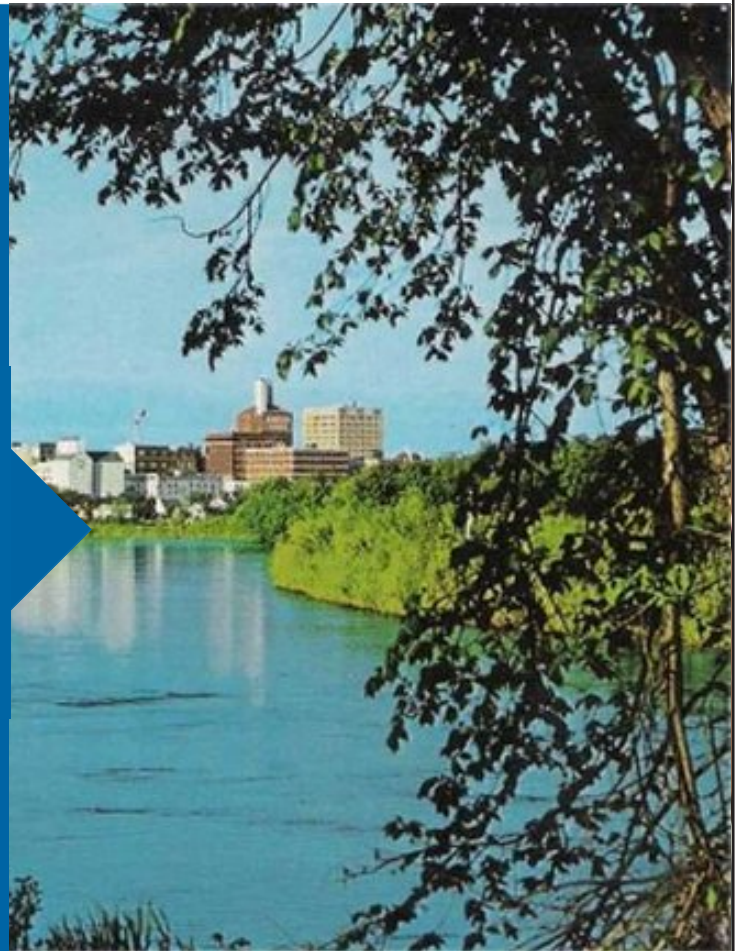


Capital Needs Data

Prepared for  
**BRANDON DSB**

June 4, 2015





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**Presented by**

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## Background on Brandon School Division Capital Needs Data

Brandon School Division began working with the Ameresco Asset Sustainability Group (AASG) in 2012 to track the capital needs of all its sites for capital budgeting and strategic planning.

The Ameresco Asset Sustainability Group (AASG) offers services in facility renewal management, capital planning, strategic capital creation strategies, facility condition assessments, and intelligent software solutions. Our success is driven by an innovative approach that helps clients achieve true “Asset Sustainability.” While many asset management firms can track a list of facility deficiencies, we also bring processes and tools that use that information to invest limited funds for the greatest impact, identify new sources of capital and generally “sustain” those assets for the long term.

### Where did this data come from?

The data was developed in two critical steps.

First Brandon created life cycle models of each asset using Ameresco’s AssetPlanner™ software. AssetPlanner contains a library of building templates for a range of different K-12 building types (elementary schools, high schools, administration buildings, portables, etc.) Each building template provides an initial estimate of what components are likely to exist in the building, how long they are projected to last, and how much they will cost to replace at the end of their life.

Applying these templates to the specifics of each BSD building (based on its age, size, and type) creates a consistent structure for capital needs analysis. All assets, regardless of how much additional data is available, then have at least a minimum estimate as to which components should be there, and in what condition. Life cycles and costs are based on industry standard guides such as RS Means coupled with Ameresco’s real-world experience in developing costing for new construction and building renewal. The life-cycle assumptions also form the basis for a replacement schedule for all major building systems, which is then used to calculate funding requirements.

Next, the modeled data was validated and improved by conducting phone-based interviews with staff who have deeper and direct knowledge about the assets to can confirm additional inventory details, component replacement years, recent upgrades, improvements and known deficiencies.

At this stage we also incorporated information such as prior assessments and reports (i.e. Roofing reports and 5 year capital request forms) where the data was available in an easily accessible format.

