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Appendix A
Single Contribution; 5.45% Annual Asset Return; Year 1 Debt Rate
Empire SERP
Rabbi Trust Funding Projection

Cost of Capital (Discount Rate)	7.52%
Cost of Debt (Year 1 Only)	2.37%
Rate of Return	5.45%
Annual Trust Expenses	10,000
Initial Trust Set-up Cost	30,000

Present Value of Reimbursements	
Pay-as-You-Go	9,508,135
Rabbi Trust	12,176,058
PV Rabbi Trust Savings/(Cost)	(2,667,923)

Mortality: RP2014 with projection scale MP-2016 adjusted to reflect the 2016 Social Security Administration's ultimate improvement rates
 Retirement: Assumed retirement age of 55
 Rate Case Frequency: 2 years

Year	Pay-as-You-Go		Rabbi Trust Funding				Up-Front Reimbursement
	Projected Benefit Payments	Current Reimbursements	Rabbi Trust Contributions BOY	Trust Expenses	Projected Benefit Payments	Accumulated Rabbi Trust EOY	
2019	512,879	512,879	12,176,058	30,000	512,879	12,282,177	12,176,058
2020	610,424	512,879	-	10,000	610,424	12,314,449	-
2021	925,017	610,424	-	10,000	925,017	12,025,429	-
2022	916,552	610,424	-	10,000	916,552	11,729,350	-
2023	907,532	916,552	-	10,000	907,532	11,426,396	-
2024	897,948	916,552	-	10,000	897,948	11,116,774	-
2025	887,786	916,552	-	10,000	887,786	10,800,712	-
2026	877,028	916,552	-	10,000	877,028	10,478,472	-
2027	865,651	877,028	-	10,000	865,651	10,150,352	-
2028	853,619	877,028	-	10,000	853,619	9,816,706	-
2029	840,886	877,028	-	10,000	840,886	9,477,951	-
2030	827,414	877,028	-	10,000	827,414	9,134,568	-
2031	813,154	827,414	-	10,000	813,154	8,787,114	-
2032	798,053	827,414	-	10,000	798,053	8,436,232	-
2033	807,810	827,414	-	10,000	807,810	8,086,207	-
2034	790,695	827,414	-	10,000	790,695	7,733,046	-
2035	772,544	790,695	-	10,000	772,544	7,377,641	-
2036	753,300	790,695	-	10,000	753,300	6,999,994	-
2037	732,921	790,695	-	10,000	732,921	6,514,201	-
2038	711,371	790,695	-	10,000	711,371	6,128,457	-
2039	688,626	711,371	-	10,000	688,626	5,745,047	-
2040	664,667	711,371	-	10,000	664,667	5,365,344	-
2041	639,481	711,371	-	10,000	639,481	4,990,811	-
2042	613,076	711,371	-	10,000	613,076	4,622,981	-
2043	585,493	613,076	-	10,000	585,493	4,263,429	-
2044	556,801	613,076	-	10,000	556,801	3,913,744	-
2045	527,095	613,076	-	10,000	527,095	3,575,506	-
2046	496,495	613,076	-	10,000	496,495	3,250,257	-
2047	465,152	496,495	-	10,000	465,152	2,939,468	-
2048	433,271	496,495	-	10,000	433,271	2,644,479	-
2049	401,119	496,495	-	10,000	401,119	2,366,430	-
2050	368,989	496,495	-	10,000	368,989	2,106,221	-
2051	337,175	368,989	-	10,000	337,175	1,864,500	-
2052	305,941	368,989	-	10,000	305,941	1,641,679	-
2053	275,499	368,989	-	10,000	275,499	1,437,975	-
2054	246,049	368,989	-	10,000	246,049	1,253,411	-
2055	217,813	246,049	-	10,000	217,813	1,087,783	-
2056	190,991	246,049	-	10,000	190,991	940,671	-
2057	165,827	246,049	-	10,000	165,827	811,383	-
2058	142,556	246,049	-	10,000	142,556	698,945	-
2059	121,358	142,556	-	10,000	121,358	602,147	-
2060	102,358	142,556	-	10,000	102,358	519,585	-
2061	85,581	142,556	-	10,000	85,581	449,751	-
2062	70,897	142,556	-	10,000	70,897	391,191	-
2063	58,132	70,897	-	10,000	58,132	342,547	-
2064	47,195	70,897	-	10,000	47,195	302,483	-
2065	37,957	70,897	-	10,000	37,957	269,722	-
2066	30,263	70,897	-	10,000	30,263	243,076	-
2067	23,949	30,263	-	10,000	23,949	221,462	-
2068	18,835	30,263	-	10,000	18,835	203,921	-
2069	14,747	30,263	-	10,000	14,747	189,622	-
2070	11,512	30,263	-	10,000	11,512	177,865	-
2071	8,974	11,512	-	10,000	8,974	168,074	-
2072	6,991	11,512	-	10,000	6,991	159,787	-
2073	5,444	11,512	-	10,000	5,444	152,636	-
2074	4,231	11,512	-	10,000	4,231	146,341	-
2075	3,268	4,231	-	10,000	3,268	140,691	-
2076	2,501	4,231	-	10,000	2,501	135,521	-
2077	1,890	4,231	-	10,000	1,890	130,697	-
2078	1,406	4,231	-	10,000	1,406	126,108	-
2079	1,025	1,406	-	10,000	1,025	121,659	-
2080	731	1,406	-	10,000	731	117,270	-
2081	509	1,406	-	10,000	509	112,870	-
2082	344	1,406	-	10,000	344	108,399	-
2083	227	344	-	10,000	227	103,805	-
2084	145	344	-	10,000	145	99,044	-
2085	90	344	-	10,000	90	94,081	-
2086	54	344	-	10,000	54	88,884	-
2087	31	54	-	10,000	31	83,427	-
2088	18	54	-	10,000	18	77,687	-
2089	10	54	-	10,000	10	71,642	-
2090	5	54	-	10,000	5	65,272	-
2091	3	5	-	10,000	3	58,558	-
2092	1	5	-	10,000	1	51,479	-
2093	1	5	-	10,000	1	44,015	-
2094	0	5	-	10,000	0	36,145	-
2095	0	0	-	10,000	0	27,846	-
2096	0	0	-	10,000	0	19,095	-
2097	0	0	-	10,000	0	9,867	-
2098	0	0	-	10,000	0	136	-

Appendix B
Single Contribution; 7.45% Annual Asset Return
Empire SERP
Rabbi Trust Funding Projection

Cost of Capital (Discount Rate)	7.52%
Cost of Debt (Year 1 Only)	2.37%
Rate of Return	7.45%
Annual Trust Expenses	10,000
Initial Trust Set-up Cost	30,000

Present Value of Reimbursements	
Pay-as-You-Go	9,508,135
Rabbi Trust	9,923,200
PV Rabbi Trust Savings/(Cost)	(415,065)

Mortality: RP2014 with projection scale MP-2016 adjusted to reflect the 2016 Social Security Administration's ultimate improvement rates
 Retirement: Assumed retirement age of 55
 Rate Case Frequency: 2 years

Year	Pay-as-You-Go		Rabbi Trust Funding				Up-Front Reimbursement
	Projected Benefit Payments	Current Reimbursements	Rabbi Trust Contributions BOY	Trust Expenses	Projected Benefit Payments	Accumulated Rabbi Trust EOY	
2019	512,879	512,879	9,923,200	30,000	512,879	10,099,741	9,923,200
2020	610,424	512,879	-	10,000	610,424	10,209,052	-
2021	925,017	610,424	-	10,000	925,017	10,000,406	-
2022	916,552	610,424	-	10,000	916,552	9,784,990	-
2023	907,532	916,552	-	10,000	907,532	9,562,875	-
2024	897,948	916,552	-	10,000	897,948	9,334,148	-
2025	887,786	916,552	-	10,000	887,786	9,098,914	-
2026	877,028	916,552	-	10,000	877,028	8,857,306	-
2027	865,651	877,028	-	10,000	865,651	8,609,492	-
2028	853,619	877,028	-	10,000	853,619	8,355,689	-
2029	840,886	877,028	-	10,000	840,886	8,096,175	-
2030	827,414	877,028	-	10,000	827,414	7,831,292	-
2031	813,154	827,414	-	10,000	813,154	7,561,457	-
2032	798,053	827,414	-	10,000	798,053	7,287,173	-
2033	807,810	827,414	-	10,000	807,810	6,982,341	-
2034	790,695	827,414	-	10,000	790,695	6,672,540	-
2035	772,544	790,695	-	10,000	772,544	6,358,474	-
2036	753,300	790,695	-	10,000	753,300	6,040,958	-
2037	732,921	790,695	-	10,000	732,921	5,720,912	-
2038	711,371	790,695	-	10,000	711,371	5,399,360	-
2039	688,626	711,371	-	10,000	688,626	5,077,430	-
2040	664,667	711,371	-	10,000	664,667	4,756,352	-
2041	639,481	711,371	-	10,000	639,481	4,437,460	-
2042	613,076	711,371	-	10,000	613,076	4,122,182	-
2043	585,493	613,076	-	10,000	585,493	3,812,008	-
2044	556,801	613,076	-	10,000	556,801	3,508,467	-
2045	527,095	613,076	-	10,000	527,095	3,213,105	-
2046	496,495	613,076	-	10,000	496,495	2,927,458	-
2047	465,152	496,495	-	10,000	465,152	2,653,021	-
2048	433,271	496,495	-	10,000	433,271	2,391,185	-
2049	401,119	496,495	-	10,000	401,119	2,143,170	-
2050	368,989	496,495	-	10,000	368,989	1,909,983	-
2051	337,175	368,989	-	10,000	337,175	1,692,402	-
2052	305,941	368,989	-	10,000	305,941	1,490,987	-
2053	275,499	368,989	-	10,000	275,499	1,306,123	-
2054	246,049	368,989	-	10,000	246,049	1,138,014	-
2055	217,813	246,049	-	10,000	217,813	986,649	-
2056	190,991	246,049	-	10,000	190,991	851,811	-
2057	165,827	246,049	-	10,000	165,827	733,012	-
2058	142,556	246,049	-	10,000	142,556	629,485	-
2059	121,358	142,556	-	10,000	121,358	540,218	-
2060	102,358	142,556	-	10,000	102,358	463,996	-
2061	85,581	142,556	-	10,000	85,581	399,486	-
2062	70,897	142,556	-	10,000	70,897	345,392	-
2063	58,132	70,897	-	10,000	58,132	300,499	-
2064	47,195	70,897	-	10,000	47,195	263,599	-
2065	37,957	70,897	-	10,000	37,957	233,526	-
2066	30,263	70,897	-	10,000	30,263	209,188	-
2067	23,949	30,263	-	10,000	23,949	189,582	-
2068	18,835	30,263	-	10,000	18,835	173,816	-
2069	14,747	30,263	-	10,000	14,747	161,113	-
2070	11,512	30,263	-	10,000	11,512	150,817	-
2071	8,974	11,512	-	10,000	8,974	142,384	-
2072	6,991	11,512	-	10,000	6,991	135,379	-
2073	5,444	11,512	-	10,000	5,444	129,456	-
2074	4,231	11,512	-	10,000	4,231	124,349	-
2075	3,268	4,231	-	10,000	3,268	119,859	-
2076	2,501	4,231	-	10,000	2,501	115,830	-
2077	1,890	4,231	-	10,000	1,890	112,134	-
2078	1,406	4,231	-	10,000	1,406	108,665	-
2079	1,025	1,406	-	10,000	1,025	105,332	-
2080	731	1,406	-	10,000	731	102,055	-
2081	509	1,406	-	10,000	509	98,765	-
2082	344	1,406	-	10,000	344	95,400	-
2083	227	344	-	10,000	227	91,906	-
2084	145	344	-	10,000	145	88,237	-
2085	90	344	-	10,000	90	84,352	-
2086	54	344	-	10,000	54	80,214	-
2087	31	54	-	10,000	31	75,792	-
2088	18	54	-	10,000	18	71,054	-
2089	10	54	-	10,000	10	65,972	-
2090	5	54	-	10,000	5	60,516	-
2091	3	5	-	10,000	3	54,656	-
2092	1	5	-	10,000	1	48,361	-
2093	1	5	-	10,000	1	41,597	-
2094	0	5	-	10,000	0	34,330	-
2095	0	0	-	10,000	0	26,522	-
2096	0	0	-	10,000	0	18,132	-
2097	0	0	-	10,000	0	9,117	-
2098	0	0	-	10,000	0	(570)	-

