



**STATE COLLEGE AREA SCHOOL DISTRICT  
ADMINISTRATIVE OFFICES**

VI-A2

131 WEST NITTANY AVENUE • STATE COLLEGE PENNSYLVANIA •  
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To: Board of School Directors

From: Bob O'Donnell, Ed Poprik, and Randy Brown

RE: **District Wide Facilities Master Plan & Elementary Project(s)**

Date: April 18, 2016

The following item was discussed during the April 6 Facilities and Grounds subcommittee meeting as well as the April 12 Citizen's Advisory Committee for Facilities meeting.

At the February 22 Board meeting, a draft calendar and draft process to start a District Wide Facilities Master Plan (DWFMP) was shared (see attachment A). This approach was predicated on starting an Elementary school project during the spring of 2018.

As a result of the Board approved DCED grant applications, an accelerated calendar has been developed to demonstrate the timeline required to start one or two elementary school projects during the fall of 2017, with substantial completion occurring sometime in 2018 (see attachment B). The deadline to submit the DCED grant applications was April 1, 2016 with approval expected in May 2016.

Due to the time needed to design and bid a project, the portion of the calendar to complete the PDE required Master Planning process would need to be compressed in order to achieve the early start date. Based on the fact that we are working with a master plan that was updated in 2014 for the High School project, and the next update would be narrowly focused on our Elementary Schools, we believe that this compressed timeline for that portion of the project could be achieved. The stakeholder and public feedback portion of the proposed process would begin in May 2016. Options would then be developed during the summer months and discussed with the community in September 2016. A final plan would then be targeted for adoption in October 2016. Even with the compressed timeline, in order to attain the targeted bid date, there would be no time allotted for a professional RFP/interview and selection process.

Our administrative team has assessed our situation and believes that the following two requirements must be met in order for us to support any recommended design team:

1. A design team must provide evidence of past effective master planning and school facility design. As important, our district desires a design team that will be very collaborative with us throughout the master planning and the design processes.
2. A design team must evidence a project history of quality facilities that include the best cost per square foot possible. The reason for analyzing this unit cost enables us to compare different projects, as different school districts (even projects within the same district) call for different design.

On Monday evening, Mr. Poprik will share his multi-year experiences with our current design team that includes the Crabtree Rohrbaugh and Associates (CRA) and Massaro Construction Management Services (MCMS). He is also able to speak to his experiences with several other design teams.

The chart in attachment (c) shows the history of the firms which have been engaged with the District for facility projects. While the district has most recently endeavored to create an open opportunity for vendors to participate in each new project, the resulting lack of continuity has been a concern. At a minimum, the learning curve for a new project team is steep and time consuming, creating a lack of efficiency and loss of productivity.

The district is currently working with three project teams (comprised of 12 distinct firms):

CRA/MCMS - High School

Hoffman/Reese Eng./Sweetland Eng. - Routine projects

Weber Murphy Fox/Urban Eng./Penn-Terra - Memorial Field

Potentially introducing several new firms into our portfolio of professional contracts for planning, design, and construction management could result in dozens of relatively new consultants working with us on facility projects.

In order to analyze cost component, an analysis comparing the square foot cost of the High School and Mount Nittany Elementary School is provided (see attachment D). Although these are two different building types, the High School comparison only includes new construction costs similar to the Mount Nittany Elementary building. The square foot cost for the High School was \$178 with that of Mount Nittany Elementary being \$190. One would have expected that the passage of over five years alone would have resulted in an increased square footage cost. In addition, the physical layout and aspects of a high school as compared to an elementary school typically raise the square footage costs (e.g. - science laboratories, Career & Technology learning spaces). This favorable comparison emphasizes the cost efficiencies represented through CRA's work on the High School project.

As part of our cost analyses, we have attached detailed project cost history of the three firms which were thoroughly evaluated as part of our high school project selection process in 2012 (see attachment E). These data were used as part of the Board's decision for the High School project.

For these reasons, the administration is requesting that the Board review proposals from Crabtree Rohrbaugh and Associates (CRA) and Massaro Construction Management Services (MCMS) for this project. If this recommendation is found acceptable by the Board, the administration would seek for approval of the team and draft process, as outlined within proposals presented at the Board's April 25 meeting.

If the continuation of services were extended for the CRA/MCMS team, the value of continuity could be maximized. Additionally, the chances of attaining what would be a very aggressive schedule would be improved. The administration makes this recommendation based upon the working relationship gained through the High School process. With the design portion of the high school project complete, the same team of professionals from CRA would be available to continue on the DWFMP and Elementary project(s).

