

## Capital Improvement Projects (CIP) FY2020 - FY2024

### **Project Description**

1. DIST Classroom Computerization/Upgrade  
The technology department will continue its efforts to be in compliance with the obsolescence plan established in the District Technology Plan. We will work to replace outdated hardware, enhance servers and network infrastructure to improve overall efficiency and ensure all users continue to be able to access and utilize necessary network resources. To accomplish this, we will divide our requested \$200,000 into two key areas:
  - Equipment - This is in accordance with our five year obsolescence plan for computers as stipulated in our District Technology Plan. It will also allow the district to purchase interactive panels in replacement of boards throughout the district.
  - Infrastructure - Funding for infrastructure will ensure ongoing access to key district resources, enhance management of our wireless network, and develop an onsite disaster recovery plan (in conjunction with the Town of Coventry).With increasing reliance on computer based network resources, the above purchases are necessary to maintain to critical resources used by students and staff throughout the district in their daily operations.
2. DIST Furniture/Equipment Replacement.  
Purchase of furniture/equipment to replace old, broken or damaged furniture/equipment.
3. CHS Cafeteria Reconfiguration.  
This project would open up the café to allow the school to service the students better and increase traffic flow allowing the students more choices and time.
4. Dist Kitchen Appliances.  
Foods Service and Facilities departments have been working on tracking kitchen equipment end of life and repair cost with the use of School Dude. With this information equipment that needs to be replaced will be based on age and cost of repair. This will include but not limited to the 1988 freezer at CHS, 1999 condenser at GHR, 1990 freezer at CNH, 1980's oven at CNH, etc.
5. DIST Crack Seal all School parking lots.  
Pricing for the crack sealing is \$1 per square yard. The total for the district is 28,600 square yards. This would include CNH, CHS, preschool, and Complex parking areas. This would not include CGS and GHR as they are in the CIP to be replaced and would not require crack sealing.
6. WH New Vehicle.  
Request of an additional four wheel drive vehicle to the maintenance department for safety and to services the district better. Last year's winter showed the need to have a four wheel drive vehicle to get around the district during inclement weather to service the district heat plants to ensure that the building were safe. The vehicle will also provide a safe way to transport items such as the lift, supplies, and trash around the district.
7. DIST Carpet Replacement  
Replacement of carpet based on the highest priority of failing carpet first. According to the Carpet and Rug Institute Carpet that is properly selected, installed and maintained lasts up to 10 years or longer. Most carpets in the district are older than 16 years. This work is proposed over two years and will include the Media center, Auditorium, office space, etc.

## Capital Improvement Projects (CIP) FY2020 - FY2024

8. CHS/CNH Install AC units in the LGI and Lecture Hall  
Currently the LGI and Lecture hall are being used not only for a classroom but is used for staff meetings, training as well as outside group use.
9. DIST Fire Proof File Cabinets  
This would replace the current standard filing cabinets that are used to store the district personal and financial records. The current filing cabinets do not safeguard the districts information from fire or water damage this would allow us to protect the districts vital information
10. CHS Relocate High School Weight room  
During the NESAC visit they sighted the school on the location and size of the weight room stating the area could not meet the needs of the students. This funding would allow a new weight room built on site to accommodate the students and athletics.
11. Dist. Phase 2 Natural gas conversion  
This phase would convert or replace equipment at CHS and CNH. The equipment would include kitchen equipment at CHS and CNH. Some of the equipment that is at or near end of life will be replaced with energy efficient equipment.
12. GHR Exterior Work  
This work included would be the repair and/or replacement of the exterior steps in the front and back of the building. Repairs and/or replacement of damaged sidewalks around the school
13. GHR Fiber Connection between LMC & GHR  
This project would run fiber from RT 31 down Cross Street to GHR also tying in Patriots Park and the senior center. This would allow the school to end the lease it has now for internet access.
14. CHS Lecture Hall seat/tablet replacement.  
The Lecture Hall seating/writing tablet system is fragile, requiring ongoing repairs as tablets break off almost as quickly as we can repair them. If we are to preserve the purpose of this venue, we will need to replace this equipment to a more durable system. Parts have not been available for the existing system for some time, with specialized fabrication as our only repair alternative.
15. CHS Band Room Compressor replacement  
The compressor in this system was installed in 1999 and has a life expectancy of 15 years. The system was also damaged in the winter of 2015 when the snow load broke the piping. The piping was repaired but the compressors where not replaced. We had the same problem with the Media center compressors and where replaced this summer.
16. DIST Van Replacement  
The van that we would replace in the 2010 maintenance van that will be 11 years old at this time.
17. DIST Sand and refinish gym floor.  
A typical MFMA maintenance schedule calls for an annual finish recoat and a complete resurfacing every 8-10 years, depending on facility use. This would
18. DIST PSSS Van Replacement  
This would replace the 2010 handicap van used to transport students. The van would be 10 years old at the time. Over the last year the van has been in the shop for repair four times for different issues.