Appendix C
Single Contribution; 3.45% Annual Asset Return
Empire SERP
Rabbi Trust Funding Projection

Cost of Capital (Discount Rate)	7.52%
Cost of Debt (Year 1 Only)	2.37%
Rate of Return	3.45%
Annual Trust Expenses	10,000
Initial Trust Set-up Cost	30,000

Present Value of Reimbursements	
Pay-as-You-Go	9,508,135
Rabbi Trust	15,449,889
PV Rabbi Trust Savings/(Cost)	(5,941,754)

Mortality: RP2014 with projection scale MP-2016 adjusted to reflect the 2016 Social Security Administration's ultimate improvement rates
 Retirement: Assumed retirement age of 55
 Rate Case Frequency: 2 years

Year	Pay-as-You-Go		Rabbi Trust Funding				Up-Front Reimbursement
	Projected Benefit Payments	Current Reimbursements	Rabbi Trust Contributions BOY	Trust Expenses	Projected Benefit Payments	Accumulated Rabbi Trust EOY	
2019	512,879	512,879	15,449,889	30,000	512,879	15,430,746	15,449,889
2020	610,424	512,879	-	10,000	610,424	15,332,071	-
2021	925,017	610,424	-	10,000	925,017	14,910,019	-
2022	916,552	610,424	-	10,000	916,552	14,482,016	-
2023	907,532	916,552	-	10,000	907,532	14,048,420	-
2024	897,948	916,552	-	10,000	897,948	13,609,614	-
2025	887,786	916,552	-	10,000	887,786	13,166,004	-
2026	877,028	916,552	-	10,000	877,028	12,718,031	-
2027	865,651	877,028	-	10,000	865,651	12,266,175	-
2028	853,619	877,028	-	10,000	853,619	11,810,968	-
2029	840,886	877,028	-	10,000	840,886	11,353,007	-
2030	827,414	877,028	-	10,000	827,414	10,892,949	-
2031	813,154	827,414	-	10,000	813,154	10,431,522	-
2032	798,053	827,414	-	10,000	798,053	9,969,536	-
2033	807,810	827,414	-	10,000	807,810	9,481,688	-
2034	790,695	827,414	-	10,000	790,695	8,994,416	-
2035	772,544	790,695	-	10,000	772,544	8,508,795	-
2036	753,300	790,695	-	10,000	753,300	8,025,993	-
2037	732,921	790,695	-	10,000	732,921	7,547,262	-
2038	711,371	790,695	-	10,000	711,371	7,073,933	-
2039	688,626	711,371	-	10,000	688,626	6,607,409	-
2040	664,667	711,371	-	10,000	664,667	6,149,158	-
2041	639,481	711,371	-	10,000	639,481	5,700,714	-
2042	613,076	711,371	-	10,000	613,076	5,263,656	-
2043	585,493	613,076	-	10,000	585,493	4,839,574	-
2044	556,801	613,076	-	10,000	556,801	4,430,044	-
2045	527,095	613,076	-	10,000	527,095	4,036,599	-
2046	496,495	613,076	-	10,000	496,495	3,660,703	-
2047	465,152	496,495	-	10,000	465,152	3,303,719	-
2048	433,271	496,495	-	10,000	433,271	2,966,845	-
2049	401,119	496,495	-	10,000	401,119	2,651,050	-
2050	368,989	496,495	-	10,000	368,989	2,357,040	-
2051	337,175	368,989	-	10,000	337,175	2,085,245	-
2052	305,941	368,989	-	10,000	305,941	1,835,841	-
2053	275,499	368,989	-	10,000	275,499	1,608,795	-
2054	246,049	368,989	-	10,000	246,049	1,403,870	-
2055	217,813	246,049	-	10,000	217,813	1,220,594	-
2056	190,991	246,049	-	10,000	190,991	1,058,275	-
2057	165,827	246,049	-	10,000	165,827	915,951	-
2058	142,556	246,049	-	10,000	142,556	792,386	-
2059	121,358	142,556	-	10,000	121,358	686,118	-
2060	102,358	142,556	-	10,000	102,358	595,509	-
2061	85,581	142,556	-	10,000	85,581	518,838	-
2062	70,897	142,556	-	10,000	70,897	454,458	-
2063	58,132	70,897	-	10,000	58,132	400,839	-
2064	47,195	70,897	-	10,000	47,195	356,494	-
2065	37,957	70,897	-	10,000	37,957	320,016	-
2066	30,263	70,897	-	10,000	30,263	290,105	-
2067	23,949	30,263	-	10,000	23,949	265,584	-
2068	18,835	30,263	-	10,000	18,835	245,418	-
2069	14,747	30,263	-	10,000	14,747	228,715	-
2070	11,512	30,263	-	10,000	11,512	214,725	-
2071	8,974	11,512	-	10,000	8,974	202,834	-
2072	6,991	11,512	-	10,000	6,991	192,551	-
2073	5,444	11,512	-	10,000	5,444	183,486	-
2074	4,231	11,512	-	10,000	4,231	175,342	-
2075	3,268	4,231	-	10,000	3,268	167,896	-
2076	2,501	4,231	-	10,000	2,501	160,973	-
2077	1,890	4,231	-	10,000	1,890	154,433	-
2078	1,406	4,231	-	10,000	1,406	148,160	-
2079	1,025	1,406	-	10,000	1,025	142,058	-
2080	731	1,406	-	10,000	731	136,044	-
2081	509	1,406	-	10,000	509	130,049	-
2082	344	1,406	-	10,000	344	124,014	-
2083	227	344	-	10,000	227	117,891	-
2084	145	344	-	10,000	145	111,640	-
2085	90	344	-	10,000	90	105,229	-
2086	54	344	-	10,000	54	98,633	-
2087	31	54	-	10,000	31	91,833	-
2088	18	54	-	10,000	18	84,812	-
2089	10	54	-	10,000	10	77,557	-
2090	5	54	-	10,000	5	70,056	-
2091	3	5	-	10,000	3	62,299	-
2092	1	5	-	10,000	1	54,276	-
2093	1	5	-	10,000	1	45,977	-
2094	0	5	-	10,000	0	37,392	-
2095	0	0	-	10,000	0	28,511	-
2096	0	0	-	10,000	0	19,324	-
2097	0	0	-	10,000	0	9,820	-
2098	0	0	-	10,000	0	(12)	-

Appendix D
5-Year Level Contribution; 5.45% Annual Asset Return
Empire SERP
Rabbi Trust Funding Projection

Cost of Capital (Discount Rate)	7.52%
Cost of Debt (Year 1 Only)	2.37%
Rate of Return	5.45%
Annual Trust Expenses	10,000
Initial Trust Set-up Cost	30,000

Present Value of Reimbursements	
Pay-as-You-Go	9,508,135
Rabbi Trust	11,740,311
PV Rabbi Trust Savings/(Cost)	(2,232,176)

Mortality: RP2014 with projection scale MP-2016 adjusted to reflect the 2016 Social Security Administration's ultimate improvement rates
 Retirement: Assumed retirement age of 55
 Rate Case Frequency: 2 years

