

Hurlbutt Elementary School



Figure 1: Entrance at Center House

Hurlbutt Elementary School was originally constructed in 1950. Today, this portion is known as the East House. Next came South House which was a separate building constructed not long after by 1952. Apparently, originally Hurlbutt Elementary School was a 3-story building that burned down in 1962. North House likely was built in the 1960s after that. This building is the only two story portion of the school. In the mid-1990s the core building was constructed with its connecting corridors so all the buildings became one, creating the Hurlbutt that we see today. The building now is approximately 94,498 net square (Including the Senior Center). Hurlbutt Elementary School is home to Prekindergarten (Early learning Center) through 2nd grade with 458 currently enrolled students and 81 staff members.

Site

Hurlbutt Elementary School is located at 9 School Road on the 117-acre school campus site. It is located right off of route 157 approximately across the street from Weston Village and adjacent to the school bus storage center. The school parcel is also adjacent to the public Library, the Government Center, Police Department, Weston EMS and Northfield Congregational Church.

The school main entrance is located at the west and served by a parking lot with a dedicated vehicle drop off. An area for visitor parking is located close to the entry. This parking lot also serves the Senior Center and is used as a service drop off area to the South House



Figure 2: Hurlbutt Site from google maps

DRAFT 11.03.17

kitchen. Buses use the loop to the northeast. There is also a parking area close to the street for faculty. An additional parking area is located to the south and accessed through the Government Center/Library. This area is for faculty parking and is gated off during school hours. Four playgrounds are dispersed throughout the Hurlbutt area of the property two at east house, one at south house and one at north house. Two hardscape play areas are located at North House, outside of the gymnasium and at the courtyard side of south house. All but North House are in good condition. The North House playscape and hardscape are both in need of replacement. The existing chain-link fence along School road is not in great condition and a taller more secure barrier would be beneficial to provide a safer secure play area. The main courtyard consists of an open grass zone with various seating areas, trees, the South House courtyard and a small garden. Five baseball fields define the remainder of the site.

Both concrete and bituminous pathways allow for pedestrian connections from all of the houses around the site. The entire front parking lot has significant cracks throughout the asphalt and should be completely repaved. The teacher parking lot near North House is currently not paved nor does it have any connecting sidewalks to the existing sidewalks and does not meet handicap accessibility. The pathways are in good condition. The surrounding fields appear to be compacted and should be addressed as spring arrives.



Figure 3: Typical parking lot cracks at front

Architecture

Overall, Hurlbutt Elementary School is in good condition. The building has been very well maintained and updated throughout its lifetime. The school is somewhat sprawling and organized into houses, south, east, north and central. The majority of the plan consists of double loaded corridors with some single at connection points. One enters the Center House where the administration spaces, nurse, art, restrooms and the Media Center are located. The Media Center is central and faces the open

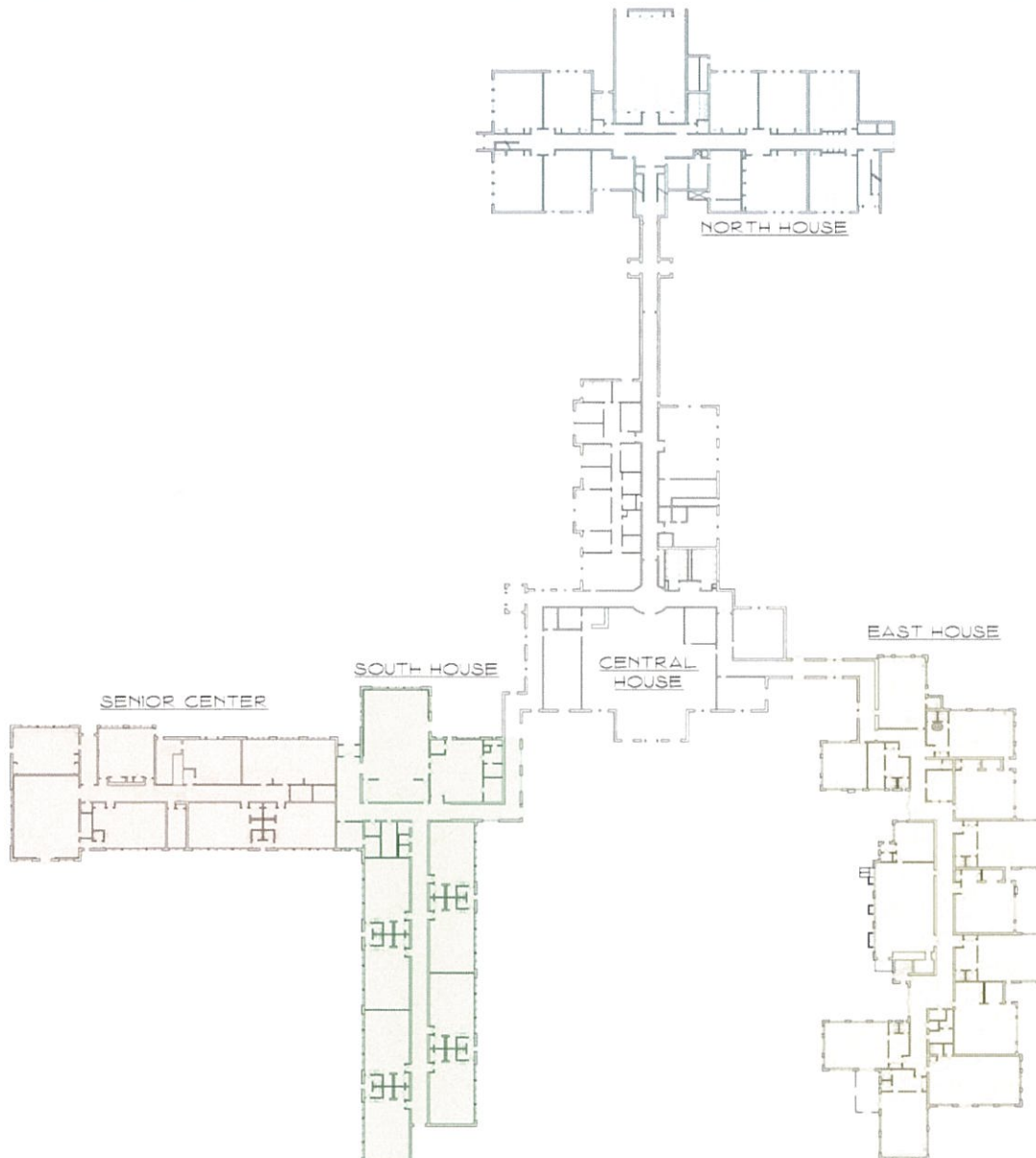


Figure 4: Hurlbutt Floor Plan depicting Houses

courtyard between East House to the East and South House to the West. North is remotely connected to Center House by a long corridor. North House is a simple plan with a double loaded corridor. A small gymnasium is located on a half a level below the main level only accessed by two stairways with a lift. The remainder of the floor plan consists of typical classrooms. Four stairways and an elevator allow for vertical circulation between the two floors. East house consists of larger rooms organized in irregular layouts, jogging the building in and out. These classrooms contain individual restrooms and

DRAFT 11.03.17

storage alcoves. A cafeteria and small kitchen face the courtyard. Next, South house is organized in a L-shaped plan. The most remote leg of the plan furthest west is sectioned off from the school and is home to the towns senior center. The remainder of the plan consist of 8 classrooms and a cafeteria with a stage and the school's main kitchen. The classrooms are a standard size and there are 2 individual toilet rooms located off of a shared vestibule between every two classrooms. Each house has its own boiler/mechanical/electrical rooms. This building although sprawling appears to be well organized and functions well for the school community.

