

# Bellefonte Area School District

Feasibility Study Update January 19, 2017



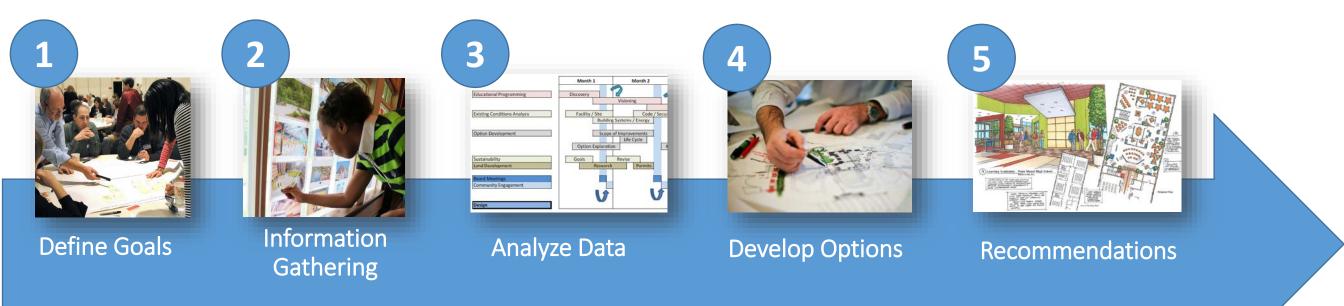


Crabtree, Rohrbaugh & Associates, Architects

Providing a Client Oriented Approach to Architecture

## Study Approach

Elements of a Building Utilization Study



### Study Approach

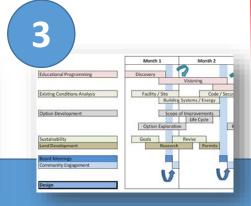
Elements of a Building Utilization Study



Define Goals



Information Gathering



Analyze Data



**Develop Options** 



Recommendations

Educational
Financial
Program requirements
Guiding principles
Indicators of quality
District Standards
Students/CR

District Standards
Students/CR
Healthy Environment
Ease of Maintenance
Safety & Security
Site Attributes

**Determine benchmarks** 

**Existing documentation Drawings** 

Facility Assessments
Quantitative
Qualitative

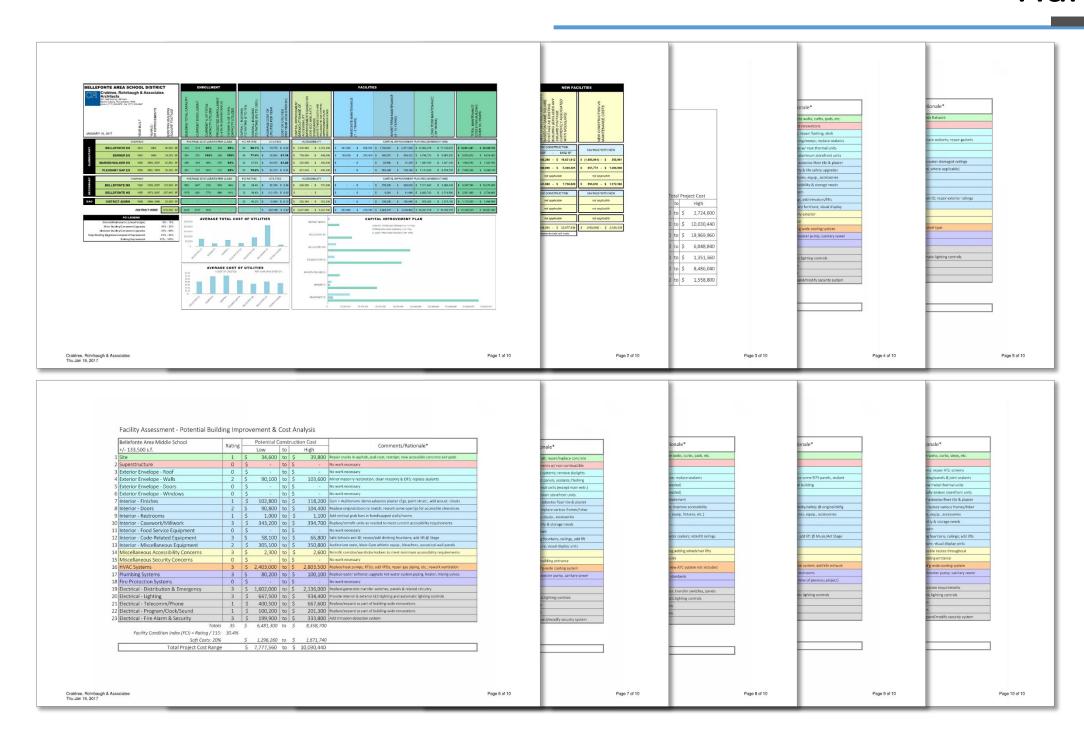
Utility cost history
Educational Program
Educational Adequacy
Functional survey

Space analysis
Energy modeling
Compare benchmarks
Utilization
Educational adequacy
Right size the boxes

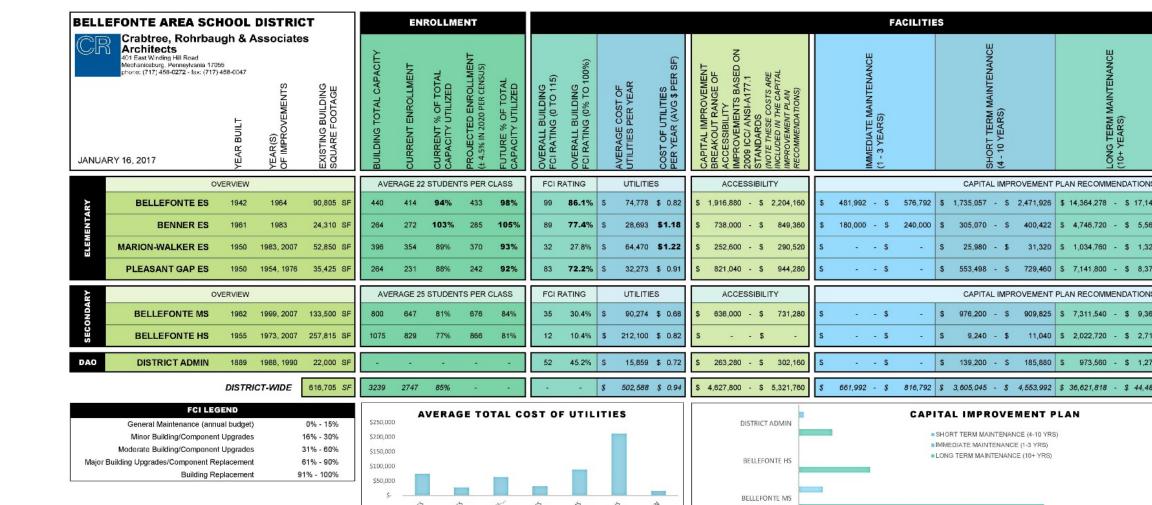
Grade level configurations
Infrastructure improvements
Educational improvements
Cost and Budget
Facility disposition
Operational optimization

