## DRAFT A2ZERO INVESTMENT PLAN

This document outlines one possible scenario, amongst many, of potential investment amounts, sources, and funds between 2020 and 2030 in order to achieve the goals as outlined in the living A2Zero Carbon Neutrality Plan. The near years have more certainty than later years. As such, staff recommend that this document be considered a 3-year investment plan, which can provide greater direction and clarity regarding investment opportunities and needs in years 1-3 and serve as guidance for future years. This is similiar to how the City budgets. If done this way, this investment plan would be reviewed every 2-years to make refinements and provide a revised, rolling 3 year investment plan that could guide the A2Zero work.

The remainder of the A2Zero Investment Plan is organized as follows:

Column A provides the name of a given action. Underneath is an *estimate* of how much funding is already available or is likely to be available within the existing City budget. For example, this may include existing staff or some alignment with existing actions/priorities meaning that some resources are already available to support a given action.

Column B provides information on investment source. This includes operating costs, operating credits (savings accrued to the City from the given action; not to residents), any debt service payments the City may have to make (based on estimates in the "city capital row"), the net budget impact to the City, and external sources of investment, including philanthropic, grants, pro-bono assistance, public-private partnerships, etc. The values in these rows will change over time as new sources of investment become available.

Column C shows the total *estimated* cost for a given action, over the full 10-years.

Columns D - N show annual *estimates*, by investment source, for each action.

Column O identifies the party primarily responsible for implementation.

														Implem.	
ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
COMMUNI	TY CHOICE AGGREGATION	\$1,645,000	\$49,000	\$49,000	\$49,000	\$49,000	\$799,000	\$300,000	\$200,000	\$150,000	\$0	\$0	\$0		Nationally, CCA's are at cost parity
	City Operating Costs City Operating Credits / Savings		\$49,000	\$49,000	\$49,000	\$49,000	\$49,000	\$50,000	\$50,000	\$50,000 - -\$81,000	-\$81,000	-\$81,000	-\$81,000		if not cheaper than existing, utility energy pricing meaning that this action will most likely save our
EST: \$392,000 Already in	City Debt Service Net City Impact City Capital	:	\$49,000	\$49,000	\$49,000	\$49,000	\$49,000	\$50,000	\$50,000	(\$31,000)	(\$81,000)	(\$81,000)	(\$81,000)	City of Ann Arbor	residents (and the City) money. The "City Operating Credits / Savings" estimates only look at energy savings related to City
City Budget			GF	GF	GF	GF	GF	GF	GF	GF	GF	GF	GF		operations. It is anticipated that
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)						\$750,000	\$250,000	\$150,000	\$100,000					residents will save approximately 3-5% on their electricity costs by enrolling in a CCA.

ACTION	TC	OTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
<b>BULK PURC</b>	HASE OF RENEWABLES	\$605,000	\$55,000	\$55,000	\$55,000	\$55,000	\$55,000	\$55,000	\$55,000	\$55,000	\$55,000	\$55,000	\$55,000		Onsite renewables have a 10-12
	City Operating Costs City Operating Credits		\$55,000	\$49,000	\$55,000	\$55,000	\$49,000	\$55,000	\$55,000	\$49,000	\$55,000	\$49,000	\$55,000	City of Ann	year payback but are warranted for 25 years, meaning the community and the City will see
FST 4000/	City Debt Service		¢55 000	¢40.000	¢55 000	Ć55 000	¢40,000	ĆEE 000	¢55 000	¢40,000	ĆEE 000	¢40,000	¢55 000	Arbor and	savings in the future. Additionally, the pilot bulk buy programs are
EST: 100% Already in	Net City Impact City Capital		\$55,000	\$49,000	\$55,000	\$55,000	\$49,000	\$55,000	\$55,000	\$49,000	\$55,000	\$49,000	\$55,000	\$66k for community	saving residents anywhere from 5%-15% additional off the cost of
City Budget	City Funding Source		MIL	liaison	solar. We anticipate achieving										
	Other (i.e., philanthropic, state, federal, pro bono, public-private													stipends	savings on City properties electrical bills 12 years after the installation is complete - which is
	partnership)			\$6,000	\$0	\$0	\$6,000			\$6,000		\$6,000			not calculated in this matrix.