Interior



Figure 4: Center House hallway

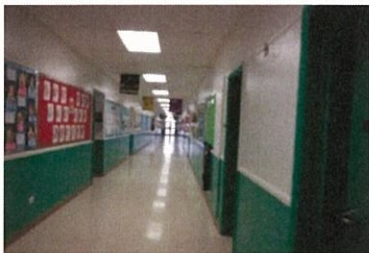


Figure 5: East House hallway



Figure 6: South House hallway

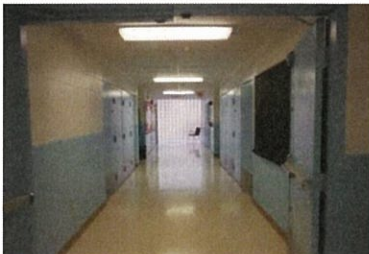


Figure 7: North House hallway

baseboards are in fair condition with some areas beginning to wear. The sheet flooring in the North House gymnasium looks fair although it was indicated that its beginning to bubble. Overall the interior walls, floor and ceiling are in good condition.

The interior of the building is well maintained based on the existing conditions and existing systems. A visual inspection of the walls, floor and ceiling were reviewed during the building walkthrough. The interior walls are a variety of concrete masonry units or block (CMU), plaster and sheetrock. Each House has its 'own interior identity. Paint color begins to designate each house making it easy for children to find their way around the school. Center House consists of painted white 8x8 concrete block. East House appears to consist mostly of plaster. The lower portion of interior walls are painted yellow. However, the cafeteria is painted with blue accents. South House too is plaster but with green accent paint. North House consists mostly of standard concrete block interior walls. It was noted in the basement along the stair the paint is significantly peeling and water infiltration is present. There were also some cracks noted in the CMU of the gymnasium. A few areas throughout the entire facility could use some touch up paint but most appear to be in reasonable condition. Ceramic tile at the toilet rooms are in fairly good condition.

The majority of the ceilings are acoustical ceiling tiles. Some are 2x2 and some are 2x4. They all appear to be in fair condition. However South House cafeteria has a spline ceiling and some tiles are missing leaving glue dabs exposed.

The majority of the flooring throughout the facility consist of 12x12 VCT tiles. Most appear to be in good condition with some areas of cracking. Most notably the tiles in the South House cafeteria are bubbling and therefore appear to have problems adhering to the slab. The kitchen in East House has 9x9 tiles which usually indicate asbestos containing materials. The quarry tile in the South House kitchen appear to be in good shape. The rubber

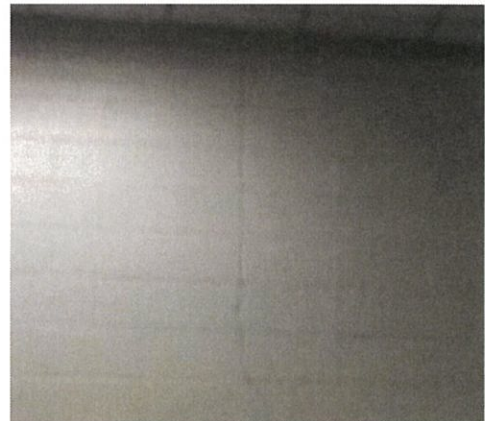


Figure 8: Crack at east wall of gym

DRAFT 11.03.17

The facility consists of a variety of doors, frames and hardware due to the different ages of all the portions of the school. Most doors are wood with a variety of glazing opening within the leaf. Some are painted while others are not. Some of the painted doors could use a fresh coat of paint. Most hardware has been upgraded, specifically door levers in order to meet code. However, there are still some doors still have knobs that require grasping and twisting. These should be altered as the others have. Most frames are hollow metal frames. Overall they are in good condition with a general need of repainting frames, specifically in East and South Houses. In North House some frames have begun to pull away from the CMU and should be caulked.



Figure 9: Door frame at North House



Figure 10: Casework in North House

Most casework and built-in shelving throughout the school is dated. Most notably the dated casework is in the East House as they appear to be original. South House has been updated however the plumbing interferes with the knee space clearance. The Center House has newer plastic laminate casework and those appear to be in good condition. The casework in North House is not quite as dated but some are in tough shape and they do not have a knee space at the sinks and drinking fountains. Most casework throughout does not meet the required height or have the required knee spaces. Most of the sinks within the casework are also not accessible.

Many ADA accessibility issues were noted at this facility. This is a common occurrence given the age of the building and its renovations. These items should be included in the long term capital plan. All of the required grab bars do not exist in any of the handicap areas. Most of the single toilet rooms do not have the required clearances. The toilet rooms within classrooms are noncompliant due to lacking the required room dimensions along with lacking the required grab bars. As previously mentioned in addition to the toilet rooms other ADA noncompliance items with the casework, sinks and door hardware. Some doors also do not have the required push pull clearances.



Figure 11: Casework at East House

The interior building analysis is a visual surveillance of the physical materials and architectural components of the school. As with most schools of this age ADA issues typically exist and material improvements are needed. Given all of these circumstances overall the interior is in good condition.

Exterior



Figure 12: North House masonry conditions

As previously discussed all of the houses were built at a different time and therefore have a different construction and a varying age or need. One consistent component to the exterior is the material, all are brick. The brick walls of the school are generally in good condition, with areas of settling and spalling. The original building is constructed with brick “veneer” and concrete masonry unit interior or plaster interior. The energy efficiency of the original construction is very low, and typical in the 1950s (“pre energy crisis”), and not one that is easily corrected. The 1997 addition, Center House has a CMU interior and likely includes insulation and air space which improves the energy efficiency.

Overall, the mortar is in fair condition with limited areas in need of repointing. Certain areas are in need of more attention. For instance, the base of some of the facades and areas around gutters have mildew and some spalling is present. Most notably this occurs at North House. These areas should be cleaned, repointed and sealed to prevent any further damage. Other areas such as the chimneys may need additional repointing. Some of the exposed foundation walls parging is flaking and may need to be repaired. The through wall base flashing on the east side of North House is deteriorating. This type of repair is rather costly, but this could be allowing water to enter the cavity. It may be the culprit of the water infiltration in the basement elevator machine room below. North House seems to have masonry in most need. Center, East and South have limited areas in need of maintenance. Overall the masonry appears to be in good condition.



Figure 13: Through wall flashing condition at North House



Figure 14: Window at lower level of North House

When evaluating the energy efficiency of a building, it is known that nearly 25–40% of all heat energy is lost through windows. The windows were replaced when the addition was constructed with double-glazed aluminum frame windows. They appear to be in good condition. Caulk is beginning to fail and in need of replacement. Many door frames, mullions and thresholds are beginning to show signs of rust. The ballast roof is in great shape. The EPDM roof also appears in good shape. The wood fascia throughout are in fair condition with some areas in need of more attention. They should be scraped, primed and painted to continue their lifespan.

Plumbing

Overall, the plumbing systems for the school are in good condition.

The Domestic cold water is provided by water supply wells that supply water to multiple buildings on the property. A 1" water meter on a 2" water line was observed in the lower level of North House. The location of the water service for the other buildings was not observed.

Domestic hot water is produced by separate water heater plants for each building. Some of the hot water piping was not insulated at the time of the visit. This pipe should be insulated to provide maximum efficiency of the water heating system.

The Central House hot water is provided by an oil-fired water heater having an input rating of 199,000 BTUH and a storage volume of 86 gallons each. The system is approximately 20 years old. The system is at the end of its average life expectancy of approximately 15-20 years. The water heating system for Central House should be replaced.

