

Summary of JCSD elementary facility study findings

- Significant needs were identified at all elementary school buildings
 - HVAC
 - All schools (except Fermanagh) utilize fuel oil and steam boilers for the use of primary heating with a 10,000 gallon underground fuel tank
 - Systems at all buildings (except Fermanagh) are at the end of their expected useful lives
 - All buildings (except Fermanagh) have pneumatic controls with very limited energy savings capabilities and poor to moderate temperature control
 - Air conditioning in most buildings is provided via window units in limited spaces

Summary of JCSD elementary facility study findings

- Significant needs were identified at all elementary school buildings
 - Water
 - Domestic hot water boilers in most facilities are nearing the end of their expected useful life
 - Wells systems for domestic hot water at several buildings will need extensive monitoring in the future
 - Staff is actively replacing high-flow water fixtures with low-flow faucets when possible
 - Toilets have not been addressed as low-flow
 - Electrical
 - Interior lighting systems already upgraded to 28W T-5
 - Electrical service may need upgraded for centralized A/C

Summary of JCSD elementary facility study findings

- Significant needs were identified at all elementary school buildings
 - Envelope
 - Significant roof work needed at Fayette (completed 2015) and Walker
 - Many windows are single paned and from original construction of each building and should be replaced
 - Security/Fire Alarm
 - With the exclusion of Fayette and Tuscarora Valley, the schools need fire alarm system upgrades
 - All schools are looking to add security vestibules

Summary of JCSD elementary facility study findings

- Significant needs were identified at all elementary school buildings
 - Structural
 - Concerns identified at Thompsontown and Walker
 - Neither building appeared to be structurally unsafe, but remediation work to address the issues was recommended

Summary of JCSD elementary facility study findings

FIGURE: Energy Indices by Building

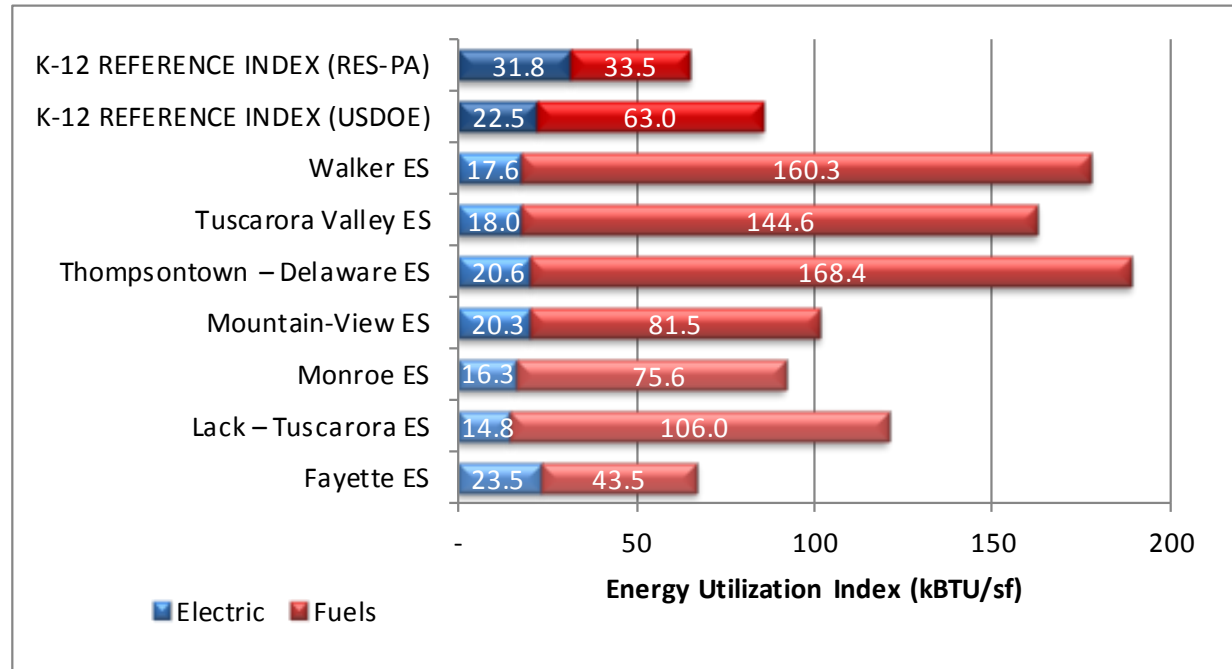
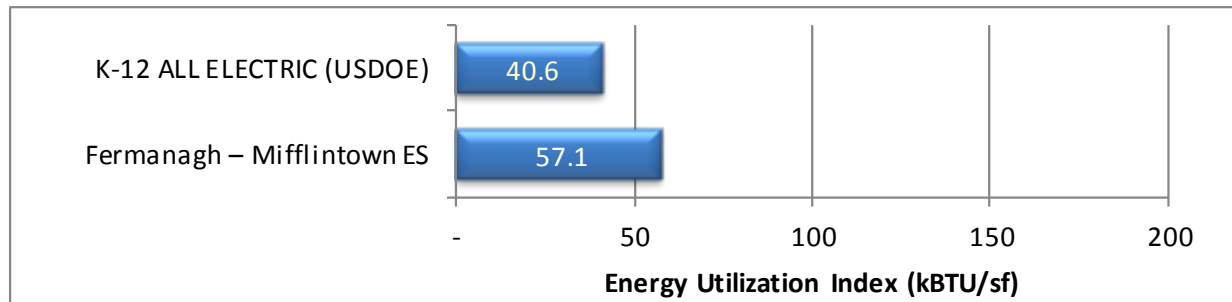