Final report
Final presentation

#### **Handouts**



#### Comprehensive FCI & Capital Improvement Program Worksheet



#### Capital Improvement Program Related to New Construction

BELL	EFONTE AREA SC	HOOL	DISTRI	СТ						EXISTIN	G FACILI	TIES		NEW FAC	CILITIES
JANUA	Crabtree, Rohrbaugh & Associates Architects 401 East Winding Hill Road Mechanicaburg, Pennsylvania 17055 phone: (717) 458-0272 - fax: (717) 458-0047  LINDA SALVANIA BUILDING SALVANIA BUILDING STANDARD SALVANIA		BUILDING OOTAGE	OVERALL BUILDING FCI RATING (0 TO 115)	OVERALL BUILDING FCI RATING (0% TO 100%)		IMMEDIATE MAINTENANCE (1 - 3 YEARS)		SHORT TERM MAINTENANCE (4 - 10 YEARS)		LONG TERM MAINTENANCE (10+ YEARS)	TOTAL MAINTENANCE COSTS PER BUILDING OVER 10+ YEARS	NEW CONSTRUCTION COSTS BASED ON SAME SQUARE FOOTAGE AS EXISTING BUILDING (EXCLUDES ANY SQUARE FOOTAGE CURRENTLY ASSOCIATED WITH MODULARS)	NEW CONSTRUCTION VS MAINTENANCE COSTS	
	0	VERVIEW			FCI RATING		FCI RATING			CAPITAL IMPROVEMENT PLAN RECOMMENDATIONS				NEW CONSTRUCTION \$168/SF - \$182/ SF	SAVINGS WITH NEW
FARY	BELLEFONTE ES	1942	1964	90,805 SF	99	86.1%	\$	481,992 - \$	576,792	\$ 1,735,057 - \$	2,471,926	\$ 14,364,278 - \$ 17,140,075	\$ 16,901,247 - \$ 20,188,793	\$ 18,306,288 - \$ 19,831,812	\$ (1,405,041) - \$ 356,981
ELEMENTARY	BENNER ES	1961	1983	24,310 SF	89	77.4%	\$	180,000 - \$	240,000	\$ 305,070 - \$	400,422	\$ 4,746,720 - \$ 5,567,520	\$ 5,552,670 - \$ 6,616,302	\$ 4,900,896 - \$ 5,309,304	\$ 651,774 - \$ 1,306,998
=======================================	MARION-WALKER ES	1950	1983, 2007	52,850 SF	32	27.8%	\$	\$		\$ 25,980 - \$	31,320	\$ 1,034,760 - \$ 1,321,440	not applicable	not applicable	not applicable
	PLEASANT GAP ES	1950	1954, 1976	35,425 SF	83	72.2%	\$	\$	-	\$ 553,498 - \$	729,460	\$ 7,141,800 - \$ 8,379,720	\$ 7,695,298 - \$ 9,109,180	\$ 7,141,680 - \$ 7,736,820	\$ 553,618 - \$ 1,372,360
ΚY	0'	VERVIEW		19	FCIF	RATING				CAPITAL IMF	ROVEMENT		NEW CONSTRUCTION	SAVINGS WITH NEW	
SECONDARY	BELLEFONTE MS	1962	1999, 2007	133,500 SF	35	30.4%	\$	\$	9-6	\$ 976,200 - \$	909,825	\$ 7,311,540 - \$ 9,360,435	not applicable	not applicable	not applicable
SECO	BELLEFONTE HS	1955	1973, 2007	257,815 SF	12	10.4%	\$	\$	- 1	\$ 9,240 - \$	11,040	\$ 2,022,720 - \$ 2,713,560	not applicable	not applicable	not applicable
DAO	DISTRICT ADMIN	1889	1988, 1990	22,000 SF	52	45.2%	\$	\$		\$ 139,200 - \$	185,880	\$ 973,560 - \$ 1,272,120	not applicable	not applicable	not applicable
		DISTRI	CT-WIDE	616,705 SF			\$	661,992 - \$	816,792	\$ 3,605,045 - \$	4,553,992	\$ 36,621,818 - \$ 44,482,750	\$ 30,149,215 - \$ 35,914,274	\$ 30,348,864 - \$ 32,877,936	\$ (199,649) - \$ 3,036,338
	FCI LEC General Maintenance (ann			0% - 15%										Estimates include soft costs	

Minor Building/Component Upgrades

Moderate Building/Component Upgrades

Major Building Upgrades/Component Replacement

16% - 30%

31% - 60%

61% - 90% 91% - 100%

### Study Approach

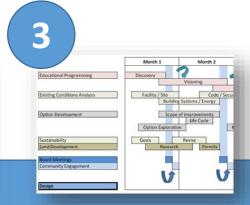
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## **Existing Conditions**

















