

DATE: September 15, 2022

FILE: 5330-20/SESP

TO: Chair and Directors
Electoral Areas Services Committee

FROM: Russell Dyson
Chief Administrative Officer

Supported by Russell Dyson
Chief Administrative Officer

R. Dyson

RE: Sewer Extension South – Value Management Workshop

Purpose

To present information on a Sewer Extension South value management workshop for the Electoral Areas Services Committee's consideration.

Recommendation from the Chief Administrative Officer:

This report is for information only.

Executive Summary

Comox Valley Regional District (CVRD) policy P90, Value Management Review of Capital Projects (Appendix A), was adopted by the CVRD Board in June 2022. Adoption of this policy was an outcome of the utilities governance review completed for the Comox Valley Water Committee and Sewage Commission, and followed the successful utilization of value management reviews for the Water Treatment and Sewer Conveyance projects. The policy is to apply to all capital projects identified in the financial plan where total project costs exceed \$25.0M.

Value management planning involves a systematic and function-based review of a project by a multidisciplinary team of subject matter experts. This third-party review also improves accountability and transparency through the decision-making process for large capital projects, providing an enhanced level of confidence that the selected project approach is the best alternative.

While a value management review can be completed at any phase in a project, a review completed earlier in the project will result in less resistance and lower costs to adjust the project to reflect the outcome of the review. The Sewer Extension South project is in a preliminary design stage, and as such is in a good position to benefit from a value management review process. While the project is not yet identified in the financial plan, the following factors provide additional support to undertake a value management review in the near term:

- The total project costs are anticipated to exceed \$25.0M by a significant margin.
- WSP preliminary design and cost estimates for the pump stations and forcemain are near completion and will be available to the value management planning team.
- Technical and Public Advisory Committee and public engagement for the Sewer Extension South Liquid Waste Management Plan addendum will be underway with several meetings left to consider the results of the value management review.
- The Investing in Canada Infrastructure Program – Environmental Quality (ICIP-EQ) grant application for the project was submitted in February 2022. The provincial ICIP-EQ webpage currently indicates that final grant decisions are anticipated in spring 2023.
- The ICIP-EQ program guide indicates that for projects with a total eligible cost exceeding \$15.0M and of a sufficiently complex nature, a value engineering assessment may be required

on a case-by-case basis at the discretion of the Province. Based on these criteria, there is considerable likelihood that a value engineering assessment will be required for the Sewer Extension South project, and having it completed in the near term would allow for it to be submitted for consideration by provincial grant program staff.

In light of the current status of the Sewer Extension South project and the considerations listed above, staff will be working with Strategic Value Solutions (the value engineering consultants used for Water Treatment and Sewer Conveyance projects) to have a value management process completed this fall. Approximate cost of the value management process is \$150,000, which will be funded through existing budget allocations for Sewer Extension South in the approved financial plan for Electoral Area A Baynes Sound Feasibility Studies service, function 151 (\$685,079).

Prepared by:

V. Van Tongeren

Vince Van Tongeren
Environmental Analyst

Concurrence:

D. Monteith

Darry Monteith
Manager of Liquid Waste
Planning

Concurrence:

M. Rutten

Marc Rutten, P.Eng.
General Manager of
Engineering Services

Government and Community Interests Distribution (Upon Agenda Publication)

Comox Valley Sewage Commission	✓
K'ómoks First Nation	✓

Attachments: Appendix A – CVRD policy P90, Value Management Review of Capital Projects

Policy Title: Value Management Review of Capital Projects		Policy Number: P90
Policy Category: Engineering		
Approval Date: June 28, 2022		Policy Owner: Engineering Services
Approved by: Sewage Commission Water Committee		File Reference: 0340-50

PREAMBLE

1. A value management policy that incorporates third party professional oversight has been developed for the Comox Valley Regional District capital projects as a result of the successful experience in implementing value management practices on the Comox Valley Water Treatment and Sewer System Conveyance Projects, the need identified through the Utilities Governance Report to increase the level of expertise in the decision making process, and to provide additional accountability and transparency through the decision making process for large or complex capital projects.

PRINCIPLES

2. Value management reviews are becoming part of best practices for large capital project development as they are widely recognised in enabling:
 - a. The assessment and enhancement of functional performance;
 - b. Identification and evaluation of possible alternatives that add value; and
 - c. Increased confidence for decisions and investment.

