memo

To: City Council

From: Alex Pettis

CC: Town Manager

Date: October 24, 2022

Re: College Town Budget

Due to the expensiveness of operating university dormitories, the university has considered the option of shutting down the dorms and requiring the students to live in apartments off campus.

The City Council requested four specific scenarios. The first scenario that was requested was that no apartments were build on an accelerated basis along with no property tax and utility increase. With this option the net income that the town would make would be $76,986 while having $3,000,000 of cash on hand and $14,139759 debt at the end of the year. The next scenario was that apartments were being built on an accelerated basis with everything else staying the same. This option would produce a significant increase to the net income with it being $2,066,247, cash on hand at the end of the year being $3,000,000, and the debt at the end of the year being $10,411,843. The third scenario that was requested to be explored was not building apartments on an accelerated basis but increasing the utilities selling price to 1% in the 2021 and 2022 years along with increasing the property tax rate in 2020 to 1%. The results are as followed: Net Income is $1,504,928, Cash on hand at the end of the year is 3,000,000, and the debt at the end of the year is $11,941,612. The final scenario that was explored was changing the apartments to being build on an accelerated basis with the utilities and property tax increases staying the same. This option is the best option to maximize profits as well as reduce the debt at the end of the year as the net income is $3,592,314 along with $3,000,000 cash on hand at the end of the year and debt being $8,080,566. The summary of this information can be found in Table 1 (below).

Scenario Summary	Current Values:	Optmistic1	Optmistic2	Increase1	Increase2
Changing Cells:					
Accelerated_Apt_Construction	N	N	Y	N	Y
Increase_Water_Selling_2020	0%	0%	0%	0%	0%
Increase_Water_Selling_2021	0%	0%	0%	1%	1%
Increase_Water_Selling_2022	0%	0%	0%	1%	1%
Increase_Kilowatt_Selling_2020	0%	0%	0%	0%	0%
Increase_Kilowatt_Selling_2021	0%	0%	0%	1%	1%
Increase_Kilowatt_Selling_2022	0%	0%	0%	1%	1%
Property_Tax_Increase_2020	0%	0%	0%	1%	1%
Property_Tax_Increase_2021	0%	0%	0%	0%	0%

Property_Tax_Increase_2022	0%	0%	0%	0%	0%
Result Cells:					
Net_Income_2022	$ 76,986	$ 76,986	$ 2,066,247	$ 1,504,928	$ 3,592,314
Cash_2022	$ 3,000,000	$ 3,000,000	$ 3,000,000	$ 3,000,000	$ 3,000,000
Debt_2022	$ 14,139,759	$ 14,139,759	$ 10,411,843	$ 11,941,612	$ 8,080,566

Table 1. The scenario summary table of the requested scenarios.

Now if we look more closely at the accelerated growth scenario, specifically for the property tax rate change of 0% we that if we were to increase the utility rate change to 3%, we would see the most amount of change in terms of increasing the net income and end of year cash on hand as well as reducing the amount of debt we have. A detailed graph of this is in Figure 1 (below).

