

City of Carroll

112 E. 5th Street

Carroll, Iowa 51401-2799

(712) 792-1000

FAX: (712) 792-0139

GOVERNMENTAL BODY: Carroll City Council

DATE OF MEETING: February 5, 2018

TIME OF MEETING: 5:15 P.M.

LOCATION OF MEETING: City Hall Council Chambers

www.cityofcarroll.com

AGENDA

- I. Pledge of Allegiance
- II. Roll Call
- III. Reports
 - A. Budget Work Session
- IV. Adjourn

February Meetings:

City Council 4th Budget Work Session (as needed) – Thursday, February 8, 2018

Airport Commission – February 12, 2018

Chamber Annual Banquet – Monday, February 12, 2018

City Council – Tuesday, February 13, 2018

Planning and Zoning Commission – February 14, 2018

Library Board of Trustees – February 19, 2018

City Council – February 26, 2018

Board of Adjustment – March 5, 2018

City Council – March 12, 2018

Airport Commission – March 12, 2018

Planning and Zoning Commission – March 14, 2018

Parks, Recreation and Cultural Advisory Board – March 19, 2018

Library Board of Trustees – February 19, 2018

City Council – March 26, 2018

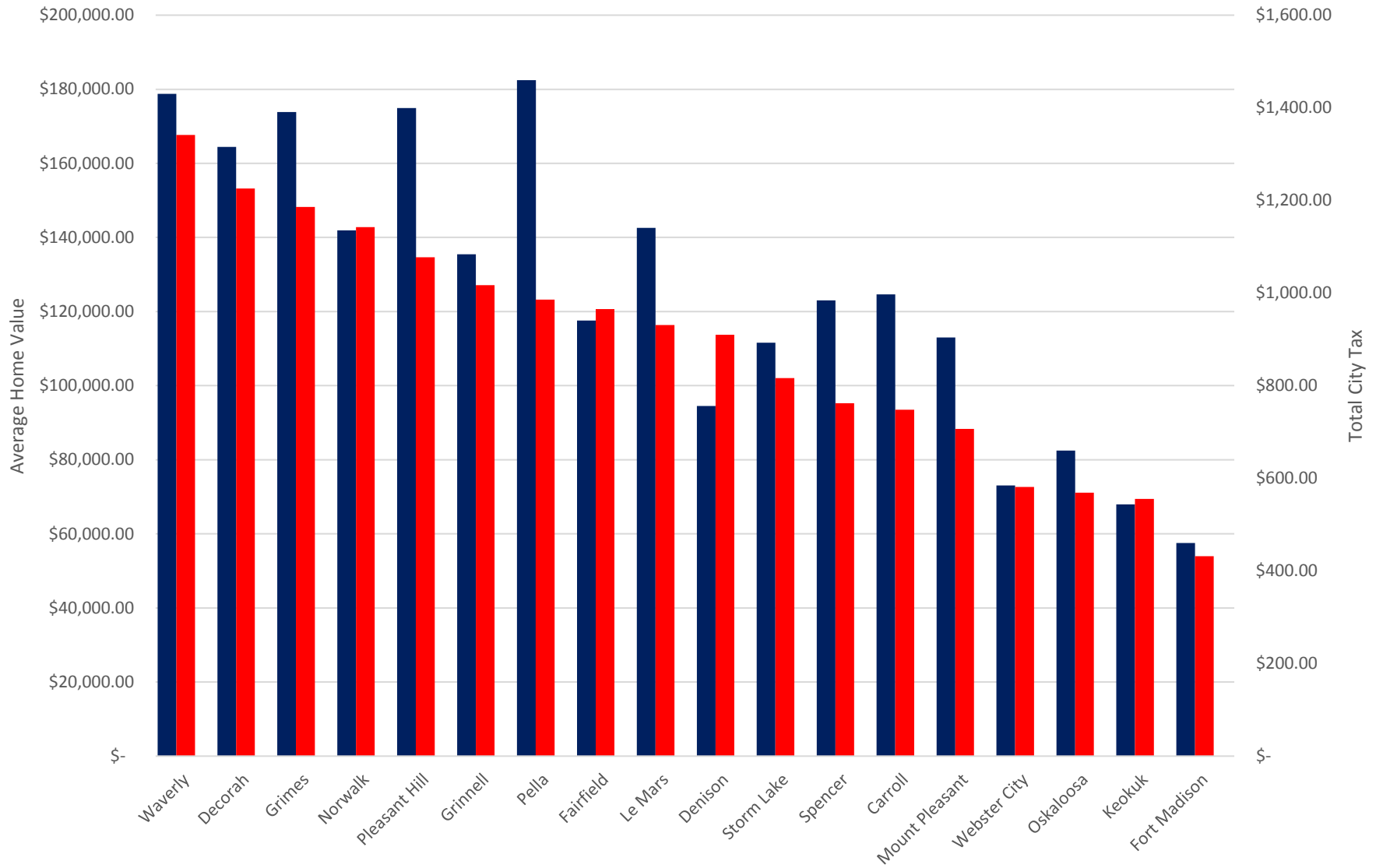
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The City of Carroll will make every attempt to accommodate the needs of persons with disabilities, please notify us at least three business days in advance when possible at 712-792-1000, should special accommodations be required.

IOWA CITY COMPARISONS POP. 8,000 - 12,000 (FY 17/18)

■ Average Home Value
 ■ Total City Tax



City of Carroll

112 E. 5th Street

Carroll, Iowa 51401-2799

(712) 792-1000

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MEMO TO: Honorable Mayor and City Council Members
FROM: Mike Pogge-Weaver, City Manager *MJP-W*
DATE: February 2, 2018
SUBJECT: PFM General Obligation Bonding Scenarios

Based on the Council's January 29th discussion with Susanne Gerlach of PFM Financial Advisors LLC, Susanne has updated her information to include three new scenarios for the Council to review and discuss. Scenarios 1, 1a, 2, 2a and 3 are unchanged from the material that was reviewed on January 29th. The previous scenario 4 has been renamed scenario 4a but is otherwise unchanged. As for the new scenarios: scenario 4 excludes the east side gym otherwise it is the same as scenario 4a. Scenario 5 and 5a follow the same projects and timing in Scenario 4 and 4a except the maximum levy is increased from \$1.76 to \$1.80.

Each scenario includes the three sets of potential G.O. bond issuance to cover various projects as follows:

	FY 2019
<u>Issuance #1</u>	<u>All Scenarios</u>
Library/City Hall	\$3,765,000
Youth Complex Lighting	\$ 375,000
Pickleball Courts	\$ 175,000
Trails	\$ 120,000
Total	\$4,435,000

	FY 2020
<u>Issuance #2</u>	<u>All Scenarios</u>
Street Maintenance Garage	\$ 700,000
Fire Truck	\$ 375,000
Total	\$1,075,000

	Pool & Locker Room FY 2024	All Rec Projects FY 2024	All Rec Projects FY 2028
<u>Issuance #3</u>	<u>Scenario 1 & 2</u>	<u>Scenario 1a & 2a</u>	<u>Scenario 3</u>
Pool	\$7,428,000	\$7,428,000	\$9,030,000
Locker Room	\$1,246,000	\$1,246,000	\$1,517,000
East Side Gym	\$ n/a	\$2,389,000	\$2,906,000
Total	\$8,674,000	\$11,063,000	\$13,453,000

	Pool & Locker Room FY 2021	All Rec Projects FY 2021
<u>Issuance #3</u>	<u>Scenario 4 & 5</u>	<u>Scenario 4a & 5a</u>
Pool	\$6,416,000	\$6,416,000
Locker Room	\$1,075,000	\$1,075,000
East Side Gym	\$ n/a	\$2,062,000
Total	\$7,491,000	\$9,553,000

Note that the above figures are estimated construction costs. The individual amounts listed in the bonding scenarios includes estimated construction costs and bond issuance fees.

Except for scenario 3 which includes all rec center projects, scenarios with an “a” include the pool, locker room and east side gym projects as part of the rec center improvements. The scenarios without an “a” only include the pool and locker room improvements at the rec center. The scenarios are as follows:

Scenario 1 (15-year bonds with Fall 2023 Rec Center Start) – UNCHANGED

- Issuance #1 issued in FY 2019 as a 15-year bond
- Issuance #2 issued in FY 2020 as a 6-year bond
- Issuance #3 issued in FY 2024 as a 15-year bond (pool and locker room only)
- Debt Service Levy Rate starts at \$1.28, then to \$1.30 in FY 2024, then to \$1.33 in FY 2025, and then remains in the 1.33-1.30 range through FY 2039
- All debt paid off in FY 2039
- Highest level to the City legal debt limits is 29.68% in FY 2024

Scenario 1a (15-year bonds with Fall 2023 Rec Center Start) – UNCHANGED

- Issuance #1 issued in FY 2019 as a 15-year bond
- Issuance #2 issued in FY 2020 as a 6-year bond
- Issuance #3 issued in FY 2024 as a 15-year bond (All rec center projects)
- Debt Service Levy rate starts at \$1.28, then to \$1.40 in FY 2024, then to \$1.74 in FY 2025, and then remains \$1.74 or less through FY 2039
- All debt paid off in FY 2039
- Highest level to the City legal debt limits is 35.27% in FY 2024

Scenario 2 (20-year bonds with Fall 2023 Rec Center Start) – UNCHANGED

- Issuance #1 issued in FY 2019 as a 20-year bond
- Issuance #2 issued in FY 2020 as a 6-year bond
- Issuance #3 issued in FY 2024 as a 20-year bond (pool and locker room only)
- Debt Service Levy rate starts at \$1.28, then to \$1.11 in FY 2026, and then to \$0.60 in FY 2039 through FY 2043
- All debt paid off in FY 2043
- Highest level to the City legal debt limits is 29.71% in FY 2024

Scenario 2a (20-year bonds with Fall 2023 Rec Center Start) – UNCHANGED

- Issuance #1 issued in FY 2019 as a 20-year bond
- Issuance #2 issued in FY 2020 as a 6-year bond
- Issuance #3 issued in FY 2024 as a 20-year bond (All rec center projects)
- Debt Service Levy rate starts at \$1.28, then to \$1.40 in FY 2024, then to \$1.47 in FY 2025, then \$0.99 in FY 2039 through FY 2043
- All debt paid off in FY 2043
- Highest level to the City legal debt limits is 35.30% in FY 2024

Scenario 3 (Accelerated bonds with Fall 2027 Rec Center Start) – UNCHANGED

- Issuance #1 issued in FY 2019 as a 9-year bond
- Issuance #2 issued in FY 2020 as a 6-year bond
- Issuance #3 issued in FY 2028 as a 19-year bond (All rec center projects)
- Maximum Debt Service Levy rate is kept at \$1.28 each year with the last year at 0.27 in FY 2046
- All debt paid off in FY 2046
- Highest level to the City legal debt limits is 31.30% in FY 2028

Scenario 4 (Early Rec Center with Spring 2021 Rec Center Start) - NEW

- Issuance #1 issued in FY 2019 as a 20-year bond
- Issuance #2 issued in FY 2020 as a 6-year bond
- Issuance #3 issued in FY 2021 as a 20-year bond (All rec center projects)
- Debt Service Levy rate starts at \$1.76, then to \$1.60 in FY 2022, then to \$1.43 in FY 2024, then to \$1.06 in FY 2026, then to \$0.68 in FY 2037, then end at \$0.54 in FY 2039
- All debt paid off in FY 2039
- Highest level to the City legal debt limits is 33.34% in FY 2021

Scenario 4a (Early Rec Center with Spring 2021 Rec Center Start) – UNCHANGED

- Issuance #1 issued in FY 2019 as a 20-year bond
- Issuance #2 issued in FY 2020 as a 6-year bond
- Issuance #3 issued in FY 2021 as a 20-year bond (All rec center projects)
- Debt Service Levy rate starts at \$1.76, then to \$1.58 in FY 2024, then to \$1.42 in FY 2026, then end at \$0.91 in FY 2039
- All debt paid off in FY 2039
- Highest level to the City legal debt limits is 38.23% in FY 2021

Scenario 5 (Early Rec Center with Spring 2021 Rec Center Start – 1.80 levy) - NEW

- Issuance #1 issued in FY 2019 as a 18-year bond
- Issuance #2 issued in FY 2020 as a 6-year bond
- Issuance #3 issued in FY 2021 as a 18-year bond (pool and locker room only)
- Debt Service Levy rate starts at \$1.80, then to \$1.51 in FY 2025, then to \$1.01 in FY 2026, then to \$0.52 in FY 2037
- All debt paid off in FY 2038
- Highest level to the City legal debt limits is 33.30% in FY 2021

Scenario 5a (Early Rec Center with Spring 2021 Rec Center Start – 1.80 levy) – NEW

- Issuance #1 issued in FY 2019 as a 18-year bond
- Issuance #2 issued in FY 2020 as a 6-year bond
- Issuance #3 issued in FY 2021 as a 18-year bond (All rec center projects)
- Debt Service Levy rate starts at \$1.80, then to \$1.59 in FY 2024, then to \$1.42 in FY 2026, then to \$1.47 in FY 2028, then to \$0.97 in FY 2037
- All debt paid off in FY 2038
- Highest level to the City legal debt limits is 38.19% in FY 2021

Included along with the General Obligation Bonding Scenarios from PFM is a worksheet that shows the projected future cost for the Recreation Center projects and the Street Maintenance Building projects. These projections use the original estimate of probable costs as the base and then inflates the construction cost 5% annually in future years.

In closing, I offer a cautionary note. During the Library/City Hall referendum, the City was looking at bonding scenarios that kept the debt service levy at 1.28 and the information the City distributed during the referendum noted that. Scenarios 1, 1a, 2, 2a, and 3 are structured in such a way that the debt service levy will remain at or below 1.28 with the debt related to both Library/City Hall project and the Street Maintenance Building and then only increases above 1.28 after voters approve a referendum on the Recreation Center improvements. Scenarios 4, 4a, 5, and 5a would require the Council to approve a debt structure for the Library/City Hall project and the Street Maintenance Building that would cause the debt service levy to exceed \$1.28 before any referendum could be held on the Recreation Center project. Clearly there are advantages to the taxpayers in paying less in construction and interest costs under scenarios 4, 4a, 5, and 5a but the Council should be prepared to defend this position if they select one of these scenarios.

RECOMMENDATION: Council should review these scenarios and consider providing direction on how to structure the possible general obligation bond issuances.



City of Carroll, Iowa

General Obligation Bonding Scenarios

PFM Financial Advisors LLC
801 Grand Avenue, Suite 3300
Des Moines, IA 50309

Susanne Gerlach
(515) 724-5734
E-mail: gerlachs@pfm.com

February 5, 2018

Summary of Bonding Options

Scenario	Year Issued	Term	Par Amount of Bonds	Total Interest	Total Debt Service	Maximum Levy Rate
Scenario 1 - 15 Year Bonds	Series	Years	\$ 14,440,000	\$ 4,991,717	\$ 19,431,717	\$1.33
Library & FY19 CIP	Series 2018B	15.6	\$ 4,480,000	\$ 1,207,735	\$ 5,687,735	\$1.28
Street Maintenance Building & Fire Truck	Series 2019A	5.7	\$ 1,120,000	\$ 137,729	\$ 1,257,729	\$1.28
Rec Center Pool & Locker Room Improvements	Series 2023A	15.5	\$ 8,840,000	\$ 3,646,253	\$ 12,486,253	\$1.33
Scenario 1a - 15 Year Bonds + Rec Cntr East Gym	Series	Years	\$ 16,860,000	\$ 5,882,280	\$ 22,742,280	\$1.74
Library & FY19 CIP	Series 2018B	15.6	\$ 4,480,000	\$ 1,207,735	\$ 5,687,735	\$1.28
Street Maintenance Building & Fire Truck	Series 2019A	5.7	\$ 1,120,000	\$ 137,729	\$ 1,257,729	\$1.28
Rec Center Pool, Locker Room & East Side Gym Improvements	Series 2023A	15.5	\$ 11,260,000	\$ 4,536,816	\$ 15,796,816	\$1.74
Scenario 2 - 20 Year Bonds	Series	Years	\$ 14,440,000	\$ 5,898,771	\$ 20,338,771	\$1.28
Library & FY19 CIP	Series 2018B	19.6	\$ 4,480,000	\$ 1,480,756	\$ 5,960,756	\$1.28
Street Maintenance Building & Fire Truck	Series 2019A	5.7	\$ 1,120,000	\$ 138,266	\$ 1,258,266	\$1.28
Rec Center Pool & Locker Room Improvements	Series 2023A	19.5	\$ 8,840,000	\$ 4,279,749	\$ 13,119,749	\$1.28
Scenario 2a - 20 Year Bonds + Rec Cntr East Gym	Series	Years	\$ 16,860,000	\$ 7,111,561	\$ 23,971,561	\$1.47
Library & FY19 CIP	Series 2018B	19.6	\$ 4,480,000	\$ 1,479,268	\$ 5,959,268	\$1.28
Street Maintenance Building & Fire Truck	Series 2019A	5.7	\$ 1,120,000	\$ 138,266	\$ 1,258,266	\$1.28
Rec Center Pool, Locker Room & East Side Gym Improvements	Series 2023A	19.5	\$ 11,260,000	\$ 5,494,027	\$ 16,754,027	\$1.47
Scenario 3 - 2027 Rec Center	Series	Years	\$ 19,280,000	\$ 6,554,342	\$ 25,834,342	\$1.28
Library & FY19 CIP	Series 2018B	8.6	\$ 4,480,000	\$ 776,657	\$ 5,256,657	\$1.28
Street Maintenance Building & Fire Truck	Series 2019A	5.7	\$ 1,120,000	\$ 138,266	\$ 1,258,266	\$1.28
Rec Center Pool, Locker Room & East Side Gym Improvements	Series 2027A	18.5	\$ 13,680,000	\$ 5,639,419	\$ 19,319,419	\$1.28