The boiler room in the basement of East House contains 2 domestic hot water heaters. One of the water heaters is a gas-fired water heater having an input rating of 199,900 BTUH and a storage volume of 76 gallons. The system is approximately 14 years old. The system should have an average life expectancy of approximately 15-20 years and remaining life expectancy it about 1-6 years. The boiler room of East House also contained a Bosch tankless water heater that was not plugged in and is assumed to be out of service. This water heater is connected to a 119-gallon storage tank. On the main level of East House, in the kitchen area, is an abandoned water heater that says "LEAKING - OFF LINE" on the outside of it. The gas water heater should be replaced within the next 5 years. The tankless water heater should be checked for serviceability and put back into working order or should be removed. The abandoned water heater in the kitchen area should be removed.



The hot water plant for the Senior Center and the South House is located in the lower level of the Senior Center in the boiler room. There is a gas-fired Bosch tankless water heater rated at 199,000 BTUH and a gas-fired water heater having an input rating of 85,000 BTUH and a storage volume of 100 gallons. The tankless water heater is approximately 7 years old and damaged. The system should have an average life expectancy of approximately 15-20 years and remaining life expectancy it about 8-13 years, however tank needs to be replaced or repaired. The tank style water heater appeared to be taken out of service and is now being used just as a storage tank. The piping in this plant should be tracked and confirm what is being fed by each water heater. The tankless water heater was set to provide water at 140 degrees and no mixing valve was observed. Water delivered at 140 degrees can cause scalding. There were also 3 separate recirculation pumps that were inline on the same piping. All the pumps were running, so the reason for so many pumps should be investigated.

Hot water for the North House is provided by water heaters located in the Boiler Room in the lower level. There is a gas-fired Bosch tankless water heater rated at 199,000 BTUH. The tankless water heater is approximately 7 years old. The system should have an average life expectancy of approximately 15-20 years and remaining life expectancy it about 8-13 years. An older electric Ariston

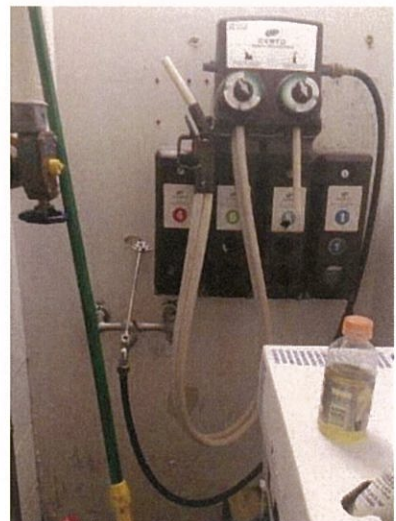
DRAFT 11.03.17

water heater was not plugged in and is assumed to be used as a buffer tank.

To maximize service life for all the water heaters, they should be regularly serviced per the manufacturer's maintenance recommendations including, but not limited to, draining and flushing, testing relief valve, and inspecting/replacing anode. Refer to manufacturer's O&M literature.

Plumbing fixtures appear good condition. The urinals have manual flushometers. The water closets are a combination of floor mounted tank type and wall mounted with manual flushometers, as well as some floor mount tank type water closets scattered throughout the building. The lavatories are a combination of wall hung and drop-in style with metered faucets. Classroom sinks are stainless steel with single lever faucets or wrist blade handles depending on the location. Some of the classroom sinks have integral bubblers. Some classrooms have an older style epoxy coated cast iron sink. The sinks in the art classrooms have solids interceptors on their drainage piping. The interceptors should be checked periodically and cleared of any solids that have been collected in them. Electric water coolers are provided throughout the building. They are various styles from older style white china drinking fountains to newer stainless steel water coolers with an integral bottle filler.

While the overall condition of the fixtures is good, some of the issues noted during the visit are noted below. One of the water closets appears to have had the vacuum breaker portion of the flush valve cut (See photo to right). The manufacturer should be consulted to figure out the location of the "critical line" (typically at least 6" long) for the particular flush valve. If the flush valve has been cut shorter than this, it can create a backflow condition that would allow for contamination of the water supply. Any lavatory or sink that is designed as and ADA accessible fixture needs to have insulation on the piping in the knee space (See photo below). The piping may also need to be reconfigured on additional fixtures. to provide the proper clearances (See photo below). A janitor's sink was observed with hoses connected to the faucet from a chemical feed system without a vacuum breaker to prevent back siphoning in the event of a drop in building water pressure. The condition could result in contamination the domestic water system creating a safety hazard. Recommend installing a vacuum breaker as soon as possible (See photo below).



DRAFT 11.03.17

The sanitary for the school is handled by means of a septic tank. None of the fixtures in the kitchens appeared to be connected to an automatic grease recovery unit or grease interceptor. The local health department should be contacted to see if this is a requirement for their district. There is a sump pump located in the basement of the East House. The check valve for the discharge of the pump is not installed correctly. This should be repaired in order to prevent and leaks. There was also another sump pump located in the basement of the North House, but it was inaccessible due to boxes stored in the area. No other sanitary or storm piping issues were observed during the visit. If there are any areas with known issues, it is recommended that the pipes in that area get scoped with a camera to see if the root of the issue can be determined.



Fire Protection

The building is not fully sprinklered. There are currently limited area sprinklers fed from the existing domestic water main. There is a backflow preventer, isolation valve and flow switch on the supply located in the basement of the North House that comes off of the domestic water piping system. The areas sprinklered of this system is only the basement of the North House. Overall, the limited area sprinkler system for the school appears to be in fair condition.

If the building is to be fully sprinklered, a new fire main would have to be run from the site fire piping that is connected to the fire water storage tank and fire pump. It would more than likely be more cost effective to provide a new storage tank and pump due to the length of the run required to connect to the existing.

Mechanical

General

The facility consists of the Central Area, which houses the Administrative Offices, Learning Resource Center, Art Room and Nurse's Office; three academic wings (North, East and South); and Senior Center, which is connected to the South Wing. The facility is served by multiple Boiler Plants. The Central Area and each academic wing is served by its own Steam or Hot Water Boiler System, Underground Fuel Oil Storage Tank and Gas Service.

Each Boiler Room is served by a dedicated Underground Fuel Oil Storage Tank (UST). The history of the USTs is as follows.

The 6000 gallon USTs serving the North and East Wings were each replaced in 2015 and should not require replacement again for at least 18 years.

The 4000 gallon UST serving the Central Area was installed in 1998, was last tested in 2009, and is due for replacement in 2018.

The 6000 gallon UST serving the South Wing was installed in 1988, was last tested in 2009, and is due for replacement in 2018.



DRAFT 11.03.17

All USTs would have been registered with the State at the time of installation and the Town's registration paperwork should be reviewed for date of installation and warranty and to determine the requirements for tank testing, inspection and replacement.



Chimney height for two of the four Boiler Rooms appears to be inadequate. Chimney height for the Central Area and North Wing Boiler Rooms appears to be code compliant but may be inadequate to prevent introduction of flue gasses into the building. The Central Area chimney is below the height of the outside air intakes, making it likely that flue gasses will be drawn into the air intakes under certain wind conditions. The North Wing chimney does not appear to be high enough to prevent introduction of flue gasses under all conditions, especially if new rooftop equipment or air intakes are provided as part of future HVAC upgrades. Consideration should be given to

increasing the height of the two chimneys. All chimneys should be cleaned and inspected by a company specializing in chimney installation and maintenance.

The condition of the facility's Boiler Rooms is noted under the individual building area descriptions below. The conditions are based on a visual inspection of the exterior of Boilers and components. Since Boiler life can be affected by poor water quality and inconsistent maintenance, it is recommended that the boiler water and feedwater be periodically tested and the boilers be regularly inspected and maintained to maximize service life.