Year	Pay-as-You-Go		Rabbi Trust Funding				Up-Front Reimbursement
	Projected Benefit Payments	Current Reimbursements	Rabbi Trust Contributions BOY	Trust Expenses	Projected Benefit Payments	Accumulated Rabbi Trust EOY	
2019	512,879	512,879	2,700,272	30,000	512,879	2,289,961	2,700,272
2020	610,424	512,879	2,700,272	10,000	610,424	4,625,094	2,700,272
2021	925,017	610,424	2,700,272	10,000	925,017	6,764,441	2,700,272
2022	916,552	610,424	2,700,272	10,000	916,552	9,029,075	2,700,272
2023	907,532	916,552	2,700,272	10,000	907,532	11,426,393	2,700,272
2024	897,948	916,552	-	10,000	897,948	11,116,770	-
2025	887,786	916,552	-	10,000	887,786	10,800,708	-
2026	877,028	916,552	-	10,000	877,028	10,478,467	-
2027	865,651	877,028	-	10,000	865,651	10,150,347	-
2028	853,619	877,028	-	10,000	853,619	9,816,701	-
2029	840,886	877,028	-	10,000	840,886	9,477,946	-
2030	827,414	877,028	-	10,000	827,414	9,134,563	-
2031	813,154	827,414	-	10,000	813,154	8,787,109	-
2032	798,053	827,414	-	10,000	798,053	8,436,226	-
2033	807,810	827,414	-	10,000	807,810	8,056,201	-
2034	790,695	827,414	-	10,000	790,695	7,673,039	-
2035	772,544	790,695	-	10,000	772,544	7,287,634	-
2036	753,300	790,695	-	10,000	753,300	6,900,986	-
2037	732,921	790,695	-	10,000	732,921	6,514,193	-
2038	711,371	790,695	-	10,000	711,371	6,128,449	-
2039	688,626	711,371	-	10,000	688,626	5,745,039	-
2040	664,667	711,371	-	10,000	664,667	5,365,336	-
2041	639,481	711,371	-	10,000	639,481	4,990,802	-
2042	613,076	711,371	-	10,000	613,076	4,622,971	-
2043	585,493	613,076	-	10,000	585,493	4,263,418	-
2044	556,801	613,076	-	10,000	556,801	3,913,733	-
2045	527,095	613,076	-	10,000	527,095	3,575,494	-
2046	496,495	613,076	-	10,000	496,495	3,250,244	-
2047	465,152	496,495	-	10,000	465,152	2,939,455	-
2048	433,271	496,495	-	10,000	433,271	2,644,465	-
2049	401,119	496,495	-	10,000	401,119	2,366,415	-
2050	368,989	496,495	-	10,000	368,989	2,106,205	-
2051	337,175	368,989	-	10,000	337,175	1,864,484	-
2052	305,941	368,989	-	10,000	305,941	1,641,662	-
2053	275,499	368,989	-	10,000	275,499	1,437,957	-
2054	246,049	368,989	-	10,000	246,049	1,253,392	-
2055	217,813	246,049	-	10,000	217,813	1,087,763	-
2056	190,991	246,049	-	10,000	190,991	940,650	-
2057	165,827	246,049	-	10,000	165,827	811,360	-
2058	142,556	246,049	-	10,000	142,556	698,921	-
2059	121,358	142,556	-	10,000	121,358	602,122	-
2060	102,358	142,556	-	10,000	102,358	519,559	-
2061	85,581	142,556	-	10,000	85,581	449,724	-
2062	70,897	142,556	-	10,000	70,897	391,162	-
2063	58,132	70,897	-	10,000	58,132	342,516	-
2064	47,195	70,897	-	10,000	47,195	302,450	-
2065	37,957	70,897	-	10,000	37,957	269,687	-
2066	30,263	70,897	-	10,000	30,263	243,040	-
2067	23,949	30,263	-	10,000	23,949	221,424	-
2068	18,835	30,263	-	10,000	18,835	203,881	-
2069	14,747	30,263	-	10,000	14,747	189,580	-
2070	11,512	30,263	-	10,000	11,512	177,821	-
2071	8,974	11,512	-	10,000	8,974	168,028	-
2072	6,991	11,512	-	10,000	6,991	159,738	-
2073	5,444	11,512	-	10,000	5,444	152,585	-
2074	4,231	11,512	-	10,000	4,231	146,287	-
2075	3,268	4,231	-	10,000	3,268	140,634	-
2076	2,501	4,231	-	10,000	2,501	135,461	-
2077	1,890	4,231	-	10,000	1,890	130,634	-
2078	1,406	4,231	-	10,000	1,406	126,041	-
2079	1,025	1,406	-	10,000	1,025	121,588	-
2080	731	1,406	-	10,000	731	117,195	-
2081	509	1,406	-	10,000	509	112,791	-
2082	344	1,406	-	10,000	344	108,316	-
2083	227	344	-	10,000	227	103,717	-
2084	145	344	-	10,000	145	98,952	-
2085	90	344	-	10,000	90	93,984	-
2086	54	344	-	10,000	54	88,782	-
2087	31	54	-	10,000	31	83,320	-
2088	18	54	-	10,000	18	77,574	-
2089	10	54	-	10,000	10	71,523	-
2090	5	54	-	10,000	5	65,147	-
2091	3	5	-	10,000	3	58,426	-
2092	1	5	-	10,000	1	51,340	-
2093	1	5	-	10,000	1	43,868	-
2094	0	5	-	10,000	0	35,990	-
2095	0	0	-	10,000	0	27,682	-
2096	0	0	-	10,000	0	18,922	-
2097	0	0	-	10,000	0	9,684	-
2098	0	0	-	10,000	0	(57)	-

Appendix E
5-Year Level Contribution; 7.45% Annual Asset Return
Empire SERP
Rabbi Trust Funding Projection

Cost of Capital (Discount Rate)	7.52%
Cost of Debt (Year 1 Only)	2.37%
Rate of Return	7.45%
Annual Trust Expenses	10,000
Initial Trust Set-up Cost	30,000

Present Value of Reimbursements	
Pay-as-You-Go	9,508,135
Rabbi Trust	9,911,220
PV Rabbi Trust Savings/(Cost)	(403,085)

Mortality: RP2014 with projection scale MP-2016 adjusted to reflect the 2016 Social Security Administration's ultimate improvement rates
 Retirement: Assumed retirement age of 55
 Rate Case Frequency: 2 years

Year	Pay-as-You-Go		Rabbi Trust Funding				Up-Front Reimbursement
	Projected Benefit Payments	Current Reimbursements	Rabbi Trust Contributions BOY	Trust Expenses	Projected Benefit Payments	Accumulated Rabbi Trust EOY	
2019	512,879	512,879	2,279,581	30,000	512,879	1,886,672	2,279,581
2020	610,424	512,879	2,279,581	10,000	610,424	3,833,519	2,279,581
2021	925,017	610,424	2,279,581	10,000	925,017	5,599,306	2,279,581
2022	916,552	610,424	2,279,581	10,000	916,552	7,505,418	2,279,581
2023	907,532	916,552	2,279,581	10,000	907,532	9,562,885	2,279,581
2024	897,948	916,552	-	10,000	897,948	9,334,158	-
2025	887,786	916,552	-	10,000	887,786	9,098,925	-
2026	877,028	916,552	-	10,000	877,028	8,857,318	-
2027	865,651	877,028	-	10,000	865,651	8,609,505	-
2028	853,619	877,028	-	10,000	853,619	8,355,703	-
2029	840,886	877,028	-	10,000	840,886	8,096,190	-
2030	827,414	877,028	-	10,000	827,414	7,831,309	-
2031	813,154	827,414	-	10,000	813,154	7,561,476	-
2032	798,053	827,414	-	10,000	798,053	7,287,194	-
2033	807,810	827,414	-	10,000	807,810	6,982,364	-
2034	790,695	827,414	-	10,000	790,695	6,672,565	-
2035	772,544	790,695	-	10,000	772,544	6,358,501	-
2036	753,300	790,695	-	10,000	753,300	6,040,987	-
2037	732,921	790,695	-	10,000	732,921	5,720,943	-
2038	711,371	790,695	-	10,000	711,371	5,399,394	-
2039	688,626	711,371	-	10,000	688,626	5,077,467	-
2040	664,667	711,371	-	10,000	664,667	4,756,391	-
2041	639,481	711,371	-	10,000	639,481	4,437,502	-
2042	613,076	711,371	-	10,000	613,076	4,122,227	-
2043	585,493	613,076	-	10,000	585,493	3,812,056	-
2044	556,801	613,076	-	10,000	556,801	3,508,519	-
2045	527,095	613,076	-	10,000	527,095	3,213,161	-
2046	496,495	613,076	-	10,000	496,495	2,927,518	-
2047	465,152	496,495	-	10,000	465,152	2,653,085	-
2048	433,271	496,495	-	10,000	433,271	2,391,253	-
2049	401,119	496,495	-	10,000	401,119	2,143,243	-
2050	368,989	496,495	-	10,000	368,989	1,910,061	-
2051	337,175	368,989	-	10,000	337,175	1,692,486	-
2052	305,941	368,989	-	10,000	305,941	1,491,078	-
2053	275,499	368,989	-	10,000	275,499	1,306,220	-
2054	246,049	368,989	-	10,000	246,049	1,138,118	-
2055	217,813	246,049	-	10,000	217,813	986,761	-
2056	190,991	246,049	-	10,000	190,991	851,931	-
2057	165,827	246,049	-	10,000	165,827	733,141	-
2058	142,556	246,049	-	10,000	142,556	629,623	-
2059	121,358	142,556	-	10,000	121,358	540,366	-
2060	102,358	142,556	-	10,000	102,358	464,155	-
2061	85,581	142,556	-	10,000	85,581	399,657	-
2062	70,897	142,556	-	10,000	70,897	345,576	-
2063	58,132	70,897	-	10,000	58,132	300,697	-
2064	47,195	70,897	-	10,000	47,195	263,811	-
2065	37,957	70,897	-	10,000	37,957	233,754	-
2066	30,263	70,897	-	10,000	30,263	209,433	-
2067	23,949	30,263	-	10,000	23,949	189,845	-
2068	18,835	30,263	-	10,000	18,835	174,098	-
2069	14,747	30,263	-	10,000	14,747	161,416	-
2070	11,512	30,263	-	10,000	11,512	151,142	-
2071	8,974	11,512	-	10,000	8,974	142,734	-
2072	6,991	11,512	-	10,000	6,991	135,756	-
2073	5,444	11,512	-	10,000	5,444	129,861	-
2074	4,231	11,512	-	10,000	4,231	124,784	-
2075	3,268	4,231	-	10,000	3,268	120,327	-
2076	2,501	4,231	-	10,000	2,501	116,333	-
2077	1,890	4,231	-	10,000	1,890	112,675	-
2078	1,406	4,231	-	10,000	1,406	109,246	-
2079	1,025	1,406	-	10,000	1,025	105,956	-
2080	731	1,406	-	10,000	731	102,726	-
2081	509	1,406	-	10,000	509	99,486	-
2082	344	1,406	-	10,000	344	96,175	-
2083	227	344	-	10,000	227	92,739	-
2084	145	344	-	10,000	145	89,132	-
2085	90	344	-	10,000	90	85,313	-
2086	54	344	-	10,000	54	81,247	-
2087	31	54	-	10,000	31	76,902	-
2088	18	54	-	10,000	18	72,247	-
2089	10	54	-	10,000	10	67,254	-
2090	5	54	-	10,000	5	61,893	-
2091	3	5	-	10,000	3	56,135	-
2092	1	5	-	10,000	1	49,950	-
2093	1	5	-	10,000	1	43,305	-
2094	0	5	-	10,000	0	36,165	-
2095	0	0	-	10,000	0	28,493	-
2096	0	0	-	10,000	0	20,250	-
2097	0	0	-	10,000	0	11,393	-
2098	0	0	-	10,000	0	1,876	-

Appendix F
5-Year Level Contribution; 3.45% Annual Asset Return
Empire SERP
Rabbi Trust Funding Projection

Cost of Capital (Discount Rate)	7.52%
Cost of Debt (Year 1 Only)	2.37%
Rate of Return	3.45%
Annual Trust Expenses	10,000
Initial Trust Set-up Cost	30,000