Summary of Bonding Options

Scenario	Year Issued	Term	Par Amount of Bonds	Total Interest	Total Debt Service	Maximum Levy Rate
Scenario 4 - 2021 Rec Center (Without Gym)	Series	Years	\$ 13,240,000	\$ 5,243,848	\$ 18,483,848	\$1.76
Library & FY19 CIP	Series 2018B	19.6	\$ 4,480,000	\$ 1,280,096	\$ 5,760,096	\$1.76
Street Maintenance Building & Fire Truck	Series 2019A	5.7	\$ 1,120,000	\$ 138,266	\$ 1,258,266	\$1.76
Rec Center Pool & Locker Room	Series 2021A	19.1	\$ 7,640,000	\$ 3,825,486	\$ 11,465,486	\$1.76
Scenario 4a - 2021 Rec Center (With Gym)	Series	Years	\$ 15,330,000	\$ 6,330,294	\$ 21,660,294	\$1.76
Library & FY19 CIP	Series 2018B	19.6	\$ 4,480,000	\$ 1,280,096	\$ 5,760,096	\$1.76
Street Maintenance Building & Fire Truck	Series 2019A	5.7	\$ 1,120,000	\$ 138,266	\$ 1,258,266	\$1.76
Rec Center Pool, Locker Room & East Side Gym Improvements	Series 2021A	19.1	\$ 9,730,000	\$ 4,911,932	\$ 14,641,932	\$1.76
Scenario 5 - \$1.80 Tax Rate (2021 Rec & No Gym)	Series	Years	\$ 13,240,000	\$ 4,549,796	\$ 17,789,796	\$1.80
Library & FY19 CIP	Series 2018B	17.6	\$ 4,480,000	\$ 1,209,130	\$ 5,689,130	\$1.80
Street Maintenance Building & Fire Truck	Series 2019A	5.7	\$ 1,120,000	\$ 138,266	\$ 1,258,266	\$1.80
Rec Center Pool & Locker Room	Series 2021A	17.1	\$ 7,640,000	\$ 3,202,400	\$ 10,842,400	\$1.80
Scenario 5a - \$1.80 Tax Rate (2021 Rec & Gym)	Series	Years	\$ 15,330,000	\$ 5,696,637	\$ 21,026,637	\$1.80
Library & FY19 CIP	Series 2018B	17.6	\$ 4,480,000	\$ 1,245,735	\$ 5,725,735	\$1.80
Street Maintenance Building & Fire Truck	Series 2019A	5.7	\$ 1,120,000	\$ 138,266	\$ 1,258,266	\$1.80
Rec Center Pool, Locker Room & East Side Gym Improvements	Series 2021A	17.1	\$ 9,730,000	\$ 4,312,636	\$ 14,042,636	\$1.80



Scenario 1: Assumes 15 Year Bonds

- 2018B Bonds – Library & FY19 CIP
- 2019A Bonds – Street Maintenance Building & Fire Truck
- 2023A Bonds - Rec Center Pool & Locker Room Improvements

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2018B

EXHIBIT 1-2

Library (15 Year Bonds) & FY 2019 CIP

SOURCES & USES	
SOURCES	
Par Amount of Notes	4,480,000.00
Cash on Hand	45,000.00
Premium	
<hr/>	
Total Sources	4,525,000.00
USES	
Deposit to Construction Account	4,435,000.00
Deposit to Reserve Account	
Capitalized Interest Account	(0.00)
Municipal Bond Insurance	0.00
Underwriters' Discount (\$10.00 per bond)	44,800.00
Costs of Issuance	45,000.00
Accrued Interest	
Rounding Amount	200.00
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Total Uses	4,525,000.00
ASSUMPTIONS	
Dated Date	10/31/2018
Delivery Date	10/31/2018
First Interest Date	6/1/2019
First Principal Date	6/1/2019
Last Principal Date	6/1/2034
Yield Calculations:	
Arbitrage Yield	3.16382%
TIC	3.30467%
AIC	3.44828%
Average Life	8.49 Years

PROJECTS FINANCED:	
Library	\$ 3,765,000
Youth Complex Lighting	375,000
Pickleball Courts	175,000
Trails	120,000
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	\$ 4,435,000

DEBT SERVICE SCHEDULE						
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service	
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0.6	6/1/2019	315,000	2.520%	79,294	394,294	394,294
	12/1/2019			63,675	63,675	
1.6	6/1/2020	240,000	2.660%	63,675	303,675	367,351
	12/1/2020			60,483	60,483	
2.6	6/1/2021	235,000	2.700%	60,483	295,483	355,967
	12/1/2021			57,311	57,311	
3.6	6/1/2022	240,000	2.740%	57,311	297,311	354,622
	12/1/2022			54,023	54,023	
4.6	6/1/2023	250,000	2.780%	54,023	304,023	358,046
	12/1/2023			50,548	50,548	
5.6	6/1/2024	255,000	2.820%	50,548	305,548	356,096
	12/1/2024			46,952	46,952	
6.6	6/1/2025	255,000	2.880%	46,952	301,952	348,905
	12/1/2025			43,280	43,280	
7.6	6/1/2026	265,000	2.940%	43,280	308,280	351,561
	12/1/2026			39,385	39,385	
8.6	6/1/2027	270,000	3.010%	39,385	309,385	348,770
	12/1/2027			35,321	35,321	
9.6	6/1/2028	280,000	3.080%	35,321	315,321	350,643
	12/1/2028			31,009	31,009	
10.6	6/1/2029	290,000	3.140%	31,009	321,009	352,019
	12/1/2029			26,456	26,456	
11.6	6/1/2030	295,000	3.200%	26,456	321,456	347,913
	12/1/2030			21,736	21,736	
12.6	6/1/2031	305,000	3.280%	21,736	326,736	348,473
	12/1/2031			16,734	16,734	
13.6	6/1/2032	315,000	3.350%	16,734	331,734	348,469
	12/1/2032			11,458	11,458	
14.6	6/1/2033	330,000	3.400%	11,458	341,458	352,916
	12/1/2033			5,848	5,848	
15.6	6/1/2034	340,000	3.440%	5,848	345,848	351,696
	12/1/2034					
16.6	6/1/2035					
	12/1/2035					
17.6	6/1/2036					
	12/1/2036					
18.6	6/1/2037					
	12/1/2037					
19.6	6/1/2038					
	12/1/2038					
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		4,480,000		1,207,735	5,687,735	5,687,735
Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ) + 75 bps for timing.						

City of Carroll, Iowa

Proposed General Obligation Bonds, Series 2019A

EXHIBIT 1-3

Street Maintenance Garage & Fire Truck

SOURCES & USES	
SOURCES	
Par Amount of Bonds	1,120,000.00
Accrued Interest	
Other Monies	

Total Sources	1,120,000.00
USES	
Deposit to Construction Account	1,075,000.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount (\$7.50 per bond)	8,400.00
Costs of Issuance	33,000.00
Accrued Interest	
Rounding Amount	3,600.00

Total Uses	1,120,000.00
ASSUMPTIONS	
Dated Date	9/1/2019
Delivery Date	9/1/2019
First Interest Date	6/1/2020
First Principal Date	6/1/2020
Last Principal Date	6/1/2025

Arbitrage Yield	3.36297%
TIC	3.58683%
AIC	4.49005%
Average Life	3.65 Years

PROJECTS FINANCED:	
Street Maintenance Garage	\$ 700,000
Fire Truck	375,000
Reserved	-
Reserved	-

	\$ 1,075,000

DEBT SERVICE SCHEDULE						
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service	

6/1/2020	150,000	3.120%	27,911	177,911	177,911	
12/1/2020			16,267	16,267		
6/1/2021	155,000	3.260%	16,267	171,267	187,534	
12/1/2021			13,741	13,741		
6/1/2022	155,000	3.300%	13,741	168,741	182,481	
12/1/2022			11,183	11,183		
6/1/2023	140,000	3.340%	11,183	151,183	162,366	
12/1/2023			8,845	8,845		
6/1/2024	235,000	3.380%	8,845	243,845	252,690	
12/1/2024			4,874	4,874		
6/1/2025	285,000	3.420%	4,874	289,874	294,747	
12/1/2025						
6/1/2026						
12/1/2026						
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6/1/2038						
12/1/2038						
6/1/2039						
12/1/2039						

	1,120,000		137,729	1,257,729	1,257,729	

Scale : MMD Aaa as of 01-02-2018 + NR/BQ credit
+ 125 bps for timing.

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2023A

EXHIBIT 1-4

Recreation Center Pool & Locker Rooms Improvements (15 Yr)

SOURCES & USES	
SOURCES	
Par Amount of Bonds	8,840,000.00
Accrued Interest	
Premium	0.58

Total Sources	8,840,000.00
USES	
Deposit to Construction Account	8,674,000.00
Deposit to Reserve Account	4.58
Capitalized Interest Account	0.00
Municipal Bond Insurance	5.58
Underwriters' Discount (\$12.50 per bond)	110,500.00
Costs of Issuance	52,000.00
Accrued Interest	
Rounding Amount	3,500.00

Total Uses	8,840,000.00
ASSUMPTIONS	
Dated Date	11/1/2023
Delivery Date	11/1/2023
First Interest Date	6/1/2024
First Principal Date	6/1/2024
Last Principal Date	6/1/2039

Arbitrage Yield	3.96915%
TIC	4.12239%
AIC	4.19542%
Average Life	10.36 Years

FY 2018 PROJECTS FINANCED:	
Recreation Center Pool & Locker Rooms	\$ 8,674,000
Reserved	-
Reserved	-
Reserved	-

	\$ 8,674,000

DEBT SERVICE SCHEDULE						
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service	
6/1/2024	0	3.270%	200,283	200,283	200,283	
12/1/2024			171,672	171,672	171,672	
6/1/2025	115,000	3.410%	171,672	286,672	458,343	
12/1/2025			169,711	169,711	169,711	
6/1/2026	410,000	3.450%	169,711	579,711	749,422	
12/1/2026			162,638	162,638	162,638	
6/1/2027	430,000	3.490%	162,638	592,638	755,277	
12/1/2027			155,135	155,135	155,135	
6/1/2028	410,000	3.530%	155,135	565,135	720,270	
12/1/2028			147,898	147,898	147,898	
6/1/2029	420,000	3.570%	147,898	567,898	715,797	
12/1/2029			140,401	140,401	140,401	
6/1/2030	440,000	3.630%	140,401	580,401	720,803	
12/1/2030			132,415	132,415	132,415	
6/1/2031	455,000	3.690%	132,415	587,415	719,831	
12/1/2031			124,021	124,021	124,021	
6/1/2032	475,000	3.760%	124,021	599,021	723,041	
12/1/2032			115,091	115,091	115,091	
6/1/2033	485,000	3.830%	115,091	600,091	715,181	
12/1/2033			105,803	105,803	105,803	
6/1/2034	505,000	3.890%	105,803	610,803	716,606	
12/1/2034			95,981	95,981	95,981	
6/1/2035	870,000	3.950%	95,981	965,981	1,061,961	
12/1/2035			78,798	78,798	78,798	
6/1/2036	900,000	4.030%	78,798	978,798	1,057,596	
12/1/2036			60,663	60,663	60,663	
6/1/2037	935,000	4.100%	60,663	995,663	1,056,326	
12/1/2037			41,496	41,496	41,496	
6/1/2038	975,000	4.150%	41,496	1,016,496	1,057,991	
12/1/2038			21,264	21,264	21,264	
6/1/2039	1,015,000	4.190%	21,264	1,036,264	1,057,529	
12/1/2039						
6/1/2040						
12/1/2040						
6/1/2041						
12/1/2041						
6/1/2042						
12/1/2042						
6/1/2043						
12/1/2043						

	8,840,000		3,646,253	12,486,253	12,486,253	
Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ) + 150 bps for timing.						

City of Carroll, Iowa
Projection of G.O. Debt Capacity

EXHIBIT 1-5

Assumes 15 Year Bonds

Updated: 25-Jan-18

Valuation Growth & Debt Limit Assumptions	
Legal Debt Limit	5.00%
Effective Limit	4.00%

\$3.8 M *Str Mnt Gar* *Rec Pool***
Library *Fire Truck* *Rec Adn***

Beginning of Fiscal Year	Actual Valuation	Historical Valuation Growth	Gross Debt Limit	Effective Debt Limit	DEBT ISSUES SUBJECT TO DEBT LIMIT *			Proposed GO Bonds 2018B	Proposed GO Bonds 2019A	Proposed GO Bonds 2023A	Reserved	TOTAL G.O. DEBT OUTST'NDG	Available Effective Capacity	Percent /Debt Gross Debt Limit	Beginning of Fiscal Year
					G.O. - TAXES -	G.O. - TIF -	Sales Tax Bonds								
2011 - 2012	632,429,951	1.9%	31,621,498	25,297,198	4,235,000	945,000	1,650,000					6,830,000	18,467,198	21.60%	2011
2012 - 2013	648,166,368	2.5%	32,408,318	25,926,655	3,520,000	655,000	1,110,000					5,285,000	20,641,655	16.31%	2012
2013 - 2014	654,646,146	1.0%	32,732,307	26,185,846	3,400,000	455,000	560,000					4,415,000	21,770,846	13.49%	2013
2014 - 2015	752,235,898	14.9%	37,611,795	30,089,436	3,750,000	55,000						3,805,000	26,284,436	10.12%	2014
2015 - 2016	757,631,838	0.7%	37,881,592	30,305,274	3,630,000							3,630,000	26,675,274	9.58%	2015
2016 - 2017	775,612,596	2.4%	38,780,630	31,024,504	5,105,000							5,105,000	25,919,504	13.16%	2016
2017 - 2018	781,063,284	0.7%	39,053,164	31,242,531	4,090,000							4,090,000	27,152,531	10.47%	2017
2018 - 2019	846,719,429	8.4%	42,335,971	33,868,777	3,045,000			4,480,000				7,525,000	26,343,777	17.77%	2018
2019 - 2020	850,584,226	0.5%	42,529,211	34,023,369	2,515,000			4,165,000	1,120,000			7,800,000	26,223,369	18.34%	2019
2020 - 2021	854,468,347	0.5%	42,723,417	34,178,734	1,975,000			3,925,000	970,000			6,870,000	27,308,734	16.08%	2020
2021 - 2022	858,371,889	0.5%	42,918,594	34,334,876	1,430,000			3,690,000	815,000			5,935,000	28,399,876	13.83%	2021
2022 - 2023	862,294,948	0.5%	43,114,747	34,491,798	865,000			3,450,000	660,000			4,975,000	29,516,798	11.54%	2022
2023 - 2024	866,237,622	0.5%	43,311,881	34,649,505	295,000			3,200,000	520,000	8,840,000		12,855,000	21,794,505	29.68%	2023
2024 - 2025	870,200,010	0.5%	43,510,001	34,808,000				2,945,000	285,000	8,840,000		12,070,000	22,738,000	27.74%	2024
2025 - 2026	874,182,210	0.5%	43,709,111	34,967,288				2,690,000		8,725,000		11,415,000	23,552,288	26.12%	2025
2026 - 2027	874,182,210		43,709,111	34,967,288				2,425,000		8,315,000		10,740,000	24,227,288	24.57%	2026
2027 - 2028	874,182,210		43,709,111	34,967,288				2,155,000		7,885,000		10,040,000	24,927,288	22.97%	2027
2028 - 2029	874,182,210		43,709,111	34,967,288				1,875,000		7,475,000		9,350,000	25,617,288	21.39%	2028
2029 - 2030	874,182,210		43,709,111	34,967,288				1,585,000		7,055,000		8,640,000	26,327,288	19.77%	2029
2030 - 2031	874,182,210		43,709,111	34,967,288				1,290,000		6,615,000		7,905,000	27,062,288	18.09%	2030
2031 - 2032	874,182,210		43,709,111	34,967,288				985,000		6,160,000		7,145,000	27,822,288	16.35%	2031
2032 - 2033	874,182,210		43,709,111	34,967,288				670,000		5,685,000		6,355,000	28,612,288	14.54%	2032
2033 - 2034	874,182,210		43,709,111	34,967,288				340,000		5,200,000		5,540,000	29,427,288	12.67%	2033
2034 - 2035	874,182,210		43,709,111	34,967,288						4,695,000		4,695,000	30,272,288	10.74%	2034
2035 - 2036	874,182,210		43,709,111	34,967,288						3,825,000		3,825,000	31,142,288	8.75%	2035
2036 - 2037	874,182,210		43,709,111	34,967,288						2,925,000		2,925,000	32,042,288	6.69%	2036
2037 - 2038	874,182,210		43,709,111	34,967,288						1,990,000		1,990,000	32,977,288	4.55%	2037
2038 - 2039	874,182,210		43,709,111	34,967,288						1,015,000		1,015,000	33,952,288	2.32%	2038
2039 - 2040	874,182,210		43,709,111	34,967,288									34,967,288		2039

* - Represents G.O. principal outstanding as of the BEGINNING of the fiscal year.

** - Project is subject to voter approval.



Scenario 1a: Assumes 15 Year Bonds

- 2018B Bonds – Library & FY19 CIP
- 2019A Bonds – Street Maintenance Building & Fire Truck
- 2023A Bonds - Rec Center Pool, Locker Room & East Gym Improvements

Library (15 Year Bonds) & FY 2019 CIP

SOURCES & USES	
SOURCES	
Par Amount of Notes	4,480,000.00
Cash on Hand	45,000.00
Premium	
Total Sources	4,525,000.00
USES	
Deposit to Construction Account	4,435,000.00
Deposit to Reserve Account	
Capitalized Interest Account	(0.00)
Municipal Bond Insurance	0.00
Underwriters' Discount (\$10.00 per bond)	44,800.00
Costs of Issuance	45,000.00
Accrued Interest	
Rounding Amount	200.00
Total Uses	4,525,000.00
ASSUMPTIONS	
Dated Date	10/31/2018
Delivery Date	10/31/2018
First Interest Date	6/1/2019
First Principal Date	6/1/2019
Last Principal Date	6/1/2034
Yield Calculations:	
Arbitrage Yield	3.16382%
TIC	3.30467%
AIC	3.44828%
Average Life	8.49 Years

PROJECTS FINANCED:	
Library	\$ 3,765,000
Youth Complex Lighting	375,000
Pickleball Courts	175,000
Trails	120,000
Total	\$ 4,435,000

DEBT SERVICE SCHEDULE						
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service	
0.6	6/1/2019	315,000	2.520%	79,294	394,294	
	12/1/2019			63,675	63,675	
1.6	6/1/2020	240,000	2.660%	63,675	303,675	
	12/1/2020			60,483	60,483	
2.6	6/1/2021	235,000	2.700%	60,483	295,483	
	12/1/2021			57,311	57,311	
3.6	6/1/2022	240,000	2.740%	57,311	297,311	
	12/1/2022			54,023	54,023	
4.6	6/1/2023	250,000	2.780%	54,023	304,023	
	12/1/2023			50,548	50,548	
5.6	6/1/2024	255,000	2.820%	50,548	305,548	
	12/1/2024			46,952	46,952	
6.6	6/1/2025	255,000	2.880%	46,952	301,952	
	12/1/2025			43,280	43,280	
7.6	6/1/2026	265,000	2.940%	43,280	308,280	
	12/1/2026			39,385	39,385	
8.6	6/1/2027	270,000	3.010%	39,385	309,385	
	12/1/2027			35,321	35,321	
9.6	6/1/2028	280,000	3.080%	35,321	315,321	
	12/1/2028			31,009	31,009	
10.6	6/1/2029	290,000	3.140%	31,009	321,009	
	12/1/2029			26,456	26,456	
11.6	6/1/2030	295,000	3.200%	26,456	321,456	
	12/1/2030			21,736	21,736	
12.6	6/1/2031	305,000	3.280%	21,736	326,736	
	12/1/2031			16,734	16,734	
13.6	6/1/2032	315,000	3.350%	16,734	331,734	
	12/1/2032			11,458	11,458	
14.6	6/1/2033	330,000	3.400%	11,458	341,458	
	12/1/2033			5,848	5,848	
15.6	6/1/2034	340,000	3.440%	5,848	345,848	
	12/1/2034					
16.6	6/1/2035					
	12/1/2035					
17.6	6/1/2036					
	12/1/2036					
18.6	6/1/2037					
	12/1/2037					
19.6	6/1/2038					
	12/1/2038					
		4,480,000		1,207,735	5,687,735	
					5,687,735	

Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ)
+ 75 bps for timing.