The older Steam Piping and Perimeter Radiation installed as part of the original 1950 construction has likely reached the end its service life expectancy. Facility Steam and Hot Water Heating Piping and Perimeter Radiation should be inspected/tested for internal condition and replaced as required. Piping and Perimeter Radiation would likely be replaced as part of a major building renovation.

Corridors of the three academic wings lack proper ventilation as required by the Building Code. Corridors ventilation should be provided as part of any future HVAC improvements.

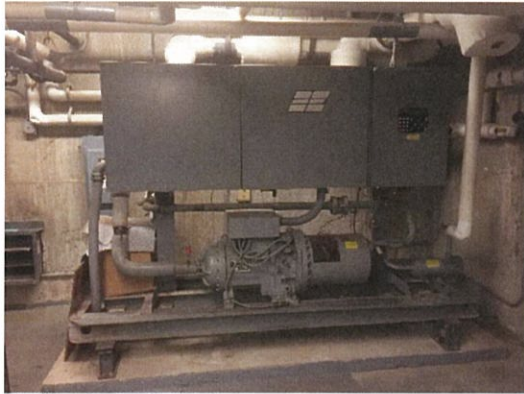


Except for the Central Area renovated in 2000, Automatic Temperature Control is provided by a pneumatic control system. Controls Compressors are located in the Boiler rooms. The compressors appear to be in good condition, but the pneumatic controls are obsolete and unable to optimize building efficiency. It is recommended that the pneumatic controls be replaced with electric/electronic controls and that the systems be integrated into the existing Alerton Building Management System (BMS) currently serving the Central Area.

DRAFT 11.03.17

Central House

Heating for the Central Area is provided by two Smith model 19-W-6 Boilers with Power-Flame dual fuel burners capable of firing #2 Fuel Oil or Natural Gas. The Boilers are believed to have been installed as part of the 1997 renovation and appear to have been well maintained, likely having a minimum of 10 years useful life remaining. Hot Water Pumps appear to be in serviceable condition but are showing some surface rust. Boiler Room floor was dry at the time of our visit however, there are signs of previous leakage including the noted rusting of the pumps. Two combustion air openings have been provided which meet the requirements of the Mechanical Code.



Chilled Water for the Air Conditioning of the Central Wing is provided by a 50 Ton Chiller located in the basement Mechanical Room with an Air-Cooled Condenser located outside on grade. The system supplies Chilled Water to Air Handling Units located in the attic mechanical space. The Chiller is designed for use with R-22 refrigerant which is being phased out and is no longer manufactured for use in the U.S. due to its atmospheric ozone depletion potential. The R-22 refrigerant will continue to be available for several years but will continue to rise in cost as existing stores are depleted. There are replacement refrigerants that may be compatible with the existing chiller but given its age, consideration should be given to eventual replacement with a high efficiency unit designed for use with an environmentally safe refrigerant.

The Mechanical Room housing the Chiller is furnished with a refrigerant leak detection system. The system should be tested for proper operation and repaired or replaced as required. No provisions were observed for emergency ventilation of the mechanical room. An emergency ventilation system is required by the Mechanical Code to ventilate the space in the event of a refrigerant leak.

The HVAC for the Central Area is provided by several Air Handling Units located in the attic mechanical space which are supplied with Hot and Chilled Water from a four pipe hydronic system. The units are arranged to provide the necessary zoning for the various occupancies and exterior exposures. The Air Handling Units were installed as part of the 2000 renovations and are in serviceable condition with 15 years or more of useful life remaining. Beyond normal preventative maintenance and filter replacement, additional maintenance such as replacement of fan motor, drive, bearings and controls components may be required to extend the useful life of the units.

It was reported by the staff that the new Conference Room has poor temperature control. Possible system modifications will be explored to improve space comfort.

It is recommended that the duct systems be cleaned and the HVAC equipment and controls be recommissioned to ensure proper sequencing of the controls and operating efficiency.

DRAFT 11.03.17

East House



The East Wing is served by two Smith model 28HE-S-08 Steam Boilers with Power-Flame dual fuel burners capable of firing #2 Fuel Oil or Natural Gas. The Boiler Room is neat and well organized and the Boilers, Boiler Fed Unit and related piping and equipment in the Boiler Room appear to be well maintained and in good condition, likely having a remaining useful life of 10 years or more. Combustion air is provided by a louver which is ducted down to within 12 inches of the floor. A second louver appears to have been closed off and the provisions for combustion air do not appear to be compliant with the code.

Steam is supplied to the East Wing perimeter radiation and other terminal heating equipment by a two-pipe steam distribution system. Condensate is return to the Boiler Room via a gravity condensate return system. Steam Traps should be serviced regularly to ensure proper system operation and efficiency.

Ventilation of the Classrooms is through operable windows which do not appear to provide the necessary 4 percent of floor area for natural ventilation as required by the Mechanical Code. There is no central air distribution system. At least two classrooms have been provided with window type Air Conditioners.

The East Wing Kitchen is served by a Grease Exhaust Hood equipped with a chemical extinguishing system. The Hood and extinguishing system appear to be in good condition however, cooking that generates grease laden vapors is no longer conducted at the facility and the high quantity of air exhausted by the system is now excessive, contributing to greater energy use.

South House



Heating for the West Wing and Senior Center is provided by two Smith model 28HE-S-08 Steam Boilers with Power-Flame dual fuel burners capable of firing #2 Fuel Oil or Natural Gas. The Boiler Room is neat and well organized and the Boilers appear to be well maintained, in good condition, likely having a remaining useful life of 10 years or more. Boiler Room piping and equipment appears to be in mostly good condition except for the Boiler Feed Unit which is badly corroded from leakage and appears to be at the end of its useful life. The leak appears to have been repaired and the life of the unit may be extended by performing maintenance including cleaning and painting.

Steam is supplied to West Wing perimeter radiation and other terminal heating equipment by a two-pipe steam distribution system. Condensate is return to the Boiler Room via a gravity condensate return system. Steam Traps should be serviced regularly to ensure proper system operation and efficiency.

Ventilation of the Classrooms is provided by operable windows and a central exhaust system. The

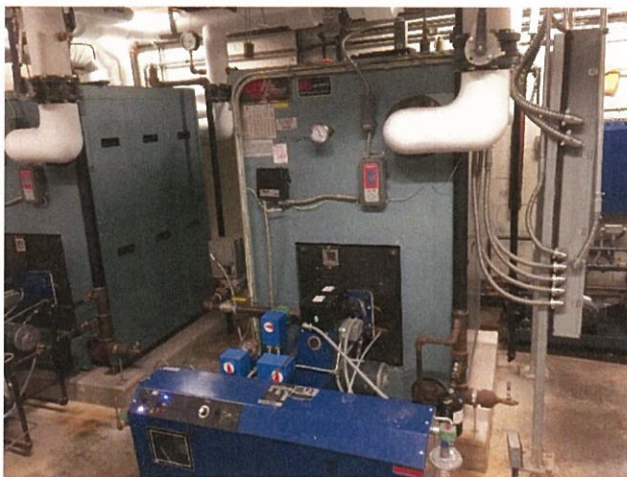
DRAFT 11.03.17

operable windows do not appear to provide the necessary 4 percent of floor area for natural ventilation as required by the Mechanical Code. There is no central air distribution or air conditioning system serving the South Wing.

There is no Toilet Exhaust in two South Wing Toilet Rooms that were checked. Recommend that all Toilet Rooms be provided with proper ventilation for compliance with the Mechanical Code.