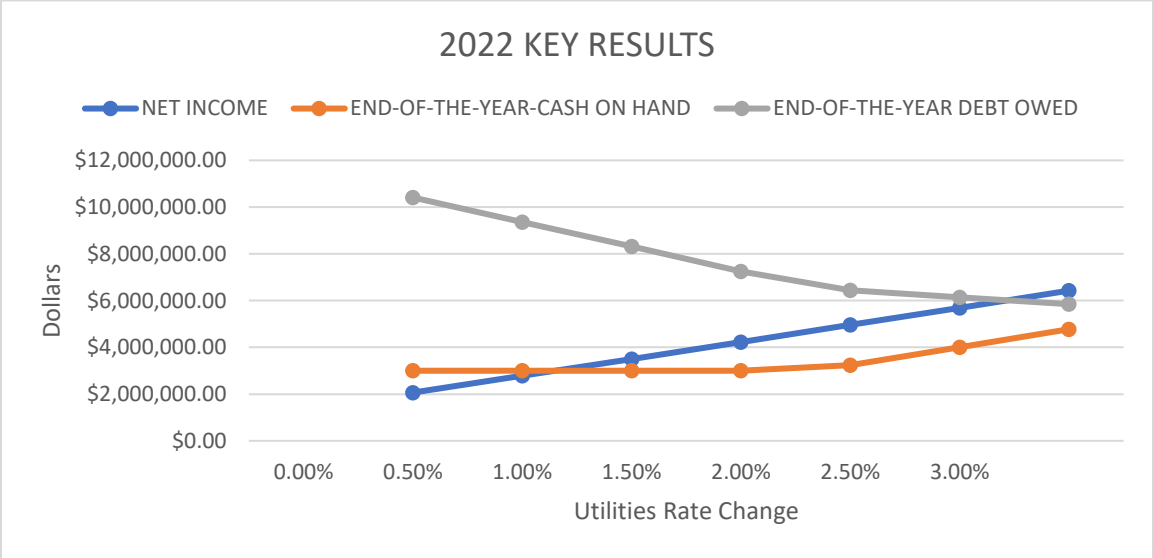

Figure 1. Line graph for the scenario of accelerated apartment growth and a property tax rate change of 0.0%.

Then we want to look at accelerated growth scenario for the property tax rate change of 1.0%. If we compare this option to the previous one in Figure 1 (above) and once again look at changing the utilities rate change to 3% we see that we have a slight increase and should choose this option. The graph of this can be seen in Figure 2 (below).

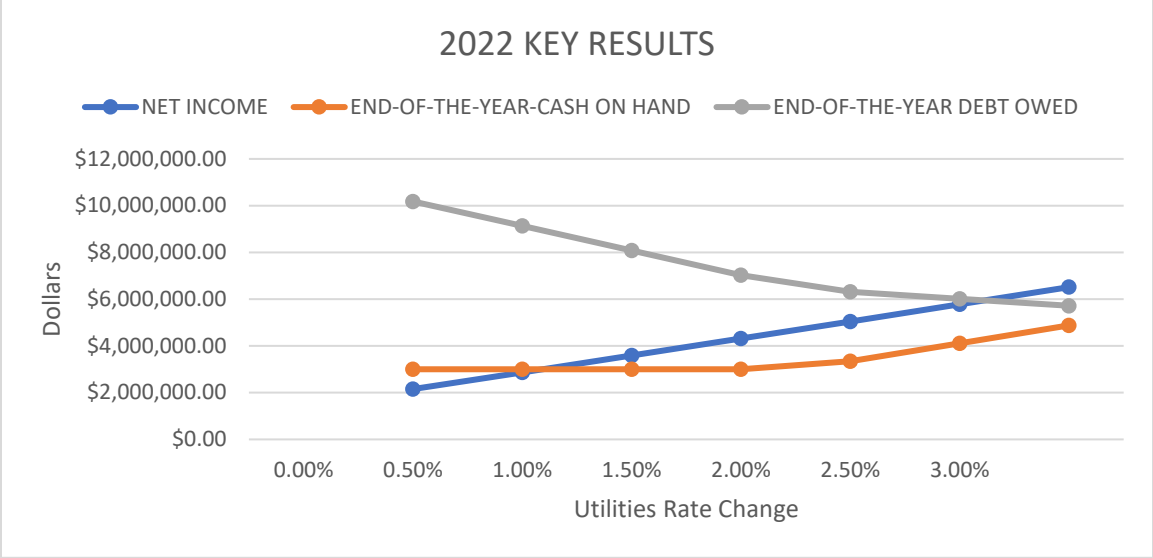

Figure 2. Line graph for the scenario of accelerated apartment growth and a property tax rate change of 1.0%.

Now we want to shift gears and look at the slow growth scenarios. Specifically, we want to look at the option of having the property tax rate change being 0.0%. When comparing this to the other scenarios it does not even compare as the net income and debt on hand at the end of the year when considering the utilities rate change to be 3.0% are much lower. The graph to illustrate this is in Figure 3 (below).

