



Grosse Pointe Public School System

Capital Planning Assessment Report

July 31, 2017



Presentation Overview

- Review GPPSS' Capital Planning Goals and Objectives
- Review Sample Facility Assessment Report Process
- Review Report Benchmarking and Findings
- Review Financial Considerations
- Questions and Answers





Report Card

Project Feasibility A⁺
Bond Issue/Millage Campaign A⁺
Project Management A⁺



Capital Planning Goals and Objectives



Capital Planning Goals and Objectives

- ❑ Grosse Pointe Public School System (“GPPSS”) engaged Plante Moran Cresa to perform a facility assessment review of the BCS major buildings and sites. Site visits took place in the Spring of 2017
 - ❑ The goal of this assessment is to provide GPPSS a “road map” to help establish needs for future capital improvement projects and future Sinking Fund or Bond Program over the next 10 years.
- ❑ The assessments primary focus will be three major components:
 - Critical need/life safety
 - Facility needs & replacement
 - Property enhancements



Facility Assessment Goals and Objectives

- PMC reviewed the over 1,800,000 square feet of elementary, middle, and high school level buildings and sites as well as support facilities

- Review included site work, building envelope, mechanical/electrical systems, environmental, educational technology, security and surveillance needs, site traffic, furniture, and furnishings/equipment needs for each facility.

- The report represents a statement of the physical condition of the buildings and properties based upon visual site observation. The assessment review was non-invasive nor diagnostic.



Facility Assessment Goals and Objectives

❑ Evaluation Definitions

The following terms will be used throughout the report and are defined as follows:

- **Excellent:** New or like new.
- **Good:** Average to above-average condition for the building system or material assessed, with consideration of its age, design, and geographical location. Generally, other than normal maintenance, no work is recommended or required.
- **Fair:** Average condition for the building system evaluated. Satisfactory; however, some short term and/or immediate attention is required or recommended (primarily due to normal aging and wear of the building system) to return the system to a good condition.
- **Poor:** Below average condition for the building system evaluated. Requires immediate repair, significant work, or replacement is anticipated to return the building system or material to an acceptable condition.



Facility Assessment Goals and Objectives

Document Review

PMC was provided the following documents for review:

- Floor plans of the existing facilities as provided by GPPSS
- Room Utilization report as provided by GPPSS
- Roofing report by J.D. Candler
- Swimming Pool Audit report by Counsilman Hunsaker
- Security & Technology assessment by Wright & Hunter



Sample Facility Assessment Report Process

Report Card

Project Feasibility **A+**
 Bond Issue/Millage Campaign **A+**
 Project Management **A+**



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Sample – Elementary School

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2017 Facilities Assessment



Defer Elementary School K-5
 15425 Kercheval, Grosse Pointe Park, Michigan 48230
 Building Age: 93 years
 Square Footage: 60,001 s.f.
 Acres: 6.32
 Students: 315
 Capacity: 525 (60% Utilization)

Description:
 Defer Elementary School is a 3 story brick clad Tudor Revival style building built in 1924 with an addition built in 1928. It was designated a Michigan State Historic Site in 1996 and listed on the National Register of Historic Places in 2001. Students at Defer will attend Pierce Middle School and Grosse Pointe South High School. Defer Elementary is in relatively good condition for its age and requires attention to building components that have exceed their life cycle expectancy.



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2017 Facilities Assessment

Site:
 The asphalt parking lot has shown signs of wear and cracking and should be replaced within the next 5 years. The playground equipment is newer and appear to be in good shape. There are (4) ballfields with dugouts and a small field house for storage surrounded by a site perimeter fence.

Roofing:
 The flat built-up roof areas range in age from 27, 21 and 17 years old and require replacement in the near future.

HVAC:
 The (2) steam boilers servicing the building are 20 years old and will need replacement or significant reconditioning in the next 5 to 10 years. The entire building is air conditioned with DX cooling systems (Sanyo units and (1) RTU for the library).

Electrical:
 It is also recommended to replace the existing stem mounted and lay-in 2'x4' fluorescent light fixtures with more energy efficient LED throughout the building. Classrooms will require additional electrical power needs to support new IT equipment.

Plumbing:
 The restrooms have been renovated recently and do not require further renovation at this time. When the restrooms were renovated, the galvanized piping was replaced with copper and new sanitary lines installed if they were accessible. The existing 93 year old domestic hot and cold water galvanized piping, sanitary & storm drains and heating system piping have been replaced on an "as needed" basis.

Finishes:
 Several rooms and corridors have carpet floor covering and will require replacement due to wear. Some of the classroom casework/cabinets will need replacement throughout the building. Where stem mounted fluorescent fixtures are present, it is recommended to install new acoustical tile ceilings and lighting. The existing greenhouse requires replacement and the classroom furniture should be replaced due to age and wear.

Report Card

Project Feasibility **A+**
 Bond Issue/Millage Campaign **A+**
 Project Management **A+**



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Sample – Elementary School

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2017 Facilities Assessment



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2017 Facilities Assessment



Defer Elementary School 61,001 s.f.
 6.32 Acres



Total Sections: 3
Total Sq/Ft: 19,230

Map	Name	Sq/Ft	Est Install	Grade
1	Section 1-A	4,540	2000	D
2	Section 2-B	9,952	1996	F
3	Section 3-C	4,737	1990	F

Defer Elementary School Roof Information – JD Candler Report dated 10-13-15

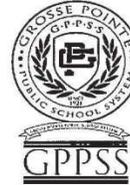


Report Card

Project Feasibility **A+**
 Bond Issue/Millage Campaign **A+**
 Project Management **A+**



Sample – Middle School
 Facilities Assessment



2017 Facilities Assessment



Brownell Middle School 6-8
 260 Chalfonte, Grosse Pointe Farms, Michigan
 Building Age: 61 years
 Square Footage: 157,493 s.f.
 Acres: 15.2
 Students: 612
 Capacity: 754 (81% Utilization)

Brownell Middle School is a 157,493 s.f brick clad 2-story building which opened in its doors in 1956. Students who graduate Brownell will attend North High School.

