

Appendix C

Sample Scenario Spreadsheet



a suite of urban and regional planning tools

Version 3.2.2

The Spreadsheet Tabs	Description
Project Info	Inputs required for a range of indicators
Building Inputs	Inputs for the building prototypes that form the building blocks for the Dev Types
Dev Type Streets	Inputs for the street and block characteristics of each Dev Type
Dev Type Inputs	Combine building types to create Dev Types
Dev Type Attributes	Detailed characteristics about each Dev Type
Summary New	New Growth Summary outputs for all 5 Scenarios
Summary Total	Total Development Summary outputs for all 5
SCENARIO1	Detailed Development Type outputs of Scenario 1
SCENARIO2	Detailed Development Type outputs of Scenario 2
SCENARIO3	Detailed Development Type outputs of Scenario 3
SCENARIO4	Detailed Development Type outputs of Scenario 4
SCENARIO5	Detailed Development Type outputs of Scenario 5
BUILDING1	Detailed Building-level outputs of Scenario 1
BUILDING2	Detailed Building-level outputs of Scenario 2
BUILDING3	Detailed Building-level outputs of Scenario 3
BUILDING4	Detailed Building-level outputs of Scenario 4
BUILDING5	Detailed Building-level outputs of Scenario 5

Tab Color Definition

Input Tab	
Output Tab	
Reference Tab	

Cell Color Definition

Input Cell	
Header Cell	
Subheader Cell	
Output Cell	[white]

Available Indicators	Location
Developed Acres	Summary New Tab, Summary Total Tab
Infill Development	Summary New Tab, Summary Total Tab
Building Square Footage Mix	Summary New Tab
Land Area Mix	Summary New Tab, Summary Total Tab
Population	Summary New Tab, Summary Total Tab
Net New Growth	Summary Total Tab
Displacement From Redevelopme	Summary Total Tab

Housing Mix	Summary New Tab, Summary Total Tab
Affordability	Summary New Tab, Summary Total Tab
Housing Distribution By Income	Summary New Tab
Housing By Building Type	Summary New Tab
Employment Mix	Summary New Tab, Summary Total Tab
Jobs/Housing Balance	Summary New Tab, Summary Total Tab
Affordability (H+T+E)	Summary Total Tab, MXD Travel App, HH Travel App
Density	Summary New Tab, Summary Total Tab
Income	Summary New Tab
Walk and Transit Friendliness	Summary New Tab
Parking	Summary New Tab
Financial	Summary New Tab
Subsidy	Summary New Tab
New Infrastructure	Summary New Tab
Tax Revenue	Summary New Tab, Summary Total Tab
Sustainability	Summary New Tab, Summary Total Tab
Bike Trips	MXD Travel App, HH Travel App
Walk Trips	MXD Travel App, HH Travel App
Transit Trips	MXD Travel App, HH Travel App
Vehicle Trips	MXD Travel App, HH Travel App
Internal Trips	MXD Travel App
External Trips	MXD Travel App, HH Travel App
Vehicle Miles Traveled (VMT)	MXD Travel App, HH Travel App
Traffic Accidents	MXD Travel App, HH Travel App
ULI Shared Parking Savings	MXD Travel App
Transportation Affordability	MXD Travel App
Daily Emissions	MXD Travel App, HH Travel App
Tax Revenue Per New Housing Unit	Fiscal Impact Tool (FIT) App
Operations and Maintenance Costs	Fiscal Impact Tool (FIT) App
Capital Outlays	Fiscal Impact Tool (FIT) App
Cost to Revenue Ratio	Fiscal Impact Tool (FIT) App

Select Project Location (or nearest location)	
Metro	Austin-Round Rock-San Marcos, TX Metropolitan Statistical Area

Household / Population Assumptions	Existing Households		New Development Population Generation Rates			Avg. Household Size (New Development)				
	Avg. Unit Size	Avg. HH Size	Gross Sq Ft per Resident	Max Household Size	Vacancy Rate	Scenario 1	Scenario 2	Scenario 2	Scenario 4	Scenario 5
Multifamily	800	2.50	499	2.25	6%	2.06	2.05	2.05	2.04	-
Townhome	1,200	2.85	599	2.50	6%					
Single Family Small Lot	1,800	3.25								
Single Family Conventional Lot	2,500	3.50	699	3.00	8%					
Single Family Large Lot	3,000	3.60								
Mobile Home	500	3.25	699	2.80	10%					

Existing Average Household Incomes	\$ / Year
Multifamily	\$ 50,000
Townhome	\$ 55,000
Single Family Small Lot	\$ 60,000
Single Family Conventional Lot	\$ 65,000
Single Family Large Lot	\$ 70,000
Mobile Home	\$ 45,000

Wage Estimator			
Industry description	Annual payroll (\$1,000)	Number of paid employees for pay period	Average Wage
Forestry, fishing, and related activities	\$ 836	40	\$ 20,900
Mining	\$ 62,006	681	\$ 91,051
Utilities	\$ 53,489	702	\$ 76,195
Construction	\$ 1,194,721	26,310	\$ 45,409
Manufacturing	\$ 1,478,595	23,719	\$ 62,338
Wholesale trade	\$ 2,338,342	30,509	\$ 76,644
Retail trade	\$ 1,426,198	52,948	\$ 26,936
Transportation and warehousing	\$ 313,168	8,029	\$ 39,005
Information	\$ 1,700,259	21,776	\$ 78,079

Envision Wage Estimates	
Envision Employment Categories	Adjusted Income (\$/yr)
Retail	\$ 24,833
Office/Public	\$ 68,766
Industrial	\$ 57,164
Education	\$ 30,406
Hotel	\$ 16,873

Finance and insurance	\$ 1,652,213	23,645	\$ 69,876
Real estate and rental and leasing	\$ 519,991	12,481	\$ 41,663
Professional, scientific, and technical services	\$ 4,703,670	56,901	\$ 82,664
Management of companies and enterprises	\$ 1,196,346	13,656	\$ 87,606
Administrative and waste services	\$ 1,654,487	44,557	\$ 37,132
Educational services	\$ 319,598	10,511	\$ 30,406
Health care and social assistance	\$ 2,610,279	56,606	\$ 46,113
Arts, entertainment, and recreation	\$ 201,737	7,108	\$ 28,382
Accommodation and food services	\$ 943,935	55,944	\$ 16,873
Accommodation	\$ 235,984	13,986	\$ 16,873
Food Services	\$ 707,951	41,958	\$ 16,873
Other services, except public administration	\$ 840,253	24,203	\$ 34,717
Government and government enterprises			\$ -
Total			\$ 45,897

Existing Average Monthly Housing Costs (Rent or Mortgage)	\$ / Month
Multifamily	\$ 650
Townhome	\$ 750
Single Family Small Lot	\$ 1,000
Single Family Conventional Lot	\$ 1,200
Single Family Large Lot	\$ 1,400
Mobile Home	\$ 450
Weighted Average	\$ 649.91
Manual Override Average	

Affordability Standards	Maxiumum Housing Expenditures	
	Owner	Renter
% of Income for Housing	26%	30%
Maximum LTV	80%	
Mortgage Years	30	
Mortgage Interest Rate	6%	

Single Family Lot Size Assumptions	Sq Ft
Small Lot Single Family	5,000
Conventional Lot Single Family	5000 - 7001
Large Lot Single Family	7,001

or below

or above

Student Generation Rates	Units	Public School				Private School
Residential Housing Type		Public School Generation Rate	K-5	6 - 8	9 - 12	
Fewer than 8 Units per Acre	8	0.450	0.157	0.135	0.158	0.058
9-14 Units per Acre	14	0.210	0.074	0.063	0.074	0.048
15+ Unis per Acre	15	0.150	0.053	0.045	0.053	0.045

Table 7-6. Planner's Estimating Guide. Projecting Land-Use and Facility Needs. Arthur C. Nelson. 2004.

Property Tax	Annual Property Tax Rate	Assessment Ratio
Residential	0.53%	100.00%
Commercial	0.53%	100.00%

Sales Tax	Annual Sales Tax Revenue per Retail Sq Ft
Sales Tax Rate	1.00%
Sales per Sq Ft	\$ 318

New Infrastructure Costs (Capital Costs only)	Unit	Cost
New Roadway	Lane Mile	\$ 2,250,000
Streetscape	Lane Mile	\$ 1,000
Sewerage	Lineal Foot	\$ 100
Utilities - above-ground	Mile	\$ 600,000
Water Lines	Lineal Foot	\$ 227

Electrical Energy Fuel Mix	Fuel Mix (%)	CO2 per Million BTU		
		kg	Pounds	Tons
Coal (anthracite)		103.69	229	0.10369
Coal (bituminous)	100%	93.28	206	0.09328
Coal (subbituminous)		97.17	214	0.09717
Coal (lignite)		97.72	215	0.09772
Diesel fuel & heating oil		73.15	161	0.07315
Propane		63.07	139	0.06307
Natural gas		53.06	117	0.05306

<http://www.eia.doe.gov/oiaf/1605/coefficients.html>

Energy Costs	\$ / 1000 BTU
Residential	\$12.00
Commercial	\$12.00

Landscaping Water Consumption		
Water per Sq Foot of Lawn Area	0.05	Gallons/Sq Ft
Maximum Watered Lawn Area	0.25	Acres

Internal Water Consumption		
Building Type/Use	Water Use (G/Day)	
	Resident	Employee
Multifamily Residential	35.00	
Townhome	50.00	
Typical Single Family	70.00	
Large Single Family	90.00	
Retail		68.00
Office		106.00
Industrial		133.00

Vickers, Amy. Handbook of Water Use and Conservation. (2001)

Waste Water Production		
Building Type/Use	Water Waste (G/Day)	
	Resident	Employee
Multifamily Residential	60.00	
Townhome	80.00	
Typical Single Family	100.00	
Large Single Family	120.00	
Retail		38.00
Office		49.00
Industrial		49.00

Adapted from Metcalf and Eddy (1991) *Wastewater Engineering. Treatment Disposal Reuse*, G. Tchobanoglous and F.L. Burton (Eds.), 1820 pp. New York: McGraw-Hill.

<http://www.eolss.net/EolssSampleChapters/C06/E6-13-04-05/E6-13-04-05-T14.htm>

Solid Waste Production		
Building Type/Use	Solid Waste (lbs/Day)	
	Resident	Employee
Multifamily Residential	1.50	
Townhome	2.00	

Typical Single Family	3.00	
Large Single Family	4.00	
Retail		5.00
Office		3.50
Industrial		9.00

<http://www.calrecycle.ca.gov/wastechar/wastegenrates/default.htm>

Abandoned Structure Value	Units (Jobs)/Acre Avg	Value/Acre Avg	Value/Unit (Job)
MF	40	2,098,032	\$ 52,451
TH	12	303,430	\$ 25,286
SF	7	306,720	\$ 43,817
MH	20	180,328	\$ 9,016
RET	30	775,017	\$ 25,834
OFF	60	2,593,363	\$ 43,223
IND	18	203,313	\$ 11,295
PUB	60	2,593,363	\$ 43,223
EDU	60	2,593,363	\$ 43,223
HOTEL	50	1,564,182	\$ 31,284

1. Load your Prototype buildings									Building Square							
Building and Site Characteristics																
#	Building Name	Lot Size (Sq Ft)	Building Lot Coverage	Landscaping Lot Coverage	Parking Lot Coverage	Height (Stories)	Floor Area Ratio (FAR)	Bldg Sq Ft	Residential	Multifamily	Townhome	Single Family	Small Lot Single Family	Medium Lot Single Family	Large Lot Single Family	Mobile Home
1	2900 Manor TOD	243,936	61%	27%	12%	4	1.00	243,856	99%	99%	0%	0%	0%	0%	0%	0%
2	Apt High Density	101,054	70%	9%	21%	4	1.98	200,566	99%	99%	0%	0%	0%	0%	0%	0%
3	Apt Low Density	289,795	37%	18%	20%	3	0.56	163,257	100%	100%	0%	0%	0%	0%	0%	0%
4	East Avenue Parcel 1	170,547	49%	12%	39%	8	2.68	457,912	78%	78%	0%	0%	0%	0%	0%	0%
5	East Avenue Parcel 3	36,320	92%	0%	8%	4	3.28	119,290	0%	0%	0%	0%	0%	0%	0%	0%
6	East Avenue Parcel 4	68,789	61%	12%	27%	6	3.26	224,547	0%	0%	0%	0%	0%	0%	0%	0%
7	East Avenue Parcel 5	114,868	36%	21%	43%	16	4.18	480,309	50%	50%	0%	0%	0%	0%	0%	0%
8	East Avenue Parcel 6	101,366	65%	7%	28%	4	2.79	282,408	0%	0%	0%	0%	0%	0%	0%	0%
9	East Avenue Parcel 7	111,754	84%	3%	13%	5	2.77	309,900	100%	100%	0%	0%	0%	0%	0%	0%
10	East Avenue Parcel 8	43,383	55%	12%	33%	3	1.20	52,000	100%	0%	100%	0%	0%	0%	0%	0%
11	East Avenue Parcel 9	49,076	36%	8%	55%	5	1.58	77,360	0%	0%	0%	0%	0%	0%	0%	0%
12	High Density Townhome	32,258	75%	25%	0%	3	0.51	16,607	100%	0%	100%	0%	0%	0%	0%	0%
13	Low Density Townhome	69,086	54%	32%	15%	2	0.34	23,469	100%	0%	100%	0%	0%	0%	0%	0%
14	Medical Office High Density	76,378	95%	5%	0%	4	0.73	55,744	0%	0%	0%	0%	0%	0%	0%	0%
15	Medical Office Low Density	68,351	27%	31%	43%	2	0.31	21,304	0%	0%	0%	0%	0%	0%	0%	0%
16	Medical	1,121,234	60%	23%	17%	3	1.00	1,119,800	0%	0%	0%	0%	0%	0%	0%	0%
17	Medical 6	1,121,234	44%	19%	37%	6	2.15	2,410,329	0%	0%	0%	0%	0%	0%	0%	0%
18	Mixed-Use Commercial	3,838,540	50%	22%	8%	4	0.62	2,396,858	37%	37%	0%	0%	0%	0%	0%	0%
19	Mixed-Use Commercial 8	2,336,994	39%	18%	23%	8	1.97	4,596,360	45%	45%	0%	0%	0%	0%	0%	0%
20	Mixed-Use Residential	1,766,794	40%	25%	15%	4	1.61	2,851,387	97%	97%	0%	0%	0%	0%	0%	0%
21	Mixed-Use Residential 6	1,766,794	36%	25%	19%	6	2.14	3,786,922	98%	98%	0%	0%	0%	0%	0%	0%
22	Owner Residential	6,728,278	44%	29%	6%	2	0.31	2,118,200	100%	0%	0%	100%	0%	0%	100%	0%
23	Pecan Springs	318,641	40%	33%	7%	2	0.27	87,500	100%	0%	100%	0%	0%	0%	0%	0%
24	Restaurant	23,087	16%	13%	72%	1	0.14	3,274	0%	0%	0%	0%	0%	0%	0%	0%
25	Retail	807,602	35%	31%	35%	1	0.22	177,040	0%	0%	0%	0%	0%	0%	0%	0%
26	River City Lofts	22,024	43%	41%	16%	3	1.20	26,400	100%	100%	0%	0%	0%	0%	0%	0%
27	Strip Retail	14,269	39%	25%	36%	1	0.25	3,610	0%	0%	0%	0%	0%	0%	0%	0%
28	VMU Compatible	210,962	66%	16%	18%	5	1.78	374,909	97%	97%	0%	0%	0%	0%	0%	0%
29	VMU High Density	74,832	88%	0%	12%	6	3.46	258,863	98%	98%	0%	0%	0%	0%	0%	0%
30	VMU Low Density	24,106	100%	0%	0%	4	1.98	47,779	95%	95%	0%	0%	0%	0%	0%	0%
31								-		0%	0%	0%	0%	0%	0%	0%
32								-		0%	0%	0%	0%	0%	0%	0%
33								-		0%	0%	0%	0%	0%	0%	0%
34								-		0%	0%	0%	0%	0%	0%	0%
35								-		0%	0%	0%	0%	0%	0%	0%
36								-		0%	0%	0%	0%	0%	0%	0%
37								-		0%	0%	0%	0%	0%	0%	0%
38								-		0%	0%	0%	0%	0%	0%	0%
39								-		0%	0%	0%	0%	0%	0%	0%
40								-		0%	0%	0%	0%	0%	0%	0%
41								-		0%	0%	0%	0%	0%	0%	0%
42								-		0%	0%	0%	0%	0%	0%	0%
43								-		0%	0%	0%	0%	0%	0%	0%
44								-		0%	0%	0%	0%	0%	0%	0%
45								-		0%	0%	0%	0%	0%	0%	0%
46								-		0%	0%	0%	0%	0%	0%	0%
47								-		0%	0%	0%	0%	0%	0%	0%
48								-		0%	0%	0%	0%	0%	0%	0%
49								-		0%	0%	0%	0%	0%	0%	0%
50								-		0%	0%	0%	0%	0%	0%	0%

[illegible]

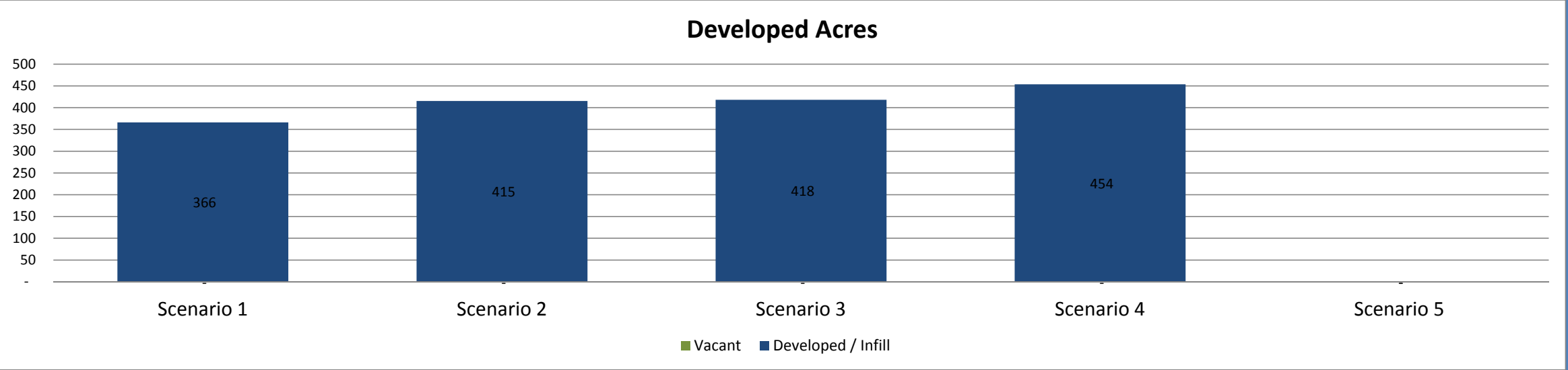
3. Create your Dev Types by mixing Prototype Buildings

[illegible]

[illegible]

						Financials					Symbology Color (RGB)		
Waste Water (G / Day)			Solid Waste (lbs / Day)			Average Land Cost (\$ / Acre)	Project Value per Acre	Subsidy per Acre	Property Tax Revenue (\$/Acre/yr)	Sales Tax Revenue (\$/acre/yr)	Red	Green	Blue
per Unit	per Employee	per Acre	per Unit	per Employee	per Acre								
wst_water_unit,double,20,10,Waste Water per Unit,0	wst_water_emp,double,20,10,Waste Water per Employee,0	wst_wtr_acre,double,20,10,Waste Water (G/Day),1,wst_wtr	solid_wst_unit,double,20,10,Solid Waste per Unit,0	solid_wst_emp,double,20,10,Solid Waste per Employee,0	solid_wst_acre,double,20,10,Solid Waste (lbs/Day),1,solid_wst	lnd_cst,double,20,10,Average Land Cost,0	bldg_val,double,20,10,Average Building Value,1	subsidy,double,20,10,Subsidy,1	prop_tax,double,20,10,Property Tax (\$/Yr),1	sales_tax,double,20,10,Sales Tax (\$/Yr),1	Red,integer,3,0,Red,0	Green,integer,3,0, Green,0	Blue,integer,3,0,Blue, 0
98.20	49.00	2,777.56	2.45	3.50	73.40	\$ 435,318	\$ 9,386,637	\$ -	\$ 49,749	\$ -	113	21	217
113.55	49.00	4,791.83	2.84	3.50	127.66	\$ 651,544	\$ 18,042,645	\$ -	\$ 95,626	\$ -	97	36	220
120.24	-	1,251.53	3.01	-	31.29	\$ 411,953	\$ 3,456,544	\$ -	\$ 18,320	\$ -	229	44	236
-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	255	127	196
184.84	-	1,296.24	4.62	-	32.41	\$ 1,350,363	\$ 5,104,066	\$ -	\$ 27,052	\$ -	163	122	255
200.00	-	752.20	5.00	-	18.80	\$ 2,522,074	\$ 5,329,810	\$ -	\$ 28,248	\$ -	230	172	251
-	48.94	6,130.73	-	3.51	439.36	\$ 547,608	\$ 4,574,073	\$ -	\$ 24,243	\$ 2,022	176	174	224
-	49.00	2,661.09	-	3.50	190.08	\$ 784,023	\$ 2,620,730	\$ -	\$ 13,890	\$ -	235	122	255
-	48.97	7,421.42	-	3.50	531.10	\$ 427,351	\$ 26,467,580	\$ -	\$ 140,278	\$ 1,383	113	21	217
-	48.97	15,974.34	-	3.50	1,143.16	\$ 427,351	\$ 28,600,109	\$ -	\$ 151,581	\$ 2,978	97	36	220
112.79	47.04	3,177.94	2.82	3.44	206.57	\$ 539,033	\$ 5,327,461	\$ -	\$ 27,989	\$ 6,530	229	44	236
112.79	47.17	9,479.46	2.82	3.43	589.57	\$ 885,368	\$ 15,752,915	\$ -	\$ 82,656	\$ 13,622	255	127	196
114.23	38.00	3,740.95	2.86	5.00	102.07	\$ 986,193	\$ 12,503,765	\$ -	\$ 66,270	\$ 6,707	163	122	255
114.23	38.00	4,982.99	2.86	5.00	132.14	\$ 986,193	\$ 16,247,676	\$ -	\$ 86,113	\$ 5,938	230	172	251
243.20	-	806.68	7.30	-	24.20	\$ 1,003,496	\$ 3,026,281	\$ -	\$ 16,039	\$ -	176	174	224
200.00	-	546.82	5.00	-	13.67	\$ 820,233	\$ 2,323,460	\$ -	\$ 12,314	\$ -	235	122	255
-	38.00	234.74	-	5.00	30.89	\$ 1,088,991	\$ 2,514,685	\$ -	\$ 13,328	\$ 19,644	113	21	217
-	38.00	362.87	-	5.00	47.75	\$ 539,375	\$ 2,022,204	\$ -	\$ 10,718	\$ 30,366	97	36	220
-	38.00	418.78	-	5.00	55.10	\$ 1,621,022	\$ 3,789,627	\$ -	\$ 20,085	\$ 35,045	229	44	236
118.22	49.00	4,350.22	2.96	3.50	129.89	\$ 836,604	\$ 16,758,867	\$ -	\$ 88,822	\$ -	255	127	196
94.63	49.00	10,160.46	2.37	3.50	281.44	\$ 1,775,417	\$ 41,446,230	\$ -	\$ 219,665	\$ -	163	122	255
135.00	38.00	2,657.72	3.38	5.00	83.93	\$ 882,902	\$ 23,074,948	\$ -	\$ 122,297	\$ 13,728	230	172	251
113.99	38.00	5,889.39	2.85	5.00	250.45	\$ 894,982	\$ 26,418,776	\$ -	\$ 140,020	\$ 81,042	176	174	224
-	48.36	23,588.26	-	3.59	1,749.30	\$ 914,982	\$ 34,188,365	\$ -	\$ 181,198	\$ 89,627	235	122	255
-	48.29	23,003.31	-	3.60	1,713.49	\$ 1,916,411	\$ 23,452,810	\$ -	\$ 124,300	\$ 97,940	255	143	143
135.00	0.90	3,927.02	3.38	0.12	106.88	\$ 914,758	\$ 34,914,884	\$ -	\$ 185,049	\$ 6,835	255	55	55
-	47.85	17,702.23	-	3.66	1,352.46	\$ 914,742	\$ 20,943,929	\$ -	\$ 111,003	\$ 122,453	234	2	2
107.01	-	6,921.95	2.68	-	173.05	\$ 914,578	\$ 25,924,139	\$ -	\$ 137,398	\$ -	201	233	255
200.00	-	1,766.89	5.00	-	44.17	\$ 1,298,246	\$ 10,406,077	\$ -	\$ 55,152	\$ -	143	209	255
-	49.00	13,458.35	-	3.50	961.31	\$ 917,498	\$ 14,207,346	\$ -	\$ 75,299	\$ -	255	127	196
135.00	-	1,780.06	3.38	-	44.50	\$ 400,508	\$ 9,491,620	\$ -	\$ 50,306	\$ -	163	122	255
-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	230	172	251
-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	176	174	224
-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	235	122	255
-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	255	143	143
-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	255	55	55
-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	234	2	2
-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	201	233	255
-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	143	209	255
-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	45	79	204
-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	255	102	-
-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	255	145	-
-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	255	184	91
-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	255	198	
-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	255	240	
-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	253	255	123
-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	115	115	115
-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	163	163	163
-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	204	204	204
-	-	-	-	-	-	\$ -	\$ -	\$ -	\$ -	\$ -	91	215	88