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2023A

EXHIBIT 1a-4

Recreation Center Pool, Locker Rooms & East Side Gym (15 Yr)

SOURCES & USES	
SOURCES	
Par Amount of Bonds	11,260,000.00
Accrued Interest	
Premium	0.58

Total Sources	11,260,000.00
USES	
Deposit to Construction Account	11,063,000.00
Deposit to Reserve Account	4.58
Capitalized Interest Account	0.00
Municipal Bond Insurance	5.58
Underwriters' Discount (\$12.50 per bond)	140,750.00
Costs of Issuance	52,000.00
Accrued Interest	
Rounding Amount	4,250.00

Total Uses	11,260,000.00
ASSUMPTIONS	
Dated Date	11/1/2023
Delivery Date	11/1/2023
First Interest Date	6/1/2024
First Principal Date	6/1/2024
Last Principal Date	6/1/2039

Arbitrage Yield	3.96053%
TIC	4.11662%
AIC	4.17497%
Average Life	10.14 Years

FY 2018 PROJECTS FINANCED:	
Rec Cntr Pool, Locker Rooms & E Gym	\$ 11,063,000
Reserved	-
Reserved	-
Reserved	-

	\$ 11,063,000

DEBT SERVICE SCHEDULE						
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service	

6/1/2024	0	3.270%	254,251	254,251	254,251	
12/1/2024			217,929	217,929		
6/1/2025	240,000	3.410%	217,929	457,929	675,858	
12/1/2025			213,837	213,837		
6/1/2026	535,000	3.450%	213,837	748,837	962,674	
12/1/2026			204,608	204,608		
6/1/2027	560,000	3.490%	204,608	764,608	969,217	
12/1/2027			194,836	194,836		
6/1/2028	545,000	3.530%	194,836	739,836	934,673	
12/1/2028			185,217	185,217		
6/1/2029	560,000	3.570%	185,217	745,217	930,434	
12/1/2029			175,221	175,221		
6/1/2030	585,000	3.630%	175,221	760,221	935,442	
12/1/2030			164,603	164,603		
6/1/2031	605,000	3.690%	164,603	769,603	934,207	
12/1/2031			153,441	153,441		
6/1/2032	630,000	3.760%	153,441	783,441	936,882	
12/1/2032			141,597	141,597		
6/1/2033	650,000	3.830%	141,597	791,597	933,194	
12/1/2033			129,150	129,150		
6/1/2034	675,000	3.890%	129,150	804,150	933,299	
12/1/2034			116,021	116,021		
6/1/2035	1,045,000	3.950%	116,021	1,161,021	1,277,042	
12/1/2035			95,382	95,382		
6/1/2036	1,090,000	4.030%	95,382	1,185,382	1,280,764	
12/1/2036			73,419	73,419		
6/1/2037	1,130,000	4.100%	73,419	1,203,419	1,276,837	
12/1/2037			50,254	50,254		
6/1/2038	1,180,000	4.150%	50,254	1,230,254	1,280,507	
12/1/2038			25,769	25,769		
6/1/2039	1,230,000	4.190%	25,769	1,255,769	1,281,537	
12/1/2039						
6/1/2040						
12/1/2040						
6/1/2041						
12/1/2041						
6/1/2042						
12/1/2042						
6/1/2043						
12/1/2043						

	11,260,000		4,536,816	15,796,816	15,796,816	
Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ) + 150 bps for timing.						

City of Carroll, Iowa
Projection of G.O. Debt Capacity

EXHIBIT 1a-5

*Assumes 15 Year Bonds
 Additional Rec Center Project*

Updated: 25-Jan-18

Valuation Growth & Debt Limit Assumptions	
Legal Debt Limit	5.00%
Effective Limit	4.00%

*\$3.8 M Str Mnt Gar Rec Pool**
 Library Fire Truck Rec Adn***

Beginning of Fiscal Year	Actual Valuation	Historical Valuation Growth	Gross Debt Limit	Effective Debt Limit	DEBT ISSUES SUBJECT TO DEBT LIMIT *			Proposed GO Bonds 2018B	Proposed GO Bonds 2019A	Proposed GO Bonds 2023A	Reserved	TOTAL G.O. DEBT OUTST'NDG	Available Effective Capacity	Percent /Debt Gross Debt Limit	Beginning of Fiscal Year
					G.O. - TAXES -	G.O. - TIF -	Sales Tax Bonds								
2011 - 2012	632,429,951	1.9%	31,621,498	25,297,198	4,235,000	945,000	1,650,000					6,830,000	18,467,198	21.60%	2011
2012 - 2013	648,166,368	2.5%	32,408,318	25,926,655	3,520,000	655,000	1,110,000					5,285,000	20,641,655	16.31%	2012
2013 - 2014	654,646,146	1.0%	32,732,307	26,185,846	3,400,000	455,000	560,000					4,415,000	21,770,846	13.49%	2013
2014 - 2015	752,235,898	14.9%	37,611,795	30,089,436	3,750,000	55,000						3,805,000	26,284,436	10.12%	2014
2015 - 2016	757,631,838	0.7%	37,881,592	30,305,274	3,630,000							3,630,000	26,675,274	9.58%	2015
2016 - 2017	775,612,596	2.4%	38,780,630	31,024,504	5,105,000							5,105,000	25,919,504	13.16%	2016
2017 - 2018	781,063,284	0.7%	39,053,164	31,242,531	4,090,000							4,090,000	27,152,531	10.47%	2017
2018 - 2019	846,719,429	8.4%	42,335,971	33,868,777	3,045,000			4,480,000				7,525,000	26,343,777	17.77%	2018
2019 - 2020	850,584,226	0.5%	42,529,211	34,023,369	2,515,000			4,165,000	1,120,000			7,800,000	26,223,369	18.34%	2019
2020 - 2021	854,468,347	0.5%	42,723,417	34,178,734	1,975,000			3,925,000	970,000			6,870,000	27,308,734	16.08%	2020
2021 - 2022	858,371,889	0.5%	42,918,594	34,334,876	1,430,000			3,690,000	815,000			5,935,000	28,399,876	13.83%	2021
2022 - 2023	862,294,948	0.5%	43,114,747	34,491,798	865,000			3,450,000	660,000			4,975,000	29,516,798	11.54%	2022
2023 - 2024	866,237,622	0.5%	43,311,881	34,649,505	295,000			3,200,000	520,000	11,260,000		15,275,000	19,374,505	35.27%	2023
2024 - 2025	870,200,010	0.5%	43,510,001	34,808,000				2,945,000	285,000	11,260,000		14,490,000	20,318,000	33.30%	2024
2025 - 2026	874,182,210	0.5%	43,709,111	34,967,288				2,690,000		11,020,000		13,710,000	21,257,288	31.37%	2025
2026 - 2027	874,182,210		43,709,111	34,967,288				2,425,000		10,485,000		12,910,000	22,057,288	29.54%	2026
2027 - 2028	874,182,210		43,709,111	34,967,288				2,155,000		9,925,000		12,080,000	22,887,288	27.64%	2027
2028 - 2029	874,182,210		43,709,111	34,967,288				1,875,000		9,380,000		11,255,000	23,712,288	25.75%	2028
2029 - 2030	874,182,210		43,709,111	34,967,288				1,585,000		8,820,000		10,405,000	24,562,288	23.81%	2029
2030 - 2031	874,182,210		43,709,111	34,967,288				1,290,000		8,235,000		9,525,000	25,442,288	21.79%	2030
2031 - 2032	874,182,210		43,709,111	34,967,288				985,000		7,630,000		8,615,000	26,352,288	19.71%	2031
2032 - 2033	874,182,210		43,709,111	34,967,288				670,000		7,000,000		7,670,000	27,297,288	17.55%	2032
2033 - 2034	874,182,210		43,709,111	34,967,288				340,000		6,350,000		6,690,000	28,277,288	15.31%	2033
2034 - 2035	874,182,210		43,709,111	34,967,288						5,675,000		5,675,000	29,292,288	12.98%	2034
2035 - 2036	874,182,210		43,709,111	34,967,288						4,630,000		4,630,000	30,337,288	10.59%	2035
2036 - 2037	874,182,210		43,709,111	34,967,288						3,540,000		3,540,000	31,427,288	8.10%	2036
2037 - 2038	874,182,210		43,709,111	34,967,288						2,410,000		2,410,000	32,557,288	5.51%	2037
2038 - 2039	874,182,210		43,709,111	34,967,288						1,230,000		1,230,000	33,737,288	2.81%	2038
2039 - 2040	874,182,210		43,709,111	34,967,288									34,967,288		2039

* - Represents G.O. principal outstanding as of the BEGINNING of the fiscal year.

** - Project is subject to voter approval.



Scenario 2: Assumes 20 Year Bonds

- 2018B Bonds – Library & FY19 CIP
- 2019A Bonds – Street Maintenance Building & Fire Truck
- 2023A Bonds - Rec Center Pool & Locker Room Improvements

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2018B

EXHIBIT 2-2

Library (20 Year Bonds) & FY 2019 CIP

SOURCES & USES	
SOURCES	
Par Amount of Notes	4,480,000.00
Cash on Hand	45,000.00
Premium	
<hr/>	
Total Sources	4,525,000.00
USES	
Deposit to Construction Account	4,435,000.00
Deposit to Reserve Account	
Capitalized Interest Account	(0.00)
Municipal Bond Insurance	0.00
Underwriters' Discount (\$10.00 per bond)	44,800.00
Costs of Issuance	45,000.00
Accrued Interest	
Rounding Amount	200.00
<hr/>	
Total Uses	4,525,000.00
ASSUMPTIONS	
Dated Date	10/31/2018
Delivery Date	10/31/2018
First Interest Date	6/1/2019
First Principal Date	6/1/2019
Last Principal Date	6/1/2038
Yield Calculations:	
Arbitrage Yield	3.27890%
TIC	3.40339%
AIC	3.53042%
Average Life	10.02 Years
PROJECTS FINANCED:	
Library	\$ 3,765,000
Youth Complex Lighting	375,000
Pickleball Courts	175,000
Trails	120,000
	<hr/>
	\$ 4,435,000

DEBT SERVICE SCHEDULE						
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service	
<hr/>						
0.6	6/1/2019	310,000	2.520%	81,239	391,239	
	12/1/2019			65,397	65,397	
1.6	6/1/2020	240,000	2.660%	65,397	305,397	
	12/1/2020			62,205	62,205	
2.6	6/1/2021	230,000	2.700%	62,205	292,205	
	12/1/2021			59,100	59,100	
3.6	6/1/2022	240,000	2.740%	59,100	299,100	
	12/1/2022			55,812	55,812	
4.6	6/1/2023	250,000	2.780%	55,812	305,812	
	12/1/2023			52,337	52,337	
5.6	6/1/2024	245,000	2.820%	52,337	297,337	
	12/1/2024			48,883	48,883	
6.6	6/1/2025	170,000	2.880%	48,883	218,883	
	12/1/2025			46,435	46,435	
7.6	6/1/2026	175,000	2.940%	46,435	221,435	
	12/1/2026			43,862	43,862	
8.6	6/1/2027	180,000	3.010%	43,862	223,862	
	12/1/2027			41,153	41,153	
9.6	6/1/2028	190,000	3.080%	41,153	231,153	
	12/1/2028			38,227	38,227	
10.6	6/1/2029	195,000	3.140%	38,227	233,227	
	12/1/2029			35,166	35,166	
11.6	6/1/2030	200,000	3.200%	35,166	235,166	
	12/1/2030			31,966	31,966	
12.6	6/1/2031	205,000	3.280%	31,966	236,966	
	12/1/2031			28,604	28,604	
13.6	6/1/2032	215,000	3.350%	28,604	243,604	
	12/1/2032			25,002	25,002	
14.6	6/1/2033	220,000	3.400%	25,002	245,002	
	12/1/2033			21,262	21,262	
15.6	6/1/2034	225,000	3.440%	21,262	246,262	
	12/1/2034			17,392	17,392	
16.6	6/1/2035	235,000	3.470%	17,392	252,392	
	12/1/2035			13,315	13,315	
17.6	6/1/2036	245,000	3.500%	13,315	258,315	
	12/1/2036			9,028	9,028	
18.6	6/1/2037	250,000	3.530%	9,028	259,028	
	12/1/2037			4,615	4,615	
19.6	6/1/2038	260,000	3.550%	4,615	264,615	
	12/1/2038					
<hr/>						
		4,480,000		1,480,756	5,960,756	
<hr/>						
Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ) + 75 bps for timing.						

City of Carroll, Iowa

Proposed General Obligation Bonds, Series 2019A

EXHIBIT 2-3

Street Maintenance Garage & Fire Truck

SOURCES & USES	
SOURCES	
Par Amount of Bonds	1,120,000.00
Accrued Interest	
Other Monies	

Total Sources	1,120,000.00
USES	
Deposit to Construction Account	1,075,000.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount (\$7.50 per bond)	8,400.00
Costs of Issuance	33,000.00
Accrued Interest	
Rounding Amount	3,600.00

Total Uses	1,120,000.00
ASSUMPTIONS	
Dated Date	9/1/2019
Delivery Date	9/1/2019
First Interest Date	6/1/2020
First Principal Date	6/1/2020
Last Principal Date	6/1/2025

Arbitrage Yield	3.36376%
TIC	3.58687%
AIC	4.48711%
Average Life	3.67 Years

PROJECTS FINANCED:	
Street Maintenance Garage	\$ 700,000
Fire Truck	375,000
Reserved	-
Reserved	-

	\$ 1,075,000

DEBT SERVICE SCHEDULE						
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service	

0.75	6/1/2020	150,000	3.120%	27,915	177,915	177,915
	12/1/2020			16,270	16,270	
1.75	6/1/2021	155,000	3.260%	16,270	171,270	187,540
	12/1/2021			13,744	13,744	
2.75	6/1/2022	155,000	3.300%	13,744	168,744	182,487
	12/1/2022			11,186	11,186	
3.75	6/1/2023	135,000	3.340%	11,186	146,186	157,372
	12/1/2023			8,932	8,932	
4.75	6/1/2024	230,000	3.380%	8,932	238,932	247,863
	12/1/2024			5,045	5,045	
5.75	6/1/2025	295,000	3.420%	5,045	300,045	305,089
	12/1/2025					
6.75	6/1/2026					
	12/1/2026					
7.75	6/1/2027					
	12/1/2027					
8.75	6/1/2028					
	12/1/2028					
9.75	6/1/2029					
	12/1/2029					
10.75	6/1/2030					
	12/1/2030					
11.75	6/1/2031					
	12/1/2031					
12.75	6/1/2032					
	12/1/2032					
13.75	6/1/2033					
	12/1/2033					
14.75	6/1/2034					
	12/1/2034					
15.75	6/1/2035					
	12/1/2035					
16.75	6/1/2036					
	12/1/2036					
17.75	6/1/2037					
	12/1/2037					
18.75	6/1/2038					
	12/1/2038					
19.75	6/1/2039					
	12/1/2039					

		1,120,000		138,266	1,258,266	1,258,266

Scale : MMD Aaa as of 01-02-2018 + NR/BQ credit
+ 125 bps for timing.

