Comox Valley REGIONAL DISTRICT

Staff report

DATE: September 11, 2014

FILE: 5360-30

TO: Chair and Directors
Comox Valley Regional District (Comox Strathcona waste management) board

FROM: Debra Oakman, CMA
Chief Administrative Officer

RE: Long term capital financing - Municipal Finance Authority loan authorization

Purpose

To obtain board approval for a loan authorization bylaw to enter into long term debt over the next five years with the Municipal Finance Authority (MFA) for Comox Strathcona solid waste management plan (CS-SWMP) capital projects.

Policy analysis

Section S. 179 of the *Local Government Act* (LGA) requires a loan authorization bylaw to be adopted by the board and also requires the board to specify certain criteria to ensure the borrowing process is transparent and accountable to the public. There is a one month quashing period after adoption of the bylaw before application for a certificate of approval from the Ministry can be obtained. Typically elector approval is required for loan authorization bylaws, however, the funds required for capital works upgrades are directly related to capital projects outlined in the CS-SWMP. Section 27(1) of the *Environmental Management Act* requires regional districts to provide for a process for comprehensive review and public consultation with respect to all aspects of the solid waste management plan including development and capital upgrades, therefore elector approval is not required as with other loan authorization bylaws, as it was completed during the CS-SWMP public consultation phase.

Executive summary

The CS-SWMP includes significant capital infrastructure spending in order to implement the plan over the 2015-2019 budget period. In order to proceed long term financing through MFA is required and a bylaw supporting capital borrowing is necessary. Long term borrowing for the CS-SWMP projects listed in Table 1 will provide for landfill gas systems and the closure of existing regional landfills at Campbell River and the Comox Valley, as well as the construction of a new engineering landfill at the Comox Valley waste management centre (CVWMC).

Table 1. CS-SWMP MFA 2015 to 2019 long term borrowing requirements for capital projects.

ITEM	CAPITAL PROJECT	ESTIMATED BUDGET
1	CAMPBELL RIVER CLOSURE	$ 13,125,000
2	COMOX VALLEY CLOSURE	$ 10,620,000
3	COMOX VALLEY NEW LANDFILL EXPANSION (8M EXCAVATION)	$ 21,550,000
	TOTAL PROJECT ESTIMATE FOR MFA BORROWING	$ 45,295,000

In 2015 it is anticipated that the initial borrowing amount will be up to $9,115,000 to allow for 70 per cent closure construction of CVWMC existing landfill and continued design work for Campbell River (CRWMC) landfill phase 2 closure, both of which include landfill gas facilities. Debt servicing is included in solid waste function 391 as a part of the operational budget in the preliminary 2015 – 2019 financial plan.

Additional MFA public assentation is not required as public outreach to all service jurisdictions and first nations was completed as per section 23 of the CS SWMP.

Recommendations from the chief administrative officer:
THAT a loan authorization bylaw be authorized by the Comox Strathcona waste management board for Comox Strathcona solid waste management plan closures of existing regional landfills at Campbell River and Comox Valley facilities as well as the expanded new regional landfill at the Comox Valley facility;

AND FURTHER THAT the loan authorization bylaw be for an amount of $45,295,000 with the debt to be repaid over a 20 year term;

AND FINALLY THAT approval for the loan authorization bylaw be requested from the Inspector of Municipalities under the authority granted by the approved 2012 Comox Strathcona solid waste management plan.

Respectfully:

D. Oakman

Debra Oakman, CMA
Chief Administrative Officer

History/background factors
As part of the MFA long term loan process, loan requests from regional districts, which have been vetted through all appropriate approval processes, are received and analyzed. Once a loan has been approved, the MFA will determine the exact date of funding, depending on district needs, the capital market and when the best interest rates can be obtained.

On May 23, 2013 the board received notice from the Ministry of Environment (MoE) regarding the approval of the 2012 CS-SWMP which identifies in Section 23 borrowing for capital projects through the inspector of the municipalities. A copy of the letter can be found here.

This letter from the Minister of Environment is a part of the MFA loan process as it indicates to the inspector that the provincial requirement for public assentation has been completed during the CS-SWMP update process and is on file at the MoE offices.

Financial factors
Table 2 below includes total five year capital project works identified in the CS SWMP, each of which is included in the solid waste (function 391) 2015 – 2019 preliminary financial plan. Attached as Appendix 'A' is a detailed description of CS-SWMP capital projects from 2012 to 2015 which is also reported to the Ministries as a part of the MFA loan request.

