



**Facility Study for**  
Colebrook Consolidated School

**February 4, 2015**



**Quisenberry Arcari**  
ARCHITECTS, LLC



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# Colebrook Consolidated School

## Facilities Study & Educational Specifications

January 7, 2014

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PROJECT OVERVIEW



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## Executive Summary

Colebrook Consolidated School is a K thru 6<sup>th</sup> grade school that was built in 1947 on 13 acres off Smith Hill Road in Colebrook Connecticut. The building sits on a sloping site and has been designed as a single level facility. A two classroom addition was constructed in 1960. The last addition and renovation project at the school was in 1992 that consisted of renovations to toilet rooms and the Media Center, along with a large addition on the east side of the existing building. This 'pre-engineered' building includes the Multi-Purpose Room and Kitchen along with (3) Classrooms. The total gross building area of the facility is 19,600 square feet. Subsequent building projects have mainly focused on aesthetic, maintenance and some program related improvements and have not addressed code and infrastructure needs that must be addressed.

The Colebrook Consolidated School building includes 7 general classrooms, an art and music shared room, a comprehensive media center, a multipurpose gymnasium/auditorium, and multiple educational support and administrative spaces. Through the self-study process it has become evident that facilities at Colebrook Consolidated School do not, in all instances, support the curriculum for implementation as it was originally designed. Although the building has been well maintained in its 67-year existence, several components of the buildings infrastructure have begun to fail and/or are at the end of their projected useful life. In the past several years, several infrastructure elements at Colebrook Consolidated School have begun to fail. Mechanical, electrical and plumbing issues have been addressed on a short term basis but need a long term solution. The building is non compliant with regard to ADA/Accessibility and does not meet all aspects of the current building, fire and health codes.

Recognizing the fact that the physical plant at Colebrook Consolidated School has served the community well for the past 67 years, and understanding the safety concerns, infrastructure needs and the impact on educational curriculum, the town leadership retained the architectural firm of Quisenberry Arcari to review and update a facility study and develop a range of design concepts based on educational specifications. The design concepts would evaluate scenarios that considered program needs, facility conditions, building, fire and life safety codes, OCR/ADA violations, construction phasing and the estimated cost to the Town of Colebrook. The options studied ranged from simple renovations and code updates, to a fully renovated facility with additions.

Based on the priorities established by the Town of Colebrook leadership, Quisenberry Arcari Architects approached the Colebrook Consolidated School project by addressing the two priority categories established by the board of education. The first priority focuses on building, fire and health codes, building infrastructure, energy management and accessibility. The second priority is the Educational Programming & Curriculum. These priorities are the baseline for the evaluation of all design concepts.

1. The first focus area is specific to the Code Compliance. Handicapped accessibility and building infrastructure. The scope of this priority includes the entire Colebrook Consolidated School building and site. Concerns to be addressed on the site will include handicapped accessible parking, walkways and drop-off areas around the site as well as accessible routes to the various fields, bleachers and site elements/improvements. Within the building, all programs will require compliance with accessibility codes based on ADA, UFAS, ANSI and regulatory building codes. The design team's evaluation and recommendation is that all OCR issues must be addressed through a renovation and addition project. The building infrastructure includes all building mechanical, electrical and plumbing systems as well as security and technology.
2. The second and perhaps the most significant focus area is the evaluation of the educational curriculum and program needs for Colebrook Consolidated School. The QA worked with the Superintendent of Schools to develop the educational specification and space needs program. The program information, along with the facility study documents, has been used to generate various design approaches and concepts that address all the educational program requirements at Colebrook Consolidated School. The design process also considered the following planning concepts integral to the design of educational facilities:

# Colebrook Consolidated School

## Educational Specifications

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- Energy Conservation and Sustainable Design
- Codes – Building, Fire/Life Safety, ADA
- Technology
- Security & Safety
- Furniture Furnishing and Equipment
- Community Use
- Flexibility & Agility
- Site Analysis/Evaluation
- Site Circulation
- Concept designs

Based on the educational specifications the key educational program deficiencies that need to be addressed in all project design scenarios have been identified.

Although several design concepts were evaluated for program adequacy and cost, each design was based on one of the following options:

- i. Limited Renovations and Code / Infrastructure update
- ii. Limited Renovations and Additions
- iii. Full Renovations and Additions under the “Renovate as New” Status with the State Department of Education.

The Limited Renovations and Additions approach included a design that was developed around additions and renovation that resolved program deficiencies in specific program areas. The main emphasis for renovation/additions was placed on improving and right sizing classrooms, appropriately consolidating and locating the administrative offices, developing secure vestibules and creating secure educational environments. During the review and programming process additional program deficiencies came to light. Although there is greater flexibility on a limited renovation project, when it comes to replacement of building systems, the State Department of Education’s reimbursement for a limited scope project is much lower compared to other options.

The Full Renovations and Additions project under the “Renovate as New” Status was evaluated to identify the potential cost of a project that would incorporate all educational program needs and include a complete facility update. Under this scenario all building systems would be replaced and the facility would be brought into compliance with the latest building, fire, ADA and life safety codes. This approach included the evaluation of several design options with emphasis on all the key educational program areas.

Based on the design teams evaluation of the design options developed for Colebrook Consolidated School in concert with the school administration and building committee, the option of “Renovate as New” is considered the most financially favorable to the Town of Colebrook.

## Project Goals

Colebrook Consolidated School will be designed with an emphasis on core academic spaces with a concept that focuses around the consolidation and redesign of all, classroom and support spaces.

- Facilitate 21 Century learning with facilities that support the curriculum.
- Improve accessibility throughout the school.
- Develop an agile and flexible learning environment that are appropriately sized.
- Improve energy efficiency and implement sustainable principles throughout the facility.
- Meet all building, fire, health and accessibility codes and standards.
- Improved indoor air quality throughout the facility.
- Enhance community access to all assembly spaces.



## **Priority Considerations**

Colebrook Consolidated School project is being submitted for consideration as a **Priority Category A**. The proposed project is envisioned to renovate and expand and improve the existing facility to provide mandatory instructional programs pursuant to Title 10 of the Connecticut General Statutes and Title IX of the U.S. Elementary and Secondary Education Act of 1972. The project will address all the educational program, accessibility and code deficiencies

## **Educational Specification Committee – Process**

The Committee gathered relevant information including current demographic reports and various constituents' input, explored current and future technologies. The committee worked with the superintendent in developing the educational specifications and evaluated several scenarios. During this process, the committee adhered to the following parameters:

- Acknowledgment of the current enrollment projections.
- Focus on the use of the building for Elementary Education.
- Maintenance of class size under the District Guidelines.
- Maintenance of current course offerings with adjustments for curriculum review.
- Gathering of constituents' input.
- Assurance that the building is ready for increased technology.
- Provision for flexibility in room usage.
- Provision for intermediate-sized group spaces.
- Provision for attractive and welcoming aesthetics.
- Provision for energy efficiency and high indoor air quality.
- Addressing all Building and Life Safety Codes, ADA and OCR concerns.

# Colebrook Consolidated School

## Educational Specifications

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## Introduction



*Colebrook Consolidated School is a Kindergarten through 6<sup>th</sup> grade elementary school on a 13-acre site located in Colebrook Connecticut. The school receives extensive year-round use and is the hub for the community. The 19,600 square foot building includes a multipurpose gymnasium that is also used for assembly and foodservice functions. The facility also includes seven general classrooms, a shared art and music space, a media center, and several special education and support spaces. The physical education area consists of a gymnasium, and playgrounds including designated playscapes.*

The educational specifications which follow, anticipate a total enrollment of 97 students projected through the 2021 - 2022 academic year. The School will be renovated to better meet the capacities and abilities of all students. The theory of the design concept associated with this philosophy assumes that when students become excited about focused relevant learning they do a better job of acquiring knowledge. The renovated school will be designed with an emphasis on core academic spaces with a concept that focuses around the consolidation and redesign of all the classroom and support spaces.

## Colebrook Consolidated School's Long Range Plan

### Mission and Vision Statement

#### Mission

The Colebrook Consolidated School, working in partnership with parents and the community, is committed to provide a safe, nurturing, quality educational experience where each child acquires the skills to become a life-long learner and to succeed in a changing global society.

#### Vision

The Colebrook Consolidated School:

1. Teaches each child to learn. Each learner is respected and taught as an individual with unique strengths, talents and needs.
2. Challenges each learner to set and achieve high personal expectations.



3. Stimulates, encourages and guides the intellectual, physical, social and emotional growth of each learner.
4. Enables each learner to develop the character traits of trustworthiness, respect, responsibility, fairness, caring and citizenship for themselves and when dealing with others.
5. Includes parents and the community as active partners in the education process.

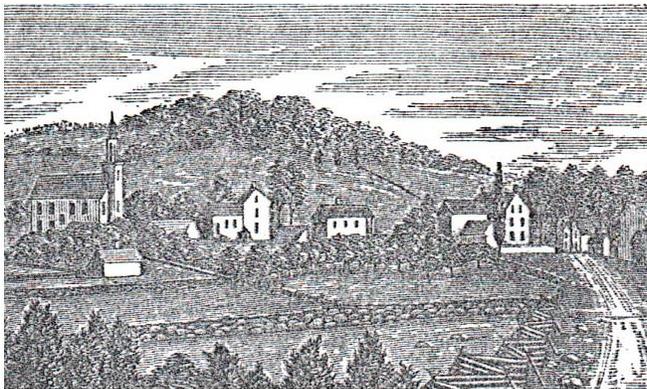
The enrollment at Colebrook School peaked at 129 in 2003-2004 and has been declining with a low of 79 students projected in 2022-2023. The existing facility is challenged by a lack of educational program space and much of the facility is outdated. Many of the academic program spaces have not been updated since the original construction in 1947.