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
COMMUNIT	Y SOLAR PROGRAM	\$205,000	\$18,636	\$18,640	\$18,636	\$18,636	\$18,636	\$18,636	\$18,636	\$18,636	\$18,636	\$18,636	\$18,636		Nationally, community solar
	City Operating Costs City Operating Credits		\$18,636	\$18,640	\$8,636	\$18,636	\$8,636	\$18,636	\$18,636	\$18,636	\$18,636	\$18,636	\$18,636		initiatives are at cost parity if not cheaper than existing, utility energy pricing. In many states,
EST: 100%	City Debt Service		¢10 626	¢19.640	¢0 626	¢10 626	\$8,636	\$18,636	\$18,636	¢10 626	¢10 626	¢19.626	¢10 626	City of Ann	consumers make money on these
Already in	Net City Impact City Capital		\$18,636	\$18,640	\$8,636	\$18,636	\$8,030	\$18,030	\$18,030	\$18,636	\$18,636	\$18,636	\$18,636	Arbor	programs. Since the cost
City Budget	City Funding Source		GF	GF	GF	GF	GF	GF	GF	GF	GF	GF	GF	711501	estimates for this are for City staf
city baaget	Other (i.e., philanthropic, state,		O,	Oi.	Oi.	Oi.	Oi.	O.	Gi.	Oi.	O.	GI.	GI.		to help create a community solar program, the City will not receive
	federal, pro bono, public-private														savings but our residents and
	partnership)				\$10,000		\$10,000								businesses will.
ACTION  LANDFILL SO	OLAR PROJECT	<b>TOTAL</b> \$80,000		\$27,000 \$27,000	<b>2022</b> \$26,500	<b>2023</b> \$0	<b>2024</b> \$0	<b>2025</b> \$0	<b>2026</b> \$0	<b>2027</b> \$0	<b>2028</b> \$0	<b>2029</b> \$0	<b>2030</b> \$0	Respon.	NOTES
LANDFILL SO	DLAR PROJECT  City Operating Costs		\$26,500 \$26,500	\$27,000 \$27,000	\$26,500 \$26,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0		
EST: 100%	City Operating Credits City Debt Service					\$572,880	\$572,880	\$572,880	\$572,880	\$572,880	\$572,880	\$572,880	\$572,880		Assumes the City pays a .2 cent
Oper. Costs	Net City Impact	:	\$26,500	\$27,000	\$26,500	\$572,880	\$572,880	\$572,880	\$572,880	\$572,880	\$572,880	\$572,880	\$572,880	City of Ann	premium, per kilowatt hour, for
Already in	City Capital													Arbor	electricity generated through the
City Budget	City Funding Source		GF	GF	GF	GF	GF	GF	GF	GF	GF	GF	GF		landfill solar site.
	Other (i.e., philanthropic, state,														
	federal, pro bono, public-private														
	partnership)														<u> </u>
ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem.	NOTES
	TION OF CITY FACILITIES	\$7,100,000		\$1,254,000	\$1,254,000	\$1,315,000	\$1,265,000	\$1,265,000	\$130,000	\$128,000	\$125,000	\$125,000	\$125,000	Respon.	Notes
LLLCTRIFTCA	City Operating Costs		\$114,000	\$114,000	\$102,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000		Additional operating costs are
	City Operating Credits		Y = 1,000	\$33,252	\$66,504	\$133,008	\$199,512	\$266,016	\$332,520	\$332,520	\$332,520	\$332,520	\$332,520		estimated for city facilities only.
	City Debt Service			\$1,306,616	\$441,116	\$441,116	\$441,116	\$441,116	\$441,116	\$441,116	\$441,116	\$441,116	\$441,116		Note, this estimated increase in
EST:	Net City Impact		\$114,000	\$1,453,868	\$609,620	\$674,124	\$740,628	\$807,132	\$873,636	\$873,636	\$873,636	\$873,636	\$873,636	\ \frac{1}{2}	operating costs is offset in the
\$550,000	City Capital		T/000	\$4,904,500	+ - 55,525	7	Ţ: .0,0 <b>_0</b>	+ - 3., <b></b>	÷ = , = ,===	+ = 1 = 1	+ = 1 = 1	÷ = . 0,000	÷ 3. 0,030	outside legal	efficiency section. Also assumes
Already in	City Funding Source		All Funds	All Funds	All Funds	All Funds	All Funds	All Funds	All Funds	All Funds	All Funds	All Funds	All Funds	support	that these projects are placed in

<b>ELECTRIFIC</b>	ATION OF CITY FACILITIES	\$7,100,000 \$	\$114,000	\$1,254,000	\$1,254,000	\$1,315,000	\$1,265,000	\$1,265,000	\$130,000	\$128,000	\$125,000	\$125,000	\$125,000		
EST: \$550,000 Already in City Budget	City Funding Source	\$	\$114,000 \$114,000 Il Funds	\$114,000 \$33,252 \$1,306,616 \$1,453,868 \$4,904,500 All Funds	\$102,000 \$66,504 \$441,116 \$609,620	\$100,000 \$133,008 \$441,116 \$674,124 All Funds	\$100,000 \$199,512 \$441,116 \$740,628	\$100,000 \$266,016 \$441,116 \$807,132	\$100,000 \$332,520 \$441,116 \$873,636	\$100,000 \$332,520 \$441,116 \$873,636	\$100,000 \$332,520 \$441,116 \$873,636	\$100,000 \$332,520 \$441,116 \$873,636	\$100,000 \$332,520 \$441,116 \$873,636	City of Ann Arbor with outside legal support	Additional operating costs are estimated for city facilities only. Note, this estimated increase in operating costs is offset in the efficiency section. Also assumes that these projects are placed in the CIP but not funded through that mechanism. Assumes a 15 year term with 4% interest
	partnership)			\$50,000	\$50,000	\$25,000	\$25,000	\$25,000	\$25,000						

													Implem.	
ACTION	TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
ELECTRIFY ALL BUSES	\$86,000,000	\$0	\$6,890,000	\$5,690,000	\$6,490,000	\$7,290,000	\$8,070,000	\$8,870,000	\$9,400,000	\$10,200,000	\$11,000,000	\$12,100,000		
City Operating	g Costs													
City Operating (	Credits													
City Debt S	Service					This actio	n intentionally or	nitted						

rms action intentionally offitted

Not	City Capital
Calculated	City Funding Source
	Other (i.e., philanthropic, state,
	federal, pro bono, public-private
	partnership)

TheRide Not calculated

ACTION	т	OTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
<b>BULK PURC</b>	HASE EVs (COMMUNITY)	\$700,000	\$0	\$153,000	\$100,000	\$55,875	\$55,875	\$55,875	\$55,875	\$55,875	\$55,875	\$55,875	\$55,875		A 2018 study from the University
EST:	City Operating Costs City Operating Credits City Debt Service Net City Impact		\$0	\$138,000 \$138,000	\$90,000	\$55,875 \$55,875	C'1 C A	of Michigan's Transportation Research Institute found that electric vehicles cost less than half as much to operate as gas- powered cars. The average cost to							
\$558,750	City Capital													Arbor	operate an EV in the United States
Already in	City Funding Source			GF	GF	GF	GF	GF	GF	GF	GF	GF	GF		is \$485 per year, while the average
City Budget	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			\$15,000	\$10,000										for a gasoline-powered vehicle is \$1,117. Since these savings go to residents, they are not factored into this action.

														Implem.	
ACTION	T	OTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
<b>PRIVATE EV</b>	FLEETS	\$123,000	\$0	\$24,500	\$24,500	\$24,500	\$24,500	\$24,500	\$500	\$0	\$0	\$0	\$0		A 2018 study from the University
	City Operating Costs City Operating Credits			\$19,500	\$19,500	\$19,500	\$19,500	\$19,500	\$500						of Michigan's Transportation Research Institute found that electric vehicles cost less than
EST:	City Debt Service Net City Impact		\$0	\$19,500	\$19,500	\$19,500	\$19,500	\$19,500	\$500	\$0	\$0	\$0	\$0	City of Ann	half as much to operate as gas- powered cars. The average cost to
\$98,000	City Capital													Arbor	operate an EV in the United States
Already in	City Funding Source			GF	GF	GF	GF	GF	GF						is \$485 per year, while the average
City Budget	Other (i.e., philanthropic, state,														for a gasoline-powered vehicle is \$1,117. Since these savings go to
	federal, pro bono, public-private partnership)			\$5,000	\$5,000	\$5,000	\$5,000	\$5,000							residents, they are not factored into this action.