Present Value of Reimbursements	
Pay-as-You-Go	9,508,135
Rabbi Trust	14,361,136
PV Rabbi Trust Savings/(Cost)	(4,853,001)

Mortality: RP2014 with projection scale MP-2016 adjusted to reflect the 2016 Social Security Administration's ultimate improvement rates
 Retirement: Assumed retirement age of 55
 Rate Case Frequency: 2 years

Year	Pay-as-You-Go		Rabbi Trust Funding				Up-Front Reimbursement
	Projected Benefit Payments	Current Reimbursements	Rabbi Trust Contributions BOY	Trust Expenses	Projected Benefit Payments	Accumulated Rabbi Trust EOY	
2019	512,879	512,879	3,303,062	30,000	512,879	2,864,854	3,303,062
2020	610,424	512,879	3,303,062	10,000	610,424	5,749,674	3,303,062
2021	925,017	610,424	3,303,062	10,000	925,017	8,414,047	3,303,062
2022	916,552	610,424	3,303,062	10,000	916,552	11,178,950	3,303,062
2023	907,532	916,552	3,303,062	10,000	907,532	14,048,416	3,303,062
2024	897,948	916,552	-	10,000	897,948	13,609,609	-
2025	887,786	916,552	-	10,000	887,786	13,165,999	-
2026	877,028	916,552	-	10,000	877,028	12,718,026	-
2027	865,651	877,028	-	10,000	865,651	12,266,170	-
2028	853,619	877,028	-	10,000	853,619	11,810,963	-
2029	840,886	877,028	-	10,000	840,886	11,353,002	-
2030	827,414	877,028	-	10,000	827,414	10,892,943	-
2031	813,154	827,414	-	10,000	813,154	10,431,516	-
2032	798,053	827,414	-	10,000	798,053	9,969,530	-
2033	807,810	827,414	-	10,000	807,810	9,481,681	-
2034	790,695	827,414	-	10,000	790,695	8,994,409	-
2035	772,544	790,695	-	10,000	772,544	8,508,788	-
2036	753,300	790,695	-	10,000	753,300	8,025,986	-
2037	732,921	790,695	-	10,000	732,921	7,547,255	-
2038	711,371	790,695	-	10,000	711,371	7,073,926	-
2039	688,626	711,371	-	10,000	688,626	6,607,401	-
2040	664,667	711,371	-	10,000	664,667	6,149,150	-
2041	639,481	711,371	-	10,000	639,481	5,700,706	-
2042	613,076	711,371	-	10,000	613,076	5,263,648	-
2043	585,493	613,076	-	10,000	585,493	4,839,566	-
2044	556,801	613,076	-	10,000	556,801	4,430,035	-
2045	527,095	613,076	-	10,000	527,095	4,036,590	-
2046	496,495	613,076	-	10,000	496,495	3,660,694	-
2047	465,152	496,495	-	10,000	465,152	3,303,710	-
2048	433,271	496,495	-	10,000	433,271	2,966,835	-
2049	401,119	496,495	-	10,000	401,119	2,651,040	-
2050	368,989	496,495	-	10,000	368,989	2,357,029	-
2051	337,175	368,989	-	10,000	337,175	2,085,234	-
2052	305,941	368,989	-	10,000	305,941	1,835,830	-
2053	275,499	368,989	-	10,000	275,499	1,608,784	-
2054	246,049	368,989	-	10,000	246,049	1,403,859	-
2055	217,813	246,049	-	10,000	217,813	1,220,583	-
2056	190,991	246,049	-	10,000	190,991	1,058,264	-
2057	165,827	246,049	-	10,000	165,827	915,940	-
2058	142,556	246,049	-	10,000	142,556	792,375	-
2059	121,358	142,556	-	10,000	121,358	686,107	-
2060	102,358	142,556	-	10,000	102,358	595,498	-
2061	85,581	142,556	-	10,000	85,581	518,827	-
2062	70,897	142,556	-	10,000	70,897	454,446	-
2063	58,132	70,897	-	10,000	58,132	400,827	-
2064	47,195	70,897	-	10,000	47,195	356,482	-
2065	37,957	70,897	-	10,000	37,957	320,004	-
2066	30,263	70,897	-	10,000	30,263	290,093	-
2067	23,949	30,263	-	10,000	23,949	265,572	-
2068	18,835	30,263	-	10,000	18,835	245,406	-
2069	14,747	30,263	-	10,000	14,747	228,702	-
2070	11,512	30,263	-	10,000	11,512	214,712	-
2071	8,974	11,512	-	10,000	8,974	202,821	-
2072	6,991	11,512	-	10,000	6,991	192,537	-
2073	5,444	11,512	-	10,000	5,444	183,471	-
2074	4,231	11,512	-	10,000	4,231	175,326	-
2075	3,268	4,231	-	10,000	3,268	167,879	-
2076	2,501	4,231	-	10,000	2,501	160,956	-
2077	1,890	4,231	-	10,000	1,890	154,415	-
2078	1,406	4,231	-	10,000	1,406	148,142	-
2079	1,025	1,406	-	10,000	1,025	142,039	-
2080	731	1,406	-	10,000	731	136,025	-
2081	509	1,406	-	10,000	509	130,029	-
2082	344	1,406	-	10,000	344	123,994	-
2083	227	344	-	10,000	227	117,870	-
2084	145	344	-	10,000	145	111,618	-
2085	90	344	-	10,000	90	105,206	-
2086	54	344	-	10,000	54	98,610	-
2087	31	54	-	10,000	31	91,809	-
2088	18	54	-	10,000	18	84,787	-
2089	10	54	-	10,000	10	77,531	-
2090	5	54	-	10,000	5	70,030	-
2091	3	5	-	10,000	3	62,272	-
2092	1	5	-	10,000	1	54,248	-
2093	1	5	-	10,000	1	45,948	-
2094	0	5	-	10,000	0	37,362	-
2095	0	0	-	10,000	0	28,480	-
2096	0	0	-	10,000	0	19,291	-
2097	0	0	-	10,000	0	9,785	-
2098	0	0	-	10,000	0	(48)	-

Appendix G
10-Year Level Contribution; 5.45% Annual Asset Return
Empire SERP
Rabbi Trust Funding Projection

Cost of Capital (Discount Rate)	7.52%
Cost of Debt (Year 1 Only)	2.37%
Rate of Return	5.45%
Annual Trust Expenses	10,000
Initial Trust Set-up Cost	30,000

Present Value of Reimbursements	
Pay-as-You-Go	9,508,135
Rabbi Trust	11,268,302
PV Rabbi Trust Savings/(Cost)	(1,760,167)

Mortality: RP2014 with projection scale MP-2016 adjusted to reflect the 2016 Social Security Administration's ultimate improvement rates
 Retirement: Assumed retirement age of 55
 Rate Case Frequency: 2 years

Year	Pay-as-You-Go		Rabbi Trust Funding				Up-Front
	Projected Benefit Payments	Current Reimbursements	Rabbi Trust Contributions BOY	Trust Expenses	Projected Benefit Payments	Accumulated Rabbi Trust EOY	Reimbursement
	2019	512,879	512,879	1,528,211	30,000	512,879	1,054,022
2020	610,424	512,879	1,528,211	10,000	610,424	2,085,858	1,528,211
2021	925,017	610,424	1,528,211	10,000	925,017	2,850,878	1,528,211
2022	916,552	610,424	1,528,211	10,000	916,552	3,666,284	1,528,211
2023	907,532	916,552	1,528,211	10,000	907,532	4,535,392	1,528,211
2024	897,948	916,552	1,528,211	10,000	897,948	5,461,708	1,528,211
2025	887,786	916,552	1,528,211	10,000	887,786	6,448,944	1,528,211
2026	877,028	916,552	1,528,211	10,000	877,028	7,501,031	1,528,211
2027	865,651	877,028	1,528,211	10,000	865,651	8,622,139	1,528,211
2028	853,619	877,028	1,528,211	10,000	853,619	9,816,704	1,528,211
2029	840,886	877,028	-	10,000	840,886	9,477,950	-
2030	827,414	877,028	-	10,000	827,414	9,134,567	-
2031	813,154	827,414	-	10,000	813,154	8,787,113	-
2032	798,053	827,414	-	10,000	798,053	8,436,230	-
2033	807,810	827,414	-	10,000	807,810	8,056,205	-
2034	790,695	827,414	-	10,000	790,695	7,673,043	-
2035	772,544	790,695	-	10,000	772,544	7,287,638	-
2036	753,300	790,695	-	10,000	753,300	6,900,990	-
2037	732,921	790,695	-	10,000	732,921	6,514,197	-
2038	711,371	790,695	-	10,000	711,371	6,128,453	-
2039	688,626	711,371	-	10,000	688,626	5,745,043	-
2040	664,667	711,371	-	10,000	664,667	5,365,340	-
2041	639,481	711,371	-	10,000	639,481	4,990,806	-
2042	613,076	711,371	-	10,000	613,076	4,622,976	-
2043	585,493	613,076	-	10,000	585,493	4,263,423	-
2044	556,801	613,076	-	10,000	556,801	3,913,738	-
2045	527,095	613,076	-	10,000	527,095	3,575,500	-
2046	496,495	613,076	-	10,000	496,495	3,250,251	-
2047	465,152	496,495	-	10,000	465,152	2,939,462	-
2048	433,271	496,495	-	10,000	433,271	2,644,473	-
2049	401,119	496,495	-	10,000	401,119	2,366,423	-
2050	368,989	496,495	-	10,000	368,989	2,106,213	-
2051	337,175	368,989	-	10,000	337,175	1,864,492	-
2052	305,941	368,989	-	10,000	305,941	1,641,670	-
2053	275,499	368,989	-	10,000	275,499	1,437,965	-
2054	246,049	368,989	-	10,000	246,049	1,253,401	-
2055	217,813	246,049	-	10,000	217,813	1,087,773	-
2056	190,991	246,049	-	10,000	190,991	940,661	-
2057	165,827	246,049	-	10,000	165,827	811,372	-
2058	142,556	246,049	-	10,000	142,556	698,934	-
2059	121,358	142,556	-	10,000	121,358	602,136	-
2060	102,358	142,556	-	10,000	102,358	519,573	-
2061	85,581	142,556	-	10,000	85,581	449,739	-
2062	70,897	142,556	-	10,000	70,897	391,178	-
2063	58,132	70,897	-	10,000	58,132	342,533	-
2064	47,195	70,897	-	10,000	47,195	302,468	-
2065	37,957	70,897	-	10,000	37,957	269,706	-
2066	30,263	70,897	-	10,000	30,263	243,060	-
2067	23,949	30,263	-	10,000	23,949	221,445	-
2068	18,835	30,263	-	10,000	18,835	203,903	-
2069	14,747	30,263	-	10,000	14,747	189,603	-
2070	11,512	30,263	-	10,000	11,512	177,845	-
2071	8,974	11,512	-	10,000	8,974	168,053	-
2072	6,991	11,512	-	10,000	6,991	159,764	-
2073	5,444	11,512	-	10,000	5,444	152,612	-
2074	4,231	11,512	-	10,000	4,231	146,315	-
2075	3,268	4,231	-	10,000	3,268	140,664	-
2076	2,501	4,231	-	10,000	2,501	135,493	-
2077	1,890	4,231	-	10,000	1,890	130,667	-
2078	1,406	4,231	-	10,000	1,406	126,076	-
2079	1,025	1,406	-	10,000	1,025	121,625	-
2080	731	1,406	-	10,000	731	117,234	-
2081	509	1,406	-	10,000	509	112,832	-
2082	344	1,406	-	10,000	344	108,359	-
2083	227	344	-	10,000	227	103,763	-
2084	145	344	-	10,000	145	99,000	-
2085	90	344	-	10,000	90	94,034	-
2086	54	344	-	10,000	54	88,835	-
2087	31	54	-	10,000	31	83,375	-
2088	18	54	-	10,000	18	77,632	-
2089	10	54	-	10,000	10	71,584	-
2090	5	54	-	10,000	5	65,211	-
2091	3	5	-	10,000	3	58,493	-
2092	1	5	-	10,000	1	51,411	-
2093	1	5	-	10,000	1	43,943	-
2094	0	5	-	10,000	0	36,069	-
2095	0	0	-	10,000	0	27,766	-
2096	0	0	-	10,000	0	19,010	-
2097	0	0	-	10,000	0	9,777	-
2098	0	0	-	10,000	0	41	-

