



# Upper Adams School District Facility Study Presentation

October 18, 2016



*Providing a Client Oriented Approach to Architecture*

Crabtree, Rohrbaugh & Associates, Architects



## Agenda

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### Part 1 – Current Assessments

- ✓ Purpose & Goals
- ✓ Enrollment Analysis
- ✓ Building Capacity Analysis
- ✓ Renovation Costs / Approach
- ✓ Building Evaluations

### Part 2 – Proposed Planning

- ✓ Costs / Upgrades to Current Standards
- ✓ Facility Options / Option Costs
- ✓ Financial Discussion
- ✓ Schedule / Decision Making

## Purpose



### Introduction:

- ✓ This report should be viewed as a starting point, or benchmark
- ✓ This report provides a framework from which both a **short and long term facilities master plan** can be implemented for any recommended or desirable facility improvements.
- ✓ The essence of the long range master plan will be to determine the number, type and location of school facilities that will be needed during the next decade and beyond.



## **Enrollment**

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**How is enrollment projected?**

**What are the different methods of projecting enrollment?**

**What are the trends within the district?**

**What is a reliable projection?**

## Upper Adams SD / K – 12 Student Population Trend:

*What is the District's K-12 Student Population Trend ?*

(162) student DECREASE overall between 2000 to 2015.							
Upper Adams School District	1990	1995	2000	2005	2010	2015	
District's Total K-12 Students	1,715	1,732	1,827	1,827	1,681	1,665	
public enrollment only		17	95	-	(146)	(16)	
increase/decrease from previous period:		1.0%	5.5%	0.00%	-7.99%	-0.95%	
per year:			1.10%	0.00%	-1.60%	-0.32%	
Between 2000 and 2015, student population decreased approximately -8.9%							
Student Population has decreased in the last fifteen (15) years however the 'rate of decrease' has slowed.							

## Enrollment



### Historic Trends -

✓ Consistent decrease in the student population over last several years

## Local (District) and District K-12 Population Trends:

*How does the Local (District) and District K-12 population compare with 2020 projections ?*

### Methodology Analysis A - Percentage of students to Local (District) population

In five (5) years from 2010 to 2015, the district population trend decreased from 15.4% students per population to 14.4% students. Continuing this declining percentage ratio to project future enrollment, this chart projects 2020 and 2025 enrollment that is close to the Pa Dept of Education projections.								
<b>HISTORICAL TREND - PROJECTION METHOD</b>							<b>Projections</b>	<b>Projections</b>
	<b>2000</b>	<b>2005*</b>	<b>2010</b>	<b>2015*</b>			<b>2020</b>	<b>2025*</b>
<b>District Total Population</b>	10,193	10,545	10,897	11,570			12,244	13,046
increase from previous decade		3.5%	3.3%	6.2%			12.4%	12.8%
<b>District Total K-12 Students</b>	1,827	1,827	1,681	1,665			1,641	1,618
		-	(146)	(16)			(40)	(47)
rate of increase/decrease from prev. interval		0.0%	-8.0%	-1.0%			-2.4%	-2.8%
student increase / decrease per year		0.00%	-1.60%	-0.19%			-0.24%	-0.28%
<b>% Students per Population</b>	<b>17.9%</b>	<b>17.3%</b>	<b>15.4%</b>	<b>14.4%</b>			<b>13.4%</b>	<b>12.4%</b>
		-0.6%	-1.9%	-1.0%			-1.0%	-1.0%
Note: The average percentage of students for a typical Pennsylvania population is approx. 14%								
					2010-2015 (5) year average		14.9%	
* district population numbers = estimated / interpolated					annual decline 2010-2015		0.21%	

## Enrollment



### Historic Trends -

✓ *Consistent decrease in the student population percentage over last several years*

✓ *Continuing this declining percentage ratio, 2020 & 2025 projections dictate enrollment projections similar to PDE's projections*