Attachments:

- A: Original draft calendar for DWFMP
- B: Accelerated calendar for DWFMP
- C: SCASD professional firms
- D: Square Foot Comparison - High School and Mount Nittany Elementary School
- E: CRA/Schrader/Buchart Horn Cost Analysis and CRA Project Listing

# Attachment A



Attachment B

	2016												2017												2018												2019																						
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S														
<b>Buildings:</b>																																																											
<b>High School Construction</b>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42																	
<b>DWFMP/Elementary School(s)</b>																																																											
Appoint project team					1																																																						
Process planning (staff level)						1																																																					
Stakeholder and Public meetings					1				2																																																		
Develop and Review options						1	2	3																																																			
Adopt plan(s)										1																																																	
Construction Documents/approvals									1	2	3	4	5	6	7	8	9	10	11																																								
Bid																				1																																							
Construction Phase																					1	2	3	4	5	6	7	8	9	10	11	12	13	14																									
Opening																																												1															
<b>Athletic Fields:</b>																																																											
<b>Memorial Field</b>																																																											
Stakeholder and Public meetings							1	2	3																																																		
Develop and Review options										1	2	3																																															
Select Option												1	2	3	4	5	6																																										
Construction Documents/approvals																				1	2	3	4	5	6	7	8	9	10																														
Bid																																																											
Construction Phase																																																											
Opening																																																											
<b>Other Athletic Fields</b>																																																											
Hire design professional												1	2																																														
Stakeholder and Public meetings													1	2	3																																												
Develop and Review options														1	2	3																																											
Adopt plan(s)																					1	2																																					
Construction Documents/approvals																																																											
Bid																																																											
Construction Phase																																																											
Opening																																																											

**Upcoming Meetings:**

**BOD** April 18: Draft changes to process / RFP information and discussion

**BOD** April 25: HIRE TEAM

## Attachment C





Attachment D



**Randy L. Brown, Business Administrator**  
**131 West Nittany Avenue**  
**State College, PA 16801**  
**814-231-1021**  
**rlb21@scasd.org**

To: Finance and Audit Committee  
From: Randy L. Brown  
RE: High School Bid Cost Comparison  
Date: April 5, 2016

Following the receipt of bids for the High School Project preparing for future building projects in the district, I asked Crabtree Rohrbaugh Associates to calculate a cost comparison.

The attached document includes a cost comparison for the bid cost from the High School compared to Mount Nittany Elementary (MNE). MNE was used as the most recent new construction project in the district. When looking at the High School, this comparison has been calculated on only the new construction piece.

This document is for informational analysis and comparison. There is obvious differences between elementary and high school projects and design teams. However, this is provided for discussion purposes.

March 10, 2016

Randy,

We compared the PlanCON Part G for State College Area High School to Mount Nittany Elementary School. Part G is probably the best data because it the official signed documentation by contractors approved by PA Department of Education of the bid results.

The intent was to try to create a benchmark to see how competitive the high school bids were this past fall.

Specifically, we looked at the New Construction Cost for State College High School and Mount Nittany ES (building only, site cost were removed and renovation square footage is almost always difficult to compare due to each renovation being unique). This was to create the most appropriate comparison "apples to apples".

#### **Part G's (Bid Day Data)**

State College Area High School

516,860 Square Feet

New Construction Cost \$106,481,050

Site Work \$14,118,800

New Constr. w/o Site \$92,362,250

**Cost per Square Foot \$178.70 Bid November 18, 2015**

**For information, we did calculate renovation cost for State High which factored to \$90 SF, though as referenced before renovation is always unique and not recommended for comparisons.**

Mount Nittany Elementary School

60,300 Square Feet

New Construction Cost \$12,805,030

Site Work \$1,344,554

New Constr. w/o Site \$11,460,476

**Cost per Square Foot \$190.05 Bid May 4 2010**

We have **NOT** included any of the Value Engineering work competed over the past 2 months.

In order to create a closer comparison we also referenced the most recent published RS Means National Construction Journal for construction costs. Under Historical Cost Data they provide Cost Escalation Data, we selected Harrisburg and Scranton, Pennsylvania as the 2 closest geographical regions providing cost data (see attached excerpt). From 2010 to 2015, Harrisburg experienced 15.39% inflation and Scranton experienced 13.1% inflation. **The average inflation is 14.39% from 2010 to 2015.**

**We combined the inflation with Mount Nittany Elementary School and it generates a cost of \$217.39/ Square Foot if bid in 2015.**

When you look at the above data this has State College High School at \$38.69 /SF less than Mount Nittany ES.