														Implem.	
<b>ACTION</b>		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
<b>CITY EV FLE</b>	ET TRANSITION	\$4,000,000	\$50,000	\$660,000	\$560,000	\$465,000	\$360,000	\$355,000	\$340,000	\$320,000	\$310,000	\$295,000	\$285,000		A 2018 study from the University
	City Operating Costs		\$50,000	\$610,000	\$510,000	\$440,000	\$360,000	\$305,000	\$315,000	\$295,000	\$310,000	\$295,000	\$285,000		of Michigan's Transportation Research Institute found that
	City Operating Credits		-\$7,500	-\$12,400	-\$24,800	-\$37,200	-\$49,600	-\$62,000	-\$74,400	-\$86,800	-\$99,200	-\$111,600	-\$124,000		electric vehicles cost less than
	City Debt Service														half as much to operate as gas-
EST: \$1.5	Net City Impact		\$42,500	\$597,600	\$485,200	\$402,800	\$310,400	\$243,000	\$240,600	\$208,200	\$210,800	\$183,400	\$161,000	City of Ann	powered cars. The average cost to
Mil in City	City Capital													Arbor	operate an EV in the United States
Budget	City Funding Source		All Funds	All Funds		is \$485 per year, while the average									
	Other (i.e., philanthropic, state,														for a gasoline-powered vehicle is
	federal, pro bono, public-private														\$1,117. Operational savings are
	partnership)			\$50,000	\$50,000	\$25,000		\$50,000	\$25,000	\$25,000					only calculated for City of Ann Arbor fleet vehicles.

														Implem.	
ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
<b>EV INFRAST</b>	RUCTURE	\$42,000,000	\$0	\$4,200,000	\$4,200,000	\$4,200,000	\$4,200,000	\$4,200,000	\$4,200,000	\$4,200,000	\$4,200,000	\$4,200,000	\$4,200,000		
	City Operating Costs			\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000		
	City Operating Credits														As an alternative, we could
	City Debt Service			\$8,497,500	\$2,520,000	\$2,520,000	\$2,520,000	\$2,520,000	\$2,520,000	\$2,520,000	\$2,520,000	\$2,520,000	\$2,520,000		explore public charging
EST:	Net City Impact		\$0	\$8,547,500	\$2,570,000	\$2,570,000	\$2,570,000	\$2,570,000	\$2,570,000	\$2,570,000	\$2,570,000	\$2,570,000	\$2,570,000	City of Ann	infrastructure through a public- private partnership which would
\$500,000 in	City Capital			\$33,872,500										Arbor and DDA	significantly lower the costs to
City Budget	City Funding Source			GF & DDA	GF & DDA	GF & DDA	GF & DDA	GF & DDA	GF & DDA	GF & DDA	GF & DDA	GF & DDA	GF & DDA		the City. Assumes 20 year
	Other (i.e., philanthropic, state,														payback with 4% interest.
	federal, pro bono, public-private	(	\$150,000												
	partnership)			\$250,000	\$250,000	\$200,000	\$200,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000		

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
<b>BULK PURC</b>	HASE OF ENERGY EFFICIENCY	\$950,000		\$275,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000		programs estimate a 5-fold return
	City Operating Costs			\$250,000	\$50,000	\$50,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000		on energy efficiency investments;
	City Operating Credits			-\$250,000	-\$400,000	-\$628,770	-\$628,770	-\$628,770	-\$628,770	-\$628,770	-\$628,770	-\$628,770	-\$628,770	City of Ann	see:
	City Debt Service													Arbor and	https://www.nrdc.org/experts/aria
EST:	Net City Impact	:		\$0	-\$350,000	-\$578,770	-\$553,770	-\$553,770	-\$553,770	-\$553,770	-\$553,770	-\$553,770	-\$553,770	SOOK IUI	na-gonzalez/michigan-utilities- plan-most-energy-efficiency-ever
\$500,000	City Capital													community	pian-most-energy-emclency-ever
Already in	City Funding Source			GF & MIL	GF	liaison	Per studies cited by the U.S. EPA,								
City Budget	Other (i.e., philanthropic, state,	,												stipends	for every \$1M spent on various
	federal, pro bono, public-private														types of EE creates between 5.7 –
	partnership)			\$25,000	\$25,000	\$25,000									11 jobs. Estimated savings are for

														Implem.	
ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
<b>BUILDING</b>	CODE REQUIREMENTS	\$1,935,000	\$49,000	\$255,000	\$255,000	\$255,000	\$206,000	\$141,000	\$141,000	\$141,000	\$141,000	\$141,000	\$210,000		
	City Operating Costs		\$49,000	\$200,000	\$245,000	\$245,000	\$206,000	\$141,000	\$141,000	\$141,000	\$141,000	\$141,000	\$210,000		Per studies cited by the U.S. EPA,
	City Operating Credits														for every \$1M spent on various
EST: \$1.5	City Debt Service														types of EE creates between 5.7 –
ES1. \$1.5	Net City Impact		\$49,000	\$200,000	\$245,000	\$245,000	\$206,000	\$141,000	\$141,000	\$141,000	\$141,000	\$141,000	\$210,000	City of Ann	11 jobs. This also assumes that training and related code-work is
Already in	City Capital													Arbor	integrated into the job
City Budget	City Funding Source		GF & CON	GF & CON	GF & CON	GF & CON	GF & CON	GF & CON	GF & CON	GF & CON	GF & CON	GF & CON	GF & CON		description for building
City budget	Other (i.e., philanthropic, state,														inspectors.
	federal, pro bono, public-private														
	partnership)			\$55,000	\$10,000	\$10,000									