The Town of Colebrook wants to upgrade its only school facility to prepare its students appropriately for the educational model of the 21<sup>st</sup> century. The renovation of the Colebrook Consolidated School will allow for an operational capacity of approximately 125 (based on the commonly accepted utilization factor of 85 percent) and will be a technologically advanced elementary school facility that will prepare its students to compete with a global perspective. All educational program spaces will be renovated and/or expanded to meet the educational requirements and goals set by the Colebrook Board of Education.

### **Long Range Plan**

The Colebrook Consolidated School is the only K through 6 grade facility in the Town of Colebrook and will remain a vital and essential component of the long range plan of the Colebrook School District and will be needed far into the foreseeable future.

### **Regional Information**



The Town of Colebrook is located in Northeastern Litchfield County, 13 miles north of Torrington. It is bordered on the north by the Massachusetts state line, to the east by the Hartford County town of Hartland, to the south by Barkhamstead and Winchester and to the west by Norfolk. The Town of Colebrook's population was estimated to be 1,479 in 2012 which ranks it as 165<sup>th</sup> in population for Connecticut.

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EXISTING CONDITIONS



## Existing Conditions Survey by Colebrook Board of Education

Colebrook Consolidated School was built in 1947 on 13 acres off Smith Hill Road in Colebrook Connecticut. The building sits on a sloping site and has been designed as a single levels facility. A two classroom addition was constructed in 1960. The last addition and renovation project at the school was in 1992 that consisted of renovations to toilet rooms and the Media Center, along with a large addition on the east side of the existing building. This 'pre- engineered' building includes the Multi-Purpose Room and Kitchen along with (3) Classrooms. The total gross building area of the facility is 19,600 square feet. Subsequent building projects have mainly focused on aesthetic, maintenance and some program related improvements and have not addressed code and infrastructure needs that must be addressed.

### Architectural Existing Conditions Survey

Colebrook Consolidated School is located on 13 acres off Smith Hill Road in Colebrook Connecticut. The site is bounded by single family residential zones on the north, and west boundaries and a wooded corridor on the east property line. The site is tiered with the high point at the entrance on Smith Hill Road, sloping down to the main entry. The site slopes to the north with a second plateau at the community/gymnasium entrance and finally the low point at the woods behind the school. The elevation change is approximately 12 feet. There is one point of access to the site, which are the main entrance and egress drives off Smith Hill Road which is the bus drop off and the parent drop-off.



The site access creates a parking zone on the south side of the site with designated visitor, handicapped accessible and general parking.

The service access to the kitchen is on the west side of the building. Parking and traffic circulation is an important aspect of project planning. Due to the limited enrollment at the elementary school there are minimal parking problem at Colebrook Consolidated school. Currently, the elementary school site has approximately 36 parking spaces which includes 2 HC Accessible spaces. There is space for additional parking spaces on the northeast side of the building adjacent to the service access. There is a need for informal parking for events which can be accommodated by reconfiguring the existing parking areas to increase parking efficiency and to improve vehicular circulation. The existing bus loading/drop-off zone along the main entrance and the parent drop-off area need to be clearly defined to improve site safety. The elementary school renovation and addition project will not require approval from the State Traffic Commission due to the size of this facility and parking.



The original building envelope is primarily a red brick with double hung vinyl windows that were installed in 2002. The windows are in good condition, however they may not meet the criteria for current energy standards. There are numerous window air-conditioning units serving each space. The windows in the 1992 wing are aluminum,

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## Educational Specifications

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double-hung units with insulating glass, and were part of the pre-engineered building system. These window units are generally in good condition and, with the exception of Classroom 105, provide adequate natural light and ventilation.

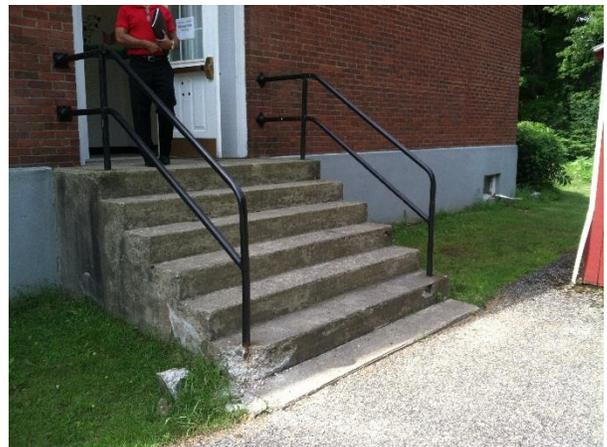
The roof is 3-tab asphalt fiberglass roof shingles which were installed in 1999. The roof pitch is approximately 5 on 12. Information provided indicates that the system installed at that time was a '25-Year' shingle. These asphalt fiberglass shingles appear to be in good condition, with no signs of deterioration and no reports of roof leaks. Continuous ridge vents were cut into the existing wood decking when this roof was installed 8 years ago. These ridge vents, along with a few small wall louvers at gable ends, provide the only ventilation for the attic spaces. Eaves, overhangs and fascias are painted wood and are generally in good condition. For the most part, rainwater spills off the roof and directly to grade, as there are no gutters for the majority of the roof area. Only at the entry/exit ramp at Classroom 32 and at some exit doors, have gutters been installed. The exterior doors are original to the building and are in poor condition. The brick façade is in good condition with some signs of deterioration through water infiltration.



The 1992 addition, as noted in the Overview section, is a pre-engineered metal building. The roofing system for this part of the existing facility is a standing seam metal roof, which is the standard for this type of construction. Overall this system appears to be in good condition, with no signs of deterioration and no reports of roof leaks. Existing drawings indicate the roof system has 6" (R21) of fiberglass insulation draped between the existing metal purlins; this is a standard detail for this type of construction. Most of the roof area is without gutters, and like the older part of the facility, rainwater spills directly to grade.

The pre-engineered metal building has vertical-rib metal siding which is the standard for this type of construction. The panels are attached directly to horizontal steel girts, which span the structural steel columns. Existing drawings indicate that exterior walls are insulated with 4" (R13) fiberglass insulation which is attached between horizontal girts. The exterior metal panels appear to have the original factory-installed paint finish (except at small areas which have been field-painted to cover graffiti), and are in good condition. The south (front) side of the Multi-Purpose Room has a brick veneer applied over the panel system, to match the brick on the older sections of the facility. A synthetic stucco fascia and column pilasters have also been applied to the south elevation. All exposed foundations have an unpainted 'rubbed' finish which provides a stucco-like finish. Foundations appear to be in good condition with no evidence of cracking.

Some areas of the existing concrete stairs/landings are in poor condition and require repair or replacement. Some of these have no handrails, while others have handrails in poor condition and do not meet the requirements of the Building Code. The concrete stairs/landings at the 1992 building are precast concrete units which are generally in good condition, but have 'pulled away' slightly from the face of the building.





### **Interior Building Elements**

The interior finish of these walls is plaster, which is in good condition. Although there are no drawings available of this portion of the building, it is assumed that the interior plaster finish is on wood lath, which is typical construction of this era. Some interior wall finishes are of gypsum board, as a result of remedial or fire-code update work, which was done in 1992. This occurs in the corridors and custodial closets. Walls in the 1992 building are comprised of a combination of gypsum board and concrete masonry units. The exterior wall construction in this building is insulated vertical rib metal siding, as noted in the "Building Exterior" section. The interior finish of this wall system is gypsum board on metal studs, which is in good condition. The metal panel wall system is exposed as the finish wall system in the Multi-Purpose room. These walls have been exposed to the constant abuse of balls and other items, which are used in Physical Education activities. The walls are in poor condition. The remainder of the walls throughout this building consists of concrete masonry units in good condition.

The original cane fiber ceiling tiles in the classrooms were replaced in 2011 with 2' x 4' suspended acoustical ceiling tiles. The Art/Music Classroom, the Media Center and other auxiliary spaces also have 2' x 4' suspended acoustical ceilings, while the Corridors and Custodial Closets have gypsum board ceilings, which were installed as Fire Code updates during the 1992 addition/renovation project. The gypsum board ceilings are in good condition, but do not provide above-ceiling access. In the 1992 wing, Classroom ceilings are suspended acoustical ceilings, which are generally in fair to good condition. The Corridor Ceilings, like the older portion of the building, are gypsum board and are in good condition, but don't provide access to above. The ceiling finish in the Multi-Purpose Room, is a spray-applied acoustical material on the underside of the roof structure and on exposed roof girts.



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Toilet rooms have the original ceramic tile floor finishes, which, besides being outdated, are in fair/good condition. Floor finishes throughout the 1992 addition are vinyl composition tile, except for the kitchen, which has a quarry tile floor and the toilets, which have ceramic tile. The majority of the floors have VCT floor tiles that are in fair to good condition. Floor tiles were replaced in 2013 in the 1947 and 1960 addition.

All interior doors are wood veneer doors, with the exception of doors to a few utility areas and a pair of fire separation doors at the west end of Corridor 112. Generally, wood doors in the older portion of the building are in wood frames and are in poor condition with varying amounts of damage, as a result of almost 60 years of constant use by children. Wood doors in the 1992 wing are generally in good condition, reflecting only 15 years of use; these doors are in hollow metal frames.

Built-in casework in the original parts of the building is in poor condition, resulting in 60 years of constant use. There are minimal amounts of built-in casework in the 1992 addition, and generally this casework is in good condition. Kitchen Equipment, which is part of the 1992 addition, is generally in good condition with the exception of the dishwasher which needs to be replaced. The casework does not meet current ADA standards for counter heights, and knee clearances.

