

Total Project

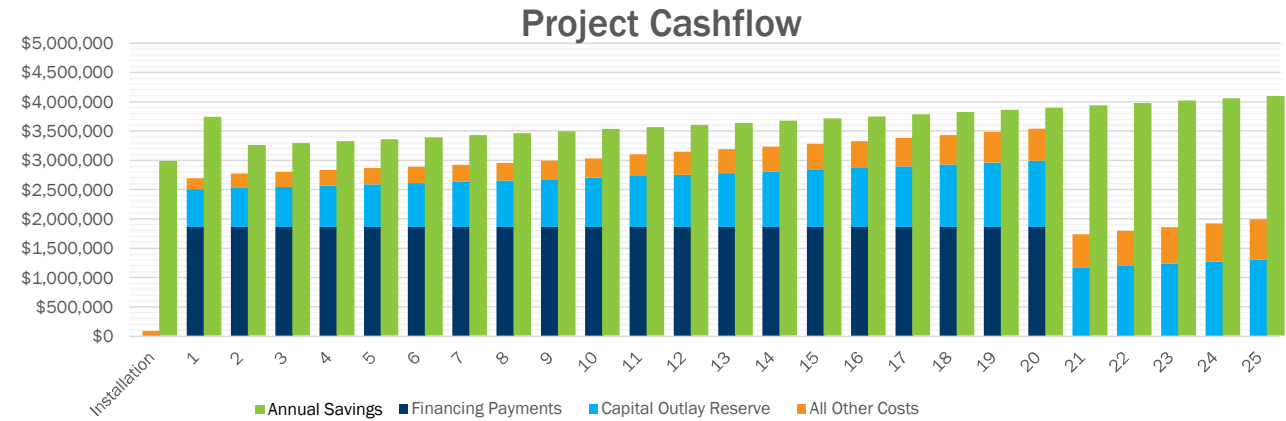
Town of Amherst

Final Design Financial Projections

11/5/2021

Project Financing Details

Total Base Construction Cost ¹	\$12,637,040
Utility Purchase Cost ²	\$15,094,254
Total Project Cost	\$27,731,295
Interest Rate	3.00%
Term of Financing	20
Payment Frequency	Annual