													Implem.	
ACTION	TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
LED LIGHTING	\$3,140,000	\$245,920	\$361,760	\$361,760	\$361,760	\$361,760	\$361,760	\$361,760	\$361,760	\$361,760	\$0	\$0		
	City Operating Costs	\$24,500	\$24,500	\$24,500	\$24,500	\$24,500	\$24,500	\$24,500	\$24,500	\$24,500				Assumes no funding currently exists for this and that the City

EST:	City Operating Credits		-\$100,000	-\$200,000	-\$300,000	-\$400,000	-\$500,000	-\$600,000	-\$675,000	-\$735,000	-\$735,000	-\$735,000		will take over all existing lights
	City Debt Service		\$660,423	\$223,998	\$223,998	\$223,998	\$223,998	\$223,998	\$223,998	\$223,998	\$223,998	\$223,998		from DTE and convert them to
Assumes no	Net City Impact	\$24,500	\$584,923	\$48,498	-\$51,502	-\$151,502	-\$251,502	-\$351,502	-\$426,502	-\$486,502	-\$511,002	-\$511,002	City of Ann	LED. LED lights will save at least
funding for	City Capital		\$2,483,075										Arbor	50% from existing lighting and
this	City Funding Source													potentially more. Operational
currently	Other (i.e., philanthropic, state,													costs are also lower but are not
exists	federal, pro bono, public-private													factored into this estimate. Assumes 15 years at 4.5%
	partnership)													Assumes 13 years at 4.3%

														Implem.	
ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
<b>BENCHMAR</b>	RKING	\$2,370,000		\$408,000	\$218,000	\$218,000	\$218,000	\$218,000	\$218,000	\$218,000	\$218,000	\$218,000	\$218,000		
	City Operating Costs			\$308,000	\$168,000	\$218,000	\$198,000	\$218,000	\$218,000	\$218,000	\$218,000	\$218,000	\$218,000		
	City Operating Credits														Benchmarking is a foundational
	City Debt Service														piece of our commercial sector
EST: \$1MIL	Net City Impact			\$308,000	\$168,000	\$218,000	\$198,000	\$218,000	\$218,000	\$218,000	\$218,000	\$218,000	\$218,000	City of Ann	engagement. We also assume that
already in	City Capital														we'll be able work with DTE to
City budget	City Funding Source			GF		build an API to automatically get									
	Other (i.e., philanthropic, state,														data from participating entities.
	federal, pro bono, public-private														
	partnership)			\$100,000	\$50,000		\$20,000								

ACTION	Т	OTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
<b>LOAN LOSS</b>	RESERVE	\$1,578,000	\$55,000	\$1,052,500	\$52,500	\$52,500	\$52,500	\$52,500	\$52,500	\$52,500	\$52,500	\$52,500	\$50,500		
EST: \$920,000	City Operating Costs City Operating Credits City Debt Service Net City Impact City Capital		\$55,000 \$55,000	\$852,500 \$852,500	\$52,500 \$52,500	\$50,500 \$50,500	City of Ann Arbor	The City currently has \$400k in a loan loss reserve dedicated for PACE financing. We've contacted the U.S. Department of Energy (the original granter) about							
already in	City Funding Source		GF	GF	GF	GF	GF	GF	GF	GF	GF	GF	GF	Alboi	moving this to this program. We
City budget	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			\$200,000											assume these funds will be able to be repurposed.

ACTION														Implem.	
ENERGY CONCIERCE		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
EDUCATION	AND COMMUNITY	\$820,000	\$74,545	\$74,550	\$74,545	\$74,545	\$74,545	\$74,545	\$74,545	\$74,545	\$74,545	\$74,545	\$74,545		DTE and Consumers Energy's EE programs estimate a 5-fold return on energy efficiency investments;
	City Operating Costs City Operating Credits		\$74,545	\$69,550	\$69,545	\$69,545	\$69,545	\$69,545	\$69,545	\$69,545	\$69,545	\$69,545	\$69,545		see: https://www.nrdc.org/experts/aria na-gonzalez/michigan-utilities-
EST: \$820,000	City Debt Service Net City Impact City Capital		\$74,545	\$69,550	\$69,545	\$69,545	\$69,545	\$69,545	\$69,545	\$69,545	\$69,545	\$69,545	\$69,545	Arbor	plan-most-energy-efficiency-ever  Per studies cited by the U.S. EPA,

City by doot	City Funding Source	GF & MIL	for every \$1M spent on various										
city budget	Other (i.e., philanthropic, state,												types of EE creates between 5.7
	federal, pro bono, public-private												11 jobs. All cost savings from th
	partnership)		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	program are accrued by resident

														Implem.	
ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
NET ZERO E HOUSING	NERGY AFFORDABLE	\$800,000	\$200,000	\$200,000	\$100,000	\$100,000	\$100,000	\$100,000	\$0	\$0	\$0	\$0	\$0		DTE and Consumers Energy's EE programs estimate a 5-fold return
EST: \$800,000	City Operating Costs City Operating Credits City Debt Service Net City Impact City Capital		\$200,000 -\$10,000 \$190,000	\$200,000 -\$20,000 \$180,000	\$100,000 -\$25,000 \$75,000	\$100,000 -\$30,000 \$70,000	\$100,000 -\$35,000 \$65,000	\$100,000 -\$40,000 \$60,000	-\$40,000 -\$40,000	-\$40,000 -\$40,000	-\$40,000 -\$40,000	-\$40,000 -\$40,000	-\$40,000 -\$40,000	City of Ann	on energy efficiency investments; see: https://www.nrdc.org/experts/aria na-gonzalez/michigan-utilities- plan-most-energy-efficiency-ever
already in City budget	City Funding Source Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)		MIL	MIL	MIL	MIL	MIL	MIL							Per studies cited by the U.S. EPA, for every \$1M spent on various types of EE creates between 5.7 – 11 jobs. Operational savings for AAHC are estimated.