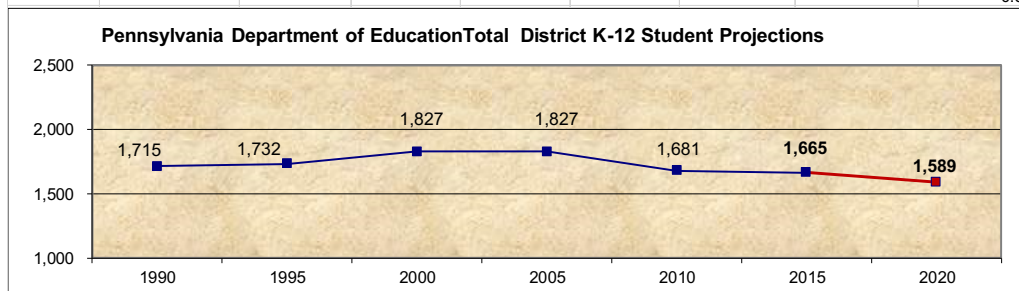
✓ *PDE 2020 projection = 1,589 difference of 52 students – the equivalent of two (2) classrooms district wide*

## District K-12 Population Trends:

How does the Local (District) and District K-12 population compare with 2020 projections ?

### Methodology Analysis B – Pa Department of Education Projections

Pa Department of Education (PDE) projects District enrollment. PDE projections indicate K-12 student population DECREASING through 2020, and the 'rate of decrease' may increase.							
PDE - PROJECTION METHOD							Current Year
	1990	1995	2000	2005	2010	2015	Projections 2020
<b>*Total K-12 Student Projections</b>	1,715	1,732	1,827	1,827	1,681	<b>1,665</b>	<b>1,589</b>
difference		17	95	-	(146)	<b>(16)</b>	<b>(76)</b>
increase / decrease		1.0%	5.5%	0.0%	-8.0%	-1.0%	-4.6%
per year					-1.60%	-0.24%	-0.76%
					Year 2010 - 2020		-5.5%
							-0.5%



## Enrollment



### Projections -

✓ *Methodology B – % of students to Local (District) population –*  
*2020 = 1,589*

## District K-12 Population Trends – Current Grade Groupings:

*What are Student Enrollment Trends and Projections for the Current Grade Groupings ?*

% BASED - PROJECTION METHOD						% Students Projections	% Students Projections
	1995	2000	2005	2010	2015	2020	2025
Total K-12 Enrollment	1,732	1,827	1,827	1,681	1,665	1,641	1,618
K-3 Enrollment	544	566	513	536	498	507	500
difference		22	(53)	23	(38)	9	(7)
increase / decrease		4.0%	-9.4%	4.5%	-7.1%	1.8%	-1.4%
% Students	31.4%	31.0%	28.1%	31.9%	29.9%	30.9%	30.9%

The chart uses the 5 year average 30.9% to project the Grade K-3 Enrollment in the year 2025 to reflect the slight decrease in the percentage of Grade K - 3 Students.

% BASED - PROJECTION METHOD						% Students Projections	% Students Projections
	1995	2000	2005	2010	2015	2020	2025
Total K-12 Enrollment	1,732	1,827	1,827	1,681	1,665	1,641	1,618
4-6 Enrollment	397	450	391	352	376	357	352
difference		53	(59)	(39)	24	(19)	(5)
increase / decrease		13.4%	-13.1%	-10.0%	6.8%	-5.0%	-1.4%
% Students	22.9%	24.6%	21.4%	20.9%	22.6%	21.8%	21.8%

The chart uses the 5 year average 21.8% to project the Grade 4-6 Enrollment in the year 2025 to reflect the slight increase in the percentage of Grade 4 - 6 Students.