Appendix H
10-Year Level Contribution; 7.45% Annual Asset Return
Empire SERP
Rabbi Trust Funding Projection

Cost of Capital (Discount Rate)	7.52%
Cost of Debt (Year 1 Only)	2.37%
Rate of Return	7.45%
Annual Trust Expenses	10,000
Initial Trust Set-up Cost	30,000

Present Value of Reimbursements	
Pay-as-You-Go	9,508,135
Rabbi Trust	9,897,969
PV Rabbi Trust Savings/(Cost)	(389,834)

Mortality: RP2014 with projection scale MP-2016 adjusted to reflect the 2016 Social Security Administration's ultimate improvement rates
 Retirement: Assumed retirement age of 55
 Rate Case Frequency: 2 years

Year	Pay-as-You-Go		Rabbi Trust Funding				Up-Front Reimbursement
	Projected Benefit Payments	Current Reimbursements	Rabbi Trust Contributions BOY	Trust Expenses	Projected Benefit Payments	Accumulated Rabbi Trust EOY	
2019	512,879	512,879	1,342,366	30,000	512,879	879,634	1,342,366
2020	610,424	512,879	1,342,366	10,000	610,424	1,744,419	1,342,366
2021	925,017	610,424	1,342,366	10,000	925,017	2,347,530	1,342,366
2022	916,552	610,424	1,342,366	10,000	916,552	3,004,348	1,342,366
2023	907,532	916,552	1,342,366	10,000	907,532	3,719,448	1,342,366
2024	897,948	916,552	1,342,366	10,000	897,948	4,497,758	1,342,366
2025	887,786	916,552	1,342,366	10,000	887,786	5,344,586	1,342,366
2026	877,028	916,552	1,342,366	10,000	877,028	6,265,653	1,342,366
2027	865,651	877,028	1,342,366	10,000	865,651	7,267,133	1,342,366
2028	853,619	877,028	1,342,366	10,000	853,619	8,355,696	1,342,366
2029	840,886	877,028	-	10,000	840,886	8,096,183	-
2030	827,414	877,028	-	10,000	827,414	7,831,301	-
2031	813,154	827,414	-	10,000	813,154	7,561,467	-
2032	798,053	827,414	-	10,000	798,053	7,287,184	-
2033	807,810	827,414	-	10,000	807,810	6,982,353	-
2034	790,695	827,414	-	10,000	790,695	6,672,553	-
2035	772,544	790,695	-	10,000	772,544	6,358,488	-
2036	753,300	790,695	-	10,000	753,300	6,040,973	-
2037	732,921	790,695	-	10,000	732,921	5,720,928	-
2038	711,371	790,695	-	10,000	711,371	5,399,378	-
2039	688,626	711,371	-	10,000	688,626	5,077,449	-
2040	664,667	711,371	-	10,000	664,667	4,756,372	-
2041	639,481	711,371	-	10,000	639,481	4,437,482	-
2042	613,076	711,371	-	10,000	613,076	4,122,206	-
2043	585,493	613,076	-	10,000	585,493	3,812,034	-
2044	556,801	613,076	-	10,000	556,801	3,508,495	-
2045	527,095	613,076	-	10,000	527,095	3,213,135	-
2046	496,495	613,076	-	10,000	496,495	2,927,490	-
2047	465,152	496,495	-	10,000	465,152	2,653,055	-
2048	433,271	496,495	-	10,000	433,271	2,391,221	-
2049	401,119	496,495	-	10,000	401,119	2,143,209	-
2050	368,989	496,495	-	10,000	368,989	1,910,025	-
2051	337,175	368,989	-	10,000	337,175	1,692,447	-
2052	305,941	368,989	-	10,000	305,941	1,491,036	-
2053	275,499	368,989	-	10,000	275,499	1,306,175	-
2054	246,049	368,989	-	10,000	246,049	1,138,070	-
2055	217,813	246,049	-	10,000	217,813	986,710	-
2056	190,991	246,049	-	10,000	190,991	851,876	-
2057	165,827	246,049	-	10,000	165,827	733,082	-
2058	142,556	246,049	-	10,000	142,556	629,560	-
2059	121,358	142,556	-	10,000	121,358	540,299	-
2060	102,358	142,556	-	10,000	102,358	464,083	-
2061	85,581	142,556	-	10,000	85,581	399,580	-
2062	70,897	142,556	-	10,000	70,897	345,493	-
2063	58,132	70,897	-	10,000	58,132	300,608	-
2064	47,195	70,897	-	10,000	47,195	263,716	-
2065	37,957	70,897	-	10,000	37,957	233,652	-
2066	30,263	70,897	-	10,000	30,263	209,323	-
2067	23,949	30,263	-	10,000	23,949	189,727	-
2068	18,835	30,263	-	10,000	18,835	173,971	-
2069	14,747	30,263	-	10,000	14,747	161,279	-
2070	11,512	30,263	-	10,000	11,512	150,995	-
2071	8,974	11,512	-	10,000	8,974	142,576	-
2072	6,991	11,512	-	10,000	6,991	135,586	-
2073	5,444	11,512	-	10,000	5,444	129,678	-
2074	4,231	11,512	-	10,000	4,231	124,587	-
2075	3,268	4,231	-	10,000	3,268	120,115	-
2076	2,501	4,231	-	10,000	2,501	116,105	-
2077	1,890	4,231	-	10,000	1,890	112,430	-
2078	1,406	4,231	-	10,000	1,406	108,983	-
2079	1,025	1,406	-	10,000	1,025	105,674	-
2080	731	1,406	-	10,000	731	102,423	-
2081	509	1,406	-	10,000	509	99,160	-
2082	344	1,406	-	10,000	344	95,825	-
2083	227	344	-	10,000	227	92,363	-
2084	145	344	-	10,000	145	88,728	-
2085	90	344	-	10,000	90	84,879	-
2086	54	344	-	10,000	54	80,781	-
2087	31	54	-	10,000	31	76,401	-
2088	18	54	-	10,000	18	71,709	-
2089	10	54	-	10,000	10	66,676	-
2090	5	54	-	10,000	5	61,272	-
2091	3	5	-	10,000	3	55,468	-
2092	1	5	-	10,000	1	49,233	-
2093	1	5	-	10,000	1	42,534	-
2094	0	5	-	10,000	0	35,337	-
2095	0	0	-	10,000	0	27,604	-
2096	0	0	-	10,000	0	19,295	-
2097	0	0	-	10,000	0	10,367	-
2098	0	0	-	10,000	0	774	-

Appendix I
10-Year Level Contribution; 3.45% Annual Asset Return
Empire SERP
Rabbi Trust Funding Projection

Cost of Capital (Discount Rate)	7.52%
Cost of Debt (Year 1 Only)	2.37%
Rate of Return	3.45%
Annual Trust Expenses	10,000
Initial Trust Set-up Cost	30,000

Present Value of Reimbursements	
Pay-as-You-Go	9,508,135
Rabbi Trust	13,207,745
PV Rabbi Trust Savings/(Cost)	(3,699,610)

Mortality: RP2014 with projection scale MP-2016 adjusted to reflect the 2016 Social Security Administration's ultimate improvement rates
 Retirement: Assumed retirement age of 55
 Rate Case Frequency: 2 years