The South Wing Kitchen is served by a Grease Exhaust Hood equipped with a chemical extinguishing system. The Hood and extinguishing system appear to be in good condition however, cooking that generates grease laden vapors is no longer conducted at the facility and the high quantity of air exhausted by the system is now excessive, contributing to greater energy use.

North House



Heating for the North Wing is provided by two Smith model 28HE-W-05 Water Boilers with Power-Flame dual fuel burners capable of firing #2 Fuel Oil or Natural Gas. The Boiler Room appears to have been renovated within the last 10 years. The Boilers, Hot Water Pumps and related piping and equipment in the Boiler Room appear to be well maintained and in good condition, likely having a remaining useful life of 15 to 20 years. Combustion air is provided by a door louver which appears to be adequately sized for the input of the boilers but is slightly damaged.

The Gymnasium of the North Wing is served by two Air Handling Units located in the lower level Mechanical Room. It appears that the units are arranged such that one unit provides heating and the other provides DX cooling/dehumidification. The Air Handling Units appear to have exceeded their useful life and the unit providing cooling/dehumidification is not currently operable. The mechanical room is not large enough for proper service access and it is recommended that replacement equipment be installed on the roof, or possibly on grade adjacent to the Gym. New HVAC equipment should be equipped with Energy Recovery and Demand Control Ventilation.



Heating and Ventilation the original Classrooms of the North Wing is provided by Unit Ventilators which appear to be at the end of their useful lives. Unit Ventilators generally do not meet the State's requirements for classroom noise levels so replacement equipment will likely be rooftop HVAC equipment.

DRAFT 11.03.17

A building addition to the North Wing has added four classrooms which are provided with heating and ventilation by an Air Handling Unit located in a basement Mechanical Room. The unit appears to be in serviceable condition with approximately 5 to 10 years of useful life remaining. It is recommended that the unit interior and ductwork be cleaned and the pneumatic controls be replaced with new DDC controls.



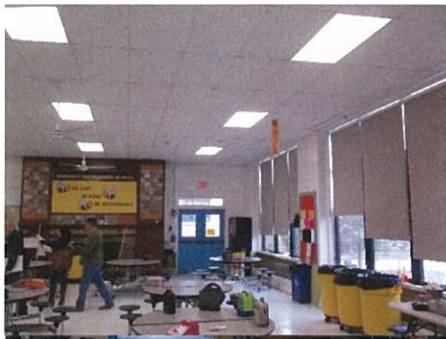
A 5 Ton Packaged Rooftop Air Conditioning Unit serves a portion of the North Wing. The unit appears to be approximately 25 years old and at the end of its useful life. Recommend planning for replacement of the unit.

Five classrooms have been provided with Ductless Split System Air Conditioning. The equipment is relatively new and appears to be in good condition but will become obsolete with the installation of central Air Conditioning equipment.



Electrical

Interior Lighting



The Central House existing luminaires are mostly made up of recessed 2'x2' and 2'x4' parabolic fluorescent fixtures with some incandescent track lights in the corridor outside of the Art room. The media center has pendant mounted direct/indirect fluorescent "bowl" fixtures and direct/indirect linear fluorescent fixtures in the center of the room. With recessed 2'x2' parabolic fluorescent fixtures on both sides. The Computer Lab had rows of pendant mounted indirect linear fluorescent fixtures. The lower level mechanical/electrical rooms have pendant mounted industrial fluorescent fixtures with wire guards while the corridor and stairwells leading to these rooms have surface and pendant

mounted "wraparound" fluorescent fixtures. The lights in this building are controlled by wall switches at the door(s), except the individual offices which had ceiling mounted occupancy sensors in conjunction with a wall switch. The East House existing luminaires are made up of recessed lensed fluorescent fixtures and surfaced mounted "wraparound" fluorescent fixtures. The lower level Boiler room and Storage/Electrical room have surface and pendant mounted industrial fluorescent fixtures with wire guards. All lighting in this building is controlled by wall mounted switches door(s), no occupancy sensors were observed. The South House existing luminaires are mostly made up of recessed lensed fluorescent fixtures, except in the Kitchen & Cafeteria where they are surface



DRAFT 11.03.17

mounted fluorescent fixtures. The Senior Center wing existing luminaires are recessed lensed and parabolic fluorescent fixtures. The lights are controlled by both ceiling mounted occupancy sensor(s) and wall mounted switch(s). The North House existing luminaires are a mix of surface mounted lensed 2'x4' fluorescent fixtures, recessed 2'x4' parabolic fluorescent fixtures and surface mounted "wraparound" fluorescent fixtures except the Gym. The Gymnasium fixtures are surface mounted linear fluorescent high bay fixtures with wire guards. All lighting in this building is controlled by wall mounted switches door(s), no occupancy sensors were observed.

The light fixtures in the Core Building are the newest and are in good condition along with the parabolic fixtures in the other buildings. Some of the surface mounted "wraparound" fixtures are in good condition, while a large number are at or beyond their useful life. Most of the surface mounted and recessed lensed fluorescent fixtures are also at or beyond their useful life. These fixtures should be replaced with new efficient LED fixtures. Additional energy savings could be had by installing occupancy sensors all classrooms that do not have them to turn lights off automatically when the rooms are not in use. Also, any classroom that has new LED fixtures installed should have a day light sensor installed for additional control of the fixtures along the windows.

Exterior Lighting



The existing luminaires throughout the exterior consist of new building mounted post top LED fixtures, wall mounted full cutoff LED sconce fixtures, surface mounted canopy light fixtures and pole mounted post top and "shoe box" LED fixtures. The pole mounted "shoe box" fixtures are installed only in the parking area of the senior center on new matching square poles. The building mounted and pole mounted post top LED fixtures are mounted to the existing pole and building mounted arms. The fixtures are all in good condition and should not need to be replaced or upgraded. The lights were not on at the time of the walk through since it was late morning early afternoon, so their operation could not be verified. Without a

photometric report with all the existing normal & emergency exterior fixtures, we cannot determine if the code required light levels are met. Also, it does not appear that all exterior egress doors have an emergency fixture and/or second normal fixture, so that failure of a fixture will not leave the area without light.



Exit signs & Emergency Lighting



There are existing emergency lights throughout the buildings, we are not sure the design meets the code and should be reviewed with the AHJ. There are old central DC battery systems in multiple buildings with “dead light” incandescent fixtures which we were told are no longer operational. These systems should be removed to avoid confusion on whether these lights or this system is not working. There are self-contained twin head emergency light fixtures in some of the utility areas, these fixtures appear to be in good operating condition. We were not able to test all fixtures at the time of our walk through. The

school’s electrical distribution is backed up by a diesel generator which is also used to provide emergency lighting throughout. The current code does not allow a single transfer switch to serve both emergency and standby loads from the same switch. The standby loads (ie: HVAC equipment, kitchen refrigeration, misc. power, etc.) should be moved to a second transfer switch. Another concern is the requirement for failure of a single fixture, lamp and/or source will not leave an area in darkness. The current generator distribution is designed where a single point of failure could leave an area, and/or a building without any lighting. Also, it does not appear the generator has the same load capacity as the normal service, providing the potential for the generator to overload on startup and not start and then have no emergency lighting in any of the buildings. This should be reviewed with the AHJ.



There are existing exit signs located throughout the facility, there are signs with thermoplastic housings and LED lamps. These signs appear to be in good condition and most were operating properly in the public spaces. There are also many non-illuminated exit signs, mostly located in classrooms with exterior egress doors. These signs do not meet the current code, and we recommend they be replaced with new illuminated LED signs.