FIGURE: Energy Indices by Building



Summary of JCSD elementary facility study findings

TABLE: Annual Utility Summary by Building

Building Name	Electric			Fuels			Water/Sewer		TOTAL	
	kWh	kW	\$	gals-oil	gals-propane	\$	kgal	\$	\$	\$/sf-yr
Fayette ES	169,800	78	\$ 16,051	7,758	-	\$ 23,274	-	\$ 5,595	\$ 44,920	\$ 1.82
Fermanagh – Mifflintown ES	408,000	196	\$ 39,747	-	-	\$ -	-	\$ 3,761	\$ 43,508	\$ 1.78
Lack – Tuscarora ES	70,840	47	\$ 8,936	12,583	-	\$ 37,748	-	\$ -	\$ 46,683	\$ 2.85
Monroe ES	93,920	58	\$ 9,114	10,795	-	\$ 32,385	-	\$ 3,210	\$ 44,710	\$ 2.27
Mountain-View ES	97,280	57	\$ 9,524	9,672	-	\$ 29,016	-	\$ 2,502	\$ 41,041	\$ 2.51
Thompsontown – Delaware ES	71,720	41	\$ 6,864	14,526	-	\$ 43,577	-	\$ 2,321	\$ 52,761	\$ 4.43
Tuscarora Valley ES	65,840	50	\$ 6,592	13,101	-	\$ 39,303	-	\$ 5,229	\$ 51,124	\$ 4.09
Walker ES	63,826	34	\$ 6,104	14,408	-	\$ 43,224	-	\$ -	\$ 49,328	\$ 3.98
TOTAL	1,041,226		\$ 102,932	82,842	-	\$ 248,526	-	\$ 22,618	\$ 374,076	\$ 2.70

TABLE: Resource and Cost Indices by Building

Building Name	RESOURCES				COSTS	
	Electric kBTU/sf-yr	Fuels kBTU/sf-yr	Total Energy kBTU/sf-yr	Water kgal/sf-yr	Energy \$/sf-yr	Water \$/sf-yr
Fayette ES	23.5	43.5	67.0	-	\$ 1.60	\$ 0.23
Lack – Tuscarora ES	14.8	106.0	120.8	-	\$ 2.85	\$ -
Monroe ES	16.3	75.6	91.8	-	\$ 2.10	\$ 0.16
Mountain-View ES	20.3	81.5	101.8	-	\$ 2.35	\$ 0.15
Thompsontown – Delaware ES	20.6	168.4	189.0	-	\$ 4.24	\$ 0.20
Tuscarora Valley ES	18.0	144.6	162.6	-	\$ 3.67	\$ 0.42
Walker ES	17.6	160.3	177.9	-	\$ 3.98	\$ -
K-12 REFERENCE INDEX (USDOE)	22.5	63.0	85.5	na	na	na
K-12 REFERENCE INDEX (RES-PA)	31.8	33.5	65.3	na	\$ 1.32	na
Fermanagh – Mifflintown ES	57.1	-	57.1	-	\$ 1.63	\$ 0.15
K-12 ALL ELECTRIC (USDOE)	40.6	-	40.6			
ALL BUILDINGS	25.7	82.7	108.4		\$ 2.54	\$ 0.16

Options explored

Options

- Option 1 - Full renovation
- Option 2 - Do nothing
- Option 3 - Partial renovation
- Option 4 - Consolidate Elementary Schools

Options explored

Option 1 - Full Renovation

- Bring each building as close to modern standards as feasible
- Complete code compliance / ADA
- All new systems HVAC, plumbing, electrical, clock/PA, fire alarm, Data, security
- Architectural improvements windows, roofing, doors and hardware, kitchen, painting
- Site improvements, repaving, bus loops, playground

Options explored

Option 1 - Full Renovation

SCHOOL	SIZE	ESTIMATED COST
Walker Elementary School	12,400 sf	\$2,746,809
Tuscarora Elementary School	12,500 sf	\$2,647,122
Mountain View Elementary School	16,380 sf	\$3,415,237
Fermanagh-Mifflintown Elementary School	24,400 sf	\$2,764,287
Thompstontown-Delaware Elementary School	11,900 sf	\$2,865,146
Monroe Elementary School	19,718 sf	\$3,733,765
Lackawanna-Tuscarora Elementary School	16,380 sf	\$3,467,990
Fayette Elementary School	24,632 sf	\$4,837,578
TOTAL ESTIMATED CONSTRUCTION COST		\$26,477,933
<i>Energy Savings (20 Yrs.)</i>		<i>\$2,465,725</i>
<i>Estimated Plancon Reimbursement</i>		<i>\$6,318,852</i>
NET COST TO JCSD		\$17,693,356