													Implem.	
ACTION		TOTAL	2020 2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
<b>GREEN REN</b>	TAL HOUSING PROGRAM	\$530,000	\$53,000	\$53,000	\$53,000	\$53,000	\$53,000	\$53,000	\$53,000	\$53,000	\$53,000	\$53,000		DTE and Consumers Energy's EE
	City Operating Cost: City Operating Credit:		\$53,000	\$48,000	\$48,000	\$48,000	\$48,000	\$48,000	\$48,000	\$48,000	\$48,000	\$48,000		programs estimate a 5-fold return on energy efficiency investments;
EST:	City Debt Service Net City Impac		\$53,000	\$48,000	\$48,000	\$48,000	\$48,000	\$48,000	\$48,000	\$48,000	\$48,000	\$48,000	City of Ann	see: https://www.nrdc.org/experts/aria na-gonzalez/michigan-utilities-
\$530,000	City Capita	nl .											Arbor	plan-most-energy-efficiency-ever
already in	City Funding Source	e	GF and CON											
City budget	Other (i.e., philanthropic, state federal, pro bono, public-private	e		45.000	45.000	45.000	45.000	45.000	45.000	45.000	45.000	45.000		Per studies cited by the U.S. EPA, for every \$1M spent on various types of EE creates between 5.7 –
	partnership	")		\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000		11 jobs.3

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
			2020											пеэрот	
<b>GREEN BUS</b>	INESS CHALLENGE	\$700,000		\$70,000	\$70,000	\$70,000	\$70,000	\$70,000	\$70,000	\$70,000	\$70,000	\$70,000	\$70,000		DTE and Consumers Energy's EE
	City Operating Costs			\$70,000	\$70,000	\$0	\$65,000	\$70,000	\$70,000	\$70,000	\$70,000	\$70,000	\$70,000		programs estimate a 5-fold return
	City Operating Credits														on energy efficiency investments;
	City Debt Service														see:
EST: Not	•			¢70.000	¢70.000	ćo	¢6F 000	¢70,000	¢70,000	¢70,000	¢70,000	¢70,000	¢70.000	City Of Allii	https://www.nrdc.org/experts/aria
currently	Net City Impact			\$70,000	\$70,000	\$0	\$65,000	\$70,000	\$70,000	\$70,000	\$70,000	\$70,000	\$70,000	AIDOLAIIO	na-gonzalez/michigan-utilities-
included in	City Capital													2030 District	plan-most-energy-efficiency-ever
	City Funding Source			GF & MIL	2000 2 10 11 10 1										
the budget	Other (i.e., philanthropic, state,														Per studies cited by the U.S. EPA,
	federal, pro bono, public-private														for every \$1M spent on various
	partnership)				ć7F 000										types of EE creates between 5.7 –
	partifership)				\$75,000										11 iobs.3

CTION	T.ACE EFFICIENTLY	OTAL	2020	<b>2021</b> \$15,000	<b>2022</b> \$15,000	<b>2023</b> \$15,000	<b>2024</b> \$15,000	<b>2025</b> \$15,000	<b>2026</b> \$15,000	<b>2027</b> \$15,000	<b>2028</b> \$15,000	<b>2029</b> \$15,000	<b>2030</b> \$15,000	Implem. Respon.	NOTES  DTE and Consumers Energy's EE
JING IN PL	City Operating Costs City Operating Credits	\$155,000	\$5,000 \$5,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000		programs estimate a 5-fold retu on energy efficiency investment see:
EST: 150,000 in	City Debt Service Net City Impact City Capital		\$5,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	City of Ann Arbor	https://www.nrdc.org/experts/a na-gonzalez/michigan-utilities- plan-most-energy-efficiency-ev
City oudgets	City Funding Source		MIL	MIL	MIL	MIL	MIL	MIL	MIL	MIL	MIL	MIL	MIL	Alboi	
	Other (i.e., philanthropic, state, federal, pro bono, public-private partnership)			\$200,000											Per studies cited by the U.S. EPA for every \$1M spent on various types of EE creates between 5.7 11 iobs.3
														Implem.	
CTION	Т	OTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
EATHERIZ	ATION EXPANSION	\$1,550,000		\$152,500	\$152,500	\$152,500	\$152,500	\$177,500	\$152,500	\$152,500	\$152,500	\$152,500	\$152,500		DTE and Consumers Energy's E
	City Operating Costs City Operating Credits			\$132,500	\$132,500	\$142,500	\$142,500	\$167,500	\$142,500	\$142,500	\$142,500	\$142,500	\$142,500		programs estimate a 5-fold retu on energy efficiency investmen see:
T: \$1 MIL in City	City Debt Service Net City Impact City Capital			\$132,500	\$132,500	\$142,500	\$142,500	\$167,500	\$142,500	\$142,500	\$142,500	\$142,500	\$142,500	Washtenaw County	https://www.nrdc.org/experts/ na-gonzalez/michigan-utilities- plan-most-energy-efficiency-ev
oudgets	City Funding Source Other (i.e., philanthropic, state,			MIL	,	Per studies cited by the U.S. EP									
	federal, pro bono, public-private partnership)			\$20,000	\$20,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000		for every \$1M spent on various types of EE creates between 5.7 11 jobs.3
														Implom	
CTION	ī	OTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
	RIZED PLAN	\$2,400,000		\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$300,000	\$200,000	\$150,000	\$140,000	\$110,000		
	City Operating Costs City Operating Credits			\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000		
	City Debt Service			\$430,255	\$145,255	\$145,255	\$145,255	\$145,255	\$145,255	\$145,255	\$145,255	\$145,255	\$145,255		Additional grant dollars may b
ST: Not	Net City Impact		\$0	\$480,255	\$195,255	\$195,255	\$195,255	\$195,255	\$195,255	\$195,255	\$195,255	\$195,255	\$195,255		available for options of this w
cluded in	City Capital		•	\$1,615,000	. ,	,	. ,	,	,	,	, ,	,		Arbor and DDA	especially if a change in federa leadership takes place. Assume
sting City	City Funding Source			GF		15 years at 4%.									
oudgets	Other (i.e., philanthropic, state,														,
	federal, pro bono, public-private														
	partnership)														