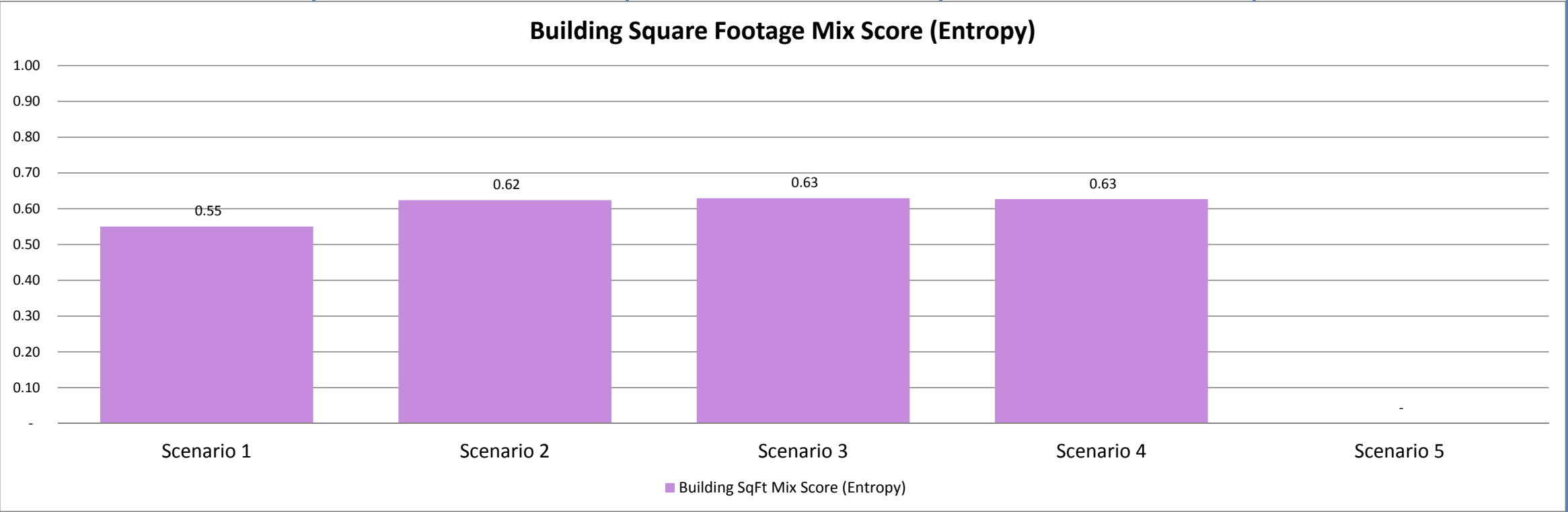
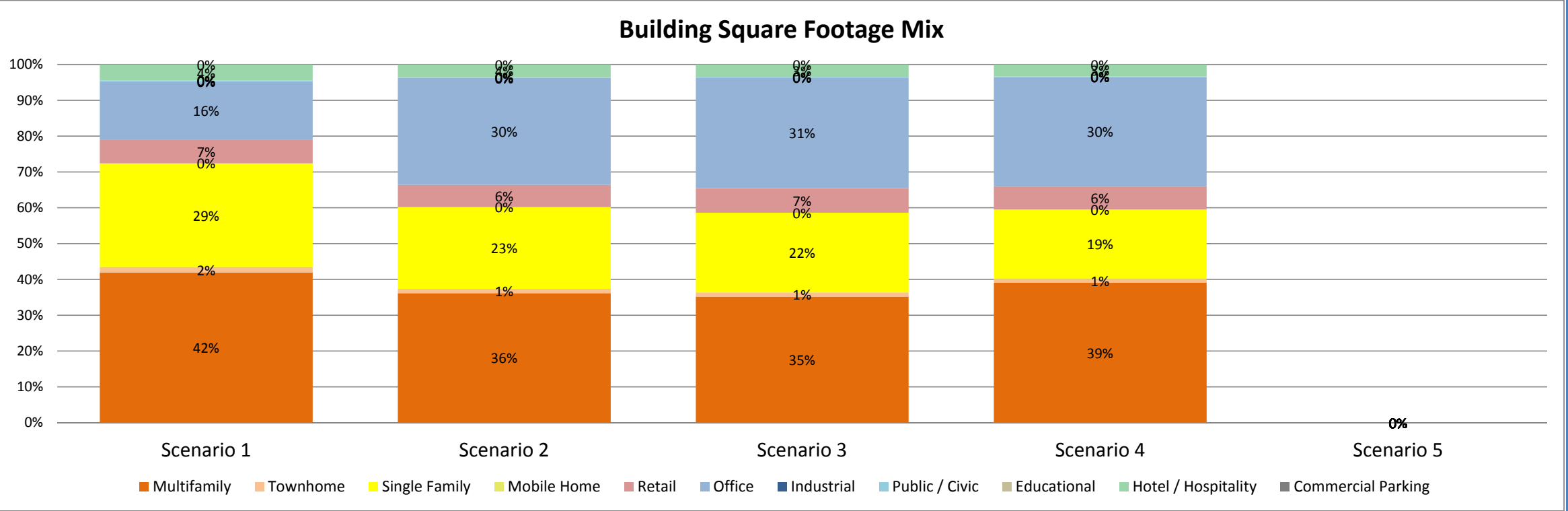
	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
Developed Acres										
Vacant	-	0%	-	0%	-	0%	-	0%	-	0%
Developed / Infill	366	100%	415	100%	418	100%	454	100%	-	0%
Total Acres	366		415		418		454		-	
New Impervious Area	-	0%	-	0%	-	0%	-	0%	-	0%



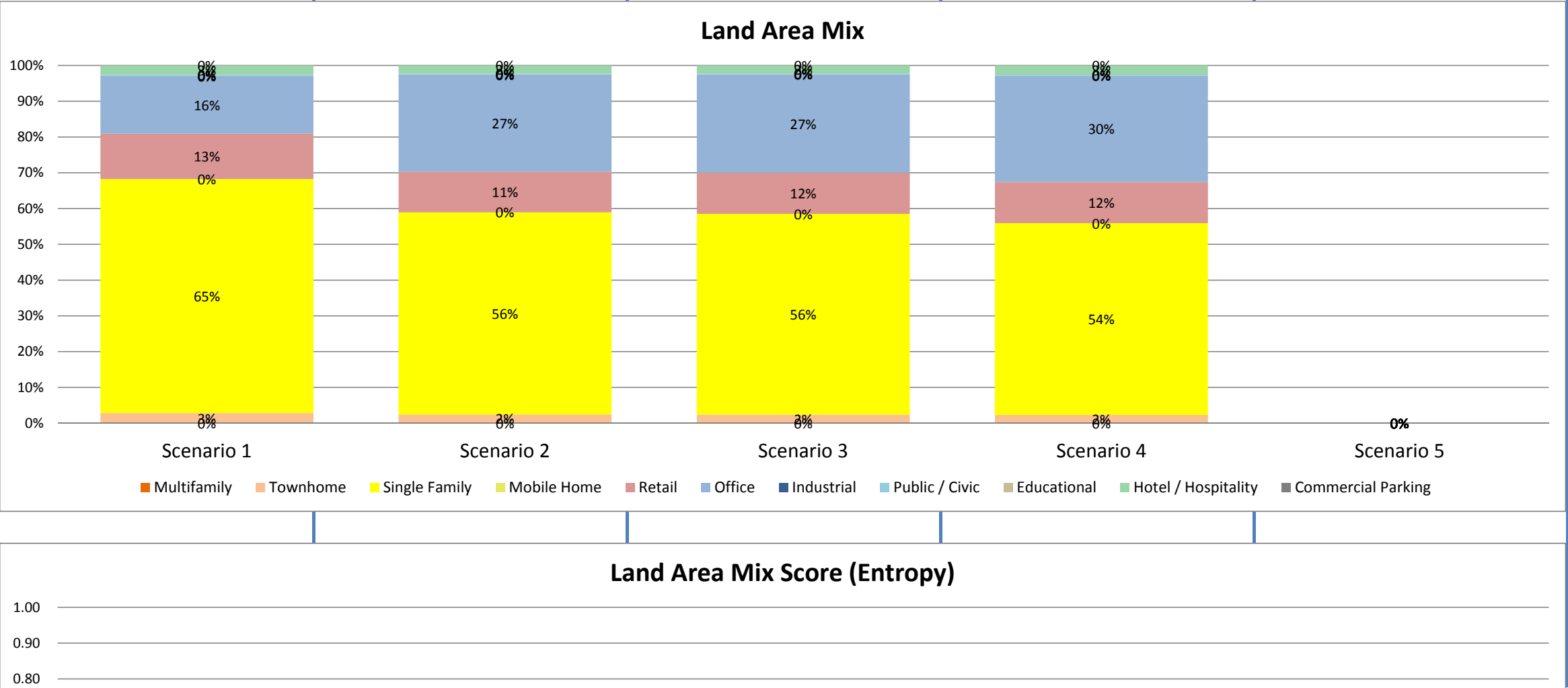
Infill Development										
Housing	5,027	100%	5,348	100%	5,348	100%	6,343	100%	-	0%
Jobs	6,877	100%	13,859	100%	14,809	100%	16,835	100%	-	0%

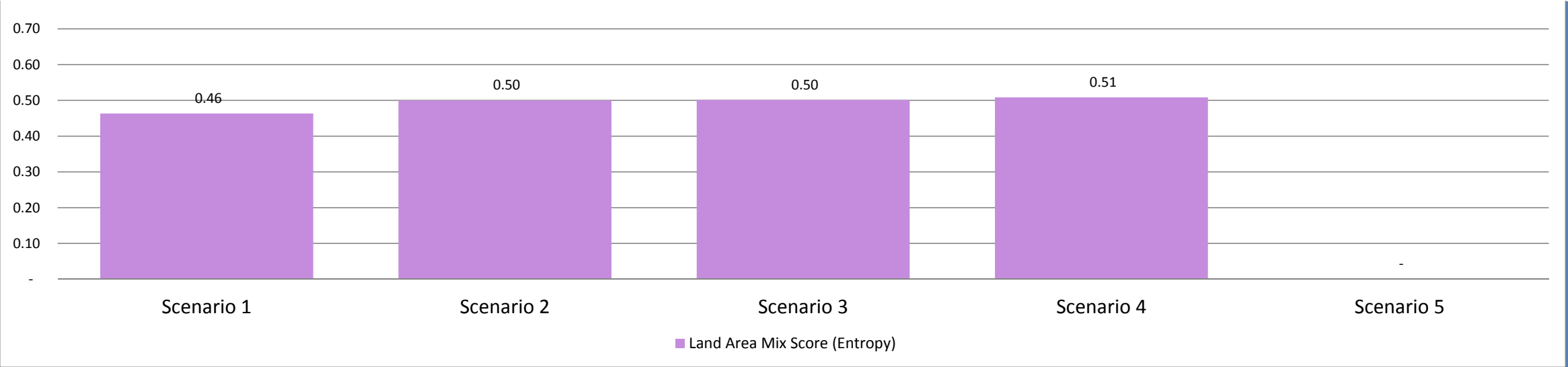
Building Square Footage										
Multifamily	3,803,004	42%	4,161,042	36%	4,161,042	35%	5,301,336	39%	-	0%
Townhome	139,461	2%	139,461	1%	139,461	1%	139,461	1%	-	0%
Single Family	2,630,822	29%	2,630,822	23%	2,630,822	22%	2,630,822	19%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Retail	591,611	7%	711,117	6%	810,070	7%	877,353	6%	-	0%
Office	1,482,259	16%	3,437,894	30%	3,650,799	31%	4,130,994	30%	-	0%
Industrial	-	0%	-	0%	-	0%	-	0%	-	0%
Public / Civic	24,872	0%	24,872	0%	24,872	0%	30,668	0%	-	0%
Educational	-	0%	-	0%	-	0%	-	0%	-	0%
Hotel / Hospitality	407,725	4%	407,725	4%	407,725	3%	448,298	3%	-	0%
Commercial Parking	-	0%	-	0%	-	0%	-	0%	-	0%
Total	9,079,754		11,512,934		11,824,791		13,558,932		-	

Building SqFt Mix Score (Entropy)	0.55	0.62	0.63	0.63	-
-----------------------------------	------	------	------	------	---

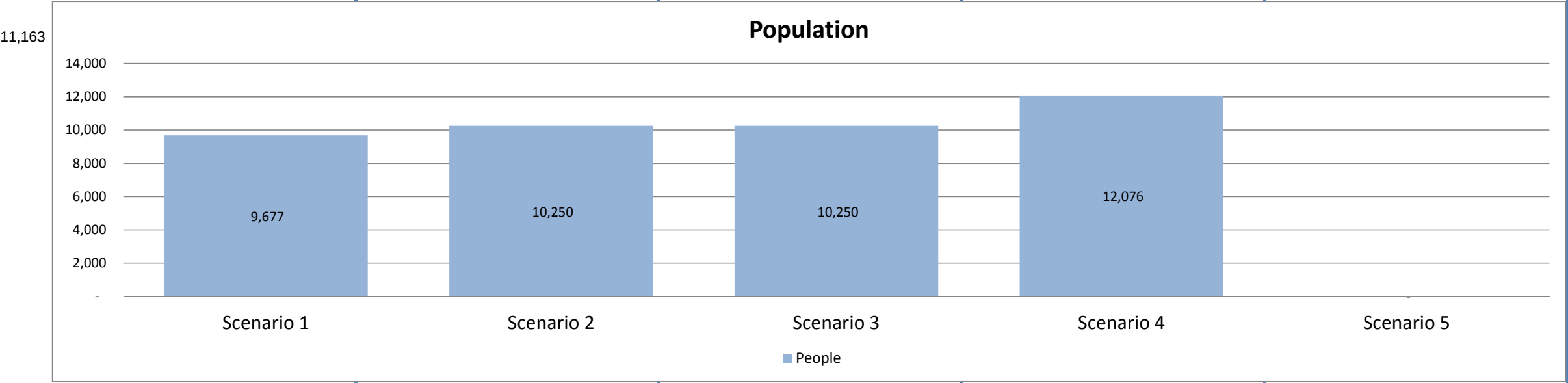


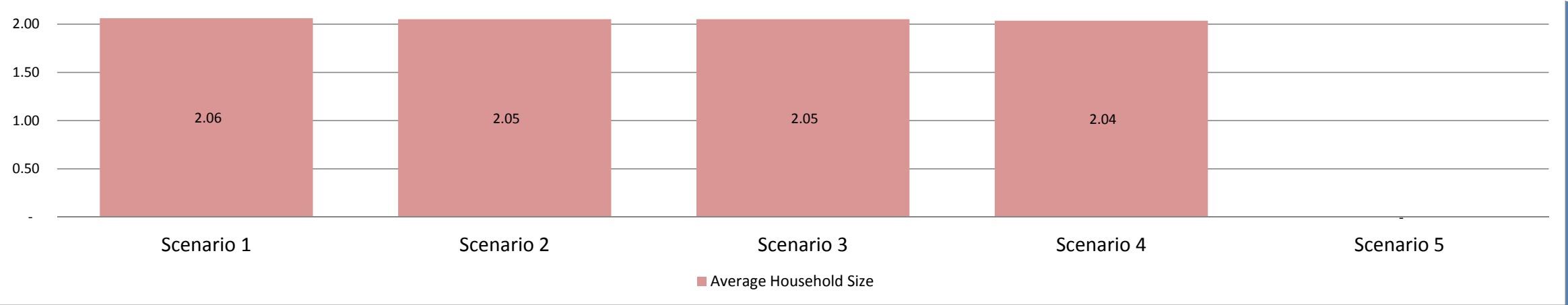
Land Area Mix (Sq Ft)										
Multifamily	-	0%	-	0%	-	0%	-	0%	-	0%
Townhome	361,950.15	3%	361,950.15	2%	361,950.15	2%	361,950.15	2%	-	0%
Single Family	8,356,576.06	65%	8,356,576.06	56%	8,356,576.06	56%	8,356,576.06	54%	-	0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	-	0%
Retail	1,624,387.69	13%	1,681,319.25	11%	1,716,836.70	12%	1,794,076.32	12%	-	0%
Office	2,059,183.52	16%	4,017,322.97	27%	4,093,742.01	27%	4,633,735.15	30%	-	0%
Industrial	-	0%	-	0%	-	0%	-	0%	-	0%
Public / Civic	39,832.71	0%	39,832.71	0%	39,832.71	0%	49,115.07	0%	-	0%
Educational	-	0%	-	0%	-	0%	-	0%	-	0%
Hotel / Hospitality	334,699.90	3%	334,699.90	2%	334,699.90	2%	399,676.43	3%	-	0%
Commercial Parking	-	0%	-	0%	-	0%	-	0%	-	0%
Total	12,776,630.02		14,791,701.03		14,903,637.51		15,595,129.17		-	
Land Area Mix Score (Entropy)		0.46		0.50		0.50		0.51		-



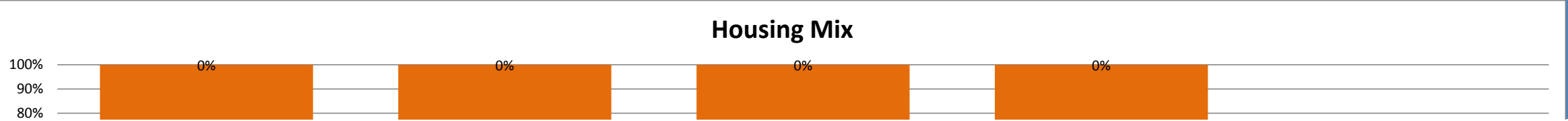
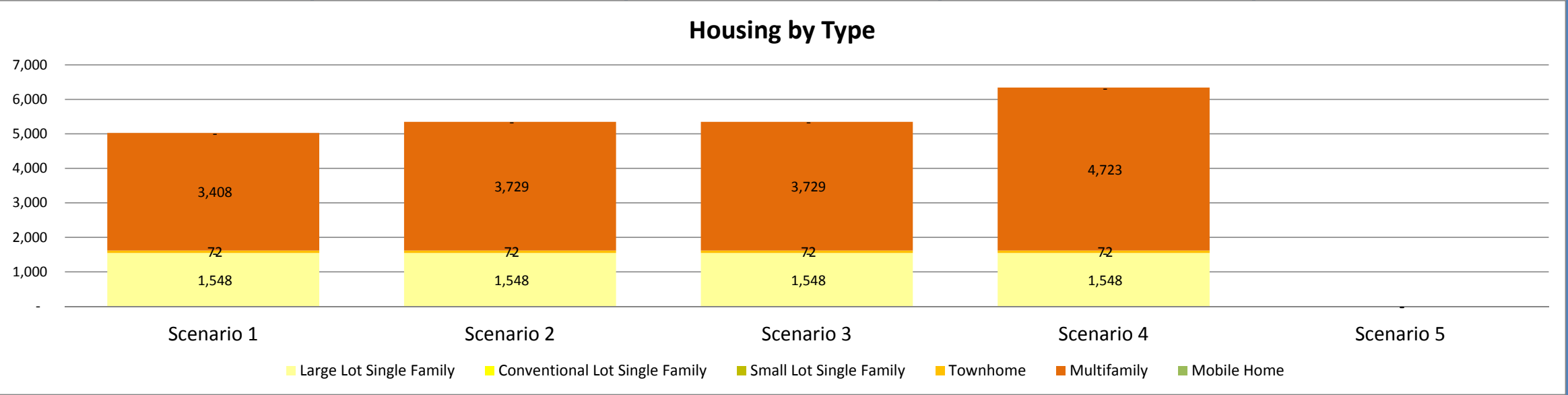


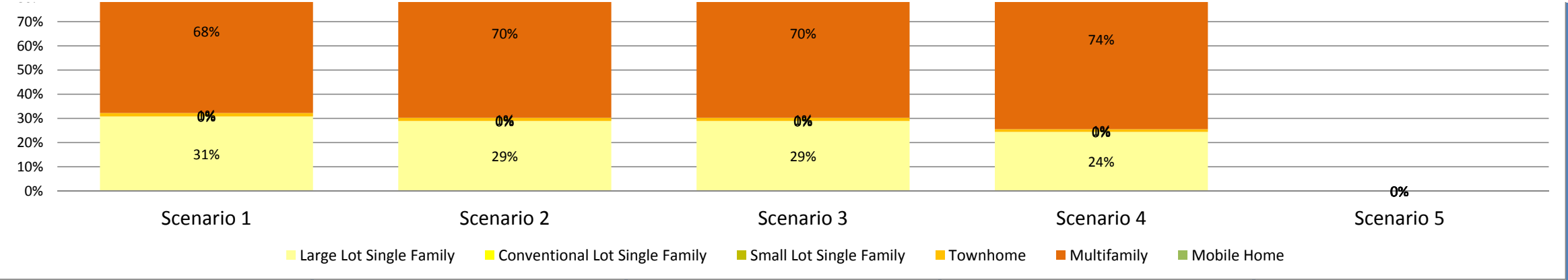
Population									
People	9,677		10,250		10,250		12,076		-
Average Household Size	2.06		2.05		2.05		2.04		-
Average Household Size (Attached)	1.90		1.90		1.90		1.91		-
Average Household Size (Detached)	2.43		2.43		2.43		2.43		-
Average Workers per Household	1.24		1.23		1.23		1.22		-
School Aged Children	1,069		1,128		1,128		1,322		-



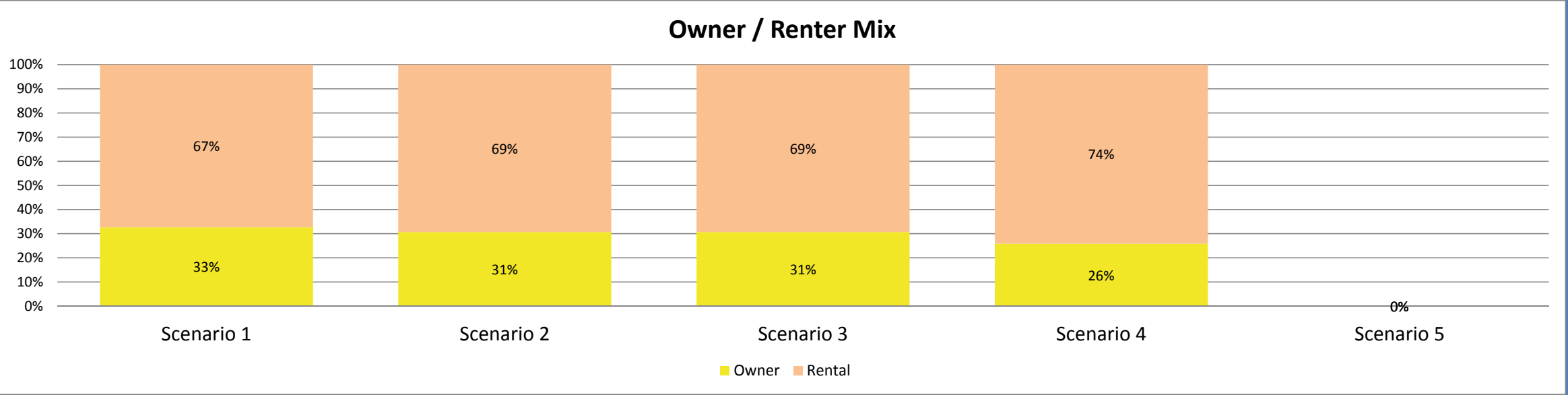


Housing Mix									
Multifamily	3,408	68%	3,729	70%	3,729	70%	4,723	74%	- 0%
Townhome	72	1%	72	1%	72	1%	72	1%	- 0%
Small Lot Single Family	-	0%	-	0%	-	0%	-	0%	- 0%
Conventional Lot Single Family	-	0%	-	0%	-	0%	-	0%	- 0%
Large Lot Single Family	1,548	31%	1,548	29%	1,548	29%	1,548	24%	- 0%
Mobile Home	-	0%	-	0%	-	0%	-	0%	- 0%
Total Housing Units	5,027		5,348		5,348		6,343		-