**Bellefonte Elementary** 

±90,805 SF FCI RATING 86.1%

**Benner Elementary** 

±24,310 SF FCI RATING 77.4%

## **Existing Conditions**

















Marion-Walker Elementary

±52,850 SF FCI RATING 27.8%

Pleasant Gap Elementary

±35,425 SF FCI RATING 72.2%

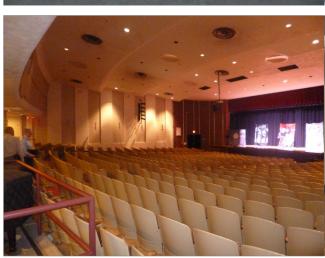
## **Existing Conditions**

















**Bellefonte Middle School** 

±133,500 SF FCI RATING 30.4%

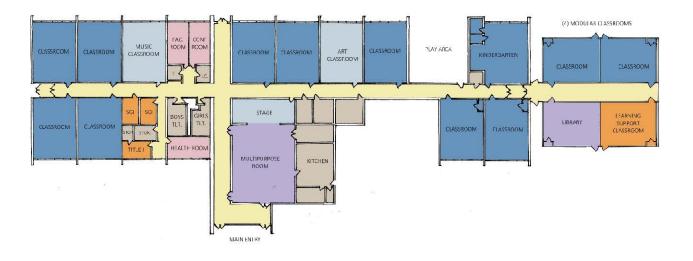
**Bellefonte High School** 

±257,815 SF FCI RATING 10.4%

#### UNEXCAVATED CLASSROOM GYMNASIUM ROOM LEARNING TECH/ SUPPORT GUID. UNEXCAVATED GYMNASIUM OCCUPATIONAL THERAPY/ AUDITORIUM CHINESE TEACHER OFFICE AU IISTIC SUPPORT AUTISTIC EMOTIONAL SUPPORT

**Bellefonte Elementary** 

### **Existing Floor Plans**



Benner Elementary

## **Existing Floor Plans**





Marion-Walker Elementary

Pleasant Gap Elementary

## **Existing Floor Plans**



DRATING CAPETERIA

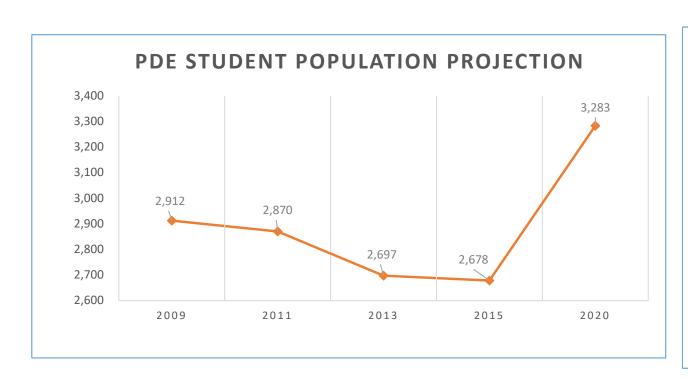
COURTYARD

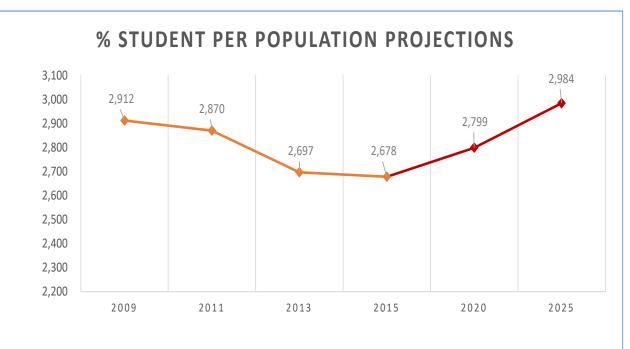
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**Bellefonte Middle School** 

Bellefonte High School

## **Enrollment Projections**





#### Section 3 of Feasibility Study

PDE enrollment projections are currently indicating a 20% potential growth within the district by 2020, please be aware PDE documents have not been updated since 2012.

Analysis of Student Population based upon Student per Population and Cohort Survival indicate a more modest growth within the district currently, that appear to be what is currently occurring within Bellefonte Area School District.

### **Existing Building Capacities**

SCHOOL	EXISTING SF	BUILDING TOTAL CAPACITY	CURRENT ENROLLMEN T	CURRENT % OF CAPACITY	PROJECTED ENROLLMENT BASED ON CENSUS (2020)	FUTURE % OF CAPACITY
BELLEFONTE ES	90,805 SF	440	414	94%	433	98%
BENNER ES	24,310 SF	264	272	103%	285	105%
MARION-WALKER ES	52,850 SF	396	354	89%	370	93%
PLEASANT GAP ES	35,425 SF	264	231	88%	242	92%
BELLEFONTE MS	133,500 SF	800	647	81%	676	84%
BELLEFONTE HS	257,815 SF	1075	829	77%	866	81%
DISTRICT ADMIN	22,000 SF	-	-	-	-	-

Based upon the information above, BASD's elementary schools are currently performing at full capacity. If renovations would be planned, growth capacity should be planned for.

