# **CEMATRIX CORPORATION**

**Management's Discussion and Analysis**For Three and Six Months Ended June 30, 2017

Date Completed: August 2, 2017

# **CEMATRIX CORPORATION**

## www.cematrix.com

# Form 51-102F1 - Management's Discussion & Analysis For the Three and Six Months Ended June 30, 2017

The following is the management's discussion and analysis ("MD&A") of CEMATRIX Corporation ("CEMATRIX" or the "Company") for the three and six months ended June 30, 2017. This MD&A should be read in conjunction with the unaudited interim consolidated financial statements of the Company for the three and six months ended June 30, 2017 (the "Interim Consolidated Financial Statements") and the related notes thereto and the audited consolidated financial statements and MD&A of the Company for the year ended December 31, 2016 and related notes thereto. The Interim Consolidated Financial Statements have been prepared in accordance with International Financial Reporting Standards. All dollar figures included therein and in this MD&A are in Canadian dollars.

Additional information relevant to the Company's activities can be found on SEDAR at <u>www.sedar.com</u>. CEMATRIX is listed on the TSX Venture Exchange under the trading symbol "CVX".

On August 2, 2017 the Audit Committee of the Company reviewed and recommended for approval by the Board of Directors of the Company the Interim Consolidated Financial Statements and MD&A for the three and six months ended June 30, 2017. The Board of Directors of the Company has reviewed and approved the Interim Consolidated Financial Statements and MD&A on August 2, 2017.

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## **Forward Looking Statements**

This MD&A contains certain statements and disclosures that may constitute forward-looking information under applicable securities law. All statements and disclosures, other than those of historical fact, which address activities, events, outcomes, results or developments that the Company anticipates or expects may or will occur in the future (in whole or in part) should be considered forward-looking information. In some cases, forward-looking information can be identified by such terms as "forecast", "future, "may", "will", "expect", "anticipate", "believe", "potential", "enable", "plan", "continue", "contemplate", "pro-forma" or other comparable terminology. Forward-looking information presented in such statements or disclosures may, amongst other things relate to: sources of revenue and income; forecasts of capital expenditures and sources of financing thereof; the Company's business outlook; plans and objectives of management for future operations; forecast business results; and anticipated financial performance.

The Company has identified what it considers to be the material forward-looking statements and disclosure in this MD&A and has listed them in Appendix A. The material factors, material assumptions and material risks that provide the basis for those statements and disclosure have also been provided in Appendix A.

The forward-looking information in statements or disclosure in this MD&A is based (in whole or in part) upon factors which may cause actual results, performance or achievements of the Company to differ materially from those contemplated (whether expressly or by implication) in the forward-looking information. Various assumptions or factors are typically applied in drawing conclusions or making forecasts or projections set out in forward-looking information. Those assumptions and factors are based on information currently available to the Company including information obtained by the Company from third-party industry analysts and other third-party sources. Actual results or outcomes may differ materially from those predicted by such statements or disclosures. While the Company does not know what impact any of those differences may have, its business, results of operations, financial condition and its credit stability may be materially adversely affected.

The Company has discussed, in Section D. – Key Market Drivers and in Section E. - Key Risks and Uncertainties of its MD&A for the year ended December 31, 2016, the significant market drivers and risk factors that affect its business and could cause actual results to differ materially from the forward-looking information disclosed herein. These factors remain substantially unchanged as of the date hereof. The Company cautions the reader that these factors are not exhaustive. The risk factors that could lead to differences in business results and which could cause actual results to differ materially from the forward-looking information disclosed herein include, without limitation, legislative and regulatory developments that may affect costs, revenues, the speed and degree of competition entering the market, global capital markets activity, timing and extent of changes in prevailing interest rates, inflation levels and general economic conditions in geographic areas where the Company operates, results of financing efforts, changes in counterparty risk and the impact of International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB") and interpretations of the International Reporting Interpretation Committee ("IFRIC").

The Company is not obligated to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable laws. Because of the risks, uncertainties and assumptions contained herein, prospective investors should not place undue reliance on forward-looking statements or disclosures. The foregoing statements expressly qualify any forward-looking information contained herein.

## A. Purpose of the Company's MD&A

The purpose of this MD&A is to provide a narrative explanation, through the eyes of management, to assist the reader in understanding the Company's performance for the three and six months ended June 30, 2017, the Company's financial condition as at June 30, 2017 and its future prospects.

### **B. Mid-Year Review**

The results for the first six months of 2017 are lower than expected because three projects, that were delayed from 2016 and scheduled to be completed in the first six months of 2017, have been delayed further in whole, or in part by, due to contractor onsite project delays. The total uncompleted contracted sales value of these delayed projects is approximately \$2.4 million. One of the projects commenced again in July, another is now scheduled for August and the third, with a sales value of \$0.8 million, may not go until the late fall, if not later.

Management knew coming into 2017 that oil and gas sales would be down substantially from those reported in 2016 due to the completion of a couple of large projects in Alberta in 2016 and the affect that low commodity prices would have on any new projects in this sector, but did not think that it would be as slow as has been experienced. Even so, management had expected that growth in additional infrastructure sales and sales to be generated by its new partnership with the largest cement supplier in the world would more than offset this decline. Unfortunately, both the growth in infrastructure markets and the sales benefit of the joint agreements with Lafarge Canada are taking longer than anticipated to develop.

Other factors for the slower than expected growth in infrastructure sales include:

- A number of infrastructure projects across Canada, which CEMATRIX had expected to proceed in 2017, have been delayed due to shifts in provincial political policy and a general deferral of provincial infrastructure spending. These projects will proceed but not until beyond 2017;
- Turmoil in the United States is resulting in the continued delay of infrastructure projects; and
- Product acceptance of CEMATRIX cellular concrete applications continues to be a challenge with many engineering and construction companies. The Company continues its efforts to educate the marketplace on its cellular concrete applications but in some areas of Canada this still remains a challenge;

Contracted sales are \$9.1 million as compared to \$11.3 million at the same time last year. The current Sales Pipeline is \$108 million compared to \$80 million at this time last year. The sales pipeline is comprised of projects on which CEMATRIX has been asked to submit a design or quote, or both.

