

**Darien Public Schools  
Capital Projects 2017-18, Priority 1**

The following descriptions and review of Priority 1 projects are broken down following this template of guidelines:

1. Problem/opportunity being address
2. Project goal
3. Options investigated to address the problem
  - a. Potential costs/benefits/negatives
4. Option selected and reasoning
5. Project plan
  - a. Estimated cost, start date, completion date, risks, other pertinent details
6. Project benefits
  - a. Hard and soft, how will benefits be measured, any paybacks

**Darien High School**

Asphalt Repairs To Roads/Parking: - **\$65,000**

1. The school blacktop areas are starting to show cracks throughout. There are also several catch basins, manholes and valve boxes that are starting to settle or heave up.
2. The goal is to repair the areas around the catch basins, manholes and valve boxes, and seal all of the cracks.
3. The only other options would be to repave everything, or do nothing.
4. This option was selected because the majority of the blacktop remains in very good condition. It is not prudent to take no action.
5. Ideally, this work will be done in late July through early August. This would be the time when summer school is winding down and fall sports practice hasn't started.
6. The benefit of this project is that it would ensure the blacktop would not need to be replaced prematurely. This will be measured by not having to replace the blacktop before 2025. There are no paybacks on a project such as this.

Expand Cafeteria: - **\$1,689,359**

1. The problem is that there is overcrowding during several lunch periods.
2. The goal is to expand the current space, change the type of furniture and improve the acoustics.
3. There were more than seven different options presented and discussed at several BOE Facilities committee meetings.
4. The start date is currently projected as the day that summer vacation begins. The completion date is projected for the last week of August. The risk involved is that if the

project gets delayed due to material shortages or labor issues, the space may not be ready for the start of school.

5. The main benefit is that the students will have a larger, more comfortable and quiet place to gather and eat. There will also be a large area for meetings and presentations. There are no pay-backs on this type of project.

Replace Oil Burners with Natural Gas Units: - **\$160,000**

1. The Town is in contract with Eversource to have a gas main installed to the High School. As part of the installation agreement, when the gas main is completed the High School will switch from oil to gas for heat and hot water.
2. The goal is to have the boilers and hot water heaters converted to natural gas when the deadline for the changeover occurs.
3. The options looked at were to change just the burners, or change the complete boiler/burner units.
4. There was no reason to change the boilers out. These units are designed to run for 25-30 years and they are only 12 years old and in excellent condition.
5. The estimated cost is based on information supplied by the equipment manufacturer. The start date would be July 1, 2017. There is no real risk, we have three boilers and can operate one on oil while the other 2 are changed over to gas.
6. The Town and Eversource have established a payback as part of their contract. According to that document, the payback will be 3.5 years.

Storage Facility: - **\$250,000**

1. There are two problems we are trying to solve. The first one is that there is no place to store the metal poles used for the safety netting around the fields. These poles are used for Lacrosse, but have to be taken down for Soccer and Field Hockey. The other problem is that there are seven shipping containers on the High School campus.
2. The goal is to build a storage facility that is adequate in size and complimentary to the campus appearance.
3. The options investigated included building storage racks for the posts. In addition to being unsightly, there is a lack of space available. The negative is that the sports building may be too far away from some of the sports areas.
4. The option chosen was selected because it was the most practical in terms of providing adequate space and improving the appearance of the property.
5. The plan would be to have an architect design the building, obtain all the permits and approvals and bid the work. There is no hard and fast start date. This project can be done independent of any other work.
6. The benefits include improved appearance of the grounds and safer, more secure storage. There are no paybacks on this type of work.

Repair Track, New Structural Spray: - **\$100,000**

1. The goal is to extend the life of the track, repair the top surface and update any of the lines and marks on the track which may have changed since the track was built.
2. There are 3 options for this type of problem. Option 1 is to do nothing and let the track deteriorate for a few more years. The whole track and sub-base would then need to be replaced at the same time. This would cost several hundred thousand dollars. The second option is to put on a structural spray. This would cost about \$100,000. The third option would be to install a completely new track and sub-base in conjunction with the stadium field renovation. This would cost several hundred thousand dollars, the same as option 1.
3. We selected the structural spray for several reasons. First, the sub-base, if taken care of now, has many more years of use. Secondly, there is no reason to tear the track up and build all new when it is not needed. We have never heard any desire to expand the track to 8 lanes, or add a steeple chase, so we cannot come up with a good reason to tear everything up.
4. The plan would be to do this project in conjunction with the turf replacement at the stadium field. Once the field was completed, the track could be done. The work would take about 3 weeks to complete.
5. Benefits would be that the track would look and perform as a brand new track at less than half the cost. The new track surface would complement the new turf field.

