

To: Dr. Mike Riggle
Board of Education

From: Dr. Kimberly Ptak

Date: Monday, February 26, 2018

Re: Approval of Capital and Life Safety Project Bids for Fiscal Year 2018-19

Recommendation

It is recommended that the Board of Education approve the following capital project and life safety bids for fiscal year 2018-19 in the amount of \$5,881,648 as presented.

Background

In the fall, building and district administration reviewed and discussed recommended capital and life safety projects with the Facilities Committee and the Board of Education. At the November 13, 2018 regular board meeting, the Board authorized the District's architect, ARCON & Associates to develop bid specifications, and obtain bids to determine the actual cost of the projects.

Funding Source:		Life Safety Proceeds	District Capital Projects Budget		School Operating Budget	
Trade	Contractor	Life Safety Projects	Paving and Concrete	GBN Back Gym	GBN Back Gym	Total Cost
Paving	Accu-Paving	\$403,760	\$210,000			\$613,760
Abatement	Valor	\$243,350				\$243,350
Flooring	Vortex	\$138,641				\$138,641
General Trades	RB Construction	\$199,000		\$435,000	\$90,000	\$724,000
Roofing	Riddiford Roofing	\$933,362				\$933,362
Gym Floor	Floors, Inc.	\$413,800				\$413,800
HVAC	DeKalb	\$810,000				\$810,000
Electrical	Prospect Electric	\$181,750		\$20,000		\$201,750
Fire Alarm	Carey Electric	\$1,802,985				\$1,802,985
Total Cost		\$5,126,648	\$210,000	\$455,000	\$90,000	\$5,881,648
10/2017 Estimate		\$5,155,000*	206,580	\$290,000	\$85,000	\$5,736,580
+/-		-\$28,352	\$3,420	\$165,000	\$5,000	\$145,068
						2.5%

*the estimate does not include the transformer relocation and replacement at GBS. That value is \$160K and will be rebid.

Summary of Bid Results

Bid specifications were distributed to prospective bidders on Tuesday, January 16, 2018 and a mandatory pre-bid meeting was held on Tuesday, January 30, 2018. Bids were opened and publicly read on Wednesday, February 14, 2018.

Overall, life safety bids were \$28,352 under the original cost estimate. Attached is a historical memo from the November 13, 2018 board meeting outlining the scope of life safety work. The majority of projects were very close to the original estimates; there are two exceptions to note.

Roofing

The scheduled roofing work includes replacing the GBS fieldhouse roof, weight room and student activity corridor roofs. The original estimate was \$1,525,000 and the low bidder was Riddiford Roofing at a cost of \$933,362. We received a total of nine bids, six of which were within \$100,000 of each other and the next lowest bidder was only \$15,000 higher than Riddiford. The highest two bids were close to the original estimate. In talking to our roofing architect several factors played in our favor. The overall size and layout of the fieldhouse roof lends itself to a lower cost per square foot. Reusing existing insulation and the wide layout of the roof allows for increased production and lower labor costs. Additionally, the access to the student activities corridor is less complicated than anticipated. Riddiford successfully performed roofing work last summer and has been awarded several projects in the past.

Fire Alarm

The scope of work includes a full voice evacuation fire alarm system at Glenbrook South including new devices, wiring and head end equipment. Three systems were included in the bid specification Simplex, Notifier and Edwards. Three reputable electrical vendors bid all three systems giving the district nine prices, all which were within a close range. An Edwards system is being recommended. Edwards is a 140 year old company, owned by United Technologies and is a global leader in fire alarm, mass notification and hazard warning systems. Edwards has a network of certified dealers to distribute parts and service equipment.

The original estimate for a full voice evacuation fire alarm system was \$1,350,000 and the bid is \$1,802,985. The majority of cost is the labor involved in installing the system; as opposed to the system and equipment itself. In talking to the contractors, the original estimates did not take into account wiring for all 1,233 devices.

The transformer replacement life safety project is being redesigned and rebid. Results will be brought to a future facilities committee meeting.

Transformer Replacement

There are five transformers located throughout the GBS academic wing, four of which are original to the building and in need of replacement. The original estimate for this project was \$160,000, however the lowest bid for this work was \$745,000. The scope of work was to not only replace the transformers but also to relocate the transformers to central areas within the academic wing. The distance of the relocation significantly drove up the cost of the project. The project will be redesigned and rebid.