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2023A

EXHIBIT 2-4

Recreation Center Pool & Locker Room Improvements (20 Yr)

SOURCES & USES	
SOURCES	
Par Amount of Bonds	8,840,000.00
Accrued Interest	
Premium	0.58

Total Sources	8,840,000.00
USES	
Deposit to Construction Account	8,674,000.00
Deposit to Reserve Account	4.58
Capitalized Interest Account	0.00
Municipal Bond Insurance	5.58
Underwriters' Discount (\$12.50 per bond)	110,500.00
Costs of Issuance	52,000.00
Accrued Interest	
Rounding Amount	3,500.00

Total Uses	8,840,000.00
ASSUMPTIONS	
Dated Date	11/1/2023
Delivery Date	11/1/2023
First Interest Date	6/1/2024
First Principal Date	6/1/2024
Last Principal Date	6/1/2043

DEBT SERVICE SCHEDULE						
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service	
6/1/2024	0	3.270%	203,661	203,661	203,661	
12/1/2024			174,567	174,567		
6/1/2025	155,000	3.410%	174,567	329,567	504,133	
12/1/2025			171,924	171,924		
6/1/2026	375,000	3.450%	171,924	546,924	718,848	
12/1/2026			165,455	165,455		
6/1/2027	390,000	3.490%	165,455	555,455	720,910	
12/1/2027			158,650	158,650		
6/1/2028	365,000	3.530%	158,650	523,650	682,299	
12/1/2028			152,207	152,207		
6/1/2029	380,000	3.570%	152,207	532,207	684,415	
12/1/2029			145,424	145,424		
6/1/2030	395,000	3.630%	145,424	540,424	685,849	
12/1/2030			138,255	138,255		
6/1/2031	410,000	3.690%	138,255	548,255	686,510	
12/1/2031			130,691	130,691		
6/1/2032	420,000	3.760%	130,691	550,691	681,381	
12/1/2032			122,795	122,795		
6/1/2033	440,000	3.830%	122,795	562,795	685,589	
12/1/2033			114,369	114,369		
6/1/2034	455,000	3.890%	114,369	569,369	683,737	
12/1/2034			105,519	105,519		
6/1/2035	475,000	3.950%	105,519	580,519	686,038	
12/1/2035			96,138	96,138		
6/1/2036	490,000	4.030%	96,138	586,138	682,275	
12/1/2036			86,264	86,264		
6/1/2037	515,000	4.100%	86,264	601,264	687,528	
12/1/2037			75,707	75,707		
6/1/2038	535,000	4.150%	75,707	610,707	686,413	
12/1/2038			64,605	64,605		
6/1/2039	560,000	4.190%	64,605	624,605	689,211	
12/1/2039			52,873	52,873		
6/1/2040	580,000	4.220%	52,873	632,873	685,747	
12/1/2040			40,635	40,635		
6/1/2041	605,000	4.250%	40,635	645,635	686,271	
12/1/2041			27,779	27,779		
6/1/2042	635,000	4.280%	27,779	662,779	690,558	
12/1/2042			14,190	14,190		
6/1/2043	660,000	4.300%	14,190	674,190	688,380	
12/1/2043						

			8,840,000	4,279,749	13,119,749	13,119,749
Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ) + 150 bps for timing.						

FY 2018 PROJECTS FINANCED:	
Recreation Center Pool & Locker Room	\$ 8,674,000
Reserved	-
Reserved	-
Reserved	-

	\$ 8,674,000

City of Carroll, Iowa
Projection of G.O. Debt Capacity

EXHIBIT 2-5

Assumes 20 Year Bonds

Valuation Growth & Debt Limit Assumptions	
Legal Debt Limit	5.00%
Effective Limit	4.00%

Updated: 26-Jan-18

\$3.8 M *Str Mnt Gar* *Rec Pool***
Library *Fire Truck* *Rec Adn***

Beginning of Fiscal Year	Actual Valuation	Historical Valuation Growth	Gross Debt Limit	Effective Debt Limit	DEBT ISSUES SUBJECT TO DEBT LIMIT *			Proposed GO Bonds 2018B	Proposed GO Bonds 2019A	Proposed GO Bonds 2023A	Reserved	TOTAL G.O. DEBT OUTST'NDG	Available Effective Capacity	Percent /Debt Gross Debt Limit	Beginning of Fiscal Year
					G.O. - TAXES -	G.O. - TIF -	Sales Tax Bonds								
2011 - 2012	632,429,951	1.9%	31,621,498	25,297,198	4,235,000	945,000	1,650,000					6,830,000	18,467,198	21.60%	2011
2012 - 2013	648,166,368	2.5%	32,408,318	25,926,655	3,520,000	655,000	1,110,000					5,285,000	20,641,655	16.31%	2012
2013 - 2014	654,646,146	1.0%	32,732,307	26,185,846	3,400,000	455,000	560,000					4,415,000	21,770,846	13.49%	2013
2014 - 2015	752,235,898	14.9%	37,611,795	30,089,436	3,750,000	55,000						3,805,000	26,284,436	10.12%	2014
2015 - 2016	757,631,838	0.7%	37,881,592	30,305,274	3,630,000							3,630,000	26,675,274	9.58%	2015
2016 - 2017	775,612,596	2.4%	38,780,630	31,024,504	5,105,000							5,105,000	25,919,504	13.16%	2016
2017 - 2018	781,063,284	0.7%	39,053,164	31,242,531	4,090,000							4,090,000	27,152,531	10.47%	2017
2018 - 2019	846,719,429	8.4%	42,335,971	33,868,777	3,045,000		4,480,000					7,525,000	26,343,777	17.77%	2018
2019 - 2020	850,584,226	0.5%	42,529,211	34,023,369	2,515,000		4,170,000	1,120,000				7,805,000	26,218,369	18.35%	2019
2020 - 2021	854,468,347	0.5%	42,723,417	34,178,734	1,975,000		3,930,000	970,000				6,875,000	27,303,734	16.09%	2020
2021 - 2022	858,371,889	0.5%	42,918,594	34,334,876	1,430,000		3,700,000	815,000				5,945,000	28,389,876	13.85%	2021
2022 - 2023	862,294,948	0.5%	43,114,747	34,491,798	865,000		3,460,000	660,000				4,985,000	29,506,798	11.56%	2022
2023 - 2024	866,237,622	0.5%	43,311,881	34,649,505	295,000		3,210,000	525,000	8,840,000			12,870,000	21,779,505	29.71%	2023
2024 - 2025	870,200,010	0.5%	43,510,001	34,808,000			2,965,000	295,000	8,840,000			12,100,000	22,708,000	27.81%	2024
2025 - 2026	874,182,210	0.5%	43,709,111	34,967,288			2,795,000		8,685,000			11,480,000	23,487,288	26.26%	2025
2026 - 2027	874,182,210		43,709,111	34,967,288			2,620,000		8,310,000			10,930,000	24,037,288	25.01%	2026
2027 - 2028	874,182,210		43,709,111	34,967,288			2,440,000		7,920,000			10,360,000	24,607,288	23.70%	2027
2028 - 2029	874,182,210		43,709,111	34,967,288			2,250,000		7,555,000			9,805,000	25,162,288	22.43%	2028
2029 - 2030	874,182,210		43,709,111	34,967,288			2,055,000		7,175,000			9,230,000	25,737,288	21.12%	2029
2030 - 2031	874,182,210		43,709,111	34,967,288			1,855,000		6,780,000			8,635,000	26,332,288	19.76%	2030
2031 - 2032	874,182,210		43,709,111	34,967,288			1,650,000		6,370,000			8,020,000	26,947,288	18.35%	2031
2032 - 2033	874,182,210		43,709,111	34,967,288			1,435,000		5,950,000			7,385,000	27,582,288	16.90%	2032
2033 - 2034	874,182,210		43,709,111	34,967,288			1,215,000		5,510,000			6,725,000	28,242,288	15.39%	2033
2034 - 2035	874,182,210		43,709,111	34,967,288			990,000		5,055,000			6,045,000	28,922,288	13.83%	2034
2035 - 2036	874,182,210		43,709,111	34,967,288			755,000		4,580,000			5,335,000	29,632,288	12.21%	2035
2036 - 2037	874,182,210		43,709,111	34,967,288			510,000		4,090,000			4,600,000	30,367,288	10.52%	2036
2037 - 2038	874,182,210		43,709,111	34,967,288			260,000		3,575,000			3,835,000	31,132,288	8.77%	2037
2038 - 2039	874,182,210		43,709,111	34,967,288					3,040,000			3,040,000	31,927,288	6.96%	2038
2039 - 2040	874,182,210		43,709,111	34,967,288					2,480,000			2,480,000	32,487,288	5.67%	2039
2040 - 2041	874,182,210		43,709,111	34,967,288					1,900,000			1,900,000	33,067,288	4.35%	2040
2041 - 2042	874,182,210		43,709,111	34,967,288					1,295,000			1,295,000	33,672,288	2.96%	2041
2042 - 2043	874,182,210		43,709,111	34,967,288					660,000			660,000	34,307,288	1.51%	2042
2043 - 2044	874,182,210		43,709,111	34,967,288									34,967,288		2043

* - Represents G.O. principal outstanding as of the BEGINNING of the fiscal year.

** - Project is subject to voter approval.



Scenario 2a: Assumes 20 Year Bonds

- 2018B Bonds – Library & FY19 CIP
- 2019A Bonds – Street Maintenance Building & Fire Truck
- 2023A Bonds - Rec Center Pool, Locker Room & East Gym Improvements

Library (20 Year Bonds) & FY 2019 CIP

SOURCES & USES	
SOURCES	
Par Amount of Notes	4,480,000.00
Cash on Hand	45,000.00
Premium	
Total Sources	4,525,000.00
USES	
Deposit to Construction Account	4,435,000.00
Deposit to Reserve Account	
Capitalized Interest Account	(0.00)
Municipal Bond Insurance	0.00
Underwriters' Discount (\$10.00 per bond)	44,800.00
Costs of Issuance	45,000.00
Accrued Interest	
Rounding Amount	200.00
Total Uses	4,525,000.00
ASSUMPTIONS	
Dated Date	10/31/2018
Delivery Date	10/31/2018
First Interest Date	6/1/2019
First Principal Date	6/1/2019
Last Principal Date	6/1/2038
Yield Calculations:	
Arbitrage Yield	3.27847%
TIC	3.40305%
AIC	3.53018%
Average Life	10.01 Years
PROJECTS FINANCED:	
Library	\$ 3,765,000
Youth Complex Lighting	375,000
Pickleball Courts	175,000
Trails	120,000
	\$ 4,435,000

DEBT SERVICE SCHEDULE						
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service	
0.6	6/1/2019	310,000	2.520%	81,223	391,223	
	12/1/2019			65,384	65,384	
1.6	6/1/2020	240,000	2.660%	65,384	305,384	
	12/1/2020			62,192	62,192	
2.6	6/1/2021	230,000	2.700%	62,192	292,192	
	12/1/2021			59,087	59,087	
3.6	6/1/2022	240,000	2.740%	59,087	299,087	
	12/1/2022			55,799	55,799	
4.6	6/1/2023	250,000	2.780%	55,799	305,799	
	12/1/2023			52,324	52,324	
5.6	6/1/2024	250,000	2.820%	52,324	302,324	
	12/1/2024			48,799	48,799	
6.6	6/1/2025	170,000	2.880%	48,799	218,799	
	12/1/2025			46,351	46,351	
7.6	6/1/2026	175,000	2.940%	46,351	221,351	
	12/1/2026			43,778	43,778	
8.6	6/1/2027	180,000	3.010%	43,778	223,778	
	12/1/2027			41,069	41,069	
9.6	6/1/2028	190,000	3.080%	41,069	231,069	
	12/1/2028			38,143	38,143	
10.6	6/1/2029	195,000	3.140%	38,143	233,143	
	12/1/2029			35,082	35,082	
11.6	6/1/2030	200,000	3.200%	35,082	235,082	
	12/1/2030			31,882	31,882	
12.6	6/1/2031	205,000	3.280%	31,882	236,882	
	12/1/2031			28,520	28,520	
13.6	6/1/2032	210,000	3.350%	28,520	238,520	
	12/1/2032			25,002	25,002	
14.6	6/1/2033	220,000	3.400%	25,002	245,002	
	12/1/2033			21,262	21,262	
15.6	6/1/2034	225,000	3.440%	21,262	246,262	
	12/1/2034			17,392	17,392	
16.6	6/1/2035	235,000	3.470%	17,392	252,392	
	12/1/2035			13,315	13,315	
17.6	6/1/2036	245,000	3.500%	13,315	258,315	
	12/1/2036			9,028	9,028	
18.6	6/1/2037	250,000	3.530%	9,028	259,028	
	12/1/2037			4,615	4,615	
19.6	6/1/2038	260,000	3.550%	4,615	264,615	
	12/1/2038					
		4,480,000		1,479,268	5,959,268	
				5,959,268	5,959,268	

Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ)
+ 75 bps for timing.

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2023A

EXHIBIT 2a-4

Recreation Center Pool, Locker Rooms & East Side Gym (20 Yr)

SOURCES & USES	
SOURCES	
Par Amount of Bonds	11,260,000.00
Accrued Interest	
Premium	0.58

Total Sources	11,260,000.00
USES	
Deposit to Construction Account	11,063,000.00
Deposit to Reserve Account	4.58
Capitalized Interest Account	0.00
Municipal Bond Insurance	5.58
Underwriters' Discount (\$12.50 per bond)	140,750.00
Costs of Issuance	52,000.00
Accrued Interest	
Rounding Amount	4,250.00

Total Uses	11,260,000.00
ASSUMPTIONS	
Dated Date	11/1/2023
Delivery Date	11/1/2023
First Interest Date	6/1/2024
First Principal Date	6/1/2024
Last Principal Date	6/1/2043

DEBT SERVICE SCHEDULE						
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service	
6/1/2024	0	3.270%	259,714	259,714	259,714	
12/1/2024			222,612	222,612		
6/1/2025	160,000	3.410%	222,612	382,612	605,225	
12/1/2025			219,884	219,884		
6/1/2026	470,000	3.450%	219,884	689,884	909,769	
12/1/2026			211,777	211,777		
6/1/2027	485,000	3.490%	211,777	696,777	908,554	
12/1/2027			203,314	203,314		
6/1/2028	465,000	3.530%	203,314	668,314	871,627	
12/1/2028			195,106	195,106		
6/1/2029	480,000	3.570%	195,106	675,106	870,213	
12/1/2029			186,538	186,538		
6/1/2030	500,000	3.630%	186,538	686,538	873,077	
12/1/2030			177,463	177,463		
6/1/2031	520,000	3.690%	177,463	697,463	874,927	
12/1/2031			167,869	167,869		
6/1/2032	540,000	3.760%	167,869	707,869	875,739	
12/1/2032			157,717	157,717		
6/1/2033	560,000	3.830%	157,717	717,717	875,435	
12/1/2033			146,993	146,993		
6/1/2034	580,000	3.890%	146,993	726,993	873,987	
12/1/2034			135,712	135,712		
6/1/2035	600,000	3.950%	135,712	735,712	871,425	
12/1/2035			123,862	123,862		
6/1/2036	625,000	4.030%	123,862	748,862	872,725	
12/1/2036			111,269	111,269		
6/1/2037	655,000	4.100%	111,269	766,269	877,537	
12/1/2037			97,841	97,841		
6/1/2038	680,000	4.150%	97,841	777,841	875,682	
12/1/2038			83,731	83,731		
6/1/2039	725,000	4.190%	83,731	808,731	892,462	
12/1/2039			68,542	68,542		
6/1/2040	755,000	4.220%	68,542	823,542	892,085	
12/1/2040			52,612	52,612		
6/1/2041	785,000	4.250%	52,612	837,612	890,224	
12/1/2041			35,931	35,931		
6/1/2042	820,000	4.280%	35,931	855,931	891,861	
12/1/2042			18,383	18,383		
6/1/2043	855,000	4.300%	18,383	873,383	891,765	
12/1/2043						

	11,260,000		5,494,027	16,754,027	16,754,027	
Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ) + 150 bps for timing.						

FY 2018 PROJECTS FINANCED:	
Rec Cntr Pool, Locker Rooms & E Gym	\$ 11,063,000
Reserved	-
Reserved	-
Reserved	-
	\$ 11,063,000

City of Carroll, Iowa
Projection of G.O. Debt Capacity

EXHIBIT 2a-5

*Assumes 20 Year Bonds
 Additional Rec Center Project*

Updated: 25-Jan-18

Valuation Growth & Debt Limit Assumptions	
Legal Debt Limit	5.00%
Effective Limit	4.00%

*\$3.8 M Str Mnt Gar Rec Pool**
 Library Fire Truck Rec Adn***

Beginning of Fiscal Year	Actual Valuation	Historical Valuation Growth	Gross Debt Limit	Effective Debt Limit	DEBT ISSUES SUBJECT TO DEBT LIMIT *			Proposed GO Bonds 2018B	Proposed GO Bonds 2019A	Proposed GO Bonds 2023A	Reserved	TOTAL G.O. DEBT OUTST'NDG	Available Effective Capacity	Percent /Debt Gross Debt Limit	Beginning of Fiscal Year
					G.O. - TAXES -	G.O. - TIF -	Sales Tax Bonds								
2011 - 2012	632,429,951	1.9%	31,621,498	25,297,198	4,235,000	945,000	1,650,000					6,830,000	18,467,198	21.60%	2011
2012 - 2013	648,166,368	2.5%	32,408,318	25,926,655	3,520,000	655,000	1,110,000					5,285,000	20,641,655	16.31%	2012
2013 - 2014	654,646,146	1.0%	32,732,307	26,185,846	3,400,000	455,000	560,000					4,415,000	21,770,846	13.49%	2013
2014 - 2015	752,235,898	14.9%	37,611,795	30,089,436	3,750,000	55,000						3,805,000	26,284,436	10.12%	2014
2015 - 2016	757,631,838	0.7%	37,881,592	30,305,274	3,630,000							3,630,000	26,675,274	9.58%	2015
2016 - 2017	775,612,596	2.4%	38,780,630	31,024,504	5,105,000							5,105,000	25,919,504	13.16%	2016
2017 - 2018	781,063,284	0.7%	39,053,164	31,242,531	4,090,000							4,090,000	27,152,531	10.47%	2017
2018 - 2019	846,719,429	8.4%	42,335,971	33,868,777	3,045,000		4,480,000					7,525,000	26,343,777	17.77%	2018
2019 - 2020	850,584,226	0.5%	42,529,211	34,023,369	2,515,000		4,170,000	1,120,000				7,805,000	26,218,369	18.35%	2019
2020 - 2021	854,468,347	0.5%	42,723,417	34,178,734	1,975,000		3,930,000	970,000				6,875,000	27,303,734	16.09%	2020
2021 - 2022	858,371,889	0.5%	42,918,594	34,334,876	1,430,000		3,700,000	815,000				5,945,000	28,389,876	13.85%	2021
2022 - 2023	862,294,948	0.5%	43,114,747	34,491,798	865,000		3,460,000	660,000				4,985,000	29,506,798	11.56%	2022
2023 - 2024	866,237,622	0.5%	43,311,881	34,649,505	295,000		3,210,000	525,000	11,260,000			15,290,000	19,359,505	35.30%	2023
2024 - 2025	870,200,010	0.5%	43,510,001	34,808,000			2,960,000	295,000	11,260,000			14,515,000	20,293,000	33.36%	2024
2025 - 2026	874,182,210	0.5%	43,709,111	34,967,288			2,790,000		11,100,000			13,890,000	21,077,288	31.78%	2025
2026 - 2027	874,182,210		43,709,111	34,967,288			2,615,000		10,630,000			13,245,000	21,722,288	30.30%	2026
2027 - 2028	874,182,210		43,709,111	34,967,288			2,435,000		10,145,000			12,580,000	22,387,288	28.78%	2027
2028 - 2029	874,182,210		43,709,111	34,967,288			2,245,000		9,680,000			11,925,000	23,042,288	27.28%	2028
2029 - 2030	874,182,210		43,709,111	34,967,288			2,050,000		9,200,000			11,250,000	23,717,288	25.74%	2029
2030 - 2031	874,182,210		43,709,111	34,967,288			1,850,000		8,700,000			10,550,000	24,417,288	24.14%	2030
2031 - 2032	874,182,210		43,709,111	34,967,288			1,645,000		8,180,000			9,825,000	25,142,288	22.48%	2031
2032 - 2033	874,182,210		43,709,111	34,967,288			1,435,000		7,640,000			9,075,000	25,892,288	20.76%	2032
2033 - 2034	874,182,210		43,709,111	34,967,288			1,215,000		7,080,000			8,295,000	26,672,288	18.98%	2033
2034 - 2035	874,182,210		43,709,111	34,967,288			990,000		6,500,000			7,490,000	27,477,288	17.14%	2034
2035 - 2036	874,182,210		43,709,111	34,967,288			755,000		5,900,000			6,655,000	28,312,288	15.23%	2035
2036 - 2037	874,182,210		43,709,111	34,967,288			510,000		5,275,000			5,785,000	29,182,288	13.24%	2036
2037 - 2038	874,182,210		43,709,111	34,967,288			260,000		4,620,000			4,880,000	30,087,288	11.16%	2037
2038 - 2039	874,182,210		43,709,111	34,967,288					3,940,000			3,940,000	31,027,288	9.01%	2038
2039 - 2040	874,182,210		43,709,111	34,967,288					3,215,000			3,215,000	31,752,288	7.36%	2039
2040 - 2041	874,182,210		43,709,111	34,967,288					2,460,000			2,460,000	32,507,288	5.63%	2040
2041 - 2042	874,182,210		43,709,111	34,967,288					1,675,000			1,675,000	33,292,288	3.83%	2041
2042 - 2043	874,182,210		43,709,111	34,967,288					855,000			855,000	34,112,288	1.96%	2042
2043 - 2044	874,182,210		43,709,111	34,967,288									34,967,288		2043

* - Represents G.O. principal outstanding as of the BEGINNING of the fiscal year.