## Enrollment



### Projections – K -3, 4 – 6 (5 year average)

✓ Student Enrollment trends as a percentage of Total K-12 Enrollment projects enrollment for 2020 and 2025



## District K-12 Population Trends – Current Grade Groupings:

*What are Student Enrollment Trends and Projections for the Current Grade Groupings ?*

% BASED - PROJECTION METHOD						% Students Projections	% Students Projections
	1995	2000	2005	2010	2015	2020	2025
<b>Total K-12 Enrollment</b>	1,995	2,000	2,005	2,010	2,015	2,020	2,025
<b>7-8 Enrollment</b>	290	290	316	250	265	258	259
difference		-	26	(66)	15	(7)	1
increase / decrease		0.0%	9.0%	-20.9%	6.0%	-2.5%	0.2%
<b>% Students</b>	<b>14.5%</b>	<b>14.5%</b>	<b>15.8%</b>	<b>12.4%</b>	<b>13.2%</b>	<b>12.8%</b>	<b>12.8%</b>

The chart uses the 5 year average 12.8% to project the Grade 7-8 Enrollment in the year 2025 to reflect the slight increase in the percentage of Grade 7 - 8 Students.

% BASED - PROJECTION METHOD						% Students Projections	% Students Projections
	1995	2000	2005	2010	2015	2020	2025
<b>Total K-12 Enrollment</b>	1,995	2,000	2,005	2,010	2,015	2,020	2,025
<b>9-12 Enrollment</b>	501	521	607	543	526	537	538
difference		20	86	(64)	(17)	11	1
increase / decrease		4.0%	16.5%	-10.5%	-3.1%	2.0%	0.2%
<b>% Students</b>	<b>25.1%</b>	<b>26.1%</b>	<b>30.3%</b>	<b>27.0%</b>	<b>26.1%</b>	<b>26.6%</b>	<b>26.6%</b>

The chart uses the 5 year average 26.6% to project the Grade 9-12 Enrollment in the year 2025 to reflect the slight decrease in the percentage of Grade 9 - 12 Students.

## Enrollment



### Projections - 7 – 8, 9 – 12 (5 year average)

✓ Student Enrollment trends as a percentage of Total K-12 Enrollment projects enrollment for 2020 and 2025