There were two capital projects bid; Glenbrook North paving and concrete work and the Glenbrook North back gym wall removal. Paving and concrete work came in as expected while the cost of the back gym wall project came in significantly higher than the estimate. Attached is a historical memo from the November 13, 2018 board meeting outlining the scope of these two projects.

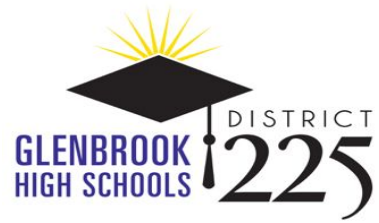
Glenbrook North Back Gym

The Glenbrook North back gym wall removal project was \$165,000 over the original estimate of \$290,000. The high cost is driven by the necessary steel and associated labor; \$270,000. The steel required for the project is 38 tons and comes in three pieces. There is extensive labor associated with welding the pieces together in the field. Additionally, given the weight and size of the steel, openings need to be made in the roof to allow a crane to lift the steel into the proper location.

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

Revenue	
Description	Actual (2/16/2018)
Life Safety Bond Proceeds	\$15,171,718
Interest Earned to-date	\$59,519
Revenue Totals	\$15,231,237

Expenditures	
Description	Actual <u>or</u> Updated Estimate (2/16/2018)
Summer 2017 Life Safety Projects	
Cost of Projects	\$5,459,313
Architect Fee (7.5%)	\$409,448
Construction Mgmt Fee (7.5%)	\$409,448
Contingency (2%)	<u>\$0</u>
Total Cost	\$6,278,209
Summer 2018 Life Safety Projects	
Cost of Projects	\$5,126,648
Transformer Replacement to be bid	\$160,000
Architect Fee (7.5%)	\$396,499
Construction Mgmt Fee (7.5%)	\$396,499
Contingency (2%)	<u>\$102,533</u>
Total Cost	\$6,182,179
Summer 2019 Life Safety Projects	
Cost of Projects	\$2,215,000
Architect Fee (7.5%)	\$166,125
Construction Mgmt Fee (7.5%)	\$166,125
Contingency (2%)	\$44,300
Additional Reserve	<u>\$0</u>
Total Cost	\$2,591,550
Expenditure Totals	\$15,051,938
Excess Reserve	\$179,299



To: Dr. Mike Riggle
Board of Education

From: Kimberly Ptak

Date: Monday, November 13, 2017

Re: Approval of Summer 2018 Life Safety Projects

Recommendations

It is recommended that the Board of Education:

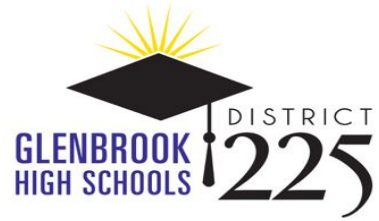
1. Authorize the District architect, ARCON & Associates, to begin developing bid specifications for the recommended Summer 2018 Life Safety Projects..
2. Authorize the administration to submit a life safety amendment to the State of Illinois to add the GBN tennis court replacement and GBS pool boiler replacement to the overall Life Safety scope of work.

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.



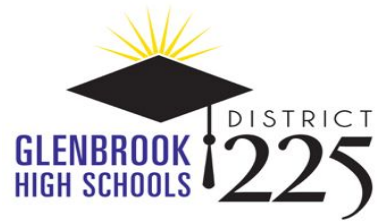
Following is a summary to-date of revenue and actual/estimated expenditures.

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%)	<u>\$110,980</u>	<u>\$0</u>	<u>\$110,980</u>
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%)	<u>\$91,840</u>	<u>\$106,300</u>	<u>(\$14,460)</u>
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	<u>\$543,480**</u>	<u>\$0</u>	<u>\$543,480</u>
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.

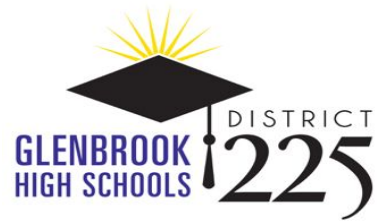
**typically a 2% contingency is budgeted. Since the scope of the work was not defined at the time the life safety survey was submitted, additional contingency was built in.



