To: Facilities Committee

From: Kimberly Ptak

Date: Wednesday, October 18, 2017

Re: Life Safety Project Recommendations

Recommendations

It is recommended that the Board of Education:

1. Authorize the District architect, ARCON & Associates, to begin developing bid specifications for the recommended Summer 2018 Life Safety Projects..

2. Authorize the administration to submit a life safety amendment to the State of Illinois to add the GBN tennis court replacement and GBS pool boiler replacement to the overall Life Safety scope of work.

3. Authorize the administration to schedule a public hearing on November 13, 2017 to seek public input on the possible inclusion of the GBN tennis courts on the Life Safety list as required by state code.

Background

Every ten years, public school districts in the State of Illinois, are required to have a Life Safety survey completed by a licensed architect. The survey identifies Life Safety code concerns throughout the buildings. Items identified can be safety related, such as an egress or aging fire detection devices or may be critical components of the building infrastructure such as roofing, mechanical systems, carpeting and bleachers that are at, or approaching, the end of their life cycle and, if not replaced, could impact the health and/or safety of the occupants.

In order to use Life Safety funds, through a bond issuance, to pay for Life Safety projects a Life Safety amendment must be filed with the State of Illinois. At the June 25, 2016 regular meeting, the Board approved submitting a $15M Life Safety amendment to the State of Illinois; the original list is attached. The amendment identifies building infrastructure needs and safety concerns and the state approved projects must be completed within three years (Summers of 2017, 2018 and 2019) in order to be funded by Life Safety bond proceeds.

Additional, Life Safety projects can be added to the state list of approved projects via an amendment. The list of projects originally submitted to the state for approval were targeted to not exceed the overall Life Safety bond proceeds procured during the 2015-2016 school year. The actual bond proceeds exceeded the original estimate and the actual cost of the 2017 projects was less than anticipated, which allows the District to pursue additional items from an amended list.

Following is a summary to-date of revenue and actual/estimated expenditures.

Revenue			
Description	**Initial Estimate (6/21/2016)**	**Actual (10/10/2017)**	**Difference**
Life Safety Bond Proceeds	$15,000,000	$15,171,718	$171,718
Interest Earned to-date	$0	$46,222	$46,222
Revenue Totals	**$15,000,000**	**$15,217,940**	**$217,940**

Expenditures			
Description	**Initial Estimate Document Attached (6/21/2016)**	**Actual or Updated Estimate (10/10/2017)**	**Difference**
Summer 2017 Life Safety Projects			
Cost of Projects	$5,549,000	$5,459,313	$89,687
Architect Fee (7.5%)	$416,175	$409,448	$6,727
Construction Mgmt Fee (7.5%)	$416,175	$409,448	$6,727
Contingency (2%)	$110,980	$0	$110,980
Total Cost	$6,492,330	$6,278,209	$214,121
Summer 2018 Life Safety Projects			
Cost of Projects	$4,592,000	$5,315,000	($723,000)*
Architect Fee (7.5%)	$344,400	$398,625	($54,225)
Construction Mgmt Fee (7.5%)	$344,400	$398,625	($54,225)
Contingency (2%)	$91,840	$106,300	($14,460)
Total Cost	$5,372,640	$6,218,550	($845,910)
Summer 2019 Life Safety Projects			
Cost of Projects	$2,215,000	$2,215,000	$0
Architect Fee (7.5%)	$166,125	$166,125	$0
Construction Mgmt Fee (7.5%)	$166,125	$166,125	$0
Contingency (2%)	$44,300	$44,300	$0
Additional Reserve	$543,480**	$0	$543,480
Total Cost	$3,135,030	$2,591,550	$543,480
Expenditure Totals	**$15,000,000**	**$15,088,309**	**($88,309)**
Excess Reserve			**$129,631**

*two additional life safety projects are being recommended that are not on the original life safety list - GBN tennis court replacement and the replacement of two GBS pool boilers.

**typically a 2% contingency is budgeted. Since the scope of the work was not defined at the time the life safety survey was submitted, additional contingency was built in.