Sales for the six months ended June 30, 2017 were \$4,735,701, down \$1,190,060, or 20.1%, in comparison to the same period in 2016. Although volumes are up slightly the average selling price has declined due the shift in sales to lower priced infrastructure work from the higher priced oil and gas projects. Infrastructure sales were up \$1,603,918, or 52.5% due mainly to a couple of large tunnel grouting jobs that carried over from 2016. The increase in infrastructure sales was not sufficient to offset the decline in oil and gas sales of \$2,793,978, or 97.4%, but it would have been if the delayed projects had gone ahead as scheduled prior to the end of the quarter. During the first six months of 2016 the Company benefitted from two large projects in the Alberta oil and gas sector.

As a result of the lower sales, the Gross Margins earned during the period decreased by \$540,969, or 44.2%. The Gross Margin Percentage in 2017 of 14.4% was down from the 20.6% in 2016. This decline is generally due to the shift to infrastructure work in 2017, which has lower margins than oil and gas projects, and the impact of a change in production method for a specific project from dry mix to wet mix which has a higher material cost. This production method change was implemented for the benefit of the introduction of the new Lafarge/CEMATRIX regional expansion program.

The decrease in the Gross Margin was partially offset by lower operating expenses such that the loss before income taxes for the six months ended June 30, 2017 was \$414,814 compared to a loss of \$125,758 in the same period in 2016.

The major challenge for management over the remainder of 2017 is to contract sales to meet its current forecast sales level. In addition, management plans to curtail all discretionary operating and capital spending and closely monitor and manage working capital requirements.

## Report on Major Initiatives

#### *Growth in Sales Pipeline:*

The Company's Sales Pipeline continues to grow to record levels, but realizing on that pipeline, which now represents mainly infrastructure type projects, is taking longer than anticipated. Even though the Sales Pipeline has grown to \$105 million compared to \$80 million at this time last year. CEMATRIX is still in the early market stage in the development of the infrastructure market so its cellular concrete is not yet the product of choice on certain projects even though CEMATRIX has knowledge that it is a better and more cost effective solution to the alternative. Management believes that this trend will start to change in CEMATRIX's favour in the next few years.

#### Agreements with Lafarge:

The Company is working closely with Lafarge to develop opportunities under the joint marketing agreement. A number of potential projects have been identified by both parties and work continues to turn these into contracted sales but nothing significant has materialized as of this date. As expected this process will take some time to get fully in place. Both parties continue to evaluate the results to date and make plans to make the program more effective in the realization of the sales of cellular concrete.

The Company has moved a wet mix unit, together with supporting equipment and supplies, to the region that Lafarge and CEMATRIX identified as the first opportunity under the regional cellular concrete development program. Lafarge staff at this location have been trained on the various CEMATRIX cellular concrete applications and will be seeking new sales over the coming months. Both parties continue to consider the timing and location of further regional expansions in Canada.

## Research Projects:

The testing related to the expanded use of CEMATRIX cellular concrete as an approved light weight fill material for mechanically stabilized earth ("MSE") panel construction projects is well underway. The test results on the various properties of Cematrix cellular concrete, such as permeability, sulfate resistance, thermal conductivity etc., are now essentially completed and the test results are being analyzed. The first phase of the pull out testing is completed and the test results are being analyzed. The final phase of the pull out testing will be completed this fall with final test result expected before the end of the year. The MSE panel market is significant in Canada and the U.S. as often, as part of this process, a light weight material is required to be placed behind the panels. CEMATRIX cellular concrete is well suited for these applications. The total estimated cost of this program, which is forecasted to be completed by the end of 2017, has been reduced to approximately \$270,000, of which the National Research Council will fund approximately \$78,000 through their industrial research assistance program.

The research with the University of Waterloo's civil engineering department has been delayed until later in 2017 due to difficulty in finding a suitable test location. This project will involve the University of Waterloo, The Ministry of Transportation of Ontario, CEMATRIX and the Federal Government at a test location near Waterloo, Ontario. It will involve pouring CEMATRIX cellular concrete for road bases with pavement structures at different densities to be monitored over three years. The purpose is to develop road bases that will last longer as well as monitoring the effect on utilities buried beneath the road systems. Positive results from this study will lead to CEMATRIX cellular concrete to be specified into road construction projects in Ontario and other provinces. CEMATRIX's cost of the three-year program will be approximately \$270,000 spread over three years.

In light of the slower than anticipated 2017 sales growth the Company is currently reviewing the timing of these projects.

# C. Results of Operations

For the three months ending June 30, 2017 compared to the three months ending June 30, 2016

		Three Months Ended June 30				
		2017		2016		Change
Revenue	\$ _	2,208,230	\$	2,755,072	\$ _	(546,842)
Gross margin	\$	147,169	\$	492,677	\$	(345,508)
Operating expenses		(508,474)		(607,516)		99,042
Operating loss		(361,305)		(114,839)		(246,466)
Non-cash stock based compensation		49,502		(39,241)		88,743
Finance costs		(53,906)		(46,893)		(7,013)
Other income		16,929		29,941		(13,012)
Loss before income taxes		(348,780)		(171,032)		(177,748)
Recovery of deferred taxes		99,118		33,223		65,895
Net loss attributable to the common shareholder Unrealized foreign exchange loss on		(249,662)		(137,809)		(111,853)
translation of foreign subsidiary		(5,773)		(10,310)		4,537
Comprehensive loss for period	\$	(255,435)	\$		\$	(107,316)
Fully diluted loss per common share for period	\$ _	(0.007)	\$	(0.004)	\$ <u>_</u>	(0.003)
		Throo	Ma	onths Ended June	30	
		2017	, IVIC	2016	30	Change
Revenue		#V11		2010		Change
Infrastructure						
Western Canada	\$	732,084	\$	339,874	\$	392,210
Eastern Canada		1,427,479	Ċ	1,759,593		(332,114)
United States		-		, , , <u>-</u>		-
	-	2,159,563		2,099,467		60,096
Western Canada Oil and Gas		48,667		655,605		(606,938)
	\$	2,208,230	\$		\$ _	(546,842)

The revenue was lower by 19.9% or \$546,842. Sales volumes were down 8% and the average selling price was down 13% due to the shift to lower priced infrastructure sales. Infrastructure sales were up only marginally with higher sales in Western Canada due to more projects as compared to the same period in 2016 and this was partially offset by a decline in Eastern Canada sales due to a large project completed in Quebec in the same period in 2016. There were no projects in the United States ("U.S.") in 2017 or in the comparative period in 2016. Oil and gas sector sales were down \$606,938, or 92.6%. Oil and gas sector sales came down as one of the large 2016 projects in Alberta continued through until the fall of 2016.