- Site:**
 The 144 car asphalt parking lot was resurfaced in 2010 and may need replacement in the near future. There are a total of 3 ballfields at the southern end of the 15.2 acre site.
- Roofing:**
 The built-up roof areas range in age from 18, 10, 8, 7, and 3 years old. Due to the varying ages of the roofs, only some roof areas will need replacement in the near future.
- HVAC:**
 The (2) steam boilers servicing the building are 24 years old and will need replacement or significant reconditioning in the next 5 to 10 years. Several of the room unit ventilators require replacement on the second level. Some of the classrooms do not have air conditioning.
- Electrical:**
 It is also recommended to replace the existing corridor and classroom fluorescent light fixtures with more energy efficient LED fixtures throughout the building. Classrooms will require additional electrical power needs to support new IT equipment.
- Plumbing:**
 The pool equipment and boiler require replacement due to condition and age. It is recommended to replace the existing 61 year old domestic hot and cold water galvanized piping, sanitary & storm drains and heating system piping. An allowance for replacement is included in the summary of costs.
- Finishes:**
 Where stem mounted fluorescent fixtures are present, it is recommended to install new acoustical tile ceilings and LED lighting. Some of the classroom, office and media center furniture should be replaced due to age and wear.

Report Card

Project Feasibility **A+**
 Bond Issue/Millage Campaign **A+**
 Project Management **A+**



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Sample – Middle School

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2017 Facilities Assessment



2017 Facilities Assessment



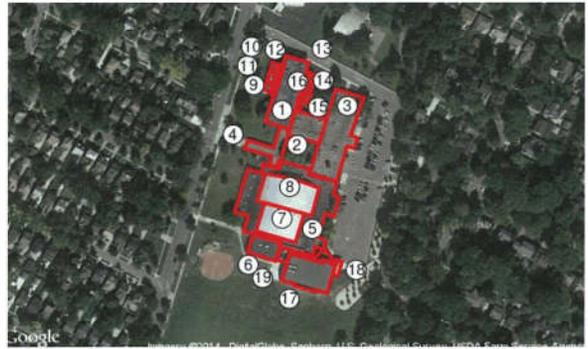
Performing Arts Center



Unit Ventilator



Classroom Furniture



Total Sections: 19
Total Sq/Ft: 160,836

Map	Name	Sq/Ft	Est Install	Grade
1	Section 1-A	15,035	2009	B
2	Section 2-B	7,208	1999	C
3	Section 3-C	22,874	1999	C
4	Section 4-D	5,617	1999	C
5	Section 5-E	57,797	2014	A
6	Section 6-F	4,906	2014	A
7	Section 7-G	10,922	1999	D
8	Section 8-H	14,780	1999	D
9	Section 9-I	482	2007	B
10	Section 10-J	493	2007	B
11	Section 11-K	549	2007	B
12	Section 12-L	1,283	2007	B
13	Section 13-M	377	2007	B
14	Section 14-N	411	2007	B
15	Section 15-O	423	2007	B
16	Section 16-P	1,371	2007	B
17	Section 17-Q	12,365	2010	C
18	Section 18-R	707	2010	B
19	Section 19-S	3,437	2010	B



Sample – Middle School

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Summary of Costs
Brownell MS