ACTION	TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Implem. Respon.	NOTES
EXPAND LOCAL AND REGIONAL TRANSIT	\$656,780,000	\$0	\$3,080,000	\$3,080,000	\$100,000	\$520,000	\$600,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000		Not Calculated. Note: Using AAA's total cost per mile driven for MI
City Operating Co	osts													drivers4 of \$0.59/mile x 388.645.000 VMT miles reduced

Not	City Operating Credits City Debt Service City Capital	Intentionally omitted	SU	TheRide with support from se City of Ann	r
mated	City Funding Source			•	Th
	Other (i.e., philanthropic, state,				С
	federal, pro bono, public-private				pa
					ac
	partnership)				٧

													Implem.	
ACTION		TOTAL	2020 2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
<b>PARK AND</b>	RIDE	\$170,000,000	\$200,000	\$300,000	\$21,500,000	\$21,500,000	\$21,500,000	\$21,000,000	\$21,000,000	\$21,000,000	\$21,000,000	\$21,000,000		
	City Operating Costs		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000		
	City Operating Credits													
EST:	City Debt Service												City of Ann	Dan a Causail sanuart arrusa
\$500,000 in	Net City Impact		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	Arbor,	Per a Council request, assumes the City takes on 100% of the
City	City Capital												TheRide and	cost. This is highly unlikely.
budgets	City Funding Source		GF and DDA	GF and DDA	GF and DDA	GF and DDA	GF and DDA	GF and DDA	GF and DDA	GF and DDA	GF and DDA	GF and DDA	MDOT	
buugets	Other (i.e., philanthropic, state,													
	federal, pro bono, public-private													
	partnership)			\$84,750,000		\$40,000,000		\$44,750,000						

														Implem.	
ACTION	TO	OTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
<b>DUPLEX / T</b>	RIPLEX / ADU'S	\$250,000	\$72,100	\$72,100	\$72,100	\$20,000	\$13,700	\$0	\$0	\$0	\$0	\$0	\$0		
	City Operating Costs		\$72,100	\$72,100	\$72,100	\$20,000	\$13,700								
	City Operating Credits														
EST:	City Debt Service														
\$250,000 in	Net City Impact		\$72,100	\$72,100	\$72,100	\$20,000	\$13,700	\$0	\$0	\$0	\$0	\$0	\$0	City of Ann	Assumes this is part of existing
City	City Capital													Arbor	staff's job.
	City Funding Source		GF	GF	GF	GF	GF								
budgets	Other (i.e., philanthropic, state,														
	federal, pro bono, public-private														
	partnership)														

														Implem.	
ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
MIXED-USE	ZONING	\$365,000		\$50,000	\$75,000	\$55,000	\$35,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000		
	City Operating Costs	5		\$50,000	\$75,000	\$35,000	\$35,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000		
	City Operating Credits	5													
EST:	City Debt Service	è													Assumes this is part of existing
\$300,000 in	Net City Impac	t	\$0	\$50,000	\$75,000	\$35,000	\$35,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	City of Ann	staff's job or it fits into the Master Plan initiative and is
	City Capita	I												Arbor	mostly covered through that
City	City Funding Source	2		GF		work.									

	Other (i.e., philanthropic, state, federal, pro bono, public-private			Ī
	partnership)	\$20,000		

														Implem.	
ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
<b>PARKING F</b>	ATES	\$4,500,000	\$0	\$2,221,000	\$2,221,000	\$7,250	\$7,250	\$7,250	\$7,250	\$7,250	\$7 <i>,</i> 250	\$7,250	\$7,250		
	City Operating Costs			\$52,500	\$52,500	\$7,250	\$7,250	\$7,250	\$7,250	\$7,250	\$7,250	\$7,250	\$7,250		
	City Operating Credits														
EST:	City Debt Service														This assumes the City works with
\$200,000 in	Net City Impact		\$0	\$52,500	\$52,500	\$7,250	\$7,250	\$7,250	\$7,250	\$7,250	\$7,250	\$7,250	\$7,250	City of Ann	a private company to implement
\$200,000 III	City Capital														this solution. An alternative is the
budgets	City Funding Source														City could fund the program itself
buugets	Other (i.e., philanthropic, state,														
	federal, pro bono, public-private														
	partnership)			\$2,168,500	\$2,168,500										

														Implem.	
ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
YEAR ROUN	ID COMPOSTING	\$26,000,000		\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000		
	City Operating Costs	S		\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000		
EST: \$26	City Operating Credits	S													
MIL in City	City Debt Service	9													
budgets	Net City Impac	t		\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	\$2,600,000	City of Ann	Assumes could be paid for
only if	City Capita	I												Arbor	through changes as outlined in the SWRMP
SWRMP is	City Funding Source	•		SW		the SWRIVII									
implemente	Other (i.e., philanthropic, state	,													
d	federal, pro bono, public-private	2													
	partnership	)													

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
<b>EXPAND CO</b>	OMMERCIAL RECYCLING	\$18,400,000		\$1,840,000	\$1,840,000	\$1,840,000	\$1,840,000	\$1,840,000	\$1,840,000	\$1,840,000	\$1,840,000	\$1,840,000	\$1,840,000		
	City Operating Cost	S		\$1,840,000	\$1,840,000	\$1,840,000	\$1,840,000	\$1,840,000	\$1,840,000	\$1,840,000	\$1,840,000	\$1,840,000	\$1,840,000		
EST: \$18.5	City Operating Credit	S													
MIL in City	City Debt Servic	е												City of Ann	Assumes a sold be used for
budgets	Net City Impac	t	\$0	\$1,840,000	\$1,840,000	\$1,840,000	\$1,840,000	\$1,840,000	\$1,840,000	\$1,840,000	\$1,840,000	\$1,840,000	\$1,840,000	•	Assumes could be paid for through changes as outlined in
only if	City Capita	nl													the SWRMP
SWRMP is	City Funding Sourc	e		SW	Contractor										
implemente	Other (i.e., philanthropic, state	2,													
d	federal, pro bono, public-privat	е													
	partnership	)													