PURPOSE

3. Value management reviews are a systematic and function-based approach to improve the value of projects by utilizing a multidisciplinary team of subject matter experts to analyze and review the project functions. In addition application of value management principles on large capital projects provides accountability and transparency through the decision making process.

SCOPE

4. The value management policy will apply to all capital projects where:
 - a. The project is identified within the financial plan and the total project costs are at or above \$25.0M as identified in a business case, a minimum of one Value Management review shall be conducted; or,
 - b. The project is identified within the financial plan and the total project costs are at or above \$75.0M as identified in a business case, a minimum of two Value Management reviews shall be conducted. Where two management reviews are required, at the discretion of the project manager, the design reviews shall be considered and implemented at logical stages in the project such as after options analysis/concept development and preliminary design of the preferred option; or,
 - c. The project is identified within the financial plan, is below the above noted financial thresholds but is identified by the project manager as potentially having significant impact on the public, increased complexity and associated risk or potential for impacting environmentally sensitive areas.

DEFINITIONS

Facilitator: Qualified Value Management review leader who is not the project manager, a project team member or the project sponsor, that manages and leads the Value Management Workshop and Work Plan.

Function: The intent or purpose that must be achieved by the project.

Total Project Cost: Costs that include all direct and indirect costs related to a project, including but not limited to consulting, administrative and construction expenditures.

Value: Is an expression of the relationship between the reliable performance of functions while using the least amount of resources, be it cost, time, materials required to accomplish the function.

$$Value = \frac{Function\ Performance}{Resources}$$

Value Management Workshop: The event during which the facilitator leads the multidisciplinary team through the Value Management work plan.

Value Management Work Plan: A structured set of steps or phases, to be followed during the Value Management Review. The work plan typically includes pre-workshop, workshop and post workshop activities.

POLICY

5. This policy represents the minimum requirements that must be completed as part of the Value Management review for all applicable capital projects that meet the criteria outlined within section 4 of the policy scope.
6. The timing and number of Value Management reviews shall be outlined by the Manager of Capital Projects and/or senior management at the onset of any capital project. Provided as Appendix A is further discussion on the considerations that should be made in regard to timing for the value management review based on the project phase. A plan shall be developed that includes:
 - a. Identification of the function(s) to be reviewed;
 - b. Acquisition of internal and external specialists and other resources that will participate in the review;
 - c. The necessary background documents that will be needed as part of the Value Management review;
 - d. Proposed timing of the Value Management review workshop(s); and
 - e. Schedule and timing for reviewing and presenting Value Management review outcomes.
7. Each Value Management Review work plan shall contain the following mandatory sections and related content.
 - a. Pre-Work Workshop: Gathering of all necessary and relevant background documentation and information. Providing to review team ahead of the Value Management workshop.
 - b. Value Management Workshop: The event where the value management facilitator leads the value management team through a value management workshop, to identify any alternative solutions to the project. The duration of the workshop can be adjusted to fit the scope and complexity of the project but should follow recommended best practices as outlined by Value Analysis Canada and include:
 - i. Function Analysis: Identify the functions of a project including defining, evaluating and classifying functions.

- ii. Creativity Phase: Value management team members brainstorm and generate creative ideas/alternatives to satisfy the project functions.
 - iii. Evaluation Phase: Value management team members review ideas/alternatives and evaluate which ideas have the most potential to improve value of the project and should be considered further in the development phase.
 - iv. Development Phase: Value management team members develop in sufficient detail the ideas/alternatives developed so that they can be compared against the originally proposed solution.
 - v. Presentation Phase: Developed ideas/alternatives and associated recommendations are presented to the project team for review and assessment.
- c. Post Workshop Review: Value alternative recommendations from the Value Management review will be further reviewed by the project team. All alternatives that are accepted or rejected for implementation will be documented.
 - d. Final Report Presentation: The final report will be presented to the respective Committee or Commission for consideration and approval.

ROLES AND RESPONSIBILITIES

- 8. Working in conjunction with the Manager of Capital Projects, senior management for the respective department will be responsible for identifying capital projects wherein this policy will apply. Where this policy is applicable the Manager of Capital Projects will be responsible for coordinating and conducting the necessary value management reviews.