### Structural Systems

The building superstructure is a structural steel frame system that is in good shape with no signs of distress. The concrete foundation system does not show any signs of settlement, cracking or sprawling and appears to be in good condition. The elevated concrete slab is on a structural steel frame and appears to be in good condition.

### HAZMAT

This report does not address lead and asbestos, Lead and Asbestos, however based on prior reports and best practices it is recommended that the floors, insulation, paint and other typical HAZMAT containing materials be tested. The project renovation budgets include an allowance for abatement.

### Code Review

Colebrook Consolidated school has several accessibility violations. The facility must meet current accessibility standards and correct all violations. Additionally any project must address the codes identified section five of this report. Building egress requirement and stair enclosures ratings must be evaluated.





## Building Systems & Infrastructure – Existing Conditions Mechanical and Electrical – Existing Conditions

### FIRE PROTECTION SYSTEMS

The facility does not have a sprinkler system and the existing fire alarm system must be updated to include a code compliant addressable system. A fire pump and storage tank will be required.

***Recommendations:***

**Provide fire sprinkler system including a fire pump and storage tank.**

### FIRE ALARM SYSTEMS

The existing Faraday Fire Watch XV fire alarm system appears to have been replaced as part of the addition. Zone annunciation is available at the main entrance to the building. There are manual pull stations at egress doors and there are no horn or horn/strobes in some spaces. The system is not compliant with the ADA standards for a fire alarm system. There are manual pull stations at the egress doors. The fire alarm is not addressable.

***Recommendations:***

**Provide a fully addressable fire alarm system throughout existing building.**



### PLUMBING SYSTEMS

**Domestic Water** The existing well is being replaced. The piping distribution network in the facility is original vintage and is showing signs of wear.

***Recommendations:*** Replace all existing domestic cold water mains and modify service entrance for new special layout.





### Gas Service - Propane

#### Sanitary Service – Septic

The sanitary system in the facility is original to the facility. A report has been developed that indicates that the system may need to be replaced. Due to the fact the enrollment is decreasing, the demand will need to be evaluated and additional testing is required in order to determine if the system is to be replaced.

#### **Recommendations:**

**Conduct testing of the existing system to determine life expectancy.**

### STORM SYSTEM –

The storm network is original vintage and is not showing visible signs of age.

#### **Recommendations:**

**Conduct camera survey existing storm network in conjunction with complete cleaning of all pipes.**



### DOMESTIC HOT WATER

The Domestic hot water for the original building is produced in a vertical "Turbo Max" heat exchanger/storage tank. The tank uses the main heating hot water loop from the boiler as its source of heat. The equipment is in fair and the piping network in the facility is original vintage and is showing signs of wear. Domestic hot water for the kitchen and the addition is provided by a Bradford/White gas-fired vertical hot water heater, 200 mbh input. Gas for this heater originates from the exterior grade-mounted propane tanks. This equipment appears to have been recently installed and is in good condition. The plumbing piping appears to be original to the building and is in fair condition. Sinks and lavatories are not ADA compliant.

#### **Recommendations:**

**Provide new centralized domestic hot water production for facility and replace all existing domestic hot water mains. Update all fixtures to meet ADA regulations.**

### MECHANICAL SYSTEMS:

**Heating:** There are two boilers contained in one boiler room. The boilers are comprised of two original vintage Weil-McLain hot water boilers with Carlin burners. Each boiler is listed as 943 mbh. The boiler room houses the pneumatic temperature control compressors as well as condensate return tanks/pumps. Fuel oil is provided by a 3,000 gallon above-ground vault-type storage tank. The tank is located outside on grade adjacent to the mechanical room. The tank was recently installed and is in good condition. Terminal heating for all areas consists of hot water baseboard





radiation. In classrooms, the radiation is built into bookshelf casework. The majority of the radiation is in fair condition. The gymnasium radiation has broken sections. Radiation in this space is a poor application due to the potential for abuse. Hot water cabinet unit heaters and convectors are provided for the heating of lobbies and corridors.

**Recommendations:**

The existing boilers have a 5+ year life expectancy. The boilers and terminal heating equipment can remain. If a renovation status project is implemented then the boilers and the terminal heating equipment would be replaced. Replace heating system throughout

**Cooling**

There is no central cooling in the facility. Spaces are cooled by window units generally installed by the teaching staff.

**Recommendations:**

Provide air conditioning in all spaces.



**Ventilation:**

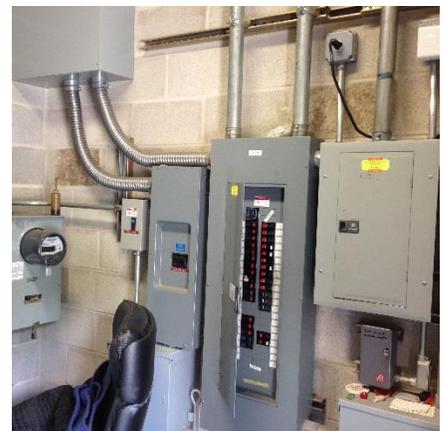
Ventilation of the facility is achieved thru operable windows and a central exhaust system located in the attic. The facility also utilizes individual window air conditioning equipment in some of the classroom. There is no ventilation in the Gymnasium/multipurpose room, and the facility does not meet current ventilation standards.

**Recommendations:**

- Provide air conditioning in all spaces. New roof mounted units serving classrooms (1 per 8 classrooms).
- All major spaces to receive new roof mounted air handling units with hot water coils.
- Each individual space to be provided with variable air volume air conditioning. The building to be provided with high efficiency rooftop units. Building to utilized centralized building components.
- Replace all exhaust fans.
- Replace all existing exhaust ductwork.
- Remove all unit ventilators in school.
- Replace the current pneumatic temperature control system throughout with an electric/electronic system.

**ELECTRICAL SYSTEMS:**

The electric service comes from the street and is fed overhead to a pole on school property. The pole contains a single pole type transformer. The service then runs underground from the pole to the building service entrance room. The Main distribution panel is rated 400 Amp, 120/240 volts- phase, 3 wire with 400 Amp main disconnect. The main distribution panel has limited space for future breakers and any future work will require an upgrade of the service. Electrical panels are located throughout the building and serving various loads including lighting, receptacles, and mechanical equipment, and fire alarm and communications systems. Most of the existing distribution system components appear to have been installed as part of the 1992 renovations and are in very good condition.



There is a site mounted, propane fueled, emergency generator that feeds the entire existing service on loss of utility power thru an automatic transfer switch. Generator is rated as a standby system, not an emergency system, because opening one breaker can interrupt code required egress lighting. Battery units provide code required egress lighting on loss of utility power.



Lighting fixtures for general use are fluorescent and most were replaced under the gymnasium addition renovations. The remaining original fixtures should be replaced under a renovation project. Interior emergency egress lighting consists of battery units with flood light heads and self-powered exit signs. Generally, interior egress ways have emergency lighting but the levels need to be verified to insure they meet code mandated levels. Exterior emergency lighting at egress doors appears to be in violation of courant code requirements. Exterior emergency lighting is required to illuminate the path to a 'public way'.

### Recommendations:

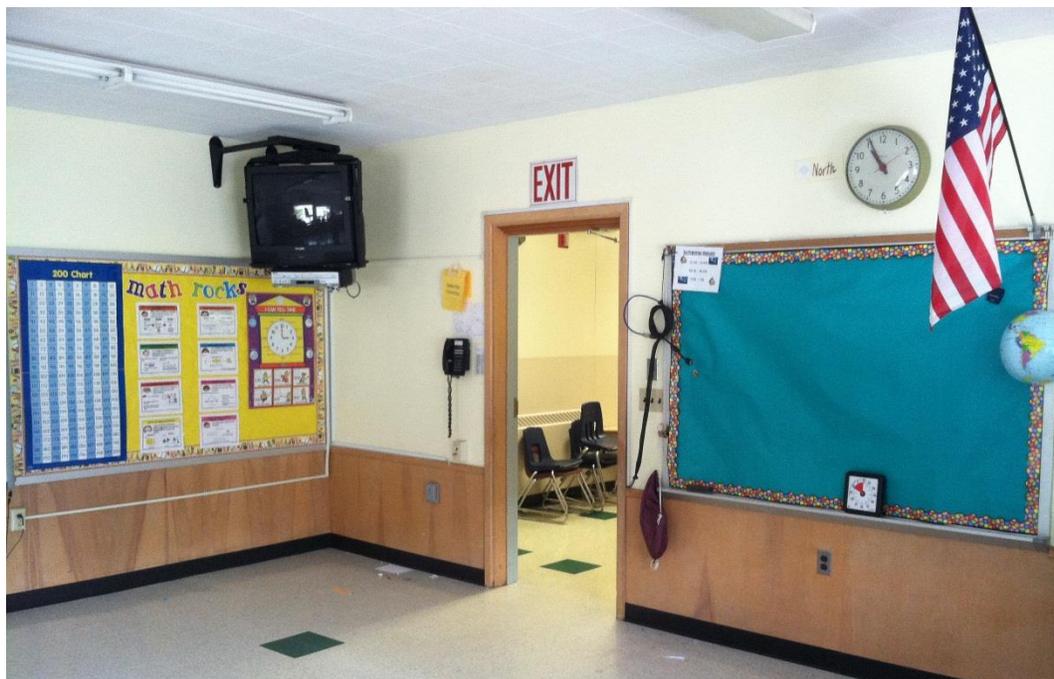
- Provide new emergency generator for school that will power the entire school.
- Allow for replacing of all corridor lighting in school.
- Upgrade (increase) electrical service entrance at school (2 - 3000 at mdp's, 480v)
- Replace all existing electrical panels prior >91.
- Allow for replacing of all lighting in school with energy efficiency lighting.
- Modify existing telephone system for new layouts.
- Modify clocks for new layouts.
- Provide new fire alarm throughout facilities (expand existing network).
- Provide new security system based on state standards.
- Provide new energy efficient code compliant lighting at the building exterior.

