

	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
23	Rural Residential	11,500.0	59.6%	3.4	0.15	1	3,049	1	1	0.07	120		1,725	5865	0	5,259,525	5,259,525	11,500	1,725,000	1725	
24	Very Low Density Residential	2,300.0	11.9%	2.8	2.1	0.25	2,831	1	1	0.26	60		4,830	13524	0	13,673,730	13,673,730	9,200	828,000	4830	
25	Low Density Residential	2,500.0	13.0%	2.8	4.9	0.125	2,505	1	1	0.46	50		12,250	34300	0	30,686,250	30,686,250	20,000	1,600,000	12250	
26	Medium Density Residential	200.0	1.0%	2.25	7.2	0.083	1,012	2	1	0.56	40		1,440	3240	0	2,914,560	1,457,280	2,410	168,675	1440	
27	Medium-High Density Residential	50.0	0.3%	1.75		13.9	0.095	1,428	2	2	0.69	30		695	1216	0	992,460	496,230	526	31,579	695
28	High Density Residential	0.0	0.0%	1.25	18.2	2	19,602	4	87	0.9	20		-	0	0	0	0	0	0	0	
29	Total	16,550.0	85.7%										20,940	58,145	0	53,526,525	51,573,015	43,636	4,353,254	20,940	
30																					
31	Mixed Use	Acres	% of Land	HH Size	FAR	Avg Lot size (sq)	Avg Bldg Footprint	# Floors	Avg DU/Bldg	sqFT E	Set Back		DU	Residents	FTE	GFA	GFA	# of Lots		ERU	
32	Mixed Use Residential Focus	0.0	0.0%	1.5	1.12	1.5	36,590	2	30	2750	20		0	0	0	0	0	0	0	0	
33	Mixed Use Employment Focus	0.0	0.0%	1.5	1.01	1.5	32,997	2	27	900	20		0	0	0	0	0	0	0	0	
34	Total	0.0	0.0%										0	0	0	0	0	0	0	0	
35																					
36	Non-Residential	Acres	% of Land	HH Size	FAR	Avg Lot size (sq)	Avg Bldg Footprint	# Floors	Avg DU/Bldg	sqFT E	Set Back		DU	Employees	FTE	GFA		# of Lots		ERU	
37	Moderate Intensity Office	175.0	0.9%	0	0.7	0.25	3,812	2	0	715	100		0	7,463	7,463	5,336,100		700	91,000	2,134	
38	Community/Neighborhood Commercial / Office	37.0	0.2%	0	0.29	0.25	1,579	2	0	510	100		0	916	916	467,399		148	20,720	186	
39	Light Industrial Office		0.0%	0	0.3	0.5	3,267	2	0	350	50		0	0	0	0		0	0	0	
40	Community / Neighborhood Retail	117.0	0.6%	0	0.18	0.5	3,920	1	0	1000	100		0	917	917	917,374		234	32,760	366	
41	Regional Retail	750.0	3.9%	0	0.2	5	43,560	1	0	465	100		0	14,051	14,051	6,534,000		150	21,000	2,613	
42	Light Industry	632.0	3.3%	0	0.2	2	17,424	1	0	700	100		0	7,865	7,865	5,505,984		316	41,080	2,202	
43	Heavy Industry	114.0	0.6%	0	0.08	2	6,970	1	0	5000	100		0	79	79	397,267		57	7,410	158	
44	Warehouse / Storage		0.0%	0	0.33	2	28,750	1	0	20000	100		0	0	0	0		0	0	0	
45	Recreation Center		0.0%	0	0.3	3	39,204	1	0	2175	100		0	0	0	0		0	0	0	
46	Public /Quasi Public	420.0	2.2%	0	0.07	1.5	1,525	3	0	1500	100		0	853	853	1,280,664		280	39,200	512	
47	Restaurant Dining		0.0%	0	0.28	1	12,197	1	0	482.5	50		0	0	0	0		0	0	0	
48	Hotel		0.0%	0	0.34	3	11,108	4	0	2200	200		0	0	0	0		0	0	0	
49	Medical / dental clinic		0.0%	0	0.98	1	42,689	1	0	350	50		0	0	0	0		0	0	0	
50	Church	40.0	0.2%	0	0.25	2	21,780	1	0	1000	100		0	435	435	435,600		20	2,600	174	
51	Schools	341.0	1.8%	0	0.15	5	32,670	1	0	1200	200		0	1,856	1,856	2,228,094		68	15,686	891	
52	Total	2,626.0	13.6%										0	34,435	34,435	23,102,482		1,973	271,456	9,236	
53																					