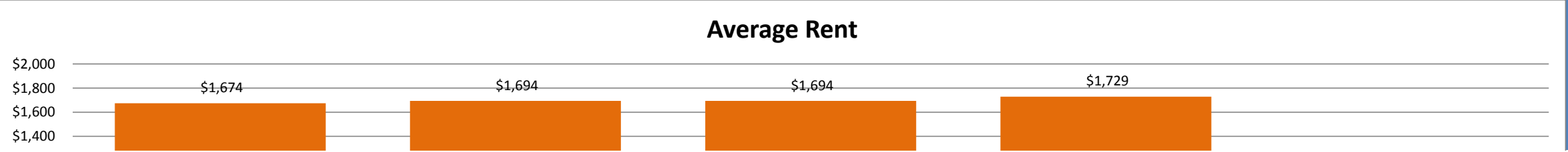


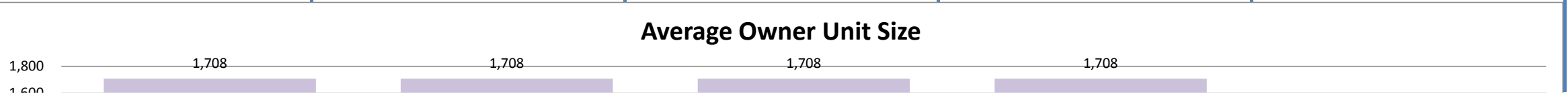
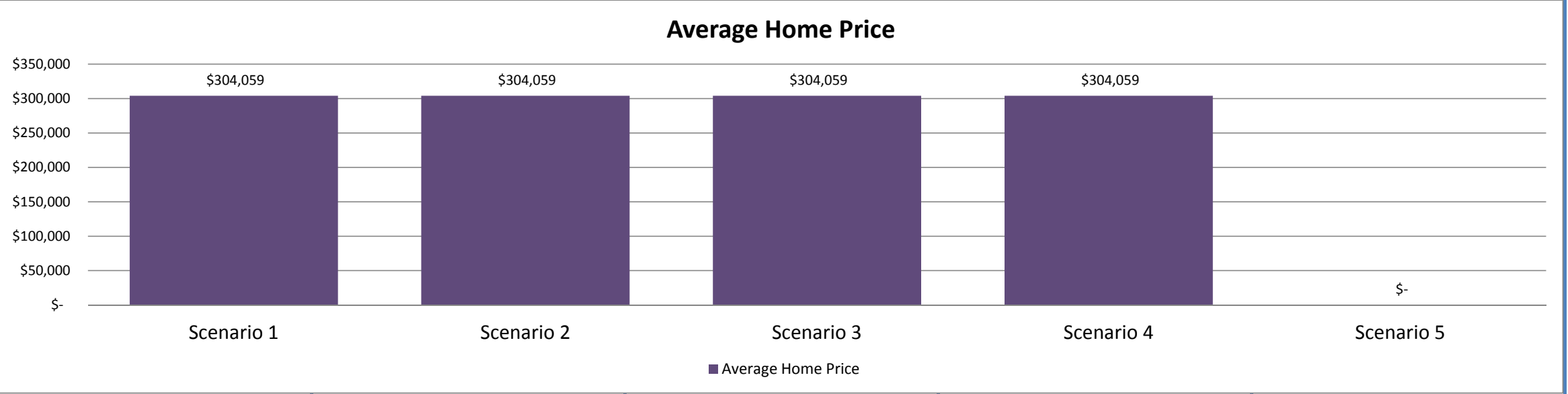
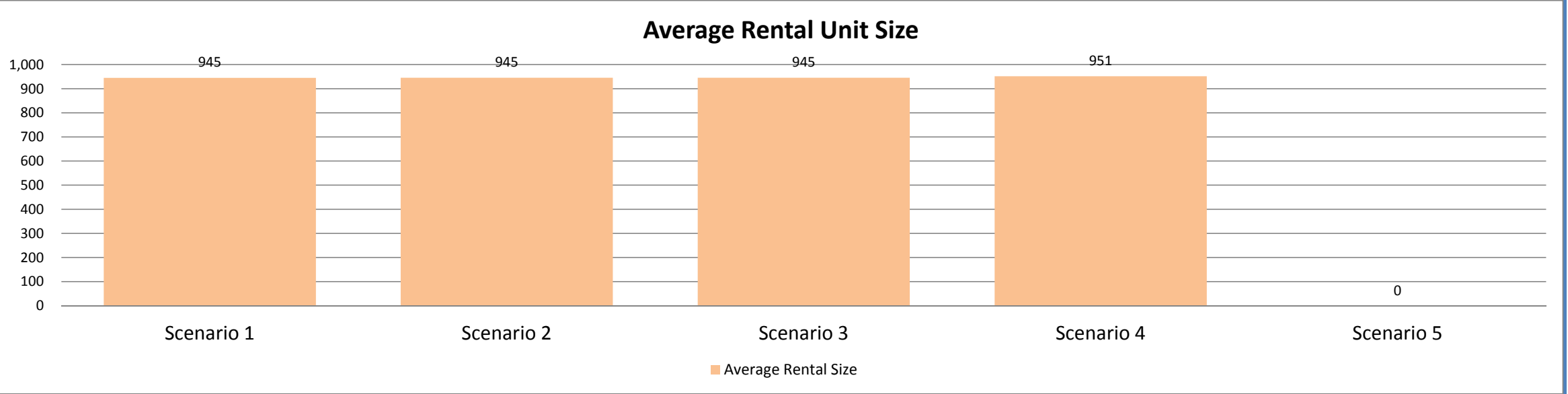
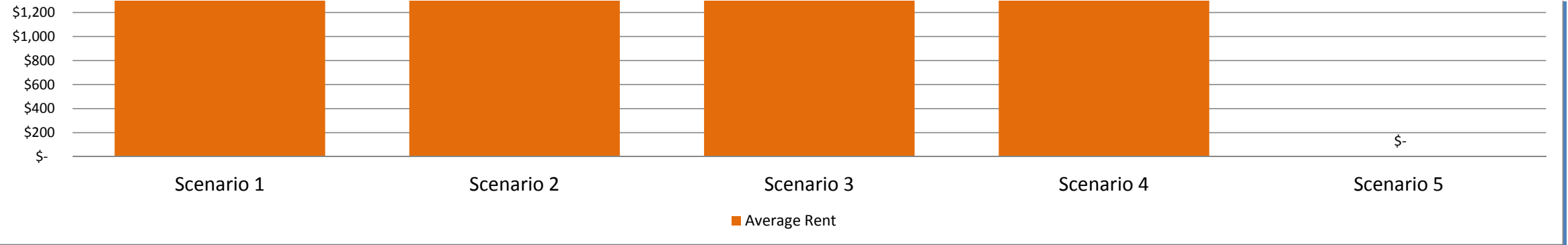


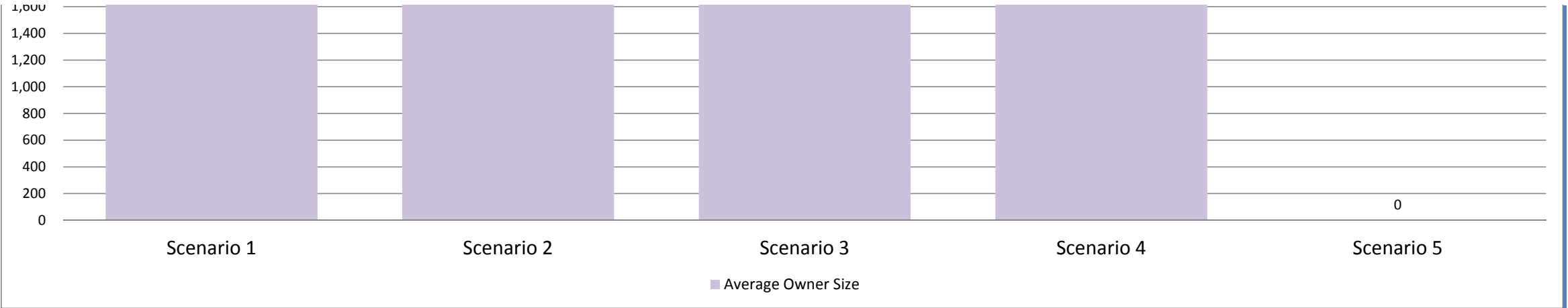
Housing Tenure									
Owner	1,642	33%	1,642	31%	1,642	31%	1,642	26%	- 0%
Rental	3,386	67%	3,707	69%	3,707	69%	4,701	74%	- 0%



Affordability		\$/sq ft		\$/sq ft		\$/sq ft		\$/sq ft		\$/sq ft	
Average Rent	\$ 1,674	\$ 1.77	\$ 1,694	\$ 1.79	\$ 1,694	\$ 1.79	\$ 1,729	\$ 1.82	\$ -	\$ -	
Average Rental Size	945		945		945		951		0		
Average Home Price	\$ 304,059	\$ 178.05	\$ 304,059	\$ 178.05	\$ 304,059	\$ 178.05	\$ 304,059	\$ 178.05	\$ -	\$ -	
Average Owner Size	1,708		1,708		1,708		1,708		0		



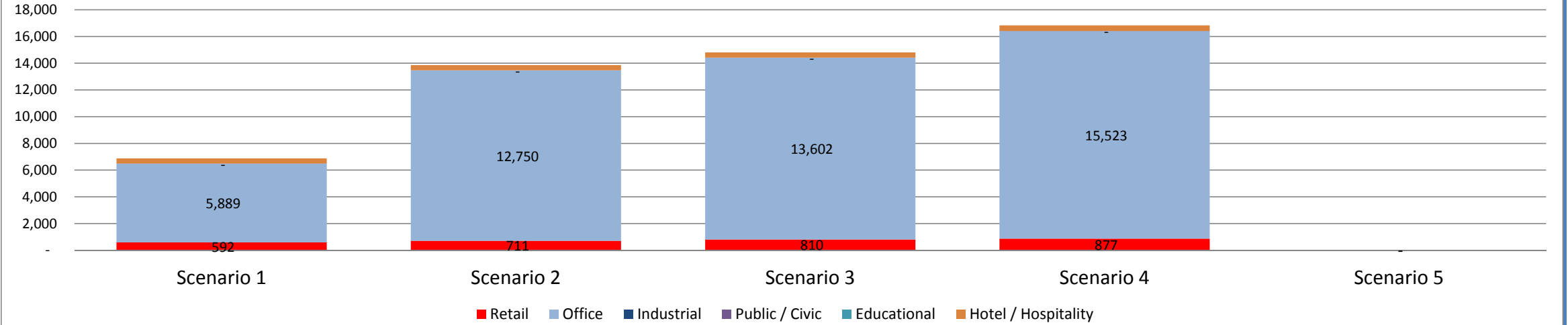




Employment Mix

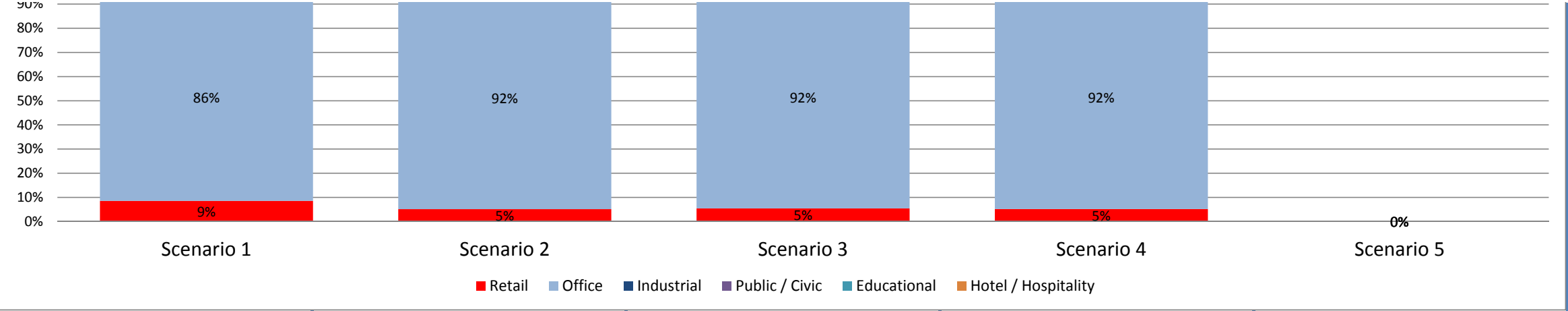
Retail	592	9%	711	5%	810	5%	877	5%	-	0%
Office	5,889	86%	12,750	92%	13,602	92%	15,523	92%	-	0%
Industrial	-	0%	-	0%	-	0%	-	0%	-	0%
Public / Civic	12	0%	12	0%	12	0%	15	0%	-	0%
Educational	-	0%	-	0%	-	0%	-	0%	-	0%
Hotel / Hospitality	385	6%	385	3%	385	3%	420	2%	-	0%
Commercial Parking	-	0%	-	0%	-	0%	-	0%	-	0%
Total Jobs	6,877		13,859		14,809		16,835		-	

Employment by Type



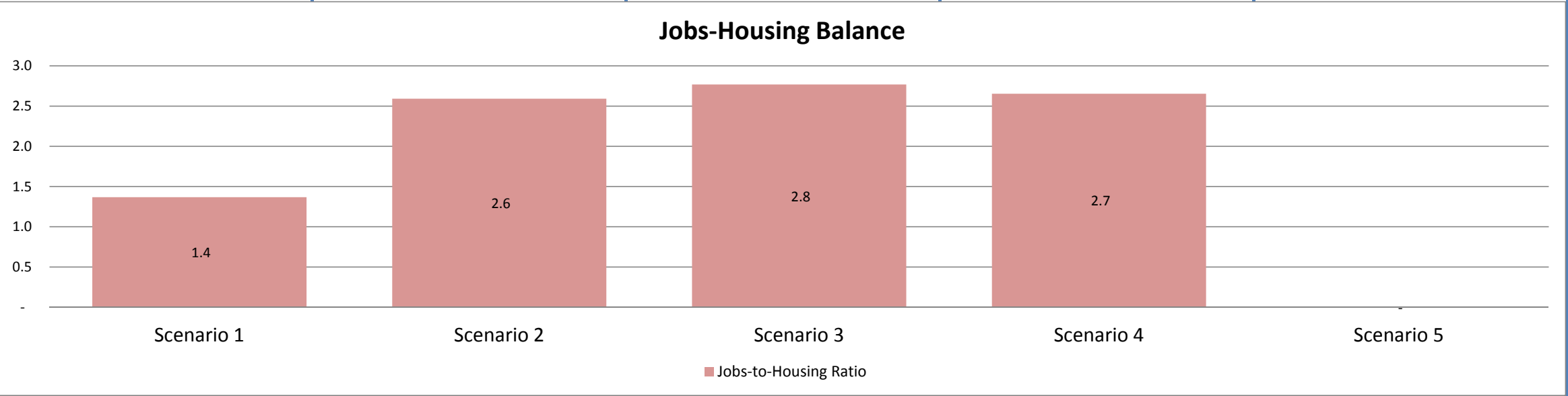
Employment Mix





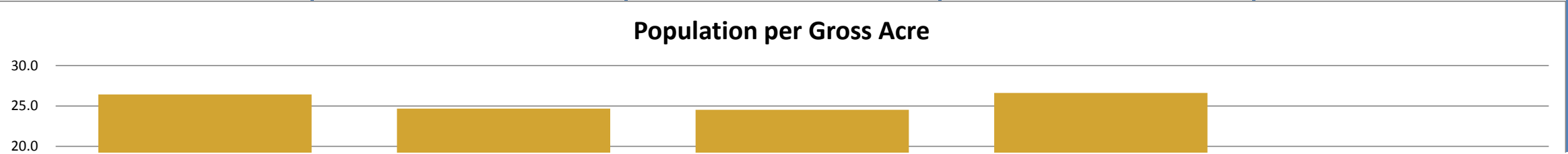
Jobs/Housing Balance

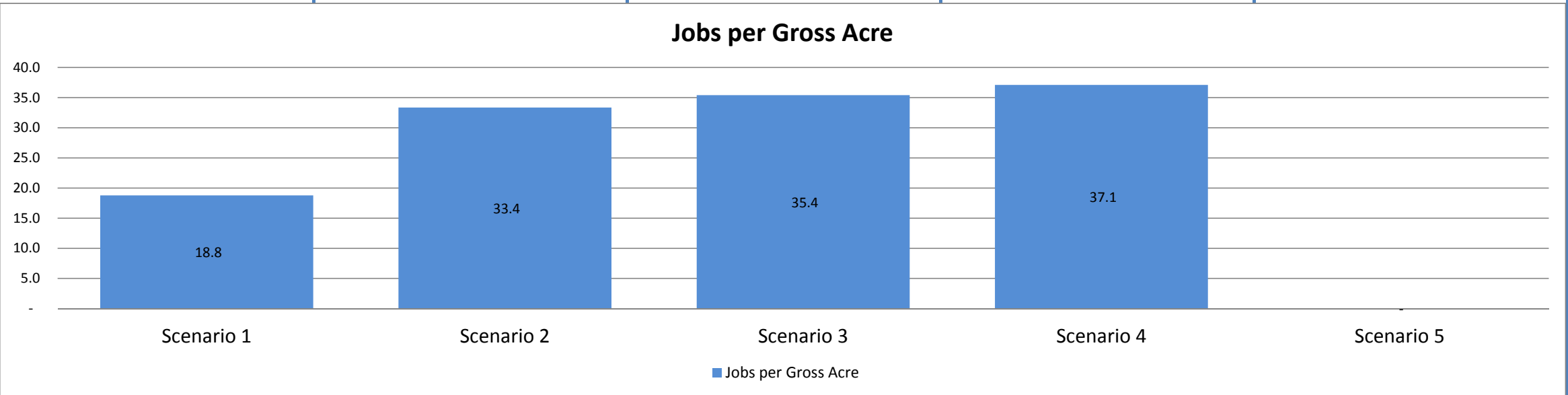
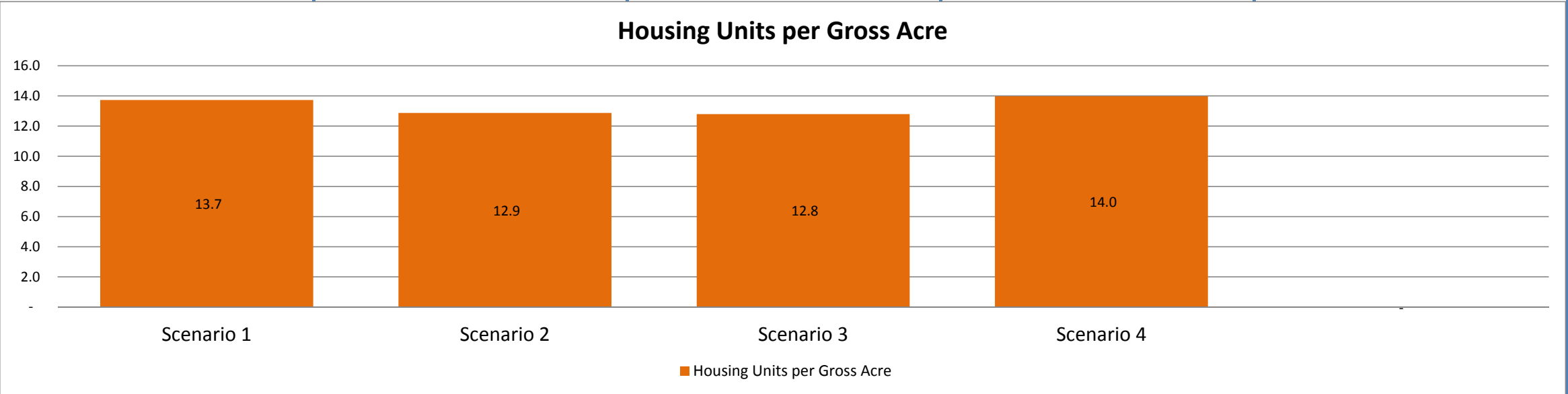
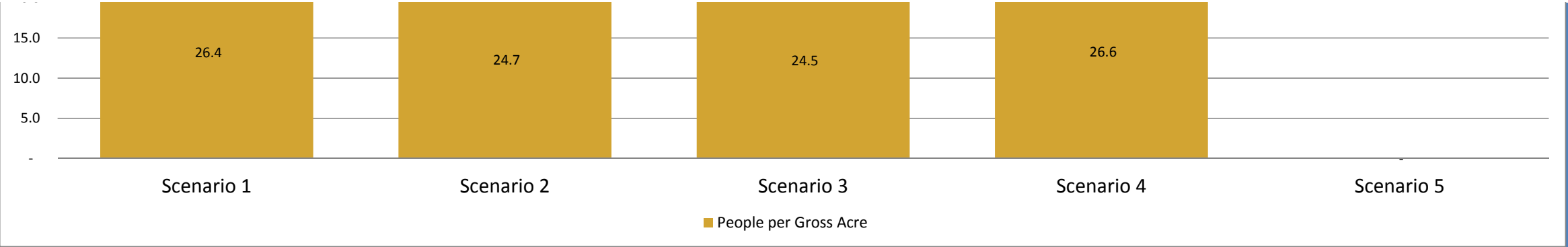
Jobs-to-Housing Ratio	1.4		2.6		2.8		2.7		-	
-----------------------	-----	--	-----	--	-----	--	-----	--	---	--

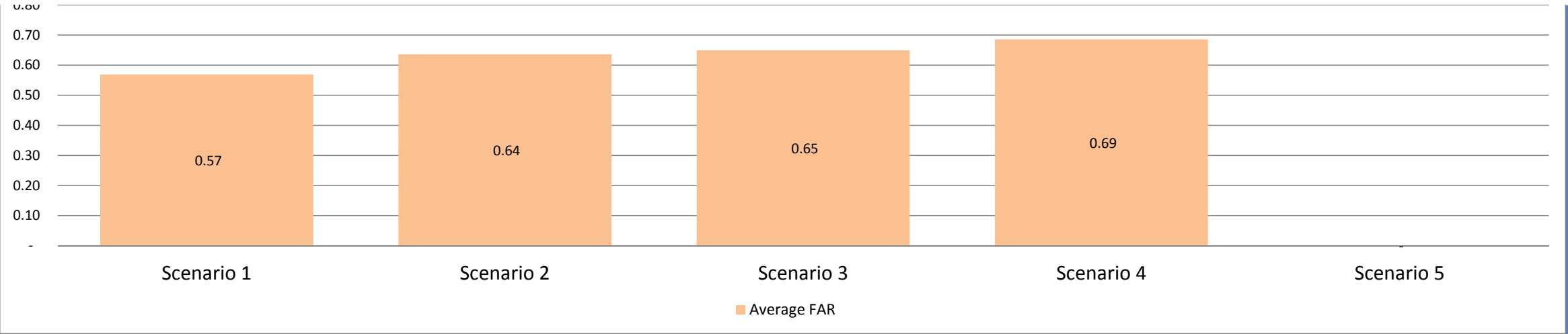


Gross Density

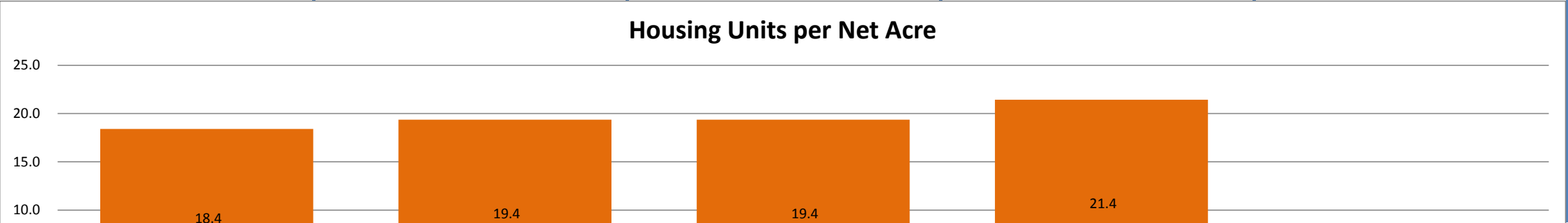
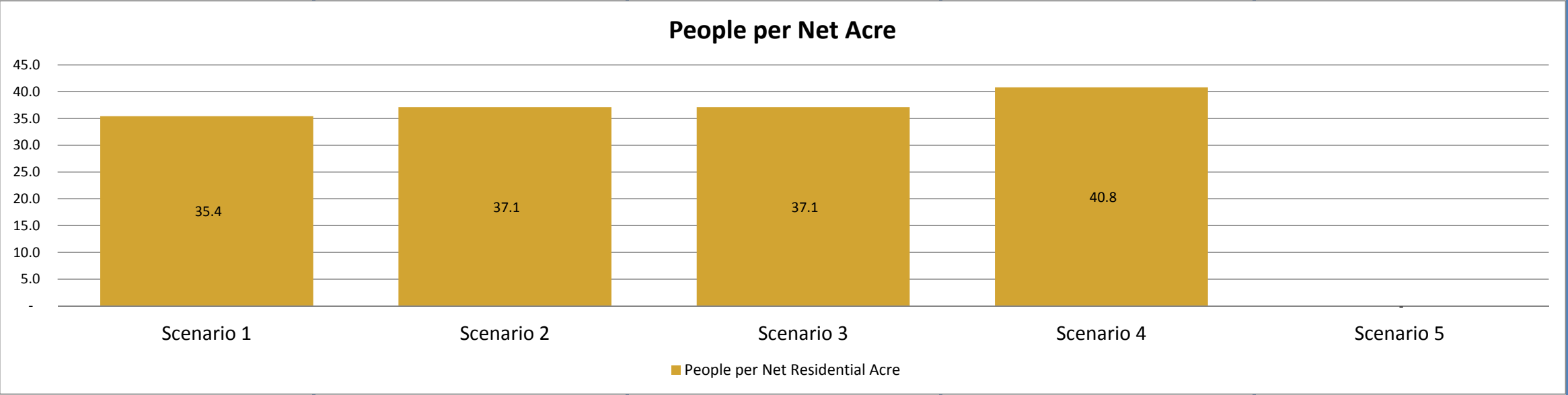
People per Gross Acre	26.4		24.7		24.5		26.6		-	
Housing Units per Gross Acre	13.7		12.9		12.8		14.0		-	
Jobs per Gross Acre	18.8		33.4		35.4		37.1		-	
Average FAR	0.57		0.64		0.65		0.69		-	