The gross margin on sales was lower by \$345,508, or 70.1% due to the lower sales level combined with a decline in the gross margin percentage achieved of 6.7% compared to 17.9% in 2016. This decline is generally due to the shift to infrastructure work in 2017, which has lower margins than oil and gas projects, together with the impact of reduced margins taken for the benefit of both parties on the completion of a project in the first regional expansion territory on the Lafarge/CEMATRIX arrangement.

Operating expenses were lower by \$99,042, or 16.3% due to the aggregate of the following:

- Salaries and benefits were down \$41,650 due to management and salaried staff taking a 10%-20% salary reduction effective January 1, 2017;
- Salaries of \$4,200, within Operating Expenses, were capitalized on research projects in 2017; there was no similar program in 2016; and
- Other costs were down by \$10,942 due mainly to cost constraints introduced in 2017.
- Costs incurred in 2016 to put in place the new demand operating loan with the Canadian Western Bank (the "CWB") and the new working capital loan with the Business Development Bank of Canada (the "BDC") were \$26,000; there was no comparable costs in 2017;
- Recruitment costs of \$16,250 were incurred in 2016 to hire additional operating staff; there was no comparable cost in 2017;

Non-cash stock based compensation was down by \$88,743. In the three months ended June 30, 2017, 250,000 employee share options were forfeited by an employee who left the Company. None of the options had vested at the time the employee left the Company and as a result the non-cash stock based compensation previously recorded in the amount of \$58,245 was reversed to income. For the remaining outstanding options, under IFRS rules, the associated non-cash stock based compensation related to stock options has to be expensed based on the vesting privileges of the particular option grants.

Finance costs were up \$7,013, or 15%, mainly due to interest on new BDC loans put in place in late 2016 and early 2017; this was partially offset by interest in 2016 on the Tallinn mezzanine loan which was repaid in April 2016.

Other income was down \$13,012. In 2017 income of \$15,800 was reported from the equipment lease agreement put in place in February 2017 with Lafarge for the regional development of cellular concrete and Ready Mix markets. The first location was started in May 2017. In 2016 a gain on the sale of equipment of \$21,093 was recorded with no comparable amount in 2017 and foreign exchange gains were \$7,719 lower in 2017.

Deferred income taxes recovery was higher by \$65,895 due to the lower results of the Canadian operations in comparison to the same period in 2016.

Unrealized foreign exchange loss on translation of foreign subsidiary was lower by \$4,537. The variability period over period is due to changes in the foreign exchange rate of the U.S. dollar vs. the Canadian dollar, which on average is similar in both years, and changes in the levels of the assets, liabilities, revenues and expenses of the U.S. subsidiary between the two periods.

The total comprehensive loss was higher by \$107,316. This was principally due to lower margin on sales as partially offset by lower operating expenses and a reversal of non-cash stock based compensation expense previously recorded on forfeited options that had not vested.

		Six Months Ended June 30						
		2017		2016		Change		
Revenue	<b>\$</b> _	4,735,701	\$	5,925,761	\$	(1,190,060)		
Gross margin	\$	681,854	\$	1,222,823	\$	(540,969)		
Operating expenses		(1,032,150)		(1,205,049)		172,899		
Operating income		(350,296)		17,774	•	(368,070)		
Non-cash stock based compensation		21,093		(63,320)		84,413		
Finance costs		(104,427)		(119,289)		14,862		
Other income		18,816		39,077		(20,261)		
Loss before income taxes	_	(414,814)		(125,758)		(289,056)		
Recovery (provision) of deferred taxes		112,757		(15,000)		127,757		
Net loss attributable to the common shareholder	_	(302,057)	· ·	(140,758)	·	(161,299)		
Unrealized foreign exchange loss on translation of foreign subsidiary	_	(5,237)		(29,848)		24,611		
Comprehensive loss for period	\$_	(307,294)	\$	(170,606)	\$	(136,688)		
Fully diluted loss per common share for period	\$_	(0.009)	\$	(0.004)	\$	(0.005)		
		Six	Mon	ths Ended June	30			
		2017		2016		Change		
Revenue								
Infrastructure								
Western Canada	\$	2,489,362	\$	942,426	\$	1,546,936		
Eastern Canada		2,170,865		2,113,883		56,982		
United States	_	-		-				
		4,660,227		3,056,309		1,603,918		
Western Canada Oil and Gas	_	75,474		2,869,452		(2,793,978)		
	\$	4,735,701	\$	5,925,761	\$	(1,190,060)		

The revenue was lower by \$1,190,060, or 20.1%. Although volumes are up slightly the average selling price has declined due the shift in sales to lower priced infrastructure work from the higher priced oil and gas projects. Infrastructure sales were up \$1,603,918, or 52.5%, with higher sales in Western Canada due to more projects as compared to the same period in 2016; Eastern Canada sales were comparable over the two periods. There were no projects in the United States ("U.S.") in 2017 or in the comparative period in 2016. Oil and gas sector sales were down \$2,793,978, or 97.4%, as a result of the decline in oil sands and refinery construction which resulted from the decline in oil prices. The price has recovered slightly, but not enough to generate any significant sales from this sector in the short term. The Company was fortunate to benefit from two large oil sector projects in Alberta in 2016. These projects generated sales of \$2,598,517 in the same period in 2016.