### 5 Year Average

Total 2020 Projected Enrollment = 1,659

### PDE

Total 2020 projected Enrollment = 1,589



## **Building Capacity**



**How many students can each building accommodate?**

**Is there adequate space for support programs?**

**Are there collaborative learning environments?**

**Do we have room to grow and offer new programs?**

## Building Capacity as it relates to Enrollment Projections – by Grade Group

*What is the capacity of existing buildings based on **Current Use of Space** ?*

Capacity of Existing Buildings based on <b>CURRENT Use of Space</b>														
<b>K - 3 Elementary School</b>														
School	Current Bldg Capacity	Utilization Rate		Utilization Rate		Utilization Rate		Utilization Rate		Utilization Rate		Utilization Rate		Additional Space Required ?
		Current 2/2016 Enrollment	% Full Current Enrollment	Enrollment Per % Local 2020 Pop	% Full Per % Local 2020 Pop	2020 Annual Rates	% Full Annual Rates	2020 Enroll % Students per Total K-12	% Full % Students per Total K-12	2020 Cohort Projection	% Full Cohort Projection	PDE 2020 Projection	% Full PDE 2020 Enrollment	
Biglerville ES	550	498	91%	491	89%	493	90%	507	92%	489	89%	448	81%	Yes
	<b>550</b>	<b>498</b>	<b>91%</b>	<b>491</b>	<b>89%</b>	<b>493</b>	<b>90%</b>	<b>507</b>	<b>92%</b>	<b>489</b>	<b>89%</b>	<b>448</b>	<b>81%</b>	Long Term
<b>Capacity Available***</b>		52		59		57		43		61		102		Yes
<b>4 - 6 Intermediate Schools</b>														
School	Current Bldg Capacity	Utilization Rate		Utilization Rate		Utilization Rate		Utilization Rate		Utilization Rate		Utilization Rate		Additional Space Required ?
		Current 2/2016 Enrollment	% Full Current Enrollment	Enrollment Per % Local 2020 Pop	% Full Per % Local 2020 Pop	2020 Annual Rates	% Full Annual Rates	2020 Enroll % Students per Total K-12	% Full % Students per Total K-12	2020 Cohort Projection	% Full Cohort Projection	PDE 2020 Projection	% Full PDE 2020 Enrollment	
Arendtsville ES	225	202	90%	199	88%	200	89%	192	85%	198	88%	209	93%	Yes
Bendersville ES	175	174	99%	171	98%	172	98%	165	94%	171	98%	180	103%	
	<b>400</b>	<b>376</b>	<b>94%</b>	<b>371</b>	<b>93%</b>	<b>372</b>	<b>93%</b>	<b>357</b>	<b>89%</b>	<b>369</b>	<b>92%</b>	<b>389</b>	<b>97%</b>	Long Term
<b>Capacity Available***</b>		24		29		28		43		31		11		Yes
<b>7 - 12 Middle / High School</b>														
School	Current Bldg Capacity	Utilization Rate		Utilization Rate		Utilization Rate		Utilization Rate		Utilization Rate		Utilization Rate		Additional Space Required ?
		Current 2/2016 Enrollment	% Full Current Enrollment	Enrollment Per % Local 2020 Pop	% Full Per % Local 2020 Pop	2020 Annual Rates	% Full Annual Rates	2020 Enroll % Students per Total K-12	% Full % Students per Total K-12	2020 Cohort Projection	% Full Cohort Projection	PDE 2020 Projection	% Full PDE 2020 Enrollment	
Middle / High School	940	791	84%	779	83%	783	83%	795	85%	777	83%	752	80%	No
	<b>940</b>	<b>791</b>	<b>84%</b>	<b>779</b>	<b>83%</b>	<b>783</b>	<b>83%</b>	<b>795</b>	<b>85%</b>	<b>777</b>	<b>83%</b>	<b>752</b>	<b>80%</b>	Long Term
<b>Capacity Available***</b>		149		161		157		145		163		188		No**
<b>Total Enrollment</b>		<b>1,665</b>		<b>1,641</b>		<b>1,648</b>		<b>1,659</b>		<b>1,636</b>		<b>1,589</b>		

## Building Capacity

### Building Capacity -

✓ Based on four (4) methodologies analyzed to project District K-12 enrollments

✓ Utilization rates dictate how full a respective building is with regard to enrollment vs current building capacity

✓ PDE model which utilizes 25 students per classroom for reimbursement calculations

# Building Capacity

## Building Capacity - CURRENT

✓ Biglerville, Arendtsville, Bendersville ES  
– ALL are at maximum utilization

Capacity of Existing Buildings based on <i>CURRENT Use of Space</i>					
K - 3 Elementary School					
		Utilization Rate		Utilization Rate	
	Current Bldg	Current 2/2016	% Full Current	Enrollment Per % Local	% Full 2020 Pop
School	Capacity*	Enrollment	Enrollment	2020 Pop	2020 Pop
Biglerville ES	550	498	91%	491	89%
	550	498	91%	491	89%
Capacity Available***		52		59	
4 - 6 Intermediate Schools					
		Utilization Rate		Utilization Rate	
	Current Bldg	Current 2/2016	% Full Current	Enrollment Per % Local	% Full 2020 Pop
School	Capacity	Enrollment	Enrollment	2020 Pop	2020 Pop
Arendtsville ES	225	202	90%	199	88%
Bendersville ES	175	174	99%	171	98%
	400	376	94%	371	93%
Capacity Available***		24		29	
7 - 12 Middle / High School					
		Utilization Rate		Utilization Rate	
	Current Bldg	Current 2/2016	% Full Current	Enrollment Per % Local	% Full 2020 Pop
School	Capacity	Enrollment	Enrollment	2020 Pop	2020 Pop
Middle / High School	940	791	84%	779	83%
	940	791	84%	779	83%
Capacity Available***		149		161	
Total Enrollment		1,665		1,641	