#### Facility Assessment & Facility Condition Index (FCI) Generation

Bellefonte Elementary School	Dating		Potential Co	onst	ructi	on Cost	Camananta/Dationala*	
+/- 90,805 s.f.	Rating		Low	to		High	- Comments/Rationale*	
1 Site	4	\$	266,600	to	\$	306,600	Replace asphalt play court paving & damaged concrete walks, curbs, pads, etc.	
2 Superstructure	4	\$	790,500	to	\$	909,100	Extensive structural shoring/underpinning for needed renovations	
3 Exterior Envelope - Roof	4	\$	1,078,700	to	\$	1,240,500	New roof, incl. insulation; new roof curbs/specialties; repair flashing, deck	
4 Exterior Envelope - Walls	4	\$	403,900	to	\$	464,500	Moderate masonry restoration & cleaning; new flashing/weeps; replace sealants	
5 Exterior Envelope - Doors	4	\$	28,200	to	\$	32,500	Replace all aluminum & hollow metal door assemblies w/ new thermal units	
6 Exterior Envelope - Windows	5	\$	391,100	to	\$	449,700	Replace original steel windows w/ thermally-broken aluminum storefront units	
7 Interior - Finishes	4	\$	752,700	to	\$	865,600	Update finishes throughout, including abatement of asbestos floor tile & plaster	
8 Interior - Doors	3	\$	384,700	to	\$	442,400	Refinish/replace doors (maintain original); accessibility & life safety upgrades	
9 Interior - Restrooms	4	\$	127,800	to	\$	146,900	Accessibility upgrades wherever feasible; replace fixtures, equip., accessories	
Interior - Casework/Millwork	4	\$	256,100	to	\$	294,500	Restore original custom units; add new to meet accessibility & storage needs	
Interior - Food Service Equipment	3	\$	195,000	to	\$	224,300	Replace antiquated equipment, fire suppression system	
Interior - Code-Related Equipment	4	\$	325,200	to	\$	373,900	Fire extinguishers, signage, drinking fountains, railings, add elevators/lifts	
13 Interior - Miscellaneous Equipment	4	\$	694,300	to	\$	798,400	Stage & gym equip., auditorium seats, acoustics, library furniture, visual display	
Miscellaneous Accessibility Concerns	4	\$	503,600	to	\$	579,100	Provide accessible routes to/within building, especially exterior	
Miscellaneous Security Concerns	5	\$	203,500	to	\$	234,000	Renovate Main Office & Vestibule for secure entrance	
HVAC Systems	5	\$	2,905,800	to	\$	3,178,200	Replace heating, ventilation & ATC systems; new bld'g-wide cooling system	
Plumbing Systems	5	\$	817,200	to	\$	1,089,700	New water piping, valves, fixtures, faucets, fittings, booster pump, sanitary sewer	
18 Fire Protection Systems	4	\$	363,200	to	\$	454,000	Add fire suppression/sprinkler system	
19 Electrical - Distribution & Emergency	5	\$	1,816,100	to	\$	2,270,200	New switchgear, panels, generator, etc.	
20 Electrical - Lighting	5	\$	454,100	to	\$	635,600	Provide interior & exterior LED lighting and automatic lighting controls	
21 Electrical - Telecomm/Phone	5	\$	272,400	to	\$	455,300	Replace/expand as part of building-wide renovations	
22 Electrical - Program/Clock/Sound	5	\$	68,100	to	\$	136,200	Replace/expand as part of building-wide renovations	
23 Electrical - Fire Alarm & Security	5	\$	137,800	to	\$	227,100	Replace fire alarm system to meet current code; expand/modify security system	
Totals	99	\$	13,236,600	to	\$	15,808,300		
Facility Condition Index (FCI) = Rating / 115:	86.1%	4	0.647.000		4	2 4 5 4 5 5 5 5		
Soft Costs (20%)		\$	2,647,320			3,161,660		
Total Project Cost Range		\$	15,883,920	to	\$	18,969,960		

# **Existing Building FCI Ratings**

SCHOOL	YEAR BUILT	YEAR(S) OF IMPROVEMENTS	EXISTING SF	FCI RATING (0 – 115)	FCI %
BELLEFONTE ES	1942	1964	90,805 SF	99	86.1%
BENNER ES	1961	1983	24,310 SF	89	77.4%
MARION-WALKER ES	1950	1983, 2007	52,850 SF	32	27.8%
PLEASANT GAP ES	1950	1954, 1976	35,425 SF	83	72.2%
BELLEFONTE MS	1962	1999, 2007	133,500 SF	35	30.4%
BELLEFONTE HS	1955	1973, 2007	257,815 SF	12	10.4%
DISTRICT ADMIN	1889	1988, 1990	22,000 SF	52	45.2%

# **Existing Building Maintenance**

SCHOOL	FCI %	IMMEDIATE MAINTENANCE (1-3 YEARS)	SHORT TERM MAINTENANCE (4-10 YEARS)	LONG TERM MAINTENANCE (10+ YEARS)
BELLEFONTE ES	86.1%	\$481,992 - \$576,792	\$1,735,057 - \$2,471,926	\$14,364,278 - \$17,140,075
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MARION-WALKER ES	27.8%	-	\$25,980 - \$31,320	\$1,034,760 - \$1,321,440
PLEASANT GAP ES	72.2%	-	\$553,498 - \$729,460	\$7,141,800 - \$8,379,720
BELLEFONTE MS	30.4%	-	\$909,200 - \$976,200	\$7,311,540 - \$9,360,435
BELLEFONTE HS	10.4%	-	\$9,240 - \$11,040	\$2,022,720 - \$2,713,560
DISTRICT ADMIN	45.2%	\$661,992 - \$816,792	\$139,200 - \$185,800	\$973,560 - \$1,272,120

# **ADA Improvements**

SCHOOL	FCI %	ACCESSIBILITY IMPROVEMENTS	INCLUDES THE FOLLOWING:			
BELLEFONTE ES	86.1%	\$1,916,880 - \$2,204,160	Door hardware and openings, restrooms, interior casework, fire extinguishers, signage, drinking fountains, railings, elevators/lifts			
BENNER ES	77.4%	\$738,000 - \$849,360	Accessible walks/ramps, door hardware and openings, restrooms, casework, fire extinguishers, signage, drinking fountains, railings, add lift			
MARION-WALKER ES	27.8%	\$252,600 - \$290,520	Door hardware and openings, restrooms, fire extinguishers, add lift at Music/Art Stage			
PLEASANT GAP ES	72.2%	\$821,040 - \$944,280	Door hardware and openings, restrooms, casework, fire extinguishers, signage, drinking fountains, railings, lifts			
BELLEFONTE MS	30.4%	\$636,000 - \$731,280	Accessible concrete exit pads, rework some door openings, vertical grab bars in restrooms, casework, lift at stage, retrofit corridor/wardrobe lockers			
BELLEFONTE HS	10.4%	-	None.			
DISTRICT ADMIN	45.2%	\$263,280 - \$302,160	Restrooms, casework, fire extinguishers, interior signage, retrofit railings			

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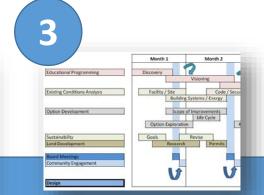
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#### New Construction vs. Maintenance Study

SCHOOL	FCI %	TOTAL MAINTENANCE COSTS OVER 10+ YEARS	NEW CONSTRUCTION BASED ON EXISTING SQUARE FOOTAGES (\$168 - \$182/SF)	NEW CONSTRUCTION VS. MAINTENANCE COST SAVINGS
BELLEFONTE ES	86.1%	\$16,901,247 – \$20,188,793	\$18,306,288 – \$19,831,812	(\$1,405,041) – \$356,981
BENNER ES	77.4%	\$5,552,670 — \$6,616,302	\$4,900,896 — \$5,309,304	\$651,774 – \$1,306,998
MARION-WALKER ES	27.8%	-	-	-
PLEASANT GAP ES	72.2%	\$7,695,298 – \$9,109,180	\$7,141,680 – \$7,736,820	\$553,618 – \$1,372,360
BELLEFONTE MS	30.4%	-	-	-
BELLEFONTE HS	10.4%	_	_	_
DISTRICT ADMIN	45.2%	-	-	-

This study is to evaluate whether maintenance or new construction is more cost effective. Further analysis of options should be completed to determine optimal financial and educational model.