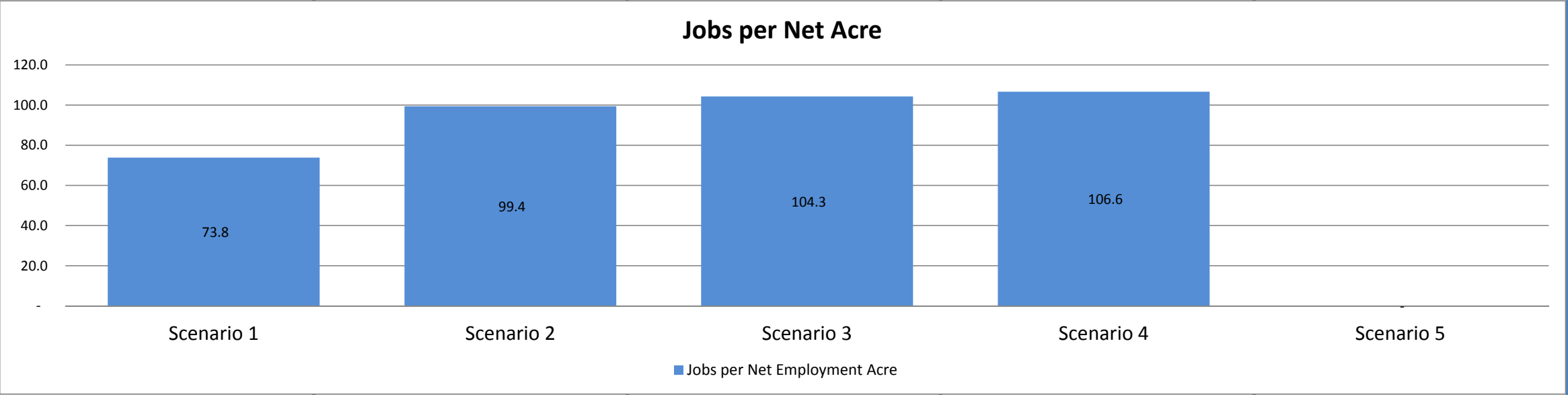
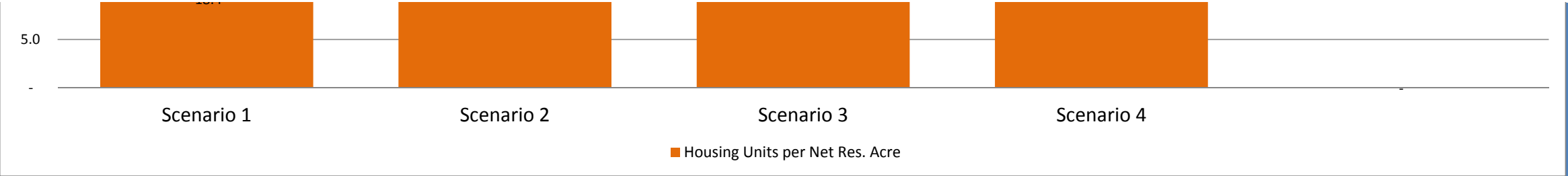




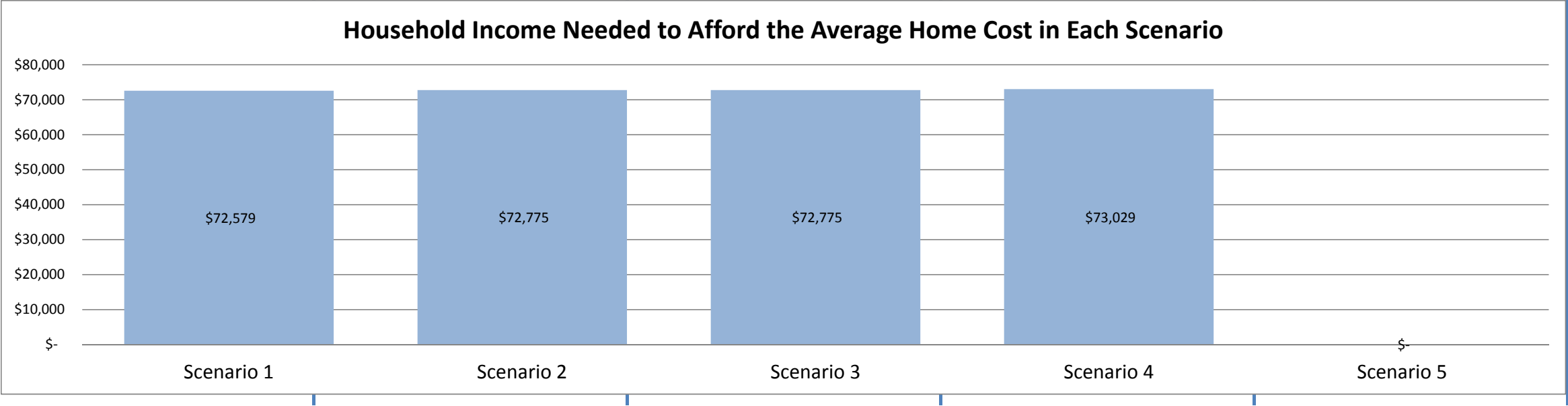


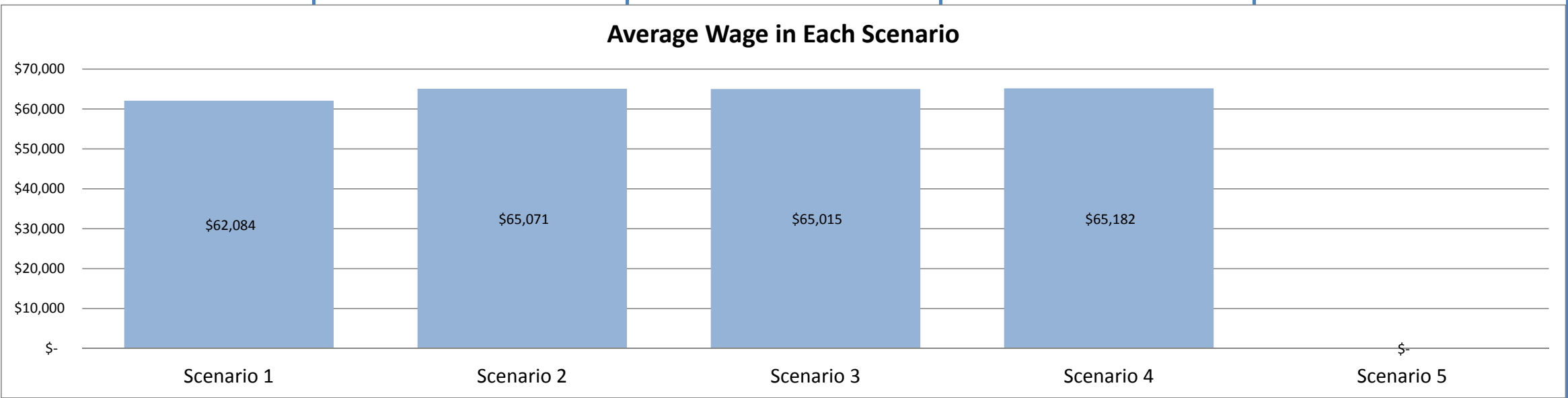
Net Density									
People per Net Residential Acre	35.4		37.1		37.1		40.8		-
Housing Units per Net Res. Acre	18.4		19.4		19.4		21.4		-
Jobs per Net Employment Acre	73.8		99.4		104.3		106.6		-





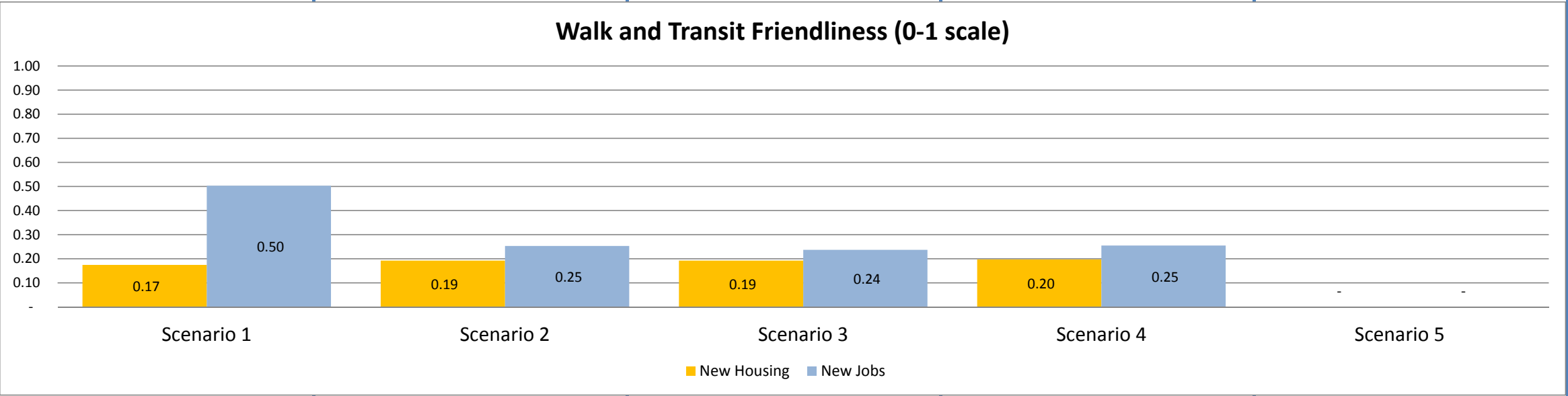
Income											
Household Income Needed to Afford Ho	\$	72,579		\$	72,775		\$	73,029		\$	-
Average Wage per Employee	\$	62,084		\$	65,071		\$	65,015		\$	-





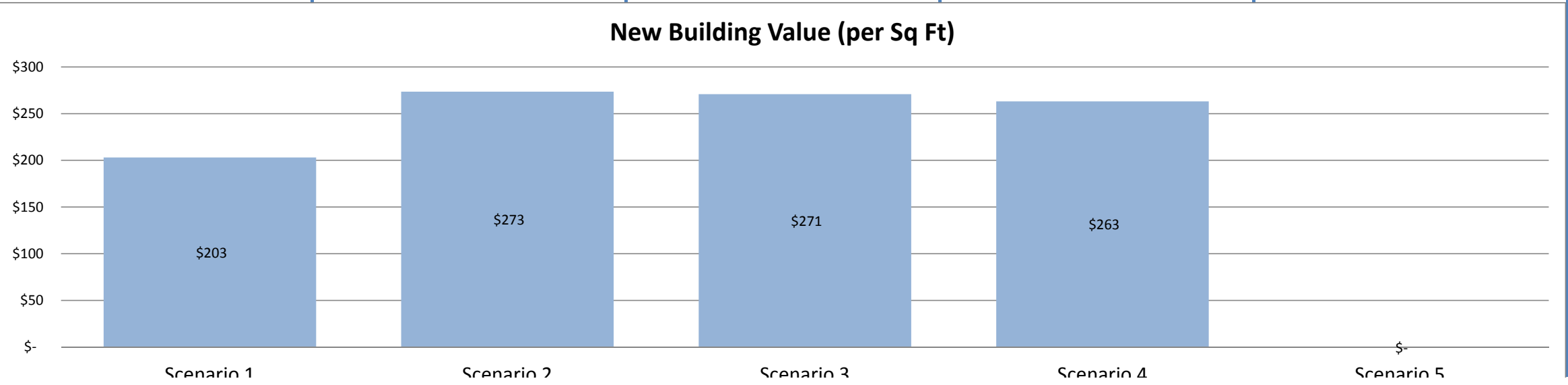
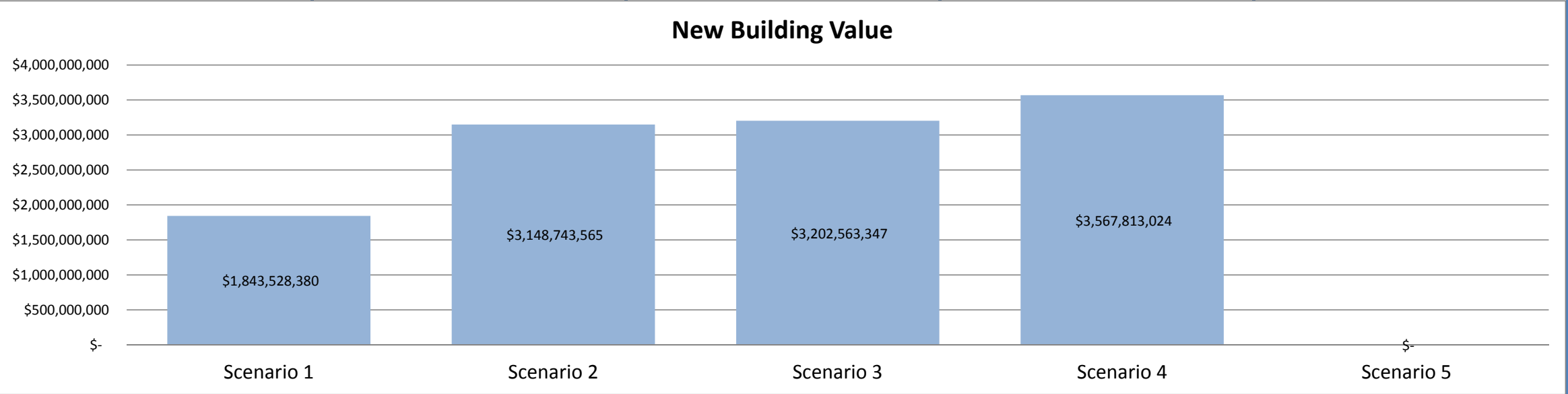
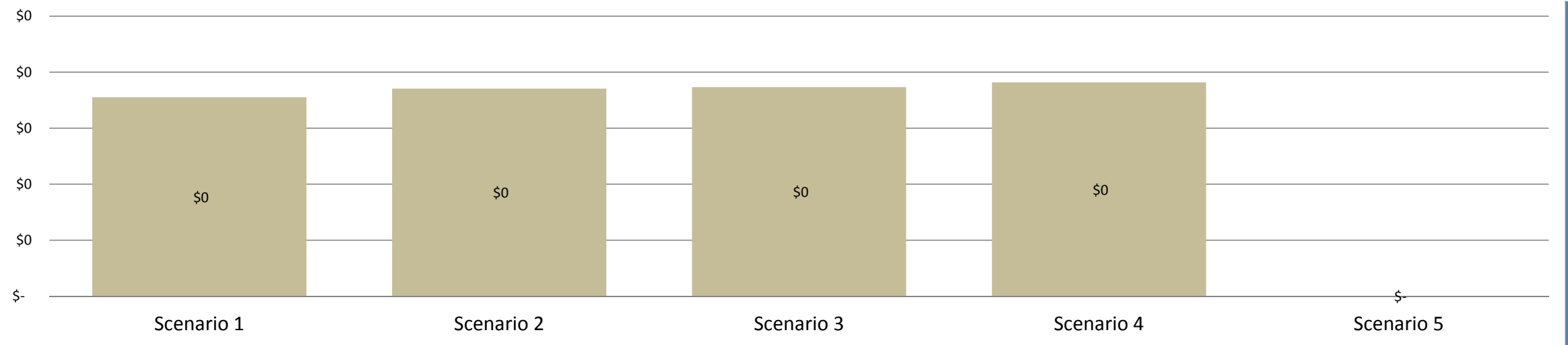
Walk and Transit Friendliness

New Housing	0.17		0.19		0.19		0.20		-	
New Jobs	0.50		0.25		0.24		0.25		-	

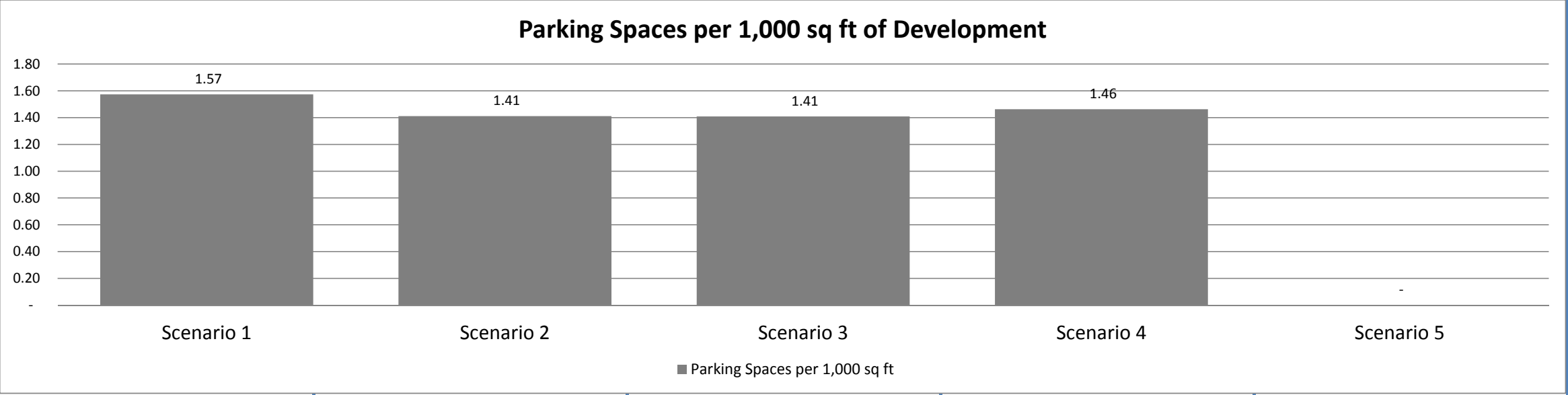
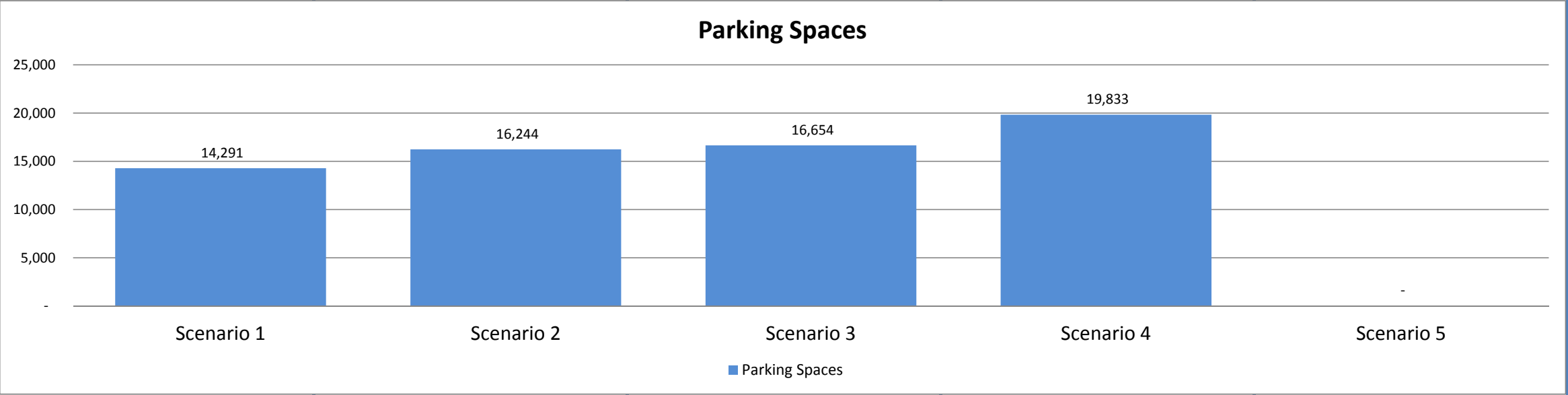


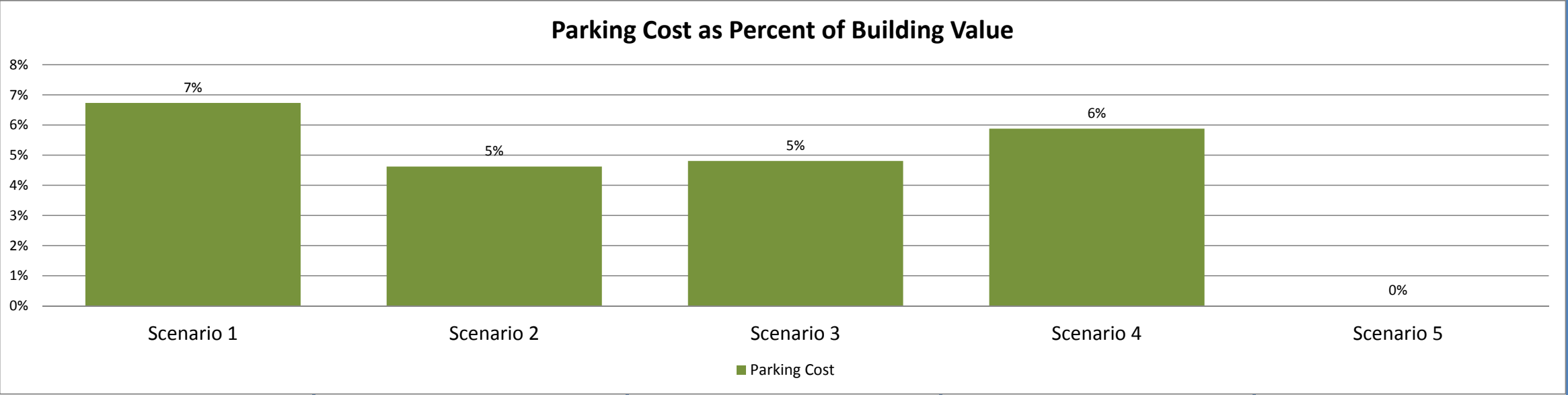
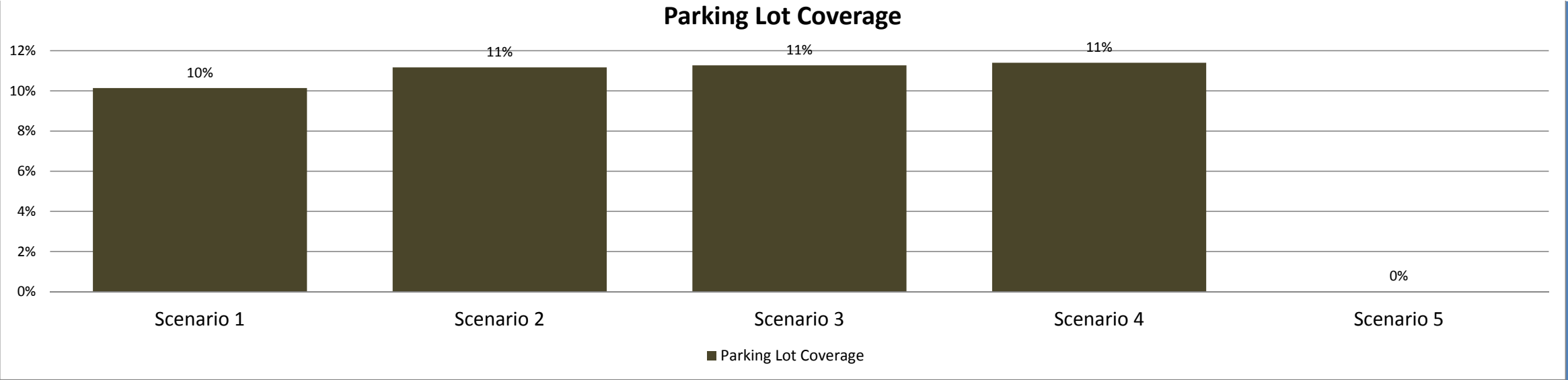
Financial	\$ @ Build Out		Avg. \$/sq ft		\$ @ Build Out		Avg. \$/sq ft		\$ @ Build Out		Avg. \$/sq ft		\$ @ Build Out		Avg. \$/sq ft		\$ @ Build Out		Avg. \$/sq ft	
Land Cost	\$	306,389,928	\$	0	\$	329,297,660	\$	0	\$	331,648,279	\$	0	\$	355,274,707	\$	0	\$	-	\$	-
Improvement Value	\$	1,843,528,380	\$	203	\$	3,148,743,565	\$	273	\$	3,202,563,347	\$	271	\$	3,567,813,024	\$	263	\$	-	\$	-

Avg. Land Cost (per Sq Ft)



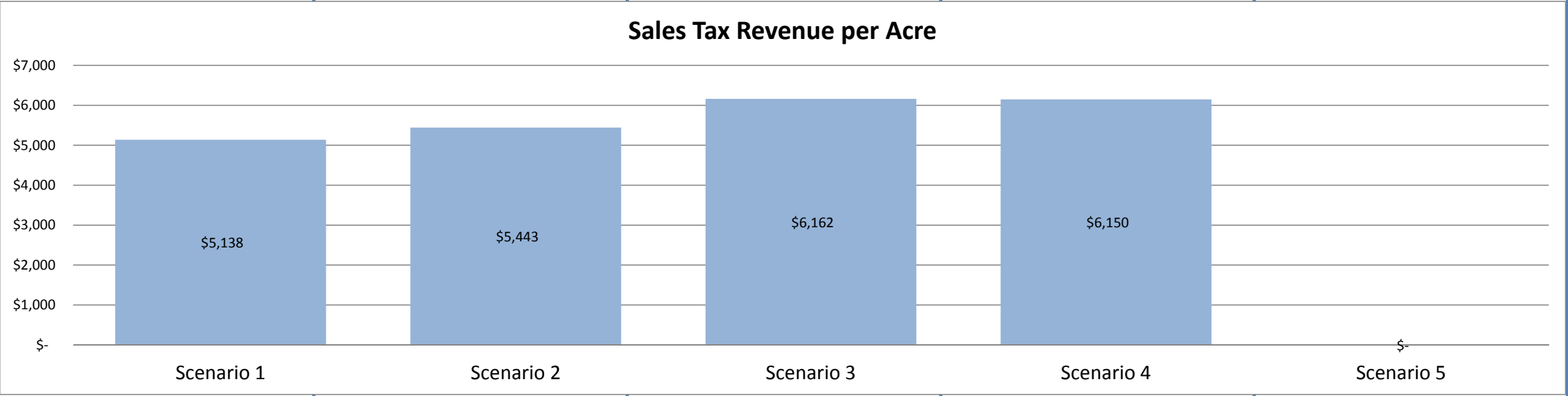
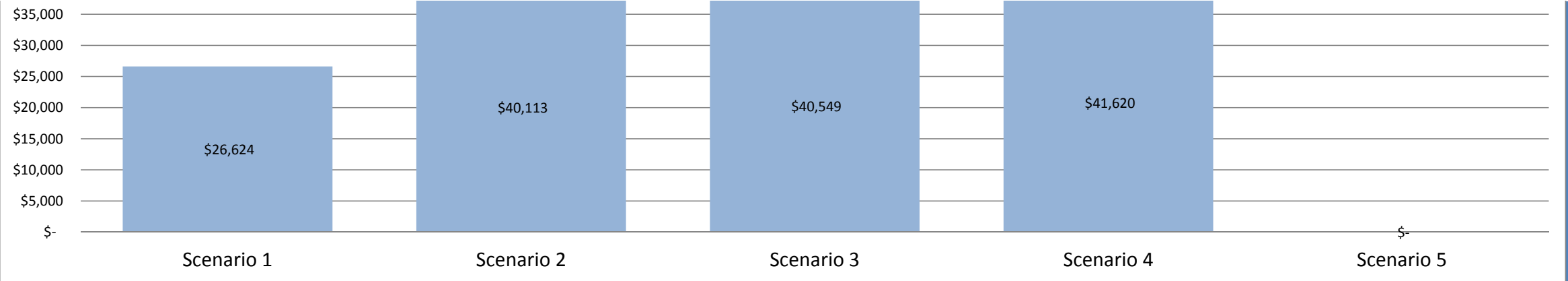
Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5	
Subsidy									
\$	\$/unit	\$	\$/unit	\$	\$/unit	\$	\$/unit	\$	\$/unit
\$	-	\$	-	\$	-	\$	-	\$	-
Parking									
% of Total		% of Total		% of Total		% of Total		% of Total	
Parking Spaces	14,291		16,244		16,654		19,833		-
Parking Spaces per 1,000 sq ft	1.57		1.41		1.41		1.46		-
Parking Lot Coverage		10%		11%		11%		11%	
Parking Cost	\$ 124,094,997	7%	\$ 145,518,792	5%	\$ 154,010,431	5%	\$ 209,794,331	6%	\$ -