- User driven land use scenario comparison tool
 - Acres of development by land use types
 - Yields dwelling units, employees, square feet of building, number of lots

IMPACS 2.0

Step 1: Introduction, Define Scenario Program

Step 2: Calibrate Infrastructure Assumptions & Inputs (Demand, Capacity, Cost, Revenue)

Step 3: View Outputs & Reports, Data & References

1. Specify Scenario Details | 2. Enter Land Use Information | 3. Enter Development Parameters | Import from Places3

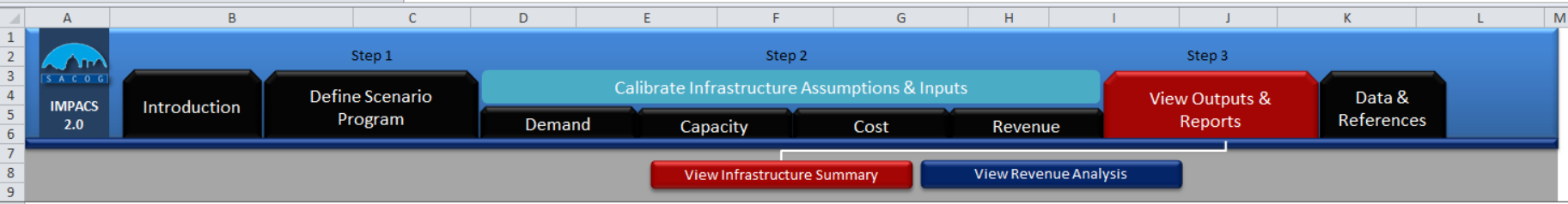
BLOCK STREET PATTERN:

Grid Block, Modified Grid Block, Mixed Block, Cul-de-Sac Block, Rural

STREET WIDTH:

Type	Description	ROW (ft)	Pavement width (ft)	Sidewalk Width (ft)	Sidewalk Completeness	Curb & Gutter Completeness	Lighting Spacing (ft)
StreetA	arterial street	80.00	48.00	6.00	100.00%	100.00%	300
StreetB	collector street	60.00	48.00	4.00	100.00%	100.00%	300
StreetC	local access 1	50.00	36.00	3.00	100.00%	100.00%	100
StreetD	local access 2	50.00	24.00	4.00	100.00%	100.00%	100
StreetE	parkway	50.00	24.00	0.00	0.00%	0.00%	500

- Context area considerations:
 - Street patterns
 - Infill vs. greenfield
 - Existing capacity of sewer, water, and waste water