### **Middlesex Middle School**

#### Resurface Asphalt Parking Lot: - \$135,000

1. The problem is that large sections of the parking lots need a new coat of asphalt and large pieces of the curbing need to be replaced.
2. The goal is to replace crumbling and damaged curbing and install new asphalt in sections of both parking lots. The parking lots would have new lines and crosswalks painted.
3. The only other option investigated was to replace all of the blacktop and curbing, this was not needed.
4. This option will include numbered spaces so people park where they are assigned to park, which has been a problem in the past. All unsafe curbing will be replaced, and we will be able to better define the crosswalks.
5. The plan is to present the scope of work to the Town so this project can be part of their blacktop bid process. Once a vendor is chosen, we will work directly with that vendor to schedule the work. We can perform this work anytime during the summer vacation.
6. The main benefit will be the repair of damaged infrastructure. There are no paybacks for this type of work.

#### Provide Backflow Preventer: - \$43,947

1. The problem is that there is no backflow preventer on the domestic water line.

2. The goal is to install this valve to help insure safe domestic drinking water.
3. The only option is to not install this unit.
4. Both the State Department of Health and our water provider require backflow preventers on new water services. They have asked customers with older services to bring their water systems into compliance.
5. The cost was estimated by a licensed engineer work with the State DOH and Aquarian Water to come up with a scope of work. Once we get the funding, we will bid the work. During the installation, there will be a short period of time when the water is turned off. This work will have to be done during a break period
6. The benefit is a safer water system. There are no paybacks for this type of project.

Install Gas Burner for Hot Water Heater, Gas Mains in Boiler Room: - \$40,000

1. This is the same opportunity being present by Eversource to the High School.
2. The goal is to make MMS ready to run on natural gas instead of oil.
3. The other option was to change out the complete hot water unit.
4. We selected changing only the burner as the complete unit is only 5 years old and should last another 5 years, at least.
5. The plan is to run all the piping in the boiler room and out to the gas meter. We will buy the burner and wait until the conversion to install. There is no real risk, we can convert when ready, and run on oil until then.
6. The benefit is outlined in the estimated payback developed by the Town and Eversource. According to that document, the payback should be 2 years.

Repair Holes in Floors and Install New VCT: - \$26,384

1. There are unused old floor outlets in these rooms. Some of the outlet boxes have broken covers.
2. Project goal is to remove the outlet, patch the floor and install new tile. This will give us a smooth safe floor that will allow the room to be used in a variety of configurations.
3. There were no other options looked at to take care of this issue.
4. The option selected is the only way to correctly eliminate this problem.
5. This work will be done during the summer and should be completed in 5-7 working days.
6. The project benefit is safety from trip hazards and the ability for the classroom teacher to set the room up in multiple configurations.

Install Floor Expansion Joint: \$14,658

1. The expansion joints in the first floor hallway are becoming tripping hazards.
2. The goal is to replace these with new joints that will sit flush with the floor tile.
3. The only other option was to try and repair these again.
4. The existing expansion joints are damaged and have been repaired multiple times.
5. The plan would be to perform this work over the summer vacation. The work should take a week to ten days.

6. The benefit is that the hallways will be safer for students, staff and visitors.

### **Hindley Elementary School**

#### Window Replacement Rooms 101,107, and 108 - **\$32,980**

1. The windows are in the 1976 addition and were not replaced when the 1996 additions were built. These windows are 40 years old. Many are inoperable and repair parts are not available.
2. Goal is to retrofit new, energy efficient windows into the existing window frames.
3. Options investigated were to try and repair the existing windows, remove the existing windows and frames and replace, or remove the sash and hardware and replace with new.
4. The window frames are in good condition, and there was no need to go through the expense of replacing them. The retro fit option will retain the look of the building while improving the interior environment.
5. This project will be designed and bid out with the other window replacement work. No schedule has been worked out at this time.
6. The benefits will be windows that work correctly, are draft free and have screens so they can be opened in the spring and fall without worrying about flying insects.