The gross margin on sales decreased by \$540,969, or 44.2%, due to the lower sales level combined with a decline in the gross margin percentage achieved of 14.4% compared to 20.6% in 2016. This decline is generally due to the shift to infrastructure work in 2017, which has lower margins than oil and gas projects, together with the impact of reduced margins taken for the benefit of both parties on the completion of a project in the first regional expansion territory on the Lafarge/CEMATRIX arrangement.

Operating expenses were lower by \$172,899, or 14.4%, due to the aggregate of the following:

- Salaries and benefits were down \$87,800 due to management and salaried staff taking a 10%-20% salary reduction effective January 1, 2017;
- Salaries of \$16,500, within Operating Expenses, were capitalized on research projects in 2017; there was no similar program in 2016;
- Commissions on sales were down \$7,400 due to lower sales;
- Other costs were down by \$18,949 due mainly to cost constraints introduced in 2017.
- Costs incurred in 2016 to put in place the new demand operating loan with the Canadian Western bank and the new BDC working capital loan were \$26,000; there was no comparable costs in 2017; and
- Recruitment costs were of \$16,250 were incurred in 2016 to hire additional operating staff; there were no similar costs in 2017.

Non-cash stock based compensation was down by \$84,413. In 2017, 250,000 employee share options were forfeited by an employee who left the Company. None of the options had vested at the time the employee left the Company and as a result the non-cash stock based compensation previously recorded in the amount of \$58,245 was reversed to income. For the remaining options, under IFRS rules, the associated non-cash stock based compensation related to stock options has to be expensed based on the vesting privileges of the particular option grants.

Finance costs were down \$14,862, or 12.5%, mainly due to the interest incurred in 2016 and not in 2017 on the Tallinn financings (repaid in April 2016) as partially offset by interest on the new BDC loans put in place in late 2016 and early 2017;

Other income was down \$22,061. In 2017 income of \$15,800 was reported from the equipment lease agreement put in place in February 2017 with Lafarge for the regional development of cellular concrete and Ready Mix markets. The first location was started in May 2017. The gain on the sale of equipment was down \$18,793 in comparison to 2017 and foreign exchange gains were \$17,268 lower in 2017.

In 2017 a deferred tax recovery of Canadian losses of \$112,757 was recorded; in 2016 a deferred tax provision on Canadian income of \$15,000 was recorded. The change year over year is due to lower results of the Canadian operations in comparison to the same period in 2016.

Unrealized foreign exchange loss on translation of foreign subsidiary was lower by \$24,611. The variability period over period is due to changes in the foreign exchange rate of the U.S. dollar vs. the Canadian dollar, which was up in 2017, and changes in the levels of the assets, liabilities, revenues and expenses of the U.S. subsidiary between the two periods.

The total comprehensive loss was higher by \$136,688. This was principally due to lower margin on sales as partially offset by lower operating expenses and a reversal of non-cash stock based compensation expense previously recorded on forfeited options that had not vested.

## D. Selected Quarterly Financial Information

Due to the seasonal nature of the Company's business, which typically follows the construction season in Canada, a significant portion of the Company's sales occur between the latter part of the three months ended June 30 and the first half of the three months ended December 31, on an annual basis. In the both 2017 and 2016 the Company benefitted from contracted winter projects carried over from the previous years. The Company continues pursuing other markets where seasonality is less of an issue. This seasonality is reflected in the quarterly results summarized in the table below:

			Income (	(Loss)
Quarters		Comprehensive	Per Share	Per Share
Ended	Revenues	Income (Loss)	Basic	Diluted
	\$	\$	\$	\$
<b>2017 Year</b>				
March 31	2,527,471	(51,859)	(0.002)	(0.002)
June 30	2,208,230	(255,435)	(0.007)	(0.007)
_	4,735,701	(307,294)	(0.009)	(0.009)
2016 Year				
March 31	3,170,689	(22,487)	-	-
June 30	2,755,072	(148,119)	(0.004)	(0.004)
September 30	2,505,273	(392,581)	(0.011)	(0.011)
December 31	1,167,827	(534,405)	(0.016)	(0.015)
Total for year	9,598,861	(1,097,592)	(0.031)	(0.031)

Note 1: Quarterly income (loss) per share is calculated on a standalone quarterly basis and accordingly the sum of the quarterly amounts may not equal the total for the year

### E. Consolidated Statement of Financial Position

		June 30 2017		December 31 2016	Change	
Total current assets	\$	3,402,440	\$	2,865,927	\$	536,513
Total non current assets	_	4,841,826	_	4,709,905	-	131,921
Total Assets	\$_	8,244,266	\$	7,575,832	\$	668,434
Current liabilities	\$	1,638,249	\$	879,700	\$	758,549
Non current liabilities	_	2,362,179	-	2,123,907	-	238,272
Total liabilities	\$	4,000,428	\$	3,003,607	\$	996,821
Shareholders' equity	\$	4,243,838	\$	4,572,225	\$	(328,387)

Total current assets increased by \$536,513. This increase in aggregate is summarized below:

<sup>-</sup> Cash in the bank was up \$24,110 (See the discussion in Section F - Consolidated Statement of Cash Flows);

<sup>-</sup> Trade and other receivables were up by \$433,118 as a result of the higher sales in the second quarter of 2017 in comparison to the fourth quarter of 2016 combined with timing differences in the collection of trade receivables;

- Inventory was up \$55,403 due to the normal usage in the production process as offset by foaming agent purchases to bring this inventory back to a level to support sales growth:
- Prepaids and deposits were up \$21,302; mainly due to timing differences on certain items in 2017 as compared to the 2016 year end balances; and
- Current portion of share acquisition loans was up \$2,580 due to the accretion of the fair value adjustment.