### TECHNOLOGY & COMMUNICATIONS SYSTEMS:

The existing data, security, communications, paging and clock systems are functioning and have limited expansion capabilities.

### Recommendations:

- Provide new systems that will meet current standards and bandwidth requirements for the data and communication systems. Replace all wiring and infrastructure.



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ENROLLMENT PROJECTIONS



## Enrollment Projections

Each year the administration updates student enrollment projections for the Colebrook Public Schools by grade, and by grade combinations from Kindergarten through Grade 6. These enrollment projections are used during the budget development process to anticipate future staffing needs as well as materials, equipment, and/or furniture needs associated with increases or decreases in projected enrollments.

The enrollment in the Colebrook Public Schools peaked at 126 in 1973 and declined to 78 students in 1981. During the next seventeen-year period 1981-1998, the Colebrook Public Schools experienced a steady increase in enrollment, growing from 78 students in 1981 to 142 in 1998, an increase of 64 students or 82.1 percent. However during the next fifteen years, there was steady decline in enrollment of 44 students or 31.00 percent, with the enrollment in 2013-2014 being 98 students.

The State Department of Education requires enrollment projections indicating the highest 8 year projected enrollment starting in October of the year the project application is submitted. Based on the proposed additions and alterations project for Colebrook Elementary School, enrollment projections would be required for October 2014 thru October 2022.

The following information was obtained from the report titled “Colebrook Consolidated School Enrollment Projected to 2023” by Peter M. Prowda, PhD dated October 16th, 2013. The full report is included in the Appendix of the educational specifications.

Based on the enrollment projections by Peter Prowda PhD the enrollment at Colebrook Public Schools is projected to decrease minimally (5 Students) from 98 in 2013 to 93 in 2017-2018, with a more significant decrease of 17 students to 81 in 2023-2024. The breakdown of the enrollment for 2010 -2011 is:

2013-2014:      PK = 0              K = 12    1-4 = 54              5&6 = 32                      Total = 98

An overview of the enrollment projections for Colebrook Elementary School is as follows:  
The methodology used by Peter M. Prowda, PhD is known as the cohort survival method. This method looks at past enrollment patterns and projects future enrollment on the basis of past history. Factors such as the balance between in-migration and out-migration of students, changes in housing patterns, and other demographic information may require periodic modifications to the cohort survival formulas. These modifications are generally done by experienced demographers.

Regardless of the source of the projections and the nature and extent of any modifications made to accommodate demographic trends, the projections themselves are very consistent as the chart on the facing page illustrates. All enrollment projection show a continuation of the enrollment decline for Colebrook well into the next millennium.

The remainder of this document explains the methodology used by all enrollment studies and displays the data each source generated.

### Projecting Enrollment: The Methodology

Although there are various methods of predicting the future number of students in any school district, the *Cohort Survival Method* is probably the single most utilized method today. This method, in its generic form, works as follows:

1. A demographer calculates the actual number of students in each grade for a period of five or ten year;



2. Next, the demographer takes the percentage difference between one year's data compared to the next year's actual enrollment in the subsequent grade level (students in first grade in year one are compared to students in second grade in year two);
3. Then the demographer computes the mean average percentage of "student survival" or "change coefficient" of the five or ten actual data-based years for each grade level;
4. Finally, the demographer uses this mean percentage average and applies it as a constant projection into, usually, five future years by initially applying that mean percentage for each grade level on the final year of *actual data*, and then carrying these projections forward for another five years. This method, by itself, is a sufficient methodology to use if a school district is very stable, and if it is undergoing a small and predicted growth or decline pattern. The projections become less accurate as the number of future projection years increase. Therefore, modifications of this method of predicting future student enrollments have to be used in conjunction with the standard *Cohort Survival Method*. Specifically, as in the case of the Colebrook Public Schools, if there has been rapid enrollment growth or decline in the past three to five years, which would be masked by the use of the mean percent of survival figure used as the multiplier to project the student population into future years, the demographer must modify the standard percent of survival figures obtained from the *Cohort Survival Method* by using common sense, pragmatic modifications

For example, an analysis of the town's population density allows the demographer to avoid counting students in areas unsuitable for housing, thus providing a more accurate determination of projected growth and decline trends in specific areas of the school district. Additionally, while short-term (one-year) projections are accomplished with a high degree of confidence, five-year projections can be more uncertain. Factors contributing to the uncertainty include in/out migration, public/private school enrollments and transfers, births and birthrates. It is generally recognized by demographers that *Component Cohort Survival Methodology* including the analysis of these additional variables is most adequate in reducing the relative error in projections.

Two of the three enrollment studies included in this report involve the use of *Component/Modified Cohort Survival Methodology*, providing more accurate and reliable projections for both the five-year and ten-year projections than possible using the standard, computerized cohort survival method. The third study, ENROLL, uses a multiple history data base to adjust for long or short-term changes in enrollment patterns.

Enrollment projections, using the modified cohort survival method, will continue to be updated each school year.

### **Enrollment Projections and Space Standards**

The State of Connecticut Department of Education provides grants for school construction projects to all public school systems. The eligibility of a school project for State funding is governed by the Connecticut General Statutes (CGS) and the grant application is administered by the State Department of Education Grants Division. Each municipality must apply for the grant by June 30th of each year and the funding is approved the following year. The Town of Colebrook has applied for and received several school construction grants over the years and specifically was funded for the last construction project that included renovations and code updates.

In considering the renovations and additions project at CCS for state reimbursement several regulations must be evaluated. These include laws that will determine the project eligibility, priority and estimated percentage of the project cost that is for the state grant. Additionally, the Town of Colebrook must meet the requirement of the Bureau of School Facilities and ultimately an audit of the project. Regulation of the State Board of Education Concerning School Construction Grants can be reviewed in the Connecticut General Statutes Section 10-287 c-J to 10-287 c-2J. The first step in this process will be a meeting with representatives from the State Department of Education to review a waiver request for a partial or complete waiver of the space standards.

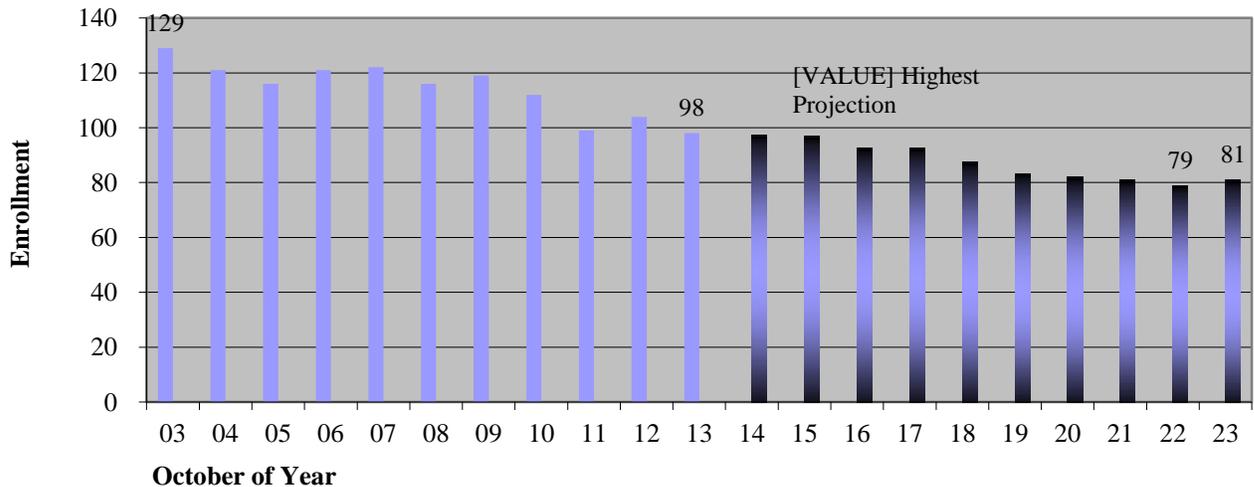


This waiver request will be filed with the Commissioner of Education. This waiver would be based on the inherent inefficiencies of the existing building design and changes in the program/curricular requirements in education that have impacted the physical plant. If additional eligible area is approved by the State Department of Education the Town of Colebrook will receive greater reimbursement, with the potential of receiving the full percentage assigned to the Town if a full waiver of space standards is approved.

### SPACE STANDARDS

For grant purposes, a maximum allowable square footage per pupil is determined for a facility. This maximum is based upon the projected enrollment for the project, grades housed at the school and the amount at square footage, if any, constructed prior to 1950. See C.G.S. 10-287c-] 5(a)

Space standards do not apply to the following, projects solely for creation of code or health violations, roof replacements, vocational agriculture equipment projects, board of education central administration projects, and projects solely for purchase. In actual construction, districts are not limited to the maximum allowable square footage per pupil. However, grant reimbursement is reduced to reflect the degree by which a school exceeds the maximum allowable square footage.