Year	Pay-as-You-Go		Rabbi Trust Funding				Up-Front Reimbursement
	Projected Benefit Payments	Current Reimbursements	Rabbi Trust Contributions BOY	Trust Expenses	Projected Benefit Payments	Accumulated Rabbi Trust EOY	
2019	512,879	512,879	1,791,239	30,000	512,879	1,300,873	1,791,239
2020	610,424	512,879	1,791,239	10,000	610,424	2,567,754	1,791,239
2021	925,017	610,424	1,791,239	10,000	925,017	3,558,369	1,791,239
2022	916,552	610,424	1,791,239	10,000	916,552	4,591,770	1,791,239
2023	907,532	916,552	1,791,239	10,000	907,532	5,669,997	1,791,239
2024	897,948	916,552	1,791,239	10,000	897,948	6,795,172	1,791,239
2025	887,786	916,552	1,791,239	10,000	887,786	7,969,501	1,791,239
2026	877,028	916,552	1,791,239	10,000	877,028	9,195,286	1,791,239
2027	865,651	877,028	1,791,239	10,000	865,651	10,474,932	1,791,239
2028	853,619	877,028	1,791,239	10,000	853,619	11,810,964	1,791,239
2029	840,886	877,028	-	10,000	840,886	11,353,002	-
2030	827,414	877,028	-	10,000	827,414	10,892,943	-
2031	813,154	827,414	-	10,000	813,154	10,431,516	-
2032	798,053	827,414	-	10,000	798,053	9,969,530	-
2033	807,810	827,414	-	10,000	807,810	9,481,681	-
2034	790,695	827,414	-	10,000	790,695	8,994,409	-
2035	772,544	790,695	-	10,000	772,544	8,508,788	-
2036	753,300	790,695	-	10,000	753,300	8,025,986	-
2037	732,921	790,695	-	10,000	732,921	7,547,255	-
2038	711,371	790,695	-	10,000	711,371	7,073,926	-
2039	688,626	711,371	-	10,000	688,626	6,607,401	-
2040	664,667	711,371	-	10,000	664,667	6,149,150	-
2041	639,481	711,371	-	10,000	639,481	5,700,706	-
2042	613,076	711,371	-	10,000	613,076	5,263,648	-
2043	585,493	613,076	-	10,000	585,493	4,839,566	-
2044	556,801	613,076	-	10,000	556,801	4,430,035	-
2045	527,095	613,076	-	10,000	527,095	4,036,590	-
2046	496,495	613,076	-	10,000	496,495	3,660,694	-
2047	465,152	496,495	-	10,000	465,152	3,303,710	-
2048	433,271	496,495	-	10,000	433,271	2,966,835	-
2049	401,119	496,495	-	10,000	401,119	2,651,040	-
2050	368,989	496,495	-	10,000	368,989	2,357,029	-
2051	337,175	368,989	-	10,000	337,175	2,085,234	-
2052	305,941	368,989	-	10,000	305,941	1,835,830	-
2053	275,499	368,989	-	10,000	275,499	1,608,784	-
2054	246,049	368,989	-	10,000	246,049	1,403,859	-
2055	217,813	246,049	-	10,000	217,813	1,220,583	-
2056	190,991	246,049	-	10,000	190,991	1,058,264	-
2057	165,827	246,049	-	10,000	165,827	915,940	-
2058	142,556	246,049	-	10,000	142,556	792,375	-
2059	121,358	142,556	-	10,000	121,358	686,107	-
2060	102,358	142,556	-	10,000	102,358	595,498	-
2061	85,581	142,556	-	10,000	85,581	518,827	-
2062	70,897	142,556	-	10,000	70,897	454,446	-
2063	58,132	70,897	-	10,000	58,132	400,827	-
2064	47,195	70,897	-	10,000	47,195	356,482	-
2065	37,957	70,897	-	10,000	37,957	320,004	-
2066	30,263	70,897	-	10,000	30,263	290,093	-
2067	23,949	30,263	-	10,000	23,949	265,572	-
2068	18,835	30,263	-	10,000	18,835	245,406	-
2069	14,747	30,263	-	10,000	14,747	228,702	-
2070	11,512	30,263	-	10,000	11,512	214,712	-
2071	8,974	11,512	-	10,000	8,974	202,821	-
2072	6,991	11,512	-	10,000	6,991	192,537	-
2073	5,444	11,512	-	10,000	5,444	183,471	-
2074	4,231	11,512	-	10,000	4,231	175,326	-
2075	3,268	4,231	-	10,000	3,268	167,879	-
2076	2,501	4,231	-	10,000	2,501	160,956	-
2077	1,890	4,231	-	10,000	1,890	154,415	-
2078	1,406	4,231	-	10,000	1,406	148,142	-
2079	1,025	1,406	-	10,000	1,025	142,039	-
2080	731	1,406	-	10,000	731	136,025	-
2081	509	1,406	-	10,000	509	130,029	-
2082	344	1,406	-	10,000	344	123,994	-
2083	227	344	-	10,000	227	117,870	-
2084	145	344	-	10,000	145	111,618	-
2085	90	344	-	10,000	90	105,206	-
2086	54	344	-	10,000	54	98,610	-
2087	31	54	-	10,000	31	91,809	-
2088	18	54	-	10,000	18	84,787	-
2089	10	54	-	10,000	10	77,531	-
2090	5	54	-	10,000	5	70,030	-
2091	3	5	-	10,000	3	62,272	-
2092	1	5	-	10,000	1	54,248	-
2093	1	5	-	10,000	1	45,948	-
2094	0	5	-	10,000	0	37,362	-
2095	0	0	-	10,000	0	28,480	-
2096	0	0	-	10,000	0	19,291	-
2097	0	0	-	10,000	0	9,785	-
2098	0	0	-	10,000	0	(48)	-

Appendix J
Single Contribution; 5.45% Annual Asset Return; Tracker
Empire SERP
Rabbi Trust Funding Projection

Cost of Capital (Discount Rate)	7.52%
Cost of Debt (Year 1 Only)	2.37%
Rate of Return	5.45%
Annual Trust Expenses	10,000
Initial Trust Set-up Cost	30,000

Present Value of Reimbursements	
Tracker with No Trust	9,681,554
Rabbi Trust	12,176,058
PV Rabbi Trust Savings/(Cost)	(2,494,504)

Mortality: RP2014 with projection scale MP-2016 adjusted to reflect the 2016 Social Security Administration's ultimate improvement rates
 Retirement: Assumed retirement age of 55
 Rate Case Frequency: 2 years

Tracker Duration: 5 years

Year	Projected Benefit					Total Reimbursements	Rabbi Trust Funding		Accumulated Rabbi Trust EOY	Up-Front Reimbursement	
	Benefit Payments	Current Reimbursements	Tracker 1	Tracker 2	Tracker 3		Rabbi Trust Contributions BOY	Trust Expenses			
2019	512,879	512,879	-	-	-	512,879	12,176,058	30,000	512,879	12,282,177	-
2020	610,424	512,879	-	-	-	512,879	-	10,000	610,424	12,314,449	-
2021	925,017	610,424	19,509	-	-	629,933	-	10,000	925,017	12,025,429	-
2022	916,552	610,424	19,509	-	-	629,933	-	10,000	916,552	11,729,350	-
2023	907,532	916,552	19,509	124,144	-	1,060,205	-	10,000	907,532	11,426,396	-
2024	897,948	916,552	19,509	124,144	-	1,060,205	-	10,000	897,948	11,116,774	-
2025	887,786	916,552	19,509	124,144	-	1,060,205	-	10,000	887,786	10,800,712	-
2026	877,028	916,552	-	124,144	-	1,040,696	-	10,000	877,028	10,478,472	-
2027	865,651	877,028	-	124,144	(19,183)	981,990	-	10,000	865,651	10,150,352	-
2028	853,619	877,028	-	-	(19,183)	857,846	-	10,000	853,619	9,816,706	-
2029	840,886	877,028	-	-	(19,183)	857,846	-	10,000	840,886	9,477,951	-
2030	827,414	877,028	-	-	(19,183)	857,846	-	10,000	827,414	9,134,568	-
2031	813,154	827,414	(24,109)	-	(19,183)	784,123	-	10,000	813,154	8,787,114	-
2032	798,053	827,414	(24,109)	-	-	803,306	-	10,000	798,053	8,436,232	-
2033	807,810	827,414	(24,109)	-	-	803,306	-	10,000	807,810	8,056,207	-
2034	790,695	827,414	(24,109)	-	-	803,306	-	10,000	790,695	7,673,046	-
2035	772,544	790,695	(24,109)	(19,989)	-	746,598	-	10,000	772,544	7,287,641	-
2036	753,300	790,695	-	(19,989)	-	770,706	-	10,000	753,300	6,900,994	-
2037	732,921	790,695	-	(19,989)	-	770,706	-	10,000	732,921	6,514,201	-
2038	711,371	790,695	-	(19,989)	-	770,706	-	10,000	711,371	6,128,457	-
2039	688,626	711,371	-	(19,989)	(38,529)	652,853	-	10,000	688,626	5,745,047	-
2040	664,667	711,371	-	-	(38,529)	672,842	-	10,000	664,667	5,365,344	-
2041	639,481	711,371	-	-	(38,529)	672,842	-	10,000	639,481	4,990,811	-
2042	613,076	711,371	-	-	(38,529)	672,842	-	10,000	613,076	4,622,981	-
2043	585,493	613,076	(47,927)	-	(38,529)	526,620	-	10,000	585,493	4,263,429	-
2044	556,801	613,076	(47,927)	-	-	565,149	-	10,000	556,801	3,913,744	-
2045	527,095	613,076	(47,927)	-	-	565,149	-	10,000	527,095	3,575,506	-
2046	496,495	613,076	(47,927)	-	-	565,149	-	10,000	496,495	3,250,257	-
2047	465,152	496,495	(47,927)	(57,284)	-	391,285	-	10,000	465,152	2,939,468	-
2048	433,271	496,495	-	(57,284)	-	439,212	-	10,000	433,271	2,644,479	-
2049	401,119	496,495	-	(57,284)	-	439,212	-	10,000	401,119	2,366,430	-
2050	368,989	496,495	-	(57,284)	-	439,212	-	10,000	368,989	2,106,221	-
2051	337,175	368,989	-	(57,284)	(63,490)	248,216	-	10,000	337,175	1,864,500	-
2052	305,941	368,989	-	-	(63,490)	305,499	-	10,000	305,941	1,641,679	-
2053	275,499	368,989	-	-	(63,490)	305,499	-	10,000	275,499	1,437,975	-
2054	246,049	368,989	-	-	(63,490)	305,499	-	10,000	246,049	1,253,411	-
2055	217,813	246,049	(62,259)	-	(63,490)	120,300	-	10,000	217,813	1,087,783	-
2056	190,991	246,049	(62,259)	-	-	183,790	-	10,000	190,991	940,671	-
2057	165,827	246,049	(62,259)	-	-	183,790	-	10,000	165,827	811,383	-
2058	142,556	246,049	(62,259)	-	-	183,790	-	10,000	142,556	698,945	-
2059	121,358	142,556	(62,259)	(53,401)	-	26,896	-	10,000	121,358	602,147	-
2060	102,358	142,556	-	(53,401)	-	89,155	-	10,000	102,358	519,585	-
2061	85,581	142,556	-	(53,401)	-	89,155	-	10,000	85,581	449,751	-
2062	70,897	142,556	-	(53,401)	-	89,155	-	10,000	70,897	391,191	-
2063	58,132	70,897	-	(53,401)	(38,006)	(20,511)	-	10,000	58,132	342,547	-
2064	47,195	70,897	-	-	(38,006)	32,891	-	10,000	47,195	302,483	-
2065	37,957	70,897	-	-	(38,006)	32,891	-	10,000	37,957	269,722	-
2066	30,263	70,897	-	-	(38,006)	32,891	-	10,000	30,263	243,076	-
2067	23,949	30,263	(22,008)	-	(38,006)	(29,751)	-	10,000	23,949	221,462	-
2068	18,835	30,263	(22,008)	-	-	8,255	-	10,000	18,835	203,921	-
2069	14,747	30,263	(22,008)	-	-	8,255	-	10,000	14,747	189,622	-
2070	11,512	30,263	(22,008)	-	-	8,255	-	10,000	11,512	177,865	-
2071	8,974	11,512	(22,008)	(10,402)	-	(20,897)	-	10,000	8,974	168,074	-
2072	6,991	11,512	-	(10,402)	-	1,111	-	10,000	6,991	159,787	-
2073	5,444	11,512	-	(10,402)	-	1,111	-	10,000	5,444	152,636	-
2074	4,231	11,512	-	(10,402)	-	1,111	-	10,000	4,231	146,341	-
2075	3,268	4,231	-	(10,402)	(4,082)	(10,252)	-	10,000	3,268	140,691	-
2076	2,501	4,231	-	-	(4,082)	149	-	10,000	2,501	135,521	-
2077	1,890	4,231	-	-	(4,082)	149	-	10,000	1,890	130,697	-
2078	1,406	4,231	-	-	(4,082)	149	-	10,000	1,406	126,108	-
2079	1,025	1,406	(1,572)	-	(4,082)	(4,248)	-	10,000	1,025	121,659	-
2080	731	1,406	(1,572)	-	-	(166)	-	10,000	731	117,270	-
2081	509	1,406	(1,572)	-	-	(166)	-	10,000	509	112,870	-
2082	344	1,406	(1,572)	-	-	(166)	-	10,000	344	108,399	-
2083	227	344	(1,572)	(603)	-	(1,630)	-	10,000	227	103,805	-
2084	145	344	-	(603)	-	(258)	-	10,000	145	99,044	-
2085	90	344	-	(603)	-	(258)	-	10,000	90	94,081	-
2086	54	344	-	(603)	-	(258)	-	10,000	54	88,884	-
2087	31	54	-	(603)	(172)	(721)	-	10,000	31	83,427	-
2088	18	54	-	-	(172)	(118)	-	10,000	18	77,687	-
2089	10	54	-	-	(172)	(118)	-	10,000	10	71,642	-
2090	5	54	-	-	(172)	(118)	-	10,000	5	65,272	-
2091	3	5	(30)	-	(172)	(198)	-	10,000	3	58,558	-
2092	1	5	(30)	-	-	(25)	-	10,000	1	51,479	-
2093	1	5	(30)	-	-	(25)	-	10,000	1	44,015	-
2094	0	5	(30)	-	-	(25)	-	10,000	0	36,145	-
2095	0	0	(30)	-	-	(30)	-	10,000	0	27,846	-
2096	0	0	-	-	-	-	-	10,000	0	19,095	-
2097	0	0	-	-	-	-	-	10,000	0	9,867	-
2098	0	0	-	-	-	-	-	10,000	0	136	-