Total non current assets increased by \$131,921. This increase in aggregate is summarized below:

- Property and equipment was down \$51,621 depreciation expense for the six months ended June 30, 2016 was \$246,521; this was partially offset by additions to property and equipment of \$194,900.
- Intangibles were up \$70,785; spending on research projects was \$105,215 (including \$19,873 of capitalized labour) was partially offset by funding received from government grants of \$34,430. There was no similar expenditures in 2016; no amortization is recorded on the remaining trademarks and technology as the Company views these as having an indefinite life; and
- The deferred tax asset increased by \$112,757 as a result of recording a recovery of deferred tax on Canadian losses incurred in the six months ended June 30, 2017.

Total current liabilities increased by \$758,549. This increase in aggregate is summarized below:

- Bank overdraft was reduced by \$33,201.
- Trade and other payables were up \$778,134 principally due to increased business activity in the three month ended June 30, 2017 as compared to the three months ended December 31, 2016;
- Current portion of long term debt was up by \$19,360 due to new BDC loans in 2017; repayments for the BDC loans run from July to December; and
- Current portion of finance lease obligations was down \$5,744 due to scheduled repayment of \$28,667 as partially offset by the reclassification from the long term portion of \$22,923.

Total non current liabilities increased by \$238,272. This increase in aggregate is summarized below:

- Long term debt was up \$261,195 due to additional draws of \$280,555 on the BDC equipment loan and a new BDC loan put in place in 2017 as partially offset by a reclassification of \$19,360 to current portion; the repayments for the BDC loans run from July to December; and
- Finance lease obligations were down \$22,923 due to a reclassification to current portion in the six months ended June 30, 2017 (see comment above).

Shareholders' Equity decreased by \$328,387. This increase in aggregate is summarized below:

- Contributed surplus decreased by \$21,093; in 2017, 250,000 employee share options were forfeited by an employee who left the Company. None of the options had vested at the time the employee left the Company and as a result the non-cash stock based compensation previously recorded in the amount of \$58,245 was reversed to income resulting in the Company recording non-cash based compensation income of \$21,093 in the six months ended June 30, 2017.
- Accumulated other comprehensive loss increased by \$5,237 due to the unrealized foreign exchange loss on translation of the Company's U.S. subsidiary in the six months ended June 30, 2017; and
- The Deficit increased by \$302,057 due to the loss to common shareholders in the period.

See the Consolidated Statements of Shareholders' Equity included in the Interim Consolidated Financial Statements at June 30, 2017.

#### F. Consolidated Statement of Cash Flows

### For the three months ending June 30, 2017 compared to the three months ending June 30, 2016

The cash position of the Company at June 30, 2017 was \$108,444 (consisting of cash in the bank) compared to a cash position of \$230,122 (consisting of cash in the bank) at June 30, 2016.

The change in the cash position in the quarters ending June 30, 2017 and 2016 was an increase of \$95,791 in 2017 as compared to a decrease of \$548,329 in the same period of 2016. This change is outlined in the table below:

	Three Months Ended June 30					
		2017		2016	_	Change
Cash generated from (used in) operating activities Before non-cash working capital adjustment Net change in non-cash working capital items	\$	(283,766) 723,365	\$	(35,148) 85,610	\$	(248,618) 637,755
		439,599	\$	50,462	\$	389,137
Cash used in investing activities		(107,878)		(70,876)		(37,002)
Cash used in financing activities		(230,157)		(517,605)		287,448
Foreign exchange effect on cash		(5,773)		(10,310)		4,537
Increase (decrease) in cash		95,791		(548,329)		644,120
Cash, at beginning of period		12,653		778,451		(765,798)
Cash, at end of period	\$	108,444	\$	230,122	\$	(121,678)

- Cash generated from operating activities increased by \$389,137.
  - The cash flow, before non cash working capital adjustments, decreased by \$248,618. The decrease was due to the increase in net loss before taxes of \$177,748 combined with a lower addback of non-cash items of \$70,870, due primarily to the lower non-cash stock based compensation due to the reversal of the previously recorded expense on non vested stock options that were forfeited; and
  - The net change in non-cash working capital items was a positive increase of \$637,755 due primarily to the level of trade receivables generated in the respective periods and the timing of their collection.
- Cash used in investing activities decreased by \$37,002.
  - Plant and equipment purchases were down \$20,770;
  - The cash invested in the term deposit was lower by \$10,000; the term deposit is required as security for the Company's corporate credit cards, in 2016 an addition \$10,000 was added to secure additional credit cards issued to new staff; there was no additions in 2017;
  - Intangible expenditures were up \$46,421 (including \$4,318 of capitalized labour) related to research projects; and
  - Proceeds received on the sale of equipment were down \$21,351.
- Cash used in financing activities increased by \$287,448.
  - In 2017 the Company used \$230,157 in financing activities; the collection of receivables was used to reduce its bank operating loan by \$287,886, \$53,855 was drawn down on the BDC equipment loan to finance the acquisition of a new service vehicle to support the agreement with Lafarge for the

regional expansion of cellular concrete and Ready Mix sales; proceeds of \$18,430 were received from government grants on its research projects and scheduled repayments of \$14,556 were made on finance lease obligations; and

- In 2016 the Company used \$517,605 in financing activities; proceeds from the new demand operating loan with the CWB was used to repay \$500,000, the remaining balance of the mezzanine loan, and scheduled repayments of \$17,605 were made on finance lease obligations.

## For the six months ending June 30, 2017 compared to the six months ending June 30, 2016

The cash position of the Company at June 30, 2017 was \$108,444 (consisting of cash in the bank) compared to a cash position of \$230,122 (consisting of cash in the bank) at June 30, 2016.