**Based on the current enrollment projections, the projections of filing to the Colebrook Consolidated School grant application reimbursement indicate a declining population. If the application is delayed beyond the 2015 timeframe, there will continue to be negative impacts on reimbursement as the projections indicate a declining population.**



**SAMPLE SPACE STANDARDS CALCULATIONS**

For grant computation purposes, the grade range and projected enrollment for a project are applied to the table below to calculate a maximum allowable square footage per pupil. The maximum allowable square footage per pupil is compared to the actual square footage per pupil if the resulting ratio is less than one, the building is considered to be oversized for grant computation purposes. Therefore, the ratio is applied to all protect costs (except site and building purchase costs), and there is a corresponding grant reduction.

**SPACE STANDARDS WORKSHEET**

This worksheet should be completed and submitted with the application for any N (new), E (extension), A (alteration), or RENO (renovation) project, or combination of such types of project.

**State Standard Space Specifications  
Grades**

Projected Enrollment	Pre-K and K	1	2	3	4	5	6	7	8	9	10	11	12
Allowable Square Footage per Pupil													
0 - 350	124	124	124	124	124	156	156	180	180	180	194	194	194
351 - 750	120	120	120	120	120	152	152	176	176	176	190	190	190
751 - 1500	116	116	116	116	116	148	148	170	170	170	184	184	184
Over 1500	112	112	112	112	112	142	142	164	164	164	178	178	178

- Under the column headed "Projected Enrollment", find the range within which your school's highest projected 8 year enrollment falls.
- Using the figures on that line, complete the grid below for only those grades housed within the school.

Pre-K	120	6	_____
K	120	7	_____
1	120	8	_____
2	120	9	_____
3	120	10	_____
4	120	11	_____
5	152	12	_____
(a) Total (grades Pre-K through 12)		872	_____
(b) Number of grades housed		7	_____
(c) Average [(a)/(b)]		124.6	_____
(d) Highest Projected 8-year Enrollment		384	_____
(e) Maximum Square Footage [(c) x(d)]		47,846	_____

- Total square footage at completion of project:
  - Existing area constructed pre-1950. 0
  - Multiply "a." by 80% 0
  - Area (at completion of project) constructed 1950 or later. 57.171
  - Square footage for space standards computation (b+c). 57,171

If line 2(e) is greater than line 3(d) there is no grant reduction.  
 If line 3(d) is greater than line 2(e), divide line 2(e) by line 3(d). 0.8368 \*

\* This factor will be used to reduce total eligible costs because of space in excess of the maximum eligible for reimbursement.  
 If a project exceeds the standards solely as the result of extraordinary programmatic requirements, the superintendent may submit a request to the Commissioner for a waiver. A detailed list of space allocations for all extraordinary programs with explanations must be included with the request.



The Town of Colebrook's State Reimbursement for 2014-15 is 37.5% for renovation projects and 27.5% for new facilities

**OPTIONS TO CONSIDER**

Space standard waivers can be requested. The potential for the waiver is greatly increased with a "Renovate as New" project.

School Readiness Program – 5%

Lighthouse School – 10%

Full Day Kindergarten in a Priority School District - 10%

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**EDUCATION PROGRAM  
SPECIFICATIONS**



## **Educational Program Specifications - Overview**

### **Overview of Program Format**

The educational specifications for the Colebrook Consolidated School study are organized into six sections. Each section identifies program and support spaces that are programmatically related. All spaces within the facility are identified in one of the following sections:

1. Academic Classroom & Support Spaces
2. Performing & Visual Arts
3. Assembly and Community Use
4. Administration and Student Services
5. Facilities Management and Support

A space utilization program is provided in the beginning of each section indicating the name of each space, the number of the spaces required and the size of the space. Information is provided for each space. The information on these pages is provided as a starting point for the architectural design team. Further review with the school for final room layout, furnishings and fixtures will be required prior to the development of the final design.

1. **ACADEMIC**
  - Pre-Kindergarten (Future Consideration)
  - Kindergarten
  - Grade 1
  - Grade 2
  - Grade 3
  - Grade 4
  - Grade 5
  - Grade 6
  - Special Education
2. **PERFORMING & VISUAL ARTS**
  - Music
  - Art
3. **ASSEMBLY & COMMUNITY USE**
  - Media Center
  - Multi-Purpose Room/Cafeteria/Gymnasium
  - Kitchen
4. **ADMINISTRATION & STUDENT SERVICES**
  - Administrative Offices
  - Health/Nurse
5. **FACILITY MANAGEMENT & SUPPORT**
  - Boiler Plant / Mechanical / Electrical Infrastructure
  - Facilities Offices & Building Storage



### Educational Program Specifications – Pre Kindergarten (Future Consideration)

**Program Objectives/Goals** - The Colebrook Preschool's mission is to provide a safe, nurturing learning community where all children are appropriately educated in their development of language, social emotional, cognitive and motor skills. The Pre-school environment promotes the child's development through a multi-sensory approach to learning. Due to the fact that the young children enter the pre-school program at different rates of development, the program must be differentiated to ensure every child is successful. This integrated environment is closely aligned with the special education, speech and language and the occupational therapy programs in its design to encourage exploration and independence in all aspects of a child's development through child-initiated and teacher initiative activities.

**Program Requirements and Activities:** - The future goal will be to provide a universal pre-school for all 3 and 4 year old children of Colebrook.

- A classroom needs space for whole group, center-based and independent activities which include multi-sensory approach to learning
- Environment must provide daily opportunities for exploration of materials, engage in concrete activities, interact with peers and adults to develop language and an understanding of the world.
- Set-up for at least 2 -3 computers in the classroom.
- A lavatory is needed in the classroom due to the possible need to toilet train students.

**Space Occupancy:** The classroom typically houses a class of 10 – 12 students with a highly qualified pre-school teacher and two Para-professionals. Throughout the school day the speech-language pathologist and the occupational therapist will be involved in the children's instruction. The space requirements will include a classroom, multiple small group instruction space, stimulus shelter, storage rooms and serves as an office for the teacher. The space should be designed as a flexible learning environment that is able to accommodate a number of teaching models and age appropriate activities.

**Existing Conditions:** Colebrook does not offer a pre-school program at the existing facility.

**Current Space Limitations:** There is no space available in the school building at this time.



## Educational Program Specifications – Pre Kindergarten

### Program Requirements

The Pre-school program requirements will include a classroom, storage areas, and classroom office space. The space requirements will include a classroom, storage area and a space that serves as an office for the teacher. The space should be designed as a flexible learning environment that is able to accommodate a number of teaching models and age appropriate activities.

### Pre-school Classrooms

Quantity: 1  
Proposed SF: 780 to 850

### Space Design Concept:

A physical space with tables, cubbies for student belongings, whole group activities and play areas including:

- Designated play areas
- water table
- art center
- kitchen
- independent reading

Rest area for full day program students  
ADA compliant rest room

### Program Activities

Support activities in a flexible learning environment that accommodates a number of teaching models and cognitive, social and motor activities.

### Loose Furnishings:

Rectangular tables with chairs for small group activities  
Circular tables for snack and art activities  
Mobile computer stations  
Teacher Desk and Chair

### Fixed Equipment

Marker/white board  
Tack board & display boards  
Projection screen/surfaces  
Display and book shelves  
Tall wardrobe and storage cabinets  
Fixed cabinets and accessible work surfaces

### Finishes

floor material:	TBD	base material:	TBD
wall material:	TBD	finish:	TBD
ceiling material:	TBD	height:	8'-0" minimum
hardware:	ada compliant	lighting	multi level direct/indirect
fire extinguisher & suppression	per code		

### Special Requirements

Specialty lighting  
HVAC systems including Air Conditioning  
Natural and indirect Lighting  
Operable windows

### Technology

Power outlet - floor and walls  
Media projection system  
Smart-boards  
Voice, video and data ports  
Security  
Portable sound system  
Technology equipment per the schools technology plan



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## **Educational Program Specifications – Pre Kindergarten Storage**

Quantity: 1

Proposed SF: 60

### **Program Storage Needs:**

Storage space for special needs equipment and instructional materials because classroom set-up is continually changing based on needs and program.

Storage for large motor skill development such as tricycles.

Lavatory storage for student training and extra clothing.

Designated classroom areas such as the building area, water table, art center, and kitchen

A large physical space with areas for instruction, play, reading, storage and student work

Close exit to playground

Fenced in play yard

Joint access to each classroom to share facilities as well as access to motor room

### **Program Activities**

Storage of educational materials.

### **Loose Furnishings**

Lateral and vertical file cabinets

### **Fixed Equipment**

Storage space for special needs equipment

Display and curriculum material shelves

Secure storage cabinet



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## **Educational Program Specifications – Kindergarten**

**Program Objectives/Goals** - The Colebrook Consolidated School kindergarten’s mission is to provide a safe, nurturing learning community where all children receive age appropriate instruction for their development of language, social emotional, cognitive and motor skills. This integrated environment is designed to encourage exploration and independence in all aspects of a child’s development. Through instruction appropriate for each child, the students will attain skills leading to the development of literacy and numeracy skills. Daily opportunities will be provided for the students to achieve their personal best, become responsible and respectful, and embrace lifelong learning in a positive, effective learning environment. This integrated environment is closely aligned with the special education, speech and language and the occupational therapy programs in its design to encourage exploration and independence in all aspects of a child’s development through child-initiated and teacher initiative activities.

**Program Requirements and Activities**- Currently Colebrook Consolidated School has a full day programs for 5 and 6 year olds placed in a classroom.

The classroom needs space for center-based and whole group activities which include multi-sensory approach to learning  
Technology – document camera, interactive white board with projector, television hook-up, etc.  
SRBI– small group instruction; 1:1 instruction simultaneous to other independent and small group academic tasks taking place  
Differentiated Instruction – small group instruction; 1:1 instruction simultaneous to other independent and small group academic tasks taking place  
State and Federal mandates (Special Education, Curricular, Data Driven instruction, Standards, etc.)  
The classroom has exit to outside.  
A lavatory is needed in each classroom with storage.