Summer 2018 Recommended Life Safety Projects

The projects listed below, with the exception of the GBN tennis courts and GBS pool boilers have been reviewed by the Board of Education and submitted on the Life Safety amendment filed with the State. The GBN tennis courts and GBS pool boilers have been added and an addendum will need to be filed. Since the tennis courts are an outdoor facility unattached to the school building, the District is required by state code to conduct a public hearing to gain public input prior to submitting them to the State as part of an amended list. These projects can be funded with the overall Life Safety bond proceeds. Attached are maps of GBN and GBS showing the location of the various life safety projects recommended for the summer of 2018.

Roofing		
Project	**Description**	**Estimate**
GBS Fieldhouse Roof Replacement	The Fieldhouse roof system at GBS is 45,500 s.f. and was part of the new construction in 1989. The existing roof system has reached the end of its serviceable life and is experiencing a number of deficiencies typical for the age of this type of roof system. The proposed new roof system would consist of roof insulation with an R-value of 30.0 minimum and a multi-ply modified bitumen built-up roof membrane with gravel surfacing. The life expectancy of the new roof is 30+ years.	$1,100,000
GBS Weight Room and Student Activity Corridor Roof Replacement	The Weight Room roof system at GBS is 4,650 s.f. and was last replaced in 1989. The Student Activity Corridor roof system at GBS is 8,700 sq.ft. and was last replaced in 1994. Both existing roof systems have reached the end of their serviceable life and are experiencing a number of deficiencies typical for the age of this type of roof system. The proposed new roof systems would consist of roof insulation with an R-value of 30.0 minimum and a multi-ply modified bitumen built-up roof membrane with gravel surfacing. The life expectancy of the new roofs is 30+ years.	$425,000
		$1,525,000

Architectural (flooring, structure, tennis courts)		
Project	**Description**	**Estimate**
GBN Floor Replacement, Painting and Lighting (4) Back Gyms	The wood flooring in each of the four back gyms at GBN were original to the building in 1957 and have reached the end of their useful lives. The floors will be replaced with a cushioned maple wood flooring system, similar to the main gym floors at GBN and GBS. The scope of this project also includes painting the ceilings & walls where the old HVAC equipment was removed during the summer 2017 work as well as an LED retrofit. Core samples of the existing floors were taken and a moisture prevention system is not needed.	$480,000
GBS Address Slab Settling in Corridor West of Cafeteria ("State and Madison")	The existing concrete slab is showing signs of settlement, causing the carpet to tear which creates a tripping hazard. The scope of this project includes removing a 20'x20' section of concrete, adding a stone base and replacing with new concrete. New flooring will also be installed.	$50,000
GBS Carpet Replacement/ Asbestos Removal	There are several areas in the building with carpeting that is 20+ years old with asbestos underneath. This project will abate asbestos from the area and replace the carpeting.	$380,000
GBN Flooring Replacement/ Asbestos Removal	There are two areas in the building with flooring that is 20+ years old with asbestos underneath. This will abate asbestos from the area and replace the flooring.	$80,000
GBN Tennis Court Replacement*	The GBN tennis courts were built in 1957 and have been resurfaced several times over the years. Additionally, the courts were overlaid with an asphalt slip sheet twice. There is significant cracking which allows water to enter and get trapped between the multiple layers of asphalt. The water freezes in the winter which causes the pavement surface to further crack and heave. The cracks have gotten significantly worse over the last winter and need to be replaced. The scope of work includes removing all existing asphalt and fencing, installing new asphalt surface, applying a new tennis surface coating, a new vinyl coated fence, new tennis posts and netting. Soil borings were taken and the subbase under the tennis court is adequate to support the new surface - no undercuts are necessary.	$520,000
		$1,510,000