← 91%

← 90%  
99%

← 84%

## Building Capacity as it relates to Enrollment Projections – by Grade Group

*What is the capacity of existing buildings based on **Planned Use of Space** ?*

Capacity of Existing Buildings based on <b>PLANNED Use of Space</b>														
K - 3 Elementary School														
School	Current Bldg Capacity	Utilization Rate		Utilization Rate		Utilization Rate		Utilization Rate		Utilization Rate		Utilization Rate		Additional Space Required ?
		Current 2/2016 Enrollment	% Full Current Enrollment	Enrollment Per % Local 2020 Pop	% Full Per % Local 2020 Pop	2020 Annual Rates	% Full Annual Rates	2020 Enroll % Students per Total K-12	% Full % Students per Total K-12	2020 Cohort Projection	% Full Cohort Projection	PDE 2020 Projection	% Full PDE 2020 Enrollment	
Biglerville ES	650	498	77%	491	75%	493	76%	507	78%	489	75%	448	69%	NO
THE ADDITION OF (4) GENERAL CLRMS	650	498	77%	491	75%	493	76%	507	78%	489	75%	448	69%	Long Term
Capacity Available		152		159		157		143		161		202		NO
4 - 6 Intermediate Schools														
School	Current Bldg Capacity	Utilization Rate		Utilization Rate		Utilization Rate		Utilization Rate		Utilization Rate		Utilization Rate		Additional Space Required ?
		Current 2/2016 Enrollment	% Full Current Enrollment	Enrollment Per % Local 2020 Pop	% Full Per % Local 2020 Pop	2020 Annual Rates	% Full Annual Rates	2020 Enroll % Students per Total K-12	% Full % Students per Total K-12	2020 Cohort Projection	% Full Cohort Projection	PDE 2020 Projection	% Full PDE 2020 Enrollment	
Arendtsville ES	275	202	73%	199	72%	200	73%	192	70%	198	72%	209	76%	Yes
Bendersville ES	225	174	77%	171	76%	172	77%	165	73%	171	76%	180	80%	
THE ADDITION OF (4) GENERAL CLRMS	500	376	75%	371	74%	372	74%	357	71%	369	74%	389	78%	Long Term
Capacity Available		124		129		128		143		131		111		Yes
7 - 12 Middle / High School														
School	Current Bldg Capacity	Utilization Rate		Utilization Rate		Utilization Rate		Utilization Rate		Utilization Rate		Utilization Rate		Additional Space Required ?
		Current 2/2016 Enrollment	% Full Current Enrollment	Enrollment Per % Local 2020 Pop	% Full Per % Local 2020 Pop	2020 Annual Rates	% Full Annual Rates	2020 Enroll % Students per Total K-12	% Full % Students per Total K-12	2020 Cohort Projection	% Full Cohort Projection	PDE 2020 Projection	% Full PDE 2020 Enrollment	
Middle / High School	940	791	84%	779	83%	783	83%	795	85%	777	83%	752	80%	No
	940	791	84%	779	83%	783	83%	795	85%	777	83%	752	80%	Long Term
Capacity Available		149		161		157		145		163		188		No**
Total Enrollment		1,665		1,641		1,648		1,659		1,636		1,589		

## Building Capacity

### Building Capacity -

✓ Based on four (4) methodologies analyzed to project District K-12 enrollments

✓ Utilization rates dictate how full a respective building is with regard to enrollment vs current building capacity