														Implem.	
ACTION	Т	TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
	BLE MATERIAL USE AND	\$270,000													
REUSE		\$270,000		\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000		
	City Operating Costs			\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000		
	City Operating Credits														
EST:	City Debt Service													City of Ann	
\$270,000 in	Net City Impact		\$0	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	Arbor	
City	City Capital													Alboi	
	City Funding Source			GF and SW											
budgets	Other (i.e., philanthropic, state,														
	federal, pro bono, public-private														
	partnership)														

														Implem.	
ACTION	T	OTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
<b>CIRCULAR E</b>	CONOMY	\$270,000		\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000		
	City Operating Costs			\$22,000	\$22,000	\$22,000	\$22,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000		
	City Operating Credits														
EST:	City Debt Service														
\$270,000 in	Net City Impact		\$0	\$22,000	\$22,000	\$22,000	\$22,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	\$27,000	City of Ann	
City	City Capital													Arbor	
budgets	City Funding Source			GF and SW											
buugets	Other (i.e., philanthropic, state,														
	federal, pro bono, public-private														
	partnership)			\$5,000	\$5,000	\$5,000	\$5,000								

ACTION	Т	OTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTE
PLANT-RICH D	IETS	\$208,400		\$20,840	\$20,840	\$20,840	\$20,840	\$20,840	\$20,840	\$20,840	\$20,840	\$20,840	\$20,840		
	City Operating Costs			\$15,840	\$15,840	\$15,840	\$20,840	\$20,840	\$20,840	\$20,840	\$20,840	\$20,840	\$20,840		
	City Operating Credits														
	City Debt Service														
EST: \$0 in	Net City Impact		\$0	\$15,840	\$15,840	\$15,840	\$20,840	\$20,840	\$20,840	\$20,840	\$20,840	\$20,840	\$20,840	City of Ann	
City	City Capital													Arbor	
budgets	City Funding Source			MIL & GF											
0	Other (i.e., philanthropic, state,														
fe	deral, pro bono, public-private														
	partnership)			\$5,000	\$5,000	\$5,000									

														Implem.	
ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
<b>REFRIGERA</b>	NT RECYCLING	\$179,400		\$10,440	\$85,440	\$10,440	\$10,440	\$10,440	\$10,440	\$10,440	\$10,440	\$10,440	\$10,440		
	City Operating	Costs		\$10,440	\$35,440	\$10,440	\$10,440	\$10,440	\$10,440	\$10,440	\$10,440	\$10,440	\$10,440		1
	City Operating C	redits													

EST: Not	City Debt Service												
included in		\$0	\$10,440	\$35,440	\$10,440	\$10,440	\$10,440	\$10,440	\$10,440	\$10,440	\$10,440	\$10,440	City of Ann
	City Canital												Arbor
existing City	City Funding Source		SW and MIL										
budgets	Other (i.e., philanthropic, state,												
	federal, pro bono, public-private												
	partnership)			\$50,000									

														Implem.	
ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
<b>RESILIENCE</b>	HUBS	\$5,025,000		\$25,000	\$25,000	\$750,000	\$100,000	\$825,000	\$225,000	\$975,000	\$300,000	\$1,500,000	\$300,000		
	City Operating Costs			\$25,000	\$25,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000		
	City Operating Credits														Studies regularly show that for
EST:	City Debt Service				\$962,412	\$324,912	\$324,912	\$324,912	\$324,912	\$324,912	\$324,912	\$324,912	\$324,912		every \$1 invested in resilience, \$7
\$500,000 in	Net City Impact		\$0	\$25,000	\$987,412	\$374,912	\$374,912	\$374,912	\$374,912	\$374,912	\$374,912	\$374,912	\$374,912	City of Ann	are saved. We don't calculate a payback here but there will
	City Capital				\$3,612,500									Arbor	undoubtedly be value to the
City budgets	City Funding Source			GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL	GF & MIL		community for this action.
budgets	Other (i.e., philanthropic, state,														Assumes 20 years at 4%
	federal, pro bono, public-private														
	partnership)			\$25,000	\$25,000	\$100,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000		

														Implem.	
ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
<b>NEIGHBORH</b>	HOOD AND YOUTH	\$350,000													
<b>AMBASSA</b>	DORS	\$350,000		\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000		
	City Operating Costs			\$25,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000		
	City Operating Credits														
EST:	City Debt Service													City of Ann	
\$350,00 in	Net City Impact		\$0	\$25,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	Arbor	
	City Capital													Alboi	
City budgets	City Funding Source			GF & MIL											
buugets	Other (i.e., philanthropic, state,														
	federal, pro bono, public-private														
	partnership)			\$10,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000		

														Implem.	
ACTION	•	TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
TREE CANOPY	Υ	\$1,160,000		\$116,000	\$116,000	\$116,000	\$116,000	\$116,000	\$116,000	\$116,000	\$116,000	\$116,000	\$116,000		
	City Operating Costs			\$116,000	\$116,000	\$116,000	\$116,000	\$116,000	\$116,000	\$116,000	\$116,000	\$116,000	\$116,000		
	City Operating Credits														1
	City Debt Service														We did not capture the payback
EST: \$1.16	Net City Impact		\$0	\$116,000	\$116,000	\$116,000	\$116,000	\$116,000	\$116,000	\$116,000	\$116,000	\$116,000	\$116,000	City of Ann	to the City of trees but we know
MIL in City	City Capital														that trees have ecosystem, health,
budgets	City Funding Source			STM		and natural system benefits.									

