

Project Report

Modular Classroom Project

JUNE 2011



Purpose of this Report

The purpose of this report is to provide key information about the Modular Classroom Project to the public. This report describes the need for the Modular Classroom Project and how it will be delivered. The report explains how different procurement delivery methods were analyzed and how project benefits and innovations are expected to be achieved. A summary of the key aspects of the agreement is also provided.

In all of its procurement processes, the Province is committed to a high standard of disclosure as part of its accountability for the delivery of public projects. Ministries, Crown corporations and other government agencies are publicly accountable for projects through regular budgeting, auditing and reporting processes.

Partnerships BC and the Ministry of Education are accountable for the contents of this project report, including the reasonableness of facts, assumptions and professional opinions that have been presented.

The focus of this project report is to provide information about the modular classroom capital component of the full day kindergarten capital plan. Other capital projects related to full day kindergarten are beyond the scope of this project report.

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1. Executive Summary and Highlights

133 MODULAR CLASSROOMS

101 SCHOOL SITES THROUGHOUT
24 SCHOOL DISTRICTS

200,000 HOURS TO PRODUCE AND INSTALL THE CLASSROOMS

The Province of British Columbia (the Province) made a commitment to provide full day kindergarten (FDK) to all five-year-olds by September 2011, to support children and working families. The Ministry of Education (the Ministry) is phasing in universal access to full day kindergarten over two years. The first phase of full day kindergarten was introduced in September 2010 and students were accommodated in existing facilities; however, additional classroom space is required to implement the second phase of full day kindergarten.

A number of options were examined to determine how to deliver additional classroom space to meet the September 2011 date, including building new schools, additions/renovations, re-opening closed schools and modular classrooms. Based on the analysis, modular classrooms were identified as the preferred service delivery option that would meet the majority of FDK classroom requirements within the September 2011 timeframe; modular classrooms were also considered a cost-effective and adaptable solution.

Modular classrooms are designed to create an optimal learning environment for students, with high ceilings and windows to maximize the amount of natural light and cross ventilation. The design and production of classrooms will feature an extensive use of wood and will be designed to be energy efficient. These modular classrooms are quality structures with a life expectancy of 40 years; modularity can be relocated or clustered in groups as demographics and educational needs change, giving school boards additional flexibility.

Following the decision to use modular classrooms to meet additional demand for kindergarten space, the Ministry analyzed procurement delivery options, including the traditional procurement method used by school districts. The analysis undertaken indicated that project objectives could best be met by using the design-build centralized delivery method.

Following a one-stage competitive process that was conducted on the principles of openness, transparency and fairness, Shelter Industries Inc. (Shelter Industries) was selected as the partner for the design, production, delivery, installation, commissioning and associated work for 133 modular classrooms.

The Ministry will provide funding to school districts to cover the costs of the modular classrooms and site works, including delivery and installation. Each school district will pay the contractor a portion of funds as each modular classroom is completed; however, the final payment will be withheld until all modular classrooms for a school district are complete. Each school district owns the modular classrooms and is responsible for maintenance.

The estimated total project cost using the design-build centralized method is \$36.6 million and is expected to achieve value for taxpayers' dollars of \$5.9 million compared to the design-build decentralized delivery method (see table on page 15 for more information on project costs). Additional benefits from the centralized procurement delivery model include:

- Schedule certainty and associated payment mechanism to incent on-time delivery of modular classrooms;
- Budget certainty through centralized management of the project budget;
- Production of consistent and high-quality classrooms across the province through the use of a standardized design;
- Flexibility in the design process while still preserving the benefits of bulk production;
- Collaboration during detailed design development that encouraged innovative solutions that were conducive to bulk production;
- Effective and efficient supply chain management with a single modular supplier; and
- Effective risk allocation and management between Shelter Industries and the Province/school districts.

7 MONTHS OF FULL-TIME
EMPLOYMENT FOR
180 B.C. WORKERS

FULL-DAY KINDERGARTEN FOR
ALL FIVE-YEAR-OLDS BY
SEPTEMBER

2011

2. Project Benefits and Key Features

The Province of British Columbia (the Province) has committed to offering full day kindergarten (FDK) to all five-year-olds by September 2011. The expansion of kindergarten requires additional classrooms to support the increased demand for facilities. Apart from the educational benefits of introducing full day kindergarten, the design and production of modular classrooms will provide school districts with an adaptable and flexible solution to meet the need for additional classrooms. These modular classrooms will be unique learning centres designed to be quality structures with a life equivalent to a standard school classroom (i.e. 40 years); modularity can be relocated or clustered in groups as demographics and educational needs change. Moreover, the classrooms can accommodate students in kindergarten through Grade 7, giving school boards additional flexibility.