Options explored

Option 2 - Do Nothing

- Maintenance Costs increase rapidly
- Major Repairs addressed on Emergency Basis
- Solutions limited
- Building in very poor condition after 20 year term

Options explored

Option 2 - Do Nothing

SCHOOL	SIZE	ESTIMATED COST
Walker Elementary School	12,400 sf	\$2,593,203
Tuscarora Elementary School	12,500 sf	\$2,010,350
Mountain View Elementary School	16,380 sf	\$2,166,578
Fermanagh-Mifflintown Elementary School	24,400 sf	\$1,079,863
Thompstontown-Delaware Elementary School	11,900 sf	\$1,983,391
Monroe Elementary School	19,718 sf	\$2,272,577
Lackawanna-Tuscarora Elementary School	16,380 sf	\$2,141,894
Fayette Elementary School	24,632 sf	\$3,506,397
TOTAL ESTIMATED CONSTRUCTION COST		\$17,754,254
<i>Energy Savings (20 Yrs.)</i>		N/A
<i>Estimated Plancon Reimbursement</i>		N/A
NET COST TO JCSD		\$17,754,254

Options explored

Option 3 - Partial Renovation of all buildings

- Address all major systems that will not last 20 more years
- Significant improvement in comfort, indoor air quality, lighting, etc.
- Minor systems not addressed, clock/PA, kitchen
- Limited Architectural improvements
- Limited Site improvements

Options explored

Option 3 - Partial Renovation of all buildings

SCHOOL	SIZE	ESTIMATED COST
Walker Elementary School	12,400 sf	\$2,315,360
Tuscarora Elementary School	12,500 sf	\$1,794,955
Mountain View Elementary School	16,380 sf	\$1,934,445
Fermanagh-Mifflintown Elementary School	24,400 sf	\$964,163
Thompstontown-Delaware Elementary School	11,900 sf	\$1,770,885
Monroe Elementary School	19,718 sf	\$2,029,087
Lackawanna-Tuscarora Elementary School	16,380 sf	\$1,912,405
Fayette Elementary School	24,632 sf	\$3,130,712
TOTAL ESTIMATED CONSTRUCTION COST		\$15,852,012
<i>Energy Savings (20 Yrs.)</i>		<i>\$2,465,725</i>
<i>Estimated Plancon Reimbursement</i>		<i>N/A</i>
NET COST TO JCSD		\$13,386,287

Options explored

Option 4 - Consolidate Elementary Schools

- Consolidate to Fermanagh and Monroe
- Additions and extensive renovation to both buildings
- Site improvements at both facilities
- Completely modernized facilities

Options explored

Option 4 - Consolidate Elementary Schools

Consolidation Plan - West Elementary Schools							
			HC/SF	HC	SC	Total	
Consolidate to Fermanaugh	Moderate Reno	14,500	\$ 129	\$ 1,866,875	\$ 373,375	\$ 2,240,250	
	Major Reno	9,900	\$ 170	\$ 1,682,505	\$ 336,501	\$ 2,019,006	
	New	64,525	\$ 206	\$ 13,292,150	\$ 2,658,430	\$ 15,950,580	
	GYM	6,500	\$ 200	\$ 1,300,000	\$ 260,000	\$ 1,560,000	
	Site	1	\$ 1,081,500	\$ 1,081,500	\$ 216,300	\$ 1,297,800	
		95,426		Project Total		\$ 23,067,636	
Year 1 Energy Savings	\$ 130,891			25 YR ENERGY SAVINGS		\$ 2,789,016	
				Potential PLANCon Reimbursement		\$ 4,404,069	
				25 YR Administrative Cost Savings (NPV)		\$ 16,945,507	
				Net Project Total		\$ (1,070,957)	

Consolidation Plan - East Elementary Schools							
			HC/SF	HC	SC	Total	
Consolidate to Monroe	Moderate Reno	10,000	\$ 145	\$ 1,450,000	\$ 290,000	\$ 1,740,000	
	Major Reno	5,000	\$ 185	\$ 927,000	\$ 185,400	\$ 1,112,400	
	New	46,500	\$ 205	\$ 9,532,500	\$ 1,906,500	\$ 11,439,000	
	GYM	6,500	\$ 200	\$ 1,300,000	\$ 260,000	\$ 1,560,000	
	Site	1	\$ 772,500	\$ 772,500	\$ 154,500	\$ 927,000	
		68,001		Project Total		\$ 16,778,400	
Year 1 Energy Savings	\$ 130,891			25 YR ENERGY SAVINGS		\$ 1,562,234	
				Potential PLANCon Reimbursement		\$ 3,063,700	
				25 YR Administrative Cost Savings (NPV)		\$ 12,282,850	
				Net Project Total		\$ (130,384)	