REVISION HISTORY

Approval Date	Approved By	Description of Change

REFERENCES

- 1. SAVE International Website
- 2. Value Analysis Canada Website
- 3. Corporate Project Management, Value Management Standard V1.1, City of Calgary 2017
- 4. Corporate Project Management, Value Management Guidance V1.2, City of Calgary 2016

APPENDIX

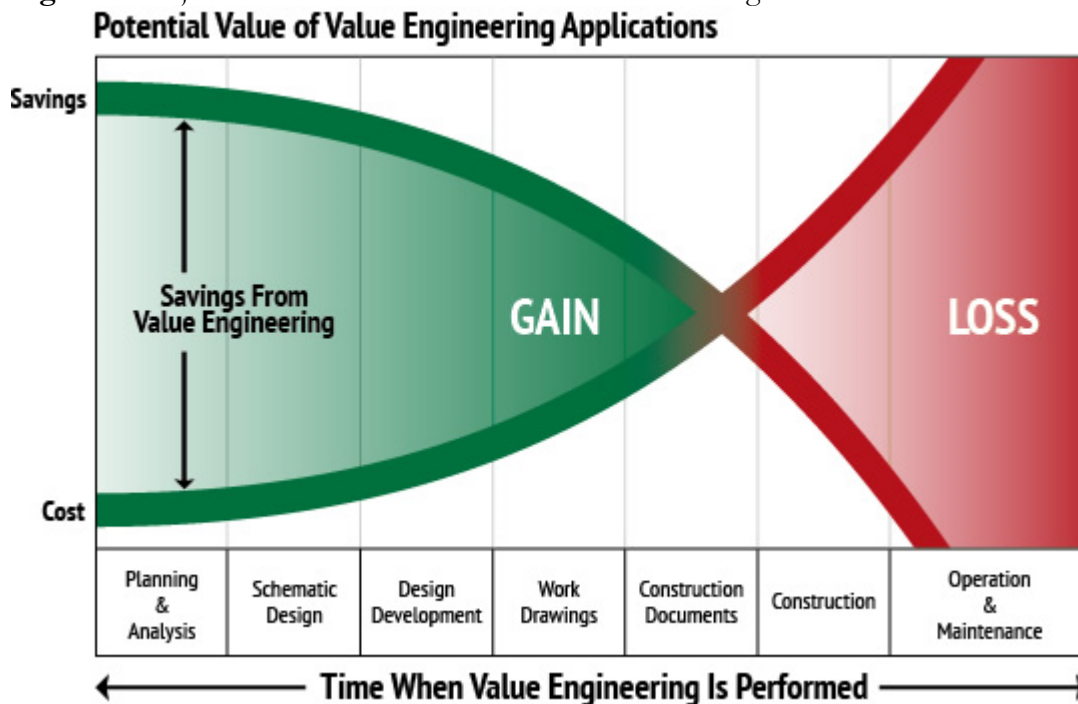
Value Management Review and Project Phase Considerations

APPENDIX A – Value Management Review and Project Phase Considerations

A Value Management Review can be undertaken at any phase in a project; however, the earlier in the project the review occurs, the lower the cost to implement any resulting changes, and resistance to change is less. It is the responsibility of the Manager of Capital Projects and/or senior management to determine for each specific project when the most logical timing to complete the Value Management Review(s).

For projects where one Value Management review is planned the best application of a Value Management review is no later than completion of the Concept or Schematic Design (15 per cent) phase, as illustrated in the figure below.

Figure 1: Project Phase and Potential Value of Value Management Review¹



Where two value management reviews are required, as outlined in the British Columbia Ministry of Transportation and Infrastructure’s Value Analysis/Value Engineering Policy and Guidelines, the two reviews are typically completed at the completion of the planning and analysis phase, when a preliminary scope has been developed following review of available options and the second review is carried out during the design development phase. As noted by Value Analysis Canada, studying a project early in its developments provides the greatest opportunity for change; however, the details and costs of the solution may not be well defined, where later in the project evolution, more information may be available supporting review and improvement of the solution being proposed. Again the exact timing of these reviews should be given careful consideration by the Manager of Capital Projects and/or senior management in relation to each specific project.

¹ UA Builders Group, “Value Engineering Overview,” 2020