Modular classrooms have been designed to create an optimal learning environment and include the following features:

- High ceilings and windows to maximize the amount of natural light and cross ventilation in the classroom;
- Ample space for learning activities and storage space for learning materials;
- Wiring for technology with built-in data outlets;
- Constructed to meet seismic safety standards in British Columbia (B.C.);
- Withstands all weather conditions throughout the province; and
- Can accommodate washroom facilities should school districts choose to install washrooms.

Wood First Act

In 2009, the Province introduced the Wood First Act to facilitate a culture of wood by requiring the use of wood as the primary building material in all new provincially funded buildings, in a manner consistent with the British Columbia Building Code. To meet the commitment of the Wood First Act, the design and production of the modular classrooms will feature a wood finish on both the exterior and interior walls of the building. Cabinets inside the classroom and student cubicles will also be constructed from wood. The extensive use of wood helps create a warm environment that showcases wood as an attractive and versatile product.

Environmental Benefits

The new modular classrooms will incorporate energy-efficient heating and cooling systems; the classrooms will be built with high-performance building envelopes to minimize operating costs and reduce greenhouse gas emissions.

Local Economic Benefits

Shelter Industries Inc. (Shelter Industries), the modular classroom supplier, will use manufacturing plants in Aldergrove and Kelowna to construct the new classrooms. Shelter Industries will lead a team of companies that will assist with the design, manufacturing, delivery and installation of modular classrooms across the province. It will take Shelter Industries approximately 200,000 hours to produce and install the new classrooms, which translates to seven months of full-time employment for 180 B.C. workers.

3. Project Background, Objectives and Scope

Project Background

Many jurisdictions in Canada and around the world either have, or are moving to provide, early learning programs for three- and four-year-olds and many offer full day kindergarten for five-year-olds. A growing body of research shows that a high-quality, play-based kindergarten program has long-term benefits for children's academic and social skills, and helps them to succeed in school and in life. Full day learning is associated with improved reading and numeracy, smoother transitions to Grade 1 and increased post-secondary graduation rates. Full day kindergarten is another step towards building a strong foundation for lifelong learning, in a nurturing, play-based environment.

Schools in B.C. have offered half-day kindergarten for many years. Some schools have also offered full-day programs for specific groups of children (Aboriginal, English as a second language and certain types of students with special needs). It has been up to school boards or individual schools to decide whether to include full day kindergarten in their educational programs. The Province made a commitment to provide full day kindergarten to all five-year-olds by September 2011, to support children and working families.

The Ministry of Education (the Ministry) has identified the following benefits of offering full day kindergarten:

- More opportunities to learn through play;
- Extended interaction with other children to help develop strong socio-emotional skills and positive self-esteem;
- Greater exposure to educational materials to help develop strong literacy skills;
- More time for teachers to meet the needs of children;
- Fewer transitions during the day; and
- More individual and small-group activities.

The Ministry is phasing in universal access to full day kindergarten over two years. Funding has been provided by the Ministry to convert more than 400 existing Grade one to Grade seven classrooms; however, additional classroom space

is required to implement the second phase of full day kindergarten by September 2011. Therefore, the Ministry engaged King & Company and Partnerships BC to assist with a facility assessment study to inventory the provincewide elementary school classroom capacity and to estimate the number of new additional classrooms required.

Upon completion of the facility assessment study, the Ministry and Partnerships BC worked together to draft a business case which examined a range of service delivery and procurement options for the new classrooms. Consultations with school districts occurred throughout the fall and winter of 2009; when that phase of consultation was complete in spring 2010, the Ministry estimated that an additional 279 new classrooms were required to meet the forecasted demand for the FDK program in 2011. The business case examined four classroom delivery options: new school construction; school additions/renovations; re-open closed schools; and, modular classrooms. Based on the analysis, modular classrooms were identified as the preferred service delivery option that would meet the majority of FDK classroom requirements within the September 2011 timeframe; modular classrooms were also considered a cost-effective and adaptable solution.

The Ministry and Partnerships BC consulted with modular building suppliers to obtain their input and feedback on procurement options for the modular classrooms. The suppliers responded positively and suggested that a centralized procurement process led by the Ministry using a standardized design would likely generate a robust competitive process. Furthermore, the suppliers estimated approximately 10 to 20 per cent of the capital costs could be saved by using a centralized procurement compared to multiple school district procurements whereby each district uses their own individual designs. Modular suppliers also recommended that responsibilities between the proponent and school districts for site planning and preparation should be clearly delineated, and site work should be undertaken well in advance to ensure the September 2011 deadline is met.