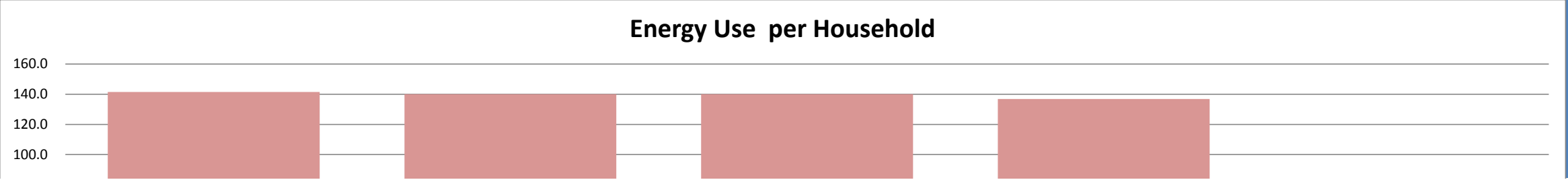


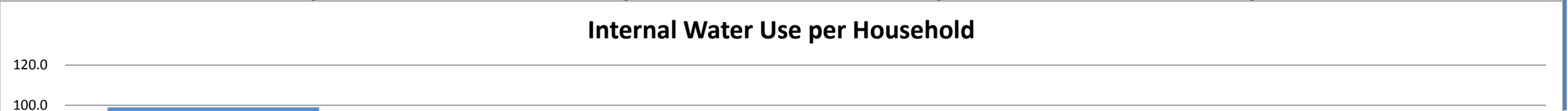
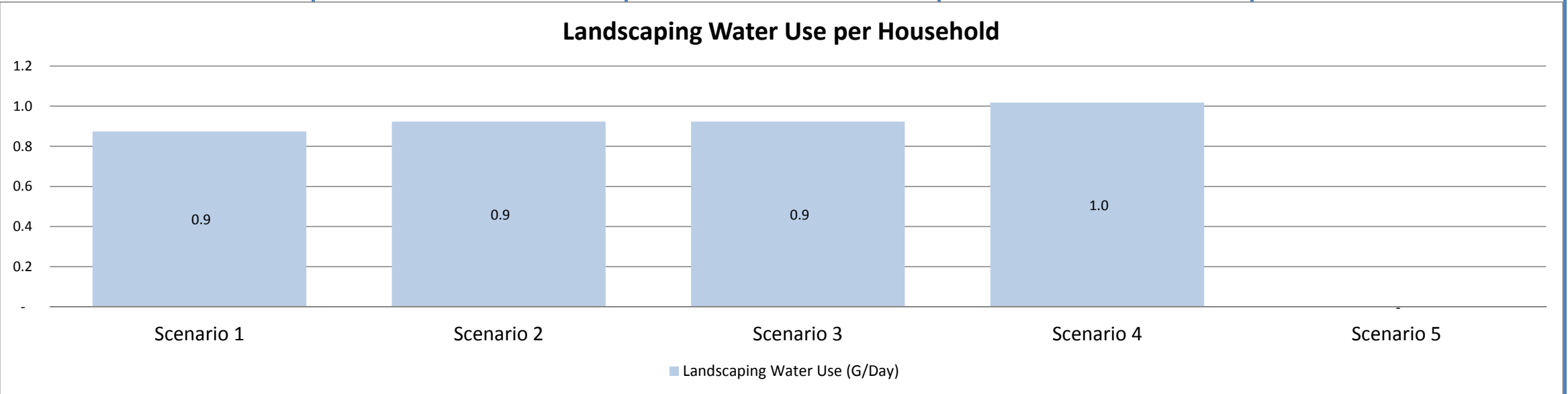
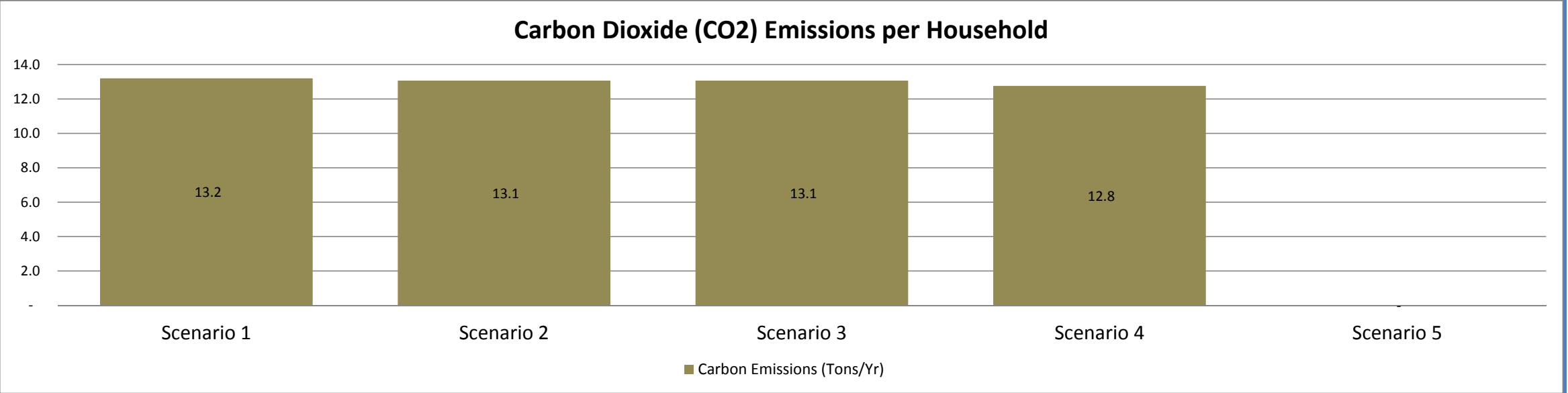
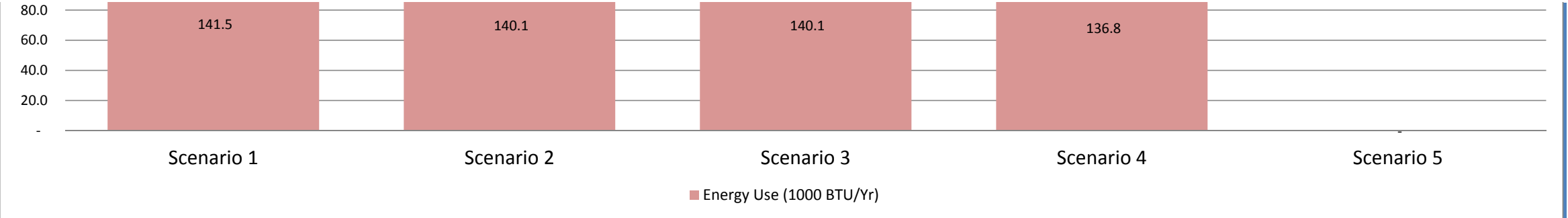
New Infrastructure			Lane Miles		\$	Lane Miles		\$	Lane Miles		\$	Lane Miles		\$	Lane Miles		\$
Total New Road Lane Miles			-		\$ -	-		\$ -	-		\$ -	-		\$ -	-		\$ -
Publicly Financed New Road Lane Miles			-		\$ -	-		\$ -	-		\$ -	-		\$ -	-		\$ -
Fiscal			\$ /yr		\$ /acre	\$ /yr		\$ /acre	\$ /yr		\$ /acre	\$ /yr		\$ /acre	\$ /yr		\$ /acre
Property Tax Revenue			\$	9,748,195	\$ 26,624	\$	16,665,836	\$ 40,113	\$	16,951,081	\$ 40,549	\$	18,881,660	\$ 41,620	\$	-	\$ -
Sales Tax Revenue			\$	1,881,322	\$ 5,138	\$	2,261,353	\$ 5,443	\$	2,576,021	\$ 6,162	\$	2,789,982	\$ 6,150	\$	-	\$ -

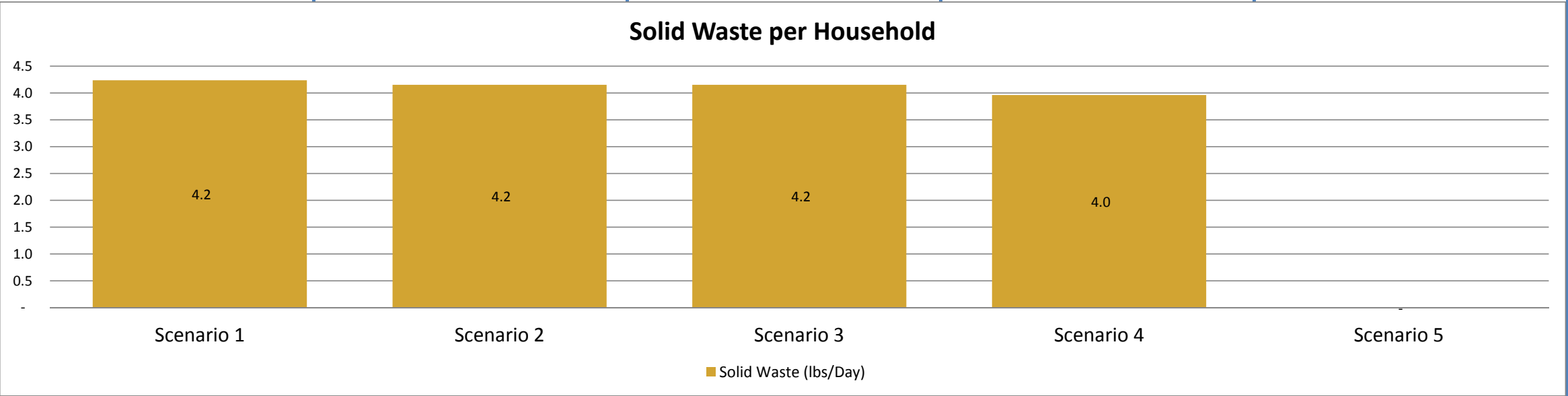
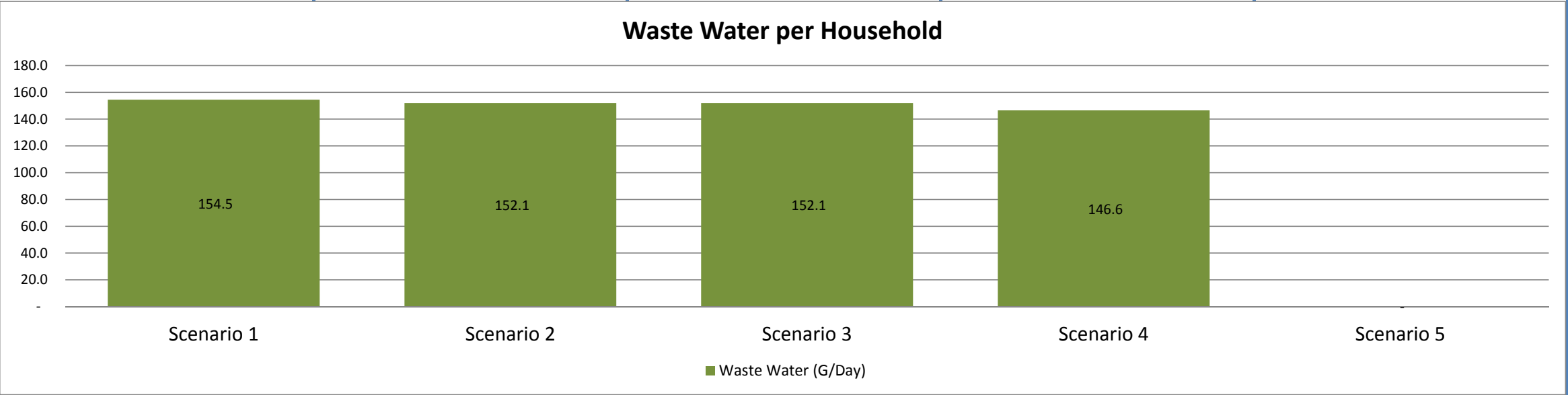
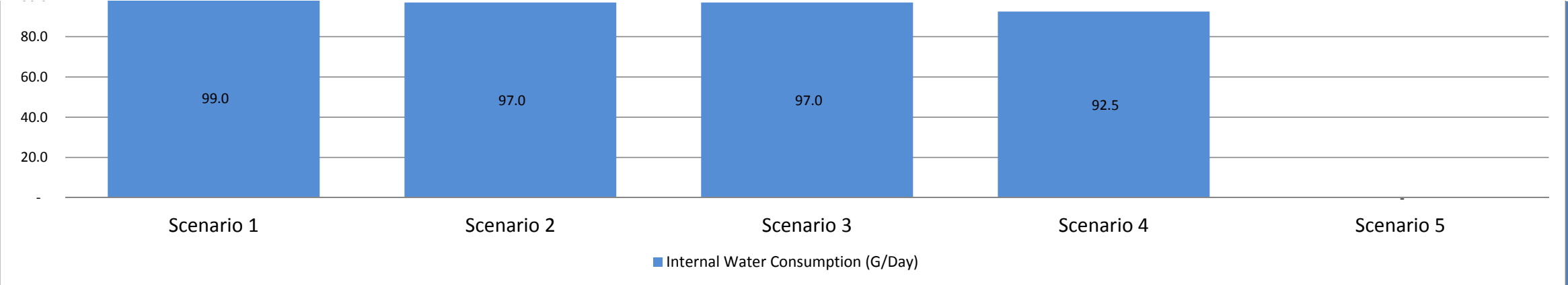




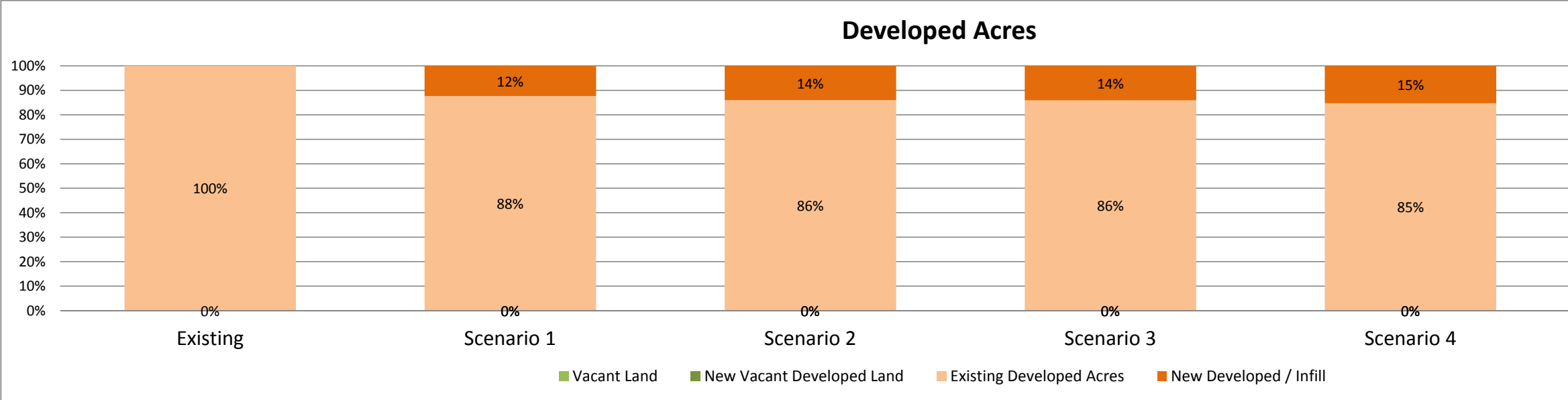
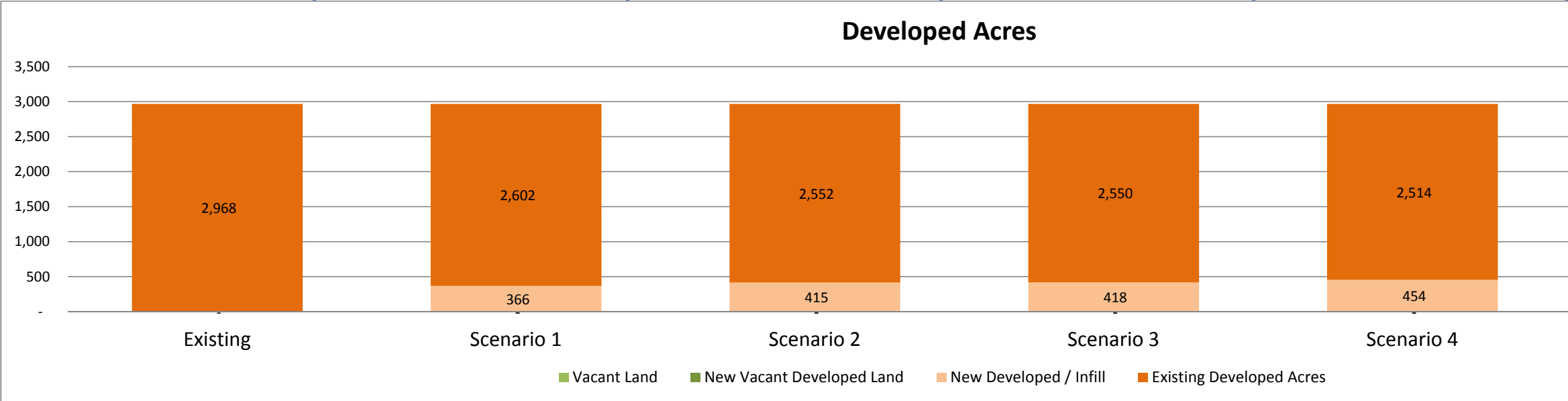
Sustainability	Per HH		Per Emp		Per HH		Per Emp		Per HH		Per Emp		Per HH		Per Emp	
Energy Use (1000 BTU/Yr)	141.5	15.9	140.1	14.3	140.1	14.6	136.8	14.5	-	-	-	-	-	-	-	-
Carbon Emissions (Tons/Yr)	13.2	1.5	13.1	1.3	13.1	1.4	12.8	1.3	-	-	-	-	-	-	-	-
Landscaping Water Use (G/Day)	0.9		0.9		0.9		1.0		-	-	-	-	-	-	-	-
Internal Water Consumption (G/Day)	99.0	96.6	97.0	101.0	97.0	101.1	92.5	101.3	-	-	-	-	-	-	-	-
Waste Water (G/Day)	154.5	45.2	152.1	47.0	152.1	47.1	146.6	47.2	-	-	-	-	-	-	-	-
Solid Waste (lbs/Day)	4.2	3.4	4.2	3.5	4.2	3.5	4.0	3.5	-	-	-	-	-	-	-	-



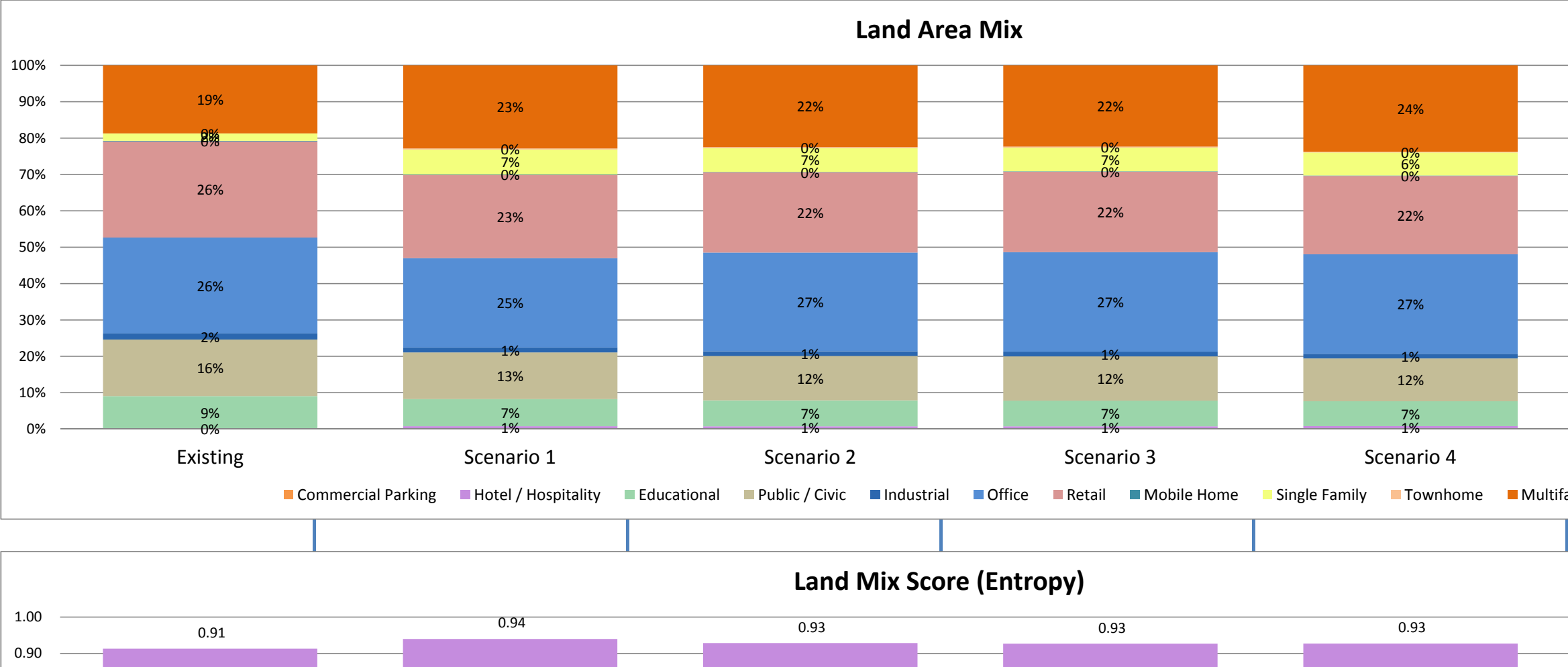


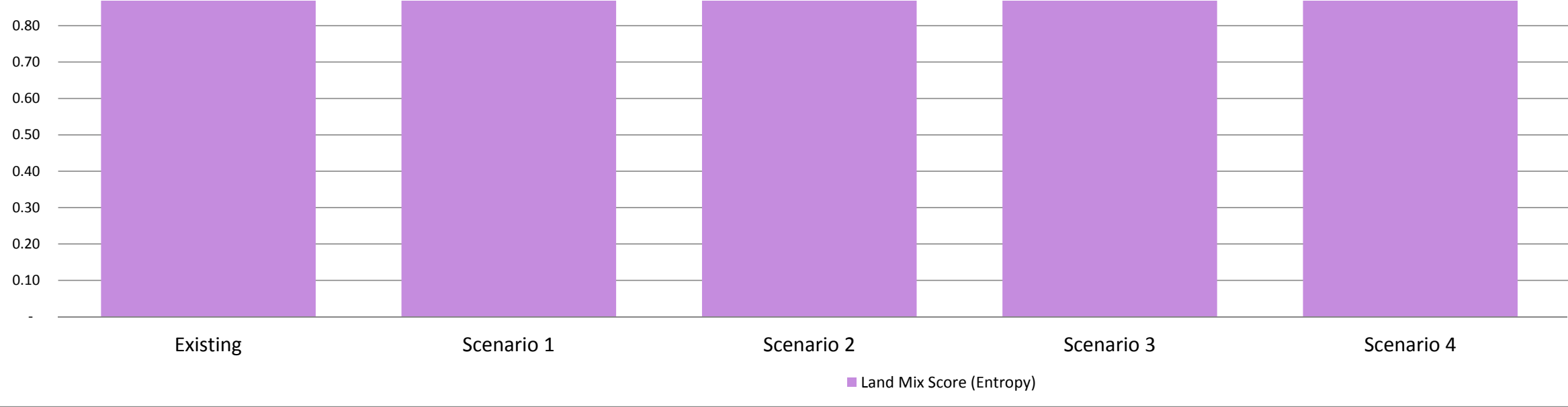


		Existing	Scenario 1		Scenario 2		Scenario 3		Scenario 4	
Developed Acres										
Vacant Land	-	0%	-	0%	-	0%	-	0%	-	0%
New Vacant Developed Land			-	0%	-	0%	-	0%	-	0%
Existing Developed Acres	2,968	100%	2,602	88%	2,552	86%	2,550	86%	2,514	85%
New Developed / Infill			366	12%	415	14%	418	14%	454	15%
Total Acres	2,968		2,968		2,968		2,968		2,968	