Line No.	Draft 6-28-17 Program Area	Area Reviewed (in Sq. Ft.)	No. of Rm./Units	Total Area (in Sq. Ft.)	Base Unit Cost (\$)	Effective Program Area Cost (\$)	As % of Total Cost	Ranked Capital Priorities		
								Critical Needs (1-3 years)	Deferrable (4-6 years)	Priority Enhancement (7-10 years)
1 SITE										
3	Paving									
4	Replace Asphalt Parking Lot (144 spaces) 2310	72,000	1	72,000	\$3.50	\$252,000	2.61%		\$319,738	
5	Improve Landscaping	1	1	1	\$26,000.00	\$26,000	0.26%			\$35,620
6										
	SITE SUBTOTAL					\$288,000	2.87%	\$0	\$319,738	\$35,620
10 BUILDING ENVELOPE										
11	Roofing Work - J.D. Candler Report									
13	Replace Roof (BUR, installed 1990, grade C)	7,208	1	7,208	\$8.00	\$57,664	0.80%		\$73,164	
14	Replace Roof (BUR, installed 1990, grade C)	22,074	1	22,074	\$8.00	\$176,592	1.95%		\$230,152	
15	Replace Roof (BUR, installed 1990, grade C)	5,417	1	5,417	\$8.00	\$43,336	0.47%		\$57,615	
16	Replace Roof (BUR, installed 1990, grade C)	10,822	1	10,822	\$8.00	\$86,576	0.94%	\$60,871		
17	Replace Roof (BUR, installed 1990, grade D)	14,760	1	14,760	\$8.00	\$118,080	1.23%			\$0
18	Replace Roof (BUR, installed 2007, grade B)	480	1	480	\$0.00	\$0	0.00%			\$0
19	Replace Roof (BUR, installed 2007, grade B)	540	1	540	\$0.00	\$0	0.00%			\$0
20	Replace Roof (BUR, installed 2007, grade B)	1,283	1	1,283	\$0.00	\$0	0.00%			\$0
21	Replace Roof (BUR, installed 2007, grade B)	377	1	377	\$0.00	\$0	0.00%			\$0
22	Replace Roof (BUR, installed 2007, grade B)	411	1	411	\$0.00	\$0	0.00%			\$0
23	Replace Roof (BUR, installed 2007, grade B)	453	1	453	\$0.00	\$0	0.00%			\$0
24	Replace Roof (BUR, installed 2007, grade B)	1,371	1	1,371	\$0.00	\$0	0.00%			\$0
25	Replace Roof (BUR, installed 2009, grade B)	15,026	1	15,026	\$0.00	\$0	0.00%			\$0
26	Replace Roof (BUR, installed 2010, grade C)	10,365	1	10,365	\$8.00	\$82,920	0.90%	\$105,510		
27	Replace Roof (BUR, installed 2010, grade B)	707	1	707	\$0.00	\$0	0.00%			\$0
28	Replace Roof (BUR, installed 2010, grade B)	3,427	1	3,427	\$0.00	\$0	0.00%			\$0
29	Replace Roof (BUR, installed 2014, grade A)	57,787	1	57,787	\$0.00	\$0	0.00%			\$0
30	Replace Roof (BUR, installed 2014, grade A)	4,906	1	4,906	\$0.00	\$0	0.00%			\$0
31	Fencing / Gates for new M/E Work	1	1	1	\$50,000.00	\$50,000	0.56%		\$63,442	\$0
32										
33										
34	BUILDING ENVELOPE SUBTOTAL					\$84,068	6.62%	\$213,841	\$49,279	\$0
35 INTERIOR/FINISHES										
36	Abatement (allow)	1	1	1	\$200,000.00	\$200,000	2.07%	\$208,000		\$0
38	Replace door hardware	1	30	30	\$60.00	\$1,800	0.18%	\$13,900		\$0
40	Flooring									
41	Classrooms (NCT)	760	12	9,000	\$4.50	\$40,500	0.42%	\$42,100		\$0
43	Replace Pool Tile, Gutter									
43	Paint Areas Disturbed by Construction	20,600	1	20,600	\$1.00	\$20,600	0.21%	\$20,900		\$0
44	Ceiling Replacement	800	12	9,600	\$4.00	\$38,400	0.40%	\$39,936		\$0
45										
46										
47										
48	INTERIOR/FINISHES SUBTOTAL					\$392,456	3.32%	\$392,456	\$0	\$0
49 PLUMBING SYSTEMS										
49	Horizontal HW/CW Piping Replacement (main only)	157,493	1	157,493	\$4.00	\$629,972	6.80%	\$697,084		\$0
50	Sanitary & Storm Drain Replacement (main only)	157,493	1	157,493	\$3.00	\$472,479	5.16%	\$527,188		\$0
51	Steam & Condensate Piping Replacement (allow)	1	1	1	\$200,000.00	\$200,000	2.07%	\$204,900		\$0
52	Replace and add domestic water valves and fittings (allow)	1	1	1	\$150,000.00	\$150,000	1.64%	\$162,480		\$0
53										
54										
55	Replace Pool pump, motor, filter, flow meter, valves, piping, gaskets, metal backwash air pipe, chemical valves, strainer	1	1	1	\$140,000.00	\$140,000	1.49%	\$145,600		\$0
56										
57	PLUMBING SYSTEMS SUBTOTAL					\$1,604,149	16.03%	\$1,650,800	\$0	\$1,999,212
60 HVAC SYSTEMS										
61	Heating									
62	Steam Boilers (1995, 24 years old)	2	1	2	\$140,000.00	\$280,000	2.73%	\$274,400		\$0
63	Replace Steam Heating System Valves	1	1	1	\$60,000.00	\$60,000	0.63%	\$62,200		\$0
64	Replace 2nd Floor Units Vert	14	1	14	\$10,000.00	\$140,000	1.36%	\$142,200		\$0
65	Replace 2nd Floor Units Vert	1	1	1	\$20,000.00	\$20,000	0.21%	\$20,400		\$0
66	Replace 2nd Floor Units Vert	3	1	3	\$100,000.00	\$300,000	3.11%	\$312,000		\$0
67	Replace 2nd Floor Units Vert									
68	Boiler for Domestic Hot Water (Lohmivar, 2001)	1	1	1	\$50,000.00	\$50,000	0.52%	\$52,000		\$0
69										
70	Boiler for Pool (Lohmivar, 2008)	1	1	1	\$40,000.00	\$40,000	0.42%	\$42,000		\$0
71	Pool AHU	1	1	1	\$100,000.00	\$100,000	1.04%	\$104,000		\$0
72										
73										
74										
75										
76	Air Conditioning - Add DX units	31	1	31	\$7,500.00	\$232,500	2.49%	\$241,800		\$0
77	Ventilation									
78	Replace Kitchen Exhaust Fan (No annual or make up air or potential other code update requirements)	1	1	1	\$30,000.00	\$30,000	0.31%	\$31,200		\$0
80										
81	Replace Exhaust Fans at Total Floors	4	1	4	\$10,000.00	\$40,000	0.41%	\$41,600		\$0
82	Temperature Controls (Currently on BASIS system)	157,493	1	157,493	\$2.50	\$393,733	4.26%	\$409,482		\$0
83	Air and Water Balance	157,493	1	157,493	\$2.10	\$330,735	3.56%	\$348,569		\$0
84	Commissioning	157,493	1	157,493	\$0.15	\$23,624	0.25%	\$24,569		\$0
85										
86	HVAC SYSTEMS SUBTOTAL					\$2,054,630	20.49%	\$2,054,630	\$0	\$0