Year	A	B	C	D = A + B + C	E	F	G	H	I	J	K = E + F + G + H + I + J	L = D - K	M = L + M ⁿ⁻¹
	Annual Energy Savings ³	New Energy Incentives ⁴	Annual Facility Charge Savings ⁵	Total Annual Savings	Financing Payments	Annual Utility Charge Cost ⁶	Real Property Tax & Insurance Costs ⁷	Annual M&V Costs ⁸	Operation & Maintenance Costs ⁹	Capital Outlay Reserve ¹⁰	Net Annual Costs	Annual Cash Flow	Cumulative Cash Flow
Installation	\$214,596		\$2,762,854	\$2,977,450		-\$15,730	-\$75,000				-\$90,730	\$2,886,720	\$2,886,720
1	\$429,192	\$512,720	\$2,790,483	\$3,732,394	-\$1,863,979	-\$15,887	-\$76,500	-\$10,000	-\$83,225	-\$644,000	-\$2,693,591	\$1,038,804	\$3,925,524
2	\$433,484	\$0	\$2,818,387	\$3,251,871	-\$1,863,979	-\$16,046	-\$78,030	-\$10,300	-\$143,778	-\$663,320	-\$2,775,452	\$476,419	\$4,401,943
3	\$437,819	\$0	\$2,846,571	\$3,284,390	-\$1,863,979	-\$16,206	-\$79,591	-\$10,609	-\$151,418	-\$683,220	-\$2,805,023	\$479,367	\$4,881,310
4	\$442,197	\$0	\$2,875,037	\$3,317,234	-\$1,863,979	-\$16,368	-\$81,182	-\$10,927	-\$159,491	-\$703,716	-\$2,835,664	\$481,570	\$5,362,880
5	\$446,619	\$0	\$2,903,787	\$3,350,406	-\$1,863,979	-\$16,532	-\$82,806	-\$11,255	-\$168,020	-\$724,828	-\$2,867,420	\$482,986	\$5,845,867
6	\$451,085	\$0	\$2,932,825	\$3,383,910	-\$1,863,979	-\$16,697	-\$84,462	\$0	-\$177,033	-\$746,573	-\$2,888,744	\$495,166	\$6,341,033
7	\$455,596	\$0	\$2,962,153	\$3,417,749	-\$1,863,979	-\$16,864	-\$86,151	\$0	-\$186,559	-\$768,970	-\$2,922,523	\$495,226	\$6,836,259
8	\$460,152	\$0	\$2,991,775	\$3,451,927	-\$1,863,979	-\$17,033	-\$87,874	\$0	-\$196,627	-\$792,039	-\$2,957,552	\$494,375	\$7,330,633
9	\$464,753	\$0	\$3,021,693	\$3,486,446	-\$1,863,979	-\$17,203	-\$89,632	\$0	-\$207,270	-\$815,800	-\$2,993,884	\$492,562	\$7,823,195
10	\$469,401	\$0	\$3,051,910	\$3,521,310	-\$1,863,979	-\$17,375	-\$91,425	\$0	-\$218,521	-\$840,274	-\$3,031,573	\$489,737	\$8,312,933
11	\$474,095	\$0	\$3,082,429	\$3,556,524	-\$1,863,979	-\$17,549	-\$93,253	\$0	-\$264,089	-\$865,482	-\$3,104,352	\$452,172	\$8,765,104
12	\$478,836	\$0	\$3,113,253	\$3,592,089	-\$1,863,979	-\$17,725	-\$95,118	\$0	-\$277,676	-\$891,447	-\$3,145,944	\$446,145	\$9,211,249
13	\$483,624	\$0	\$3,144,386	\$3,628,010	-\$1,863,979	-\$17,902	-\$97,020	\$0	-\$292,015	-\$918,190	-\$3,189,106	\$438,903	\$9,650,153
14	\$488,460	\$0	\$3,175,829	\$3,664,290	-\$1,863,979	-\$18,081	-\$98,961	\$0	-\$307,151	-\$945,736	-\$3,233,907	\$430,383	\$10,080,535
15	\$493,345	\$0	\$3,207,588	\$3,700,933	-\$1,863,979	-\$18,262	-\$100,940	\$0	-\$323,129	-\$974,108	-\$3,280,417	\$420,516	\$10,501,051
16	\$498,278	\$0	\$3,239,664	\$3,737,942	-\$1,863,979	-\$18,444	-\$102,959	\$0	-\$339,998	-\$1,003,331	-\$3,328,711	\$409,231	\$10,910,282
17	\$503,261	\$0	\$3,272,060	\$3,775,321	-\$1,863,979	-\$18,629	-\$105,018	\$0	-\$357,810	-\$1,033,431	-\$3,378,867	\$396,455	\$11,306,737
18	\$508,294	\$0	\$3,304,781	\$3,813,075	-\$1,863,979	-\$18,815	-\$107,118	\$0	-\$376,620	-\$1,064,434	-\$3,430,966	\$382,108	\$11,688,845
19	\$513,377	\$0	\$3,337,829	\$3,851,205	-\$1,863,979	-\$19,003	-\$109,261	\$0	-\$396,486	-\$1,096,367	-\$3,485,096	\$366,109	\$12,054,955
20	\$518,511	\$0	\$3,371,207	\$3,889,717	-\$1,863,979	-\$19,193	-\$111,446	\$0	-\$417,470	-\$1,129,258	-\$3,541,346	\$348,371	\$12,403,326
21	\$523,696	\$0	\$3,404,919	\$3,928,615	\$0	-\$19,385	-\$113,675	\$0	-\$439,638	-\$1,163,136	-\$1,735,833	\$2,192,781	\$14,596,107
22	\$528,933	\$0	\$3,438,968	\$3,967,901	\$0	-\$19,579	-\$115,948	\$0	-\$463,057	-\$1,198,030	-\$1,796,614	\$2,171,287	\$16,767,394
23	\$534,222	\$0	\$3,473,358	\$4,007,580	\$0	-\$19,775	-\$118,267	\$0	-\$487,802	-\$1,233,971	-\$1,859,815	\$2,147,765	\$18,915,159
24	\$539,564	\$0	\$3,508,091	\$4,047,656	\$0	-\$19,973	-\$120,633	\$0	-\$513,950	-\$1,270,990	-\$1,925,545	\$2,122,111	\$21,037,270
25	\$544,960	\$0	\$3,543,172	\$4,088,132	\$0	-\$20,172	-\$123,045	\$0	-\$541,584	-\$1,309,119	-\$1,993,921	\$2,094,211	\$23,131,481
Totals	\$12,336,347	\$512,720	\$81,575,008	\$94,424,075	-\$37,279,572	-\$464,429	-\$2,525,318	-\$53,091	-\$7,490,418	-\$23,479,766	-\$71,292,595	\$23,131,481	

Assumptions:	
O&M Escalation (col I):	3.0%
Energy & Facility Escalation (col A,C,F):	1.0%
M&V Escalation (col H):	3.0%
Real Property Tax & Insurance Escalation (col G):	2.0%
Capital Outlay Reserve Escalation (col J):	3.0%

Notes

- Project Cost include all professional and construction services for a turn-key, guaranteed energy savings project.
- Purchase Costs represent cost of purchasing street lighting system from National Grid (NG) & New York State Electric and Gas (NYSEG).
- Energy Savings represent savings from converting existing HID lamps to LED lamps as well as the transfer from NG-SC-2 & NYSEG-SC-3 to NG-SC-3 & NYSEG-SC-4 and the corresponding delivery rates.
- Net Energy Incentives are based on current NG & NYSEG incentive programs.
- Facility Charge Savings represents savings from the purchase of street lighting system from NG & NYSEG and assuming the maintenance responsibility for the street lighting district, removing facility charges.
- Utility Charge represents an annual charge of \$12.14 for each roadway (cobrahead) fixture attached to a wooden utility pole.
- This cost represents the anticipated loss in revenue from the real property tax & insurance costs collected from NG & NYSEG which will no longer be collected once the street lighting system is owned by the Town.
- M&V period is assumed to include 5 years of active M&V followed by a stipulated guarantee for the balance of the contract
- Operation & Maintenance is estimated at replacing 1% of fixtures due to accidents, power surges, etc. plus 1% of the total fixtures due to fixture and photocell failure, this does not include any facilities such as poles, arms, wiring etc.
- Capital Outlay is estimated at replacing all of the facilities, not including the lights, over the next 25 years. Equipment life is projected at 50 years new. Note that damaged and poor conditioned existing equipment has been budgeted to be replaced during construction utilizing the facility repair allowances and the rest will be replaced over 25 years with 4% replaced / year at a 3% cost