Table 2. CS-SWMP preliminary 2015-2019 FP estimated capital projects

ITEM	CAPITAL PROJECT	ESTIMATED BUDGET
1	Campbell River Closure	$ 13,125,000
2	Comox Valley Closure	$ 10,620,000
3	Comox Valley New Landfill Expansion (8m excavation)	$ 21,550,000
4	Gold River Landfill Closure	$ 2,866,200
5	Gold River TS Upgrade	$ 688,859
6	Tahsis Landfill Closure	$ 1,865,000
7	Tahsis Transfer Station	$ 676,936
8	Zeballos Landfill Closure	$ 1,002,500
9	Zeballos Transfer Station	$ 676,936
10	Sayward Landfill Closure	$ 390,000
11	Cortes Island Closure	$ 390,000
	TOTAL	$ 53,851,431

Through the proposed bylaw, capital projects from Table 2, proposed to be funded by MFA long term borrowing include:

1. Campbell River Closure;
2. Comox Valley Closure, and
3. Comox Valley New Landfill Expansion (8m excavation).

Options for capital funding for the remaining CS-SWMP capital works projects in Table 2, estimated at $8,556,431, will be through funds transfer from operations, short term financing, CSWM reserves, future additional long term funding, capital grants or combinations of these options.

Approval of a long term MFA borrowing bylaw for a total of $45,295,000 to complete these three projects scheduled below in Table 3 would allow for completion of 84 per cent of the CS-SWMP capital projects commitment.

Table 3. CS-SWMP capital projects – long term borrowing schedule, 2015 – 2019.

Item	2015	2016	2017	2018	2019	Total
Campbell River Closure Works	$ 350,000	$ 9,200,000		$ 125,000	$ 3,450,000	$ 13,125,000
Comox Valley Closure Works	$ 8,015,000			$ 105,000	$ 2,500,000	$ 10,620,000
Comox Valley New Landfill Expansion (8m excavation)	$ 750,000	$ 100,000	$ 20,700,000			$ 21,550,000
Bylaw for MFA long term funding	$ 9,115,000	$ 9,300,000	$ 20,700,000	$ 230,000	$ 5,950,000	$ 45,295,000

Loan servicing for Table 3 borrowing is included in the 2015 – 2019 preliminary financial plan.

Options

Due to the magnitude of capital project work, the board has the following option to consider:

1. Fund capital project requirements of $45,295,000 through long term debt financing from the MFA through a loan authorization bylaw.

The CS-SWMP includes significant capital infrastructure requirements over the life of the plan. These project requirements surpass the services ability to fund the work in any way other than long

term debt. Existing capital works reserves, transfers from operations and short term debt are all also being used to fund capital projects. In addition, the service will pursue grant opportunities, as directed by the board, in order to reduce future borrowing requirements.

Legal factors

Municipal loan authorization and security issuing procedures are through *Community Charter* (CC) and LGA CC-S.179 which include bylaw preparation and presentation to council. Further, the electoral approval of the bylaw CC-S.84-86 where public approval is not required as set down as a specific exemption or where prescribed by regulation (assent-free). Bylaw preparation, presentation to the board, three readings and a ten day quashing period are referenced in LGA – S.824 & 825, LGA – S.794, LGA – S.262(3.1), LGA – 1022 Form SI, respectively.

Specific exemption from public assentation per the LGA and CC is referenced through the regulatory *Environmental Management Act*, Chapter 53, Part 24 – Waste Management Plans.

Intergovernmental factors

The CS-SWMP - Section 23 includes reference to required borrowing to complete CS-SWMP capital projects as required by the Minister of Environment as a part of the CS-SWMP public outreach requirement. Through the May 23, 2013 Minister of Environment letter of approval to the CSWM Directors for the CS SWMP, acknowledgement of completion of the public assentation process for capital projects at the provincial level has been provided. Therefore, when the inspector of municipalities, through the MFA process, approves the CS-SWMP capital projects application for long term borrowing, there will be further acknowledgement that public assentation for borrowing for these projects has been completed.