Line No.	Draft 6-28-17 Program Area	Area Reviewed (in Sq. Ft.)	No. of Rm./Units	Total Area (in Sq. Ft.)	Base Unit Cost (\$)	Effective Program Area Cost (\$)	As % of Total Cost	Ranked Capital Priorities		
								Critical Needs (1-3 years)	Deferrable (4-6 years)	Priority Enhancement (7-10 years)
68 ELECTRICAL SYSTEMS										
80	Lighting									
80	Replace Lighting with LED's	35	1	35	\$1,200.00	\$42,000	0.44%	\$43,800		\$0
91	Replace exterior building lights	157,493	1	157,493	\$0.25	\$39,373	0.41%	\$40,948		\$0
92	Replace all emergency and exit lights	157,493	1	157,493	\$0.25	\$39,373	0.41%	\$40,948		\$0
93	Add electrical upgrades for IT classrooms	40	1	40	\$5,000.00	\$200,000	2.07%	\$208,000		\$0
94	Aut Generator	1	1	1	\$150,000.00	\$150,000	1.60%	\$156,000	\$213,720	\$0
95										
96	ELECTRICAL SYSTEMS SUBTOTAL					\$448,976	4.88%	\$453,376	\$0	\$213,720
78 SECURITY (Wired & Unwired)										
96	Door Access System	1	1	1	\$50,000.00	\$50,000	0.52%	\$52,000		\$0
99	Surveillance System	1	1	1	\$87,000.00	\$87,000	0.92%	\$90,480		\$0
100										
101	SECURITY SYSTEMS SUBTOTAL					\$148,480	1.62%	\$148,480	\$0	\$0
88 NOT USED										
100										
102										
103										
104										
105										
106	OTHER SUBTOTAL					\$0	0.00%	\$0	\$0	\$0
89 FURNITURE & EQUIPMENT										
106	Classroom Furniture	1	20	20	\$15,000.00	\$300,000	3.11%	\$312,000		\$427,440
110	Other furniture (Office, lobby, etc.)	1	8	8	\$8,000.00	\$64,000	0.68%	\$66,560		\$91,152
111	Media Center Furniture	1	1	1	\$20,000.00	\$20,000	0.21%	\$20,800		\$28,456
112										
113										
114	FURNITURE & EQUIPMENT SUBTOTAL					\$299,360	3.09%	\$308,360	\$0	\$547,128
100 TECHNOLOGY (Wired & Unwired)										
115	Classroom Technology (AV, Desktop, Laptops, Tablets)	1	1	1	\$805,000.00	\$805,000	8.59%	\$850,000		\$0
116	Network Cabling	1	1	1	\$750,000.00	\$750,000	7.78%	\$780,000		\$0
119	Network Wireless and Switches	1	1	1	\$200,000.00	\$200,000	2.07%	\$204,000		\$0
120	Telephone System	1	1	1	\$100,800.00	\$100,800	1.05%	\$104,832		\$0
121	Public Address Systems	1	1	1	\$75,000.00	\$75,000	0.78%	\$78,000		\$0
122	Fiber WAN	1	1	1	\$80,000.00	\$80,000	0.83%	\$84,000		\$0
123										
124	TECHNOLOGY SUBTOTAL					\$2,269,800	22.62%	\$2,369,832	\$0	\$0
125	Building Infrastructure Improvement Total									
126	Project Contingency	10.00%	01 Building & Site Budget	\$52,468	\$4,269,832	\$4,322,300	45.41%	\$4,510,416	\$880,016	\$2,794,375
127	Permits, Testing & Printing	2.50%	01 Building & Site Budget	\$13,117	\$13,117	\$13,117	0.14%	\$13,688	\$67,171	\$23,898
128	Construction Manager Fee and Costs	8.00%	01 Building & Site Budget	\$184,387	\$1,843,870	\$1,843,870	19.27%	\$1,908,856	\$364,986	\$643,800
130	Professional Fees & Costs	8.00%	01 Building & Site Budget & Contingency	\$184,387	\$1,843,870	\$1,843,870	19.27%	\$1,908,856	\$364,986	\$643,800
130	PROJECT TOTAL					\$10,608,048	100.00%	\$6,532,405	\$1,142,857	\$3,502,915

\$6,532,405	\$1,142,857	\$3,502,915	\$0
\$11,178,177			



Report Card

Project Feasibility **A+**
 Bond Issue/Millage Campaign **A+**
 Project Management **A+**



Sample – High School



2017 Facilities Assessment



North High School 9-12
 707 Vernier, Grosse Pointe Woods, Michigan
 Building Age: 51 years
 Square Footage: 342,148 s.f.
 Acres: 31.3
 Students: 1,385
 Capacity: 2,408 (57% Utilization)

North High School is a 342,148 s.f brick clad 3-story building which opened in its doors in 1966. It is the High School for Poupard ES, Mason ES, Ferry ES and Parcels MS students.



2017 Facilities Assessment

Site:
 The South 179 car asphalt parking lot and the North 356 car student parking lot may need replacement in 4 to 6 years along with several catch basins. The football field turf needs replacement, the running track requires replacement along with the stadium lights.

Roofing:
 The built-up roof areas range in age from 37, 22, 21, 18, 16, 14, 12, 7 and 4 years old. Due to the varying ages of the roofs, only some roof areas will need replacement in the near future.

HVAC:
 The (2) steam boilers servicing the building are 24 years old and will need replacement or significant reconditioning in the next 5 to 10 years. Several of the room unit ventilators require replacement on the second level. Some of the classrooms do not have air conditioning.

Electrical:
 It is also recommended to replace the existing corridor and classroom fluorescent light fixtures with more energy efficient LED fixtures throughout the building. Classrooms will require additional electrical power needs to support new IT equipment. The existing electrical panels and switch gear are original and should be replaced.

Plumbing:
 The pool equipment requires replacement due to condition and age. The domestic hot water boiler is 17 years old and requires replacement in the near future. The circulation pumps in the fan rooms should be replaced due to current condition and wear. It is recommended to replace the existing 51 year old domestic hot and cold water galvanized piping, sanitary & storm drains and heating system piping. An allowance for replacement is included in the summary of costs.

Finishes:
 Where stem mounted fluorescent fixtures are present, it is recommended to install new acoustical tile ceilings and LED lighting. The third floor ceilings and flooring should be replaced due to their current condition and the lockers should be replaced. The kitchen walk-in freezer and serving lines should be replaced. The exterior metal panels at Area A North Lobby should be replaced due to their current condition and several windows require replacement with more energy efficient units. The Performing Arts Center (PAC) orchestra pit elevator requires repairs or replacement.