** - Project is subject to voter approval.



Scenario 3: Assumes 2027 Rec Center Bonds

- 2018B Bonds – Library & FY19 CIP
- 2019A Bonds – Street Maintenance Building & Fire Truck
- 2027A Bonds - Rec Center Pool, Locker Room & East Gym Improvements

Library (Accelerated Bonds) & FY 2019 CIP

SOURCES & USES	
SOURCES	
Par Amount of Notes	4,480,000.00
Cash on Hand	45,000.00
Premium	
<hr/>	
Total Sources	4,525,000.00
USES	
Deposit to Construction Account	4,435,000.00
Deposit to Reserve Account	
Capitalized Interest Account	(0.00)
Municipal Bond Insurance	0.00
Underwriters' Discount (\$10.00 per bond)	44,800.00
Costs of Issuance	45,000.00
Accrued Interest	
Rounding Amount	200.00
<hr/>	
Total Uses	4,525,000.00
ASSUMPTIONS	
Dated Date	10/31/2018
Delivery Date	10/31/2018
First Interest Date	6/1/2019
First Principal Date	6/1/2019
Last Principal Date	6/1/2027
Yield Calculations:	
Arbitrage Yield	2.91095%
TIC	3.09898%
AIC	3.29041%
Average Life	5.95 Years

PROJECTS FINANCED:	
Library	\$ 3,765,000
Youth Complex Lighting	375,000
Pickleball Courts	175,000
Trails	120,000
	<hr/>
	\$ 4,435,000

DEBT SERVICE SCHEDULE						
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service	
<hr/>						
0.6	6/1/2019	315,000	2.520%	74,969	389,969	
	12/1/2019			59,986	59,986	
1.6	6/1/2020	250,000	2.660%	59,986	309,986	
	12/1/2020			56,661	56,661	
2.6	6/1/2021	240,000	2.700%	56,661	296,661	
	12/1/2021			53,421	53,421	
3.6	6/1/2022	250,000	2.740%	53,421	303,421	
	12/1/2022			49,996	49,996	
4.6	6/1/2023	265,000	2.780%	49,996	314,996	
	12/1/2023			46,312	46,312	
5.6	6/1/2024	460,000	2.820%	46,312	506,312	
	12/1/2024			39,826	39,826	
6.6	6/1/2025	695,000	2.880%	39,826	734,826	
	12/1/2025			29,818	29,818	
7.6	6/1/2026	1,020,000	2.940%	29,818	1,049,818	
	12/1/2026			14,824	14,824	
8.6	6/1/2027	985,000	3.010%	14,824	999,824	
	12/1/2027					
9.6	6/1/2028					
	12/1/2028					
10.6	6/1/2029					
	12/1/2029					
11.6	6/1/2030					
	12/1/2030					
12.6	6/1/2031					
	12/1/2031					
13.6	6/1/2032					
	12/1/2032					
14.6	6/1/2033					
	12/1/2033					
15.6	6/1/2034					
	12/1/2034					
16.6	6/1/2035					
	12/1/2035					
17.6	6/1/2036					
	12/1/2036					
18.6	6/1/2037					
	12/1/2037					
19.6	6/1/2038					
	12/1/2038					
<hr/>						
		4,480,000		776,657	5,256,657	
					5,256,657	

Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ)
+ 75 bps for timing.

City of Carroll, Iowa

Proposed General Obligation Bonds, Series 2019A

EXHIBIT 3-3

Street Maintenance Garage & Fire Truck

SOURCES & USES	
SOURCES	
Par Amount of Bonds	1,120,000.00
Accrued Interest	
Other Monies	

Total Sources	1,120,000.00
USES	
Deposit to Construction Account	1,075,000.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount (\$7.50 per bond)	8,400.00
Costs of Issuance	33,000.00
Accrued Interest	
Rounding Amount	3,600.00

Total Uses	1,120,000.00
ASSUMPTIONS	
Dated Date	9/1/2019
Delivery Date	9/1/2019
First Interest Date	6/1/2020
First Principal Date	6/1/2020
Last Principal Date	6/1/2025

Arbitrage Yield	3.36376%
TIC	3.58687%
AIC	4.48711%
Average Life	3.67 Years

PROJECTS FINANCED:	
Street Maintenance Garage	\$ 700,000
Fire Truck	375,000
Reserved	-
Reserved	-

	\$ 1,075,000

DEBT SERVICE SCHEDULE						
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service	

6/1/2020	150,000	3.120%	27,915	177,915	177,915	
12/1/2020			16,270	16,270		
6/1/2021	155,000	3.260%	16,270	171,270	187,540	
12/1/2021			13,744	13,744		
6/1/2022	155,000	3.300%	13,744	168,744	182,487	
12/1/2022			11,186	11,186		
6/1/2023	135,000	3.340%	11,186	146,186	157,372	
12/1/2023			8,932	8,932		
6/1/2024	230,000	3.380%	8,932	238,932	247,863	
12/1/2024			5,045	5,045		
6/1/2025	295,000	3.420%	5,045	300,045	305,089	
12/1/2025						
6/1/2026						
12/1/2026						
6/1/2027						
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12/1/2036						
6/1/2037						
12/1/2037						
6/1/2038						
12/1/2038						
6/1/2039						
12/1/2039						

	1,120,000		138,266	1,258,266	1,258,266	
Scale : MMD Aaa as of 01-02-2018 + NR/BQ credit + 125 bps for timing.						

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2027A

EXHIBIT 3-4

Recreation Center Pool, Locker Rooms & East Side Gym

SOURCES & USES	
SOURCES	
Par Amount of Bonds	13,680,000.00
Accrued Interest	
Premium	0.58

Total Sources	13,680,000.00
USES	
Deposit to Construction Account	13,453,000.00
Deposit to Reserve Account	4.58
Capitalized Interest Account	0.00
Municipal Bond Insurance	5.58
Underwriters' Discount (\$12.50 per bond)	171,000.00
Costs of Issuance	52,000.00
Accrued Interest	
Rounding Amount	4,000.00

Total Uses	13,680,000.00
ASSUMPTIONS	
Dated Date	11/1/2027
Delivery Date	11/1/2027
First Interest Date	6/1/2028
First Principal Date	6/1/2028
Last Principal Date	6/1/2046

Arbitrage Yield	4.00845%
TIC	4.16667%
AIC	4.21538%
Average Life	10.24 Years

FY 2018 PROJECTS FINANCED:	
Rec Cntr Pool, Locker Rooms & E Gym	\$ 13,453,000
Reserved	-
Reserved	-
Reserved	-

	\$ 13,453,000

DEBT SERVICE SCHEDULE							
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service		
6/1/2028	735,000	3.270%	308,366	1,043,366	1,043,366		
12/1/2028			252,297	252,297			
6/1/2029	540,000	3.410%	252,297	792,297	1,044,594		
12/1/2029			243,090	243,090			
6/1/2030	560,000	3.450%	243,090	803,090	1,046,180		
12/1/2030			233,430	233,430			
6/1/2031	580,000	3.490%	233,430	813,430	1,046,860		
12/1/2031			223,309	223,309			
6/1/2032	600,000	3.530%	223,309	823,309	1,046,618		
12/1/2032			212,719	212,719			
6/1/2033	620,000	3.570%	212,719	832,719	1,045,438		
12/1/2033			201,652	201,652			
6/1/2034	640,000	3.630%	201,652	841,652	1,043,304		
12/1/2034			190,036	190,036			
6/1/2035	665,000	3.690%	190,036	855,036	1,045,072		
12/1/2035			177,767	177,767			
6/1/2036	690,000	3.760%	177,767	867,767	1,045,533		
12/1/2036			164,795	164,795			
6/1/2037	715,000	3.830%	164,795	879,795	1,044,589		
12/1/2037			151,102	151,102			
6/1/2038	740,000	3.890%	151,102	891,102	1,042,205		
12/1/2038			136,709	136,709			
6/1/2039	770,000	3.950%	136,709	906,709	1,043,419		
12/1/2039			121,502	121,502			
6/1/2040	800,000	4.030%	121,502	921,502	1,043,004		
12/1/2040			105,382	105,382			
6/1/2041	835,000	4.100%	105,382	940,382	1,045,764		
12/1/2041			88,264	88,264			
6/1/2042	870,000	4.150%	88,264	958,264	1,046,529		
12/1/2042			70,212	70,212			
6/1/2043	905,000	4.190%	70,212	975,212	1,045,424		
12/1/2043			51,252	51,252			
6/1/2044	940,000	4.220%	51,252	991,252	1,042,504		
12/1/2044			31,418	31,418			
6/1/2045	980,000	4.250%	31,418	1,011,418	1,042,836		
12/1/2045			10,593	10,593			
6/1/2046	495,000	4.280%	10,593	505,593	516,186		
12/1/2046							
6/1/2047							
12/1/2047							

			13,680,000	5,639,419	19,319,419	19,319,419	
Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ) + 150 bps for timing.							

City of Carroll, Iowa
Projection of G.O. Debt Capacity

EXHIBIT 3-5

2027 Rec Center

Updated: 25-Jan-18

Valuation Growth & Debt Limit Assumptions	
Legal Debt Limit	5.00%
Effective Limit	4.00%

\$3.8 M Str Mnt Gar Rec Pool**
 Library Fire Truck Rec Adn**

Beginning of Fiscal Year	Actual Valuation	Historical Valuation Growth	Gross Debt Limit	Effective Debt Limit	DEBT ISSUES SUBJECT TO DEBT LIMIT *			Proposed GO Bonds 2018B	Proposed GO Bonds 2019A	Proposed GO Bonds 2023A	Reserved	TOTAL G.O. DEBT OUTST'NDG	Available Effective Capacity	Percent /Debt Gross Debt Limit	Beginning of Fiscal Year
					G.O. - TAXES -	G.O. - TIF -	Sales Tax Bonds								
2011 - 2012	632,429,951	1.9%	31,621,498	25,297,198	4,235,000	945,000	1,650,000					6,830,000	18,467,198	21.60%	2011
2012 - 2013	648,166,368	2.5%	32,408,318	25,926,655	3,520,000	655,000	1,110,000					5,285,000	20,641,655	16.31%	2012
2013 - 2014	654,646,146	1.0%	32,732,307	26,185,846	3,400,000	455,000	560,000					4,415,000	21,770,846	13.49%	2013
2014 - 2015	752,235,898	14.9%	37,611,795	30,089,436	3,750,000	55,000						3,805,000	26,284,436	10.12%	2014
2015 - 2016	757,631,838	0.7%	37,881,592	30,305,274	3,630,000							3,630,000	26,675,274	9.58%	2015
2016 - 2017	775,612,596	2.4%	38,780,630	31,024,504	5,105,000							5,105,000	25,919,504	13.16%	2016
2017 - 2018	781,063,284	0.7%	39,053,164	31,242,531	4,090,000							4,090,000	27,152,531	10.47%	2017
2018 - 2019	846,719,429	8.4%	42,335,971	33,868,777	3,045,000			4,480,000				7,525,000	26,343,777	17.77%	2018
2019 - 2020	850,584,226	0.5%	42,529,211	34,023,369	2,515,000			4,165,000	1,120,000			7,800,000	26,223,369	18.34%	2019
2020 - 2021	854,468,347	0.5%	42,723,417	34,178,734	1,975,000			3,915,000	970,000			6,860,000	27,318,734	16.06%	2020
2021 - 2022	858,371,889	0.5%	42,918,594	34,334,876	1,430,000			3,675,000	815,000			5,920,000	28,414,876	13.79%	2021
2022 - 2023	862,294,948	0.5%	43,114,747	34,491,798	865,000			3,425,000	660,000			4,950,000	29,541,798	11.48%	2022
2023 - 2024	866,237,622	0.5%	43,311,881	34,649,505	295,000			3,160,000	525,000			3,980,000	30,669,505	9.19%	2023
2024 - 2025	870,200,010	0.5%	43,510,001	34,808,000				2,700,000	295,000			2,995,000	31,813,000	6.88%	2024
2025 - 2026	874,182,210	0.5%	43,709,111	34,967,288				2,005,000				2,005,000	32,962,288	4.59%	2025
2026 - 2027	874,182,210		43,709,111	34,967,288				985,000				985,000	33,982,288	2.25%	2026
2027 - 2028	874,182,210		43,709,111	34,967,288						13,680,000		13,680,000	21,287,288	31.30%	2027
2028 - 2029	874,182,210		43,709,111	34,967,288						12,945,000		12,945,000	22,022,288	29.62%	2028
2029 - 2030	874,182,210		43,709,111	34,967,288						12,405,000		12,405,000	22,562,288	28.38%	2029
2030 - 2031	874,182,210		43,709,111	34,967,288						11,845,000		11,845,000	23,122,288	27.10%	2030
2031 - 2032	874,182,210		43,709,111	34,967,288						11,265,000		11,265,000	23,702,288	25.77%	2031
2032 - 2033	874,182,210		43,709,111	34,967,288						10,665,000		10,665,000	24,302,288	24.40%	2032
2033 - 2034	874,182,210		43,709,111	34,967,288						10,045,000		10,045,000	24,922,288	22.98%	2033
2034 - 2035	874,182,210		43,709,111	34,967,288						9,405,000		9,405,000	25,562,288	21.52%	2034
2035 - 2036	874,182,210		43,709,111	34,967,288						8,740,000		8,740,000	26,227,288	20.00%	2035
2036 - 2037	874,182,210		43,709,111	34,967,288						8,050,000		8,050,000	26,917,288	18.42%	2036
2037 - 2038	874,182,210		43,709,111	34,967,288						7,335,000		7,335,000	27,632,288	16.78%	2037
2038 - 2039	874,182,210		43,709,111	34,967,288						6,595,000		6,595,000	28,372,288	15.09%	2038
2039 - 2040	874,182,210		43,709,111	34,967,288						5,825,000		5,825,000	29,142,288	13.33%	2039

* - Represents G.O. principal outstanding as of the BEGINNING of the fiscal year.

** - Project is subject to voter approval.



Scenario 4: Assumes 2021 Rec Center Bonds

- 2018B Bonds – Library & FY19 CIP
- 2019A Bonds – Street Maintenance Building & Fire Truck
- 2021A Bonds - Rec Center Pool & Locker Room

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2018B

EXHIBIT 4-2

Library (20 Year Bonds) & FY 2019 CIP

SOURCES & USES	
SOURCES	
Par Amount of Notes	4,480,000.00
Cash on Hand	45,000.00
Premium	
<hr/>	
Total Sources	4,525,000.00
USES	
Deposit to Construction Account	4,435,000.00
Deposit to Reserve Account	
Capitalized Interest Account	(0.00)
Municipal Bond Insurance	0.00
Underwriters' Discount (\$10.00 per bond)	44,800.00
Costs of Issuance	45,000.00
Accrued Interest	
Rounding Amount	200.00
<hr/>	
Total Uses	4,525,000.00
ASSUMPTIONS	
Dated Date	10/31/2018
Delivery Date	10/31/2018
First Interest Date	6/1/2019
First Principal Date	6/1/2019
Last Principal Date	6/1/2038
Yield Calculations:	
Arbitrage Yield	3.23558%
TIC	3.37523%
AIC	3.51784%
Average Life	8.78 Years
PROJECTS FINANCED:	
Library	\$ 3,765,000
Youth Complex Lighting	375,000
Pickleball Courts	175,000
Trails	120,000
	<hr/>
	\$ 4,435,000

DEBT SERVICE SCHEDULE						
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service	
<hr/>						
0.6	6/1/2019	310,000	2.520%	79,675	389,675	
	12/1/2019			64,063	64,063	
1.6	6/1/2020	510,000	2.660%	64,063	574,063	
	12/1/2020			57,280	57,280	
2.6	6/1/2021	505,000	2.700%	57,280	562,280	
	12/1/2021			50,463	50,463	
3.6	6/1/2022	110,000	2.740%	50,463	160,463	
	12/1/2022			48,956	48,956	
4.6	6/1/2023	130,000	2.780%	48,956	178,956	
	12/1/2023			47,149	47,149	
5.6	6/1/2024	135,000	2.820%	47,149	182,149	
	12/1/2024			45,245	45,245	
6.6	6/1/2025	180,000	2.880%	45,245	225,245	
	12/1/2025			42,653	42,653	
7.6	6/1/2026	215,000	2.940%	42,653	257,653	
	12/1/2026			39,493	39,493	
8.6	6/1/2027	225,000	3.010%	39,493	264,493	
	12/1/2027			36,107	36,107	
9.6	6/1/2028	195,000	3.080%	36,107	231,107	
	12/1/2028			33,104	33,104	
10.6	6/1/2029	200,000	3.140%	33,104	233,104	
	12/1/2029			29,964	29,964	
11.6	6/1/2030	210,000	3.200%	29,964	239,964	
	12/1/2030			26,604	26,604	
12.6	6/1/2031	220,000	3.280%	26,604	246,604	
	12/1/2031			22,996	22,996	
13.6	6/1/2032	225,000	3.350%	22,996	247,996	
	12/1/2032			19,227	19,227	
14.6	6/1/2033	235,000	3.400%	19,227	254,227	
	12/1/2033			15,232	15,232	
15.6	6/1/2034	240,000	3.440%	15,232	255,232	
	12/1/2034			11,104	11,104	
16.6	6/1/2035	245,000	3.470%	11,104	256,104	
	12/1/2035			6,853	6,853	
17.6	6/1/2036	250,000	3.500%	6,853	256,853	
	12/1/2036			2,478	2,478	
18.6	6/1/2037	70,000	3.530%	2,478	72,478	
	12/1/2037			1,243	1,243	
19.6	6/1/2038	70,000	3.550%	1,243	71,243	
	12/1/2038					
<hr/>						
		4,480,000		1,280,096	5,760,096	
					5,760,096	
Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ) + 75 bps for timing.						