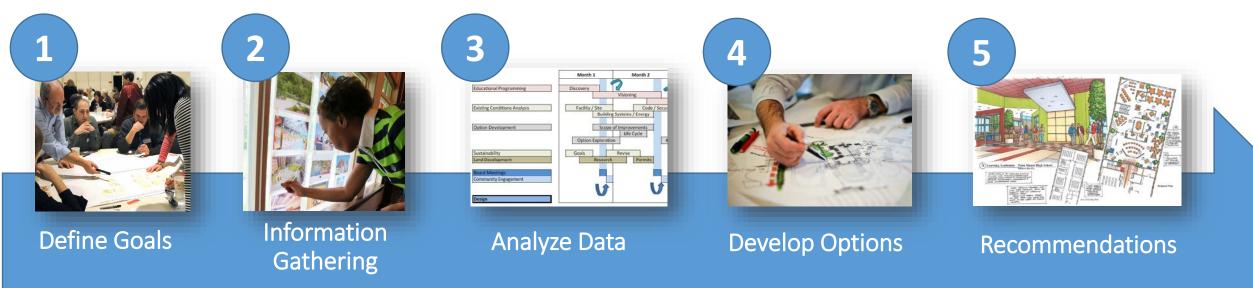
<b>Total Maintenance over 10+ Years</b>	\$30.1 - \$35.9 Million
New Construction	\$30.3 - \$32.8 Million
Potential Savings	Up to \$3.0 Million

This analysis is maintaining all 3 elementary school buildings as currently constructed.

It is recommended that options be discussed to reduce existing square footage. This is anticipated to create efficiency beyond the \$3 Million for Bellefonte Area School District.

The existing 3 buildings range from 1942-1961 original construction and have not been renovated substantially for more than 34 years both infrastructure and educationally to meet current standards.

## Next Step



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20 Electrical - Lighting	5	\$	454,100	to	\$	635,600	Provide interior & exterior LED lighting and automatic lighting controls	
21 Electrical - Telecomm/Phone	5	\$	272,400	to	\$	455,300	Replace/expand as part of building-wide renovations	
22 Electrical - Program/Clock/Sound	5	\$	68,100	to	\$	136,200	Replace/expand as part of building-wide renovations	
23 Electrical - Fire Alarm & Security	5	\$	137,800	to	\$	227,100	Replace fire alarm system to meet current code; expand/modify security system	
Totals	99	\$	13,236,600	to	\$	15,808,300		
Facility Condition Index (FCI) = Rating / 115:	86.1%	4	0.647.000		4	2 4 5 4 5 5 5 5		
Soft Costs (20%)		\$	2,647,320			3,161,660		
Total Project Cost Range		\$	15,883,920	to	\$	18,969,960		

	Benner Elementary School		Potential Co	nstr	uctio	on Cost	Comments/Pationals*	
	+/- 24,310 s.f.	Rating	Low	to		High	Comments/Rationale*	
1	Site	3	\$ 181,300	to	\$	208,500	Add accessible walks, ramps; repair & seal-coat asphalt; repair/replace concrete	
2	Superstructure	3	\$ 91,500	to	\$	105,200	Remove modular unit; replace wood-framed components w/ non-combustible	
3	Exterior Envelope - Roof	3	\$ 561,100	to	\$	645,200	Replace roof (incl. insulation) & soffit (incl. asbestos) systems; remove skylights	
4	Exterior Envelope - Walls	4	\$ 134,000	to	\$	154,100	Heavy masonry restoration, cleaning; replace precast panels, sealants; flashing	
5	Exterior Envelope - Doors	3	\$ 32,100	to	\$	36,900	Replace all door assemblies w/ new alum./H.M. thermal units (except main entr.)	
6	Exterior Envelope - Windows	4	\$ 116,500	to	\$	133,900	Replace original aluminum windows w/ thermally-broken storefront units	
7	Interior - Finishes	4	\$ 226,300	to	\$	260,200	Update finishes throughout, including abatement of asbestos floor tile & plaster	
8	Interior - Doors	4	\$ 119,200	to	\$	137,600	Replace all doors; recess doorways for accessibility; replace various frames/hdwr	
9	Interior - Restrooms	4	\$ 54,100	to	\$	62,200	Accessibility upgrades (all locations); replace fixtures, equip., accessories	
10	Interior - Casework/Millwork	4	\$ 184,000	to	\$	211,600	Replace all casework w/ new units to meet accessibility & storage needs	
11	Interior - Food Service Equipment	2	\$ 78,000	to	\$	89,700	Replace antiquated equipment, fire suppression system	
12	Interior - Code-Related Equipment	4	\$ 76,400	to	\$	87,900	Replace fire extinguishers/cabinets, signage, drinking fountains, railings, add lift	
13	Interior - Miscellaneous Equipment	3	\$ 201,100	to	\$	231,200	Replace stage & gym equip., acoustics, library furniture, visual display units	
14	Miscellaneous Accessibility Concerns	0	\$ ;=	to	\$	-	No work necessary	
15	Miscellaneous Security Concerns	5	\$ 192,200	to	\$	221,000	Add Main Office space necessary to provide secure building entrance	
16	HVAC Systems	5	\$ 850,900	to	\$	923,800	Replace heating, ventilation & ATC systems; new bld'g-wide cooling system	
17	Plumbing Systems	5	\$ 267,400	to	\$	340,300	New water piping, valves, fixtures, faucets, fittings, booster pump, sanitary sewer	
18	Fire Protection Systems	4	\$ 109,400	to	\$	145,900	Add fire suppression/sprinkler system	
19	Electrical - Distribution & Emergency	5	\$ 534,800	to	\$	656,400	New switchgear, panels, generator, etc.	
20	Electrical - Lighting	5	\$ 121,600	to	\$	170,200	Provide interior & exterior LED lighting and automatic lighting controls	
21	Electrical - Telecomm/Phone	5	\$ 72,900	to	\$	121,600	Replace/expand as part of building-wide renovations	
22	Electrical - Program/Clock/Sound	5	\$ 18,200	to	\$	36,500	Replace/expand as part of building-wide renovations	
23	Electrical - Fire Alarm & Security	5	\$ 35,500	to	\$	60,800	Replace fire alarm system to meet current code; expand/modify security system	
	Totals	89	\$ 4,258,500	to	\$	5,040,700		
	Facility Condition Index (FCI) = Rating / 115:	77.4%						
	Soft Costs (20%)		\$ 851,700	to	\$	1,008,140		
	Total Project Cost Range		\$ 5,110,200	to	\$	6,048,840		