In addition to gathering feedback from modular suppliers, the Ministry engaged the support of schools districts with the creation of a Modular Advisory Committee (MAC). The MAC was comprised of school district representatives from urban, rural, large and small districts and they were tasked with providing significant input into the development of standardized design requirements for the modular classrooms. The standardized design requirements were used to provide guidance to proponent teams in areas such as energy efficiency and encouraging the use of wood in construction of the classrooms.

Project Objectives

The Ministry established the following project objectives to guide the FDK program implementation from a facility capital perspective:

- Provide additional classroom capacity required for successful implementation of FDK for the start of school in September 2011;
- Ensure adaptability to meet changing enrolments and the potential addition of Pre-K programs;
- Provide a facility solution(s) that is flexible to meet different classroom needs for students ranging from kindergarten to Grade 7;
- Ensure new facilities are high-quality and consistent with Ministry program requirements across the province;
- Provide a positive environment for students that is supportive of the Ministry's educational goals; and
- Encourage a positive work environment for staff.

The Ministry emphasized that the requirement to provide new FDK classroom facilities by the September 2011 occupancy was a critical objective in determining how the classroom space would be delivered.

Project Scope

The Ministry and school districts determined that 133 modular classrooms could be provided through a centralized delivery model and the balance through new school construction, additions and renovations and re-opening of closed schools.

The scope of the modular classroom project (the project) included the provision of 133 new modular classrooms on 101 school sites throughout 24 school districts.

School districts are responsible for the following work:

- Identifying the site for a modular classroom;
- Site planning and preparation;
- Securing permits and approvals from local authorities (e.g. development permit);
- Installing services and utilities required for connection to the modular classroom (e.g. water, hydro); and
- Classroom furniture and equipment.

The modular supplier is responsible for the design and production of the modulars, delivery and installation of the modulars to the school sites, commissioning and associated work.

The design of the modular classrooms is intended to provide a high-quality educational environment comparable to a traditionally built classroom, with an expected life of 40 years. Modular classrooms may be installed permanently or, if required, relocated in response to changing enrolment demands. The modular classrooms will be designed to support the sustainability goals of the Province; greenhouse gas emissions will be reduced through the use of an energy efficient mechanical system and by specifying low volatile organic compound (VOC) materials. The modular classrooms will be designed for operational flexibility with heating and cooling systems suitable for all climatic conditions throughout the province.

The design of the modular classrooms will also be consistent with and support the Wood First Act. Wood is prescribed as the building material of choice and opportunities have been identified to showcase wood treatments in millwork and wood paneling on both the interior and exterior walls of the modular classroom.

4. Project Delivery Options

The Ministry of Finance has mandated through its Capital Asset Management Framework that the following principles guide all public sector capital procurement:

- Fairness, openness and transparency;
- Allocation and management of risk;
- Value for money and protecting the public interest; and
- Competition.

The Ministry and Partnerships BC undertook a procurement options assessment to determine an optimal procurement method for the project.

Methodology

The evaluation of project delivery options is focused on identifying the method of delivering a project that will result in the greatest value for taxpayers' dollars on both a quantitative and qualitative basis.

For the modular classroom project, the procurement options analysis began with identifying the Ministry's key procurement objectives and providing a qualitative assessment of a range of procurement options. The purpose of this assessment was intended to identify the two most appropriate delivery methods for new classrooms which then formed the basis of comparison.

Project Procurement Objectives

The following procurement objectives were developed by the Ministry and Partnerships BC, and used to help identify and assess procurement options.

PROCUREMENT OBJECTIVE	DESCRIPTION
Educational Program Delivery	Degree to which the procurement option minimizes impacts of installation of classrooms on ongoing educational programs and school operations.
Innovation	Degree to which the procurement option fosters opportunity for innovation in design and project delivery to support educational goals, and to provide flexibility and adaptability for changing environments.
School Integration	Degree to which the procurement option supports the provision of additional classroom space that can be readily included at existing elementary schools and expanded as a companion modular learning centre.
Operational Reliability	Degree to which the procurement option provides a high-quality classroom that minimizes the frequency of building and system performance failures and their associated impacts on educational program delivery.
Constructive Working Relationships	Degree to which the procurement option enables and leverages the strengths of the Ministry and school districts to support successful project completion.
Schedule Certainty	Degree to which the procurement option is likely to deliver the project by the required September 2011 occupancy date.
Sustainability	Degree to which the procurement option is able to achieve Provincial requirements for building sustainability in a manner that is appropriate for an elementary school environment (e.g. Wood First).
Cost Effectiveness	Degree to which the procurement option makes the best use of taxpayers' dollars.