## Capital Improvement Projects (CIP) FY2020 - FY2024

19. DIST AC Replacement  
This project would replace multiple ductless split units district wide that were installed 2000 and have a life expectancy of 15 years. With the newer systems it would save the district money in maintenance and electrical cost.
20. DIST Custodial Equipment Replacement  
Replace battery powered floor equipment at GHR currently beyond life expectancy.  
Replace battery powered floor equipment at CGS currently beyond life expectancy.  
This equipment is strategic in maintaining common area floors with minimal labor
21. DIST Network Refresh  
Technology is integrated into all district functions and we need to ensure that the network is able to support and grow in alignment with new and emerging IT trends and requirements. This funding will help us ensure all networking, cabling, switches and wireless infrastructure will continue to support daily practice and ensure ongoing productivity. Network switch developments have introduced new technologies such as Fabric networking, Shortest Path Bridging (SPB) and Cloud management, to name a few. While these advances can greatly improve the overall network they should be evaluated in depth to see if they can be phased into our existing infrastructure or be a 100% replacement.
22. DIST Utility Vehicle  
The vehicle would be outfitted with snow removal equipment to reduce the overtime costs of snow removal and reduce the risk of injuries from snow removal and slips and falls. Other than snow removal the vehicle would be used as a service vehicle for the complex and could be used to replace the golf cart for athletics
23. CHS Resurface the track.  
According to the American Sports Builders Association a track should be resurfaced every 8 to 10 years depending on use and maintenance.
24. CHS Resurface tennis courts.  
According to the American Sports Builders Association a tennis court should be resurfaced every 8 to 10 years depending on use and maintenance.
25. DIST Rooftop A/C Units  
This project would replace rooftop units DIST wide that may not be done under the building committee because of the age of the unit.
26. CHS/CNH Water Filtration Replacement  
The water filtration and softener will be at end of life in 2020 and is recommended that it is replaced. This system treats the water for the High school, Capt. Nathan Hale, and the Town Hall.

## School Building Committee

27. DIST School Entry Modifications. Create a secondary check point at main entrance. Entry modifications to include window film on all entry-way glass, making it shatter proof; quality camera for full view of visitor; verbal communication capability; and door lock release, to allow visitor into school. This is in addition to existing buzz-in at exterior door. This project may be eligible for School Construction funds.
28. CHS ADA Compliance. The State Department of Education (SDE) recently conducted a Civil Rights Compliance Review of the High School. The review noted several areas of noncompliance with the 2010 ADA Standards. A voluntary Corrective Action Plan (VCAP) has been submitted to the SDE. This request is to hire a design professional familiar with ADA Standards to prepare Bid Specifications and Construction

## Capital Improvement Projects (CIP) FY2020 - FY2024

Documents that will bring the facility into compliance. This project would be eligible for School Construction funds.

