District:	Brockton
School Names:	Brockton High School North Junior High School East Junior High School West Junior High School Edgar B. Davis Elementary School Oscar F. Raymond Elementary School Downey Elementary School Hancock Elementary School
Recommended Category:	Project Funding Agreement Green Repair Program
Date:	June 8, 2011

Recommendation

That the Executive Director be authorized to enter into a Project Funding Agreement with the City of Brockton to replace the roof and windows at Brockton High School and the Downey Elementary School; replace the roof and boiler at the East Junior High School and the North Junior High School; and, replace the roof at the Edgar B. Davis Elementary School, West Junior High School, the Oscar F. Raymond Elementary School, and the Hancock Elementary School.

District Info	
District Name:	Brockton
Elementary Schools:	12 – Brookfield Elementary School Downey Elementary School Dr. W. Arnone Community School Edgar B. Davis Elementary School (K-8) Hancock Elementary School Howard Elementary School Huntington Elementary School John F. Kennedy Elementary School Louis F. Angelo Elementary School Manthala George Jr. Elementary School Mary E. Baker Elementary School Oscar F. Raymond Elementary School (K-8)
Middle Schools:	6 – Ashfield Middle School East Junior High School Joseph F. Plouffe Academy North Junior High School South Junior High School West Junior High School
High Schools:	2 – Brockton Champion High School Brockton High School

School Info								
School Name:	**Brockton HS**	**North JHS**	**East JHS**	**West JHS**	**Davis ES**	**Raymond ES**	**Downey ES**	**Hancock ES**
Type of School:	High School	Middle School	Middle School	Middle School	Elementary School	Elementary School	Elementary School	Elementary School
Grades Served:	9-12	6-8	6-8	6-8	K-8	K-8	K-5	K-5
Year Opened:	1970	1959	1958	1952	1975	1974	1971	1963
Total Building Square Footage:	548,000	92,061	96,000	110,318	123,336	123,336	119,000	68,261
Building Issues:	Roof, and windows are failing	Roof and boilers are failing	Roof and boilers are failing	Roof is failing	Roof is failing	Roof is failing	Roof and windows are failing	Roof is failing
2010-2011 Enrollment:	4,145	421	530	578	1,023	971	579	713

MSBA Votes	
Invited into Green Repair:	September 29, 2010 (Brockton HS, North JHS, Davis ES, Raymond ES) November 17, 2010 (East JHS, West JHS, Downey ES, Hancock ES)
Project Funding Agreement Authorization:	June 8, 2011

Consultants	
Owner's Project Manager:	Skanska
Designer:	CSS Architects, Inc.

The OPM and Designer conducted a feasibility analysis and schematic design of the facilities and developed a proposed scope of work, schedule and estimated budget. The District's Designer, CSS Architects, Inc., recommends removing the existing roofs on all eight buildings and replacing them with 4-ply, cold-applied, built-up roofing systems. Both the District and its consultants reviewed different roofing systems and concluded that this 4-ply system would be the best to withstand the high volume of foot traffic necessary for maintaining rooftop equipment at each school. Also, over the past 13 years Brockton has completed full or partial roof replacements on 7 buildings using a 4-ply built up aggregate roof system, and the results have been positive. The Designer also recommends removing and replacing the existing windows in two of the facilities. The current boilers at two of the facilities will be replaced with energy efficient boilers. The District has confirmed that the roof, window and boiler systems will be in compliance with the Green Repair Program sustainability requirements.

MSBA staff have reviewed the schematic drawings and specifications provided by the District and have discussed scope and budget with the District and its consultants. The District has provided a total project budget of $36,001,597 with a total construction cost of $31,561,193. Construction costs include:

- Brockton High School
  - $22/sf for roof replacement, associated roof costs for structural upgrades, above roof line masonry and thru flashing of $1,203,454
  - $90/sf for windows and $455,000 for demolition and abatement

- North Junior High School
  - $23/sf for roof replacement, associated costs for structural upgrades, skylight replacement, above roof line masonry and thru flashing of $497,838
  - $489,750 for boiler replacement

- East Junior High School
  - $21/sf for roof replacement, associated costs for structural upgrades, skylight replacement, above roof line masonry and thru flashing of $681,674
  - $237,230 for boiler replacement

- West Junior High School
  - $23/sf for roof replacement, associated roof costs for deck repair, above roof masonry, thru wall flashing, drainage of $690,491

- Edgar B. Davis Elementary School
  - $27/sf for multi-level roof replacement, associated roof costs for deck repair, above roof masonry, thru wall flashing, drainage of $1,838,315

- Oscar F. Raymond Elementary School
  - $27/sf for multi-level roof replacement, associated roof costs for deck repair, above roof masonry, thru wall flashing, drainage of $1,834,992

- Downey Elementary School
  - $21/sf for roof replacement, associated roof costs for deck repair, above roof masonry, thru wall flashing, drainage of $1,611,935
  - $86/sf for windows and $180,864 for demolition and abatement

- Hancock Elementary School
  - $22/sf for roof replacement, associated roof costs for deck repair, above roof masonry, thru wall flashing, drainage of $291,488

The basis of the Total Facilities Grant would be $35,616,343.

School Name:	**Brockton HS**	**North JHS**	**East JHS**	**West JHS**	**Davis ES**	**Raymond ES**	**Downey ES**	**Hancock ES**	**TOTAL**
Project Scope:	Roof (147,699 sf) Windows (35000 sf)	Roof (67,183 sf) Boiler	Roof (84,744 sf) Boiler	Roof (73,579 sf)	Roof (122,409 sf)	Roof (122,409 sf)	Roof (80,188 sf) Windows (13000 sf)	Roof (69,208 sf)	
Total Project Budget:	$8,924,841	$3,247,728	$3,235,610	$2,742,386	$5,725,788	$5,813,473	$4,019,607	$2,292,164	$36,001,597
Total Construction Budget*:	$7,933,232	$2,805,032	$2,801,010	$2,357,371	$5,151,736	$5,148,414	$3,520,339	$1,934,059	$31,561,193
Scope Exclusions/ Ineligible Costs**:	$96,363	$31,868	$36,227	$28,635	$62,577	$62,537	$43,554	$23,493	$385,254
Basis of Total Facilities Grant:	$8,828,478	$3,215,860	$3,199,383	$2,713,751	$5,663,211	$5,750,936	$3,976,053	$2,268,671	$35,616,343
Reimbursement Rate:	80%	80%	80%	80%	80%	80%	80%	80%	80%
Maximum Total Facilities Grant:	$7,062,782	$2,572,688	$2,559,506	$2,171,001	$4,530,569	$4,600,749	$3,180,842	$1,814,937	$28,493,074

* Does not include Construction Contingency.
** Scope exclusions include ineligible permitting costs and construction contingency amounts beyond MSBA funding limits.

MSBA staff recommends a maximum total facilities grant for each project in the amount set forth in the chart above, for a maximum Total Facilities Grant of $28,493,074 for the Project Funding Agreement for the City of Brockton. These amounts are subject to adjustment based on the MSBA's audit of project costs incurred by the District.