Procurement Options Analyzed

The Ministry and Partnerships BC explored different procurement options for the modular classroom project including a design, build, finance and maintain public private partnership method. However, preliminary analysis of the partnership method indicated it should be excluded from the detailed procurement options analysis for the following reasons: insufficient value for money and market feedback on challenges in providing facilities maintenance services to numerous locations throughout the province.

Based on the procurement objectives for the modular classroom project, the Ministry and Partnerships BC focused on the following two procurement options for detailed analysis:

1. Design-build (DB) centralized: This option assumes a single procurement process managed by the Ministry, based on a standardized design and specifications developed in consultation with school districts. In this option, the modular supplier would design, build, deliver, install and commission the modular classrooms, and provide an industry standard warranty. Maintenance and repair of the modular classrooms would be the responsibility of school districts.

The supplier would enter into a master agreement with the Ministry and a standardized contract with each school district. The Ministry would provide funding to each school district for the purchase, delivery and installation of each modular classroom. The payment mechanism would be performance-based to incent timely project completion across all school districts; in addition, the final payment from a school district to the modular supplier would be withheld until all modular classrooms for that school district are complete. Site planning, preparation and provision of furniture and equipment would be the responsibility of the respective school districts within the budget allocation funded by the Ministry.

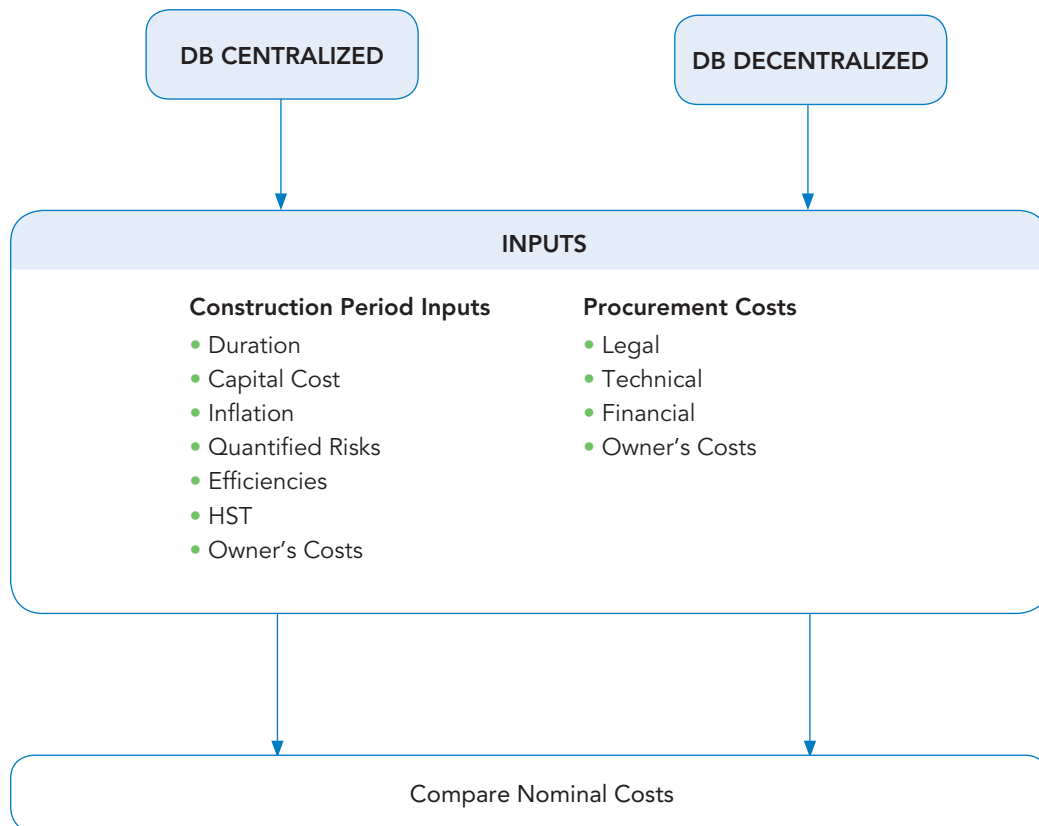
2. Design-build (DB) decentralized: This option is the status-quo capital project process used by the Ministry and school districts. This option assumes that each school district would work independently to develop its own modular design and specifications, and manage the procurement and project implementation process.