Appendix K
5-Year Level Contribution; 5.45% Annual Asset Return; Tracker
Empire SERP
Rabbi Trust Funding Projection

Cost of Capital (Discount Rate)	7.52%
Cost of Debt (Year 1 Only)	2.37%
Rate of Return	5.45%
Annual Trust Expenses	10,000
Initial Trust Set-up Cost	30,000

Present Value of Reimbursements	
Tracker with No Trust	9,681,554
Rabbi Trust	11,740,311
PV Rabbi Trust Savings/(Cost)	(2,058,757)

Mortality: RP2014 with projection scale MP-2016 adjusted to reflect the 2016 Social Security Administration's ultimate improvement rates
 Retirement: Assumed retirement age of 55
 Rate Case Frequency: 2 years

Tracker Duration: 5 years

Year	Projected Benefit					Total Reimbursements	Rabbi Trust Funding			Up-Front Reimbursement	
	Benefit Payments	Current Reimbursements	Tracker 1	Tracker 2	Tracker 3		Rabbi Trust Contributions BOY	Trust Expenses	Projected Benefit Payments		Accumulated Rabbi Trust EOY
2019	512,879	512,879	-	-	-	512,879	2,700,272	30,000	512,879	2,289,961	2,700,272
2020	610,424	512,879	-	-	-	512,879	2,700,272	10,000	610,424	4,625,094	2,700,272
2021	925,017	610,424	19,509	-	-	629,933	2,700,272	10,000	925,017	6,764,441	2,700,272
2022	916,552	610,424	19,509	-	-	629,933	2,700,272	10,000	916,552	9,029,075	2,700,272
2023	907,532	916,552	19,509	124,144	-	1,060,205	2,700,272	10,000	907,532	11,426,393	2,700,272
2024	897,948	916,552	19,509	124,144	-	1,060,205	-	10,000	897,948	11,116,770	-
2025	887,786	916,552	19,509	124,144	-	1,060,205	-	10,000	887,786	10,800,708	-
2026	877,028	916,552	-	124,144	-	1,040,696	-	10,000	877,028	10,478,467	-
2027	865,651	877,028	-	124,144	(19,183)	981,990	-	10,000	865,651	10,150,347	-
2028	853,619	877,028	-	-	(19,183)	857,846	-	10,000	853,619	9,816,701	-
2029	840,886	877,028	-	-	(19,183)	857,846	-	10,000	840,886	9,477,946	-
2030	827,414	877,028	-	-	(19,183)	857,846	-	10,000	827,414	9,134,563	-
2031	813,154	827,414	(24,109)	-	(19,183)	784,123	-	10,000	813,154	8,787,109	-
2032	798,053	827,414	(24,109)	-	-	803,306	-	10,000	798,053	8,436,226	-
2033	807,810	827,414	(24,109)	-	-	803,306	-	10,000	807,810	8,056,201	-
2034	790,695	827,414	(24,109)	-	-	803,306	-	10,000	790,695	7,673,039	-
2035	772,544	790,695	(24,109)	(19,989)	-	746,598	-	10,000	772,544	7,287,634	-
2036	753,300	790,695	-	(19,989)	-	770,706	-	10,000	753,300	6,900,986	-
2037	732,921	790,695	-	(19,989)	-	770,706	-	10,000	732,921	6,514,193	-
2038	711,371	790,695	-	(19,989)	-	770,706	-	10,000	711,371	6,128,449	-
2039	688,626	711,371	-	(19,989)	(38,529)	652,853	-	10,000	688,626	5,745,039	-
2040	664,667	711,371	-	-	(38,529)	672,842	-	10,000	664,667	5,365,336	-
2041	639,481	711,371	-	-	(38,529)	672,842	-	10,000	639,481	4,990,802	-
2042	613,076	711,371	-	-	(38,529)	672,842	-	10,000	613,076	4,622,971	-
2043	585,493	613,076	(47,927)	-	(38,529)	526,620	-	10,000	585,493	4,263,418	-
2044	556,801	613,076	(47,927)	-	-	565,149	-	10,000	556,801	3,913,733	-
2045	527,095	613,076	(47,927)	-	-	565,149	-	10,000	527,095	3,575,494	-
2046	496,495	613,076	(47,927)	-	-	565,149	-	10,000	496,495	3,250,244	-
2047	465,152	496,495	(47,927)	(57,284)	-	391,285	-	10,000	465,152	2,939,455	-
2048	433,271	496,495	-	(57,284)	-	439,212	-	10,000	433,271	2,644,465	-
2049	401,119	496,495	-	(57,284)	-	439,212	-	10,000	401,119	2,366,415	-
2050	368,989	496,495	-	(57,284)	-	439,212	-	10,000	368,989	2,106,205	-
2051	337,175	368,989	-	(57,284)	(63,490)	248,216	-	10,000	337,175	1,864,484	-
2052	305,941	368,989	-	-	(63,490)	305,499	-	10,000	305,941	1,641,662	-
2053	275,499	368,989	-	-	(63,490)	305,499	-	10,000	275,499	1,437,957	-
2054	246,049	368,989	-	-	(63,490)	305,499	-	10,000	246,049	1,253,392	-
2055	217,813	246,049	(62,259)	-	(63,490)	120,300	-	10,000	217,813	1,087,763	-
2056	190,991	246,049	(62,259)	-	-	183,790	-	10,000	190,991	940,650	-
2057	165,827	246,049	(62,259)	-	-	183,790	-	10,000	165,827	811,360	-
2058	142,556	246,049	(62,259)	-	-	183,790	-	10,000	142,556	698,921	-
2059	121,358	142,556	(62,259)	(53,401)	-	26,896	-	10,000	121,358	602,122	-
2060	102,358	142,556	-	(53,401)	-	89,155	-	10,000	102,358	519,559	-
2061	85,581	142,556	-	(53,401)	-	89,155	-	10,000	85,581	449,724	-
2062	70,897	142,556	-	(53,401)	-	89,155	-	10,000	70,897	391,162	-
2063	58,132	70,897	-	(53,401)	(38,006)	(20,511)	-	10,000	58,132	342,516	-
2064	47,195	70,897	-	-	(38,006)	32,891	-	10,000	47,195	302,450	-
2065	37,957	70,897	-	-	(38,006)	32,891	-	10,000	37,957	269,687	-
2066	30,263	70,897	-	-	(38,006)	32,891	-	10,000	30,263	243,040	-
2067	23,949	30,263	(22,008)	-	(38,006)	(29,751)	-	10,000	23,949	221,424	-
2068	18,835	30,263	(22,008)	-	-	8,255	-	10,000	18,835	203,881	-
2069	14,747	30,263	(22,008)	-	-	8,255	-	10,000	14,747	189,580	-
2070	11,512	30,263	(22,008)	-	-	8,255	-	10,000	11,512	177,821	-
2071	8,974	11,512	(22,008)	(10,402)	-	(20,897)	-	10,000	8,974	168,028	-
2072	6,991	11,512	-	(10,402)	-	1,111	-	10,000	6,991	159,738	-
2073	5,444	11,512	-	(10,402)	-	1,111	-	10,000	5,444	152,585	-
2074	4,231	11,512	-	(10,402)	-	1,111	-	10,000	4,231	146,287	-
2075	3,268	4,231	-	(10,402)	(4,082)	(10,252)	-	10,000	3,268	140,634	-
2076	2,501	4,231	-	-	(4,082)	149	-	10,000	2,501	135,461	-
2077	1,890	4,231	-	-	(4,082)	149	-	10,000	1,890	130,634	-
2078	1,406	4,231	-	-	(4,082)	149	-	10,000	1,406	126,041	-
2079	1,025	1,406	(1,572)	-	(4,082)	(4,248)	-	10,000	1,025	121,588	-
2080	731	1,406	(1,572)	-	-	(166)	-	10,000	731	117,195	-
2081	509	1,406	(1,572)	-	-	(166)	-	10,000	509	112,791	-
2082	344	1,406	(1,572)	-	-	(166)	-	10,000	344	108,316	-
2083	227	344	(1,572)	(603)	-	(1,830)	-	10,000	227	103,717	-
2084	145	344	-	(603)	-	(258)	-	10,000	145	98,952	-
2085	90	344	-	(603)	-	(258)	-	10,000	90	93,984	-
2086	54	344	-	(603)	-	(258)	-	10,000	54	88,782	-
2087	31	54	-	(603)	(172)	(721)	-	10,000	31	83,320	-
2088	18	54	-	(172)	-	(118)	-	10,000	18	77,574	-
2089	10	54	-	-	(172)	(118)	-	10,000	10	71,523	-
2090	5	54	-	-	(172)	(118)	-	10,000	5	65,147	-
2091	3	5	(30)	-	(172)	(198)	-	10,000	3	58,426	-
2092	1	5	(30)	-	-	(25)	-	10,000	1	51,340	-
2093	1	5	(30)	-	-	(25)	-	10,000	1	43,868	-
2094	0	5	(30)	-	-	(25)	-	10,000	0	35,990	-
2095	0	0	(30)	-	-	(30)	-	10,000	0	27,682	-
2096	0	0	-	-	-	0	-	10,000	0	18,922	-
2097	0	0	-	-	-	0	-	10,000	0	9,684	-
2098	0	0	-	-	-	0	-	10,000	0	(57)	-