Power



The existing electrical service originates from a pad mounted utility transformer located to the east side of the Central House. From the utility transformer, the secondary feeder runs underground to a 1200 amp, 480Y/277V – 3 phase service rated switch. The service switch intern feeds a generator transfer switch, we could not determine the size of the transfer switch but assume it is 1200 amps. The transfer switch feeds a distribution panel “MDP-1”, this panel feeds the four houses (Central, North, East & South/Senior Center) via a 150 KVA transformer located in each house. Also in this room is a 265 KW diesel generator and day tank that feeds the standby side of the transfer switch.

DRAFT 11.03.17

Panel “MDP-1” feeds a 150 KVA transformer, which intern feeds panel “MDP-2”. This is the 208Y/120V – 3 phase distribution for the Central house. There are two additional panels in this room along with some mechanical controls.

The other three houses are fed from a 200 amp 3 pole circuit breaker in panel “MDP-1” to heavy duty disconnect switch and 150 KVA transformer. The transformer then feeds the 208V distribution for that house. The distribution equipment throughout the houses is approximately 20 years old and in good condition. There are some local panels that are original to when the houses were first built and are at or near the end of their useful life and should be replaced. These panels are no longer manufactured and are difficult to get spare parts and new breakers for.

The existing power receptacles throughout the school are a mix of surface and recessed mounted duplex receptacles with metal cover plates. The majority of the receptacles appear to be in good operating condition. In all the Kindergarten and Pre-K classrooms, we recommend installing new tamperproof receptacles.

Voice / Data

The existing data outlets are located throughout in the classrooms and the Administration Offices. There is a network cabinet (Multicom-2000) in the main office with the Franklin Time System master clock, CD & DVD player. There are wall mounted phones in all the classrooms, along with a wall mounted clocks and speakers. There are speakers in all the hallways and utility rooms. Some of the classrooms in the East House have older wall mounted speakers that should be upgraded to a newer ceiling mounted speaker. There are desk phones in the Offices of Central House.



Fire Alarm



The existing fire alarm system is an addressable Edwards (EST3) system, with the control panel located in the main office. There are additional power panels and transponders located in the other houses. There are manual pull stations at the egress doors along with audio/visual devices throughout the complex. There appears to be a voice evacuation system, we could not determine if it is throughout the entire school or only in the assembly spaces. The devices throughout appear to be in good operating condition.

There is an existing security lock down system throughout the school, with emergency push button stations at the major entry/exit locations and blue strobe lights located both in the interior and exterior of the building. The classroom egress doors do not have push button stations.

There is an existing “area of rescue” system located in the main office that is serving the center back stair in the North House. There is no code required illuminated sign aimed at the door into the stairwell, we recommend a new illuminated sign be installed.

WESTON SCHOOLS - FACILITIES FEASIBILITY STUDY

HURLBUTT ELEMENTARY SCHOOL - FACILITY CONDITIONS ANALYSIS

TAG NO.	ASSESSMENT	SYSTEM/ CODE REFERENC E	RANKING				CORRECTIVE ACTION	ITEMIZED ESTIMATED COST	REMARKS
			4	3	2	1			
SITE CONDITIONS									
S1	Front bituminous parking area is approaching the end of its life. Cracks cover the area and the bituminous curbs are starting to fail.	Civil		3			Reclaim and repave.	\$ 192,000	
S2	Front concrete sidewalk has cracking	Civil		3			Replace portion of sidewalk	\$ 12,000	
S3	Timber guard rail is beginning to heave and fall over	Civil			2		Repair portion	\$ 15,000	
S4	Handrails at stair do not have the proper extensions	ADA		3			Weld on the extensions	\$ 2,000	
S5	Concrete sidewalk at South house has area of significant cracking				2		Reclaim and replace the effected area	\$ 8,000	
S6	Hillside erosion near South house hardscape/basketball area			3			Continue timber retaining wall	\$ 8,000	
S7	Proximity of North House playscape to School Rd is problematic - chain-link fence is dated & too low				2		Add a more appropriate physical barrier to the North House playground at school road	\$ 15,000	
S8	North House playground play equipment should be replaced				2		Provide new age appropriate playscape equipment	\$ 180,000	
S9	North House bituminous pavement is at the end of its lifecycle.				2		Reclaim and repave	\$ 54,000	
S10	Teacher parking is not paved & no accessible path to the building				2		Add base, bituminous pavement and ADA concrete walks to building	\$ 135,000	
SITE SUBTOTAL								\$	621,000

HURLBUTT ELEMENTARY SCHOOL - FACILITY CONDITIONS ANALYSIS						
TAG NO.	ASSESSMENT	SYSTEM/ CODE REFERENCE	RANKING	CORRECTIVE ACTION	ESTIMATED COST	REMARKS
EXTERIOR CONDITIONS						
A1	Brick is spalling or mortar is in need of repointing or mildew is growing over brick	General	3	Patch, repair, or replace brick and repoint and wash as necessary.	\$ 72,000	
A2	Doors and/or hardware are in need of replacement. Some exterior classroom doors still have knobs that require twisting.	4.13.9 (ADA) 404.2.6 (ANSI 117.1)	3	Replace door and hardware	\$ 14,000	
A3	Door thresholds or concrete pads have a greater than 1/2" transition to grade	ANSI 117 (ADA)	3	Provide ramp or re-grade asphalt/concrete to allow for 1/2" maximum vertical transition.	\$ 9,600	
A4	The paint on the fascia of East and South House is peeling and chipping		2	Scrape, prime and paint as required to maintain lifespan	\$ 30,000	
A5	Window sill and window caulk is beginning to crack		2	The lifespan of caulk is 5-10 years and these should be caulked to maintain the lifespan	\$ 45,000	
A6	North House lower level south facing windows are peeling		3	Scrape, prime and paint	\$ 6,000	
A7	Base through wall flashing at North House is deteriorating		2	Remove lower three courses of brick and flashing. Reinstall copper flashing and brick.	\$ 32,300	This could be part of the cause of leaks in basement
A8	Foundation parge coating is peeling		3	Wash and provide a parge coat to foundation wall	\$ 10,000	
A9	Roofs will be nearing the end of its useful life (based on warranty)		4	The roofs are due for replacement in approximately 2020+/-	\$ 1,565,000	Estimate includes asphalt and EPDM to match existing
EXTERIOR SUBTOTAL					\$	1,783,900

HURLBUTT ELEMENTARY SCHOOL - FACILITY CONDITIONS ANALYSIS

TAG NO.	ASSESSMENT	SYSTEM/ CODE REFERENC E	RANKING	CORRECTIVE ACTION	ESTIMATED COST	REMARKS
INTERIOR CONDITIONS						
A10	All door push and/or pull maneuvering clearances do not meet code.	413.6 (ADA) 1101.2 (IBC) ANSI 117.1	3	Where obstruction is not furniture related, modify door swing and/or location to comply. Where the previous is not easily achieved, supply push button door operator where required.	\$ 19,000	
A11	The required clearance, depth, approach & corridor width doesn't meet code		3	Reconfigure space if possible otherwise, supply push button door operator where required.	\$ 20,000	
A12	Due to the size, restrooms do not meet current code accessibility requirements.	(B)1108.0 (ANSI A117.1) 603-606	2	Reconfigure the room to enlarge and provide the minimum dimensional requirements.	\$ 750,000	
A13	The current code required toilet grab bars are not installed	(B)1108.0 (ANSI A117.1) 603-606	2	Install code required grab bars	\$ 3,000	
A14	Existing students restrooms do not meet current code accessibility requirements. No handicap stall exists.	(B)1108.0 (ANSI A117.1) 603-606	2	Provide at least one accessible toilet stall and ambulatory stall, lavatory sink, and urinal in the Boy's and Girl's restroom. Provide required grab bars. Provide new accessible doors and frames and latching hardware as required by doors adjacent to egress corridor.	\$ 500,000	This applies to the North House gang toilet rooms.
A15	Existing sinks do not meet accessibility requirements		3	Provide at least one accessible sink	\$ 45,000	
A16	Existing drinking fountains do not comply with current code accessibility requirements	(B)1108.6 (ANSI A117.1) 602	3	Remove existing drinking fountains and install new Handicapped drinking fountains.	\$ 5,000	
A17	The required knee spaces do not exist at most cabinetry or is located at the wrong height		3	Since the cabinetry is not accessible and is very dated or not included in some rooms it may be time to replace them all together	\$ 253,500	