Citizen/public relations

Through the CS-SWMP preparation process an extensive outreach and public approval process was completed, reported to the CSWM board and the province as required by the province as proof of public assentation. The public outreach and consultation process of the board authorized proposed plan occurred between January 2012 and September 2012 and includes:

1. First Nations consultation which included (3) meetings with band representatives;
2. (12) public open house meetings which included exit survey information;
3. (10) presentations to council;
4. (2) sets of newspaper ads;
5. (5) sets of news releases;
6. Statistically representative phone survey – detailed report of findings to the CSWM board and the MoE from Discovery Research, March 2012, entitled 2012 Future Directions Telephone Survey;
7. CVRD open website access to the proposed and final CS-SWMP from January 2012 to September 2012 and the final plan from October 2012 to the present;

Then, in the CSWM board September 2012 meeting the approved plan was forwarded to all corporate jurisdictions for further review and a letter of response was requested from all councils. All councils responded and no letters of disapproval were received. Public response was also positive with over 65 per cent measured approval of the final plan recorded and reported to the Minister of Environment.

Prepared by:	Concurrence:
T. Boatman	***M. Rutten***
Thomas A. Boatman, PE Senior Manager of CSWM Services	Marc Rutten, P. Eng., General Manager of Engineering Services

Appendix A: CS-SWMP Capital Projects Schedule Details 2012 – 2015

Table 1. 2012 FP (2012 $) Aug, 2014

Item	Item	2012	2013	2014	2015	2016	Total Budget
1	Comox Valley Closure	$ 205,000.00	$ 2,590,513.00	$ 1,194,688.00			$ 3,990,201.00
2	Campbell River Closure	$ 2,830,000.00	$ 4,467,137.00				$ 7,297,137.00
3	Tahsis Closure	$ 44,000.00	$ 143,275.00		$ 205,975.00		$ 393,250.00
4	Zeballos Closure	$ 44,000.00	$ 176,550.00				$ 220,550.00
5	Gold River Closure	$ 50,650.00	$ 108,391.00	$ 166,022.00			$ 325,063.00
	Total	$ 3,173,650.00	$ 7,485,866.00	$ 1,360,710.00	$ 205,975.00		$ 12,226,201.00

Table 1 Notes:

1 - 5 CSWM staff modified closure construction costs - documents: AECOM, CH2MHill, CSWM archive documents (1995 - 2011)
1 - 5 Very High level analysis - high level planning estimate for construction costs updated from previous third party historical documents
1 - 5 Table values represent phase 1 of 2 phase closure costs with only 5 years represented
1 - 5 Table did not include any outstanding facility changes or and future facilities being considered only projected landfill closure costs

Table 1a. CSWM SERVICES - Preliminary high level estimate of major landfill closure construction costs (2012 $) Mar 4, 2012 version

Item	Item	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Sum
2	Campbell River Closure Schedule	$ 2,830,000.00	$ 4,467,137.00	$ -	$ -	$ -	$ -	$ 364,981.50	$ -	$ -	$ 943,678.63	$ 919,078.63	$ -	$ -	$ 9,524,875.75
1	Comox Valley Closure Schedule	$ 205,000.00	$ 2,590,512.50	$ 1,194,688.00	$ -	$ -	$ -	$ -	$ 352,500.00	$ -	$ 140,600.00	$ 1,704,566.25	$ 1,704,566.25	$ -	$ 7,892,433.00
5	Gold River Closure Schedule	$ 50,650.00	$ 108,391.00	$ 166,022.19	$ -	$ -	$ -	$ -	$ 166,022.19	$ -	$ -	$ -	$ -	$ 237,008.38	$ 728,093.75
3	Tahsis Closure Schedule	$ 44,000.00	$ 143,275.00	$ -	$ 205,975.00	$ -	$ -	$ -	$ -	$ 119,625.00	$ -	$ -	$ -	$ 119,625.00	$ 632,500.00
4	Zeballos Closure Schedule	$ 44,000.00	$ 176,550.00	$ -	$ -	$ -	$ -	$ 147,125.00	$ -	$ -	$ -	$ -	$ -	$ 264,825.00	$ 632,500.00
	Total	$ 3,173,650.00	$ 7,485,865.50	$ 1,360,710.19	$ 205,975.00	$ -	$ -	$ 512,106.50	$ 518,522.19	$ 119,625.00	$ 1,084,278.63	$ 2,623,644.88	$ 1,704,566.25	$ 621,458.38	$ 19,410,402.50