Summer 2018 Recommended Life Safety Projects

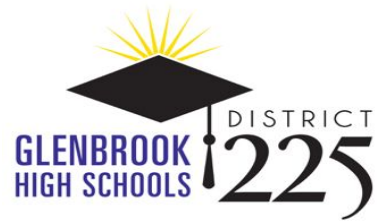
The projects listed below, with the exception of the GBN tennis courts and GBS pool boilers have been reviewed by the Board of Education and submitted on the Life Safety amendment filed with the State. The GBN tennis courts and GBS pool boilers have been added and an addendum will need to be filed. Since 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

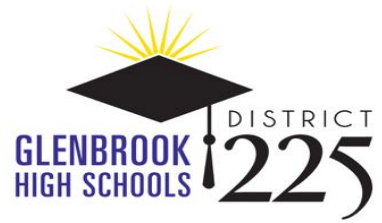


Architectural (flooring, structure, tennis courts)		
Project	Description	Estimate
GBN Floor Replacement, Painting and Lighting (4) Back Gyms	The wood flooring in each of the four back gyms at GBN were original to the building in 1957 and have reached the end of their useful lives. The floors will be 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

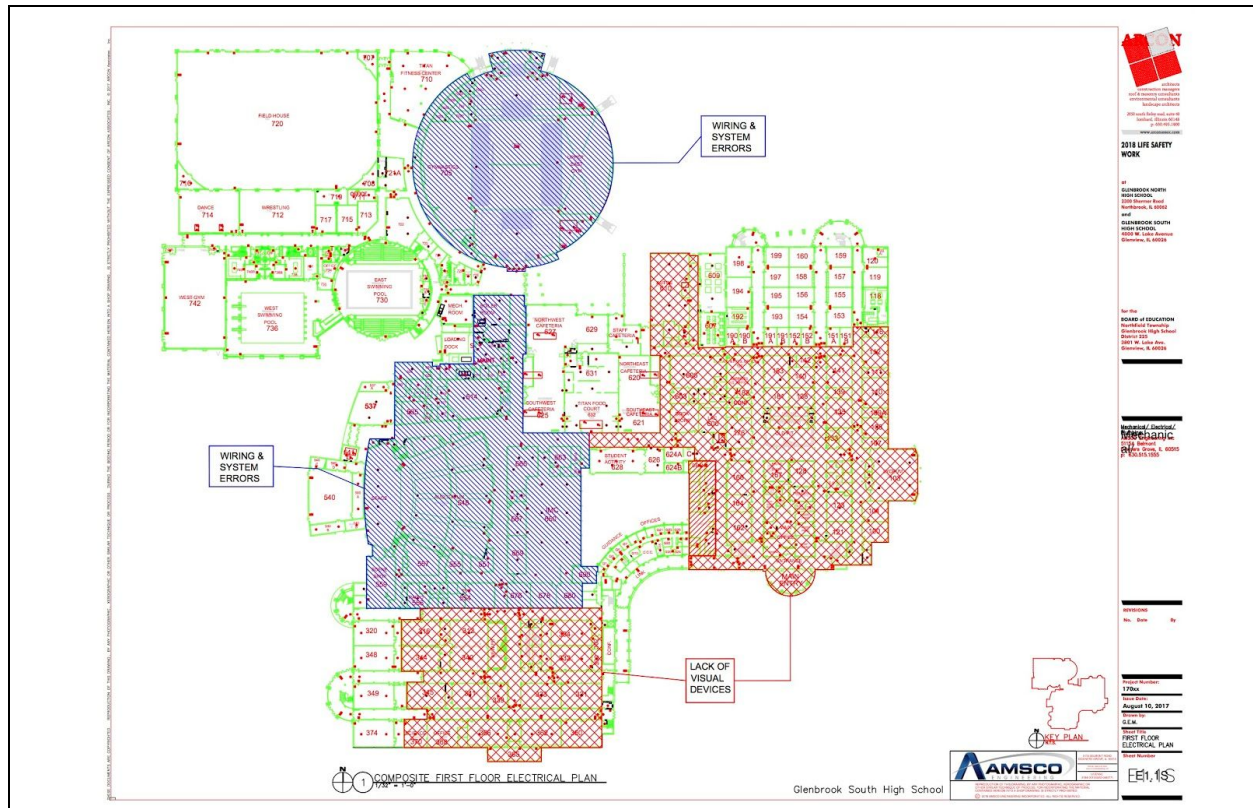


GBS Fire Alarm Diagrams of Existing Condition

Blue: Wiring and System Errors, Zoned Areas

Red: Lack of Audio/Visual Devices

GBS First Floor



1 COMPOSITE SECOND FLOOR ELECTRICAL PLAN

WIRING & SYSTEM ERRORS

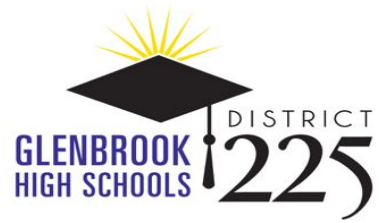
LACK OF VISUAL DEVICES

17000
August 16, 2017
1:10
SECOND FLOOR ELECTRICAL PLAN

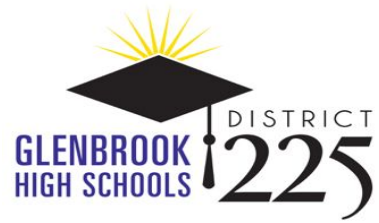
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17000
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SECOND FLOOR ELECTRICAL PLAN