Report Card

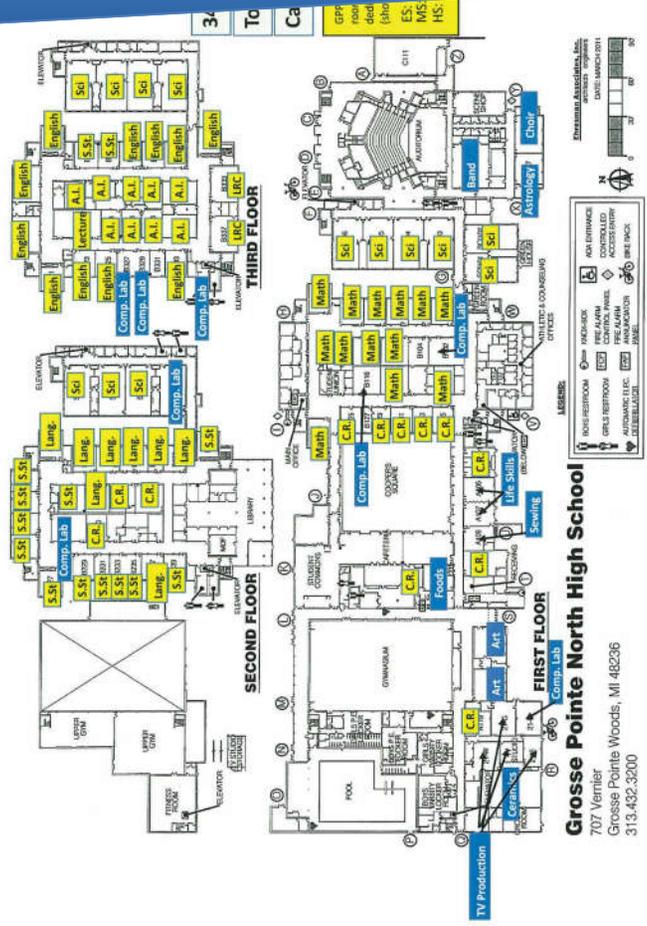
Project Feasibility **A⁺**
 Bond Issue/Millage Campaign **A⁺**
 Project Management **A⁺**



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Sample – High School



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2017 Facilities Assessment



Air Handlers



Aluminum Storefront



Original Building Controls



Original Electrical Switchgear

Report Card

Project Feasibility **A+**
 Bond Issue/Millage Campaign **A+**
 Project Management **A+**