**Compared against the 516,860 SF new construction for State High only, this represents \$19,997,313 or \$20 Million rounding up the \$3,000.**

While the above creates an “apples to apples” comparison, please also be aware that since high schools are typically more complex than elementary schools (examples include auditoriums, gyms, locker rooms, more complex serving kitchens, science classrooms and Career & Tech Education) that high schools are typically more costly per square foot than elementary schools. I did not have conclusive data on this item, so I did not provide any calculations but wanted to provide this information.

I hope that the above information is useful, it’s sometimes difficult to evaluate bids, especially due to the complexity and size of State College High School.

Let me know if you would like me to clarify any information.  
Jeff



**R. Jeffrey Straub, AIA, REFP,  
LEED AP BD+C, CPD**  
Principal, Studio Director

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**Crabtree, Rohrbaugh & Associates  
Architects**

Pennsylvania • Virginia • Maryland • West  
Virginia

find us at:



## Attachment E - Page 1

		<b>AV. ft2 cost</b>	<b>HS FT2</b>	<b>total cost</b>	<b>Ft2 per 60M</b>	<b>Ft2 per 80M</b>	<b>ft2 per 100M</b>
Crabtree Rohrbaugh	NEW average	\$157.82	449678	\$70,970,013.71	380,170	506,894	633,617
Schradergroup	NEW average	\$216.74	449678	\$97,463,854.55	276,828	369,103	461,379
Buchart Horn/Basco	NEW average	\$217.94	449678	\$98,004,943.25	275,299	367,066	458,832
Difference	SGA to CR	\$58.92	449678	\$26,493,840.84			
Difference	BHB to CR	\$60.12	449678	\$27,034,929.54			
Crabtree Rohrbaugh	Reno add average	\$92.04	449678	\$41,388,219.75	651,893	869,190	1,086,488
Schradergroup	Reno add average	\$183.25	449678	\$82,404,070.38	327,419	436,559	545,699
Buchart Horn/Basco	Reno add average	\$155.98	449678	\$70,139,990.31	384,669	512,892	641,115
Difference	SGA to CR	\$91.21	449678	\$41,015,850.63			
Difference	BHB to CR	\$63.94	449678	\$28,751,770.56			

## Attachment E - Page 2

**Projects used for data analysis:**

<b>Firm</b>	<b>Project</b>	<b>Type</b>	<b>YR</b>	<b>FT2</b>	<b>Const. Cost</b>	<b>FT2 Cost</b>	<b>*inflation</b>	<b>11-12 cost</b>
SGA	Central York (K)	New	2005	333620	48500000	\$145.37	1.398	\$203.23
SGA	Central York	Additions	2008	75847	14900000	\$196.45	1.183	\$232.40
SGA	GW Carver	Reno add	2008	213000	34898000	\$163.84	1.183	\$193.82
SGA	Twin Valley	Reno add	2007	28500	4500130	\$157.90	1.22	\$192.64
SGA	Lankenau	Reno add	2013	71000	12000000	\$169.01	1	\$169.01
SGA	Penncrest	Reno add	2001	200000	20980000	\$104.90	1.508	\$158.19
SGA	FTES***	Reno add	2011	64500	13067237	\$202.59	1	\$202.59
SGA	MNES***	New	2011	59946	12863930	\$214.59	1	\$214.59
CR	Chambersburg	Reno add	2010	530000	61895700	\$116.78	1.085	\$126.71
CR	Red Lion	Reno add	2009	434795	26790100	\$61.62	1.094	\$67.41
CR	Dallas	New	2011	224000	37601491	\$167.86	1	\$167.86
CR	Spring Grove	New	2008	333810	44070044	\$132.02	1.183	\$156.18
CR	North Pocono	New	2009	237820	34796990	\$146.32	1.094	\$160.07
CR	Donegal**	New	2012	246500	32340747	\$131.20	1	\$131.20
CR	Connellsville	Reno add	2012	318546	45163705	\$141.78	1	\$141.78
CR	Uniontown	Reno add	2012	215000	21611554	\$100.52	1	\$100.52
CR	Midd-West***	New	2011	192492	33456127	\$173.81	1	\$173.81
CR	James Buchanan	Reno add	2011	172043	14117350	\$82.06	1	\$82.06
CR	Cedar Cliff	Reno add	2011	238010	15858066	\$66.63	1	\$66.63
CR	Red Land	Reno add	2011	273680	16195000	\$59.17	1	\$59.17
BHB/FA	Manheim Township	Reno add	2008	432000	68868269	\$159.42	1.183	\$188.59
BHB/FA	Upper St Clair	Reno add	2000	315000	30500000	\$96.83	1.528	\$147.95
BHB/FA	West York	Reno add	2002	165000	14570000	\$88.30	1.488	\$131.39
BHB/FA	East Stroudsburg	New	2008	121044	22300000	\$184.23	1.183	\$217.94
BHB/FA	Dover Area HS	not constructed						
BHB/FA	Neshaminy HS	not constructed						