Table 1a Notes: Table values updated from construction estimates taken from historical consultant reports: UMA - 1996, Gartner Lee - 1997, CH2M Hill 1998 & 2008, AECOM 2011

Table 2. CS SWMP 23-1 (2012 $) Aug, 2014

Item	Item	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total Budget
1	Campbell River Closure	$ 2,830,000.00	$ 4,467,000.00					$ 365,000.00			$ 944,000.00	$ 920,000.00	$ 9,526,000.00
2	Campbell River Transfer Station	$ 1,500,000.00											$ 1,500,000.00
3	Comox Valley Closure	$ 205,000.00	$ 2,591,000.00	$ 1,195,000.00					$ 353,000.00				$ 4,344,000.00
4	Comox Valley New Landfill Expansion		$ 215,000.00	$ 72,000.00	$ 72,000.00	$ 357,000.00	$ 4,779,000.00	$ 4,779,000.00					$ 10,274,000.00
5	Gold River Closure	$ 51,000.00	$ 108,000.00	$ 225,000.00					$ 266,000.00				$ 650,000.00
6	Tahsis Closure	$ 44,000.00	$ 143,000.00				$ 100,000.00	$ 226,000.00	$ 120,000.00				$ 633,000.00
7	Zeballos Closure	$ 44,000.00	$ 177,000.00				$ 100,000.00	$ 200,000.00	$ 120,000.00				$ 641,000.00
8	Regional Transfer Stations			$ 50,000.00	$ 200,000.00			$ 100,000.00	$ 100,000.00				$ 450,000.00
9	Closure of Cortes and Sayward Landfills		$ 16,000.00	$ 184,000.00									$ 200,000.00
	Total	$ 4,674,000.00	$ 7,717,000.00	$ 1,726,000.00	$ 272,000.00	$ 357,000.00	$ 4,979,000.00	$ 5,670,000.00	$ 959,000.00	$ -	$ 944,000.00	$ 920,000.00	$ 28,218,000.00

Table 2 Notes:

1 - 9 AECOM CS SWMP 2012 Solid Waste Management Plan Table 23-1 - high level construction cost estimates
8, 9 Considered placeholder due to lack of scope; mainly for construction planning purposes
4 CH2MHill historical updated construction estimate, considered within Class D estimate
5,6,7 AECOM and historical CSWM documents, considered within Class D estimate
2 Carryover - construction began in 2011, Class A estimate plus budget factor
1 AECOM, considered within Class D estimates
3 CH2MHill historical updated construction estimate, considered within Class D estimate
1 - 9 Table range of 10 years represent the MoE requirement for SWAMP disposal systems planning

Table 3. 2013 FP Aug, 2014

Item	Item	2013	2014	2015	2016	2017	2018	2019	Total Budget
1	Campbell River Closure	$ 2,455,100.00		$ 5,211,163.00			$ 3,364,015.00		$ 11,030,278.00
2	Comox Valley Closure	$ 3,619,230.00	$ 10,210.00	$ 10,424.00	$ 10,643.00	$ 4,383,211.00			$ 8,033,718.00
3	Comox Valley New Landfill Expansion	$ 215,000.00	$ 72,000.00	$ 72,000.00	$ 357,000.00	$ 4,779,000.00	$ 4,779,000.00		$ 10,274,000.00
4	Gold River Closure	$ 111,440.00	$ 184,993.00				$ 753,577.00	$ 769,402.00	$ 1,819,412.00
5	Tahsis Closure	$ 118,984.00		$ 197,539.00			$ 735,895.00	$ 751,349.00	$ 1,803,767.00
6	Zeballos Closure	$ 140,925.00					$ 391,326.00	$ 399,544.00	$ 931,795.00
7	Regional Transfer Stations		$ 50,000.00	$ 200,000.00			$ 100,000.00	$ 100,000.00	$ 450,000.00
8	Closure of Cortes and Sayward Landfills	$ 16,000.00	$ 184,000.00						$ 200,000.00
	Total	$ 6,676,679.00	$ 501,203.00	$ 5,691,126.00	$ 367,643.00	$ 9,162,211.00	$ 10,123,813.00	$ 2,020,295.00	$ 34,542,970.00

Table 3 Notes:

1 - 9 SCS, EBA and AECOM preliminary engineers construction cost estimate and, placeholder estimates for No. 7 and No. 8
1,2,4,5,6 EBA, SCS submitted preliminary (prior to 30% completion) construction and closure costs as a part of LF liability (PSAB 3270) work; considered Class C estimate
3,7,8 Unchanged from CS SWMP 23-1

Table 4. 2014 FP Aug, 2014

Item	Item	2014	2015	2016	2017	2018	2019	Total Budget
1	Campbell River Closure	$ 4,648,677.00	$ 357,176.00	$ 7,143,520.00	$ 148,313.00	$ 2,966,250.00		$ 15,263,936.00
2	Comox Valley Closure	$ 100,000.00	$ 8,250,000.00			$ 102,960.00	$ 2,353,363.00	$ 10,806,323.00

3	Comox Valley New Landfill Expansion	$ 650,000.00		$ 100,000.00	$ 12,918,333.00			$ 13,668,333.00
4	Gold River Landfill Closure	$ 25,000.00	$ 604,200.00			$ 130,000.00	$ 2,132,000.00	$ 2,891,200.00
5	Gold River TS Upgrade			$ 688,859.00				$ 688,859.00
6	Tahsis Landfill Closure	$ 530,000.00				$ 130,000.00	$ 1,735,000.00	$ 2,395,000.00
7	Tahsis Transfer Station			$ 676,936.00				$ 676,936.00
8	Zeballos Landfill Closure	$ 190,000.00				$ 80,000.00	$ 922,500.00	$ 1,192,500.00
9	Zeballos Transfer Station			$ 676,936.00				$ 676,936.00
10	Sayward Landfill Closure		$ 90,000.00	$ 300,000.00				$ 390,000.00
11	Cortes Island Closure		$ 90,000.00	$ 300,000.00				$ 390,000.00
	Total	$ 6,143,677.00	$ 9,391,376.00	$ 9,886,251.00	$ 13,066,646.00	$ 3,409,210.00	$ 7,142,863.00	$ 49,040,023.00

Table 4 Notes:

1 - 9 Engineers construction costs estimates with contingency and budget factors as noted

1 2014 SCS final engineers construction Class A estimate. 2015 - 2018 SCS Class C estimates (includes: 30% contingency, 15% budget factor, no CQA and PM (10% construction)

2 EBA 95% engineer construction Class A estimate (includes: contingency 10%, CQA and PM, 15% budget factor); 2019 EBA Class C estimate (includes: 30% contingency, no CQA and PM, 15% budget factor)

3 2017 AECOM Class D construction estimate.

4 2015 EBA Class C estimate (30% contingency, 20% budget factor, PM CQA/QC included); 2018, 2019 EBA Class C estimate (30% contingency, budget factor, PM CQA/QC included)

5 2016 AECOM Class B construction estimate (20% contingency, 20% budget factor)

6 2018, 2019 EBA Class C estimate (30% contingency, budget factor, PM CQA/QC included)

7 2016 AECOM Class B construction estimate (20% contingency, 20% budget factor)

8 2018, 2019 EBA Class C estimate (30% contingency, budget factor, PM CQA/QC included)

9 2016 AECOM Class B construction estimate (20% contingency, 20% budget factor)

10 Staff approximation; to be adjusted when third party liability table available (wells $50,000, Eng. $20,000, test pits $10,000, surveys $10,000)

11 Staff approximation; to be adjusted when third party liability table available (wells $50,000, Eng. $20,000, test pits $10,000, surveys $10,000)