Each school district would enter into its own contract with a supplier and other contractors required for delivery and installation services, with progress payments being made upon completion. Performance incentives would be limited to liquidated damages that may be claimed by an individual school district in response to an individual contract. Site planning and preparation, and in some cases delivery and installation, would be completed by the respective school districts. Maintenance and repair of the modular classrooms would be the responsibility of school districts. Furniture and equipment would be provided by the school districts within the budget allocation funded by the Ministry.

Quantitative Analysis

The next step in the procurement options analysis involved a quantitative analysis that compared the selected procurement methods. To do this, a financial model was developed for the project based on a traditional procurement method (DB decentralized) which was then compared to a financial model created based on an alternative method (DB centralized). The financial models included a comprehensive risk analysis of each procurement method thereby resulting in comparable total project costs for each.

The following diagram illustrates the financial modeling approach undertaken for the project.



Construction of the modular classrooms at the Shelter Industries plant in Aldergrove, B.C.

Recommended Procurement Option

Based on the procurement options analyzed, the DB centralized method was recommended as the preferred procurement option; this method is expected to result in lower overall project costs and is best able to support the qualitative objectives of the modular classroom project compared to the DB decentralized procurement method.

Achieving Value for Money

Value for money is a broad term that captures both the quantitative and qualitative benefits that are expected to be achieved by the decision to deliver the project using a particular procurement method. Quantitative value for money is achieved through the lower cost of a project resulting from a

particular procurement method. Qualitative value is achieved when a particular procurement method is best able to support the qualitative goals and objectives of a project.

In the case of the modular classroom project, value for taxpayers' dollars was established by calculating the total nominal cost of the project to the Ministry rather than the net present cost of the project. Net present cost methodology is typically used when comparing different cash flows between a public private partnership delivery method and a traditional delivery method.

The conclusions of the analysis based on total nominal cost are valid because the project does not include long-term cash flows such as financing, life cycle costs and facilities maintenance.



Modular classrooms are designed to create an optimal learning environment for students, with high ceilings and windows to maximize the amount of natural light and cross ventilation.

5. Competitive Selection Process and Results

With a limited number of modular building suppliers, the competitive selection process for the modular classrooms was undertaken as a one-step Request for Proposals (RFP) process¹. The RFP was posted on BC Bid; interested proponents were invited to prepare and submit proposals for the design, production, delivery, installation, commissioning and associated work for modular classroom solutions to support the implementation of the FDK program.

The initial draft master agreement and initial draft modular classroom contract were issued with the RFP; proponents were encouraged to review the contracts and identify any issues that needed to be clarified or amended. A final master agreement and final modular classroom contract were issued prior to the closing date of the RFP and thus formed the basis for final contract negotiations.

The table below outlines the competitive selection process and timelines.

PROCUREMENT STAGE	TIMING	OUTCOME
Request for Proposals	June 14, 2010 - August 3, 2010	The project was marketed provincially and nationally and received interest from jurisdictions across North America. Three proposals were submitted.
Selection of Preferred Proponent	September 3, 2010	Shelter Industries of Aldergrove was selected as the preferred proponent.
Contract Award	October 7, 2010	A master agreement was signed between the Ministry and Shelter Industries Inc.

RFP Process and Evaluation of Proposals

An evaluation committee was appointed by the Ministry to evaluate the proposals and identify the preferred proponent. Three proposals were received in response to the RFP; however, upon review of the proposals, the evaluation committee determined that one proposal did not comply with the mandatory requirements and therefore was not evaluated.

The remaining two proposals were evaluated and Shelter Industries was selected as the preferred proponent, having submitted the lowest proposal price that substantially met the requirements set out in the RFP.

Affordability Ceiling

The RFP included an affordability ceiling to indicate to the market the amount of funding available for the project. The affordability ceiling was set at \$26 million in nominal dollars, which represented the middle of the estimated range of costs based on a standardized design. The final agreement with Shelter Industries has a nominal capital cost that exceeds the affordability ceiling; however, it falls within the range of the capital cost estimates.

Fairness Advisor

A fairness advisor, Owen Pawson of Miller Thomson LLP, was engaged to monitor the competitive selection process and offer an assessment about whether or not the selection process was carried out in a fair and reasonable manner. The fairness advisor was provided access to all documents, meetings and information related to the evaluation processes throughout the RFP stage.