**Space Occupancy:** The classroom typically houses a class of 12 to 16 students with a highly qualified kindergarten teacher and a Para-professional. Throughout the school day the speech-language pathologist, reading teacher, special education teacher and the occupational therapist will be involved in the children’s instruction. The space should be designed as a flexible learning environment that is able to accommodate a number of teaching models and age appropriate activities. There is a need for one door for entrance and exit; windows that open upward – 1 of which is deemed an emergency exit.

**Existing Conditions**- The single classroom is adequate for the existing program.



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## Educational Program Specifications – Kindergarten Classroom

Quantity: 1

Proposed SF: 880 to 900

**Space Design Concept:** Each kindergarten classroom must support a number of teaching styles, including whole group, small group and individual instruction.

A large physical space with areas for instruction, play, reading, storage and student work

Toilets within Classroom

Blinds on windows and doors for security

### Program Activities

Support activities in a flexible learning environment that accommodates a multitude of teaching models and cognitive, social and motor activities.

### Loose Furnishings:

Rectangular tables with chairs for small group activities

Circular tables for snack and art activities

Mobile computer stations

Teacher Desk and Chair

### Fixed Equipment

Magnetic white board

Tack board & display boards

Projection screen/surfaces

Display and book shelves

Tall wardrobe and storage cabinets

Fixed cabinets and accessible work surfaces

### Finishes

floor material:

TBD

base material:

TBD

wall material:

TBD

finish:

TBD

ceiling material:

TBD

height:

8'-0" minimum

hardware:

ADA compliant

lighting

multi level direct/indirect

fire extinguisher & suppression

per code

### Special Requirements

Specialty lighting

HVAC systems including Air Conditioning

Natural and indirect Lighting

Operable windows

### Technology

Power outlet - floor and walls

Media projection system

Smart board technology

Voice, video and data ports

Security

Portable sound system

Technology equipment

per the schools technology plan



## **Educational Program Specifications – Kindergarten Storage**

Quantity: 1  
Proposed SF: 60

### **Program Storage Needs:**

Overhead wall cabinets with doors  
Storage areas with built in shelving for teacher supplies.  
Countertop work space for teacher work space.  
Built in closet for teachers.  
Adequate storage – bookcases, cubbies, drawer units all designed for easy access for kindergarten children

### **Space Design Concept**

The storage should be designed to accommodate books, storage grade level specific materials and equipment.

### **Program Activities**

Storage of educational materials.

### **Loose Furnishings**

Lateral file cabinet

### **Fixed Equipment**

Display and curriculum material shelves  
Secure storage cabinet



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## **Educational Program Specifications – Grade 1-3**

**Program Objectives/Goals:** To provide opportunities for grade 1-3 students to achieve their personal best, become responsible and productive students, and embrace lifelong learning in a safe, positive, effective learning environment. This effective learning environment is foundational in its design addressing the following core domains: physical environment, psychological, pedagogical, technological, cultural and pragmatic.

**Program Requirements and Activities:**

Each classroom needs space for center-based and whole group activities which include multi-sensory approach to learning  
Technology – document camera, interactive white board with projector, etc.

SRBI– small group instruction; 1:1 instruction simultaneous to other independent and small group academic tasks taking place  
Differentiated Instruction – small group instruction; 1:1 instruction simultaneous to other independent and small group academic tasks taking place

State and Federal mandates (Special Education, Curricular, Data Driven instruction, Standards, etc.)

**Space Occupancy:**

Each of the three classrooms typically houses a class of 12 to 16 students with a highly qualified teacher and a part-time para-professional. Throughout a typical week the speech-language pathologist, reading teacher, special education teacher and the occupational therapist will be involved in the children’s instruction. The space should be designed as a flexible learning environment that is able to accommodate a number of teaching models and age appropriate activities. There is a need for one door for entrance and exit; 2 windows – 1 of which is deemed an emergency exit.

**Existing Conditions:**

SIGNIFICANT air quality concerns. All classrooms lack adequate fresh air exchange.



## Educational Program Specifications - Grade 1-3 Classrooms

Quantity: 3  
Proposed SF: 700

**Space Design Concept:** The classroom should be designed for an integrated approach to instruction, multiple furniture arrangements and classroom configurations. The space will function as an office for the teacher.

A physical organization of space that facilitates rather than hinders pedagogy . . . organized to promote the various ways children acquire knowledge: visually, auditorally, kinesthetically, independently; cooperatively – thus creating multiple learning scenarios within one space

A physical space should large enough for various learning tasks and other gatherings such as meeting,

- Whole group and small group instruction
- An area for library, technology, math, and science/social studies.
- Wall space low enough for student access and visibility from both the floor and the table area.
- A large enough floor space for whole group instruction and gatherings on the floor and without sacrificing comfortable space for tables or student desks.

Color, lighting, furniture that helps to help delineate different learning zones – quiet vs. active; independent vs. small group; working with a variety of technology

Infrastructure that supports and enhances current and future technology (including multiple outlets on walls)

Furniture and equipment specifically designed for grade 1-3 students.

Utility sink in classroom with hot and cold water and a water fountain

Close proximity to other early primary classrooms and close proximity to bathrooms.

### Program Activities

Support activities in a flexible learning environment that accommodates a multitude of teaching models and cognitive, social and motor activities.

### Loose Furnishings:

Rectangular tables or student desks with chairs for small group activities

Mobile computer stations

Teacher Desk and Chair

### Fixed Equipment

Magnetic white board

Tack board & display boards

Projection screen/surfaces

Display and book shelves

Tall wardrobe and storage cabinets

Fixed cabinets and accessible work surfaces

### Finishes

floor material:	TBD	base material:	TBD
wall material:	TBD	finish:	TBD
ceiling material:	TBD	height:	8'-0" minimum
hardware:	ada compliant	lighting	multi level direct/indirect
fire extinguisher & suppression	per code		

### Special Requirements

Specialty lighting

HVAC systems including Air Conditioning

Natural and indirect Lighting

Operable windows

### Technology

Power outlet - floor and walls

Media projection system

Smart board technology

Voice, video and data ports

Security

Portable sound system

Technology equipment per the schools technology plan



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## **Educational Program Specifications – Grade 1-3 Storage**

Quantity: 3  
Proposed SF: 60 (include in 700 sq. ft. classroom)

### **Program Storage Needs:**

Adequate storage – bookcases, cubbies, drawer units all designed for easy access for 6 - 9 year olds  
Coat area for adults  
Countertop work space for teacher work space.  
Overhead wall cabinets with doors  
Storage areas with built in shelving for teacher supplies.  
Countertop work space for teacher work space.  
Built-in closet for teachers.

### **Space Design Concept**

The storage should be designed to accommodate books, storage grade level specific materials and equipment.

### **Program Activities**

Storage of educational materials.

### **Loose Furnishings**

Lateral file cabinet

### **Fixed Equipment**

Display and book shelves  
Secure storage cabinet



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## **Educational Program Specifications – Grade 4-6**

**Program Objectives/Goals** - The goals of the Colebrook Consolidated School’s fourth through sixth grade experience is to provide opportunities for the students to achieve their personal best by becoming confident readers and mathematicians, responsible and respectful young students, and lifelong learners in a positive and safe environment. The daily instruction guides the students to transition from becoming students who are learning to read to independent learners who learn by reading. The integrated environment is designed to encourage independence in all aspects of a child’s development with support of the regular and special education faculty.

**Program Requirements and Activities**- Currently Colebrook Consolidated School has one classroom each for Grades 4-6. The fourth grade teacher teaches literacy and mathematics in either homogeneous or heterogeneous grouping. The fifth and sixth grade teachers act as a team for instruction with one teacher teaching literacy and the other teaching mathematics, science and social studies. Each classroom needs space for center-based and whole group activities which include multi-sensory approach to learning.

Technology – document camera, interactive white board with projector, etc.

SRBI– small group instruction; 1:1 instruction simultaneous to other independent and small group academic tasks taking place

Differentiated Instruction – small group instruction; 1:1 instruction simultaneous to other independent and small group academic tasks taking place

State and Federal mandates (Special Education, Curricular, Data Driven instruction, Standards, etc.)

**Space Occupancy:** Each of the three classrooms typically houses a class of 12 to 16 students with a highly qualified teacher. Throughout a typical week the speech-language pathologist, reading teacher, special education teacher and the occupational therapist will be involved in the children’s instruction. The space should be designed as a flexible learning environment that is able to accommodate a number of teaching models and age appropriate activities. There is a need for one door for entrance and exit; 2 windows – 1 of which is deemed an emergency exit.

**Existing Conditions:**

Significant air quality concerns since all classrooms lack adequate fresh air exchange.



## Educational Program Specifications – Grade 4-6 Classrooms

Quantity: 3

Proposed SF: 2 at 700; 1 at 900 to accommodate science instruction

**Space Design Concept:** The classroom should be designed for an integrated approach to instruction, multiple furniture arrangements and classroom configurations. The space will function as an office for the teacher.

A physical organization of space organized to promote the various ways children acquire knowledge: visually, auditorally, kinesthetically, independently; cooperatively – thus creating multiple learning scenarios within one space

A physical space should be large enough for various learning tasks and other gatherings such as class:

- o Whole group and small group instruction
- o An area for library and technology
- o Wall space low enough for student access and visibility from both the floor and the table area.
- o A large enough floor space to accommodate student desks, computer tables and tables that seat 4-6 students for small group work.