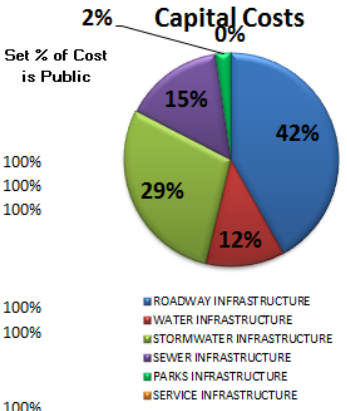


MUNICIPAL INFRASTRUCTURE SUMMARY

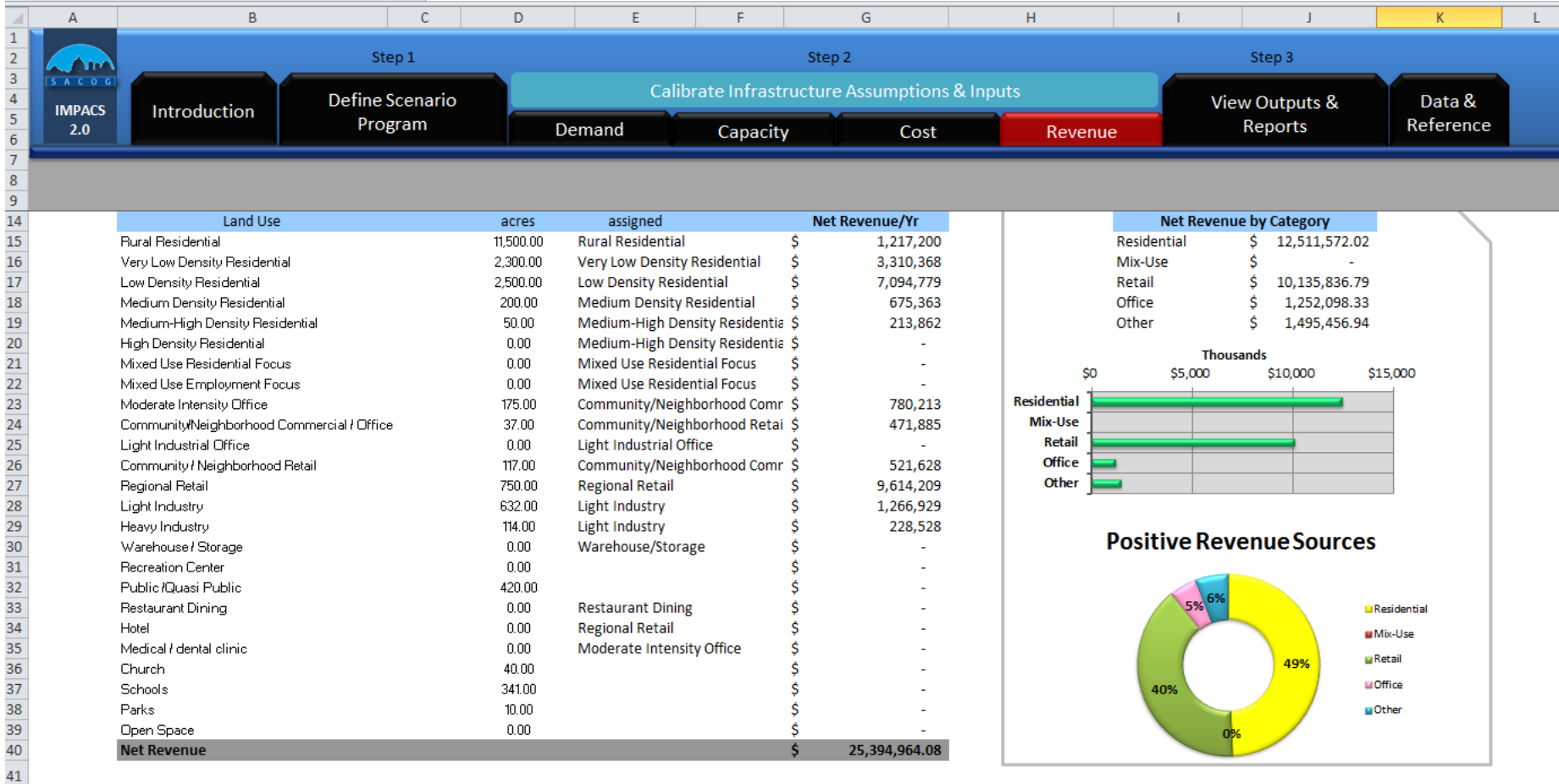
Select Standards Scenario: **Median**
 Select Cost Scenario:
 Select Capacity Scenario:

Public Sector Cost Implication Summary: **Capital Cost \$542,304,303** **Cost / ERU \$17,97** **Annual O&M \$20,373,061.42** **O&M / ERU \$675**