\*\*Green Globes project

\*\*\* LEED project

\*construction inflation from US Bureau of Labor Statistics, cost for new School Construction

**Crabtree, Rohrbaugh & Associates  
Project Experience**

SCHOOL NAME	DISTRICT	DESIGN	YEAR	BUDGET /COST	SIZE	Paul Taylor, AIA, LEED AP	John Beddia, AIA LEED AP	Tracy Rohrbaugh	Jeff Straub
						Educational Planner	Director of Operations	Interior Design	Project Manager
<b>Middle Schools</b>									
Garden Spot Middle School /High School	Eastern Lancaster County School District	Additions / Renovations	2010	\$21,904,679	343,510	X		X	
Spring Grove Middle School	Spring Grove Area School District	Renovation	2010	\$10,145,000	181,000	X		X	
Central Columbia Middle School	Penn Manor School District	Renovation	2011	\$576,565	11,520		X	X	
Donegal Intermediate School	Donegal School District	Renovation	2013	\$12,954,807	136,890		X	X	
Marticville Middle School	Penn Manor School District	Renovation	2010	\$9,942,591	107,409		X	X	
Middletown Middle School	Middletown Area School District	New Construction	2007	\$24,500,000	173,122	X		X	X
Centerville Middle School	Hempfield School District	Renovation & Addition	2006	\$13,815,521	147,000		X		
Mechanicsburg Middle School	Mechanicsburg Area School District	New Construction	2002	\$21,333,000	220,952	X	X	X	
Susquenita Middle School	Susquenita School District	Renovation & Addition	2001	\$2,575,653	110,835		X		
Yellow Breaches Middle School	South Middleton School District	New Construction	2000	\$10,573,045	108,800	X	X	X	X
Spring Forge Intermediate School	Northeastern York School District	New Construction	2000	\$9,402,328	102,300		X	X	
<b>High Schools</b>									
9th Grade School	Hazleton Area School District	Renovation	2014	\$4,000,000	84,685	X		X	X
Albert Gallatin Senior High School	Albert Gallatin School District	Additions / Renovations	2013	\$7,846,563	197,770	X	X	X	
Bellefonte Area High School	Bellefonte School District	Additions / Renovations	2008	\$26,885,163	258,499	X		X	
Donegal High School	Donegal School District	New Construction	2012	\$32,340,747	246,500	X	X	X	
Cedar Cliff High School	West Shore School District	Additions / Renovations	2011	\$15,858,066	238,010		X	X	
Chambersburg Area Senior High School	Chambersburg Area School District	Additions / Renovations	2010	\$61,895,700	530,000	X	X	X	
Connellsville Area Senior High School	Connellsville Area School District	Additions / Renovations	2012	\$45,163,705	318,546	X		X	X
Donegal Junior High School	Donegal School District	Additions / Renovations	2014	\$7,767,814	122,285		X	X	
Spring Grove Area High School	Spring Grove Area School District	New Construction	2008	\$44,070,044	333,810	X	X	X	
Friendly High School	Prince George's County Public Schools	Renovations	2012	\$1,034,000	7,598		X	X	X
James Buchanan High School	Tuscarora School District	Additions / Renovations	2011	\$14,117,350	172,043	X	X	X	
Juniata Valley Jr/Sr High School	Juniata Valley School District	Additions / Renovations	2010	\$12,915,000	102,350	X	X	X	X
Line Mountain Jr / Sr High School	Line Mountain School District	Additions / Renovations	2010	\$6,924,999	45,945	X	X	X	
Midd-West High School	Midd-West School District	Additions / Renovations	2011	\$33,456,127	192,492	X	X	X	X
Red Land High School	West Shore School District	Additions / Renovations	2011	\$16,195,000	273,680	X	X	X	
Red Lion High School	Red Lion Area School District	Additions / Renovations	2009	\$26,790,100	434,795	X	X	X	
Hazleton Area Academy of Sciences (STEM)	Hazleton Area School District	Additions / Renovations	2013	\$5,900,000	55,334	X	X	X	X
Spring Grove High School Technology	Spring Grove Area School District	Renovations	2009	\$680,800	9,000	X		X	
Troy High School	Troy Area School District	Additions / Renovations	2008	\$20,975,811	147,524	X	X	X	X
Tussey Mountain Jr/Sr High School	Tussey Mountain School District	Additions / Renovations	2009	\$15,382,285	134,184	X		X	
Uniontown High School	Uniontown School District	Additions / Renovations	2012	\$21,611,554	215,000		X	X	
Wyalusing Valley Jr/Sr High School	Wyalusing Valley School District	Additions / Renovations	2009	\$9,805,445	140,835	X			
Boiling Springs High School	Boiling Springs School District	Additions / Renovations	2007	\$10,888,500	52,200	X		X	X