## What data is included in the analysis?

AssetPlanner™ contains a list of each of BSD's 24 **sites**. For each site, it stores basic asset details such as:

AssetPlanner™  
tracks Details  
about each asset

- Construction Year
- Size
- Address
- # of stories
- Narrative description
- Replacement value (construction cost, not land value)

Also for each site, AssetPlanner™ includes a list of the building **components** that exist in the building such as the roof, walls, windows, heating system, life safety systems, interior elements (floors, ceilings, etc.) and so on. A typical K-12 school has about 60 components.

For each component AssetPlanner™ stores key information such as:

AssetPlanner™  
tracks info  
about each  
component

- Year of last replacement (or refurbishment)
- Replacement cost
- Narrative descriptions
- Condition

All components are named and organized according to the industry standard UNIFORMAT II hierarchical structure. The UNIFORMAT II approach ensures that components are named and categorized in the same way from one asset to the next and that each asset includes a similar level of detail. Having consistency ensures higher quality analysis across this large portfolio.

Then for each component, AssetPlanner™ captures the work that needs to be done to keep the component in a state of good repair and fix current deficiencies and then ultimately to replace it at the end of its life. These work items are called “**actions**” and are often referred to as Capital Needs. For each action, the data includes:

For each  
component,  
AssetPlanner™  
tracks work  
that will need  
to be done

- Action type (is it a replacement at end of life or a major repair or something else?)
- Total cost to complete the Action
- Year (when will the work need to be done?)
- Narrative descriptions
- How often the action needs to be repeated (for example, the action “replace roof” needs to be repeated every 22 years)
- Prioritization information (see below)

Some components may show only one action, which is to replace it at end of life. A roof that was replaced last year might show an action to replace the roof again in 22 years (and every 23 years thereafter). Other components may have more than one action such as a repair to fix an immediate deficiency in the current year and then a full replacement in 5 years.

Note that AssetPlanner™’s Capital Planning module stores actions that are considered “capital” spending. This module is not intended to store maintenance management data or costs associated with operational maintenance (AASG’s CMMS application can be considered for that purpose).

## Prioritization

To help Brandon School Division managers prioritize when there are more capital needs (i.e. Actions) than budget, AssetPlanner™ assigns each action a number of **Priority Points**. These points are calculated based on several factors which have been customized for BSD, including:

- Life Safety / Code Related? (actions that address life safety concerns or code issues get more points than other types of actions)
- Adverse Effect on Security? (actions that address security issues get more points)
- Risk of building shut down (actions for components whose failure could result in building shut down get more points)
- Component type (actions for critical components, such as structural, elevators, fire alarm systems, roofs, etc. get more points)
- Action type (repairs get more points than replacements because they are extending life)
- Component Condition (actions for a component in poor condition will get more points)
- Urgency (actions with high urgency get more points)
- Operation / Energy Savings (actions that result in energy or other savings get more points)

Brandon School Division can then rank all actions for a given budget year by priority in a consistent and transparent manner and ensure that budget dollars are spent on the most important items.

## Track Spending and Keep Data Current

Since the initial base data was established, BSD has continued to use AssetPlanner to keep its data up to date.

**New needs:** If a new need arises, such as an unexpected repair, users select the corresponding component in AssetPlanner and add a new Action to represent the repair.

**Changes in needs:** Sometimes an Action that was forecasted for three years in the future becomes more urgent and needs to be done this year. The user selects the corresponding Action in AssetPlanner and simply changes the Action Year to the current year.

**Completed Projects:** When a capital project, such as a roof replacement, is completed, BSD selects the corresponding Action in AssetPlanner and marks the Action as “Complete”. Then at the end of the year, those Completed Actions are archived for future reference and reporting on what work was done and for how much. At the same time a new action is created in the future to represent the next replacement at the end of the component’s life cycle.

Also at the end of the year, any Actions for the current year that were not completed (usually due to lack of funds) are “moved” to the next year to show that they are still needed, even though they have been deferred a year.

## Ameresco Asset Sustainability Group (AASG)

The Ameresco Asset Sustainability Group (AASG) provides asset-management and facility-renewal services to customers in the education, social housing, government, healthcare and commercial sectors. AASG has been working with BSD since 2012 to establish and track capital needs data for its 24 sites.