¹The RFP document is publicly available at www.partnershipsbc.ca

The fairness advisor was satisfied with the RFP process and concluded that the evaluation process was conducted in a fair manner, without bias toward any proponent. The report of the fairness advisor is publicly available at www.partnershipsbc.ca.

Competitive Selection Costs

The total competitive selection cost for the modular classroom project covering the period from approval of the business case to final agreement is approximately \$533,000. Competitive selection costs include procurement costs and business and legal advisory costs.



One section of a modular classroom unit, destined for a school site in Sooke, is loaded onto a BC Ferry.

6. The Master Agreement and Modular Classroom Contract

Contract Cost

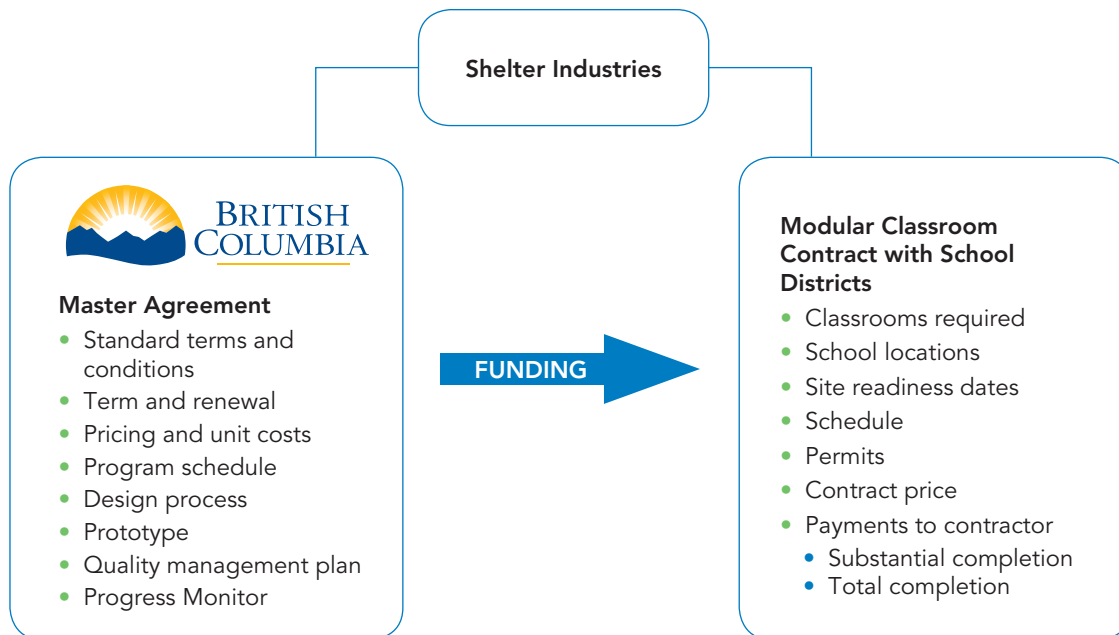
The final contract with Shelter Industries for the design, production, delivery, installation, commissioning and associated work for the 133 modular classrooms is fixed at \$28.5 million.

Profile of Shelter Industries Inc.


Shelter Industries of Aldergrove, B.C. has been a supplier of modular building solutions to clients throughout B.C., the Pacific NW region and internationally for 25 years. Shelter Industries will use manufacturing operations in Aldergrove and Kelowna to construct the modular classrooms and will lead a team of companies to complete the project.

Key Terms of the Master Agreement and Modular Classroom Contract

Shelter Industries has signed a master agreement with the Ministry for the design, production, delivery, installation, commissioning and associated work for the modular classrooms. The master agreement outlines the design and construction requirements for the modular classrooms (the statement of requirements), the prototype and design review process and common terms and conditions including the term of the contract.



Shelter Industries has signed a standard modular classroom contract with each school district. The term of the modular classroom contract commences on signing and concludes on completion of the warranty, which is a standard warranty of 12 months from the date upon which the classrooms are occupied, plus extended warranties from subcontractors/suppliers.



BRITISH COLUMBIA

Master Agreement

Appendix 1

- Modular Classroom Contract Template

Appendix 2

- Pricing and schedule commitments

Appendix 3

- Program schedule

Modular Classroom Contract with School Districts

Schedule A - Order Summary

- A1 - School Site Information Sheets
- A2 - Schedule of Prices
- A3 - Milestone Schedule
- A4 - Time Schedule

Schedule B - Statement of Requirements

Schedule C - General Conditions

Schedule D - Insurance Conditions

Schedule E - Key Personnel

Schedule F - Proposal Extracts

Drawings and specifications reviewed under the Master Agreement

The Ministry will provide funding to school districts to cover the costs of the modular classrooms and site works, including delivery and installation. Each school district will pay the contractor a portion of funds as each modular classroom is completed; however, the final payment will be withheld until all modular classrooms for a school district are complete. Each school district owns the modular classrooms and is responsible for cleaning and maintaining the modular classrooms.