	SCHOOL NAME	DISTRICT	DESIGN	YEAR	BUDGET /COST	SIZE	Paul Taylor, AIA, LEED AP	John Beddia, AIA LEED AP	Tracy Rohrbaugh	Jeff Straub
35	Catasauqua High School	Catasauqua School District	New Construction	2005	\$20,995,000	191,000	X		X	
36	Southern Huntingdon High & Middle School	Southern Huntingdon School District	Additions / Renovations	2004	\$11,640,820	143,554	X		X	
37	Mechanicsburg Senior High School	Mechanicsburg Area High School	Additions / Renovations	2002	\$14,960,025	295,855	X		X	
38	Mount Carmel Jr/Sr High School	Mount Carmel School District	Additions / Renovations	2002	\$6,517,590	186,200	X			
39	Northeastern High School	Northeastern School District	Additions / Renovations	2002	\$6,714,697	160,204	X	X	X	
40	Northern York High School	Northern York County School District	New Construction	2002	\$24,472,641	236,000	X	X	X	
41	Phoenixville High School	Phoenixville School District	Additions / Renovations	2002	\$16,277,637	196,000	X		X	X
42	Susquenita High School	Susquenita School District	Additions / Renovations	2002	\$11,512,932	188,000		X	X	
43	Pocono High School	Pocono Mountain School District	Additions / Renovations	2000	\$6,700,000	161,402	X			
44	Southern Columbia High School	Southern Columbia School District	Additions / Renovations	2000	\$3,879,529	38,100		X	X	
45	Elizabethtown Area High & Middle School Complex	Elizabethtown Area School District	Additions / Renovations	1999	\$21,754,946	422,000	X	X	X	X
46	Coudersport Area Jr/Sr High School	Coudersport Area School District	Additions / Renovations	1998	\$5,118,091	95,622	X	X	X	
47	Clarion Area Jr/Sr High School	Clarion Area School District	Additions / Renovations	1997	\$8,305,301	173,625	X	X	X	
48	Otto-Eldred Jr/Sr High School	Otto-Eldred School District	Additions / Renovations	1997	\$5,449,880	89,000	X	X	X	X
	<b>Career &amp; Technical</b>									
49	York County School of Technology	York County School of Technology	Additions / Renovations	2007	\$40,493,267	435,000	X	X	X	X
50	Central Pennsylvania Institute of Science	Central Pennsylvania Institute of Science	Additions / Renovations	2005	\$5,587,000	116,000	X			X
51	Seneca Highlands AVTS	Seneca Highlands AVTS	Additions / Renovations	2008	\$7,700,800	50,140	X		X	
52	Capital Area Intermediate Unit	Capital Area Intermediate Unit	New Construction	2008	\$4,332,000	38,688			X	X
53	Northumberland AVTS	Northumberland AVTS	Additions / Renovations	2003	\$2,340,000	99,826	X		X	
54	Clearfield County Career & Technology Center	Clearfield County Career & Technology Center	Additions / Renovations	2007	\$8,808,747	75,000		X	X	X
55	Northern Tier Career Center	Northern Tier Career Center	Additions / Renovations	2007	\$8,700,000	80,000	X			
56	Connellsville Area Career & Technical	Connellsville Area School District	Additions / Renovations	2009	\$14,255,712	109,000	X		X	X
57	Adams County Tech Prep	Adams County Tech Prep	New Construction	2012	\$3,443,055	20,696		X	X	
58	Franklin County Career & Technology Center	Franklin County Career & Technology Center	Additions / Renovations	2013	\$11,500,000	200,000	X	X	X	
59	Dauphin County Technical School	Dauphin County Technical School	Additions / Renovations	2009	\$1,200,000	258,475	X		X	X