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Sample – High School

2017 Facilities Assessment



2017 Facilities Assessment



Damaged Metal Panels



Open Stairwell



Locker Room



Typical Toilet Room



North High School 342,148 s.f.
31.3 Acres



Sample – High School



Summary of Costs North HS

Line No.	Draft 6-28-17 Program Area	Area Required (in Sq. Ft.)	No. of Rms. / Units	Total Area (in Sq. Ft.)	Base Unit Cost (\$)	Effective Program Area Cost (\$)	As % of Total Cost	Ranked Capital Priorities				
								Critical Needs (1-3 years)	Deferrable Maintenance (4-6 years)	Property Enhancement (7-10 years)	Other	
6.0 INTERIOR FINISHES												
66	Abatement	30,000	1	30,000	\$3.00	\$93,600	0.32%	\$93,600				
67	Remove 3rd floor ACT Tie	30,000	1	30,000	\$3.00	\$93,600	0.32%	\$93,600				
70	Remove 3rd floor ACT Ceiling	30,000	1	30,000	\$3.00	\$93,600	0.32%	\$93,600				
71	Remove Spray on Asbest. AI removed lockers	1	1	1	\$20,000.00	\$20,000	0.07%	\$20,000				
72	PAC Elevator	1	1	1	\$250,000.00	\$250,000	0.89%	\$250,000				
74	Doors & Hardware	500	1	500	\$900.00	\$260,000	0.89%	\$260,000				
76	Replace door hardware (locks only)	500	1	500	\$900.00	\$260,000	0.89%	\$260,000				
78	ceilings	30,000	1	30,000	\$4.00	\$124,800	0.43%	\$124,800				
79	Replace Corridor and CH Ceilings (due to new MRPHIT roof at 3rd floor)	30,000	1	30,000	\$4.00	\$124,800	0.43%	\$124,800				
80	Floors	30,000	1	30,000	\$4.00	\$124,800	0.43%	\$124,800				
81	Corridor and Classrooms 3rd Floor	30,000	1	30,000	\$4.00	\$124,800	0.43%	\$124,800				
82	Paint Areas Disturbed by Construction	30,000	1	30,000	\$1.00	\$31,200	0.11%	\$31,200				
83	Paint Areas Disturbed by Construction	30,000	1	30,000	\$1.00	\$31,200	0.11%	\$31,200				
84	Replace Toilet Partitions (metal or plastic)	1	12	12	\$25,000.00	\$312,000	1.07%	\$380,640				
85	Replace Toilet Accessories (TP, PT, soap, mirror, grab bars, etc.)	1	12	12	\$600.00	\$7,200	0.03%	\$9,135				
86	Lockers	1	300	300	\$175.00	\$52,500	0.19%	\$66,612				
87	Replace student corridor lockers 3rd Floor	1	80	80	\$175.00	\$14,000	0.05%	\$17,760				
88	Replace gym lockers	1	80	80	\$175.00	\$14,000	0.05%	\$17,760				
89	Replace gym lockers	1	80	80	\$175.00	\$14,000	0.05%	\$17,760				
90	Replace Mark in Freezer	1	1	1	\$100,000.00	\$100,000	0.36%	\$126,880				
91	Replace Serving Lines in Cafeteria	1	1	1	\$50,000.00	\$50,000	0.18%	\$63,440				
92	Replace student corridor lockers 3rd Floor	1	300	300	\$175.00	\$52,500	0.19%	\$66,612				
93	Replace gym lockers	1	80	80	\$175.00	\$14,000	0.05%	\$17,760				
94	Replace gym lockers	1	80	80	\$175.00	\$14,000	0.05%	\$17,760				
95	Replace Mark in Freezer	1	1	1	\$100,000.00	\$100,000	0.36%	\$126,880				
96	Replace Serving Lines in Cafeteria	1	1	1	\$50,000.00	\$50,000	0.18%	\$63,440				
97	Replace student corridor lockers 3rd Floor	1	300	300	\$175.00	\$52,500	0.19%	\$66,612				
98	Replace gym lockers	1	80	80	\$175.00	\$14,000	0.05%	\$17,760				
99	Replace gym lockers	1	80	80	\$175.00	\$14,000	0.05%	\$17,760				
100	Replace Mark in Freezer	1	1	1	\$100,000.00	\$100,000	0.36%	\$126,880				
101	Replace Serving Lines in Cafeteria	1	1	1	\$50,000.00	\$50,000	0.18%	\$63,440				
102	Replace student corridor lockers 3rd Floor	1	300	300	\$175.00	\$52,500	0.19%	\$66,612				
103	Replace gym lockers	1	80	80	\$175.00	\$14,000	0.05%	\$17,760				
104	Replace gym lockers	1	80	80	\$175.00	\$14,000	0.05%	\$17,760				
105	Replace Mark in Freezer	1	1	1	\$100,000.00	\$100,000	0.36%	\$126,880				
106	Replace Serving Lines in Cafeteria	1	1	1	\$50,000.00	\$50,000	0.18%	\$63,440				
107	Replace student corridor lockers 3rd Floor	1	300	300	\$175.00	\$52,500	0.19%	\$66,612				
108	Replace gym lockers	1	80	80	\$175.00	\$14,000	0.05%	\$17,760				
109	Replace gym lockers	1	80	80	\$175.00	\$14,000	0.05%	\$17,760				
110	Replace Mark in Freezer	1	1	1	\$100,000.00	\$100,000	0.36%	\$126,880				
111	Replace Serving Lines in Cafeteria	1	1	1	\$50,000.00	\$50,000	0.18%	\$63,440				
112	Horizontal HW/CW Piping Replacement (main only)	342,148	1	342,148	\$4.00	\$1,424,592	4.87%	\$1,940,970				
113	Sanitary & Storm Drain Replacement (main only)	342,148	1	342,148	\$3.00	\$1,026,444	3.42%	\$1,424,592				
114	Swamp & Condensate Piping Replacement (allow)	1	1	1	\$400,000.00	\$416,000	1.42%	\$569,920				
115	Hot Water Boiler (2000)	1	1	1	\$50,000.00	\$50,000	0.18%	\$63,440				
116	Replace pool equipment	1	1	1	\$32,000.00	\$33,280	0.11%	\$33,280				
117	Plumbing Fixtures	1	12	12	\$12,000.00	\$149,760	0.51%	\$182,707				
118	Replace toilet/urinals/lavatories	1	12	12	\$12,000.00	\$149,760	0.51%	\$182,707				
119	Plumbing Fixtures	1	12	12	\$12,000.00	\$149,760	0.51%	\$182,707				
120	Replace toilet/urinals/lavatories	1	12	12	\$12,000.00	\$149,760	0.51%	\$182,707				
121	Plumbing Fixtures	1	12	12	\$12,000.00	\$149,760	0.51%	\$182,707				
122	Replace toilet/urinals/lavatories	1	12	12	\$12,000.00	\$149,760	0.51%	\$182,707				
123	6.0 HVAC SYSTEMS					\$3,225,077	11.03%	\$116,480	\$246,147	\$3,982,367	\$0	
124	Heating					\$634,400						
125	Steam Boilers (2002 Johnson Low Pressure)	2	1	2	\$250,000.00	\$500,000	1.78%	\$634,400				
126	Assoc. equip, comb. Air, emerg. Gas stops	1	1	1	\$100,000.00	\$104,000	0.36%	\$126,880				
127	Replace Steam Heating System Valves	1	1	1	\$100,000.00	\$104,000	0.36%	\$126,880				
128	Install new steam traps	50	1	50	\$1,000.00	\$50,000	0.18%	\$63,440				
129	Replace Air Handlers (less Pwd)	325,000	1	325,000	\$15.00	\$5,075,000	17.33%	\$6,185,400				
130	AHU Main Office, CH, (1969), Sci Bldg (2005), Heat ex (1969)	325,000	1	325,000	\$15.00	\$5,075,000	17.33%	\$6,185,400				
131	AHU Pool (sehum)	1	1	1	\$100,000.00	\$104,000	0.36%	\$126,880				
132	Air Conditioning -100%	1	1	1	\$250,000.00	\$260,000	0.89%	\$317,200				
133	Replace Chiller (McQuay Centrifugal Chiller, 2002)	1	1	1	\$20,000.00	\$20,800	0.07%	\$26,376				
134	Replace Chiller Pumps (1968)	1	1	1	\$50,000.00	\$52,000	0.19%	\$63,440				
135	Cooling Tower (Maffis, 2000)	1	1	1	\$50,000.00	\$52,000	0.19%	\$63,440				
136	Air and Water Balance	342,148	1	342,148	\$0.10	\$35,583	0.12%	\$35,583				
137	Commissioning	342,148	1	342,148	\$0.15	\$51,375	0.18%	\$51,375				
138	Temperature Controls (50% of building Mchysis)	175,000	1	175,000	\$2.50	\$437,500	1.58%	\$455,000				
139	Temperature Controls (50% of building Mchysis)	175,000	1	175,000	\$2.50	\$437,500	1.58%	\$455,000				
140	Temperature Controls (50% of building Mchysis)	175,000	1	175,000	\$2.50	\$437,500	1.58%	\$455,000				
141	Temperature Controls (50% of building Mchysis)	175,000	1	175,000	\$2.50	\$437,500	1.58%	\$455,000				
142	Temperature Controls (50% of building Mchysis)	175,000	1	175,000	\$2.50	\$437,500	1.58%	\$455,000				
143	Temperature Controls (50% of building Mchysis)	175,000	1	175,000	\$2.50	\$437,500	1.58%	\$455,000				
144	Temperature Controls (50% of building Mchysis)	175,000	1	175,000	\$2.50	\$437,500	1.58%	\$455,000				
145	Temperature Controls (50% of building Mchysis)	175,000	1	175,000	\$2.50	\$437,500	1.58%	\$455,000				
146	Temperature Controls (50% of building Mchysis)	175,000	1	175,000	\$2.50	\$437,500	1.58%	\$455,000				
147	Temperature Controls (50% of building Mchysis)	175,000	1	175,000	\$2.50	\$437,500	1.58%	\$455,000				
148	Temperature Controls (50% of building Mchysis)	175,000	1	175,000	\$2.50	\$437,500	1.58%	\$455,000				
149	INTERIOR FINISHES SUBTOTAL					\$1,568,008	5.36%	\$877,600	\$720,288	\$0	\$0	
150	6.0 PLUMBING SYSTEMS					\$3,225,077	11.03%	\$116,480	\$246,147	\$3,982,367	\$0	
151	Replace circulation pumps in each fan room	14	1	14	\$5,000.00	\$70,000	0.25%	\$72,800				
152	Replace 6" Back Flow Preventer	1	1	1	\$10,000.00	\$10,000	0.04%	\$10,400				
153	Horizontal HW/CW Piping Replacement (main only)	342,148	1	342,148	\$4.00	\$1,424,592	4.87%	\$1,940,970				
154	Sanitary & Storm Drain Replacement (main only)	342,148	1	342,148	\$3.00	\$1,026,444	3.42%	\$1,424,592				
155	Swamp & Condensate Piping Replacement (allow)	1	1	1	\$400,000.00	\$416,000	1.42%	\$569,920				
156	Hot Water Boiler (2000)	1	1	1	\$50,000.00	\$50,000	0.18%	\$63,440				
157	Replace pool equipment	1	1	1	\$32,000.00	\$33,280	0.11%	\$33,280				
158	Plumbing Fixtures	1	12	12	\$12,000.00	\$149,760	0.51%	\$182,707				
159	Replace toilet/urinals/lavatories	1	12	12	\$12,000.00	\$149,760	0.51%	\$182,707				
160	Plumbing Fixtures	1	12	12	\$12,000.00	\$149,760	0.51%	\$182,707				
161	Replace toilet/urinals/lavatories	1	12	12	\$12,000.00	\$149,760	0.51%	\$182,707				
162	Plumbing Fixtures	1	12	12	\$12,000.00	\$149,760	0.51%	\$182,707				
163	Replace toilet/urinals/lavatories	1	12	12	\$12,000.00	\$149,760	0.51%	\$182,707				
164	Plumbing Fixtures	1	12	12	\$12,000.00	\$149,760	0.51%	\$182,707				
165	Replace toilet/urinals/lavatories	1	12	12	\$12,000.00	\$149,760	0.51%	\$182,707				
166	Plumbing Fixtures	1	12	12	\$12,000.00	\$149,760	0.51%	\$182,707				
167	Replace toilet/urinals/lavatories	1	12	12	\$12,000.00	\$149,760	0.51%	\$182,707				
168	Plumbing Fixtures	1	12	12	\$12,000.00	\$149,760	0.51%	\$182,707				
169	Replace toilet/urinals/lavatories	1	12	12	\$12,000.00	\$149,760	0.51%	\$182,707				
170	Plumbing Fixtures	1	12	12	\$12,000.00	\$149,760	0.51%	\$182,707				
171	Replace toilet/urinals/lavatories	1										