The change in the cash position in the six months ending June 30, 2017 and 2016 was an increase of \$57,311 in 2017 as compared to a decrease of \$1,220,663 in the same period of 2016. This change is outlined in the table below:

	Six Months Ended June 30					
		2017		2016	_	Change
Cash generated from (used in) operating activities Before non-cash working capital adjustment Net change in non-cash working capital items	\$	(194,266) 268,311	\$	147,582 236,826	\$	(341,848) 31,485
		74,045	\$	384,408	\$	(310,363)
Cash used in investing activities		(297,815)		(130,358)		(167,457)
Cash generated from (used in) financing activities		286,318		(1,444,865)		1,731,183
Foreign exchange effect on cash		(5,237)		(29,848)		24,611
Increase (decrease) in cash		57,311		(1,220,663)		1,277,974
Cash, at beginning of period		51,133		1,450,785		(1,399,652)
Cash, at end of period	\$	108,444	\$	230,122	\$	(121,678)

- Cash generated from operating activities decreased by \$310,363.
  - The cash flow, before non-cash working capital adjustments, decreased by \$341,848. The decrease was due to the increase in net loss before taxes of \$289,056 combined with a lower addback of non-cash items of \$52,792, due primarily to the lower to non-cash stock based compensation due to the reversal of the previously recorded expense on non vested stock options that were forfeited; and
  - The net positive change in non-cash working capital items increased by \$31,485 due primarily to the level of trade receivables generated in the respective periods and the timing of their collection.
- Cash used in investing activities increased by \$167,457.
  - Plant and equipment purchases were up \$53,191 which was primarily the acquisition of a new service vehicle to support the agreement with Lafarge for the regional expansion of cellular concrete and Ready Mix sales;
  - The cash invested in the term deposit was lower by \$10,000; the term deposit is required as security for the Company's corporate credit cards, in 2016 an addition \$10,000 was added to secure additional credit cards issued to new staff; there was no additions in 2017;
  - Intangible expenditures were up \$105,215 (including \$19,873 of capitalized labour) related to research projects; and
  - Proceeds received on the sale of equipment were down \$19,051.

- Cash used in financing activities increased by \$1,731,183.
  - In 2017 generated \$286,318 from financing activities: new BDC debt provided \$280,555 to finance the completion of production equipment and acquisition of a new service vehicle to support the agreement with Lafarge for the regional expansion of cellular concrete and Ready Mix sales and to fund the first year cost of the BDC program to assist the Company in establishing its growth strategy; proceeds of \$34,430 were received from government grants on its research projects and scheduled repayments of \$28,667 were made on finance lease obligations; and
  - In 2016 the Company used \$1,444,865 in financing activities; cash collected on trade receivables that had been factored at December 31, 2015 was used to repay the factoring liability of \$703,462; the \$750,000 mezzanine loan was repaid and scheduled repayments of \$36,403 on finance lease obligations were made; cash was received from the issue of common shares for \$45,000 on the exercise of stock options by The Howard Group, the Company's investor relations firm.

#### G. Liquidity, Capital Resources and Commitments

#### Liquidity

The Company's liquidity, including obtaining cash resources to finance capital spending to increase its production capacity to meet forecasted growth, is dependent on continuing to generate sales, profits, cash flow from operations, maintaining a facility to finance working capital and accessing capital debt facilities through loans or lease financing.

At June 30, 2017, the Company had Net Working Capital of \$1,930,836, down from \$2,199,147 at December 31, 2016.

For the six months ended June 30, 2017, the Company reported a loss of \$435,907, before taxes and non-cash stock based compensation, negative cash from operations of \$194,266, before the non-cash working capital adjustment, and negative EBITDA of \$84,959.

The Company introduced cash flow measures at the beginning of 2017 to reduce cash flow requirements in the first six months of 2017. The executive management took a 20% reduction in base salary, and all other salaried staff a 10% reduction; the Company also negotiated a 10% reduction in the rental cost of its Calgary facility for six months and placed cost constraints on all discretionary spending. In order to incent employees to contribute to the development of new sales opportunities the Company restored all salaries to their previous levels but will continue cost constraints on all discretionary spending for the balance of the year.

As of this date the Company has signed contracts on hand for \$9.1 million, of which \$4.7 million has been completed, the balance will be completed over the next six months. There are a number of other contracts in process.

The realization of the net working capital as at June 30, 2017, the benefit from cost reduction initiatives to reduce cash flow requirements, the availability of the CWB demand operating loan and the new BDC loans and the successful completion of sales contracts that are in place, or are expected to be in place, will provide the necessary liquidity to carry the Company's operations through the balance of 2017. Ongoing liquidity beyond this, is dependent on the Company achieving additional sales and profitable results.

## Capital resources

Capital additions to build new productive capacity in the current year will come from the funds generated from operations and the BDC loan 4, which has \$319,445 that can be drawn down until October 2018. The Company has currently curtailed any major capital spending for the balance of 2017.

Building additional productive capacity in future years is dependent on the Company generating the required funds from operations or new debt or equity financing. There is no certainty that additional debt or equity financing will be available to the Company.

The Company defines its capital as the long term debt, the finance lease obligations and shareholders' equity. The current objective of the Company is to manage its capital through growth in earnings and to reinvest the earnings generated to facilitate the continued growth in the Company, in order to provide an appropriate rate of return to shareholders in relation to the risks underlying the Company's assets. The consolidated capital of the Company, as outlined in Note 22 - Capital management to the Interim Consolidated Financial Statements, was \$6,982,155 at June 30, 2017 as compared to \$7,057,654 at December 31, 2016 (see Section E. Consolidated Statements of Financial Position for details).

#### Commitments

The following is a summary of the Company's lease and debt obligations and commitments for the next five years from June 30, 2017.

Debt Category	2017/18	2018/19	2019/20	2020/21	2021/22
	\$	\$	\$	\$	\$
Finance lease obligations (1)	83,108	72,653	81,486	3,994	-
BDC Financing (2) (3)	303,822	349,142	390,462	241,688	94,800
Secured Debenture (2)	-	1,000,000	-	-	-
Operating leases	298,648	277,168	135,584	-	-

- (1) Includes principal and interest
- (2) Principal only
- (3) Based on BDC loans drawn down as of June 30, 2017
- (4) The Company's lease on its head office and shop facilities in Calgary expires December 31, 2019.

### H. Off Balance Sheet Arrangements

There were no off balance sheet arrangements at June 30, 2017 or December 31, 2016.

#### I. Transactions with Related Parties

During the three and six months ending June 30, 2017, the Company incurred legal fees from a firm which employs one of the directors of the Company in the amount of \$14,305 and \$17,864, respectively (\$11,285 and \$14,835, respectively for the same periods in 2016) of which \$3,372 was in trade payables as at June 30, 2017 (December 31, 2016 - \$nil).