QUICK FACTS	
Business Partner	Shelter Industries Inc.
Owner of modular classrooms	School districts
Completion date	July 31, 2011
Master agreement term (with an option to extend)	October 7, 2010 - March 31, 2012
Funding source	Province provides funding to school districts
Options	Province can order additional classrooms until March 31, 2014

Scope Contracted with Shelter Industries

Shelter Industries is responsible for the following:

- Design and production of 133 modular classrooms based on the design requirements established in the master agreement;
- Delivery, installation and commissioning of the modular classrooms to 101 school sites in 24 school districts across the province, including connection to services and utilities;
- Ensuring permits and approvals related to design, construction, delivery and installation are obtained and supporting school districts with the application process for development, variance, building and zoning permits;
- Performance bonding issued by an acceptable surety company; and
- Site inspections to identify any issues before the modular classrooms are delivered.

REGIONAL SUMMARY OF MODULAR CLASSROOMS AS PER THE RFP

	SCHOOL DISTRICTS	SCHOOL SITES	CLASSROOMS
Lower Mainland	11	58	74
Fraser Valley	4	8	8
Okanagan	3	12	17
Interior	1	1	1
Northern B.C.	1	2	2
Vancouver Island	4	20	31
Total	24	101	133

Risk Allocation Summary

The master agreement for the modular classroom project includes risk allocation provisions over the duration of the contract. One of the features of the centralized procurement is the ability of the Ministry to manage risk allocation with school districts through the master agreement, in conjunction with the modular classroom contract between school districts and Shelter Industries. This approach allocates risk to the party best able to cost-effectively manage that risk. It ensures greater accountability for performance as payments to Shelter Industries are conditional on specified delivery dates for the modular classrooms being met.

For example, the master agreement outlines the steps for planning and confirming site readiness. This process allows for a cost-effective substitution of ready sites for late sites with logistics management being provided by Shelter Industries, which helps to mitigate challenges associated with site readiness.

ALLOCATION OF KEY RISKS FOR THE MODULAR CLASSROOM PROJECT

RISK	PUBLIC SECTOR (MINISTRY AND SCHOOL DISTRICTS)	SHELTER INDUSTRIES
Site planning	✓	
Site preparation	✓	
Functionality of design		✓
Cost		✓
Shortages of labour and materials		✓
Schedule		✓
Scope changes initiated by owner	✓	
Delivery		✓
Installation		✓
Commissioning		✓
Warranty		✓
Life cycle maintenance	✓	

Quantitative Benefits

The nominal capital cost of the modular classroom project using the DB decentralized delivery method is estimated to be \$34.1 million whereas the final agreement with Shelter Industries has a nominal capital cost of \$28.5 million. The difference in the capital costs between the two delivery methods is based on the efficiencies gained from a centralized procurement that uses a standardized design, achieves economies of scale and eliminates multiple school district procurements. Both capital cost numbers are adjusted for risk; as well, project management, procurement and implementation costs are added to the capital costs for both delivery methods. Therefore, the estimated total project cost is \$42.5 million for the DB decentralized compared to \$36.6 million for the DB centralized method. The project is estimated to achieve value for taxpayers’ dollars of \$5.9 million. A high-level comparison of these numbers is provided in the table below.

NOMINAL COSTS (\$ MILLIONS)	DB CENTRALIZED	DB DECENTRALIZED
Capital Costs	28.5	34.1
Risk Adjustment	5.6	5.8
Project management costs including HST, procurement and implementation	2.4	2.6
Total	36.6	42.5
Cost Differential		5.9
Percentage savings from DB Centralized		16%

Additional Benefits

There are numerous qualitative benefits for the Ministry with the DB centralized procurement compared to the DB decentralized procurement, including:

- Schedule certainty with a centralized procurement and associated payment mechanism to incent on time delivery of modular classrooms—a critical project objective for the Ministry;
- Budget certainty for the Ministry through centralized management of the project budget;
- Production of consistent and high-quality classrooms across the province through the use of a standardized design;
- Flexibility in the design process to give school districts some choice in selecting finishes and materials while still preserving the benefits of bulk production;
- Collaboration during detailed design development that allowed Shelter Industries to propose innovative solutions that were conducive to bulk production;
- Effective and efficient supply chain management with a single modular supplier (i.e. production, delivery and installation); and
- Effective risk allocation and management between Shelter Industries and the Province/ school districts.