HURLBUTT ELEMENTARY SCHOOL - FACILITY CONDITIONS ANALYSIS

TAG NO.	ASSESSMENT	SYSTEM/ CODE REFERENC E	RANKING	CORRECTIVE ACTION	ESTIMATED COST	REMARKS
A18	Some door hardware is not accessible and does not meet current code. Knob handles require grasping and twisting.	4.13.9 (ADA) 404.2.6 (ANSI 117.1)	2	Remove door locksets and install new accessible lever handle locksets where designated.	\$ 12,500	Mostly noted at South House restrooms and classroom access to vestibules.
A19	There is no second means of egress		2	Install a second door, preferably to the exterior	\$ 6,000	
A20	There is no accessibility to stage		2	Provide a lift or ramp	\$ 20,000	
A21	9X9 tile		3	Remove and replace	\$ 3,600	These tiles/glue may contain asbestos
A22	Spline ceiling		3	Remove and replace	\$ 17,600	
A23	Paint can use some touch up at door frames and some walls most notably at East and South		3	Paint as needed - specifically at door frames	\$ 30,000	
A24	Cracking door caulk at North House		3	Caulk at door surrounds to concrete block	\$ 6,000	allowance
A25	The corridor exceeds the minimum dead-end distance allowable in a nonsprinklered building		2	Install corridor doors with swing in direction of egress at the max length of 20'-0" from the exit. A more costly option would be to reconfigure and drive a corridor through classroom.	\$ 16,000	
A26	Gym Floor bubbles		2	Remove floor, investigate slab and replace floor with rubber sports floor & use waterproof adhesive	\$ 43,200	
A27	Leak in North House basement -standing water in elevator machine room floor and along shared wall with stair		1	Investigate further	\$ 20,000	allowance
A28	Elevator	4		Continue to evaluate and inspect the elevator	\$ 3,000	
A29	Gym accessibility	4		Lift is acceptable but not the best option, may want to retrofit the space and install a ramp	\$ 32,000	
A30	Air Conditioning is desired		3	Remove and replace ceilings as dictated by the mechanical design- coordinate lighting and devices at additional costs	\$ 706,500	Excludes Center House
INTERIOR SUBTOTAL						\$ 2,511,900

HURLBUTT ELEMENTARY SCHOOL - FACILITY CONDITIONS ANALYSIS

TAG NO.	ASSESSMENT	SYSTEM/ CODE REFERENC E	RANKING	CORRECTIVE ACTION	ESTIMATED COST	REMARKS
PLUMBING/FIRE PROTECTION						
P1	Periodically inspect, test and replace plumbing valves, pressure regulators, backflow preventers, thermostatic mixing valves, pumps, etc.	General	3	Replace faulty equipment as required.	\$ 10,000	Cost over next 10 years.
P2	Barrier Free lavatories and sinks do not have insulated supplies and drains.	ADA	2	Insulate supplies and drains with ADA insulation kit.	\$ 10,000	
P3	A Janitors Sink was observed with hoses connected to faucet without a visible means to prevent backflow.	IPC Section 608	2	Install vacuum breaker.	\$ 500	Cost for each sink
P4	Water heater for Central House has reached the end of its useful life.	General	2	Replace water heater	\$ 30,000	
P5	Some of the hot water piping is missing insulation	General	3	Install insulation on piping missing insulation	\$ 10,000	
P6	Some water heaters are no longer in use	General	3	Remove water heaters not being used and associated piping and accessories	\$ 2,500	
P7	Storage tank for water heater in Senior Center/South House is damaged	General	2	Replace storage tank	\$ 5,000	
P8	Vacuum breaker for water closet appears to be too short	General	2	Repair/replace flush valve	\$ 2,500	
P9	Check valve for sump pump in basement of East House is not properly installed	General	2	Repair/replace check valve	\$ 500	
FP1	Building is not currently fully protected with a sprinkler system	NFPA 25	4	Provide sprinkler system for entire building	\$ 430,000	Based on \$5/sf at approximately 86,000 sf
FP2	Limited sprinkler area is currently fed off of domestic water system	General	4	Provide new fire pump and approx. 30,000 gallon storage tank to provide water for fully sprinklered building that is separated from domestic water	\$ 125,000	
PLUMBING/FP SUBTOTAL					\$	626,000

HURLBUTT ELEMENTARY SCHOOL - FACILITY CONDITIONS ANALYSIS

TAG NO.	ASSESSMENT	SYSTEM/ CODE REFERENC E	RANKING	CORRECTIVE ACTION	ITIMIZED ESIMATED COST	REMARKS
MECHANICAL SYSTEMS						
M1	Central Area Conf Room poor temperature control	General	3	Install dedicated Fan Coil Unit	\$ 10,000	Tier 1
M2	Central Area Boiler Room has 10+ years of useful life remaining		4	Replace Boilers at end of Useful Life	\$ 90,000	Present day cost - Tier 1
M3	Central Area Chiller is approaching end of useful life. Refrigerant is being phased out.		3	Replace Chiller and Chilled Water Pumps	\$ 110,000	Tier 1
M4	Chiller Room does not appear to have emergency ventilation		1	Install emergency ventilation system	\$ 20,000	Tier 1
M5	Central Area Ductwork and Air Handling Units require cleaning.		2	Perform interior cleaning	\$ 20,000	Tier 1
M6	East Wing Combustion Air is not per code.		2	Add upper louver	\$ 3,000	Tier 1
M7	East Wing Classrooms are not well ventilated,		2	Install Central Air Handling Equipment	\$ 410,000	Tier 1
M8	East Wing Air Conditioning		4	Install Air Conditioning Equipment	\$ 150,000	Cost added to Central Air Handling Equipment. Tier 2
M9	East Wing corridors lack ventilation		2	Install corridor ventilation system	\$ 45,000	Tier 1
M10	East Wing Finned Tube Radiation is likely at the end of its useful life		2	Inspect and replace FTR as required	\$ 110,000	Cost for full replacement Tier 1
M11	East Wing Steam and Condensate Return piping is likely at the end of its useful life		2	Inspect and replace piping as required	\$ 76,000	Cost for full replacement Tier 1
M12	East Wing Kitchen Exhaust Fans is oversized for current use and at the end of its useful life		3	Replace Fan	\$ 4,000	Tier 1
M13	East Wing Boiler Room has 10+ years of useful life remaining		4	Replace Boilers at end of Useful Life	\$ 240,000	Present day cost - Tier 1
M14	North Wing Gym AHUs in poor condition		2	Replace AHUs	\$ 48,000	Tier 1