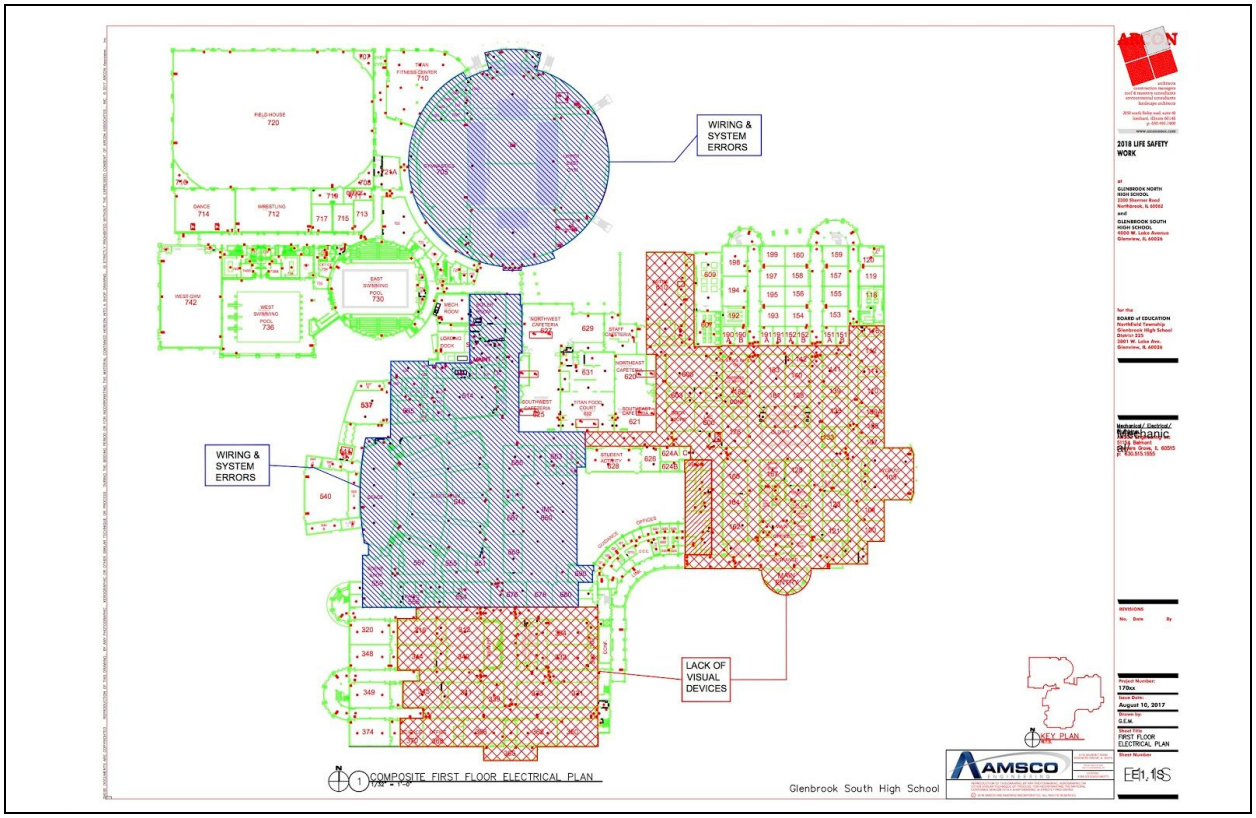
* These were not part of the original LS list and will need to be added via an amendment.

Electrical		
Project	**Description**	**Estimate**
GBS Replace 5 original transformers	There are 5 transformers located throughout the building's academic wing that are original to the building and in need of replacement. Several transformers are currently in poor locations and will be relocated.	$160,000
GBS Rebuild Electrical Distribution System	Existing electrical distribution equipment is older and exceeds the six switch rule. This project is intended to will rebuild the distribution equipment and will include replacement of the main circuit breaker.	$60,000
GBS Replace Main Electrical Switch	Electrical service has a Pringle main bolted pressure switch. These switches have a known failure to re-close after fault or manual opening. Replace bolted pressure switch with new 100% rated main circuit.	$50,000
GBS Upgrade Fire Alarm System	The existing fire alarm system at GBS is a hybrid system - parts of the building are addressable, meaning if the fire alarm goes off the exact location is identified, and parts of the building are zoned, meaning if the fire alarm goes off, a zone, rather than an exact location, is identified. Additionally, there are several areas in the building without an AV indicator in every classroom. In order to convert the entire building to an addressable system and put AV indicators in every classroom, it is recommended the existing fire alarm system be replaced with a new mass notification system as required by the 2015 International Fire Code (IFC). The Illinois Board of Education officially adopted the 2015 IFC starting with any project under contract on or after July 1, 2016. The new system shall include speakers, speaker/visual, pull stations, smoke detectors, heat detectors, etc. which make up a fully functioning voice (digital message and microphone for authorized personnel) based fire alarm/alert system.	$1,350,000
		$1,620,000