Glenbrook South High School

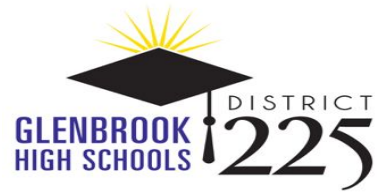
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Mechanical		
Project	Description	Estimate
GBS hot Water Expansion Tank	In 2000, a new expansion tank system was installed as part of the boiler and chiller plant work. The system has been repaired several times over the years and is no longer maintaining consistent temperatures.	\$90,000
GBS Orchestra Pit Exhaust System	Due to dampness in the orchestra pit, an exhaust system is recommended to increase airflow 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



To: Dr. Riggle
Board of Education

From: Kimberly Ptak

Date: Monday, November 13, 2017

Re: Approval of Summer 2018 Capital Projects

Recommendations

It is recommended that the Board of Education:

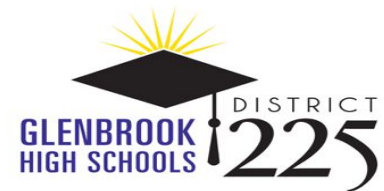
1. Authorize the District architect, ARCON & Associates, to develop bid specifications for the recommended Summer 2018 Paving and Concrete work as outlined below.
2. Authorize the District architect, ARCON & Associates, to develop bid specifications for the recommended Summer 2018 GBN Back Gym Renovation work as outlined below.

Background

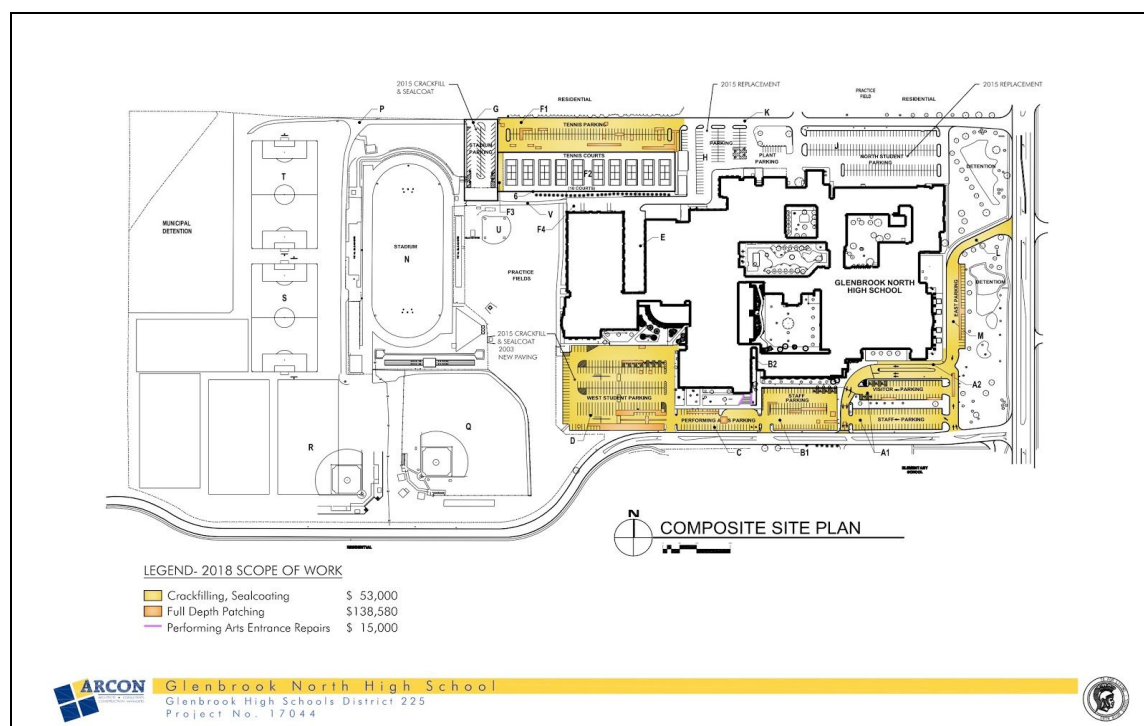
Every fall, district and building administration recommend capital projects to the Facility Committee and Board of Education for consideration and approval. Once projects are approved in concept, the district architect (ARCON) develops detailed bid specifications for each project. Projects are put out to bid and actual costs are brought to the Facility Committee and Board of Education for discussion and approval. Projects are typically completed during the summer months. Capital projects are built into the overall annual budget and funded on a "pay as you go" method. The proposed projects for the summer of 2018 will be paid from the 2018-2019 budget.