The Ameresco Asset Sustainability Group (AASG) was created to focus on facility renewal management, capital planning, strategic capital creation strategies, facility condition assessments, and intelligent software solutions. Our success is driven by an innovative approach that helps clients achieve true “Asset Sustainability.” While many asset management firms can track a list of facility deficiencies, we also bring the processes and tools to use that information to invest limited funds for the greatest impact, identify new sources of capital and generally “sustain” those assets for the long term.

In August 2012, to augment its AASG team, Ameresco acquired Fame Facility Software Solutions Inc. (FAME), a leading provider in asset management software and services with an extensive, long standing presence in Western Canada. Today, AASG’s software supports over 200 clients with over 12,000 users across the US and Canada, including the Ministry of Education in Saskatchewan and all the K-12 schools it oversees.

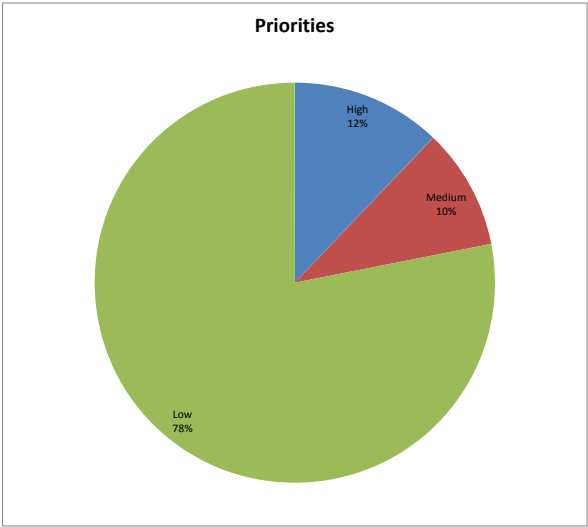
Ameresco Asset Sustainability Group is a subsidiary of Ameresco Canada. Founded in 1973, Ameresco Canada's head office is in Toronto, with branch office locations in Vancouver, Edmonton, Calgary, Ottawa, London, Windsor, Sudbury, Burlington, Montreal, and Quebec City. It is a wholly owned subsidiary of Ameresco Inc. ([www.ameresco.com](http://www.ameresco.com)) which is based in Framingham, Massachusetts and traded on the New York Stock Exchange under the symbol AMRC.

Sum of Action : Cost	Column Labels					
Row Labels	2016	2017	2018	2019	2020	Grand Total
Capital Budget	\$904,576	\$236,115	\$132,919	\$2,747,402	\$4,710,986	\$8,731,998
B-Shell	\$70,000	\$236,115		\$421,790	\$1,868,117	\$2,596,021
C-Interiors	\$385,314			\$1,314,917	\$479,636	\$2,179,866
D-Services - Electrical			\$45,888	\$270,067	\$220,066	\$536,021
D-Services - Mechanical	\$449,262		\$57,031	\$706,724	\$1,936,599	\$3,149,616
G-Building Sitework			\$30,000	\$33,905	\$206,569	\$270,473
Operating Budget	\$50,659					\$50,659
B-Shell	\$50,659					\$50,659
Section B - Renovations	\$3,310,526		\$1,679,908			\$4,990,434
B-Shell	\$3,310,526		\$1,679,908			\$4,990,434
Section C - Replacement of Systems	\$6,159,180	\$1,214,976	\$601,224			\$7,975,380
A-Substructure	\$34,322					\$34,322
C-Interiors	\$8,400					\$8,400
D-Services - Electrical	\$42,316					\$42,316
D-Services - Mechanical	\$6,074,142	\$1,214,976	\$601,224			\$7,890,342
Section D - Capital Grant for Minor Items	\$7,933,059	\$1,581,966	\$1,319,797	\$90,000		\$10,924,822
B-Shell	\$1,304,738		\$20,000			\$1,324,738
C-Interiors	\$4,498,961	\$929,736	\$341,444	\$90,000		\$5,860,141
D-Services - Electrical	\$1,347,420	\$173,318	\$453,760			\$1,974,497
D-Services - Mechanical	\$575,759	\$473,331	\$28,159			\$1,077,249
G-Building Sitework	\$206,182	\$5,580	\$476,434			\$688,196
Section E - Environmental Assistance Program	\$2,130,152	\$1,255,850	\$498,125			\$3,884,127
B-Shell	\$2,130,152	\$1,255,850	\$498,125			\$3,884,127
Grand Total	\$20,488,152	\$4,288,907	\$4,231,973	\$2,837,402	\$4,710,986	\$36,557,420