GBS Fire Alarm Diagrams of Existing Condition

Blue: Wiring and System Errors, Zoned Areas
Red: Lack of Audio/Visual Devices

GBS First Floor



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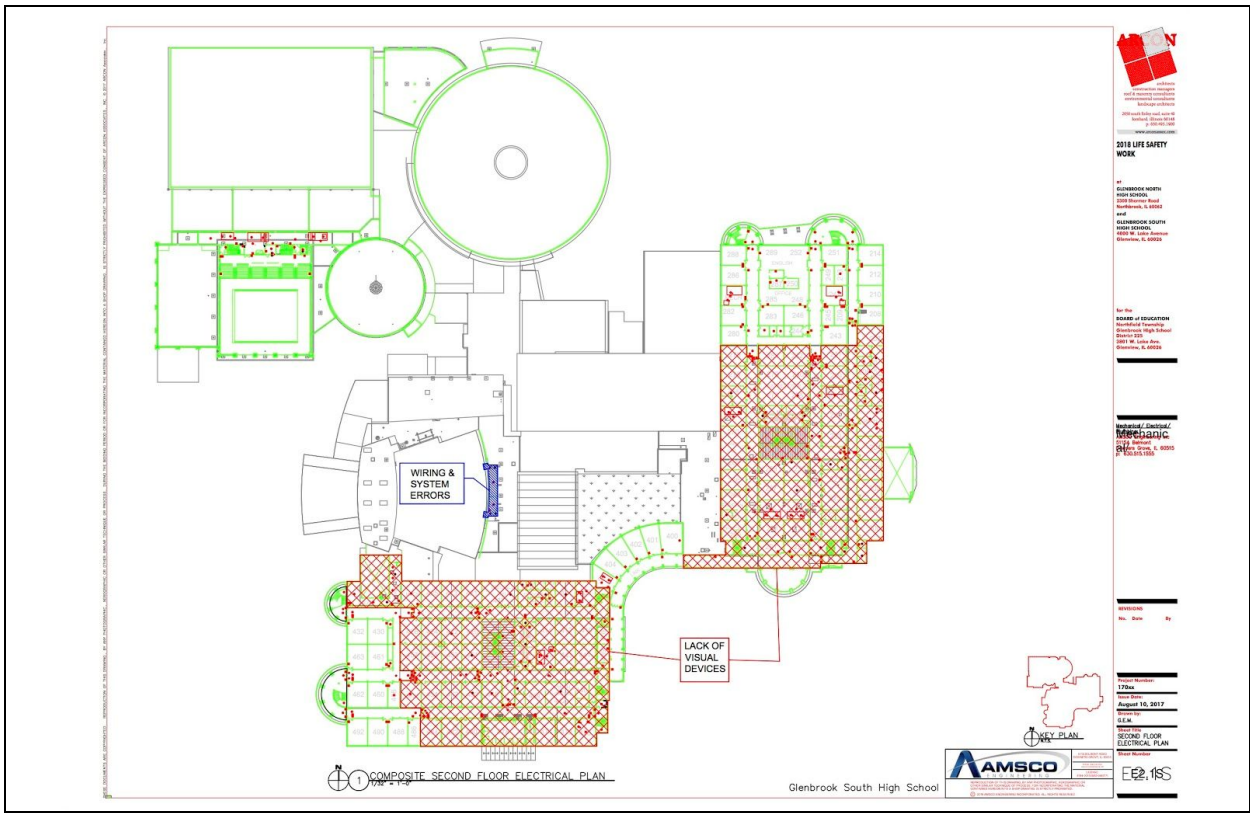
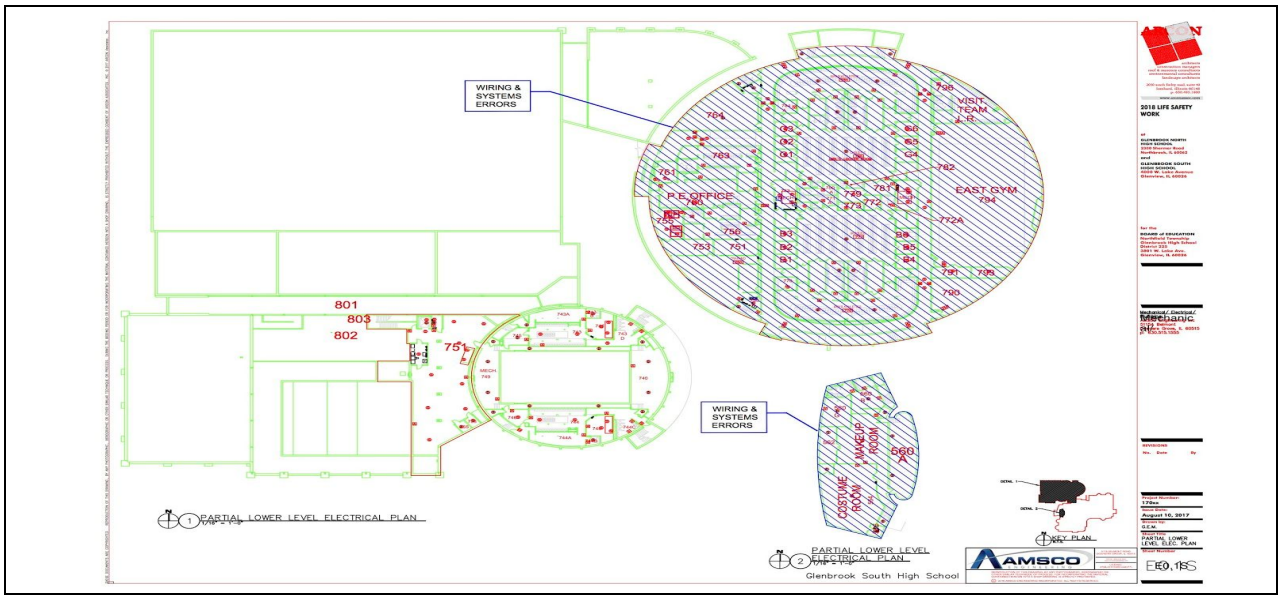
GBS Second Floor