Capacity of Existing Buildings based on <i>PLANNED Use of Space</i>					
K - 3 Elementary School					
		Utilization Rate		Utilization Rate	
	Current Bldg Capacity*	Current 2/2016 Enrollment	% Full Current Enrollment	Enrollment Per % Local 2020 Pop	% Full Per % Local 2020 Pop
Biglerville ES	650	498	77%	491	75%
THE ADDITION OF (4) GENERAL CL RMS	650	498	77%	491	75%
Capacity Available		152		159	
4 - 6 Intermediate Schools					
		Utilization Rate		Utilization Rate	
	Current Bldg Capacity	Current 2/2016 Enrollment	% Full Current Enrollment	Enrollment Per % Local 2020 Pop	% Full Per % Local 2020 Pop
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THE ADDITION OF (4) GENERAL CL RMS	500	376	75%	371	74%
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7 - 12 Middle / High School					
		Utilization Rate		Utilization Rate	
	Current Bldg Capacity	Current 2/2016 Enrollment	% Full Current Enrollment	Enrollment Per % Local 2020 Pop	% Full Per % Local 2020 Pop
Middle / High School	940	791	84%	779	83%
	940	791	84%	779	83%
Capacity Available		149		161	
Total Enrollment		1,665		1,641	

← 77%

← 75%

## Building Capacity

**Building Capacity - PLANNED**  
 ✓ With the addition of just four (4) general classrooms in the elementary buildings in a planned use of space significantly drops the utilization rates





## Renovation Costs



**Facility Study level estimates for planning and decision**

**CRA Historical cost data**

**Compliance with building codes**

**Expectation to meet current construction standards to qualify for reimbursement – 20 year cycle**

**Board controls cost of the project based upon approved scope of work**



## Base Line Renovation Costs



- Purpose of establishing **Base Line**
  - Develop an understanding of the work required to bring existing school facilities up to current construction standards – Pa Dept. of Education**
    - Qualify for potential state reimbursement (20 Year cycle)
    - Develop systematic approach to Study
    - Identify Guiding Principles
    - Comprehensive Renovations Throughout
      - Building Systems; HVAC, Electrical, Plumbing, Technology
    - Apples to Apples comparison for all school buildings

Base Line Renovation Costs **DO NOT** address:  
Additional Building Area for Educational Program/Capacity



## Comprehensive SCOPE

Scope determines budget

### EXAMPLES:

Building reorganization

New Ed Program additions

Address ALL site work items

Replace ALL:     Interior finishes  
                         Casework  
                         Bldg. Envelope

Replace ALL Mechanical/Elec. Systems

4 Pipe System

Preferred ATC Controls

Fully Air Conditioned

New Lighting Fixtures

Lower Operating Costs

vs.

## Reduced SCOPE

Budget determines scope

Maintain current organization

Minor/ No new additions

Prioritize LDP approval

Reduced replacement of finishes

Limited area

Prioritize by budget

Upgrade Mechanical Systems

2 Pipe or VAV System

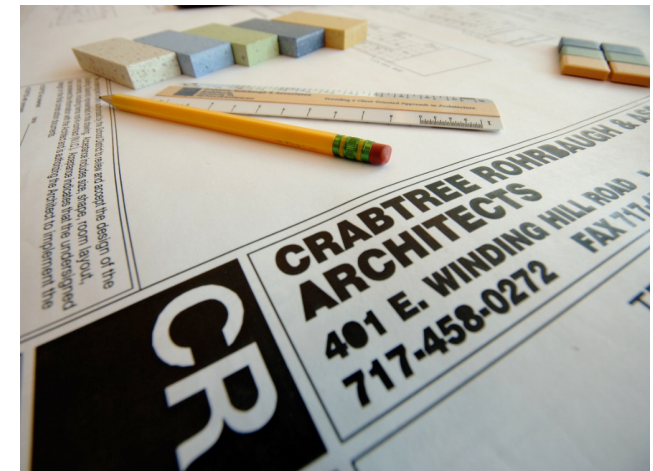
Basic ATC Controls

Limited Air Conditioning

Retrofit Existing Lighting

Higher Operating Costs

## Renovation Costs & Approach



## Base Line Renovation Costs



### Influencing factors

- Scope of Work, i.e. HVAC system selection
- Scale of the project
- Timing of the project
- Duration of the project; phasing etc.
- Building / Municipal Requirements
- Equity among buildings
- Other ?