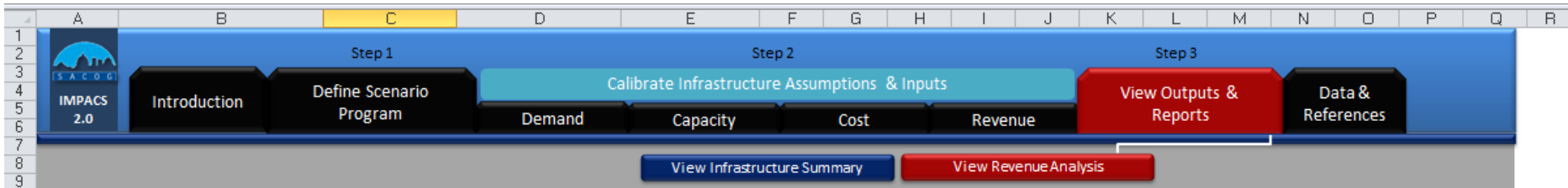
Component	Quantities		Capital Construction Costs		Annual O&M Costs		Check to Include Capital Cost as Public
	Total (ft)	Ft/ERU	Total	Per ERU	Total	Per ERU	
ROADWAY INFRASTRUCTURE							
Local Streets	2,523,662	83.6	\$1,422,443,382	\$47,138	\$706,105	\$23	<input type="checkbox"/> 100%
Major Streets	1,331,907	44.1	\$757,445,497	\$25,101	\$462,793	\$15	<input type="checkbox"/> 100%
Street Upgrades	18500	0.6	\$6,475,881	\$215	\$5,176	\$0	<input checked="" type="checkbox"/> 100%
Total Streets & Roadways	3,855,569	127.8	\$2,186,364,760	\$72,454	\$5,176	\$0	
WATER INFRASTRUCTURE							
Laterals	4,624,710	153.3	\$97,118,903	\$3,218	\$74,342	\$2.5	<input type="checkbox"/> 100%
Distribution + Main	3,856,069	127.8	\$504,006,636	\$16,702	\$297,367	\$9.9	<input checked="" type="checkbox"/> 100%
Total Water Distribution	8,480,778	281.0	\$601,125,538	\$19,921	\$297,367	\$9.9	
Supply, Treatment, Storage etc.	-	-	\$12,879,076	\$427	\$743,417	\$24.6	<input checked="" type="checkbox"/> 100%
Total Water	0	0.0	\$614,004,614	\$20,347	\$1,040,784	\$34.5	



- Results for total and per capita infrastructure demand and cost
 - Roads
 - Water
 - Sewer
 - Storm water
 - Parks
 - Services (police, fire, health, etc.)



- Total Revenue generated from:
 - Misc. Taxes (non-sales tax)
 - Services
 - Fees
 - Sales Tax
 - Property Transfers Taxes



Simple Payback Analysis

Total Public Sector Costs	\$542,304,303
Public Sector Annual O&M Costs	\$20,373,061
Annual Revenue (Taxes etc.)	\$25,394,964
Annual Net Revenue	\$5,021,903

Actual Simple Payback:	108.0	yrs
Desired Simple Payback (yrs)	30	
Gap per ERU (desired payback)	\$599	per year

Bond Analysis

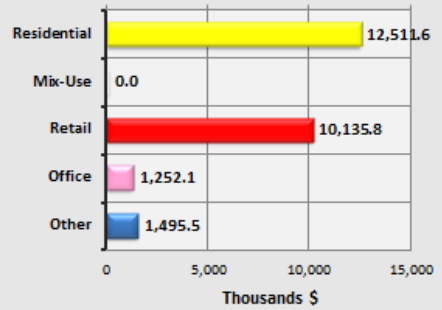
Maturity period (yrs)	30
Coupon Rate	5.0%
Annual Coupon Payments	\$35,277,673
Total Additional Funds:	-\$30,255,770
Bond Gap per ERU:	\$1,003

Life Cycle Cost Analysis

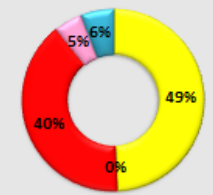
Discount Rate	2.0%
Analysis Time Period (yrs)	50
Maintenance Escalation rat	1.5%

Net Present Value (NPV) savings (50 yrs) **-\$723,834,912**

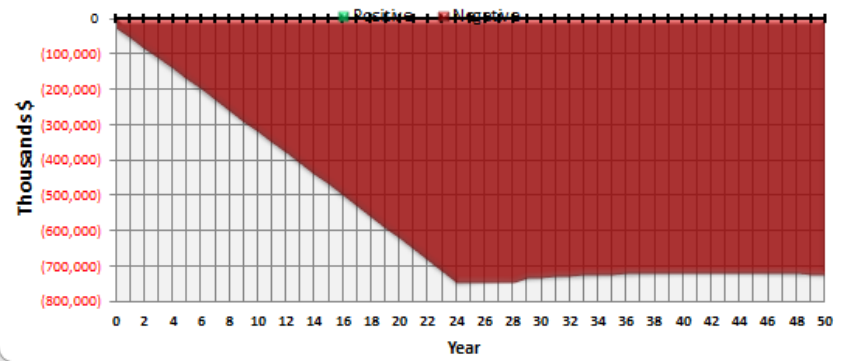
Revenue per Year



Positive Revenue Sources



Savings (Net Present Value)



- Net Revenues and Paybacks