Other (i.e., philanthropic, state,
federal, pro bono, public-private
partnership)

														Implem.	
ACTION	-	TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
<b>NEIGHBOR</b>	HOOD ASSET MAPPING	\$300,000		\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000		
	City Operating Costs			\$15,000	\$25,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000		
	City Operating Credits														
	City Debt Service														
EST: \$0 in	Net City Impact		\$0	\$15,000	\$25,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	City of Ann	
City	City Capital													Arbor	
budgets	City Funding Source			GF & MIL											
	Other (i.e., philanthropic, state,														
	federal, pro bono, public-private														
	partnership)			\$15,000	\$5,000										

														Implem.	
ACTION	T	OTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
<b>EMERGENC</b>	Y KITS	\$350,000		\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000		
	City Operating Costs			\$35,000	\$25,000	\$25,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000		
	City Operating Credits			-\$245,000	-\$245,000	-\$245,000	-\$245,000	-\$245,000	-\$245,000	-\$245,000	-\$245,000	-\$245,000	-\$245,000		
EST:	City Debt Service														Estimated savings from a FEMA
\$100,000 in	Net City Impact		\$0	-\$210,000	-\$220,000	-\$220,000	-\$210,000	-\$210,000	-\$210,000	-\$210,000	-\$210,000	-\$210,000	-\$210,000	City of Ann	report showing that for every \$1 invested in prevention, we save
	City Capital													Arbor	\$7 in emergency management and
City budgets	City Funding Source			GF & MIL		response costs.									
budgets	Other (i.e., philanthropic, state,														1
	federal, pro bono, public-private														
	partnership)				\$10,000	\$10,000									

ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
<b>SENSORS A</b>	ND DATA MONITORING	\$300,000		\$101,300	\$28,300	\$21,300	\$21,300	\$21,300	\$21,300	\$21,300	\$21,300	\$21,300	\$21,300		
	City Operating Costs			\$51,300	\$28,300	\$21,300	\$21,300	\$21,300	\$21,300	\$21,300	\$21,300	\$21,300	\$21,300		
	City Operating Credits			-\$709,100	-\$198,100	-\$149,100	-\$149,100	-\$149,100	-\$149,100	-\$149,100	-\$149,100	-\$149,100	-\$149,100		
EST: Not	City Debt Service														Estimated savings from a FEMA
	Net City Impact		\$0	-\$657,800	-\$169,800	-\$127,800	-\$127,800	-\$127,800	-\$127,800	-\$127,800	-\$127,800	-\$127,800	-\$127,800	City of Ann	report showing that for every \$1
currently included in	City Capital													Arbor	invested in prevention, we save \$7 in emergency management and
	City Funding Source			GF		response costs.									
City budget	Other (i.e., philanthropic, state,														l '
	federal, pro bono, public-private														
	partnership)			\$50,000											

														Implem.	
ACTION	7	TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
<b>EQUITY PRO</b>	OGRAMS	\$200,000		\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000		
	City Operating Costs			\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000		
	City Operating Credits														
EST:	City Debt Service														
\$200,000 in	Net City Impact		\$0	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	City of Ann	
\$200,000 III	City Capital													Arbor	
budgets	City Funding Source			GF & MIL											
buugets	Other (i.e., philanthropic, state,														
	federal, pro bono, public-private														
	partnership)														

														Implem.	
ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
SA2T GRAN	TPROGRAM	\$1,000,000		\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000		
	City Operating Costs			\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000		
	City Operating Credits														
	City Debt Service														Each application is unique but to-
EST: \$1 MIL	Net City Operating Costs		\$0	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	Pass unough	date, most awarded grants have at least a 50% match meaning we are
in City	City Capital													to community	leveraging a lot of external
budgets	City Funding Source			MIL		funding through this program.									
	Other (i.e., philanthropic, state,														
	federal, pro bono, public-private														
	partnership)														

														Implem.	
ACTION	Т	OTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
INTERNAL (	CARBON TAX	\$75,000		\$52,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500		
	City Operating Costs			\$52 <i>,</i> 500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500		
	City Operating Credits			-\$2,500	-\$52,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500	-\$2,500		
EST: \$0	City Debt Service														Revenue generated through this
estimated	Net City Impact		\$0	\$50,000	-\$50,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	LITY OF ANN	program is immediately reivested back into energy efficiency or
in City	City Capital													Arbor	renewable energy projects at City
budgets	City Funding Source			GF	GF	GF	GF	GF	GF	GF	GF	GF	GF		faciilties.
buugets	Other (i.e., philanthropic, state,														
	federal, pro bono, public-private														
	partnership)														

														Implem.	
ACTION		TOTAL	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Respon.	NOTES
OFFSETS		\$9,440,000		\$12,000	\$22,100	\$22,100	\$22,100	\$22,100	\$22,100	\$22,100	\$22,100	\$4,636,650	\$4,636,650		
	City Operating Costs			\$12,000	\$22,100	\$22,100	\$22,100	\$22,100	\$22,100	\$22,100	\$22,100	\$4,636,650	\$4,636,650		
	City Operating Credits	\$9,207,000													
	City Debt Service													City of Ann	

EST:	Net City Impact	\$0	\$12,000	\$22,100	\$22,100	\$22,100	\$22,100	\$22,100	\$22,100	\$22,100	\$4,636,650	\$4,636,650	Arbor and	Estimated cost for carbon offsets
\$233,000 in	City Capital												Offset	Estimated cost for carbon offsets
city budget	City Funding Source		GF	GF	Organization	1								
	Other (i.e., philanthropic, state,													1
	federal, pro bono, public-private													1
	partnership)													

\$46,487,575

	SUMMARY											
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	
<b>TOTAL City Operating Costs</b>	\$793,281	\$8,491,870	\$7,119,461	\$6,847,486	\$6,791,186	\$6,719,486	\$6,585,486	\$6,558,986	\$6,529,986	\$11,099,036	\$11,162,036	
<b>TOTAL City Operating Credits</b>	-\$17,500	-\$1,305,748	-\$1,078,896	-\$686,682	-\$737,578	-\$788,474	-\$834,370	-\$1,002,770	-\$1,075,170	-\$1,087,570	-\$1,099,970	
<b>TOTAL City Debt Service</b>	\$0	\$10,894,794	\$4,292,781	\$3,655,281	\$3,655,281	\$3,655,281	\$3,655,281	\$3,655,281	\$3,655,281	\$3,655,281	\$3,655,281	
TOTAL Net City Impact	\$775,781	\$18,080,916	\$10,333,346	\$9,816,085	\$9,708,889	\$9,586,293	\$9,406,397	\$9,211,497	\$9,110,097	\$13,666,747	\$13,717,347	
TOTAL City Capital	\$0	\$42,875,075	\$3,612,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
philanthropic, state, federal,												
pro bono, public-private												
partnership)	\$150,000	\$3,259,500	\$87,588,500	\$455,000	\$41,071,000	\$480,000	\$45,100,000	\$281,000	\$150,000	\$156,000	\$150,000	