Color, lighting, furniture that helps to help delineate different learning zones – quiet vs. active; independent vs. small group; working with a variety of technology

Infrastructure that supports and enhances current and future technology (including multiple outlets on walls)

Furniture and equipment specifically designed for 4-6 grade students

Utility sink in classroom with hot and cold water.

Technology – document camera, interactive white board with projector, etc.

Counter space for teacher work area and shelves in each classroom storage for instruction supplies

Recess displayed ledges in hallway walls to display student

Storage for student’s materials, coats, backpacks, lunch bags

Larger grade level restroom facilities close to the fourth grade classrooms

### Program Activities

Support activities in a flexible learning environment that accommodates a space multitude of teaching models and instructional strategies.

### Loose Furnishings

Student desks and chairs

Rectangular tables with chairs for small group activities

Computer stations

Teacher Desk and Chair

### Fixed Equipment

Magnetic white board

Tack board & display boards

Projection screen/surfaces

Display and book shelves

Tall wardrobe and storage cabinets

Fixed cabinets and accessible work surfaces

### Finishes

floor material:	TBD	base material:	TBD
wall material:	TBD	finish:	TBD
ceiling material:	TBD	height:	8'-0" minimum
hardware:	ada compliant	lighting	multi level direct/indirect

### Special Requirements

HVAC systems including Air Conditioning

Natural and indirect Lighting

Operable windows

### Technology

Power outlet - floor and walls

Media projection system

Smart board technology

Voice, video and data ports

Security

Portable sound system

Technology equipment per the schools technology plan



## **Educational Program Specifications – Grade 4-6 Storage**

Quantity: 3  
Proposed SF: 60

### **Program Storage Needs:**

Adequate storage – bookcases, cubbies/lockers drawer units all designed for easy access for students  
Built in closet for teachers.  
Countertop work space for teacher work space.  
Overhead wall cabinets with doors

### **Space Design Concept**

The storage room should be designed for storage for both instructional student materials and teacher resource materials.

### **Program Activities**

Storage of educational materials.

### **Loose Furnishings**

Lateral file cabinet

### **Fixed Equipment**

Display and book shelves  
Secure storage cabinet



## Educational Program Specifications – World Language

### Program Objectives

It is recommended that students begin their study of a world language as early as possible so that they can develop proficiency beyond the novice level in all skills. World languages are of great importance in today's world for self-development and career possibilities, as well as for communication with an understanding of cultures. The following is an outline of the World language goals for the students at CCS:

#### Goals:

- Develop a world language program designed to meet the needs of all students.
- Promote global understanding.
- Make connections and comparisons across disciplines.
- Create lessons that foster listening, speaking, writing and reading skills.
- Develop critical thinking skills and efficient problem solvers.
- Offer Advanced Placement courses.
- Foster a positive and safe environment.

### Space Occupancy and Design Criteria (instruction will occur in the regular grade level classroom)

The individual utilization the space includes the students and World Language teacher. A special education teacher, paraprofessional, or a reading/writing resource teacher may share space for the instruction of small groups or individuals within the regular classroom. The following is a partial list of design elements that should be incorporated into all instructional spaces:

- The classroom configuration should maximize flexibility and interaction within and among the instructional areas for student learning.
- Digital projection systems should be utilized for visual display.
- Ceiling height and windows should maximize natural light and accommodate daylighting.
- Sidelights must be provided adjacent to all classroom doors.
- Cabinets and casework appropriate to the instructional classroom function should be provided
- Special consideration should be given for sound transmission at operable and standard walls to minimize sound infiltration into the adjacent space.
- Speaker systems should be incorporated into all instructional spaces.
- Whiteboards, tackboards and projection screens should be provided in each instructional space.

### Existing Conditions

Instruction is provided in the regular grade level classroom.



## World Language Classroom

Quantity: Instruction to be provided in the regular grade level classroom.  
 Proposed SF:

### Space Design Concept

The classroom should be designed for an integrated approach to technology and multiple furniture arrangements and classroom configurations.

### Program Activities

Support a number of teaching styles.

### Loose Furnishings

- Modular rectangular tables with chairs – 15 each
- Circular tables for small groups with chairs
- Mobile computer stations
- Teacher Desk and Chair
- Lateral/vertical file cabinet

### Fixed Equipment

- Acoustical treatment
- Marker/white board (Multiple)
- Tack board & display boards
- Projection screen/surfaces
- Flag Bracket & Flag
- Display and book shelves
- Tall wardrobe and storage cabinet
- Fixed cabinets and accessible work surfaces

### Finishes

Floor material:	TBD		
Base material:	TBD		
Wall material:	TBD	finish:	TBD
Ceiling material:	Acoustical Tile	height:	8'-0" minimum
Hardware:	ADA compliant		
Lighting	Multi level direct/indirect		
Windows	Operable with blinds - Maximize natural light		
Fire extinguisher & suppression	per code		

### Special Requirements

- Specialty lighting
- HVAC systems including Air Conditioning
- Natural and indirect/direct Lighting
- Operable windows

### Technology

- Power outlet - floor and walls
  - Media projection system
  - Smart boards
  - Voice, video and data ports
  - Security
  - Portable sound system
  - Technology equipment
  - Wireless & Hard wired Network
  - Integrated public address system
- per the district's technology plan  
 per the district's technology plan



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**World Language Department Office**

Quantity: 1  
Proposed SF: 100 to 150 SF

**Space Design Concept**

The office should be designed to accommodate the world language teacher.

**Program Activities**

Teacher planning and preparation room.

**Loose Furnishings**

Lateral file cabinet  
Conference Table and Chairs  
Desks and chairs – 2  
Shelving Units – 2 at 12 linear feet each

**Fixed Equipment**

Tack board & display boards  
Display and book shelves  
Secure storage cabinet

**Finishes**

Floor material:	TBD
Base material:	TBD
Wall material:	TBD
Wall Finish:	Paint
Ceiling material:	Acoustical Tile
Ceiling height:	8'-0" minimum
Hardware:	ADA compliant
Lighting	Multi level direct/indirect
Fire extinguisher & suppression	per code

**Special Requirements**

HVAC systems including Air Conditioning  
Natural and indirect Lighting  
Operable windows

**Technology**

Power outlet - walls  
Voice, video and data ports  
Security  
Technology equipment per the schools technology plan



## **Educational Program Specifications – Special Education**

### **Program Objectives**

The special education department serves approximately 12% of the students attending Colebrook Consolidated School. The early intervention and PPT process identifies those students who have a demonstrated disability that impacts their learning and requires specialized instruction to progress in the curriculum. The staff of teachers, social workers, psychologists, speech and language pathologists, occupational and physical therapists, and paraprofessionals provides a continuum of services in self-contained and mainstream settings. The diversity of educational and behavioral student needs necessitates a variety of spaces to accommodate instructional activities.

### **Goals**

- Establish a program to offer a free, appropriate, public education to all disabled students in the least restrictive environment and to include interaction with non-disabled peers.
- Comply with ADA requirements and OCR regulations.
- Design a program to provide full access to all students.
- Develop a program focused on specific content combined with general education, specialized instruction, study skills, and remediation for students with disabilities.
- Provide functional and hands-on strategies and materials for students with significant cognitive deficits.
- Provide adequate opportunities for the development of skills in technology.

### **Program Activities to be Accommodated**

Special Education consist of Special Education Services including Speech and Language Services, Psychological Services, Social Work Services, Adaptive Living Skills and OT/PT services. Other appropriate services as determined by the students individual education program (IEP) are also included. As each of the above are fairly specialized, so are their respective activities.

### **Space Occupancy and Design Criteria**

The individual utilization the space include the student's special education teacher, professionals and aides. The following is a partial list of design elements that should be incorporated into the all spaces to accommodate students with special needs:

- Sensory friendly lighting and acoustics would be beneficial for students with autism, hearing difficulties, and attention deficits.
- Self-contained programs should be placed with ready access to the mainstream classrooms.
- Special education classrooms must provide efficient emergency egress.
- Self-contained settings should be close to exits to allow for easy access to transportation.
- All classrooms should have ample locked storage space for materials and records.
- Self-contained, flexible work stations should support both individual and small group instruction.
- Classroom technology in special education settings should be equal to that offered in mainstream settings.
- All classrooms should be equipped with a telephone line, clock, multiple outlets, whiteboards, bulletin boards, and wiring for computer network capability and internet access.
- Each classroom should have audiovisual capability and the flexibility to accommodate large and small group activities and individual instruction.
- General education classrooms will require commensurate standards for the inclusion of special education students.
- Access to technology should be provided in all spaces.
- Digital projection systems should be utilized for visual display.
- Interactive whiteboards should be installed in all instructional areas.
- Ceiling height and windows should maximize natural light and accommodate delighting.
- Side-lights must be provided adjacent to all classroom doors.
- Cabinets and casework appropriate to the instructional studio function should be provided.
- Speaker systems should be incorporated into all instructional spaces.
- Whiteboards, Tack boards and projection screens should be provided in each instructional space.

### **Existing Conditions**

Significant air quality concerns since all spaces lack adequate air exchange.



### Educational Program Specifications – Resource Room

Quantity: 1 (with dividing curtain capable of creating 2 separate instructional spaces)  
Proposed SF: 700

#### Space Design Concept

The small group classroom should be designed for an integrated approach to technology and multiple furniture arrangements and classroom configurations. The space will function as an instructional classroom for 2-6 students and teacher office space.

#### Program Activities

Support a number of teaching styles, including small group and individual instruction.