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2021A

EXHIBIT 4-4

Recreation Center Pool & Locker Rooms

SOURCES & USES	
SOURCES	
Par Amount of Bonds	7,640,000.00
Accrued Interest	
Premium	
Total Sources	7,640,000.00
USES	
Deposit to Construction Account	7,491,000.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount (\$12.50 per bond)	95,500.00
Costs of Issuance	52,000.00
Accrued Interest	
Rounding Amount	1,500.00
Total Uses	7,640,000.00
ASSUMPTIONS	
Dated Date	5/1/2021
Delivery Date	5/1/2021
First Interest Date	12/1/2021
First Principal Date	6/1/2022
Last Principal Date	6/1/2040

DEBT SERVICE SCHEDULE					
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
12/1/2021			176,230	176,230	0
1.08 6/1/2022	0	3.270%	151,055	151,055	327,285
12/1/2022			151,055	151,055	
2.08 6/1/2023	0	3.410%	151,055	151,055	302,109
12/1/2023			151,055	151,055	
3.08 6/1/2024	100,000	3.450%	151,055	251,055	402,109
12/1/2024			149,330	149,330	
4.08 6/1/2025	275,000	3.490%	149,330	424,330	573,659
12/1/2025			144,531	144,531	
5.08 6/1/2026	370,000	3.530%	144,531	514,531	659,062
12/1/2026			138,000	138,000	
6.08 6/1/2027	380,000	3.570%	138,000	518,000	656,001
12/1/2027			131,217	131,217	
7.08 6/1/2028	395,000	3.630%	131,217	526,217	657,435
12/1/2028			124,048	124,048	
8.08 6/1/2029	410,000	3.690%	124,048	534,048	658,096
12/1/2029			116,484	116,484	
9.08 6/1/2030	425,000	3.760%	116,484	541,484	657,967
12/1/2030			108,494	108,494	
10.08 6/1/2031	440,000	3.830%	108,494	548,494	656,987
12/1/2031			100,068	100,068	
11.08 6/1/2032	455,000	3.890%	100,068	555,068	655,135
12/1/2032			91,218	91,218	
12.08 6/1/2033	475,000	3.950%	91,218	566,218	657,436
12/1/2033			81,837	81,837	
13.08 6/1/2034	495,000	4.030%	81,837	576,837	658,673
12/1/2034			71,862	71,862	
14.08 6/1/2035	515,000	4.100%	71,862	586,862	658,725
12/1/2035			61,305	61,305	
15.08 6/1/2036	535,000	4.150%	61,305	596,305	657,610
12/1/2036			50,204	50,204	
16.08 6/1/2037	555,000	4.190%	50,204	605,204	655,407
12/1/2037			38,576	38,576	
17.08 6/1/2038	580,000	4.220%	38,576	618,576	657,153
12/1/2038			26,338	26,338	
18.08 6/1/2039	605,000	4.250%	26,338	631,338	657,677
12/1/2039			13,482	13,482	
19.08 6/1/2040	630,000	4.280%	13,482	643,482	656,964
12/1/2040					
20.08 6/1/2041					
			7,640,000	3,825,486	11,465,486
				11,465,486	11,465,486

FY 2018 PROJECTS FINANCED:	
Rec Cntr Pool & Locker Rooms	\$ 7,491,000
Reserved	-
Reserved	-
Reserved	-
	\$ 7,491,000

Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ)
+ 150 bps for timing.

City of Carroll, Iowa
Projection of G.O. Debt Capacity

EXHIBIT 4-5

Assumes 20 Year Bonds
 2021 Rec Center Projects (No East Gym)

Updated: 2-Feb-18

Valuation Growth & Debt Limit Assumptions	
Legal Debt Limit	5.00%
Effective Limit	4.00%

\$3.8 M Str Mnt Gar Rec Pool**
 Library Fire Truck Rec Adn**

Beginning of Fiscal Year	Actual Valuation	Historical Valuation Growth	Gross Debt Limit	Effective Debt Limit	DEBT ISSUES SUBJECT TO DEBT LIMIT *			Proposed GO Bonds 2018B	Proposed GO Bonds 2019A	Proposed GO Bonds 2021A	Reserved	TOTAL G.O. DEBT OUTST'NDG	Available Effective Capacity	Percent /Debt Gross Debt Limit	Beginning of Fiscal Year
					G.O. - TAXES -	G.O. - TIF -	Sales Tax Bonds								
2011 - 2012	632,429,951	1.9%	31,621,498	25,297,198	4,235,000	945,000	1,650,000					6,830,000	18,467,198	21.60%	2011
2012 - 2013	648,166,368	2.5%	32,408,318	25,926,655	3,520,000	655,000	1,110,000					5,285,000	20,641,655	16.31%	2012
2013 - 2014	654,646,146	1.0%	32,732,307	26,185,846	3,400,000	455,000	560,000					4,415,000	21,770,846	13.49%	2013
2014 - 2015	752,235,898	14.9%	37,611,795	30,089,436	3,750,000	55,000						3,805,000	26,284,436	10.12%	2014
2015 - 2016	757,631,838	0.7%	37,881,592	30,305,274	3,630,000							3,630,000	26,675,274	9.58%	2015
2016 - 2017	775,612,596	2.4%	38,780,630	31,024,504	5,105,000							5,105,000	25,919,504	13.16%	2016
2017 - 2018	781,063,284	0.7%	39,053,164	31,242,531	4,090,000							4,090,000	27,152,531	10.47%	2017
2018 - 2019	846,719,429	8.4%	42,335,971	33,868,777	3,045,000		4,480,000					7,525,000	26,343,777	17.77%	2018
2019 - 2020	850,584,226	0.5%	42,529,211	34,023,369	2,515,000		4,170,000	1,120,000				7,805,000	26,218,369	18.35%	2019
2020 - 2021	854,468,347	0.5%	42,723,417	34,178,734	1,975,000		3,660,000	970,000	7,640,000			14,245,000	19,933,734	33.34%	2020
2021 - 2022	858,371,889	0.5%	42,918,594	34,334,876	1,430,000		3,155,000	815,000	7,640,000			13,040,000	21,294,876	30.38%	2021
2022 - 2023	862,294,948	0.5%	43,114,747	34,491,798	865,000		3,045,000	660,000	7,640,000			12,210,000	22,281,798	28.32%	2022
2023 - 2024	866,237,622	0.5%	43,311,881	34,649,505	295,000		2,915,000	525,000	7,640,000			11,375,000	23,274,505	26.26%	2023
2024 - 2025	870,200,010	0.5%	43,510,001	34,808,000			2,780,000	295,000	7,540,000			10,615,000	24,193,000	24.40%	2024
2025 - 2026	874,182,210	0.5%	43,709,111	34,967,288			2,600,000		7,265,000			9,865,000	25,102,288	22.57%	2025
2026 - 2027	874,182,210		43,709,111	34,967,288			2,385,000		6,895,000			9,280,000	25,687,288	21.23%	2026
2027 - 2028	874,182,210		43,709,111	34,967,288			2,160,000		6,515,000			8,675,000	26,292,288	19.85%	2027
2028 - 2029	874,182,210		43,709,111	34,967,288			1,965,000		6,120,000			8,085,000	26,882,288	18.50%	2028
2029 - 2030	874,182,210		43,709,111	34,967,288			1,765,000		5,710,000			7,475,000	27,492,288	17.10%	2029
2030 - 2031	874,182,210		43,709,111	34,967,288			1,555,000		5,285,000			6,840,000	28,127,288	15.65%	2030
2031 - 2032	874,182,210		43,709,111	34,967,288			1,335,000		4,845,000			6,180,000	28,787,288	14.14%	2031
2032 - 2033	874,182,210		43,709,111	34,967,288			1,110,000		4,390,000			5,500,000	29,467,288	12.58%	2032
2033 - 2034	874,182,210		43,709,111	34,967,288			875,000		3,915,000			4,790,000	30,177,288	10.96%	2033
2034 - 2035	874,182,210		43,709,111	34,967,288			635,000		3,420,000			4,055,000	30,912,288	9.28%	2034
2035 - 2036	874,182,210		43,709,111	34,967,288			390,000		2,905,000			3,295,000	31,672,288	7.54%	2035
2036 - 2037	874,182,210		43,709,111	34,967,288			140,000		2,370,000			2,510,000	32,457,288	5.74%	2036
2037 - 2038	874,182,210		43,709,111	34,967,288			70,000		1,815,000			1,885,000	33,082,288	4.31%	2037
2038 - 2039	874,182,210		43,709,111	34,967,288					1,235,000			1,235,000	33,732,288	2.83%	2038
2039 - 2040	874,182,210		43,709,111	34,967,288					630,000			630,000	34,337,288	1.44%	2039
2040 - 2041	874,182,210		43,709,111	34,967,288									34,967,288		2040
2041 - 2042	874,182,210		43,709,111	34,967,288									34,967,288		2041
2042 - 2043	874,182,210		43,709,111	34,967,288									34,967,288		2042
2043 - 2044	874,182,210		43,709,111	34,967,288									34,967,288		2043

* - Represents G.O. principal outstanding as of the BEGINNING of the fiscal year.

** - Project is subject to voter approval.



Scenario 4a: Assumes 2021 Rec Center Bonds

- 2018B Bonds – Library & FY19 CIP
- 2019A Bonds – Street Maintenance Building & Fire Truck
- 2021A Bonds – Rec Center Pool, Locker Room & East Gym Improvements

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2018B

EXHIBIT 4a-2

Library (20 Year Bonds) & FY 2019 CIP

SOURCES & USES	
SOURCES	
Par Amount of Notes	4,480,000.00
Cash on Hand	45,000.00
Premium	
<hr/>	
Total Sources	4,525,000.00
USES	
Deposit to Construction Account	4,435,000.00
Deposit to Reserve Account	
Capitalized Interest Account	(0.00)
Municipal Bond Insurance	0.00
Underwriters' Discount (\$10.00 per bond)	44,800.00
Costs of Issuance	45,000.00
Accrued Interest	
Rounding Amount	200.00
<hr/>	
Total Uses	4,525,000.00
ASSUMPTIONS	
Dated Date	10/31/2018
Delivery Date	10/31/2018
First Interest Date	6/1/2019
First Principal Date	6/1/2019
Last Principal Date	6/1/2038
Yield Calculations:	
Arbitrage Yield	3.23558%
TIC	3.37523%
AIC	3.51784%
Average Life	8.78 Years
PROJECTS FINANCED:	
Library	\$ 3,765,000
Youth Complex Lighting	375,000
Pickleball Courts	175,000
Trails	120,000
	<hr/>
	\$ 4,435,000

DEBT SERVICE SCHEDULE						
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service	
<hr/>						
0.6	6/1/2019	310,000	2.520%	79,675	389,675	389,675
	12/1/2019			64,063	64,063	
1.6	6/1/2020	510,000	2.660%	64,063	574,063	638,127
	12/1/2020			57,280	57,280	
2.6	6/1/2021	505,000	2.700%	57,280	562,280	619,561
	12/1/2021			50,463	50,463	
3.6	6/1/2022	110,000	2.740%	50,463	160,463	210,926
	12/1/2022			48,956	48,956	
4.6	6/1/2023	130,000	2.780%	48,956	178,956	227,912
	12/1/2023			47,149	47,149	
5.6	6/1/2024	135,000	2.820%	47,149	182,149	229,298
	12/1/2024			45,245	45,245	
6.6	6/1/2025	180,000	2.880%	45,245	225,245	270,491
	12/1/2025			42,653	42,653	
7.6	6/1/2026	215,000	2.940%	42,653	257,653	300,307
	12/1/2026			39,493	39,493	
8.6	6/1/2027	225,000	3.010%	39,493	264,493	303,986
	12/1/2027			36,107	36,107	
9.6	6/1/2028	195,000	3.080%	36,107	231,107	267,213
	12/1/2028			33,104	33,104	
10.6	6/1/2029	200,000	3.140%	33,104	233,104	266,207
	12/1/2029			29,964	29,964	
11.6	6/1/2030	210,000	3.200%	29,964	239,964	269,927
	12/1/2030			26,604	26,604	
12.6	6/1/2031	220,000	3.280%	26,604	246,604	273,207
	12/1/2031			22,996	22,996	
13.6	6/1/2032	225,000	3.350%	22,996	247,996	270,991
	12/1/2032			19,227	19,227	
14.6	6/1/2033	235,000	3.400%	19,227	254,227	273,454
	12/1/2033			15,232	15,232	
15.6	6/1/2034	240,000	3.440%	15,232	255,232	270,464
	12/1/2034			11,104	11,104	
16.6	6/1/2035	245,000	3.470%	11,104	256,104	267,208
	12/1/2035			6,853	6,853	
17.6	6/1/2036	250,000	3.500%	6,853	256,853	263,706
	12/1/2036			2,478	2,478	
18.6	6/1/2037	70,000	3.530%	2,478	72,478	74,956
	12/1/2037			1,243	1,243	
19.6	6/1/2038	70,000	3.550%	1,243	71,243	72,485
	12/1/2038					
<hr/>				4,480,000	1,280,096	5,760,096
<hr/>						5,760,096
Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ) + 75 bps for timing.						

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2021A

EXHIBIT 4a-4

Recreation Center Pool, Locker Rooms & East Side Gym

SOURCES & USES	
SOURCES	
Par Amount of Bonds	9,730,000.00
Accrued Interest	
Premium	
Total Sources	9,730,000.00
USES	
Deposit to Construction Account	9,553,000.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount (\$12.50 per bond)	121,625.00
Costs of Issuance	52,000.00
Accrued Interest	
Rounding Amount	3,375.00
Total Uses	9,730,000.00
ASSUMPTIONS	
Dated Date	5/1/2021
Delivery Date	5/1/2021
First Interest Date	12/1/2021
First Principal Date	6/1/2022
Last Principal Date	6/1/2040

Arbitrage Yield	4.03674%
TIC	4.16949%
AIC	4.22693%
Average Life	12.45 Years

FY 2018 PROJECTS FINANCED:	
Rec Cntr Pool, Locker Rooms & E Gym	\$ 9,553,000
Reserved	-
Reserved	-
Reserved	-
	\$ 9,553,000

DEBT SERVICE SCHEDULE					
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
12/1/2021			224,739	224,739	0
1.08 6/1/2022	0	3.270%	192,634	192,634	417,373
12/1/2022			192,634	192,634	
2.08 6/1/2023	0	3.410%	192,634	192,634	385,268
12/1/2023			192,634	192,634	
3.08 6/1/2024	100,000	3.450%	192,634	292,634	485,268
12/1/2024			190,909	190,909	
4.08 6/1/2025	275,000	3.490%	190,909	465,909	656,818
12/1/2025			186,110	186,110	
5.08 6/1/2026	475,000	3.530%	186,110	661,110	847,220
12/1/2026			177,726	177,726	
6.08 6/1/2027	490,000	3.570%	177,726	667,726	845,453
12/1/2027			168,980	168,980	
7.08 6/1/2028	510,000	3.630%	168,980	678,980	847,960
12/1/2028			159,723	159,723	
8.08 6/1/2029	530,000	3.690%	159,723	689,723	849,447
12/1/2029			149,945	149,945	
9.08 6/1/2030	545,000	3.760%	149,945	694,945	844,890
12/1/2030			139,699	139,699	
10.08 6/1/2031	565,000	3.830%	139,699	704,699	844,398
12/1/2031			128,879	128,879	
11.08 6/1/2032	590,000	3.890%	128,879	718,879	847,758
12/1/2032			117,404	117,404	
12.08 6/1/2033	610,000	3.950%	117,404	727,404	844,807
12/1/2033			105,356	105,356	
13.08 6/1/2034	635,000	4.030%	105,356	740,356	845,712
12/1/2034			92,561	92,561	
14.08 6/1/2035	660,000	4.100%	92,561	752,561	845,122
12/1/2035			79,031	79,031	
15.08 6/1/2036	690,000	4.150%	79,031	769,031	848,062
12/1/2036			64,713	64,713	
16.08 6/1/2037	715,000	4.190%	64,713	779,713	844,427
12/1/2037			49,734	49,734	
17.08 6/1/2038	750,000	4.220%	49,734	799,734	849,468
12/1/2038			33,909	33,909	
18.08 6/1/2039	780,000	4.250%	33,909	813,909	847,818
12/1/2039			17,334	17,334	
19.08 6/1/2040	810,000	4.280%	17,334	827,334	844,668
12/1/2040					
20.08 6/1/2041					
	9,730,000		4,911,932	14,641,932	14,641,932

Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ)
+ 150 bps for timing.