Table 5. 2015 FP Aug, 2014

Item	Item	2014 CFWD	2015 New Capital	2016	2017	2018	2019	Total Budget
1	Campbell River Closure		$ 350,000.00	$ 9,200,000.00		$ 125,000.00	$ 3,450,000.00	$ 13,125,000.00
2	Comox Valley Closure	$ 15,000.00	$ 8,000,000.00			$ 105,000.00	$ 2,500,000.00	$ 10,620,000.00
3a	Comox Valley New Landfill Expansion (3m excavation)	$ 150,000.00	$ 600,000.00	$ 100,000.00	$ 16,100,000.00			$ 16,950,000.00
3b	Comox Valley New Landfill Expansion (8m excavation)	$ 150,000.00	$ 600,000.00	$ 100,000.00	$ 20,700,000.00			$ 21,550,000.00
4	Gold River Landfill Closure		$ 604,200.00			$ 130,000.00	$ 2,132,000.00	$ 2,866,200.00
5	Gold River TS Upgrade			$ 688,859.00				$ 688,859.00
6	Tahsis Landfill Closure					$ 130,000.00	$ 1,735,000.00	$ 1,865,000.00
7	Tahsis Transfer Station			$ 676,936.00				$ 676,936.00
8	Zeballos Landfill Closure					$ 80,000.00	$ 922,500.00	$ 1,002,500.00
9	Zeballos Transfer Station			$ 676,936.00				$ 676,936.00
10	Sayward Landfill Closure					$ 90,000.00	$ 300,000.00	$ 390,000.00
11	Cortes Island Closure					$ 90,000.00	$ 300,000.00	$ 390,000.00
	Total Excluding 3b	$ 165,000.00	$ 10,154,200.00	$ 11,442,731.00	$ 16,100,000.00	$ 750,000.00	$ 11,339,500.00	$ 49,251,431.00
	Total Excluding 3a	$ 165,000.00	$ 10,154,200.00	$ 11,442,731.00	$ 20,700,000.00	$ 750,000.00	$ 11,339,500.00	$ 53,851,431.00

Table 5 Notes:

1 - 9 Engineers construction costs estimates with contingency and budget factors as noted below.

1 2015 SCS revised engineering design costs; 2016 and 2019 SCS Class C estimates (includes: 30% contingency, 15% budget factor, CQA/QA and PM)

2 2015 EBA Class A construction estimate (10% contingency, CQA/QC and PM, 15% budget factor); 2019 EBA Class C construction estimate, CQA/QC and PM, 15% budget factor)

3a 2015 EBA design (includes new work - leachate facility $450,000); 2017 EBA Class C construction estimate (contingency 30%, CQA and PM, 15% budget factor); 2019 EBA Class C construction estimate (CQA/QC and PM, 15% budget factor)

3b Same as 3a with exception: 5 meters more excavation, approximate capital cost difference = 4 m + 2 m operation = approximately 6 million more and will yield over 23 million in additional tipping fees @ $90.00/tonne of additional waste

4 2015 EBA Class C estimate (30% contingency, 15% budget factor, PM CQA/QC); 2019 EBA Class C estimate (30% contingency, budget factor, PM CQA/QC)

5 2016 AECOM Class B construction estimate (20% contingency, 20% budget factor)

6 2019 EBA Class C estimate (30% contingency, budget factor, PM CQA/QC)

7 2016 AECOM Class B construction estimate (20% contingency, 20% budget factor)

8 2019 EBA Class C estimate (30% contingency, budget factor, PM CQA/QC)

9 2016 AECOM Class B construction estimate (20% contingency, 20% budget factor)

10 Staff approximation; to be adjusted when liability table available (wells $50,000, Eng. $20,000, test pits $10,000, surveys $10,000)

11 Staff approximation; to be adjusted when liability table available (wells $50,000, Eng. $20,000, test pits $10,000, surveys $10,000)

Table 1 - 5 Notes Definitions:

PM - Project Management

CQA - Construction Quality Assurance

QC - Inspection of construction methods and quality

budget factor - increase added by CSWM to assure appropriation is sufficient

Cost Estimate Classification Definitions

It is important to recognize that, until a project is actually constructed, a cost estimate represents the best judgment of the professional engineer in the light of their experience and knowledge and the information available at the time. Its completeness and accuracy is influenced by many factors, including the project status and development stage.

Estimates have a limited life, and are subject to inflation and fluctuating market conditions as well as scope variation.

Class A estimate (±10-15%): A detailed estimate based on quantity take-off from final drawings and specifications. It is used to evaluate tenders or as a basis of cost control during day-labor construction.

Class B estimate (±15-25%): An estimate prepared after site investigations and studies have been completed and the major systems defined. It is based on a project brief and preliminary design. It is used for obtaining effective project approval and for budgetary control.

Class C estimate (±25-40%): An estimate prepared with limited site information and based on probable conditions affecting the project. It represents the summation of all identifiable project elemental costs and is used for program planning, to establish a more specific definition of client needs and to obtain preliminary project approval.

Class D estimate (±50%): A preliminary estimate which, due to little or no site information, indicates the approximate magnitude of cost of the proposed project, based on the client's broad requirements. This overall cost estimate may be derived from lump sum or unit costs for a similar project. It may be used in developing long term capital plans and for preliminary discussion of proposed capital projects.