	Marion-Walker Elementary School	Dating	Potential Co	nstr	ucti	on Cost	Comments/Dationale*
	+/- 52,850 s.f.	Rating	Low		to High		Comments/Rationale*
1	Site	2	\$ 11,800	to	\$	13,600	Minor asphalt crack repair
2	Superstructure	3	\$ 3,500	to	\$	4,000	Remove modular units
3	Exterior Envelope - Roof	2	\$ 3,100	to	\$	3,500	Replace eave fasciae @ original building
4	Exterior Envelope - Walls	3	\$ 105,500	to	\$	121,300	Masonry restoration & cleaning @ orig. bld'g; replace some EIFS panels, sealant
5	Exterior Envelope - Doors	2	\$ 5,600	to	\$	6,400	Add/replace a few door/frame assemblies in original building
6	Exterior Envelope - Windows	0	\$ =	to	\$	#2	No work necessary
7	Interior - Finishes	0	\$ -	to	\$	4	No work necessary
8	Interior - Doors	3	\$ 104,900	to	\$	120,600	Replace original doors; recess doorways for accessibility/safety @ original bld'g
9	Interior - Restrooms	3	\$ 61,000	to	\$	70,200	Accessibility upgrades @ original bld'g; replace fixtures, equip., accessories
10	Interior - Casework/Millwork	0	\$ <b>:</b>	to	\$	-	No work necessary
11	Interior - Food Service Equipment	2	\$ -	to	\$	<del></del>	No work necessary
12	Interior - Code-Related Equipment	3	\$ 44,600	to	\$	51,300	Fire ext./cab's @ original bld'g; Safe Schools exit ID; add lift @ Music/Art Stage
13	Interior - Miscellaneous Equipment	1	\$ 21,600	to	\$	24,800	Add acoustic panels @ Multipurpose & Lobby
14	Miscellaneous Accessibility Concerns	0	\$ <b>-</b> 0	to	\$	-:	No work necessary
15	Miscellaneous Security Concerns	0	\$ 	to	\$	-:	No work necessary
16	HVAC Systems	2	\$ 6,000	to	\$	8,000	Replace miscellaneous items & portions of ventilation system; add kiln exhaust
17	Plumbing Systems	2	\$ 13,500	to	\$	15,600	Replace fixtures, faucets, fittings @ non-accessible restrooms
18	Fire Protection Systems	2	\$ 237,800	to	\$	317,100	Add fire suppression/sprinkler system (not req'd at time of previous project)
19	Electrical - Distribution & Emergency	0	\$ <del>-</del> 0	to	\$		No work necessary
20	Electrical - Lighting	2	\$ 264,300	to	\$	369,900	Provide interior & exterior LED lighting and automatic lighting controls
21	Electrical - Telecomm/Phone	0	\$ 	to	\$	#:	No work necessary
22	Electrical - Program/Clock/Sound	0	\$ 	to	\$	#:	No work necessary
23	Electrical - Fire Alarm & Security	0	\$ -	to	\$		No work necessary
	Totals	32	\$ 883,200	to	\$	1,126,300	
	Facility Condition Index (FCI) = Rating / 115:	27.8%					
	Soft Costs: 20%		\$ 176,640	to	\$	225,260	
	Total Project Cost Range		\$ 1,059,840	to	\$	1,351,560	

Facility Assessment - Potential Building Improvement & Cost Analysis

Pleasant Gap Elementary School	Pating		Potential Co	nstr	uctio	on Cost	Comments/Pationale*
+/- 35,425 s.f.	Rating		Low to High		High	Comments/Rationale*	
Site	3	\$	276,900	to	\$	318,400	Replace/patch & seal-coat asphalt; replace concrete walks, curbs, steps, etc.
Superstructure	0	\$	-	to	\$	-	No work necessary
Exterior Envelope - Roof	4	\$	781,500	to	\$	898,700	Replace roof (w/ adequate insulation) & soffit systems; repair RTU screens
Exterior Envelope - Walls	3	\$	110,700	to	\$	127,300	Minor masonry restoration, full cleaning; replace siding/panels & joint sealants
Exterior Envelope - Doors	4	\$	68,400	to	\$	78,600	Replace all door assemblies w/ new aluminum/hollow metal thermal units
Exterior Envelope - Windows	5	\$	22,700	to	\$	26,100	Replace original aluminum/steel windows w/ thermally-broken storefront units
Interior - Finishes	3	\$	491,600	to	\$	565,400	Update finishes throughout, including abatement of asbestos floor tile & plaster
Interior - Doors	4	\$	166,100	to	\$	191,000	Replace all doors; recess doorways for accessibility; replace various frames/hdwr
Interior - Restrooms	4	\$	94,400	to	\$	108,600	Accessibility upgrades (all locations); replace fixtures, equip., accessories
Interior - Casework/Millwork	4	\$	218,500	to	\$	251,300	Replace all casework w/ new units to meet accessibility & storage needs
Interior - Food Service Equipment	2	\$	66,500	to	\$	76,400	Replace antiquated equipment, fire suppression system
Interior - Code-Related Equipment	4	\$	136,700	to	\$	157,200	Replace fire extinguishers/cabinets, signage, drinking fountains, railings; add lifts
Interior - Miscellaneous Equipment	3	\$	270,100	to	\$	310,700	Replace stage & gym equip., acoustics, library furniture, visual display units
Miscellaneous Accessibility Concerns	4	\$	68,500	to	\$	78,800	Improve/rework interior & exterior to provide accessible routes throughout
Miscellaneous Security Concerns	5	\$	281,000	to	\$	323,200	Renovate Main Office in order to provide secure building entrance
HVAC Systems	4	\$	1,239,900	to	\$	1,346,200	Replace heating, ventilation & ATC systems; new bld'g-wide cooling system
Plumbing Systems	4	\$	372,000	to	\$	478,200	New water piping, valves, fixtures, faucets, fittings, booster pump, sanitary sewer
Fire Protection Systems	4	\$	159,400	to	\$	212,600	Add fire suppression/sprinkler system
Electrical - Distribution & Emergency	4	\$	885,600	to	\$	956,500	Expand switchgear, panels, generator, etc. per renovation requirements
Electrical - Lighting	4	\$	177,100	to	\$	247,900	Provide interior & exterior LED lighting and automatic lighting controls
Electrical - Telecomm/Phone	3	\$	106,300	to	\$	176,900	Replace/expand as part of building-wide renovations
Electrical - Program/Clock/Sound	3	\$	26,600	to	\$	53,100	Replace/expand as part of building-wide renovations
Electrical - Fire Alarm & Security	5	\$	53,200	to	\$	88,600	Replace fire alarm system to meet current code; expand/modify security system
Totals	83	\$	6,073,700	to	\$	7,071,700	
Facility Condition Index (FCI) = Rating / 115:	72.2%						
Soft Costs: 20%		\$	1,214,740	to	\$	1,414,340	
Total Project Cost Range		\$	7,288,440	to	\$	8,486,040	

