b>6,155.30</b>

Source: See Table IV-X.

The local citizenry—potential new homeowners and business owners in

Southeast Florida—would save the most with Alternative development: the cost of developing residential and nonresidential properties would be \$4.19 billion less. These residents would also benefit from lower subdivision road costs and reductions in water and sewer hookup costs.

**SUMMARY**

Across the foregoing indices of measurement—land consumption, infrastructure requirements/costs, housing costs, and fiscal impacts—Alternative development would yield noticeable savings over Existing development. The savings parallel those found in the literature and pertain to either Southeast Florida (county and municipal) government, the residents of Southeast Florida, or the State of Florida (see Tables S-5 and S-6).

What is the significance of these savings, and what do they mean when distributed over a five-county area that could be about 7.05 million in population, or 2.69 million in households, by the year 2020? It does not mean that each Existing household would be saved 1,100 square feet of land, or \$570 in local road costs (regardless of who pays for them); it means much more. The significance of these savings is that a group of citizens making decisions about future public policy would reduce land consumption and road building in their living environment by nearly 22 and 30 percent, respectively. Thirty percent of all local roads to be built need not be built. Twenty-two percent of all land consumed need not be consumed.

Furthermore, development in the Eastward Ho! areas throughout the five-county area would mean a 2.3 percent savings in housing costs and a 8.9

percent savings in public service costs. These are very significant physical and economic savings accomplishments by any measure.

**Table S-6**

**Comparison of Southeast Florida Results  
With Other Studies of Alternative Development**

<b>Alternative versus Existing Growth: Findings of the Field Nationally</b>		<b>Alternative versus Existing Growth: Findings in Southeast Florida</b>	
<b>Areas of Impact</b>	<b>Savings: Alternative over Existing</b>	<b>Areas of Impact</b>	<b>Savings: Alternative over Existing</b>
Developable Land*	20.5–24.2%	Developable Land*	21.8%
Agricultural Land	18–19%	Agricultural Land	33.5%
Fragile Land	20–27%	Fragile Land	27.5%
Infrastructure		Infrastructure	
Roads (local lane-miles)	14.8–19.7%	Roads (local lane-miles)	29.5%
(state lane-miles)	10.0-15.0%	(state lane-miles)	11.7%
Utilities		Utilities	
(water/sewer hookups)	6.7–8.2%	(water/sewer hookups)	16.7%
Housing Costs	2.5–8.4%	Residential/ Nonresidential Costs	2.3% 1.0%
Fiscal Impacts	6.9%	Fiscal Impacts	8.9%

Source: See Table IV-Y.

\*Developable land includes agricultural and fragile lands.