#### Replace All 1<sup>st</sup>/2<sup>nd</sup> Floor Classroom Doors and Hardware: - **\$67,426**

1. The main problem is that there are several types of doors and door hardware on the classroom doors of the original building.
2. The goal is to have new, uniform doors with hardware that matches the 1996 addition.
3. The options were to do nothing, or change out the door hardware only.
4. This option was selected because it would alleviate all the issues we have with doors in various states of repair and with various types of locks and hardware.
5. The architect has estimated the cost at \$67,426. The plan would be to use a specification from the architect and our hardware supplier to bid out the work. There is usually a long lead time on the hardware. This would determine the start of the project.
6. The project benefit would be reduced inventory of multiple lock parts and less repair calls on the doors.

#### Window Replacement Program, Original Building: - **\$167,649**

1. The windows in the original building were not replaced when the 1996 addition was built. These windows are not original to the building, but are at least 40 years old. Many are inoperable and parts are not available.
2. The goal is to retrofit new, energy efficient windows into the existing window frames.
3. Options investigated were to try and repair the existing, remove the complete windows and frames and replace, or remove the sash and hardware and replace with new.

4. The window frames are in good condition, there was no need to go through the expense of replacing them. The retrofit option will retain the look of the building while improving the interior environment.
5. The architect has been working on this project, and has a basic specification completed. This work is scheduled to run over the next few summers, being completed in 2019. Most of the work will be done during the summer.
6. The benefits will be windows that work correctly, are draft free and have screens so they can be opened in the spring and fall without worrying about flying insects.

Install Backflow Preventer on Domestic Water Line: - \$43,974

1. This is the same as the project at Middlesex Middle School

### **Holmes Elementary School**

New Exterior Door, 1933 Building: - \$21,500

1. The problem is that these are wooden doors of unknown age that are in poor-fair condition. The door at the rear of the gym is mounted with the wrong swing.
2. The goal is to install new commercial grade doors with insulated windows that retain the appearance of the original building.
3. The options investigated were to try and repair the existing doors, or to replace all the doors and frames.
4. We selected this option of new doors because, for the most part, the existing frames and hardware is in good condition and can be reused. The frame for the gym door will have to be replaced so the door will swing in the correct direction.
5. The plan would be to purchase the doors and needed hardware and perform the work in-house. There are no risks involved, we would hope to complete before school starts in August.
6. The benefits would be more secure openings, improved energy efficiency and better handicapped access to the gym from the exterior.

Replace Fixed Windows, 2<sup>nd</sup> Floor Hallway - \$15,000

1. The halls and stairwells in the 1996 addition have fixed windows. The building becomes stifling hot from May through September.
2. The goal is to replace fixed panes with operable windows so we can have some cross ventilation for the hallways and stairwells.
3. The only alternative that would address this issue is to install a powered ventilation system.
4. We selected this option because it is quick to implement and won't be at odds with any future work.
5. The plan would be to perform all the requests for pricing in the spring, and perform the work in the summer.

6. The benefit would be increased comfort for all building occupants. There are no paybacks for this type of work.

**Ox Ridge School:**

Provide Backflow Preventer - \$43,974

This is the same scope of work as the Middle School

**Royle Elementary School**

Upgrade Fire Alarm Panel: - \$25,000

1. The fire alarm panel and detectors are obsolete. It becomes more difficult for the service company to keep the system operating correctly.
2. The goal is to change out the panel, communicator, smoke heads, heat detectors and CO detectors.
3. The only other option would be to replace the complete system including all wiring.
4. This option was selected because the existing wiring and boxes that the devices attach to are all in excellent condition. This is how we upgraded the fire alarms at Holmes, Hindley and Ox Ridge.
5. The estimated cost is based on the previous similar projects. We would perform this work over the summer. We would need fire watch in the building during the changeover of the main panel.
6. The benefit is a modern digital alarm system. There is no payback on a project such as this.