Bellefonte Area Middle School	Pating	Potential C	onst	ruction Co	st	Commonts/Dationals*
+/- 133,500 s.f.	Rating	Low t		High		Comments/Rationale*
1 Site	1	\$ 34,600	to	\$ 3	9,800	Repair cracks in asphalt, seal-coat, restripe; new accessible concrete exit pads
2 Superstructure	0	\$ -	to	\$	-	No work necessary
3 Exterior Envelope - Roof	0	\$ -	to	\$	-	No work necessary
4 Exterior Envelope - Walls	2	\$ 90,100	to	\$ 10	3,600	Minor masonry restoration; clean masonry & EIFS; replace sealants
5 Exterior Envelope - Doors	0	\$ -	to	\$	=	No work necessary
6 Exterior Envelope - Windows	0	\$ -	to	\$	-	No work necessary
7 Interior - Finishes	1	\$ 102,800	to	\$ 11	.8,200	Gym + Auditorium: demo asbestos plaster cl'gs; paint struct., add acoust. clouds
8 Interior - Doors	2	\$ 90,800	to	\$ 10	4,400	Replace original doors to match; rework some open'gs for accessible clearances
9 Interior - Restrooms	1	\$ 1,000	to	\$	1,100	Add vertical grab bars in handicapped stalls/rooms
Interior - Casework/Millwork	3	\$ 343,200	to	\$ 39	4,700	Replace/retrofit units as needed to meet current accessibility requirements
Interior - Food Service Equipment	0	\$ -	to	\$	-	No work necessary
Interior - Code-Related Equipment	3	\$ 58,100	to	\$ 6	6,800	Safe Schools exit ID; recess/add drinking fountains; add lift @ Stage
Interior - Miscellaneous Equipment	2	\$ 305,100	to	\$ 35	0,800	Auditorium seats, Main Gym athletic equip., bleachers, acoustical wall panels
Miscellaneous Accessibility Concerns	3	\$ 2,300	to	\$	2,600	Retrofit corridor/wardrobe lockers to meet minimum accessibility requirements
Miscellaneous Security Concerns	0	\$ -	to	\$	-	No work necessary
L6 HVAC Systems	3	\$ 2,403,000	to	\$ 2,80	3,500	Replace heat pumps, RTUs; add VFDs; repair gas piping, etc.; rework ventilation
Plumbing Systems	3	\$ 80,200	to	\$ 10	0,100	Replace water softener; upgrade hot water system piping, heater, mixing valves
Fire Protection Systems	0	\$ -	to	\$	-	No work necessary
19 Electrical - Distribution & Emergency	3	\$ 1,602,000	to	\$ 2,13	6,000	Replace generator, transfer switches, panels & related circuitry
20 Electrical - Lighting	3	\$ 667,500	to	\$ 93	4,400	Provide interior & exterior LED lighting and automatic lighting controls
21 Electrical - Telecomm/Phone	1	\$ 400,500	to	\$ 66	7,600	Replace/expand as part of building-wide renovations
22 Electrical - Program/Clock/Sound	1	\$ 100,200	to	\$ 20	1,300	Replace/expand as part of building-wide renovations
23 Electrical - Fire Alarm & Security	3	\$ 199,900	to	\$ 33	3,800	Add intrusion detection system
Totals	35	\$ 6,481,300	to	\$ 8,3.	58,700	
Facility Condition Index (FCI) = Rating / 115:	30.4%					
Soft Costs: 20%		\$ 1,296,260	to		71,740	
Total Project Cost Range		\$ 7,777,560	to	\$ 10,03	0,440	