There were no other significant related party transactions.

# J. Critical Accounting Judgements, Estimates and Assumptions

The preparation of financial statements in conformity with IFRS requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities and contingent liabilities at the date of the financial statements and reported amounts of revenues and expenses during the reporting period. Estimates and judgments are continuously evaluated and are based on management's experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. However, actual outcomes can differ from these estimates.

The key sources of estimation uncertainty that have a significant risk of causing material adjustment to the amounts recognized in the consolidated financial statements are described in Note 3 of the audited consolidated financial statements for the year ended December 31, 2016. There have been no changes since that date.

## K. Changes in Accounting Policies including Initial Adoption

The significant accounting policies of the Company are outlined in note 4 of the audited consolidated financial statements for the year ended December 31, 2016. There have been no changes.

### Future accounting pronouncements

Certain new standards, interpretations, amendments and improvements to existing standards were issued by the IASB or the IFRIC that are mandatory for accounting periods beginning on or after July 1, 2017 or later periods. The standards impacted that are applicable to the Company are as follows:

IFRS 9 Financial Instruments – On July 24, 2014, the IASB issued the final version of IFRS 9, "Financial Instruments" ("IFRS 9") to replace IAS 39, "Financial Instruments: Recognition and Measurement" ("IAS 39"). IFRS 9 introduces a single approach to determine whether a financial asset is measured at amortized cost or fair value and replaces the multiple rules in IAS 39. The approach is based on how an entity manages its financial instruments in the context of its business model and the contractual cash flow characteristics of the financial assets. For financial liabilities, IFRS 9 retains most of the IAS 39 requirements; however, where the fair value option is applied to financial liabilities, the change in fair value resulting from an entity's own credit risk is recorded in OCI rather than net earnings, unless this creates an accounting mismatch. In addition, a new expected credit loss model for calculating impairment on financial assets replaces the incurred loss impairment model used in IAS39. The new model will result in more timely recognition of expected credit losses. IFRS 9 also includes a simplified hedge accounting model, aligning hedge accounting more closely with risk management. IFRS 9 is effective for years beginning on or after January 1, 2018. Early adoption is permitted if IFRS 9 is adopted in its entirety at the beginning of a fiscal period.

IFRS 15 Revenue from Contracts With Customers – On May 28, 2014, the IASB issued IFRS 15, "Revenue From Contracts With Customers" ("IFRS 15") replacing International Accounting Standard 11, "Construction Contracts" ("IAS 11"), IAS 18, "Revenue" ("IAS 18"), and several revenue-related interpretations. IFRS 15 establishes a single revenue recognition framework that applies to contracts with customers. The standard requires an entity to recognize revenue to reflect the transfer of goods and services for the amount it expects to receive, when control is transferred to the purchaser. Disclosure requirements have also been expanded. IFRS 15 is effective for years beginning on or after January 1, 2018.

The Company has determined the impact on its consolidated financial statements from the adoption of these future accounting pronouncements will not be material.

IFRS 16 Leases – In January 2016, the IASB issued IFRS 16, "Leases" ("IFRS 16") replacing International Accounting Standard 17, "Leases" ("IAS 17"). IFRS 16 sets out the principles for the recognition, measurement, presentation and disclosure of leases for both parties to a contract, the customer ("lessee") and the supplier ("lessor"). The standard provides revised guidance on identifying a lease and separating lease and non-lease components of a contract. It introduces a single accounting model for all leases and requires a lessee to recognize right-of-use assets and lease liabilities for leases with a term of more than 12 months, unless the underlying asset is of low value, and depreciation of lease assets separately from interest on lease liabilities in the income statement. Lessor accounting for operating and finance leases will remain substantially unchanged. IFRS 16 is effective for years beginning on or after January 1, 2019.

The Company has not determined the impact on its consolidated financial statements from the adoption of the above future accounting pronouncements.

## L. Financial Instruments

The Company has not entered into any specialized financial agreements to minimize its investment risk, currency risk or commodity risk. For information on financial instruments refer to Note 4 (M) – Significant Accounting Policies – Non-derivative financial instruments in the audited consolidated financial statements at December 31, 2016 and Note 21 – Financial Instruments and risk management to the Interim Consolidated Financial Statements.

## Risk management

The Company's activities are exposed to a variety of financial risks: interest rate risk, credit risk, liquidity risk and foreign exchange risk. The Company's overall risk management program focuses on the unpredictability of financial and economic markets and seeks to minimize potential adverse effects on the Company's financial performance. Risk management is carried out by financial management in conjunction with overall Company governance.

### Interest Rate Risk

The BDC Financing, which had a balance of \$1,517,049 outstanding at June 30, 2017, and the demand operating loan, which had a balance of \$nil outstanding at June 30, 2017, are subject to floating rates. Based on this floating rate debt outstanding at June 30, 2017 a 1% increase/decrease in interest rates would result in a decrease/increase in the comprehensive income (loss) of approximately \$11,100.

### Credit Risk

Financial instruments that subject the Company to credit risk consist primarily of trade receivables. The Company manages credit risk using credit approval and monitoring practices. At June 30, 2017, 6 customers accounted for approximately 92% of trade receivables (at December 31, 2016, 9 customers accounted for approximately 90% of trade receivables). (See Note 5 for details of credit policy and aging of outstanding trade receivables at June 30, 2017 and December 31, 2016).

## Liquidity Risk

Liquidity risk management involves maintaining sufficient cash and cash equivalents and the availability of working capital financing.

The table below summarizes the maturity profile of the Corporation's financial liabilities at June 30, 2017 and December 31, 2016 based on contractual undiscounted payments.