Appendix L
10-Year Level Contribution; 5.45% Annual Asset Return; Tracker
Empire SERP
Rabbi Trust Funding Projection

Cost of Capital (Discount Rate)	7.52%
Cost of Debt (Year 1 Only)	2.37%
Rate of Return	5.45%
Annual Trust Expenses	10,000
Initial Trust Set-up Cost	30,000

Present Value of Reimbursements	
Tracker with No Trust	9,681,554
Rabbi Trust	11,268,302
PV Rabbi Trust Savings/(Cost)	(1,586,748)

Mortality: RP2014 with projection scale MP-2016 adjusted to reflect the 2016 Social Security Administration's ultimate improvement rates
 Retirement: Assumed retirement age of 55
 Rate Case Frequency: 2 years

Tracker Duration: 5 years

Year	Projected						Rabbi Trust Funding				Up-Front
	Benefit	Current	Tracker 1	Tracker 2	Tracker 3	Total	Rabbi Trust	Trust Expenses	Projected	Accumulated	Reimbursement
	Payments	Reimbursements				Reimbursements	Contributions	BOY	Benefit	Rabbi Trust EOY	Reimbursement
2019	512,879	512,879	-	-	-	512,879	1,528,211	30,000	512,879	1,054,022	1,528,211
2020	610,424	512,879	-	-	-	512,879	1,528,211	10,000	610,424	2,085,858	1,528,211
2021	925,017	610,424	19,509	-	-	629,933	1,528,211	10,000	925,017	2,850,878	1,528,211
2022	916,552	610,424	19,509	-	-	629,933	1,528,211	10,000	916,552	3,666,284	1,528,211
2023	907,532	916,552	19,509	124,144	-	1,060,205	1,528,211	10,000	907,532	4,535,392	1,528,211
2024	897,948	916,552	19,509	124,144	-	1,060,205	1,528,211	10,000	897,948	5,461,708	1,528,211
2025	887,786	916,552	19,509	124,144	-	1,060,205	1,528,211	10,000	887,786	6,448,944	1,528,211
2026	877,028	916,552	-	124,144	-	1,040,696	1,528,211	10,000	877,028	7,501,031	1,528,211
2027	865,651	877,028	-	124,144	(19,183)	981,990	1,528,211	10,000	865,651	8,622,139	1,528,211
2028	853,619	877,028	-	-	(19,183)	857,846	1,528,211	10,000	853,619	9,816,704	1,528,211
2029	840,886	877,028	-	-	(19,183)	857,846	-	10,000	840,886	9,477,950	-
2030	827,414	877,028	-	-	(19,183)	857,846	-	10,000	827,414	9,134,567	-
2031	813,154	827,414	(24,109)	-	(19,183)	784,123	-	10,000	813,154	8,787,113	-
2032	798,053	827,414	(24,109)	-	-	803,306	-	10,000	798,053	8,436,230	-
2033	807,810	827,414	(24,109)	-	-	803,306	-	10,000	807,810	8,056,205	-
2034	790,695	827,414	(24,109)	-	-	803,306	-	10,000	790,695	7,673,043	-
2035	772,544	790,695	(24,109)	(19,989)	-	746,598	-	10,000	772,544	7,287,638	-
2036	753,300	790,695	-	(19,989)	-	770,706	-	10,000	753,300	6,900,990	-
2037	732,921	790,695	-	(19,989)	-	770,706	-	10,000	732,921	6,514,197	-
2038	711,371	790,695	-	(19,989)	-	770,706	-	10,000	711,371	6,128,453	-
2039	688,626	711,371	-	(19,989)	(38,529)	652,853	-	10,000	688,626	5,745,043	-
2040	664,667	711,371	-	-	(38,529)	672,842	-	10,000	664,667	5,365,340	-
2041	639,481	711,371	-	-	(38,529)	672,842	-	10,000	639,481	4,990,806	-
2042	613,076	711,371	-	-	(38,529)	672,842	-	10,000	613,076	4,622,976	-
2043	585,493	613,076	(47,927)	-	(38,529)	526,620	-	10,000	585,493	4,263,423	-
2044	556,801	613,076	(47,927)	-	-	565,149	-	10,000	556,801	3,913,738	-
2045	527,095	613,076	(47,927)	-	-	565,149	-	10,000	527,095	3,575,500	-
2046	496,495	613,076	(47,927)	-	-	565,149	-	10,000	496,495	3,250,251	-
2047	465,152	496,495	(47,927)	(57,284)	-	391,285	-	10,000	465,152	2,939,462	-
2048	433,271	496,495	-	(57,284)	-	439,212	-	10,000	433,271	2,644,473	-
2049	401,119	496,495	-	(57,284)	-	439,212	-	10,000	401,119	2,366,423	-
2050	368,989	496,495	-	(57,284)	-	439,212	-	10,000	368,989	2,106,213	-
2051	337,175	368,989	-	(57,284)	(63,490)	248,216	-	10,000	337,175	1,864,492	-
2052	305,941	368,989	-	-	(63,490)	305,499	-	10,000	305,941	1,641,670	-
2053	275,499	368,989	-	-	(63,490)	305,499	-	10,000	275,499	1,437,965	-
2054	246,049	368,989	-	-	(63,490)	305,499	-	10,000	246,049	1,253,401	-
2055	217,813	246,049	(62,259)	-	(63,490)	120,300	-	10,000	217,813	1,087,773	-
2056	190,991	246,049	(62,259)	-	-	183,790	-	10,000	190,991	940,661	-
2057	165,827	246,049	(62,259)	-	-	183,790	-	10,000	165,827	811,372	-
2058	142,556	246,049	(62,259)	-	-	183,790	-	10,000	142,556	698,934	-
2059	121,358	142,556	(62,259)	(53,401)	-	26,896	-	10,000	121,358	602,136	-
2060	102,358	142,556	-	(53,401)	-	89,155	-	10,000	102,358	519,573	-
2061	85,581	142,556	-	(53,401)	-	89,155	-	10,000	85,581	449,739	-
2062	70,897	142,556	-	(53,401)	-	89,155	-	10,000	70,897	391,178	-
2063	58,132	70,897	-	(53,401)	(38,006)	(20,511)	-	10,000	58,132	342,533	-
2064	47,195	70,897	-	-	(38,006)	32,891	-	10,000	47,195	302,468	-
2065	37,957	70,897	-	-	(38,006)	32,891	-	10,000	37,957	269,706	-
2066	30,263	70,897	-	-	(38,006)	32,891	-	10,000	30,263	243,060	-
2067	23,949	30,263	(22,008)	-	(38,006)	(29,751)	-	10,000	23,949	221,445	-
2068	18,835	30,263	(22,008)	-	-	8,255	-	10,000	18,835	203,903	-
2069	14,747	30,263	(22,008)	-	-	8,255	-	10,000	14,747	189,603	-
2070	11,512	30,263	(22,008)	-	-	8,255	-	10,000	11,512	177,845	-
2071	8,974	11,512	(22,008)	(10,402)	-	(20,897)	-	10,000	8,974	168,053	-
2072	6,991	11,512	-	(10,402)	-	1,111	-	10,000	6,991	159,764	-
2073	5,444	11,512	-	(10,402)	-	1,111	-	10,000	5,444	152,612	-
2074	4,231	11,512	-	(10,402)	-	1,111	-	10,000	4,231	146,315	-
2075	3,268	4,231	-	(10,402)	(4,082)	(10,252)	-	10,000	3,268	140,664	-
2076	2,501	4,231	-	-	(4,082)	149	-	10,000	2,501	135,493	-
2077	1,890	4,231	-	-	(4,082)	149	-	10,000	1,890	130,667	-
2078	1,406	4,231	-	-	(4,082)	149	-	10,000	1,406	126,076	-
2079	1,025	1,406	(1,572)	-	(4,082)	(4,248)	-	10,000	1,025	121,625	-
2080	731	1,406	(1,572)	-	-	(166)	-	10,000	731	117,234	-
2081	509	1,406	(1,572)	-	-	(166)	-	10,000	509	112,832	-
2082	344	1,406	(1,572)	-	-	(166)	-	10,000	344	108,359	-
2083	227	344	(1,572)	(603)	-	(1,830)	-	10,000	227	103,763	-
2084	145	344	-	(603)	-	(258)	-	10,000	145	99,000	-
2085	90	344	-	(603)	-	(258)	-	10,000	90	94,034	-
2086	54	344	-	(603)	-	(258)	-	10,000	54	88,835	-
2087	31	54	-	(603)	(172)	(721)	-	10,000	31	83,375	-
2088	18	54	-	-	(172)	(118)	-	10,000	18	77,632	-
2089	10	54	-	-	(172)	(118)	-	10,000	10	71,584	-
2090	5	54	-	-	(172)	(118)	-	10,000	5	65,211	-
2091	3	5	(30)	-	(172)	(198)	-	10,000	3	58,493	-
2092	1	5	(30)	-	-	(25)	-	10,000	1	51,411	-
2093	1	5	(30)	-	-	(25)	-	10,000	1	43,943	-
2094	0	5	(30)	-	-	(25)	-	10,000	0	36,069	-
2095	0	0	(30)	-	-	(30)	-	10,000	0	27,766	-
2096	0	0	-	-	-	0	-	10,000	0	19,010	-
2097	0	0	-	-	-	0	-	10,000	0	9,777	-
2098	0	0	-	-	-	0	-	10,000	0	41	-