Facility Assessment Report Benchmarking and Findings



Facility Assessment Report Benchmarking

□ Ave. Capital Cost per s.f. for Infrastructure Improvement

Item	Low	High
• Roofing	\$6	\$8
• Windows	\$8	\$12
• Interiors/Finishes:	\$6	\$9
• Mechanical	\$12	\$16
• Electrical	\$10	\$13
• Plumbing	\$3	\$5
• Site/Parking	\$5	\$7
Average:	\$50	\$70

PMC Capital Planning Clients

Detroit Public Schools	\$500M
Warren Con Schools	\$350M*
Livonia Schools	\$195M
Rochester Schools	\$183M
Farmington Schools	\$131M
West Bloomfield	\$120M
Belleville Schools	\$80M
Novi Schools	\$70M
Woodhaven Schools	\$53M
Crestwood Schools	\$35M
Southgate Schools	\$20M

* denotes over \$141M in 2015 bond programs



Facility Assessment Report Benchmarking

Comparative Capital Costs (per student and facility area)

School District Name	Proposed / Approved Bond Budgets	# of Students	Educational Square Feet	Cost per Student	Cost per Educational S.F.	Year of Previous Bond/Amount
Detroit Public Schools (Passed 2009)	\$500,000,000	47,000	9,875,000	\$10,638	\$50.63	1994 (\$1.5B)
Livonia Public Schools (Passed 2013)	\$195,000,000	14,902	2,712,653	\$13,085	\$71.89	1994 (\$50M)
Rochester Community Schools (2016)	\$183,000,000	15,117	2,395,000	\$12,106	\$76.41	2004 (\$63M)
Warren Consolidated Schools (Passed 2015)	\$141,000,000	15,508	2,515,000	\$9,092	\$56.06	2000 (\$150M)
Farmington Public Schools (Passed 2015)	\$131,000,000	9,500	1,797,497	\$13,789	\$72.88	1997 (\$93M)
West Bloomfield School District (Passed 2017)	\$120,000,000	6,630	1,600,000	\$18,100	\$75.00	2009 (\$63M)
Plymouth Canton Schools (Passed 2013)	\$114,000,000	17,390	2,513,672	\$6,555	\$45.35	2004 (\$109M)
Novi Community Schools (Passed 2015)	\$70,000,000	6,800	876,352	\$10,294	\$79.88	2001 (\$27M)
Average				\$11,708	\$66.01	



GPPSS Facility Assessment Report Findings

❑ Ave. 10 year Capital Cost per s.f. for GPPSS (based on 1.87M SF)

Item	Average
• Elementary School	\$111.54
• Middle Schools	\$80.70
• High Schools	\$79.87
• Support Buildings	\$99.21
Average:	\$92.83

❑ Summary of Capital Costs (over next 10 years)

• Critical Need (1-3 Years)	\$91,538,240
• Deferred Maintenance (4-6 Years):	\$28,047,681
• Property Enhancement (7-10 Years)	\$48,017,931
Summary of 10 Year Capital Costs	\$167,603,852