Detailed written reports contained within the study



## Building Evaluations

*What is the current physical condition of each of the District buildings and assessment of site location?*

### Site Assessment\*

Scale : 1 – Poor; 3 – Fair; 5 - Good

	Arendtsville ES	Bendersville ES	Biglerville ES	MS/HS
General Condition	5	3	5	5
Site Circulation	4	2	4	4
Entrance / Access	4	3	3	4
Parking	3	1	3	4
Site Size**	5 (16.5/13)	1 (4.5/12)	5 (88/16)	4 (35/45)
Expansion Capability	5	1	5	3
<b>Total average</b>				
<b>SITE assessment</b>	<b>4.3</b>	<b>1.8</b>	<b>4.2</b>	<b>4</b>

\*This site/building evaluation chart reflects a similar facility appraisal process as developed by the Council of Educational Facilities Planners International

\*\* (actual site acreage / optimal acreage per PDE guidelines) – typical all site sizes listed above

## Building Evaluations



### **Building Site Assessments -**

✓ *Based on six (6) criteria analyzed to project total site condition ranging from poor to good*

✓ *Subjective assessments*

✓ *Detailed written reports documenting conditions*

## Building Evaluations

*What is the current physical condition of each of the District buildings and assessment of site location?*

### Building Condition

Scale : 1 – Poor; 3 – Fair; 5 - Good

	Arendtsville ES	Bendersville ES	Biglerville ES	MS/HS
<i>Building Identity</i>	4	4	4	4
<i>Roof</i>	3	3	5	4
<i>Storefront Entrances</i>	2	2	5	4
<i>Windows</i>	2	2	4	4
<i>Energy Efficiency</i>	3	3	4	4
<i>Exterior Wall</i>	3	3	4	5
<i>Structural Integrity</i>	4	4	4	5
Exterior Environment	3	3	4.3	4.3
<i>Educational Adequacy</i>	3	3	4	4
<i>Classroom/Core Size</i>	2	2	4	4
<i>ADA/Toilet</i>	2	2	5	4
<i>Finishes</i>	3	3	5	4
<i>Floors/Ceilings</i>	3	3	5	4
<i>Furnishings/Equip</i>	3	3	5	4
<i>Structural Integrity</i>	4	4	5	5
Interior Environment	2.9	2.9	4.7	4

\*This site/building evaluation chart reflects a similar facility appraisal process as developed by the Council of Educational Facilities Planners International

## Building Evaluations



### Building Condition Assessments -

✓ *Based on criteria analyzed to project total building condition ranging from poor to good*

✓ *Subjective assessments*

## Building Evaluations

*What is the current physical condition of each of the District buildings and assessment of site location?*

### Building Systems

Scale : 1 – Poor; 3 – Fair; 5 - Good

	Arendtsville ES	Bendersville ES	Biglerville ES	MS/HS
<i>Mechanical / HVAC</i>	4	4	4	5
<i>Plumbing</i>	3	3	4	4
<i>Electrical</i>	3	3	4	5
Building Systems	3.3	3.3	4	4.7

### Total average

### Bldg Condition

### Assessment

3.1

3.1

4.3

4.3

\*This site/building evaluation chart reflects a similar facility appraisal process as developed by the Council of Educational Facilities Planners International

## Building Evaluations



### **Building Condition Assessments -**

✓ *Based on criteria analyzed to project total building condition ranging from poor to good*

✓ *Subjective assessments*



## Next Step

Enrollment Assessment

What number to plan for?

Enrollment & Building Capacity Analysis

Identify where space is needed

Educational Program

Determine if new additions are needed

Assemble **Cost** Estimates

Review Preliminary Options

Discuss timeline for decision making



Purpose of the Study is to Prioritize Projects and develop a schedule which meets the Districts financial expectations



# Upper Adams School District

Questions?



*Providing a Client Oriented Approach to Architecture*

Crabtree, Rohrbaugh & Associates, Architects