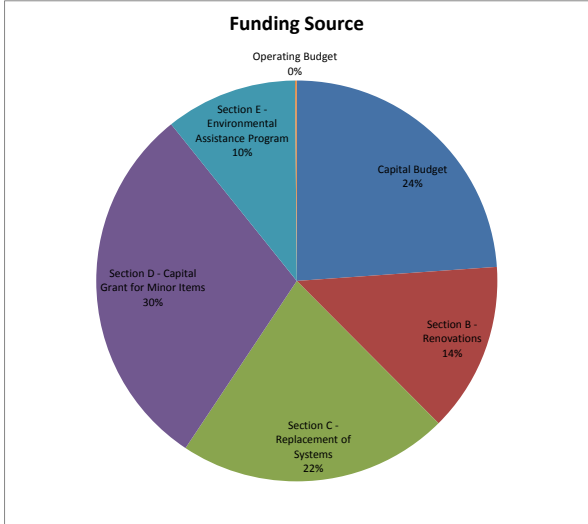
Sum of Action : Cost	Column Labels			
Row Labels	High	Low	Medium	Grand Total
A-Substructure		\$34,322		\$34,322
Section C - Replacement of Systems		\$34,322		\$34,322
B-Shell	\$2,490,752	\$9,583,195	\$772,032	\$12,845,979
Capital Budget		\$2,551,021	\$45,000	\$2,596,021
Operating Budget		\$50,659		\$50,659
Section B - Renovations	\$2,303,498	\$2,316,805	\$370,131	\$4,990,434
Section D - Capital Grant for Minor Items		\$1,324,738		\$1,324,738
Section E - Environmental Assistance Program	\$187,255	\$3,339,971	\$356,901	\$3,884,127
C-Interiors		\$8,010,008	\$38,400	\$8,048,408
Capital Budget		\$2,179,866		\$2,179,866
Section C - Replacement of Systems			\$8,400	\$8,400
Section D - Capital Grant for Minor Items		\$5,830,141	\$30,000	\$5,860,141
D-Services - Electrical	\$58,368	\$2,315,234	\$179,232	\$2,552,834
Capital Budget	\$45,888	\$490,133		\$536,021
Section C - Replacement of Systems		\$42,316		\$42,316
Section D - Capital Grant for Minor Items	\$12,480	\$1,782,785	\$179,232	\$1,974,497
D-Services - Mechanical	\$1,879,919	\$7,697,399	\$2,539,890	\$12,117,208
Capital Budget	\$57,031	\$1,861,017	\$1,231,568	\$3,149,616
Section C - Replacement of Systems	\$1,692,317	\$5,194,509	\$1,003,516	\$7,890,342
Section D - Capital Grant for Minor Items	\$130,570	\$641,873	\$304,806	\$1,077,249
G-Building Sitework		\$914,871	\$43,798	\$958,669
Capital Budget		\$267,973	\$2,500	\$270,473
Section D - Capital Grant for Minor Items		\$646,898	\$41,298	\$688,196
Grand Total	\$4,429,039	\$28,555,028	\$3,573,353	\$36,557,420



Sum of Action : Cost Action : Priority	Total
High	\$4,429,039
Medium	\$3,573,353
Low	\$28,555,028
Grand Total	\$36,557,420



Sum of Action : Cost Funding Source	Total
Capital Budget	\$8,731,998
Section B - Renovations	\$4,990,434
Section C - Replacement of Systems	\$7,975,380
Section D - Capital Grant for Minor Items	\$10,924,822
Section E - Environmental Assistance Program	\$3,884,127
Operating Budget	\$50,659
Grand Total	\$36,557,420



Sum of Action : Cost Discipline	Total
B-Shell	\$12,845,979
C-Interiors	\$8,048,408
D-Services - Mechanical	\$12,117,208
G-Building Sitework	\$958,669
D-Services - Electrical	\$2,552,834
A-Substructure	\$34,322
Grand Total	\$36,557,420