City of Carroll, Iowa
Projection of G.O. Debt Capacity

EXHIBIT 4a-5

Assumes 20 Year Bonds
 2021 Rec Center Projects

Updated: 26-Jan-18

Valuation Growth & Debt Limit Assumptions	
Legal Debt Limit	5.00%
Effective Limit	4.00%

\$3.8 M Str Mnt Gar Rec Pool**
 Library Fire Truck Rec Adn**

Beginning of Fiscal Year	Actual Valuation	Historical Valuation Growth	Gross Debt Limit	Effective Debt Limit	DEBT ISSUES SUBJECT TO DEBT LIMIT *			Proposed GO Bonds 2018B	Proposed GO Bonds 2019A	Proposed GO Bonds 2021A	Reserved	TOTAL G.O. DEBT OUTST'NDG	Available Effective Capacity	Percent /Debt Gross Debt Limit	Beginning of Fiscal Year
					G.O. - TAXES -	G.O. - TIF -	Sales Tax Bonds								
2011 - 2012	632,429,951	1.9%	31,621,498	25,297,198	4,235,000	945,000	1,650,000					6,830,000	18,467,198	21.60%	2011
2012 - 2013	648,166,368	2.5%	32,408,318	25,926,655	3,520,000	655,000	1,110,000					5,285,000	20,641,655	16.31%	2012
2013 - 2014	654,646,146	1.0%	32,732,307	26,185,846	3,400,000	455,000	560,000					4,415,000	21,770,846	13.49%	2013
2014 - 2015	752,235,898	14.9%	37,611,795	30,089,436	3,750,000	55,000						3,805,000	26,284,436	10.12%	2014
2015 - 2016	757,631,838	0.7%	37,881,592	30,305,274	3,630,000							3,630,000	26,675,274	9.58%	2015
2016 - 2017	775,612,596	2.4%	38,780,630	31,024,504	5,105,000							5,105,000	25,919,504	13.16%	2016
2017 - 2018	781,063,284	0.7%	39,053,164	31,242,531	4,090,000							4,090,000	27,152,531	10.47%	2017
2018 - 2019	846,719,429	8.4%	42,335,971	33,868,777	3,045,000		4,480,000					7,525,000	26,343,777	17.77%	2018
2019 - 2020	850,584,226	0.5%	42,529,211	34,023,369	2,515,000		4,170,000	1,120,000				7,805,000	26,218,369	18.35%	2019
2020 - 2021	854,468,347	0.5%	42,723,417	34,178,734	1,975,000		3,660,000	970,000	9,730,000			16,335,000	17,843,734	38.23%	2020
2021 - 2022	858,371,889	0.5%	42,918,594	34,334,876	1,430,000		3,155,000	815,000	9,730,000			15,130,000	19,204,876	35.25%	2021
2022 - 2023	862,294,948	0.5%	43,114,747	34,491,798	865,000		3,045,000	660,000	9,730,000			14,300,000	20,191,798	33.17%	2022
2023 - 2024	866,237,622	0.5%	43,311,881	34,649,505	295,000		2,915,000	525,000	9,730,000			13,465,000	21,184,505	31.09%	2023
2024 - 2025	870,200,010	0.5%	43,510,001	34,808,000			2,780,000	295,000	9,630,000			12,705,000	22,103,000	29.20%	2024
2025 - 2026	874,182,210	0.5%	43,709,111	34,967,288			2,600,000		9,355,000			11,955,000	23,012,288	27.35%	2025
2026 - 2027	874,182,210		43,709,111	34,967,288			2,385,000		8,880,000			11,265,000	23,702,288	25.77%	2026
2027 - 2028	874,182,210		43,709,111	34,967,288			2,160,000		8,390,000			10,550,000	24,417,288	24.14%	2027
2028 - 2029	874,182,210		43,709,111	34,967,288			1,965,000		7,880,000			9,845,000	25,122,288	22.52%	2028
2029 - 2030	874,182,210		43,709,111	34,967,288			1,765,000		7,350,000			9,115,000	25,852,288	20.85%	2029
2030 - 2031	874,182,210		43,709,111	34,967,288			1,555,000		6,805,000			8,360,000	26,607,288	19.13%	2030
2031 - 2032	874,182,210		43,709,111	34,967,288			1,335,000		6,240,000			7,575,000	27,392,288	17.33%	2031
2032 - 2033	874,182,210		43,709,111	34,967,288			1,110,000		5,650,000			6,760,000	28,207,288	15.47%	2032
2033 - 2034	874,182,210		43,709,111	34,967,288			875,000		5,040,000			5,915,000	29,052,288	13.53%	2033
2034 - 2035	874,182,210		43,709,111	34,967,288			635,000		4,405,000			5,040,000	29,927,288	11.53%	2034
2035 - 2036	874,182,210		43,709,111	34,967,288			390,000		3,745,000			4,135,000	30,832,288	9.46%	2035
2036 - 2037	874,182,210		43,709,111	34,967,288			140,000		3,055,000			3,195,000	31,772,288	7.31%	2036
2037 - 2038	874,182,210		43,709,111	34,967,288			70,000		2,340,000			2,410,000	32,557,288	5.51%	2037
2038 - 2039	874,182,210		43,709,111	34,967,288					1,590,000			1,590,000	33,377,288	3.64%	2038
2039 - 2040	874,182,210		43,709,111	34,967,288					810,000			810,000	34,157,288	1.85%	2039
2040 - 2041	874,182,210		43,709,111	34,967,288									34,967,288		2040
2041 - 2042	874,182,210		43,709,111	34,967,288									34,967,288		2041
2042 - 2043	874,182,210		43,709,111	34,967,288									34,967,288		2042
2043 - 2044	874,182,210		43,709,111	34,967,288									34,967,288		2043

* - Represents G.O. principal outstanding as of the BEGINNING of the fiscal year.

** - Project is subject to voter approval.



Scenario 5:

Assumes \$1.80 Max Tax Rate & 2021 Rec Center Bonds

- 2018B Bonds – Library & FY19 CIP
- 2019A Bonds – Street Maintenance Building & Fire Truck
- 2021A Bonds – Rec Center Pool & Locker Room

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2018B

EXHIBIT 5-2

Library (17 Year Bonds) & FY 2019 CIP

SOURCES & USES	
SOURCES	
Par Amount of Notes	4,480,000.00
Cash on Hand	45,000.00
Premium	
<hr/>	
Total Sources	4,525,000.00
USES	
Deposit to Construction Account	4,435,000.00
Deposit to Reserve Account	
Capitalized Interest Account	(0.00)
Municipal Bond Insurance	0.00
Underwriters' Discount (\$10.00 per bond)	44,800.00
Costs of Issuance	45,000.00
Accrued Interest	
Rounding Amount	200.00
<hr/>	
Total Uses	4,525,000.00
ASSUMPTIONS	
Dated Date	10/31/2018
Delivery Date	10/31/2018
First Interest Date	6/1/2019
First Principal Date	6/1/2019
Last Principal Date	6/1/2036
Yield Calculations:	
Arbitrage Yield	3.21246%
TIC	3.35796%
AIC	3.50657%
Average Life	8.35 Years

PROJECTS FINANCED:	
Library	\$ 3,765,000
Youth Complex Lighting	375,000
Pickleball Courts	175,000
Trails	120,000
	<hr/>
	\$ 4,435,000

DEBT SERVICE SCHEDULE						
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service	
<hr/>						
0.6	6/1/2019	310,000	2.520%	79,103	389,103	389,103
	12/1/2019			63,575	63,575	
1.6	6/1/2020	530,000	2.660%	63,575	593,575	657,151
	12/1/2020			56,526	56,526	
2.6	6/1/2021	525,000	2.700%	56,526	581,526	638,053
	12/1/2021			49,439	49,439	
3.6	6/1/2022	130,000	2.740%	49,439	179,439	228,878
	12/1/2022			47,658	47,658	
4.6	6/1/2023	175,000	2.780%	47,658	222,658	270,316
	12/1/2023			45,225	45,225	
5.6	6/1/2024	180,000	2.820%	45,225	225,225	270,451
	12/1/2024			42,687	42,687	
6.6	6/1/2025	185,000	2.880%	42,687	227,687	270,375
	12/1/2025			40,023	40,023	
7.6	6/1/2026	190,000	2.940%	40,023	230,023	270,047
	12/1/2026			37,230	37,230	
8.6	6/1/2027	195,000	3.010%	37,230	232,230	269,461
	12/1/2027			34,296	34,296	
9.6	6/1/2028	200,000	3.080%	34,296	234,296	268,591
	12/1/2028			31,216	31,216	
10.6	6/1/2029	205,000	3.140%	31,216	236,216	267,431
	12/1/2029			27,997	27,997	
11.6	6/1/2030	215,000	3.200%	27,997	242,997	270,994
	12/1/2030			24,557	24,557	
12.6	6/1/2031	220,000	3.280%	24,557	244,557	269,114
	12/1/2031			20,949	20,949	
13.6	6/1/2032	230,000	3.350%	20,949	250,949	271,898
	12/1/2032			17,097	17,097	
14.6	6/1/2033	235,000	3.400%	17,097	252,097	269,193
	12/1/2033			13,102	13,102	
15.6	6/1/2034	245,000	3.440%	13,102	258,102	271,203
	12/1/2034			8,888	8,888	
16.6	6/1/2035	250,000	3.470%	8,888	258,888	267,775
	12/1/2035			4,550	4,550	
17.6	6/1/2036	260,000	3.500%	4,550	264,550	269,100
	12/1/2036					
18.6	6/1/2037					
	12/1/2037					
19.6	6/1/2038					
	12/1/2038					
<hr/>				4,480,000	1,209,130	5,689,130
<hr/>						5,689,130

Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ)
+ 75 bps for timing.

City of Carroll, Iowa

Proposed General Obligation Bonds, Series 2019A

EXHIBIT 5-3

Street Maintenance Garage & Fire Truck

SOURCES & USES	
SOURCES	
Par Amount of Bonds	1,120,000.00
Accrued Interest	
Other Monies	

Total Sources	1,120,000.00
USES	
Deposit to Construction Account	1,075,000.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount (\$7.50 per bond)	8,400.00
Costs of Issuance	33,000.00
Accrued Interest	
Rounding Amount	3,600.00

Total Uses	1,120,000.00
ASSUMPTIONS	
Dated Date	9/1/2019
Delivery Date	9/1/2019
First Interest Date	6/1/2020
First Principal Date	6/1/2020
Last Principal Date	6/1/2025

Arbitrage Yield	3.36376%
TIC	3.58687%
AIC	4.48711%
Average Life	3.67 Years

PROJECTS FINANCED:	
Street Maintenance Garage	\$ 700,000
Fire Truck	375,000
Reserved	-
Reserved	-

	\$ 1,075,000

DEBT SERVICE SCHEDULE						
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service	

6/1/2020	150,000	3.120%	27,915	177,915	177,915	
12/1/2020			16,270	16,270		
6/1/2021	155,000	3.260%	16,270	171,270	187,540	
12/1/2021			13,744	13,744		
6/1/2022	155,000	3.300%	13,744	168,744	182,487	
12/1/2022			11,186	11,186		
6/1/2023	135,000	3.340%	11,186	146,186	157,372	
12/1/2023			8,932	8,932		
6/1/2024	230,000	3.380%	8,932	238,932	247,863	
12/1/2024			5,045	5,045		
6/1/2025	295,000	3.420%	5,045	300,045	305,089	
12/1/2025						
6/1/2026						
12/1/2026						
6/1/2027						
12/1/2027						
6/1/2028						
12/1/2028						
6/1/2029						
12/1/2029						
6/1/2030						
12/1/2030						
6/1/2031						
12/1/2031						
6/1/2032						
12/1/2032						
6/1/2033						
12/1/2033						
6/1/2034						
12/1/2034						
6/1/2035						
12/1/2035						
6/1/2036						
12/1/2036						
6/1/2037						
12/1/2037						
6/1/2038						
12/1/2038						
6/1/2039						
12/1/2039						

	1,120,000		138,266	1,258,266	1,258,266	

Scale : MMD Aaa as of 01-02-2018 + NR/BQ credit
+ 125 bps for timing.

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2021A

EXHIBIT 5-4

Recreation Center Pool & Locker Rooms

SOURCES & USES	
SOURCES	
Par Amount of Bonds	7,640,000.00
Accrued Interest	
Premium	
Total Sources	7,640,000.00
USES	
Deposit to Construction Account	7,491,000.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount (\$12.50 per bond)	95,500.00
Costs of Issuance	52,000.00
Accrued Interest	
Rounding Amount	1,500.00
Total Uses	7,640,000.00
ASSUMPTIONS	
Dated Date	5/1/2021
Delivery Date	5/1/2021
First Interest Date	12/1/2021
First Principal Date	6/1/2022
Last Principal Date	6/1/2038

DEBT SERVICE SCHEDULE					
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
12/1/2021			172,024	172,024	
1.08 6/1/2022	100,000	3.270%	147,450	247,450	419,474
12/1/2022			145,815	145,815	
2.08 6/1/2023	105,000	3.410%	145,815	250,815	396,629
12/1/2023			144,024	144,024	
3.08 6/1/2024	315,000	3.450%	144,024	459,024	603,049
12/1/2024			138,591	138,591	
4.08 6/1/2025	395,000	3.490%	138,591	533,591	672,181
12/1/2025			131,698	131,698	
5.08 6/1/2026	440,000	3.530%	131,698	571,698	703,396
12/1/2026			123,932	123,932	
6.08 6/1/2027	455,000	3.570%	123,932	578,932	702,864
12/1/2027			115,810	115,810	
7.08 6/1/2028	435,000	3.630%	115,810	550,810	666,620
12/1/2028			107,915	107,915	
8.08 6/1/2029	450,000	3.690%	107,915	557,915	665,830
12/1/2029			99,612	99,612	
9.08 6/1/2030	470,000	3.760%	99,612	569,612	669,225
12/1/2030			90,776	90,776	
10.08 6/1/2031	485,000	3.830%	90,776	575,776	666,553
12/1/2031			81,489	81,489	
11.08 6/1/2032	505,000	3.890%	81,489	586,489	667,977
12/1/2032			71,666	71,666	
12.08 6/1/2033	525,000	3.950%	71,666	596,666	668,333
12/1/2033			61,298	61,298	
13.08 6/1/2034	545,000	4.030%	61,298	606,298	667,595
12/1/2034			50,316	50,316	
14.08 6/1/2035	570,000	4.100%	50,316	620,316	670,632
12/1/2035			38,631	38,631	
15.08 6/1/2036	590,000	4.150%	38,631	628,631	667,262
12/1/2036			26,388	26,388	
16.08 6/1/2037	615,000	4.190%	26,388	641,388	667,777
12/1/2037			13,504	13,504	
17.08 6/1/2038	640,000	4.220%	13,504	653,504	667,008
12/1/2038					
18.08 6/1/2039					
12/1/2039					
19.08 6/1/2040					
12/1/2040					
20.08 6/1/2041					
			-----	-----	-----
			7,640,000	3,202,400	10,842,400
					10,842,400
Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ) + 150 bps for timing.					

FY 2018 PROJECTS FINANCED:	
Rec Cntr Pool & Locker Rooms	\$ 7,491,000
Reserved	-
Reserved	-
Reserved	-
	\$ 7,491,000

City of Carroll, Iowa
Projection of G.O. Debt Capacity

EXHIBIT 5-5

Assumes 20 Year Bonds
 2021 Rec Center Projects
 \$1.80 Maximum Tax Rate

Valuation Growth & Debt Limit Assumptions	
Legal Debt Limit	5.00%
Effective Limit	4.00%

Updated: 2-Feb-18

\$3.8 M Str Mnt Gar Rec Pool**
 Library Fire Truck Rec Adn**

Beginning of Fiscal Year	Actual Valuation	Historical Valuation Growth	Gross Debt Limit	Effective Debt Limit	DEBT ISSUES SUBJECT TO DEBT LIMIT *			Proposed GO Bonds 2018B	Proposed GO Bonds 2019A	Proposed GO Bonds 2021A	Reserved	TOTAL G.O. DEBT OUTST'NDG	Available Effective Capacity	Percent /Debt Gross Debt Limit	Beginning of Fiscal Year
					G.O. - TAXES -	G.O. - TIF -	Sales Tax Bonds								
2011 - 2012	632,429,951	1.9%	31,621,498	25,297,198	4,235,000	945,000	1,650,000					6,830,000	18,467,198	21.60%	2011
2012 - 2013	648,166,368	2.5%	32,408,318	25,926,655	3,520,000	655,000	1,110,000					5,285,000	20,641,655	16.31%	2012
2013 - 2014	654,646,146	1.0%	32,732,307	26,185,846	3,400,000	455,000	560,000					4,415,000	21,770,846	13.49%	2013
2014 - 2015	752,235,898	14.9%	37,611,795	30,089,436	3,750,000	55,000						3,805,000	26,284,436	10.12%	2014
2015 - 2016	757,631,838	0.7%	37,881,592	30,305,274	3,630,000							3,630,000	26,675,274	9.58%	2015
2016 - 2017	775,612,596	2.4%	38,780,630	31,024,504	5,105,000							5,105,000	25,919,504	13.16%	2016
2017 - 2018	781,063,284	0.7%	39,053,164	31,242,531	4,090,000							4,090,000	27,152,531	10.47%	2017
2018 - 2019	846,719,429	8.4%	42,335,971	33,868,777	3,045,000		4,480,000					7,525,000	26,343,777	17.77%	2018
2019 - 2020	850,584,226	0.5%	42,529,211	34,023,369	2,515,000		4,170,000	1,120,000				7,805,000	26,218,369	18.35%	2019
2020 - 2021	854,468,347	0.5%	42,723,417	34,178,734	1,975,000		3,640,000	970,000	7,640,000			14,225,000	19,953,734	33.30%	2020
2021 - 2022	858,371,889	0.5%	42,918,594	34,334,876	1,430,000		3,115,000	815,000	7,640,000			13,000,000	21,334,876	30.29%	2021
2022 - 2023	862,294,948	0.5%	43,114,747	34,491,798	865,000		2,985,000	660,000	7,540,000			12,050,000	22,441,798	27.95%	2022
2023 - 2024	866,237,622	0.5%	43,311,881	34,649,505	295,000		2,810,000	525,000	7,435,000			11,065,000	23,584,505	25.55%	2023
2024 - 2025	870,200,010	0.5%	43,510,001	34,808,000			2,630,000	295,000	7,120,000			10,045,000	24,763,000	23.09%	2024
2025 - 2026	874,182,210	0.5%	43,709,111	34,967,288			2,445,000		6,725,000			9,170,000	25,797,288	20.98%	2025
2026 - 2027	874,182,210		43,709,111	34,967,288			2,255,000		6,285,000			8,540,000	26,427,288	19.54%	2026
2027 - 2028	874,182,210		43,709,111	34,967,288			2,060,000		5,830,000			7,890,000	27,077,288	18.05%	2027
2028 - 2029	874,182,210		43,709,111	34,967,288			1,860,000		5,395,000			7,255,000	27,712,288	16.60%	2028
2029 - 2030	874,182,210		43,709,111	34,967,288			1,655,000		4,945,000			6,600,000	28,367,288	15.10%	2029
2030 - 2031	874,182,210		43,709,111	34,967,288			1,440,000		4,475,000			5,915,000	29,052,288	13.53%	2030
2031 - 2032	874,182,210		43,709,111	34,967,288			1,220,000		3,990,000			5,210,000	29,757,288	11.92%	2031
2032 - 2033	874,182,210		43,709,111	34,967,288			990,000		3,485,000			4,475,000	30,492,288	10.24%	2032
2033 - 2034	874,182,210		43,709,111	34,967,288			755,000		2,960,000			3,715,000	31,252,288	8.50%	2033
2034 - 2035	874,182,210		43,709,111	34,967,288			510,000		2,415,000			2,925,000	32,042,288	6.69%	2034
2035 - 2036	874,182,210		43,709,111	34,967,288			260,000		1,845,000			2,105,000	32,862,288	4.82%	2035
2036 - 2037	874,182,210		43,709,111	34,967,288					1,255,000			1,255,000	33,712,288	2.87%	2036
2037 - 2038	874,182,210		43,709,111	34,967,288					640,000			640,000	34,327,288	1.46%	2037
2038 - 2039	874,182,210		43,709,111	34,967,288									34,967,288		2038
2039 - 2040	874,182,210		43,709,111	34,967,288									34,967,288		2039
2040 - 2041	874,182,210		43,709,111	34,967,288									34,967,288		2040
2041 - 2042	874,182,210		43,709,111	34,967,288									34,967,288		2041
2042 - 2043	874,182,210		43,709,111	34,967,288									34,967,288		2042
2043 - 2044	874,182,210		43,709,111	34,967,288									34,967,288		2043

* - Represents G.O. principal outstanding as of the BEGINNING of the fiscal year.