HURLBUTT ELEMENTARY SCHOOL - FACILITY CONDITIONS ANALYSIS

TAG NO.	ASSESSMENT	SYSTEM/ CODE REFERENCE	RANKING		CORRECTIVE ACTION	ESTIMATED COST	REMARKS
M15	North Wing Unit Ventilators appear to be near the end of their useful lives		2		Replace Unit Ventilators or add Central Air	\$ 400,000	Tier 1
M16	North Wing Air Conditioning	4			Install Air Conditioning Equipment	\$ 210,000	Cost added to Central Air Handling Equipment. Tier 2
M17	North Wing 5 Ton Packaged Rooftop Unit is at the end of its useful life		2		Replace Rooftop Unit	\$ 15,000	Tier 1
M18	North Wing lacks corridor ventilation		2		Install corridor ventilation system	\$ 50,000	Tier 1
M19	North Wing Finned Tube Radiation and Unit Heaters are likely at the end of its useful life		2		Inspect and replace equipment as required	\$ 40,000	Cost for full replacement Tier 1
M20	North Wing Hot Water Piping is Likely at the end of its useful life		2		Inspect and replace piping as required	\$ 70,000	Cost for full replacement Tier 1
M21	North Wing Boiler Room has 10+ years of useful life remaining	4			Replace Boilers at end of Useful Life	\$ 70,000	Present day cost - Tier 1
M22	South Wing Classrooms are not well ventilated,		2		Install Central Air Handling Equipment	\$ 225,000	Tier 1
M23	South Wing Air Conditioning	4			Install Air Conditioning Equipment	\$ 90,000	Cost added to Central Air Handling Equipment Tier 2
M24	There is no corridor ventilation for the South Wing		2		Install corridor ventilation system	\$ 40,000	Tier 1
M25	South Wing Toilets lack exhaust		2		Install Toilet Exhaust System	\$ 10,000	Tier 1
M26	South Wing Finned Tube Radiation and Unit Heaters are likely at the end of its useful life		2		Inspect and replace equipment as required	\$ 80,000	Cost for full replacement Tier 1
M27	South Wing South Wing Steam Piping is Likely at the end of its useful life		2		Inspect and replace piping as required	\$ 30,000	Cost for full replacement Tier 1
M28	South Wing Kitchen Exhaust Fans is oversized for current use and at the end of its useful life		3		Replace Fan	\$ 4,000	Tier 1
M29	Senior Center Boiler Feed Unit appears to be in poor condition		2		Replace unit	\$ 5,000	Tier 1

HURLBUTT ELEMENTARY SCHOOL - FACILITY CONDITIONS ANALYSIS

TAG NO.	ASSESSMENT	SYSTEM/ CODE REFERENCE	RANKING		CORRECTIVE ACTION	ESTIMATED COST	REMARKS
M30	Senior Center rooms are not well ventilated			2	Install Central Air Handling Equipment	\$ 250,000	Tier 1
M31	Add Senior Center Air Conditioning		4		Install Air Conditioning Equipment	\$ 90,000	Cost added to Central Air Handling Equipment. Tier 2
M32	There is no corridor ventilation for the Senior Center			2	Install corridor ventilation system	\$ 15,000	Tier 1
M33	Senior Center Finned Tube Radiation is likely at the end of its useful life			2	Inspect and replace FTR as required	\$ 75,000	Cost for full replacement Tier 1
M34	Senior Steam and Condensate Return piping is likely at the end of its useful life			2	Inspect and replace piping as required	\$ 35,000	Cost for full replacement Tier 1
M35	Senior Center/South Wing Boiler Room has 10+ years of useful life remaining		4		Replace Boilers at end of Useful Life	\$ 240,000	Present day cost - Tier 1
M36	Chimney Height for the Central Area and North Wing do not appear adequate to prevent introduction of flue gasses			3	Inspect chimney interiors reline and extend as required.	\$ 30,000	Tier 1
M37	Existing Pneumatic Automatic Temperature Controls are obsolete			2	Replace pneumatic Automatic Temperature Controls with DDC and update existing Building Management System	\$ 350,000	Include in Tier 3
M38	Tier 1 HVAC upgrades			2	One for one replacement of Equipment at end of useful life.		Total Tier 1 Cost: \$2,870,000
M39	Tier 2 HVAC upgrades		4		Add Air Conditioning Equipment to spaces not currently conditioned.		Total Tier 2 Cost: \$540,000
M40	Tier 3 HVAC upgrades		4		Includes consolidation of the Heating Plants and new High Performance HVAC Systems		Total Tier 3 Cost: \$8,040,000
MECHANICAL SUBTOTAL					Tier 1 + Tier 2 Cost		\$ 3,410,000

HURLBUTT ELEMENTARY SCHOOL - FACILITY CONDITIONS ANALYSIS

TAG NO.	ASSESSMENT	SYSTEM/ CODE REFERENCE	RANKING	CORRECTIVE ACTION	ESTIMATED COST	REMARKS
ELECTRICAL SYSTEMS						
E1	Classrooms with exterior egress doors do not have illuminated exit signs or emergency lights to meet the current code		2	Install new illuminated exit signs with emergency battery at both doors within the room, one of the exit signs shall be provided with two integral emergency lights w/ battery power to operate both lights and exit sign for 90 minutes	\$ 12,500	allowance
E2	Handicap accessible individual toilet rooms require call for aid system to meet the current code		2	Install new "call for aid" system in each newly configured individual accessible toilet room	\$ 7,500	allowance
E3	Currently the emergency lighting is provided by the generator feeding the entire electrical distribution, this does not appear to meet the current code and should be reviewed further with the AHJ		1	Install code approved emergency lighting system throughout the school, there are a few options to achieve this (install a second ATS dedicated to the emergency system and associated equipment, stand alone twin head battery units throughout or battery ballasts in existing fixtures)	\$110,000	The \$63K is for a twin head battery system and the \$110K is to modify the generator distribution, the third option would fall somewhere in between
E4	Existing fluorescent and incandescent fixtures throughout the school, appear to be fully operational but not that efficient	4		Replace all existing fluorescent and incandescent fixtures with new energy efficient LED fixtures.	\$ 650,000	allowance
E5	Existing North House stairwell is missing an illuminated "area of rescue" sign to meet the current code		2	Install new illuminated "area of rescue" sign outside of 2nd floor door leading into North House back stairwell	\$ 500	allowance
E6	Tier 1 HVAC upgrades	4		One for one replacement of existing equipment that is not working properly		allowance of \$15,000
E7	Tier 2 HVAC upgrades	4		Install air conditioning throughout the school, requiring electric service upgrade. Replace existing 1200 amp 480V service with new 2000 amp 480V service	\$500,000	allowance
E8	Tier 3 HVAC upgrades	4		Same as tier 2, but with mechanical central plant modifications.		allowance of \$600,000
ELECTRICAL SUBTOTAL						\$ 1,280,500

HURLBUTT ELEMENTARY SCHOOL - FACILITY CONDITIONS ANALYSIS

TAG NO.	ASSESSMENT	SYSTEM/ CODE REFERENC E	RANKING	CORRECTIVE ACTION	ITIMIZED ESIMATED COST	REMARKS
TOTAL ESTIMATED COSTS					\$	10,233,300

LEDGEND PRIORITY - RANK

- 1** Urgent priority - These items should be corrected as soon as possible and most likely encompass code, health and life safety issues.
- 2** High priority - These items should be corrected within a reasonable amount of time after the highest priorities referenced above. These may be associated with high priority maintenance issues or accessibility issues for the physically challenged. Maintenance items have a remaining useful life from 1-3 years.
- 3** Moderate priority - These items may be associated with aesthetic or general maintenance issues. Remaining useful life of 3-5 years.
- 4** Low priority - These items include maintenance and aesthetic issues that are not in current need of replacement, but should continue to be monitored on a regular basis. These items typically have a remaining useful life of 5-10 years or greater.

