Lower Milford and Hopewell
Demographic and Life Cost Analysis

A Demographic Study and Life/Cost Analysis were performed to identify future needs of the of the Southern Lehigh School District (SLSD) elementary schools. The goal of the demographic study was to identify patterns in population growth between Hopewell, Lower Milford and Liberty Bell. The life/cost analysis identified anticipated 10 year construction costs at Hopewell and Lower Milford. Liberty Bell was not included in the life/cost study since it underwent a full renovation in 1999.

BUILDING STATISTICS:

	Lower Milford	Hopewell	Liberty Bell	Intermediate School
Built & Occupied	1950	1970	1963	2009
Renovations	1962 & 1991	NA	1999	NA
Acres	20	23	20	32
Square Footage occ.	39,000	51,600	59,265	140,000
Functional Building Capacity	260*	440*	425*	950
Current Occupancy	183	305	322	736

* Functional building capacity as identified in the 2004 feasibility study prepared by Breslin Ridyard Fadero Architects.

DEMOGRAPHIC STUDY:

Dejong Healy performed the demographic study and provided enrollment projections in a report dated April 10, 2013. The goal was to provide enrollment projections 10 years out with special attention to shifts in enrollment between elementary schools. Ten plus years of District, County and US Census data was gathered for the analysis. In addition, municipalities were interviewed for zoning and anticipated building permits. This data was then analyzed by Dejong Healy to identify population trends 10 years into the future.

SLSD has floating elementary school boundaries that balance class sizes across the district. As a result identifying shifts in population by building boundary were nearly impossible. Township and Borough shifts were easier to identify then translate those shifts back to the buildings.

Over the next 10 years SLSD student population is expected to grow by 4%. Lower Milford is anticipated to have a 1% growth in population with Hopewell and Liberty Bell approaching 5%.

LOWER MILFORD LIFE/COST ANALYSIS:

Lower Milford has had two renovations since its construction in 1950. During the renovations a new roof structure was added along with drop ceilings and much of the plumbing upgraded. The drop ceilings and crawl space under the building assists with renovations and upgrades. Building systems, some from the 50s, have exceeded their life expectancy and will require renovation over the next 10 years.

LOWER MILFORD 10 YEAR CAPITAL BUDGET

System	Cost	Year
Roof & Downspouts	$250,000.	2014
Masonry Repairs	$77,500.	2014
Concrete Sidewalks	$25,500.	2015
Asphalt Paving	$320,750.	2015
Restrooms (1950)	$145,500.	2016
ADA Upgrades	$445,000.	2016

System	Cost	Year
Cabinets	$68,750.	2017
Kitchen	$225,000.	2018
Electrical Upgrades	$308,750.	2019
New Well	$20,000.	2020
Waste Water Plant	$795,000.	2021

Developed by Barry Isett's office as part of the Life/Cost Analysis. All projects are listed in order of priority with anticipated year for replacement.

Isett's office estimates *additional unforeseen costs* (the contingency) for these projects would likely total $385,000. Concrete/ Asphalt replacement are dependent upon one another as are the 1950s restrooms and ADA upgrades so related work must be performed together. Classroom space will be lost to the ADA upgrades. Future expansion of Lower Milford to add classrooms or other needs would be very difficult and costly because of the sloping terrain.

HOPEWELL LIFE/COST ANALYSIS:

Hopewell was constructed and occupied in 1970. The building has not had any renovations over the past 43 years but has been maintained to extend the functioning of systems well beyond their life expectancy. The roof structure failed and was reengineered in 1996. The building is 100% electric with adequate service entering the building. The classrooms only have a 20 amp distribution which is not adequate for the needs of today. Some copper piping in the building is beginning to fail with much of it running through the block walls making repair difficult and costly. The sewer pipe for the building is buried under the floor slab. Repair of this will be destructive and costly. Much of the HVAC system remains from the original 1970 construction. Failures of individual system components are pointing to major needs over the next 10 years. Major failure of any system could require the closure of the school.

HOPEWELL 10 YEAR CAPITAL BUDGET

System	Cost	Priority
Electrical System	$2,310,000.	1
Generator	$97,000.	1
HVAC	$2,536,000.	1
Fire Protection	$91,000.	1
Asphalt	$369,000.	2

System	Cost	Priority
Concrete	$25,500.	2
Cabinets	$43,750.	3
Kitchen	$385,000.	4
Restrooms	$144,500.	4
ADA Restroom	$539,250.	4

Developed by Barry Isett's office as part of the Life/Cost Analysis. All projects are listed in order of priority.

The contingency for these projects would likely total $975,000. Total "identified" project cost including contingency exceeds 7 million dollars. Renovation is problematic and will require the closure of school for a year. Many systems intertwine so it would not be an option or financially responsible to repair as failure occur. All priority 1 should be done together, priority 2 together and so on.

HOPEWELL LIFE/COST ANALYSIS: (continued)

There are many systems not included in the analysis that should be addressed. Plumbing that runs from classroom wings could require replacement with complete destruction of floors to access old and install new pipes. Wall systems, sub floor and roof structure were not addressed and will all become issue during a major construction project. Code requires that up to 20% of project cost to be applied to ADA upgrades. This could require major alteration to the ramps and entrances. The classroom floors contain a low percentage of asbestos that will likely increase costs. Costs for a complete renovation project at Hopewell could exceed twelve million dollars.

FINANCES:

Lower Milford 10 Year: $2,681,750

Hopewell 10 Year: .....$7,472,750 to 12,000,000+

Bond $15,000,000: .....$600,000 approximate yearly cost for the first 13 years

New Construction: .....$285 per square foot. *This cost is all inclusive from IS project including $20 per square foot for demolition.

STRATEGIES:

1. **Repair systems as they fail.** This strategy could create a safety issue or close a building. This approach will ultimately be more costly as it does not address work that intertwines. Some work completed with each project may have to be redone with each future project. Systems will never be fully integrated.
2. **Develop and follow through on a 10 year plan to address useful life of equipment.** This strategy addresses the potential for catastrophic failure. If done properly it will address systems that intertwine. Basically, Hopewell and Lower Milford will be under a 10 year construction project. This does not address all systems and costs at Hopewell will approach that of a new building. Hopewell will need to be closed for a year. Aging systems will require continuing upgrade.
3. **Perform high priority repairs at Lower Milford and proceed with a complete renovation at Hopewell.** Repair roof, brick, asphalt and concrete at Lower Milford holding off on systems of less priority. Proceed with a complete renovation at Hopewell with renovations costs that could approach or exceed new school costs. Some systems will not be replaced that could lead to future concerns and the building must be closed for a year during construction. This does not address inefficiencies of the POD design in construction and curriculum.
4. **Perform a complete demolition of Hopewell and construct a new building.** The cost for demolition and new construction would be very close to that of renovation. With everything new the life of the building will be maximized before the next major cash outlay. All systems will integrate. This will address inefficiencies in construction and curriculum challenges related to the POD design. Lower Milford would be renovated as necessary.
5. **Proceed with Strategy 4 without repair to Lower Milford**. Lower Milford would be maintained for three to four years during the Hopewell project. Lower Milford would be closed at the end of construction. The new school can be paid for from Lower Milford operational savings along with efficiencies at a new school. This will have no effect on taxes.