GBS Basement



Mechanical		
Project	**Description**	**Estimate**
GBS hot Water Expansion Tank	In 2000, a new expansion tank system was installed as part of the boiler and chiller plant work. The system has been repaired several times over the years and is no longer maintaining consistent temperatures.	$90,000
GBS Orchestra Pit Exhaust System	Due to dampness in the orchestra pit, an exhaust system is recommended to increase air flow in the pit to dry it out and reduce the chance of mold.	$10,000
GBS Home Ec. Exhaust System	Currently, there is no exhaust system in the home economics room. This was cited during a recent ROE inspection.	$15,000
GBS Auditorium Exhaust Grill	There is a sump pump for the sanitary line located in a closet in the basement of the auditorium that fills with sewer gas. An exhaust would relieve the smell which infiltrates into the auditorium. This project will add an exhaust grill to tie into the existing exhaust system.	$15,000
GBS Dehumidification System Repair	The current Innovent system which provides dehumidification and temperature control in the natatorium is 8 years old and not working properly. Some of the refrigerant compressors and control valves have failed or leaked, resulting in a significant repair costs.	$50,000
GBS Replace Pool Boilers*	The existing pool boilers were installed in 2007 and 2008. The boilers have been leaking and are approaching the end of their useful life. The pool heater being recommended has a separate heat exchanger so the chlorinated pool water does not circulate through the heater itself thus extending the life.	$200,000
GBS Replace Rooftop Exhaust Fans	The existing rooftop exhaust fans are 30 years old and failing. The fans are required to maintain the proper static pressure in the fieldhouse along with the ventilation supply fans. Similar to the work done several years ago at GBN, intake louvers will be installed to draw in outside air and provide better ventilation.	$70,000
	* Note, these were not part of the original LS list and will need to be added via an amendment.	**$450,000**

Plumbing		
Project	**Description**	**Estimate**
GBS Replace Old Pool Filtration System	The old pool filtration system is over 40 years old and in poor condition due to corrosion and age. The scope of this project is to replace the current high rate sand filter with a new version of a high rate sand filter and replace the existing surge tank.	$210,000
		$210,000
	Total of All Life Safety Summer 2018 Recommended Projects	**$5,315,000**