29. CHS (SBS) Install VFD's & occupancy controls & optimize control sequences for AHU's serving 2 gyms. The gyms are served by constant volume AHU's. Variable frequency drives (VFD's) would allow the fan motors to adjust to seasonal and/or temperature requirements. The occupancy sensors would allow the spaces to set back when empty. More sophisticated control strategies such as control ventilation, dual enthalpy economizer cycles, etc. would also be implemented. \$900-1,800 oil savings/yr.; \$4,800-5,800 electric savings/yr.
30. CHS (SBS) Replace original Classroom unit ventilators. The original classroom HVAC equipment is reaching the end of life expectancy and a replacement plan should be adopted.
31. CNH (SBS) Replace original Classroom unit ventilators. The original classroom HVAC equipment is reaching the end of life expectancy and a replacement plan should be adopted.
32. CGS (SBS) Replace original Classroom unit ventilators. The original classroom HVAC equipment is reaching the end of life expectancy and a replacement plan should be adopted.
33. CGS/GHR/Admin Portable Generator/ATS installation. The town is considering use of a portable generator that could be transported from between buildings to keep pipes from freezing, food from spoiling and other building issues if power were to be lost with sub-freezing temperatures. This project is for installation of the connections and safeguards necessary to accommodate this program.
34. GHR (SBS) Replace original Classroom unit ventilators. The original classroom HVAC equipment is reaching the end of life expectancy and a replacement plan should be adopted.
35. DIST (SBS) Occupancy Sensors & Exhaust Hood Timers. The current corridor wiring does not provide any night lights and therefore the lights are on much of the day and evening. Wiring in two fixtures per corridor as standing lights would allow the balance of the lights to be controlled based on occupancy. Install digital timers for kitchen hood exhaust systems. The kitchen hood exhaust and makeup fan are manually activated and may have excessive run times.
36. CHS/CNH (SBS) VFD's & Occupancy controls for Auditorium, Stage, Band/Choral. These spaces are served by constant volume AHU's. VFD's would allow the fan motors to adjust to seasonal and/or temperature requirements. The occupancy sensors would allow the spaces to set back when empty. More sophisticated control strategies such as demand control ventilation, dual enthalpy economizer cycles, etc. would also be implemented.
37. CHS (SBS) Install individual control valves on perimeter radiation for Administration area. The administration area is served by an AHU that has two reheat coils serving approximately 8 different spaces. There is also perimeter heat that is uncontrolled. Installing control valves for the perimeter heat in each space would prevent the spaces from overheating.
38. CHS/CNH Lightning Protection. The high school, middle school, emergency generator and associated buildings have sustained damage from lightning and/or electrical surge events on a continuing basis. We have lost circuit boards in electronic devices in the school, and controls and circuit boards on the generator that serves the high school community shelter. These interruptions in service have been both costly and disruptive. The project includes a complete system of lightning protection in accordance with Underwriters Laboratories Inc., Lightning Protection Institute and the National Electrical Code. Air terminals, ground electrodes, conductors, connectors and fasteners used to ground to water system, power ground, plumbing/heating systems, AC units, antennas and all equipment per code standards, will be installed for the purpose of preventing or lessening the damage due to lightning strikes.

## Capital Improvement Projects (CIP) FY2020 - FY2024

39. CHS/CNH Surge Protection. This project is related to the Lightning Protection project listed above. Although power surges can also occur from causes other than lightning, they can expose the schools to the same types of damage to physical plant and electronic devices.
40. GHR (SBS) Optimize combustion air fan control. The current sequence calls for the combustion air fan to run anytime the outside air temperature is below 50 degree regardless of whether a boiler is firing or not. (SBS) Upgrade Abandoned FTR control to DDC. The local controls for the FTR have been abandoned in place and are controlled manually. This is causing the spaces served to be over/under heated and is time consuming for the building operators to respond to complaints.  
  
(SBS) Install Occupancy Control and optimize control sequences on Café supply & exhaust fans. The Café is served by a constant volume AHU, lights are controlled by conventional wall switches and the space is at occupied set point whether the space is actually being utilized or not. The installation of occupancy sensors would allow the lights and HVAC system to be controlled.
41. CNH (SBS) Install VFD's and Occupancy controls & optimize control sequences for AHU's serving gym, CAD lab, wood shop, computer lab, LGI and café. These spaces are served by constant volume AHU's. Variable frequency drives would allow the fan motors to adjust to seasonal and/or temperature requirements. The occupancy sensors would allow the spaces to set back when empty. More sophisticated control strategies such as demand control ventilation, dual enthalpy economizer cycles, etc. would also be implemented.
42. CHS/CNH (SBS) Install occupancy control for Classroom unit ventilators. The classrooms currently have an occupancy sensor for lighting only. Changing the sensors to a type that can integrate with the lighting and HVAC will allow the spaces to setback at any time.
43. CNH (SBS) Install 2 way DDC control valves on classroom unit ventilators and misc. AHU's/Terminal units and install VFD's on Hot Water (HW) pumps. The existing Unit Ventilators have 3-way control valves which allow constant flow to the pumping system. Replacing these valves with 2-way control valves and installing VFD's on the HW pumps will realize energy savings due to reduced pump speeds.
44. GHR (SBS) Upgrade existing controls in classrooms. The 3<sup>rd</sup> and 4<sup>th</sup> grade classrooms are locally controlled with limited scheduling capability. Converting to DDC will allow for improved control strategies including unoccupied modes based on motion sensors. The 5<sup>th</sup> grade classrooms will be in unoccupied mode based on motion sensors and will allow for the Outside Air (OT) damper on the unit ventilators to open/close when asked.
45. CHS (SBS) Add dedicated heat/make-up air unit for the kitchen. The make-up air and heat source for the kitchen hood exhaust is from the cafeteria. This is only possible if the doors between the server and the cafeteria are open and the kitchen exhaust fan is operating. If these two conditions are not met, then the kitchen has no heat source. It has been reported that water pipes in the kitchen have previously frozen.
46. GHR (SBS) Install hydronic perimeter heating system for the Media Center. The original perimeter heating system for the media center was replaced with electric resistance heating elements. Converting to hydronic and connecting to the boiler plant would allow the space to be heated by a cheaper fuel.
47. DIST (SBS) Boiler Replacement. Multi-year boiler replacement determined by year manufactured and boiler condition. All new boilers will include hot water bypass (internal or external). All with have high efficiency burners. Ten Boilers in total.
48. DIST Underground Fuel Storage Tank (UST) Replacement. UST were installed at each school site in 1988, the tanks must be replaced no later than 30 years after installation. This proposal is to hire a design professional to prepare Bid Specifications and Construction Documents. Actual removal replacement to occur is summer of 2016 or 2017.