Paving and Concrete

The district maintains a master paving schedule that plans for parking lot replacement every 15 years and general maintenance every 3 years. Planned summer of 2018 work includes seal coating various parking lots in accordance with the master schedule as well as the repair of various concrete paths and tuckpointing of the masonry around the GBN CPA stairs.

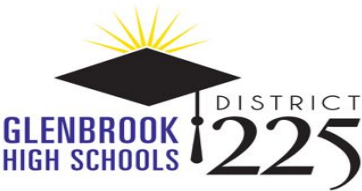


Paving and Concrete		
Building	Description	Estimate
GBN	Crack Filling and Sealcoating	\$53,000
GBN	Full Depth Patching	\$138,580
GBN	Masonry Tuckpointing by CPA Stairs	\$15,000
		\$206,580
7.5% architectural fee		\$15,494
7.5% construction management fee		\$15,494
2% contingency		\$4,132
Total Cost of Paving and Concrete Work		\$241,700



GBN Back Gym Reconfiguration

As part of the planned summer of 2018 life safety work, the gym floors in the four back gyms at GBN are to be replaced, the interior walls and ceilings are to be painted and existing light fixtures will be retrofitted



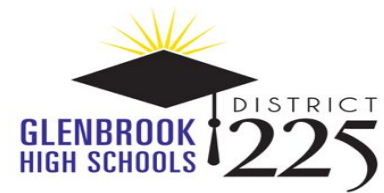
to LED. The cost of this life safety work is estimated at \$480,000. The four back gyms are used daily (all blocks) for Physical Education classes. In addition, the back gyms are used for boys and girls volleyball, basketball and gymnastics as well as wrestling, cheerleading, color guard, intramural programs, Glenbrook United, Glenbrook Aquatics, feeder programs and various Northbrook Park District Events.

The physical size of each back gym is 5,200 square feet and while they work nicely for daily PE and athletic practices, the size limits the experience of participants and spectators attempting to view the various athletic competitions. The existing size of the gymnasiums limits the types of competitions that can be held. To accommodate spectators at events, folding chairs are placed along the sides of the court. However only 75 people can be accommodated in each gym which often leaves 30+ people trying to view events from the hall. The distance from the wall to the court is approximately 4 feet which means the spectators are sitting very close to the out of bound lines. It is difficult to have small children at the events due to the proximity to the courts.

Sports Currently Holding Competitions in Back Gyms	Number of Annual Competitions
Boys Basketball	15 competitions
Girls Basketball	15 competitions
Boys Volleyball	21 competitions
Girls Volleyball	18 competitions



By removing the wall between two of the back gyms (D104 and D106), one large open space can be created that is similar in size to the high ceiling space built at GBS in 2008 as part of the referendum, which is 8,600 s.f. Having an open space would allow for more flexibility in hosting larger games and



competitions and allow for seating up to 330 for a single event. The new space would allow for events that can't currently be hosted in the back gyms such as dual wrestling meets, two major gymnastics invites, badminton practice, feeder district competitions, park district competitions, clinics and tryouts.

The larger competition space would be designed to have flexibility through the use of a dividing curtain to still allow for two separate spaces as needed for PE during the day and practices after school.

Item Description	Cost Estimate
<u>District-level Funds</u>	
Wall Removal and New Steel Support	\$170,000
Electrical Upgrade for New Gym Equipment	\$15,000
Basketball Goals (14) Ceiling Mounted	<u>\$105,000</u>
	\$290,000
7.5% Architect Fee	\$21,750
7.5% Construction Management Fee	\$21,750
2% Contingency	<u>\$5,800</u>
Total District-level funds	\$339,300
<u>Building-level Funds</u>	
Dividing Gym Curtain	\$10,000
Portable Bleachers	<u>\$75,000</u>
Total Building-level Funds	\$85,000
	\$424,300