	Less	s than 1 year	1	to 2 years	2	to 5 years	Total
As at June 30, 2017 Trade and other payables Long-term debt Finance lease obligations	\$	1,263,111 303,822 71,316	\$	1,349,142 66,745	\$	864,085 82,207	\$ 1,263,111 2,517,049 220,268
	\$	1,638,249	\$	1,415,887	\$	946,292	\$ 4,000,428
	Les	s than 1 year	1	to 2 years	2	to 5 years	Total
As at December 31, 2016 Bank overdraft Trade and other payables Long-term debt Finance lease obligations	\$	33,201 484,977 284,462 77,060	\$	- 1,284,142 47,243	\$	667,890 124,632	\$ 33,210 484,977 2,236.494 248,935
Ç	\$	879,700	\$	1,331,385	\$	792,522	\$ 3,003,607

#### Foreign Exchange Risk

Foreign exchange risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates. The Company's exposure relates to trade receivables, and the collection thereof, denominated in USD and the operations of its U.S. subsidiary which are predominantly in USD. The Company does not hedge these items as the timing of related transactions is not certain.

As at June 30, 2017 and December 31, 2016 the following balances were denominated in USD:

	2017		2	2016
Cash and cash equivalents	\$	24,051	\$	60,666
Trade and other receivables	\$	32,934	\$	39,672
Prepaid expenses and deposits	\$	12,308	\$	9,837
Trade and other payables	\$	19,302	\$	14,317

The Company's primary foreign exchange sensitivity is in relation to movements of the USD against the Canadian dollar. Based on the USD balances outstanding at June 30, 2017, a 5% increase/decrease of the USD against the Canadian dollar would result in an increase/decrease in total annual comprehensive loss of approximately \$3,200.

# M. Disclosure of Outstanding Share Data

As at June 30, 2017 and August 2, 2017, the following is a description of the outstanding equity securities and convertible securities previously issued by the Company:

	Authorized	Outstanding as at June 30, 2017	Outstanding as at August 2, 2017
Voting or equity securities issued and outstanding	Unlimited Common Shares	34,475,994 Common Shares	34,475,994 Common Shares
Securities convertible or exercisable into voting or equity securities - stock options	Stock options to acquire up to 10% of outstanding Common Shares	Stock options to acquire 3,175,000 Common Shares at an exercise price at between \$0.145-\$0.43	Stock options to acquire 3,275,000 Common Shares at an exercise price at between \$0.145-\$0.43

On August 2, 2017 100,000 employee stock options were issued to a new employee. The options are for four year term with an exercise price of \$0.18 with vesting as to one third on each of the next three anniversary dates from the date of issue

## N. Outlook

The future of CEMATRIX continues to look extremely positive, as infrastructure markets continue to grow and there are signs that planned construction activity is increasing in the oil and gas sector. Infrastructure market sales growth and new sales from the Lafarge/CEMATRIX arrangement are taking longer than anticipated but CEMATRIX is making progress, as reflected in the continued growth in its Sales Pipeline.

# <u>CEMATRIX CORPORATION</u> www.cematrix.com

# Form 51-102F1 - Management's Discussion & Analysis For the Three and Six Months Ended June 30, 2017

# **Appendix A – Forward Looking Statements**

The forward-looking statements in the MD&A for the three and six months ending June 30, 2017 are outlined below:

#### General

There are a number of statements in the MD&A which refer to "expect", "believes", "expected sales growth or increase", "forecast revenue growth", "anticipated growth" and "forecasting".

The foregoing statements contains forward-looking statements which are based on sales forecasts prepared for 2017; sales forecasts include work which is under contract for 2017, as well as probability adjusted forecasts for projects on which the Company has placed or will place bids in the coming year, where the probabilities applied to the sales forecast are based on management's assessment of the particular project based on historical experience and the stage the project is in the sales cycle. There are a number of risks that could affect these assumptions which include: contracted work is delayed; the failure of 2017 sales to materialize, because of project delays or cancelations or because CEMATRIX's cellular concrete is not specified into projects, management's assumptions in applying probabilities to the various projects in the sales forecast are incorrect, and product acceptance in new markets takes longer than anticipated resulting in reduced sales.

# **CEMATRIX CORPORATION**

## www.cematrix.com

# Form 51-102F1 - Management's Discussion & Analysis For the Three and Six Month Ending June 30, 2017

## **Appendix B – Definitions**

### Sales Pipeline:

The Company's sales pipeline is defined as the total forecasted dollar amount of those future projects that CEMATRIX has been contacted by engineering firms, or owners, or contractors for design assistance (which could include thermal modelling), a quote, or both. The sales pipeline does not include the dollar value of contracted sales; or the dollar value of sales, where volumes have not been determined by the designers; or the dollar value of sales that have been lost for various reasons, including that the proposed project has been cancelled, lost to an alternative product or lost to a competitor. The sales pipeline is updated when changes in the status of a project becomes known to CEMATRIX. The sales pipeline includes projects from the current and future years and grows with the continued acceptance of the product throughout the Company's market territory, which currently includes significant parts of Canada and parts of the U.S.

#### **Revenue:**

Total revenue of the Company that primarily consists of the production and placement of cellular concrete.

#### **Cost of Sales:**

Direct costs related to the production of cellular concrete, including materials and labour; direct and indirect variable costs related to the production of cellular concrete; and fixed costs related to the production of cellular concrete, including depreciation related to the equipment used in the production of cellular concrete.

## **Gross Margin:**

The profit after cost of sales is deducted from revenue.

### **Gross Margin Percentage:**

The percentage of the gross margin as a percentage of revenue.

#### **Operating Expenses:**

Represents costs not directly related to the production of cellular concrete, including general and administrative, sales and marketing and technology development.

#### **Operating Income:**

Income before non-cash stock based compensation, finance costs and other miscellaneous items and taxes.

# Unrealized Foreign Exchange Gain (Loss) on Translation of Foreign Subsidiary:

The unrealized gain (loss) resulting from the translation of CEMATRIX's U.S. subsidiary into Canadian dollars. This foreign exchange gain or loss is recognized only when there is a return of capital from the U.S. subsidiary.

#### **Net Working Capital:**

The sum of trade and other receivables, inventory and prepaid expenses and deposits minus trade and other payables.

## Ready Mix

This refers to pre-designed cement slurry which is delivered by a ready mix supplier.