## Capital Improvement Projects (CIP) FY2020 - FY2024

49. CHS Vinyl Composition Tile (VCT) Floor replacement/asbestos abatement.  
The cafeteria VCT and that of 13 classrooms was installed over asbestos-containing tile and/or mastic in year 2000. Cafeteria VCT is rapidly failing due to adhesion and blistering issues relating to the underlying Vinyl Asbestos Tile (VAT). Some blistering has appeared on classroom VCT. Replacement of all of these areas at the same time makes sense because of the need for an Asbestos Abatement Project to replace the VCT. This project is eligible for school construction grant.

### Larger Projects for Long Term Planning and Bonding

50. Dist Security Upgrades.  
Security of the schools is an ongoing effort that the district has been working with local and state agencies to provide the safest learning environment we can. The district has taken advantage of the State grant program to offset cost to the district. To continue to provide a safe learning environment we are looking to fund the following upgrades.
- Additional access controls upgrades district wide both exterior and interior doors. This would give better monitoring of visitors and allow the Police department the ability to view the door cameras along with remote access if needed.
  - Window safety film installed district wide on all exterior windows. This film stops access through windows even after being shot or hit with an object.
  - Inclosing the gym/café at CGS to allow the area to be put in lockdown. Currently the back of the area is open to the hall allowing anyone in the hall access to the gym.  
Replacement of the fire alarm and burglar alarm panels with one panel that also acts as a lockdown and emergency PA system.
51. CGS Parking Lot Replacement  
The current parking lots are over 17 years old and beyond repair due to large cracks and sections were the asphalt is breaking apart. This project would remove the old asphalt, curbing, and storm drains and will include the upper and lower lots as well as the front turn around. The pricing may be lower if we can do the project with one of the Towns road projects
52. GHR Parking Lot Replacement  
The current parking lots are over 17 years old and beyond repair due to large cracks and sections were the asphalt is breaking apart. This project would remove the old asphalt, curbing, and storm drains and will include the upper and lower lots. The pricing may be lower if we can do the project with one of the Towns road projects.
53. CHS/GHR Roof replacement  
This project would replace the current flat roof over the high school and complex. The roof was installed in 1999 during the renovation and has been leaking the last couple years. At GHR it would replace the roof over the 5<sup>th</sup> grade wing that was installed in 1999. This project is reimbursable from the state.
54. DIST Window Replacement.  
Replace windows at all four schools with energy efficient windows. This is an estimated cost do to the complexity of the project it would have to be engineered.
55. GHR Roof Replacement  
The roof was installed in 2011 and would reach the 20 year mark in 2031. This project would include the original section of GHR and GYM. The 5<sup>th</sup> grade wing is scheduled to be replaced in 2020.

## Capital Improvement Projects (CIP) FY2020 - FY2024

- 56. CNH      Roof Replacement  
The roof was installed in 2011 and would reach the 20 year mark in 2031. This project would include all of the CNH roof up to the complex.
  
- 57. CGS      Roof Replacement  
The roof was installed in 2011 and would reach the 20 year mark in 2031. This project would cover the complete roof at CGS.