	Bellefonte Area High School	Dating	Potential Co	onstr	ucti	on Cost	Comments/Rationale*	
	+/- 257,815 s.f.	Rating	Low		to High		Confinences Nationale	
1	Site	1	\$ 2,500	to	\$	2,900	Repair minor damages to asphalt paving & concrete flatwork	
2	Superstructure	0	\$ -	to	\$	-	No work necessary	
3	Exterior Envelope - Roof	0	\$ -	to	\$	=:	No work necessary	
4	Exterior Envelope - Walls	2	\$ 227,800	to	\$	262,000	Some masonry repair & cleaning; recoat EIFS; replace sealants; repair gaskets	
5	Exterior Envelope - Doors	0	\$ :=	to	\$	=:	No work necessary	
6	Exterior Envelope - Windows	0	\$ .≔.	to	\$	Æ:	No work necessary	
7	Interior - Finishes	1	\$ 70,600	to	\$	82,200	Repair & refinish Aux. Gym floor; minor repairs to water-damaged ceilings	
8	Interior - Doors	1	\$ 3,700	to	\$	4,300	Replace limited wire glass w/ tempered (fire-rated, where applicable)	
9	Interior - Restrooms	0	\$ -	to	\$	<del></del>	No work necessary	
10	Interior - Casework/Millwork	0	\$ -	to	\$	÷	No work necessary	
11	Interior - Food Service Equipment	0	\$ 9	to	\$	<del>-</del> .	No work necessary	
12	Interior - Code-Related Equipment	3	\$ 23,700	to	\$	26,800	Replace fire extinguisher cabinets; Safe Schools exit ID; repair exterior railings	
13	Interior - Miscellaneous Equipment	1	\$ 74,400	to	\$	85,600	Replace Aux. Gym athletic equipment	
14	Miscellaneous Accessibility Concerns	0	\$ =	to	\$	+	No work necessary	
15	Miscellaneous Security Concerns	0	\$ æ	to	\$	#.	No work necessary	
16	HVAC Systems	1	\$ 1,500	to	\$	2,000	Replace wall grilles in Main Lobby w/ heavy duty steel type	
17	Plumbing Systems	0	\$ 2	to	\$	₩.	No work necessary	
18	Fire Protection Systems	0	\$ 12	to	\$	21	No work necessary	
19	Electrical - Distribution & Emergency	0	\$ ~	to	\$	<u>=</u>	No work necessary	
20	Electrical - Lighting	2	\$ 1,289,100	to	\$	1,804,700	Provide interior & exterior LED lighting and automatic lighting controls	
21	Electrical - Telecomm/Phone	0	\$ -	to	\$	21	No work necessary	
22	Electrical - Program/Clock/Sound	0	\$ -	to	\$	-	No work necessary	
23	Electrical - Fire Alarm & Security	0	\$ -	to	\$	-	No work necessary	
	Totals	12	\$ 1,693,300	to	\$	2,270,500		
	Facility Condition Index (FCI) = Rating / 115:	10.4%						
	Soft Costs: 20%		\$ 338,660	to	\$	454,100		
	Total Project Cost Range		\$ 2,031,960	to	\$	2,724,600		

	District Administration Offices	Rating	Potential Co	onstr	ucti	on Cost	Comments/Rationale*
	+/- 22,000 s.f. (combined)	Nating	Low	to		High	
1	Site	3	\$ 38,000	to	\$	43,700	Replace/patch & seal-coat asphalt; replace concrete walks, curbs, pads, etc.
2	Superstructure	0	\$ -	to	\$	-	No work necessary
3	Exterior Envelope - Roof	0	\$ ( <del>=</del> )	to	\$	<b>.</b>	No work necessary
4	Exterior Envelope - Walls	2	\$ 85,400	to	\$	98,200	Minor masonry restoration & cleaning; repaint annex; replace sealants
5	Exterior Envelope - Doors	0	\$ -	to	\$	Œ	No work necessary (historic; future replication as needed)
6	Exterior Envelope - Windows	0	\$ ( <del>-)</del>	to	\$	-	No work necessary (historic; future replication as needed)
7	Interior - Finishes	2	\$ 11,500	to	\$	13,300	Minimal replacement; includes asbestos floor tile abatement
8	Interior - Doors	3	\$ 32,800	to	\$	37,700	Replace limited, non-historic doors, some hardware; improve accessibility
9	Interior - Restrooms	3	\$ 66,800	to	\$	76,800	Upgrade all restrooms where practical (accessiblity, equip, fixtures, etc.)
10	Interior - Casework/Millwork	3	\$ 23,000	to	\$	26,400	Minimal unit replacement to meet accessility code
11	Interior - Food Service Equipment	0	\$ -	to	\$	-	Not Applicable
12	Interior - Code-Related Equipment	3	\$ 23,700	to	\$	26,800	Replace fire extinguisher cab'ts; interior signage; water coolers; retrofit railings
13	Interior - Miscellaneous Equipment	1	\$ 74,400	to	\$	85,600	Replace Aux. Gym athletic equipment
14	Miscellaneous Accessibility Concerns	3	\$ 105,900	to	\$	121,800	Improve exterior/interior accessible routes, including adding wheelchair lifts
15	Miscellaneous Security Concerns	4	\$ 60,500	to	\$	69,600	Add secure, electronic-controlled entrances/vestibules
16	HVAC Systems	3	\$ 10,000	to	\$	15,000	Replace heat pump tanks; modify exhaust system; new ATC system not included
17	Plumbing Systems	3	\$ 33,000	to	\$	49,500	Replace fixtures, faucets & fittings per accessibility standards
18	Fire Protection Systems	4	\$ 110,200	to	\$	132,100	Add fire suppression/sprinkler system
19	Electrical - Distribution & Emergency	4	\$ 100,000	to	\$	150,000	Replace distribution system (1 meter); add generator, transfer switches, panels
20	Electrical - Lighting	3	\$ 110,000	to	\$	154,000	Provide interior & exterior LED lighting and automatic lighting controls
21	Electrical - Telecomm/Phone	2	\$ 66,000	to	\$	109,800	Replace/expand as part of building-wide renovations
22	Electrical - Program/Clock/Sound	2	\$ 16,500	to	\$	33,300	Replace/expand as part of building-wide renovations
23	Electrical - Fire Alarm & Security	5	\$ 32,900	to	\$	55,400	Add a limited fire alarm system
	Totals	53	\$ 1,000,600	to	\$	1,299,000	
	Facility Condition Index (FCI) = Rating / 115:	46.1%					
	Soft Costs: 20%		\$ 200,120	to	\$	259,800	
	Total Project Cost Range		\$ 1,200,720	to	\$	1,558,800	

#### **Case Studies**



#### Winding Creek Elementary School (2017)

\$162/ SF (\$44M) 850 Student Capacity ±200,000 SF



#### Marion Elementary School (2016)

\$180/ SF (\$6.7M) 325 Student Capacity 37,062 SF



#### Hambright Elementary School (2014)

\$184/ SF (\$17.7M) 750 Student Capacity 95,740 SF