Digital Heating Controls, Phase 2 - \$150,000

1. The problem is that the original building classroom heat is controlled by obsolete pneumatic valves and thermostats.
2. The goal is to change out the valves and thermostats to digital valves and sensors.
3. The existing system as it is does not work effectively. In some rooms the system does not work at all. Heating is controlled by manually turning valves on and off.
4. The option is in keeping with our planned conversion of all the schools to the Allerton System. We have seen improved operations and energy savings where we have installed these systems.
5. The cost is estimated based on the costs in the other buildings that we have switched over to Allerton.
6. The benefit will be more uniform heating and ventilating in the original part of the building. We will be able to measure the savings with the Energy Star program.

Replace Boiler Room Sump Pump: - \$51,302

1. This large pump is original to the building. It collects ground water and water from the boiler room floor drains. We have removed and repaired it twice since 2011. It is at the end of its' useful life.
2. The goal is to replace the pump with a newer version that is capable of almost continuous duty. It has to be able to pump both hot and cold water.
3. The only other option is to try and keep repairing the existing pump. The rebuilding company has advised that the pump needs to be replaced.
4. We selected this option based on advice from the pump company and the engineer. Once funding is approved, the pump float and check valves will be ordered and installed. Based on the time the pump and parts arrive, we would like to get this work done before mid-September.
5. The main benefit is new reliable equipment replacing a 68 year old pump. There are no paybacks on this type of project.

### **Tokeneke School:**

#### Reseal and Line Parking Lots - \$7,500

1. The problem is that cracks have started to appear on the blacktop and the lines for the parking spaces have faded.
2. The goal is to seal up the cracks before they get worse and to repaint the parking lot lines.
3. There were no options investigated.
4. This project was selected as the best way of insuring the parking lots reach their full useful life before new paving is needed.
5. The plan would be to add this onto the project being done at the High School. The work would be completed over the summer
6. The benefit will be extending the useful life of the parking lot. There is no payback on this type of Project.

#### Install Expansion Joint in Great Hall: - \$7,000

1. The problem is that an expansion joint was not installed in the great hall when the building was built. The concrete has made its own expansion joint. The floor continuously cracks along this fault line.
2. The goal is to install an expansion joint instead of having to change tiles every year.
3. There are no other options to this project.
4. This option is the only way to eliminate this problem.
5. The estimated cost was given to us by a contractor and we verified it through our own research. This work would be done either over the summer or over the December break.
6. The benefit is the elimination of a potential tripping hazard and the unsightly broken tiles that are continuously being changed.

## **Central Office**

Nothing is being requested this year

## **District-Wide**

Replace DAR-100 - 1997 Rack body/dump - **\$48,500**

1. This truck is no longer used as an everyday vehicle, it is used as a spare truck in the summer and for sanding in the winter. It is a backup for both snow plowing and towing the lawn mower trailer. The frame has been welded twice, and the body is starting to get rusty along the bottom edges.
2. Project goal is to remove this vehicle and replace it with a 2018 model.
3. There aren't really any options, as we need a sander truck and we have several other trucks that will need to be replaced in the upcoming years.
4. We see no reason to keep putting money into a truck with a limited future. There is no point in a lease purchase or in buying used equipment. We are buying new equipment, the same brand in the same color year after year.
5. The cost is approximately \$55,000. We will be able to order the truck sometime in late July. This means the order will be placed in August and we will receive our new vehicle in early 2018.
6. The benefit is a safe reliable vehicle for the grounds department.

Replace DAR-58, a 2001 Pick Up - **\$48,500**

1. The problem is that this truck is showing, rather suddenly, a large amount of rust on the frame. This vehicle is used daily by our electrician.
2. Replace with a similar sized vehicle that has a utility body and snow plow.
3. There aren't any viable options. Truck will be 16 years old, it has over 139,000 miles on it. Aside from the electrician, it is used regularly for plowing.
4. We have moved this piece of equipment up a few years on the replacement list due to the rust issues. There is no point in trying to spend money repairing an old, rusty vehicle.
5. Plan is to order a vehicle off the state bid once the funding is allocated. We would like to have this vehicle in time for the start of the winter.
6. Benefit will be reliable safe vehicle for a member of the maintenance department.