** - Project is subject to voter approval.



Scenario 5a:

Assumes \$1.80 Max Tax Rate & 2021 Rec Center Bonds

- 2018B Bonds – Library & FY19 CIP
- 2019A Bonds – Street Maintenance Building & Fire Truck
- 2021A Bonds – Rec Center Pool, Locker Room & East Gym Improvements

Library (17 Year Bonds) & FY 2019 CIP

SOURCES & USES	
SOURCES	
Par Amount of Notes	4,480,000.00
Cash on Hand	45,000.00
Premium	
Total Sources	4,525,000.00
USES	
Deposit to Construction Account	4,435,000.00
Deposit to Reserve Account	
Capitalized Interest Account	(0.00)
Municipal Bond Insurance	0.00
Underwriters' Discount (\$10.00 per bond)	44,800.00
Costs of Issuance	45,000.00
Accrued Interest	
Rounding Amount	200.00
Total Uses	4,525,000.00
ASSUMPTIONS	
Dated Date	10/31/2018
Delivery Date	10/31/2018
First Interest Date	6/1/2019
First Principal Date	6/1/2019
Last Principal Date	6/1/2036
Yield Calculations:	
Arbitrage Yield	3.22356%
TIC	3.36575%
AIC	3.51094%
Average Life	8.58 Years

PROJECTS FINANCED:	
Library	\$ 3,765,000
Youth Complex Lighting	375,000
Pickleball Courts	175,000
Trails	120,000
Total	\$ 4,435,000

DEBT SERVICE SCHEDULE						
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service	
0.6	6/1/2019	310,000	2.520%	79,455	389,455	
	12/1/2019			63,876	63,876	
1.6	6/1/2020	530,000	2.660%	63,876	593,876	
	12/1/2020			56,827	56,827	
2.6	6/1/2021	525,000	2.700%	56,827	581,827	
	12/1/2021			49,739	49,739	
3.6	6/1/2022	100,000	2.740%	49,739	149,739	
	12/1/2022			48,369	48,369	
4.6	6/1/2023	130,000	2.780%	48,369	178,369	
	12/1/2023			46,562	46,562	
5.6	6/1/2024	135,000	2.820%	46,562	181,562	
	12/1/2024			44,659	44,659	
6.6	6/1/2025	180,000	2.880%	44,659	224,659	
	12/1/2025			42,067	42,067	
7.6	6/1/2026	200,000	2.940%	42,067	242,067	
	12/1/2026			39,127	39,127	
8.6	6/1/2027	205,000	3.010%	39,127	244,127	
	12/1/2027			36,041	36,041	
9.6	6/1/2028	210,000	3.080%	36,041	246,041	
	12/1/2028			32,807	32,807	
10.6	6/1/2029	220,000	3.140%	32,807	252,807	
	12/1/2029			29,353	29,353	
11.6	6/1/2030	225,000	3.200%	29,353	254,353	
	12/1/2030			25,753	25,753	
12.6	6/1/2031	230,000	3.280%	25,753	255,753	
	12/1/2031			21,981	21,981	
13.6	6/1/2032	240,000	3.350%	21,981	261,981	
	12/1/2032			17,961	17,961	
14.6	6/1/2033	245,000	3.400%	17,961	262,961	
	12/1/2033			13,796	13,796	
15.6	6/1/2034	255,000	3.440%	13,796	268,796	
	12/1/2034			9,410	9,410	
16.6	6/1/2035	265,000	3.470%	9,410	274,410	
	12/1/2035			4,813	4,813	
17.6	6/1/2036	275,000	3.500%	4,813	279,813	
	12/1/2036					
18.6	6/1/2037					
	12/1/2037					
19.6	6/1/2038					
	12/1/2038					
		4,480,000		1,245,735	5,725,735	
				5,725,735	5,725,735	

Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ)
+ 75 bps for timing.

City of Carroll, Iowa

Proposed G. O. Capital Loan Notes, Series 2021A

EXHIBIT 5a-4

Recreation Center Pool, Locker Rooms & East Side Gym

SOURCES & USES	
SOURCES	
Par Amount of Bonds	9,730,000.00
Accrued Interest	
Premium	
Total Sources	9,730,000.00
USES	
Deposit to Construction Account	9,553,000.00
Deposit to Reserve Account	
Capitalized Interest Account	0.00
Municipal Bond Insurance	
Underwriters' Discount (\$12.50 per bond)	121,625.00
Costs of Issuance	52,000.00
Accrued Interest	
Rounding Amount	3,375.00
Total Uses	9,730,000.00
ASSUMPTIONS	
Dated Date	5/1/2021
Delivery Date	5/1/2021
First Interest Date	12/1/2021
First Principal Date	6/1/2022
Last Principal Date	6/1/2038

Arbitrage Yield	3.96900%
TIC	4.11323%
AIC	4.17564%
Average Life	11.13 Years

FY 2018 PROJECTS FINANCED:	
Rec Cntr Pool, Locker Rooms & E Gym	\$ 9,553,000
Reserved	-
Reserved	-
Reserved	-
	\$ 9,553,000

DEBT SERVICE SCHEDULE					
Date	Principal	Coupon	Interest	Debt Service	Annual Debt Service
12/1/2021			220,940	220,940	0
1.08 6/1/2022	40,000	3.270%	189,377	229,377	450,316
12/1/2022			188,723	188,723	
2.08 6/1/2023	60,000	3.410%	188,723	248,723	437,446
12/1/2023			187,700	187,700	
3.08 6/1/2024	150,000	3.450%	187,700	337,700	525,400
12/1/2024			185,112	185,112	
4.08 6/1/2025	325,000	3.490%	185,112	510,112	695,225
12/1/2025			179,441	179,441	
5.08 6/1/2026	560,000	3.530%	179,441	739,441	918,882
12/1/2026			169,557	169,557	
6.08 6/1/2027	580,000	3.570%	169,557	749,557	919,114
12/1/2027			159,204	159,204	
7.08 6/1/2028	600,000	3.630%	159,204	759,204	918,408
12/1/2028			148,314	148,314	
8.08 6/1/2029	620,000	3.690%	148,314	768,314	916,628
12/1/2029			136,875	136,875	
9.08 6/1/2030	645,000	3.760%	136,875	781,875	918,750
12/1/2030			124,749	124,749	
10.08 6/1/2031	670,000	3.830%	124,749	794,749	919,498
12/1/2031			111,919	111,919	
11.08 6/1/2032	695,000	3.890%	111,919	806,919	918,837
12/1/2032			98,401	98,401	
12.08 6/1/2033	720,000	3.950%	98,401	818,401	916,802
12/1/2033			84,181	84,181	
13.08 6/1/2034	750,000	4.030%	84,181	834,181	918,362
12/1/2034			69,068	69,068	
14.08 6/1/2035	780,000	4.100%	69,068	849,068	918,137
12/1/2035			53,078	53,078	
15.08 6/1/2036	810,000	4.150%	53,078	863,078	916,157
12/1/2036			36,271	36,271	
16.08 6/1/2037	845,000	4.190%	36,271	881,271	917,542
12/1/2037			18,568	18,568	
17.08 6/1/2038	880,000	4.220%	18,568	898,568	917,136
12/1/2038					
18.08 6/1/2039					
12/1/2039					
19.08 6/1/2040					
12/1/2040					
20.08 6/1/2041					
	9,730,000		4,312,636	14,042,636	14,042,636

Scale : MMD Aaa as of 01-02-2018 + 35 bps for credit (Aa2/BQ)
+ 150 bps for timing.

City of Carroll, Iowa
Projection of G.O. Debt Capacity

EXHIBIT 5a-5

Assumes 20 Year Bonds
 2021 Rec Center Projects
 \$1.80 Maximum Tax Rate

Valuation Growth & Debt Limit Assumptions	
Legal Debt Limit	5.00%
Effective Limit	4.00%

\$3.8 M Library
 Str Mnt Gar Fire Truck
 East Gym**
 Rec Pool**
 Rec Adn**

Updated: 2-Feb-18

Beginning of Fiscal Year	Actual Valuation	Historical Valuation Growth	Gross Debt Limit	Effective Debt Limit	DEBT ISSUES SUBJECT TO DEBT LIMIT *			Proposed GO Bonds 2018B	Proposed GO Bonds 2019A	Proposed GO Bonds 2021A	Reserved	TOTAL G.O. DEBT OUTST'NDG	Available Effective Capacity	Percent /Debt Gross Debt Limit	Beginning of Fiscal Year
					G.O. - TAXES -	G.O. - TIF -	Sales Tax Bonds								
2011 - 2012	632,429,951	1.9%	31,621,498	25,297,198	4,235,000	945,000	1,650,000					6,830,000	18,467,198	21.60%	2011
2012 - 2013	648,166,368	2.5%	32,408,318	25,926,655	3,520,000	655,000	1,110,000					5,285,000	20,641,655	16.31%	2012
2013 - 2014	654,646,146	1.0%	32,732,307	26,185,846	3,400,000	455,000	560,000					4,415,000	21,770,846	13.49%	2013
2014 - 2015	752,235,898	14.9%	37,611,795	30,089,436	3,750,000	55,000						3,805,000	26,284,436	10.12%	2014
2015 - 2016	757,631,838	0.7%	37,881,592	30,305,274	3,630,000							3,630,000	26,675,274	9.58%	2015
2016 - 2017	775,612,596	2.4%	38,780,630	31,024,504	5,105,000							5,105,000	25,919,504	13.16%	2016
2017 - 2018	781,063,284	0.7%	39,053,164	31,242,531	4,090,000							4,090,000	27,152,531	10.47%	2017
2018 - 2019	846,719,429	8.4%	42,335,971	33,868,777	3,045,000		4,480,000					7,525,000	26,343,777	17.77%	2018
2019 - 2020	850,584,226	0.5%	42,529,211	34,023,369	2,515,000		4,170,000	1,120,000				7,805,000	26,218,369	18.35%	2019
2020 - 2021	854,468,347	0.5%	42,723,417	34,178,734	1,975,000		3,640,000	970,000	9,730,000			16,315,000	17,863,734	38.19%	2020
2021 - 2022	858,371,889	0.5%	42,918,594	34,334,876	1,430,000		3,115,000	815,000	9,730,000			15,090,000	19,244,876	35.16%	2021
2022 - 2023	862,294,948	0.5%	43,114,747	34,491,798	865,000		3,015,000	660,000	9,690,000			14,230,000	20,261,798	33.00%	2022
2023 - 2024	866,237,622	0.5%	43,311,881	34,649,505	295,000		2,885,000	525,000	9,630,000			13,335,000	21,314,505	30.79%	2023
2024 - 2025	870,200,010	0.5%	43,510,001	34,808,000			2,750,000	295,000	9,480,000			12,525,000	22,283,000	28.79%	2024
2025 - 2026	874,182,210	0.5%	43,709,111	34,967,288			2,570,000		9,155,000			11,725,000	23,242,288	26.83%	2025
2026 - 2027	874,182,210		43,709,111	34,967,288			2,370,000		8,595,000			10,965,000	24,002,288	25.09%	2026
2027 - 2028	874,182,210		43,709,111	34,967,288			2,165,000		8,015,000			10,180,000	24,787,288	23.29%	2027
2028 - 2029	874,182,210		43,709,111	34,967,288			1,955,000		7,415,000			9,370,000	25,597,288	21.44%	2028
2029 - 2030	874,182,210		43,709,111	34,967,288			1,735,000		6,795,000			8,530,000	26,437,288	19.52%	2029
2030 - 2031	874,182,210		43,709,111	34,967,288			1,510,000		6,150,000			7,660,000	27,307,288	17.52%	2030
2031 - 2032	874,182,210		43,709,111	34,967,288			1,280,000		5,480,000			6,760,000	28,207,288	15.47%	2031
2032 - 2033	874,182,210		43,709,111	34,967,288			1,040,000		4,785,000			5,825,000	29,142,288	13.33%	2032
2033 - 2034	874,182,210		43,709,111	34,967,288			795,000		4,065,000			4,860,000	30,107,288	11.12%	2033
2034 - 2035	874,182,210		43,709,111	34,967,288			540,000		3,315,000			3,855,000	31,112,288	8.82%	2034
2035 - 2036	874,182,210		43,709,111	34,967,288			275,000		2,535,000			2,810,000	32,157,288	6.43%	2035
2036 - 2037	874,182,210		43,709,111	34,967,288					1,725,000			1,725,000	33,242,288	3.95%	2036
2037 - 2038	874,182,210		43,709,111	34,967,288					880,000			880,000	34,087,288	2.01%	2037
2038 - 2039	874,182,210		43,709,111	34,967,288									34,967,288		2038
2039 - 2040	874,182,210		43,709,111	34,967,288									34,967,288		2039
2040 - 2041	874,182,210		43,709,111	34,967,288									34,967,288		2040
2041 - 2042	874,182,210		43,709,111	34,967,288									34,967,288		2041
2042 - 2043	874,182,210		43,709,111	34,967,288									34,967,288		2042
2043 - 2044	874,182,210		43,709,111	34,967,288									34,967,288		2043

* - Represents G.O. principal outstanding as of the BEGINNING of the fiscal year.

** - Project is subject to voter approval.

Projected future cost for City Building Projects

Including original estimate of probable costs

Rec Center

	Pool ¹	Locker Rooms ²	East Side Addition ³	All Rec Center Projects
FY 2015			\$ 1,536,600	
FY 2016	\$ 5,025,408	\$ 840,000	\$ 1,614,000	\$ 7,479,408
FY 2017	\$ 5,277,000	\$ 882,000	\$ 1,695,000	\$ 7,854,000
FY 2018	\$ 5,541,000	\$ 927,000	\$ 1,780,000	\$ 8,248,000
FY 2019	\$ 5,819,000	\$ 974,000	\$ 1,869,000	\$ 8,662,000
FY 2020	\$ 6,110,000	\$ 1,023,000	\$ 1,963,000	\$ 9,096,000
FY 2021	\$ 6,416,000	\$ 1,075,000	\$ 2,062,000	\$ 9,553,000
FY 2022	\$ 6,737,000	\$ 1,129,000	\$ 2,166,000	\$ 10,032,000
FY 2023	\$ 7,074,000	\$ 1,186,000	\$ 2,275,000	\$ 10,535,000
FY 2024	\$ 7,428,000	\$ 1,246,000	\$ 2,389,000	\$ 11,063,000
FY 2025	\$ 7,800,000	\$ 1,309,000	\$ 2,509,000	\$ 11,618,000
FY 2026	\$ 8,190,000	\$ 1,375,000	\$ 2,635,000	\$ 12,200,000
FY 2027	\$ 8,600,000	\$ 1,444,000	\$ 2,767,000	\$ 12,811,000
FY 2028	\$ 9,030,000	\$ 1,517,000	\$ 2,906,000	\$ 13,453,000
FY 2029	\$ 9,482,000	\$ 1,593,000	\$ 3,052,000	\$ 14,127,000

Notes:

¹ Based on February 2016 cost estimate from Waters Edge

² Based on Verbal estimate in February 2016 from FEH

³ Based on July 2015 cost estimate from FEH

Future years are based on a 5% annual construction inflation.

Street Maintenance Building

	Street Maintenance	Aggregate Bins	Cold Storage	Full Street Maint. Project
FY 2016	\$ 3,924,957	\$ 145,000	\$ 216,000	\$ 4,285,957
FY 2017	\$ 4,122,000	\$ 153,000	\$ 227,000	\$ 4,502,000
FY 2018	\$ 4,329,000	\$ 161,000	\$ 239,000	\$ 4,729,000
FY 2019	\$ 4,546,000	\$ 170,000	\$ 251,000	\$ 4,967,000
FY 2020	\$ 4,774,000	\$ 179,000	\$ 264,000	\$ 5,217,000
FY 2021	\$ 5,013,000	\$ 188,000	\$ 278,000	\$ 5,479,000
FY 2022	\$ 5,264,000	\$ 198,000	\$ 292,000	\$ 5,754,000

Notes: Based on May 2016 cost estimate from FEH. Future years are based on a 5% annual construction inflation.