7. Ongoing Project Monitoring

Project Board

A project board has been established to provide guidance and oversight for the implementation of the full day kindergarten project, including the modular classroom component. Members of the project board include representatives from the Ministry of Education, the Ministry of Transportation and Infrastructure and Partnerships BC.

Ministry of Education

Under the terms of the master agreement, the Ministry appoints a representative to provide progress monitoring services. The role of the progress monitor is to provide the Ministry with monthly monitoring reports on the status of work under each modular classroom contract. For example, site planning and preparation milestones, fabrication, delivery, installation and commissioning milestones for the modular classrooms, and other construction project milestones and indicators. The progress monitor acts as a liaison between school districts, Shelter Industries and the Ministry to identify any performance issues that may arise during the project. In addition, the progress monitor will provide the Ministry with updates on the status of all capital projects related to the implementation of full day kindergarten throughout the province. The progress monitor has been hired as a contractor for the Ministry and will be retained for the duration of all capital projects related to full day kindergarten.



The interior of a modular classroom, showcasing wood treatments in millwork and wood paneling on the interior walls.

8. Glossary of Terms

Business Case: Document prepared in British Columbia by a project owner demonstrating the need and cost/benefit of a project, in addition to supporting a procurement method and providing an overview of the accounting impacts that a project may have.

Design-build centralized: A single procurement process managed by the Ministry of Education based on a standardized design and specifications developed by the Ministry and school districts, for the design, production, delivery, installation and commissioning of modular classrooms.

Design-build decentralized: Multiple procurement processes managed by individual school districts using multiple contractors for design, production, delivery, installation and commissioning of modular classrooms.

Fairness Advisor: An independent third party engaged to monitor the competitive selection process and offer an assessment about whether or not the selection process was carried out in a fair and reasonable manner.

Modular Advisory Committee: A number of school districts representing urban, rural, large and small districts participated on the Modular Advisory Committee. This committee provided significant input into the development of standardized design requirements for the modular classrooms.

Ministry of Education: The Ministry of Education provides leadership and funding to the K-12 education system through governance, legislation, policy and standards. The K-12 system serves approximately 580,000 public school students, 69,000 independent school students, and 2,400 home-schooled children.

Net Present Cost (NPC): NPC refers to the value of periodic future cost outlays when they are expressed in current, or present day, dollars by discounting them using the discount rate.

Nominal dollars: Price or value expressed in current dollars which includes the effects of inflation.

Partnerships British Columbia (Partnerships BC): Partnerships BC was established by the Province of British Columbia to plan, structure and implement partnership delivery solutions which are expected to achieve value for money.

Preferred Proponent: A proponent selected from a short-list of bidders to enter into negotiations with a project owner to reach financial close and deliver a project.

Procurement Decision: The decision by an owner to procure a project in a particular way in order to achieve value for money.

Progress Monitor: The designated liaison appointed by the Ministry of Education responsible for providing complete and timely information about the status of individual full day kindergarten projects in school districts across the province.

Public Private Partnership (PPP): Public sector infrastructure is procured using a long-term performance-based agreement with a private sector partner to deliver and maintain an infrastructure asset, including significant, upfront capital investment.

Request for Proposals (RFP): The RFP is a legal document that invites interested teams to participate in a competitive process and submit a comprehensive proposal that includes the design, construction, delivery and installation of modular classrooms across the province.

School Districts: There are 60 school districts in the Province. The School Act establishes and describes the functions and authorities of school districts. Each school district is a separate legal entity responsible for providing educational services.

Standardized design requirements: The design requirements give guidance to the proponent teams. For example, encouraging the use of wood on walls and ceilings, incorporating energy-efficient mechanical and electrical systems and constructing the modulars to meet seismic requirements and adapt to many climatic regions throughout the province.

Traditional Procurement: Methods by which the public sector has traditionally procured projects in B.C, through design bid build (DBB), or a combination of DBB and design build (DB) contracts.

Value for money (VFM): Also commonly referred to as value for taxpayer dollars, VFM describes the benefits to the public expected to be realized through a particular procurement method, and can be quantitative and/or qualitative in nature. Quantitative value for money is achieved through the lower cost of a project resulting from a particular procurement method, whereas qualitative value is achieved when a particular procurement method better supports the goals and objectives of a project without necessarily costing less.



Workers complete the installation of the second half of a modular classroom at Herbert Spencer Elementary in New Westminster.



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