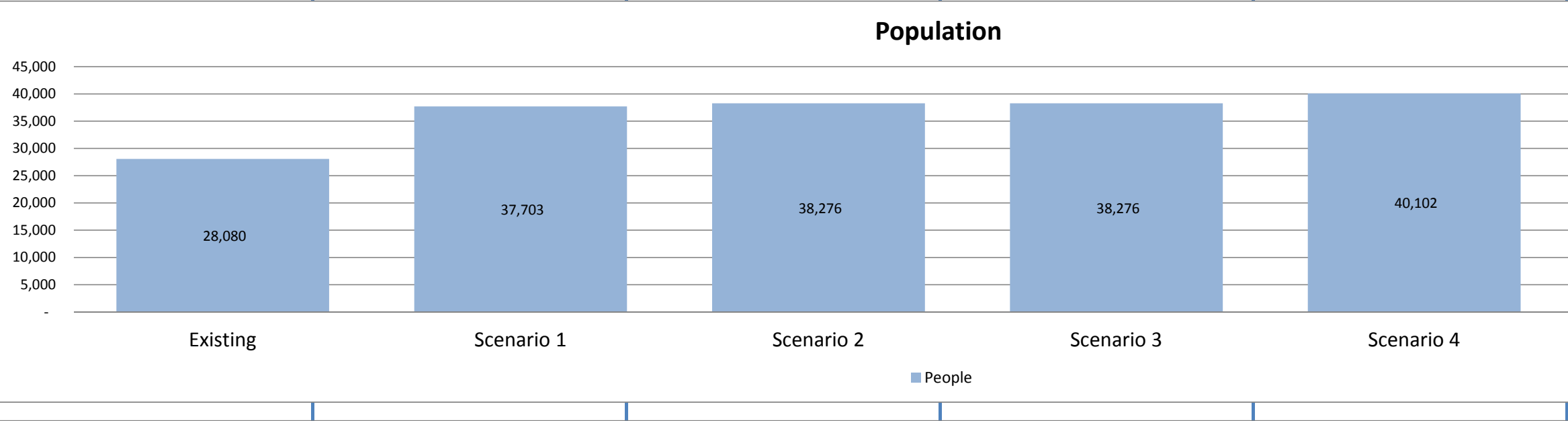


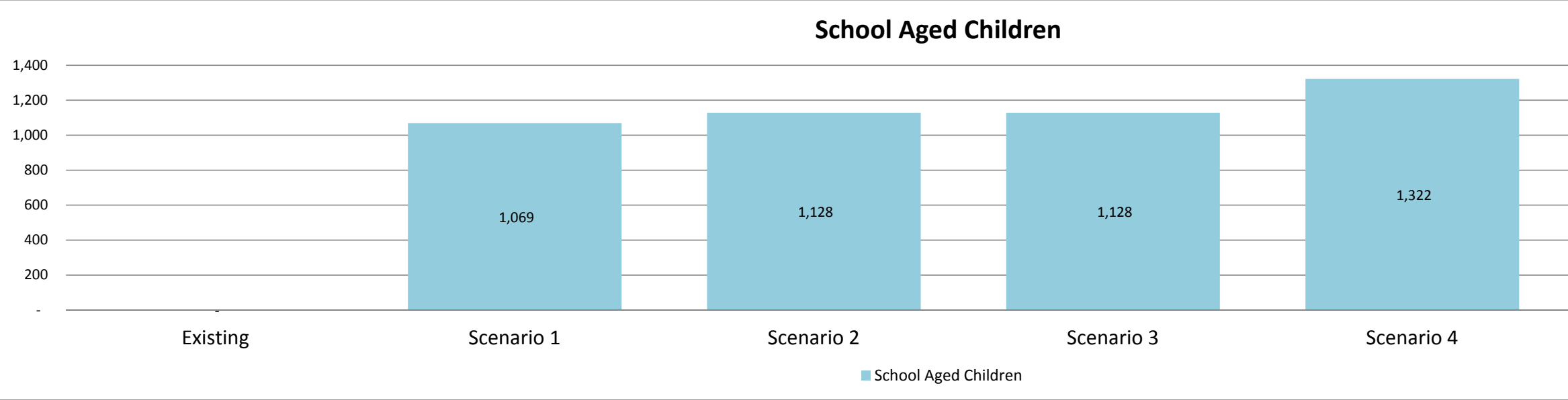
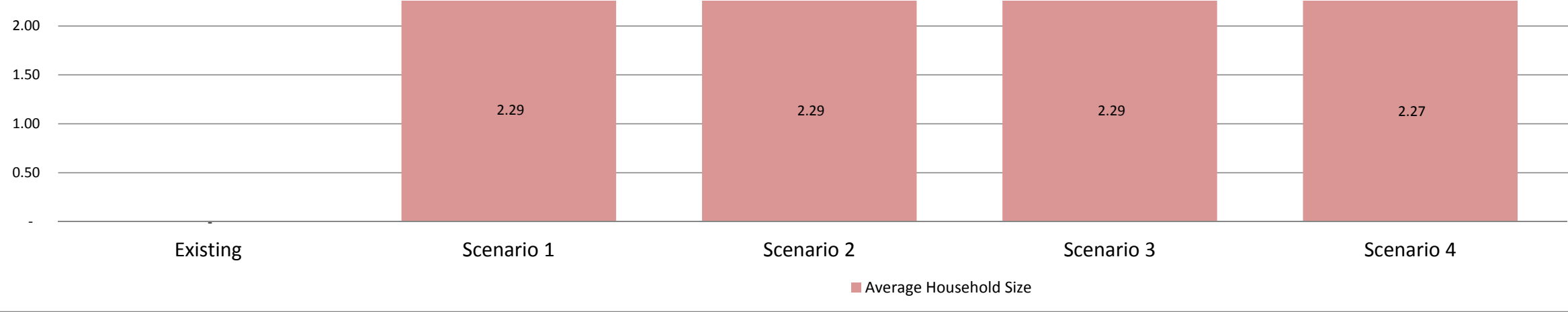
Land Area Mix (Sq Ft)										
Multifamily	7,782,742	19%	11,585,745	23%	11,943,784	22%	11,943,784	22%	13,084,077	24%
Townhome	-	0%	139,461	0%	139,461	0%	139,461	0%	139,461	0%
Single Family	857,398	2%	3,488,220	7%	3,488,220	7%	3,488,220	7%	3,488,220	6%
Mobile Home	65,587	0%	65,587	0%	65,587	0%	65,587	0%	65,587	0%
Retail	11,003,660	26%	11,595,270	23%	11,714,777	22%	11,813,729	22%	11,881,012	22%
Office	10,971,729	26%	12,453,989	25%	14,409,624	27%	14,622,529	27%	15,102,724	27%
Industrial	700,326	2%	700,326	1%	700,326	1%	700,326	1%	700,326	1%
Public / Civic	6,472,921	16%	6,497,793	13%	6,497,793	12%	6,497,793	12%	6,503,589	12%
Educational	3,772,753	9%	3,772,753	7%	3,772,753	7%	3,772,753	7%	3,772,753	7%
Hotel / Hospitality	-	0%	407,725	1%	407,725	1%	407,725	1%	448,298	1%
Commercial Parking	-	0%	-	0%	-	0%	-	0%	-	0%
Total	41,627,115		50,706,869		53,140,049		53,451,906		55,186,047	
Land Mix Score (Entropy)		0.91		0.94		0.93		0.93		0.93





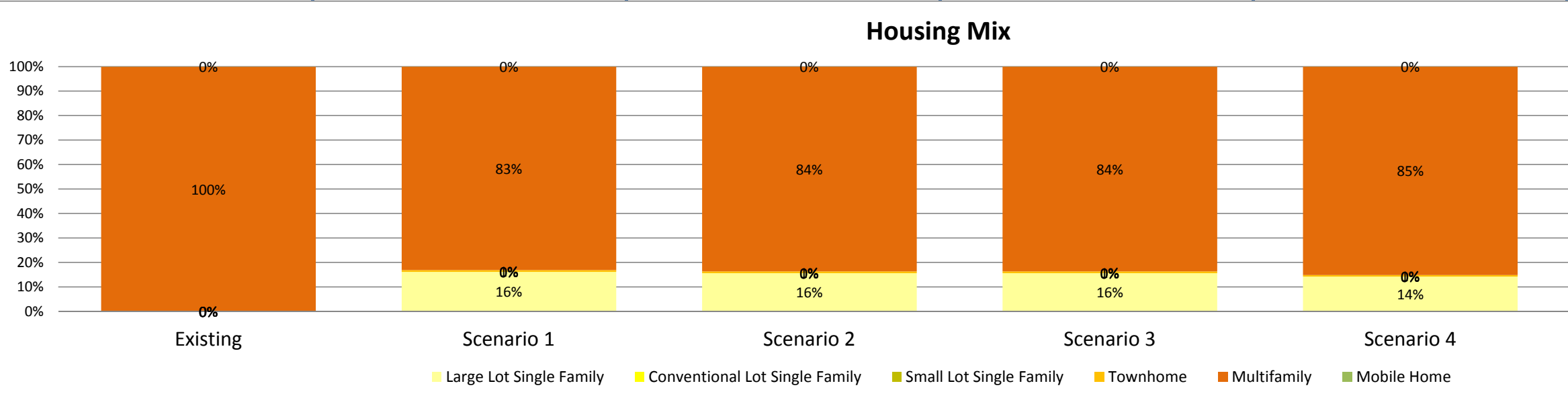
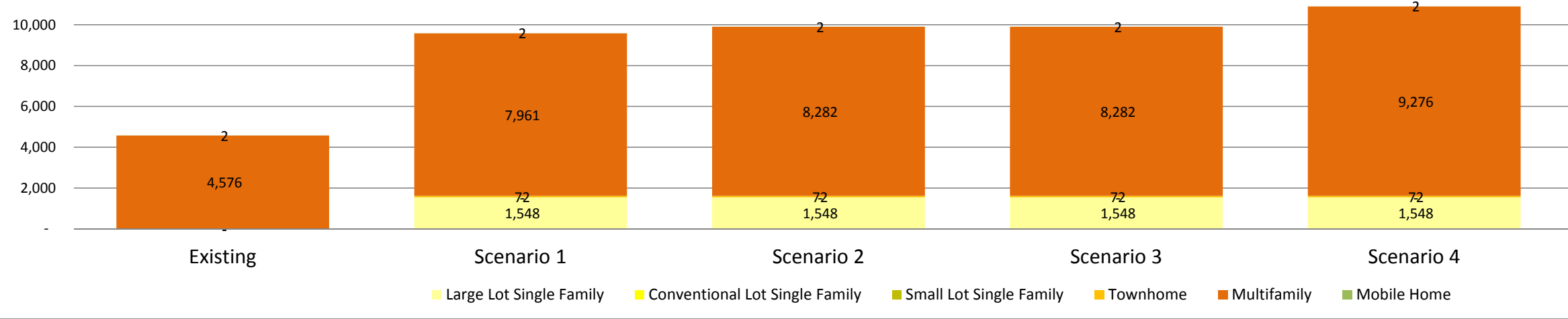
Population									
People	28,080		37,703		38,276		38,276		40,102
Households	-		16,436		16,737		16,737		17,672
Average Household Size	-		2.29		2.29		2.29		2.27
School Aged Children	-		1,069		1,128		1,128		1,322





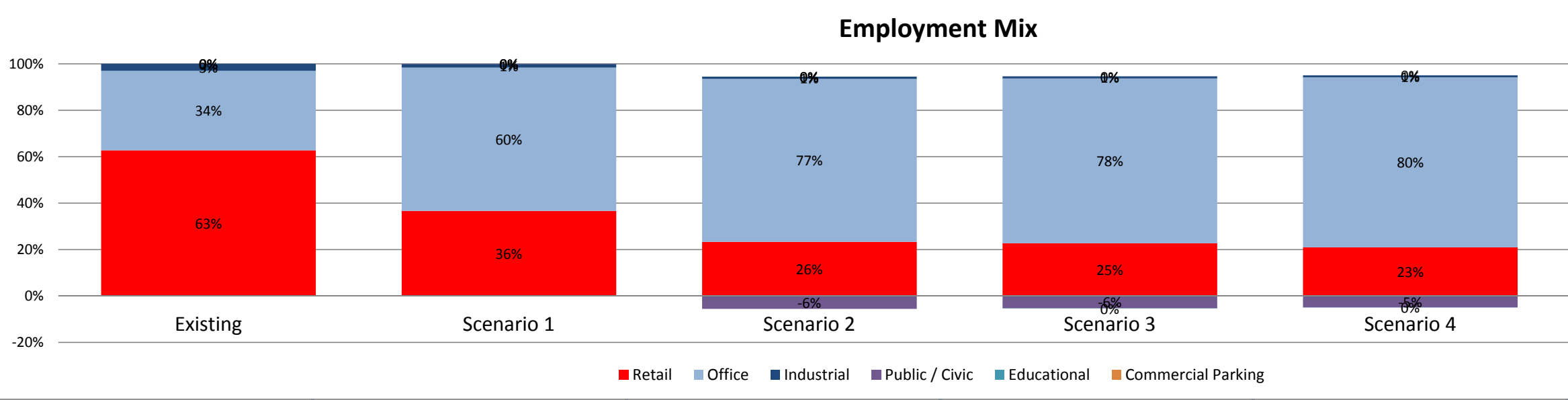
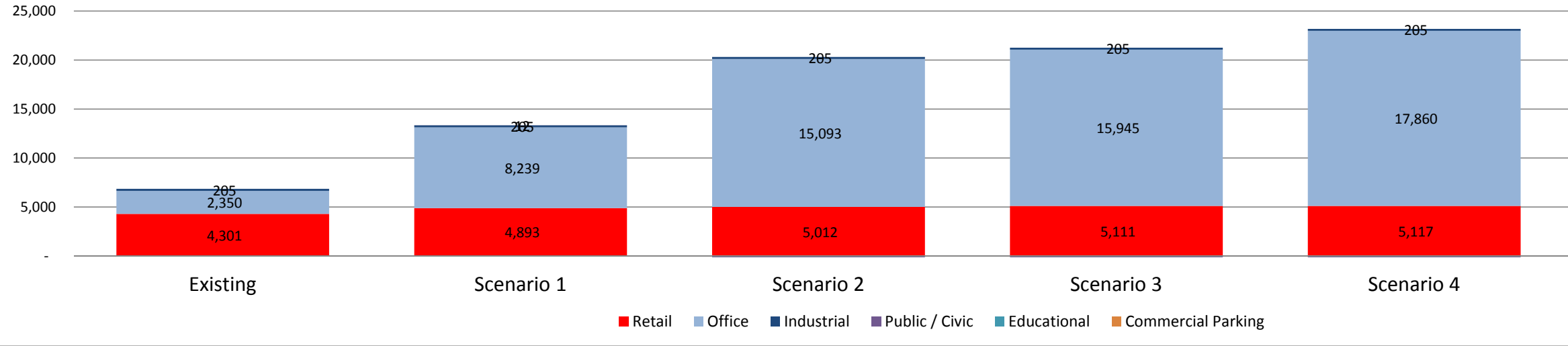
Housing Mix										
Multifamily	4,576	100%	7,961	83%	8,282	84%	8,282	84%	9,276	85%
Townhome	-	0%	72	1%	72	1%	72	1%	72	1%
Small Lot Single Family	-	0%	-	0%	-	0%	-	0%	-	0%
Conventional Lot Single Family	-	0%	-	0%	-	0%	-	0%	-	0%
Large Lot Single Family	-	0%	1,548	16%	1,548	16%	1,548	16%	1,548	14%
Mobile Home	2	0%	2	0%	2	0%	2	0%	2	0%
Total Housing Units	4,578		9,582		9,903		9,903		10,898	



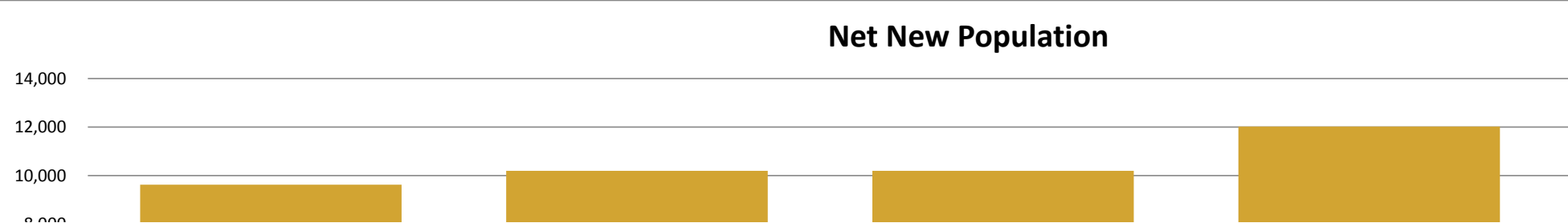


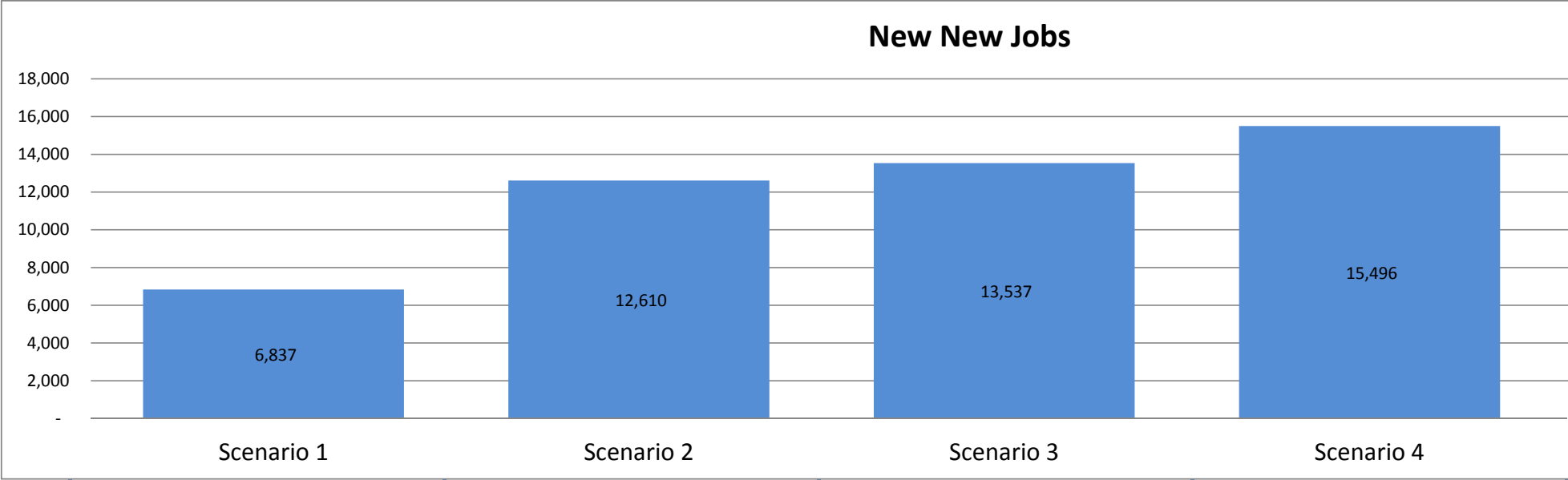
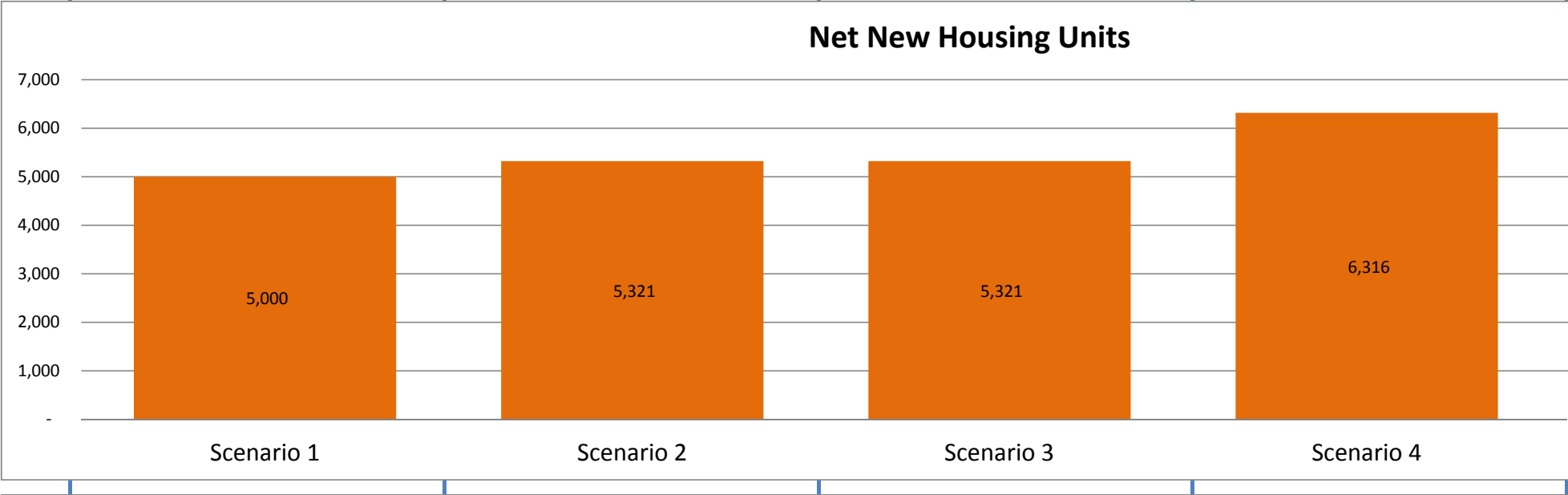
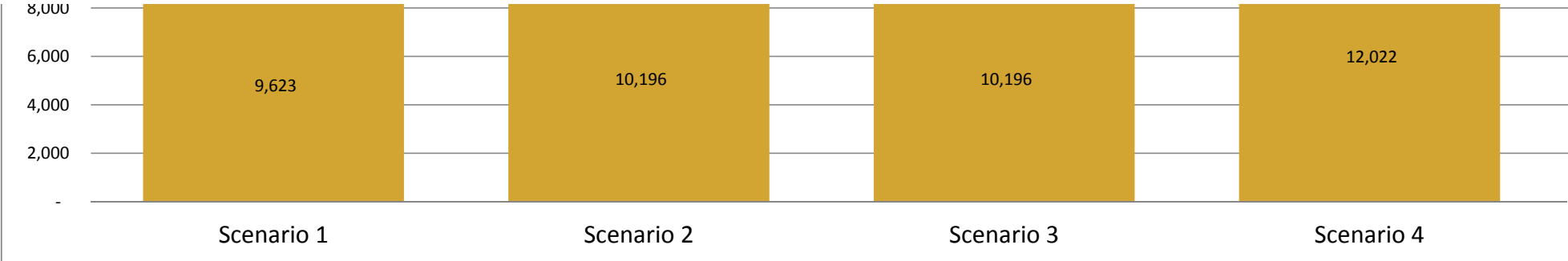
Employment Mix											
Retail	4,301	63%	4,893	36%	5,012	26%	5,111	25%	5,117	23%	
Office	2,350	34%	8,239	60%	15,093	77%	15,945	78%	17,860	80%	
Industrial	205	3%	205	1%	205	1%	205	1%	205	1%	
Public / Civic	-	0%	12	0%	(1,190)	-6%	(1,190)	-6%	(1,187)	-5%	
Educational	-	0%	-	0%	-	0%	(23)	0%	(23)	0%	
Hotel / Hospitality	-	0%	385	3%	385	2%	385	2%	420	2%	
Commercial Parking	-	0%	-	0%	-	0%	-	0%	-	0%	
Total Jobs	6,856		13,733		19,506		20,433		22,392		