Grosse Pointe Public School System

SUMMARY OF COSTS BY PRIORITIZATION

Bldg #	Name of School Facility	Total Costs	Critical Need (1 - 3)	Deferred Maintenance (4 - 6)	Property Enhancement (7 - 10)	Total
ELEMENTARY:						
1	Defer Elementary School	\$ 6,607,006	\$ 4,130,205	\$ 163,108	\$ 2,313,693	\$ 6,607,006
2	Ferry Elementary School	\$ 6,809,747	\$ 4,382,036	\$ 352,022	\$ 2,075,689	\$ 6,809,747
3	Kerby Elementary School	\$ 6,438,846	\$ 4,305,835	\$ 230,023	\$ 1,902,987	\$ 6,438,846
4	Maire Elementary School	\$ 6,750,001	\$ 2,362,889	\$ 2,579,342	\$ 1,807,770	\$ 6,750,001
5	Mason Elementary School	\$ 5,662,216	\$ 3,998,427	\$ 374,927	\$ 1,288,861	\$ 5,662,216
6	Monteith Elementary School	\$ 7,578,888	\$ 5,012,138	\$ 275,602	\$ 2,291,147	\$ 7,578,888
7	Poupard Elementary School	\$ 7,735,550	\$ 4,521,032	\$ 954,534	\$ 2,259,984	\$ 7,735,550
8	Richard Elementary School	\$ 5,234,209	\$ 2,182,283	\$ 923,294	\$ 2,128,633	\$ 5,234,209
9	Trombly Elementary School	\$ 5,628,130	\$ 3,809,629	\$ 361,695	\$ 1,456,807	\$ 5,628,130
MIDDLE:						
10	Brownell Middle School	\$ 11,178,177	\$ 6,532,405	\$ 1,142,857	\$ 3,502,915	\$ 11,178,177
11	Parcells Middle School	\$ 15,382,240	\$ 8,030,653	\$ 1,821,989	\$ 5,529,599	\$ 15,382,240
12	Pierce Middle School	\$ 12,738,252	\$ 8,480,376	\$ 1,439,111	\$ 2,818,766	\$ 12,738,252
HIGH:						
13	North High School	\$ 33,929,210	\$ 11,495,234	\$ 15,379,137	\$ 7,054,839	\$ 33,929,210
14	South High School	\$ 28,292,560	\$ 18,355,378	\$ 1,263,772	\$ 8,673,410	\$ 28,292,560
SUPPORT:						
15	Barnes Early Childhood Center	\$ 5,307,688	\$ 2,782,859	\$ 649,877	\$ 1,874,953	\$ 5,307,688
16	Administration	\$ 2,331,131	\$ 1,156,860	\$ 136,393	\$ 1,037,878	\$ 2,331,131
TOTAL BUILDINGS BUDGET		\$ 167,603,853	\$ 91,538,240	\$ 28,047,681	\$ 48,017,931	\$ 167,603,853
Escalation Factors			1.04	1.22	1.37	
Net Present Value (NPV)		\$ 167,603,853	\$ 91,538,240	\$ 22,989,903	\$ 35,049,585	\$ 149,577,728



Major Items **Grosse Pointe Public School System**
Major Items (excludes soft costs)

Bldg #	Name of School Facility	Cost/s.f.	Paving	Roofing	Plumbing	HVAC	Electrical	Security	Tech	Furniture	Pools
ELEMENTARY:											
1	Defer Elementary School	\$79.73	\$117,681	\$185,985	\$818,490	\$1,482,003	\$415,169	\$58,240	\$1,007,274	\$688,178	
2	Ferry Elementary School	\$72.86	\$204,932	\$483,221	\$911,595	\$474,036	\$534,516	\$55,120	\$1,045,408	\$602,690	
3	Kerby Elementary School	\$62.15	\$117,681	\$63,542	\$983,449	\$1,943,434	\$422,086	\$52,000	\$970,320	\$380,422	
4	Maire Elementary School	\$93.92	\$187,429	\$212,573	\$732,158	\$1,597,982	\$387,374	\$49,920	\$999,024	\$387,546	
5	Mason Elementary School	\$95.36	\$127,712	\$138,195	\$520,251	\$1,272,757	\$415,594	\$48,880	\$996,944	\$370,448	
6	Monteith Elementary School	\$89.11	\$0	\$217,627	\$844,440	\$1,792,864	\$460,844	\$59,280	\$1,067,456	\$712,400	
7	Poupard Elementary School	\$89.47	\$188,100	\$280,872	\$831,814	\$1,825,643	\$467,785	\$55,120	\$1,133,600	\$514,353	
8	Richard Elementary School	\$67.92	\$86,060	\$232,187	\$773,229	\$614,067	\$366,027	\$49,920	\$1,087,216	\$763,693	
9	Trombley Elementary School	\$94.82	\$97,031	\$183,014	\$501,202	\$1,078,925	\$562,801	\$94,640	\$920,816	\$404,643	
MIDDLE:											
10	Brownell Middle School	\$52.46	\$319,738	\$763,119	\$1,998,212	\$1,898,630	\$547,296	\$142,480	\$2,268,032	\$547,123	\$301,600
11	Parcells Middle School	\$50.68	\$234,162	\$1,244,978	\$2,562,476	\$1,743,925	\$755,778	\$132,080	\$1,359,696	\$692,453	\$546,000
12	Pierce Middle School	\$50.68	\$195,040	\$772,364	\$1,504,861	\$2,808,601	\$629,051	\$132,080	\$2,165,904	\$511,788	\$540,800
HIGH:											
13	North High School	\$67.71	\$1,272,678	\$1,949,730	\$4,311,714	\$7,948,654	\$1,926,426	\$350,480	\$350,480	\$0	\$137,280
14	South High School	\$35.29	\$689,520	\$684,527	\$5,650,181	\$3,159,700	\$1,608,540	\$410,800	\$1,359,696	\$0	\$22,464
SUPPORT:											
15	Barnes Early Childhood Center	\$77.53	\$317,886	\$337,832	\$712,065	\$759,056	\$759,056	\$67,600	\$806,416	\$447,387	
16	Administration	\$77.99	\$131,781	\$11,724	\$308,004	\$308,004	\$225,661	\$45,760	\$621,816	\$641,160	
TOTALS:			\$4,287,431	\$7,761,491	\$23,964,142	\$30,708,281	\$10,484,005	\$1,804,400	\$18,160,098	\$7,664,284	\$1,548,144



Next Steps...

Capital Planning considerations on the following;

- How should GPPSS address capital needs?
- Should GPPSS consider renewing the Sinking Fund or consider a potential Capital Bond?
- What is the dollar amount required to address capital needs versus the dollar amount that could be supported by the Community?
- What capital needs should be included in that dollar amount?



Questions / Answers