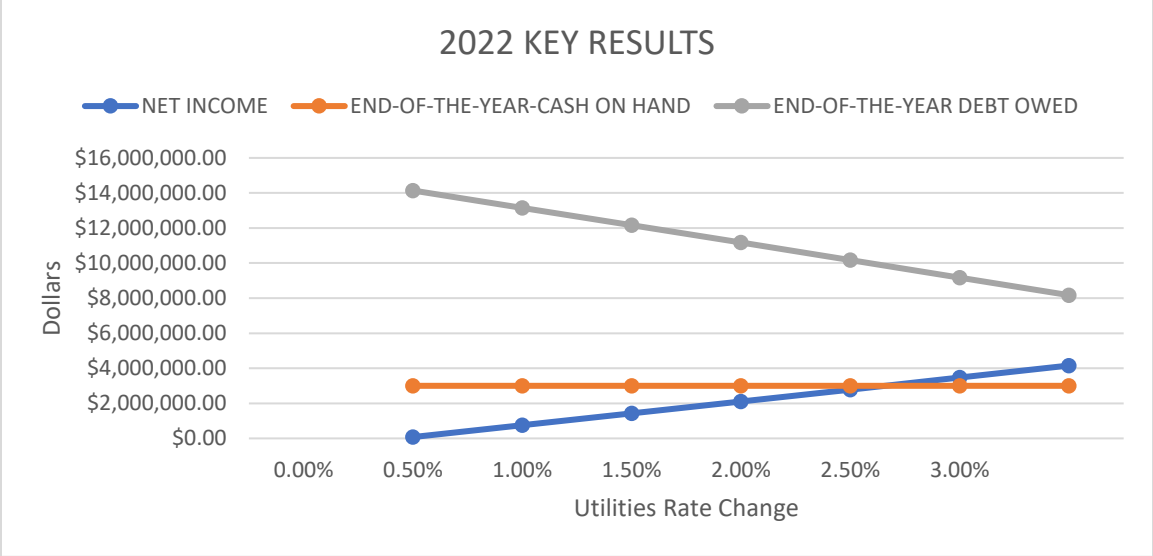

Figure 3. Line graph for the scenario of slow apartment growth and a property tax rate change of 0.0%.

The final scenario we will be exploring is the slow growth option with a 1.0% property tax rate change. We see that this option is the better slow growth option as we get a net income that is slightly higher while the debt at the end of the year is slightly decreasing for the 3.0% utilities rate change. The graph for this information can be seen in Figure 4 (below).

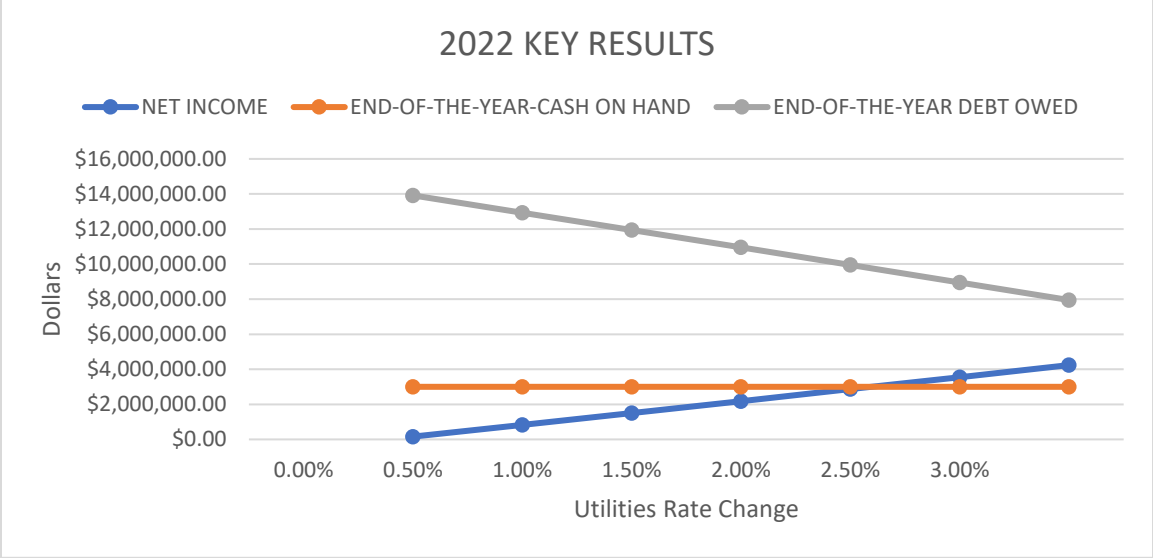

Figure 4. Line graph for the scenario of slow apartment growth and a property tax rate change of 0.0%.

After looking at the four scenarios specifically requested by the town council, we can see that the bets one is increase 2 where there was accelerated growth and 1% increase for the selling price of the utilities for the 2021 and 2022 years and the 1% property tax rate increase for 2020. Then if we wanted to compare the other four options requested by the town manager, we see that the best option is to increase the property tax rate change to 1% as well as having accelerated growth. Lastly, if we were to compare all the options as a whole, we can see that the option to increase the property tax rate change to 1% while having accelerated growth is the best option that he town should go with to maximize the net income and end of year cash on hand as well as reducing the end of year debt on hand.