Employment by Type



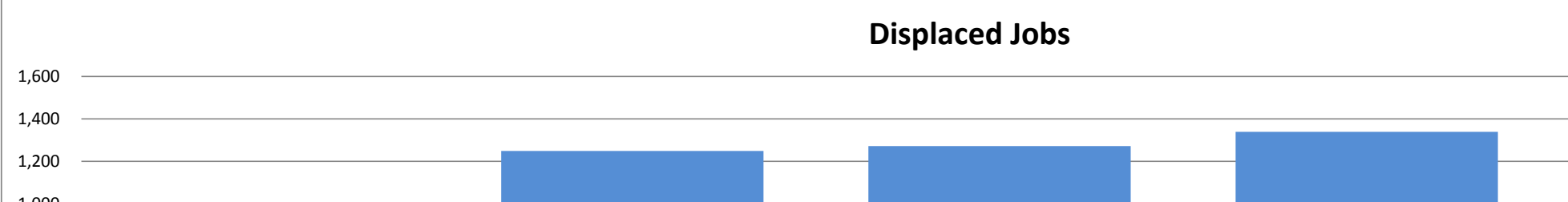
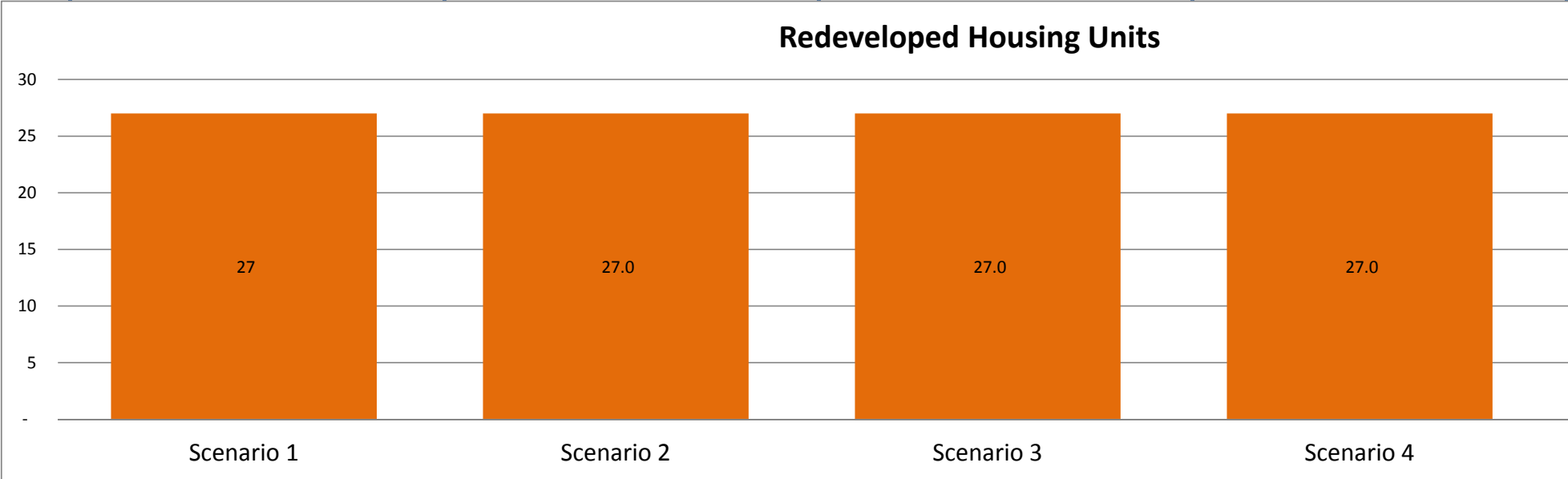
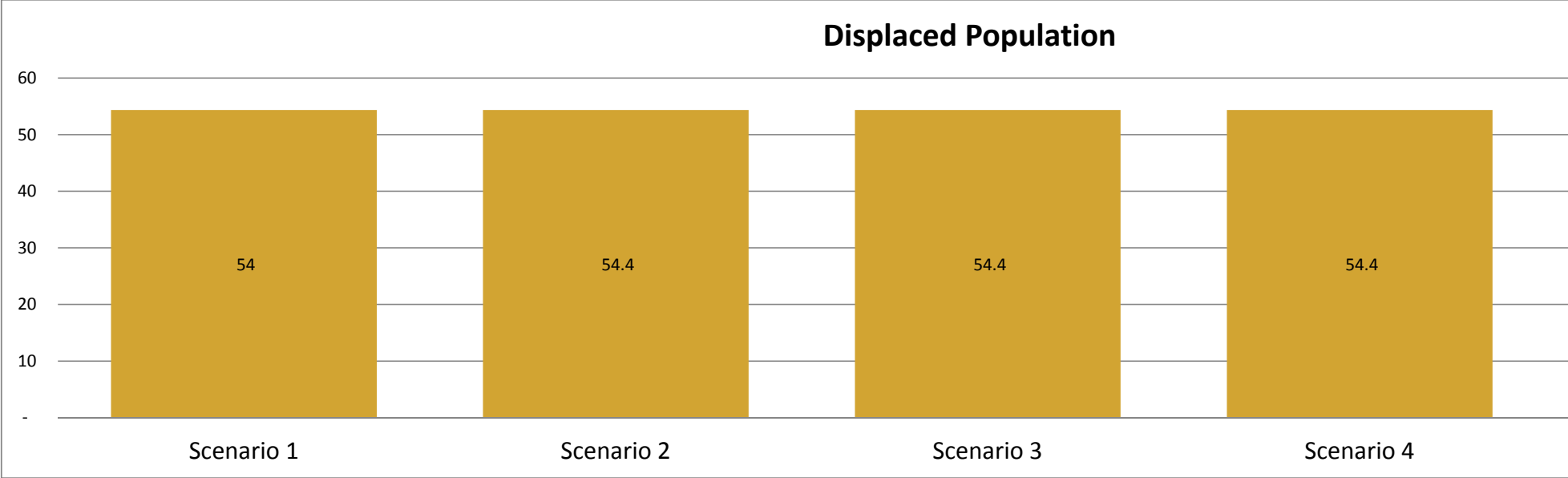
Net New Growth									
Population		9,623		10,196		10,196		12,022	
Housing Units		5,000		5,321		5,321		6,316	
Jobs		6,837		12,610		13,537		15,496	

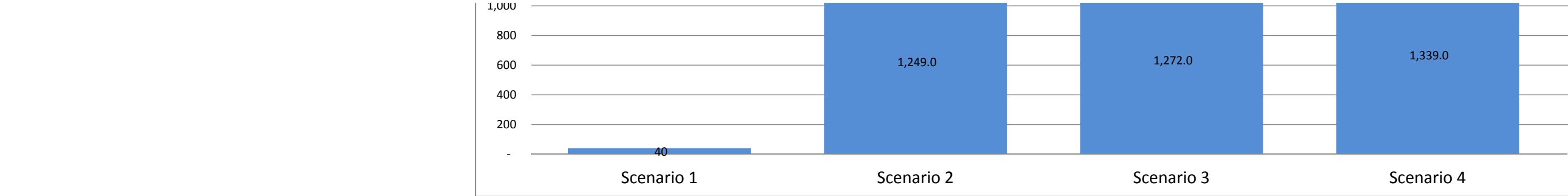




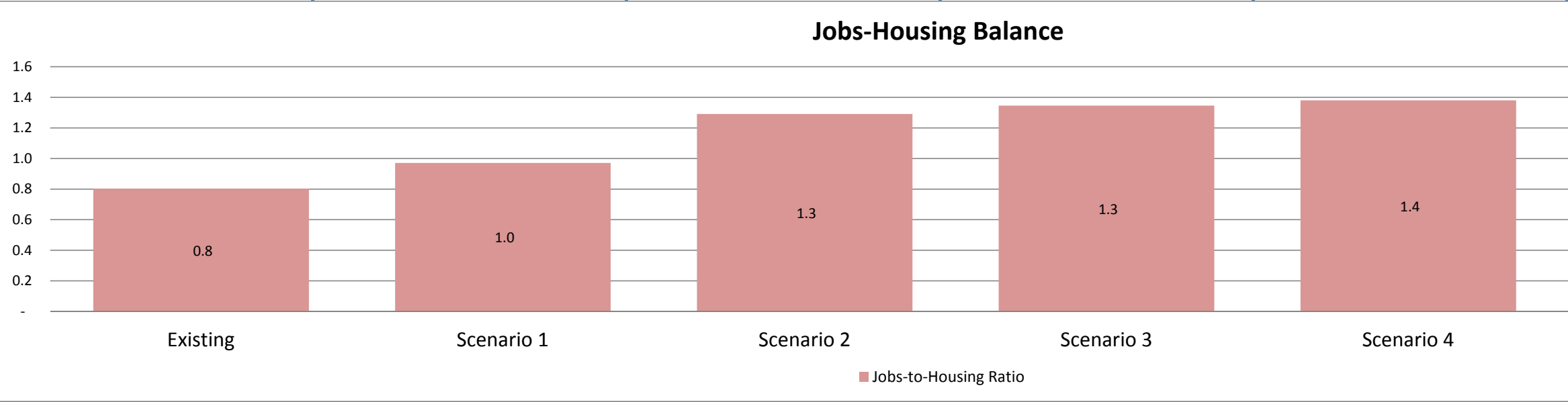
Displacement from Redevelopment

Population		54		54.4		54.4		54.4	
Housing Units		27		27.0		27.0		27.0	
Jobs		40		1,249.0		1,272.0		1,339.0	
Building Value		\$ -		\$ -		\$ -		\$ -	

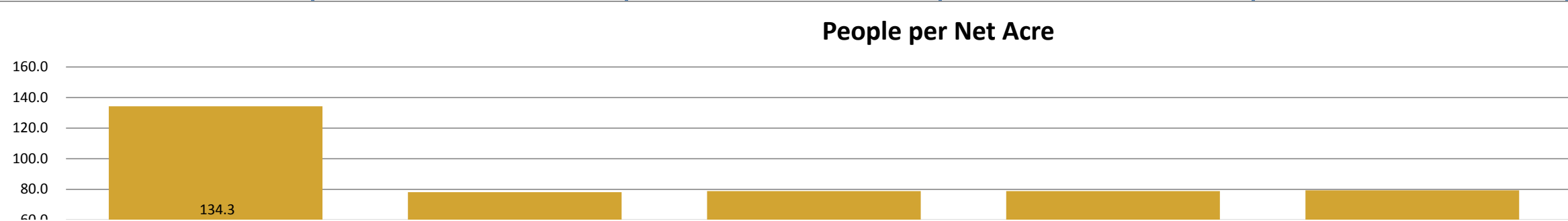


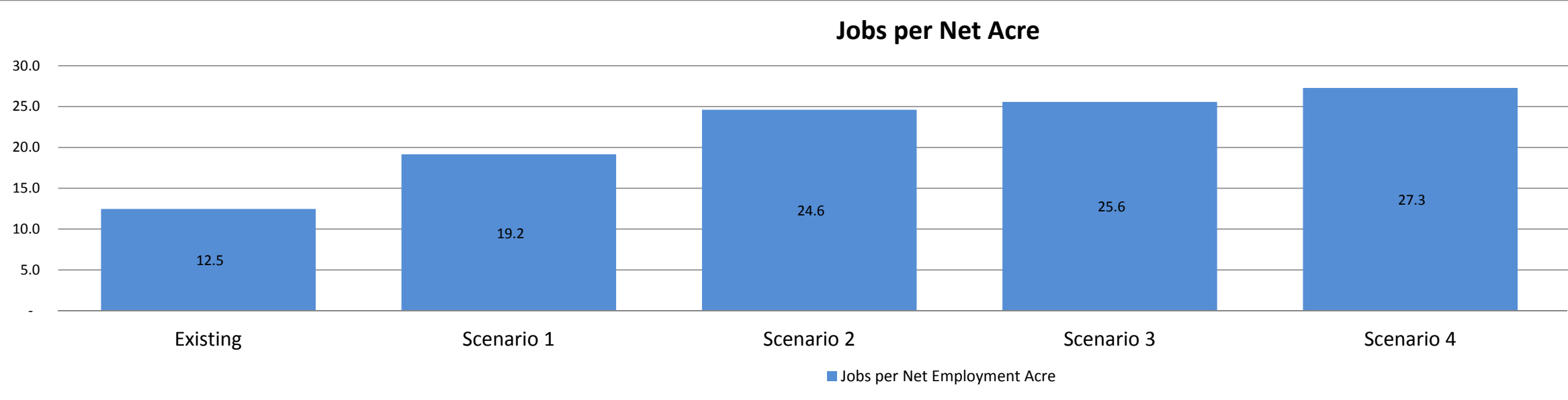
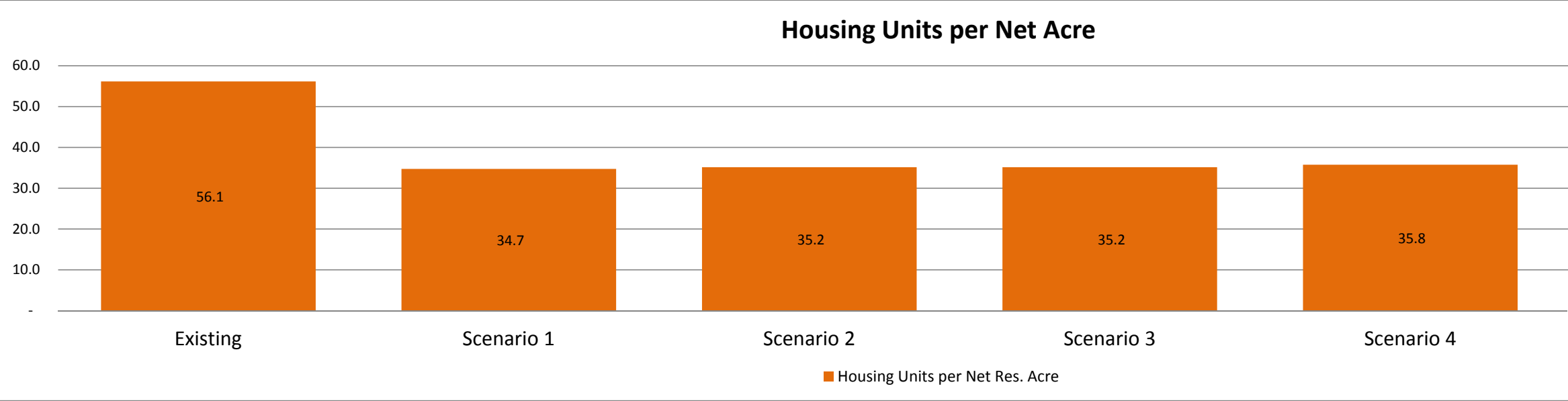
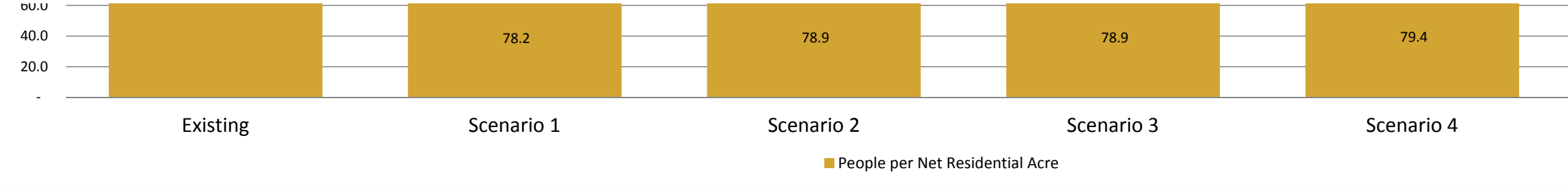


Jobs/Housing Balance									
Jobs-to-Housing Ratio	0.8		1.0		1.3		1.3		1.4



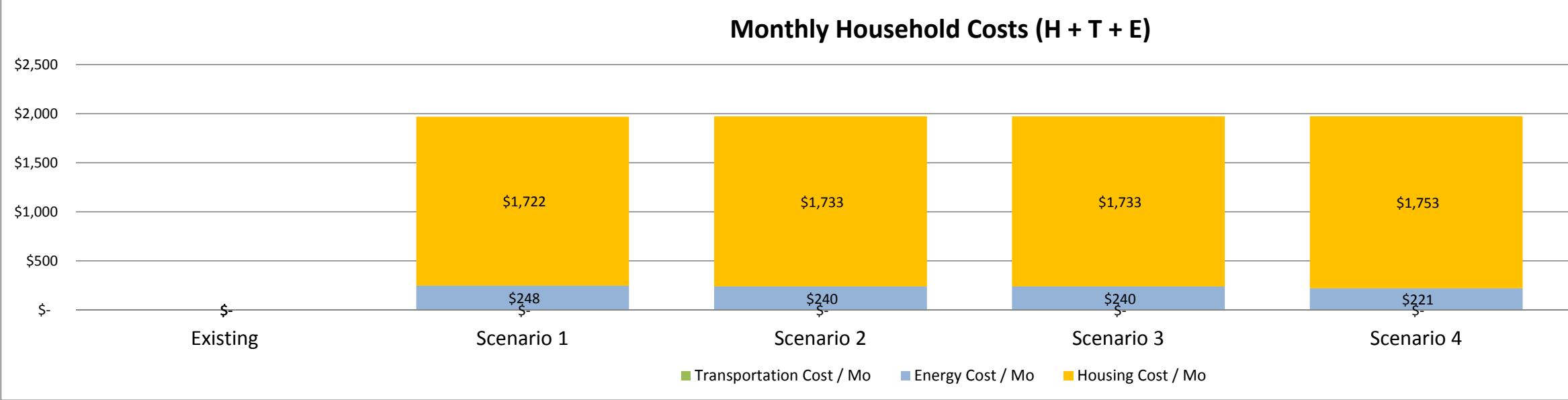
Density									
People per Net Residential Acre	134.3		78.2		78.9		78.9		79.4
Housing Units per Net Res. Acre	56.1		34.7		35.2		35.2		35.8
Jobs per Net Employment Acre	12.5		19.2		24.6		25.6		27.3



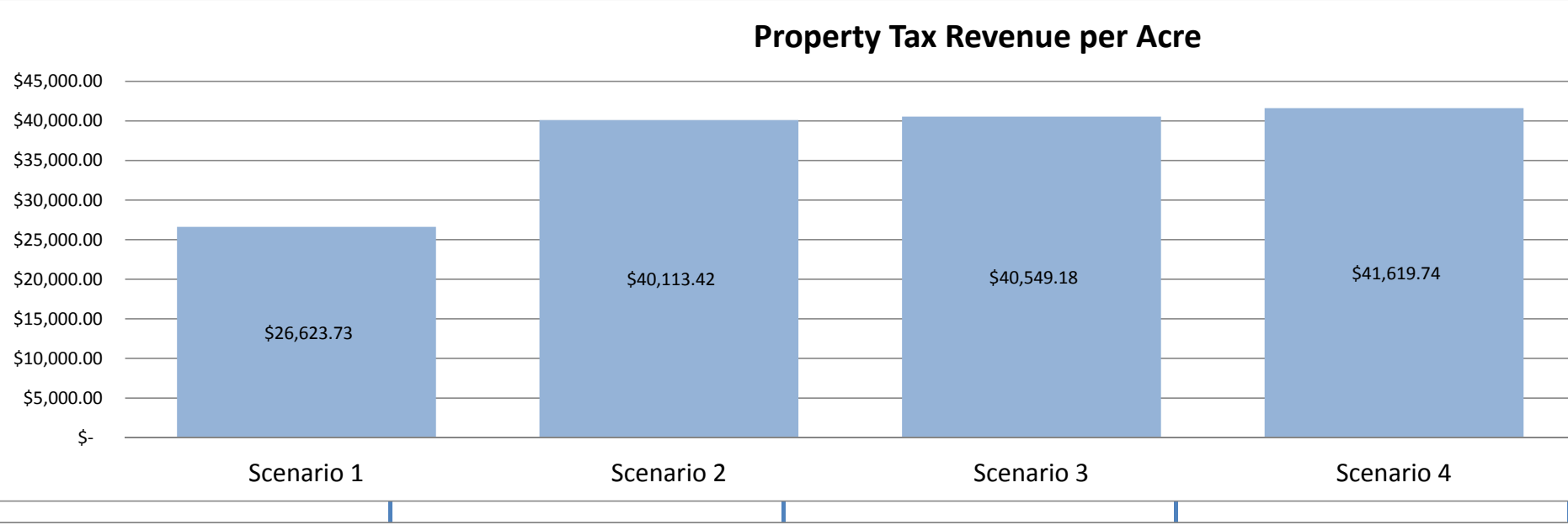


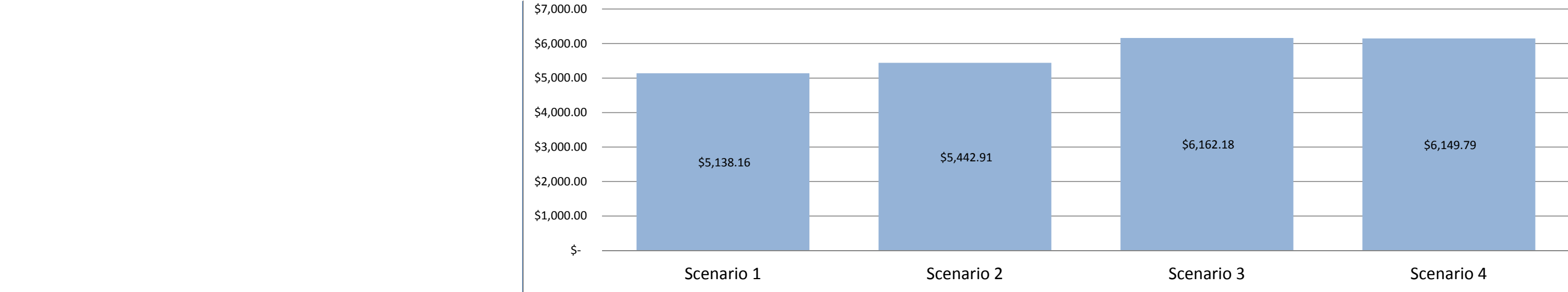
Affordability (H + T + E)															
Housing Cost / Mo	\$	-	0%	\$	1,722	87%	\$	1,733	88%	\$	1,733	88%	\$	1,753	89%

Transportation Cost / Mo	\$	-	0%	\$	-	0%	\$	-	0%	\$	-	0%
Energy Cost / Mo	\$	-	0%	\$	248	13%	\$	240	12%	\$	221	11%
Total Cost / Mo	\$	-	/ Mo	\$	1,970	/ Mo	\$	1,973	/ Mo	\$	1,974	/ Mo

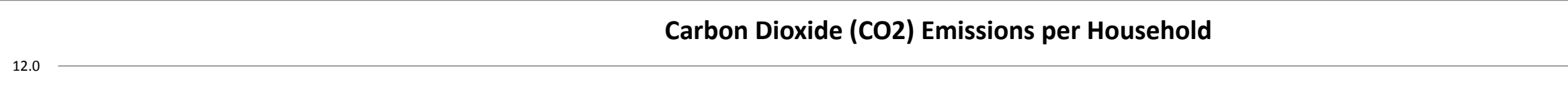
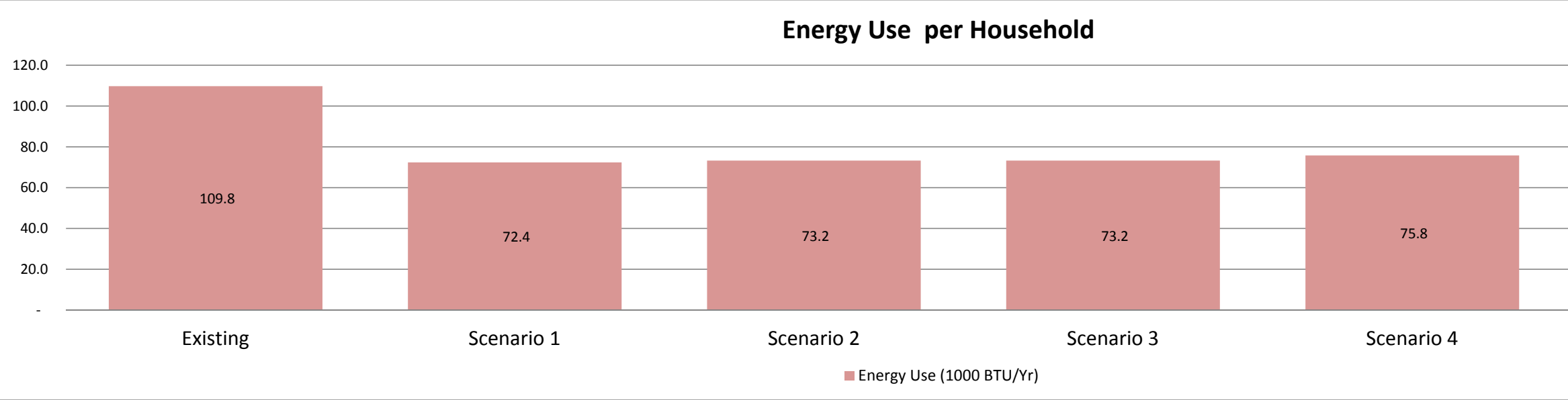


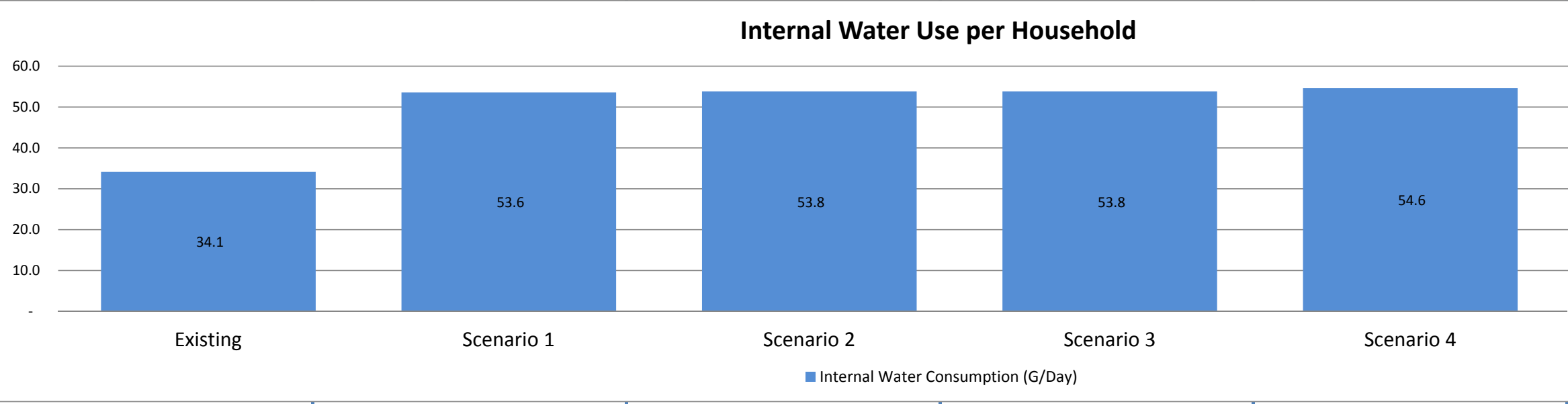
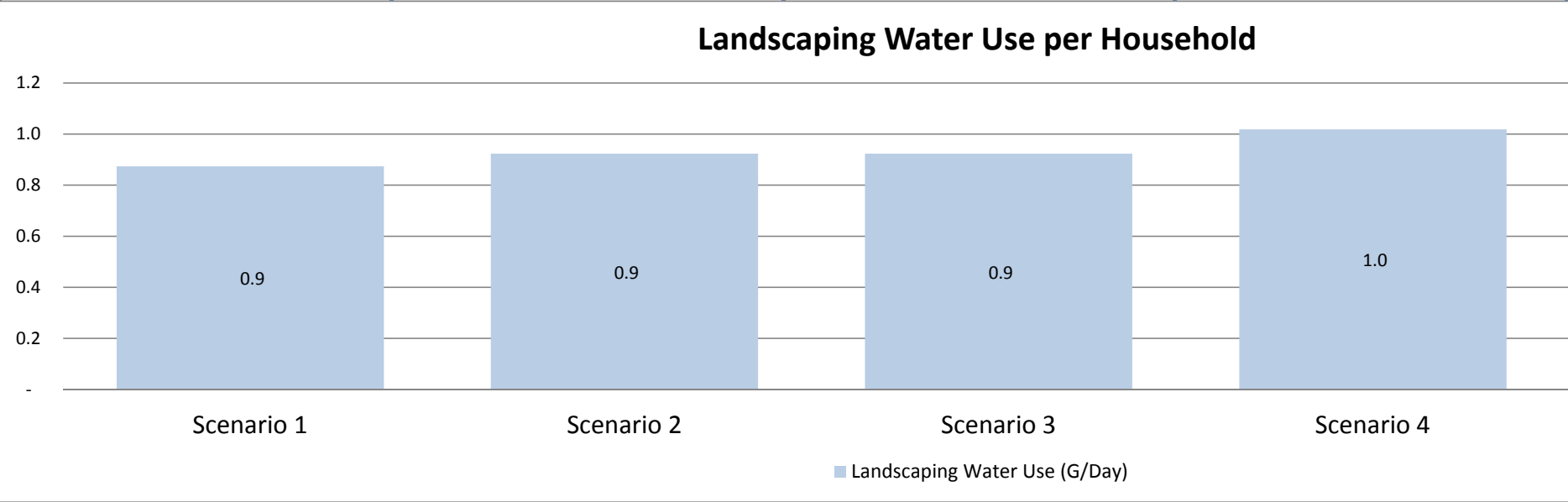
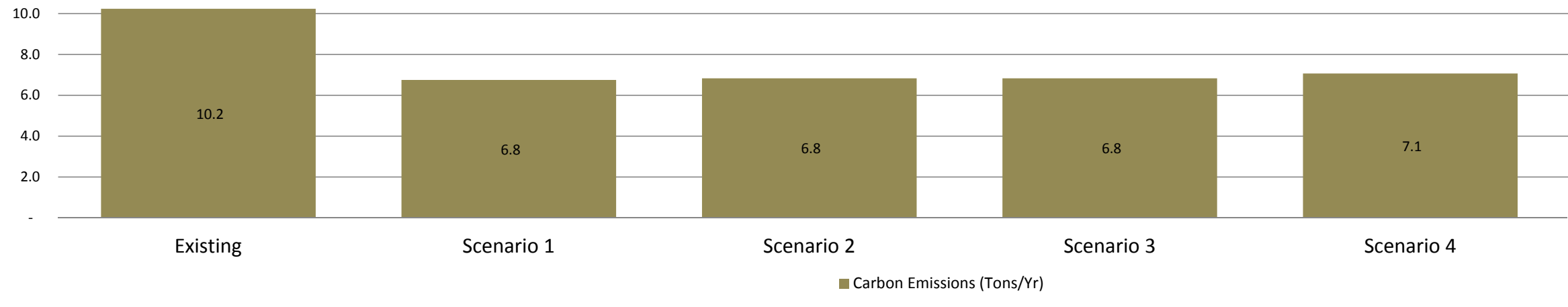
Fiscal		\$/yr	\$/acre	\$/yr	\$/acre	\$/yr	\$/acre	\$/yr	\$/acre
Property Tax Revenue		\$ 9,748,195	\$ 26,623.73	\$ 16,665,836	\$ 40,113.42	\$ 16,951,081	\$ 40,549.18	\$ 18,881,660	\$ 41,619.74
Sales Tax Revenue		\$ 1,881,322	\$ 5,138.16	\$ 2,261,353	\$ 5,442.91	\$ 2,576,021	\$ 6,162.18	\$ 2,789,982	\$ 6,149.79

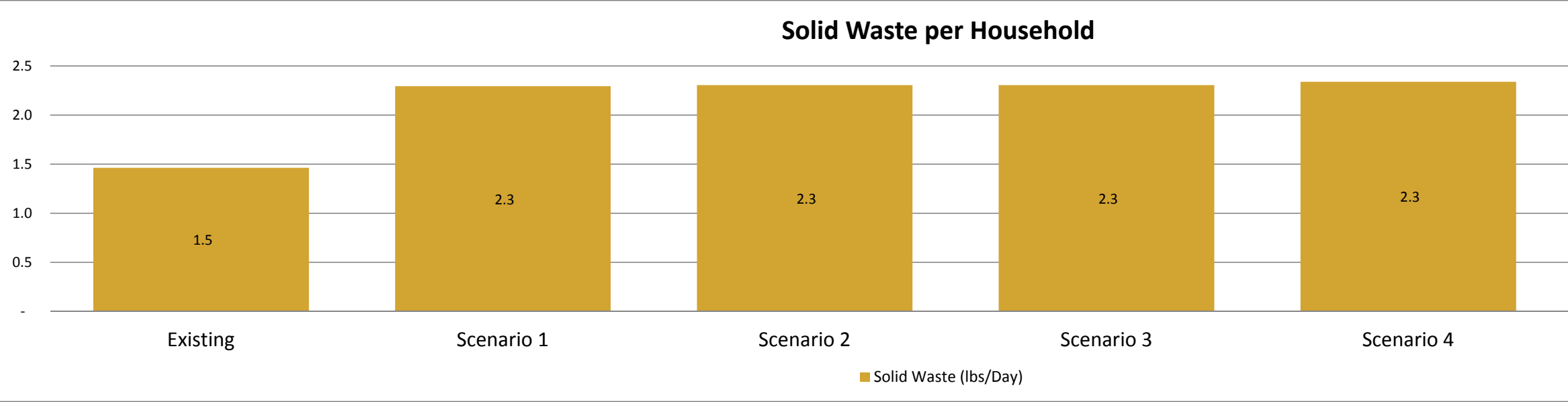
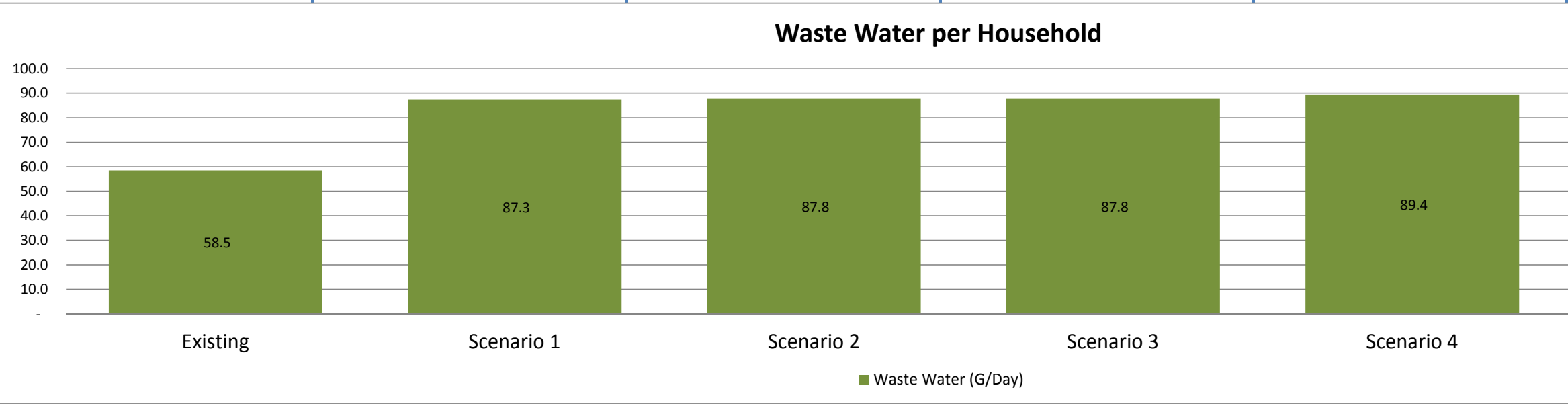




Sustainability	Per HH	Per Emp	Per HH	Per Emp	Per HH	Per Emp	Per HH	Per Emp	Per HH	Per Emp
Energy Use (1000 BTU/Yr)	109.8	24.1	72.4	19.2	73.2	17.4	73.2	17.5	75.8	17.3
Carbon Emissions (Tons/Yr)	10.2		6.8		6.8		6.8		7.1	
Landscaping Water Use (G/Day)			0.9		0.9		0.9		1.0	
Internal Water Consumption (G/Day)	34.1		53.6	96.6	53.8	101.0	53.8	101.1	54.6	101.3
Waste Water (G/Day)	58.5		87.3	45.2	87.8	47.0	87.8	47.1	89.4	47.2
Solid Waste (lbs/Day)	1.5		2.3	3.4	2.3	3.5	2.3	3.5	2.3	3.5







Scenario 1:

[illegible]

Scenario 2:

[illegible]

[illegible]

[illegible]

Scenario 3:

[illegible]

[illegible]

Scenario 4:

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Existing Development	Vacant Acres	Developed Acres	Total Acres	Total Value				Population	School Children	Households	Avg Household Size
				Land Value	Residential Improvement Value	Commercial Improvement Value					
EXISTING	VAC_ACRE	DEVD_ACRE			EX_LAND_VAL	EX_RES_VAL	EX_COM_VAL	EX_POP	EX_SCL_CHLDRN	EX_HH	
Existing	-	2,967.9	2,967.9	\$ -	\$ -	\$ -	\$ -	28,080	-	-	-

Housing Mix									Employment				
Housing Units	Multifamily	Townhome	Single Family	Small Lot Single Family	Conventional Lot Single Family	Large Lot Single Family	Mobile Home	Hotel Rooms	Jobs	Retail	Office	Industrial	Public / Civic
EX_HU	EX_MF	EX_TH	EX_SF	EX_SF_SM	EX_SF_MD	EX_SF_LRG	EX_MH	EX_HOTEL_RM	EX_EMP	EX_RET	EX_OFF	EX_IND	EX_PUB
11,741	4,576	-	7,109	-	-	-	2	-	9,423	4,301	2,350	205	-

Employment Mix				
Educational	Hotel / Hospitality	Utilities / Infrastructure	Commercial Parking	Agriculture
EX_EDU	EX_HOTEL	EX_UTIL	EX_PRKG	EX_AG
-	-	-	-	-

Existing Land Use Area	GIS Field Name	Existing		Scenario 1				Scenario 2				
		Acres	Square Feet	Painted / Redeveloped		Unpainted / Unchanged		Painted / Redeveloped		Unpainted / Unchanged		Painted / I
				Acres	Square Feet	Acres	Square Feet	Acres	Square Feet	Acres	Square Feet	Acres
EXISTING	EX_LU	DEVD_ACRE		PAINTED1				PAINTED2				PAINTED3
Mixed-Use	MU	9	403,983		-	9	403,983		-	9	403,983	
Multifamily	MF	179	7,782,742		-	179	7,782,742		-	179	7,782,742	
Townhome	TH		-		-	-	-		-	-	-	
Single Family Small Lot	SF_SM		-		-	-	-		-	-	-	
Single Family Conventional Lot	SF_MD		-		-	-	-		-	-	-	
Single Family Large Lot	SF_LRG	20	857,398		-	20	857,398		-	20	857,398	
Mobile Home	MH	2	65,587		-	2	65,587		-	2	65,587	
Retail	RET	253	11,003,660		-	253	11,003,660		-	253	11,003,660	
Office	OFF	252	10,971,729		-	252	10,971,729		-	252	10,971,729	
Industrial	IND	16	700,326		-	16	700,326		-	16	700,326	
Public / Civic	PUB	149	6,472,921		-	149	6,472,921		-	149	6,472,921	
Educational	EDU	87	3,772,753		-	87	3,772,753		-	87	3,772,753	
Hotel / Hospitality	HOTEL		-		-	-	-		-	-	-	
Utilities / Infrastructure	UTIL	31	1,330,734		-	31	1,330,734		-	31	1,330,734	
Commercial Parking	PKG		-		-	-	-		-	-	-	
Agricultural	AG		-		-	-	-		-	-	-	
Open Space	OS	209	9,115,551		-	209	9,115,551		-	209	9,115,551	
Vacant	VAC		-		-	-	-		-	-	-	
Unknown	NONE		-		-	-	-		-	-	-	
		1,205	52,477,384		-	1,205	52,477,384		-	1,205	52,477,384	

Scenario 3			Scenario 4				Scenario 5				Land Use Mix Category
Redeveloped	Unpainted / Unchanged		Painted / Redeveloped		Unpainted / Unchanged		Painted / Redeveloped		Unpainted / Unchanged		
Square Feet	Acres	Square Feet	Acres	Square Feet	Acres	Square Feet	Acres	Square Feet	Acres	Square Feet	
			PAINTED4				PAINTED5				EX_LU_TYPES
-	9	403,983		-	9	403,983		-	9	403,983	COM
-	179	7,782,742		-	179	7,782,742		-	179	7,782,742	RES
-	-	-		-	-	-		-	-	-	RES
-	-	-		-	-	-		-	-	-	RES
-	-	-		-	-	-		-	-	-	RES
-	20	857,398		-	20	857,398		-	20	857,398	RES
-	2	65,587		-	2	65,587		-	2	65,587	RES
-	253	11,003,660		-	253	11,003,660		-	253	11,003,660	COM
-	252	10,971,729		-	252	10,971,729		-	252	10,971,729	COM
-	16	700,326		-	16	700,326		-	16	700,326	COM
-	149	6,472,921		-	149	6,472,921		-	149	6,472,921	PUB
-	87	3,772,753		-	87	3,772,753		-	87	3,772,753	PUB
-	-	-		-	-	-		-	-	-	COM
-	31	1,330,734		-	31	1,330,734		-	31	1,330,734	
-	-	-		-	-	-		-	-	-	
-	-	-		-	-	-		-	-	-	
-	209	9,115,551		-	209	9,115,551		-	209	9,115,551	
-	-	-		-	-	-		-	-	-	
-	-	-		-	-	-		-	-	-	
-	1,205	52,477,384		-	1,205	52,477,384	-	-	1,205	52,477,384	

Existing Land Use Area	Residential Energy Use (1000 BTU / Unit / Yr)				Commercial Energy Use (1000 BTU / Emp / Yr)					Carbon Emissions	
	Space Heating	Space Cooling	Other Energy	Total per Unit	Space Heating	Space Cooling	Other Energy	Total per Employee	Residential Energy Cost per Month	per Unit	per Employee
EXISTING											
Multifamily	11	77	22	110					\$ 110	10.2	
Townhome	19	37	34	90					\$ 90	8.4	
Single Family Small Lot	14	39	28	82					\$ 82	7.6	
Single Family Conventional Lot	16	43	32	91					\$ 91	8.5	
Single Family Large Lot	17	37	27	80					\$ 80	7.5	
Mobile Home	38	31	31	101					\$ 101	9.4	
Retail					0	2	26	28			2.6
Office					5	1	11	17			1.6
Industrial											
Public / Civic					2	1	13	16			1.5
Educational											
Hotel / Hospitality											

Residential Energy Use	Single Family Detached			Townhome			Multifamily			Mobile home		
	Heating coefficient	Cooling coefficient	Other uses coefficient	Heating coefficient	Cooling coefficient	Other uses coefficient	Heating coefficient	Cooling coefficient	Other uses coefficient	Heating coefficient	Cooling coefficient	Other uses coefficient
constant	11.027	6.755	8.293	12.341	5.626	9.582	12.296	8.322	8.453	15.160	8.769	10.608
LN House size (sq ft)	0.262	0.168	0.177	0.259	0.251	0.185	0.196	0.137	0.251			0.244
Year built=pre-1940												
Year built=1940-1959	(0.205)						(0.188)					
Year built=1960-1979	(0.295)		0.043	(0.305)			(0.520)	(0.225)				
Year built=1980-1999	(0.399)		0.070	(0.492)			(0.728)	(0.340)				
Year built=2000-2005	(0.432)		0.061	(0.502)			(0.826)	(0.471)				
LN Household income (\$/yr)	0.095	0.119	0.160		0.110	0.077			0.089			
Household size		0.082	0.134		0.177	0.174		0.152	0.210		0.122	0.158
Ownership=owned			0.087		(0.294)		0.122		0.153			
Ownership=rented												
Stay at home=yes	0.121	0.064	0.052									
Stay at home=no												
LN Energy price (\$/1000 BTU)	(1.582)	(0.713)	(0.394)	(1.632)	(0.579)	(0.585)	(1.525)	(0.676)	(0.497)	(1.946)	(0.694)	(0.719)
Insulation=none												
Insulation=adequate		(0.062)										(0.118)
Insulation=well		(0.077)		(0.243)					(0.090)			(0.134)
Age of equipment=<10 yrs	(0.118)			(0.142)			(0.098)					
Age of equipment=>10 yrs												
Central cooling=yes		0.699			0.319			0.584			0.773	
Central cooling=no												
Heating Degree Days	0.000			0.000			0.000			0.000		
Cooling Degree Days		0.001			0.001			0.001			0.001	

Dependent Variables: Natural Logarithm of Delivered Residential Energy Use for Heating per Household per Year (1000 of Btu)

Reference dummies included houses built before 1940, the age of heating equipment (more than 10 years old), the building insulation variable (poorly insulated), if there is someone at home all day on a typical weekday (reference dummy is no) and home ownership (renting the home is reference dummy)

Data Source: EIA’s Residential Energy Use Survey 2005.

Commercial Energy Coefficients Tab

Commercial Energy Use	Retail			Office			Institutional		
	Heating coefficient	Cooling coefficient	Other uses coefficient	Heating coefficient	Cooling coefficient	Other uses coefficient	Heating coefficient	Cooling coefficient	Other uses coefficient
constant	6.163	4.290	6.456	4.702	5.025	3.528	4.267	3.488	4.005
Ln Building size	0.328	0.351	0.193	0.649	0.338	0.625	0.685	0.539	0.698
Main heating equipment									
Boiler inside bldg.	0.419			0.404			0.614		
Packaged heating units									
Indiv. Space heaters	(0.690)			(0.445)			(0.500)		
Heat pumps	(0.901)			(0.755)			0.141		
District steam/hot water									
Direct air furnace*									
Other heating equip.									
Main cooling equipment									
Packaged A/C units*									
Residential-type central A/C		(0.242)			(0.196)			(0.259)	
Indiv. Room A/C		(0.594)			(0.934)			(0.750)	
Other cooling equip.					0.366			0.285	
Ln Number of workers	0.411	0.495	0.531	0.122	0.542	0.350	0.080	0.415	0.334
Ln Weekly oper. Hours	0.368	0.484	1.186	0.173	0.125	0.728		0.213	0.496
Owned		(0.371)	(0.281)				0.122		(0.111)
Rented*									
Ln Energy price for main source fuel (\$/BTU)	(1.582)	(0.025)	(0.422)	(0.054)	(0.054)	(0.178)	(0.065)	(0.017)	(0.211)
Heating Degree Days	0.000			0.000			0.000		
Cooling Degree Days		0.001			0.000			0.001	

*Reference or dummy variable

Dependent Variable: Natural Logarithm of Delivered Commercial Energy Use per Commercial Unit per Year (1000s of Btu).

Data Source: EIA’s Commercial Building Energy Consumption Survey (CBECS) 2003.

Metro CDD HDD Tab

MSA Name	MSA Code	Precip Mean	Temp Mean	HDD Mean	CDD Mean
Akron, OH Metropolitan Statistical Area	10420	41.17	50.2	5662	892
Albany, GA Metropolitan Statistical Area	10500	47.43	65.3	2215	2388
Albany-Schenectady-Troy, NY Metropolitan Statistical Area	10580	47.72	49.2	5997	925
Albuquerque, NM Metropolitan Statistical Area	10740	11.42	58.5	3608	1558
Alexandria, LA Metropolitan Statistical Area	10780	32.98	67.8	1752	2999
Allentown-Bethlehem-Easton, PA-NJ Metropolitan Statistical Area	10900	51.35	52.1	5100	1098
Altoona, PA Metropolitan Statistical Area	11020	38.77	54.3	4719	1343
Amarillo, TX Metropolitan Statistical Area	11100	15	57.6	3789	1432
Ames, IA Metropolitan Statistical Area	11180	28.05	52.4	5500	1329
Anchorage, AK Metropolitan Statistical Area	11260	15.91	39.1	10073	8
Anderson, IN Metropolitan Statistical Area	11300	43.73	53.9	4933	1306
Anderson, SC Metropolitan Statistical Area	11340	53.14	61.3	2813	1761
Ann Arbor, MI Metropolitan Statistical Area	11460	28.3	50.8	5525	1109
Anniston-Oxford, AL Metropolitan Statistical Area	11500	49.2	63.3	2498	2091
Appleton, WI Metropolitan Statistical Area	11540	26.22	46.3	6886	648
Asheville, NC Metropolitan Statistical Area	11700	47.26	56.1	3883	900
Athens-Clarke County, GA Metropolitan Statistical Area	12020	58.42	62	2640	1820
Atlanta-Sandy Springs-Marietta, GA Metropolitan Statistical Area	12060	56.43	62.3	2632	1851
Atlantic City-Hammonton, NJ Metropolitan Statistical Area	12100	43.8	55.5	3971	1242
Auburn-Opelika, AL Metropolitan Statistical Area	12220	62.51	65.9	1866	2422
Augusta-Richmond County, GA-SC Metropolitan Statistical Area	12260	47.46	63.9	2336	2165
Austin-Round Rock-San Marcos, TX Metropolitan Statistical Area	12420	22.33	70	1155	3309
Bakersfield-Delano, CA Metropolitan Statistical Area	12540	7.99	65.5	1981	2120
Baltimore-Towson, MD Metropolitan Statistical Area	12580	49.13	55.6	4177	1350
Bangor, ME Metropolitan Statistical Area	12620	58.57	44.7	7713	435
Barnstable Town, MA Metropolitan Statistical Area	12700	66.22	49.3	5808	771
Baton Rouge, LA Metropolitan Statistical Area	12940	47.53	68.8	1347	2920
Battle Creek, MI Metropolitan Statistical Area	12980	32.31	49.2	6089	916
Bay City, MI Metropolitan Statistical Area	13020	28.96	48	6314	779
Beaumont-Port Arthur, TX Metropolitan Statistical Area	13140	43.79	70	1129	3158
Bellingham, WA Metropolitan Statistical Area	13380	35.44	52.9	4442	162
Bend, OR Metropolitan Statistical Area	13460	34.74	52.6	4712	257
Billings, MT Metropolitan Statistical Area	13740	15.27	48.4	6067	646
Binghamton, NY Metropolitan Statistical Area	13780	41.39	47.2	6638	679
Birmingham-Hoover, AL Metropolitan Statistical Area	13820	49.2	63.3	2498	2091
Bismarck, ND Metropolitan Statistical Area	13900	19.22	44.8	7297	555
Blacksburg-Christiansburg-Radford, VA Metropolitan Statistical Area	13980	37.87	57.6	3655	1342
Bloomington, IN Metropolitan Statistical Area	14020	43.73	53.9	4933	1306
Bloomington-Normal, IL Metropolitan Statistical Area	14060	25.42	53.5	5249	1432
Boise City-Nampa, ID Metropolitan Statistical Area	14260	13.66	52.4	5363	965
Boston-Cambridge-Quincy, MA-NH Metropolitan Statistical Area	14460	43.67	51	5329	894
Boulder, CO Metropolitan Statistical Area	14500	12.79	51.5	5440	927
Bowling Green, KY Metropolitan Statistical Area	14540	39.86	58.5	3830	1806
Bremerton-Silverdale, WA Metropolitan Statistical Area	14740	35.44	52.9	4442	162
Bridgeport-Stamford-Norwalk, CT Metropolitan Statistical Area	14860	46	53	5030	1062
Brownsville-Harlingen, TX Metropolitan Statistical Area	15180	14.41	75.8	383	4385
Brunswick, GA Metropolitan Statistical Area	15260	46.03	65.9	1821	2387
Buffalo-Niagara Falls, NY Metropolitan Statistical Area	15380	39.07	49	5852	889
Burlington, NC Metropolitan Statistical Area	15500	33.66	59.6	3203	1635
Burlington-South Burlington, VT Metropolitan Statistical Area	15540	39.41	46.4	6717	740
Canton-Massillon, OH Metropolitan Statistical Area	15940	41.17	50.2	5662	892