#### Loose Furnishings

- Computer Workstations with chairs (laptop computers))
- Mobile computer stations
- Work Tables
- Teacher Desk and Chair
- Lateral file cabinet

#### Fixed Equipment

- Acoustical treatment
- Marker/white board (Multiple)
- Tack board & display boards
- Projection screen/surfaces
- Flag Bracket & Flag
- Display and book shelves
- Tall wardrobe and storage cabinet
- Fixed cabinets and accessible work surfaces

#### Finishes

Floor material:	TBD		
Base material:	TBD		
Wall material:	TBD	finish:	TBD
Ceiling material:	Acoustical Tile	height:	8'-0" minimum
Hardware:	ADA compliant		
Lighting	Multi level direct/indirect		
Windows	Operable with blinds - Maximize natural light		
Fire extinguisher & suppression	per code		

#### Special Requirements

- HVAC systems including Air Conditioning
- Natural and indirect/direct Lighting

#### Technology

- Power outlet - floor and walls
- Media projection system
- Smart boards
- Voice, video and data ports
- Security
- Portable sound system
- Technology equipment per the district's technology plan
- Wireless & Hard wired Network per the district's technology plan
- Integrated public address system



## Educational Program Specifications – Social Worker/School Psychologist

Quantity: 1 (shared space)  
Proposed SF: 150 to 175 SF

### Space Design Concept

The space should be designed to accommodate typical private office equipment and a small conference table for up to four individuals.

### Program Activities

Individual counseling  
Student assessment  
Referral services

### Fixed Equipment

Shelves  
Secure storage cabinet

### Fixed Equipment

Acoustical treatment  
Marker/white board (Multiple)  
Tack board & display boards  
Projection screen/surfaces  
Flag Bracket & Flag  
Display and book shelves  
Tall wardrobe and storage cabinet  
Fixed cabinets and accessible work surfaces

### Finishes

Floor material:	TBD		
Base material:	TBD		
Wall material:	TBD	finish:	TBD
Ceiling material:	Acoustical Tile	height:	8'-0" minimum
Hardware:	ADA compliant		
Lighting	Multi level direct/indirect		
Windows	Operable with blinds - Maximize natural light		
Fire extinguisher & suppression	per code		

### Special Requirements

HVAC systems including Air Conditioning  
Natural and indirect/direct Lighting

### Technology

Power outlet - floor and walls	
Media projection system	
Smart boards	
Voice, video and data ports	
Security	
Portable sound system	
Technology equipment	per the district's technology plan
Wireless & Hard wired Network	per the district's technology plan
Integrated public address system	



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## **Educational Program Specifications – Speech and Language Pathologist**

Quantity: 1  
Proposed SF: 150 to 175 SF

### **Space Design Concept**

The space should be designed to accommodate typical private office equipment and a small conference table for up to four individuals.

### **Program Activities**

Small group instruction, therapy activities and testing

### **Fixed Equipment**

Shelves  
Secure storage cabinet

### **Fixed Equipment**

Acoustical treatment  
Marker/white board (Multiple)  
Tack board & display boards  
Flag Bracket & Flag  
Display and book shelves  
Tall wardrobe and storage cabinet  
Fixed cabinets and accessible work surfaces

### **Finishes**

Floor material:	TBD		
Base material:	TBD		
Wall material:	TBD	finish:	TBD
Ceiling material:	Acoustical Tile	height:	8'-0" minimum
Hardware:	ADA compliant		
Lighting	Multi level direct/indirect		
Windows	Operable with blinds - Maximize natural light		
Fire extinguisher & suppression	per code		

### **Special Requirements**

HVAC systems including Air Conditioning  
Natural and indirect/direct Lighting

### **Technology**

Power outlet - floor and walls	
Voice, video and data ports	
Security	
Technology equipment	per the district's technology plan
Wireless & Hard wired Network	per the district's technology plan
Integrated public address system	



## **Educational Program Specifications – Special Education /Teacher Conference Room**

Quantity: 1  
 Proposed SF: 250 to 300 SF

### **Space Design Concept**

The space should be designed to accommodate a small conference table for up to twelve individuals.

### **Program Activities**

Small group instruction and meetings

### **Fixed Equipment**

Shelves  
 Secure storage cabinet

### **Fixed Equipment**

Acoustical treatment  
 Marker/white board (Multiple)  
 Tack board & display boards  
 Projection screen/surfaces  
 Flag Bracket & Flag  
 Display and book shelves  
 Lower storage cabinet  
 Fixed cabinets and accessible work surfaces

### **Finishes**

Floor material:	TBD		
Base material:	TBD		
Wall material:	TBD	finish:	TBD
Ceiling material:	Acoustical Tile	height:	8'-0" minimum
Hardware:	ADA compliant		
Lighting	Multi level direct/indirect		
Windows	Operable with blinds - Maximize natural light		
Fire extinguisher & suppression	per code		

### **Special Requirements**

HVAC systems including Air Conditioning  
 Natural and indirect/direct Lighting

### **Technology**

Power outlet - floor and walls  
 Media projection system  
 Voice, video and data ports  
 Security  
 Portable sound system  
 Technology equipment per the district's technology plan  
 Wireless & Hard wired Network per the district's technology plan  
 Integrated public address system



## Educational Program Specifications - Music

### Program Objectives

The Arts have been identified by the U.S. Congress, the College Board, The Partnership for 21st Century Skills, the National Association of Secondary Principals, and the U.S. Department of Education as part of the core. Music education's mandate in contemporary American education, as stated by the Music Educator's National Conference, is to provide a varied, significant, and cumulative musical experience for every student. The Colebrook Consolidated School Music program offers diverse learning and performing opportunities in vocal and instrumental music. The program provides opportunities for all students to:

- Recognize the role and importance of music in their own lives and in their cultures
- Perform music from a wide variety of cultural and aesthetic perspectives
- Think critically and creatively
- Work collaboratively
- Develop self-discipline through practice and striving for excellence in their musical performances

### Program Activities to be accommodated

Students in grades K-6 participate in a variety of classes in music. Classes may include general music, instrumental music and chorus.

### Space Occupancy and Design Criteria

The individuals utilizing the space include students and music teacher. A special education paraprofessional or a teacher's aide may share space for the instruction of individuals with special needs. The following is a partial list of design elements that should be incorporated into the Music Classroom/rehearsal room spaces:

- The rehearsal room configuration should maximize flexibility for small and large groups.
- Access to technology should be provided throughout the individual and group instructional spaces.
- Digital projection systems should be utilized for visual display.
- Interactive whiteboards should be installed in all instructional areas.
- Ceiling height and windows should maximize natural light and accommodate the lighting.
- Cabinets and casework appropriate to the instructional rehearsal spaces should be provided.
- Special consideration should be given for sound transmission to minimize sound infiltration into the adjacent space.
- Speaker systems should be incorporated into all instructional spaces.
- Whiteboards, Tack boards and projection screens should be provided in each instructional space.
- Storage should be provided for student instruments.
- Sinks should be provided.
- Music instrument equipment storage cabinets should be provided.
- Computer workstations and data connections must be provided.
- Video recording equipment.
- Enhanced ventilation requirements.
- Ceiling heights appropriate to Band and Chorus rehearsal rooms should be provided.

### Existing Conditions

The music and art programs share the same space.

### Current Space Limitations:

Lack of instructional space and instrument and general storage space.



## **Educational Program Specifications - Art**

### **Program Objectives**

The Arts have been identified by the U.S. Congress, the College Board, The Partnership for 21<sup>st</sup> Century Skills, the National Association of Secondary Principals, and the U.S. Department of Education as part of the core curriculum which all students should take as part of their school program. The Colebrook Consolidated School Art program offers diverse learning opportunities in art. The program emphasizes problem solving, visual literacy and higher order thinking skills and offers all students the opportunity to:

Recognize the role and importance of art and artists in society, culture, and history  
Communicate visually  
Express their own feelings and ideas

Opportunities exist for students to display their artwork within the school, district, and the greater community. The arts play a profound role in learning. Experiences in the arts are basic to learning. The arts curriculum offers one way to formulate questions, construct knowledge, express meaning, and solve problems. The arts enhance language facility and the development of expressive skills. Self-esteem, social awareness, critical thinking, sensitivity to others, sensitivity to one's environment, and problem solving are all enhanced with the dynamics of arts infused approach.

### **Program Activities to be Accommodated**

The art classroom needs to accommodate all art instruction. Display cases for student work should be created throughout the school as well as an art exhibition space at the main entrance of the school

### **Space Occupancy and Design Criteria**

The space includes the students and art teacher. A special education paraprofessional, or a teacher's aide may share space for the instruction of individuals within the regular art classroom. The following is a partial list of design elements that should be incorporated into the studio spaces:

- The art classroom configuration should maximize flexibility and provide lecture as well as studio space.
- Access to technology should be provided through the studio.
- Digital projection systems should be utilized for visual display.
- Interactive whiteboards should be installed in all instructional areas.
- Ceiling height and windows should maximize natural light and accommodate daylighting.
- Cabinets and casework appropriate to the instructional function should be provided.
- Special consideration should be given for sound transmission at operable and standard walls to minimize sound infiltration into the adjacent space.
- Whiteboards, Tack boards and projection screens should be provided in each instructional space.
- Storage should be provided for ongoing student projects within the classroom and in storage room.
- Large deep sinks with clay-traps.
- Adjustable multi directional lighting.
- Enhanced ventilation requirements.
- Student display shelving in all studios.

### **Existing Conditions**

The art and music room share the same space.

### **Proposed Program and Concept Plan**

The educational program space outlined below is based on renovating the existing facility to meet the program objectives



## **Educational Program Specifications – General /Instrumental Music/Art Room**

Quantity: 1  
Proposed SF: 870 SF

### **Space Design Concept**

The general music/instrumental music/ art room will house the various levels of music, band and art instruction. An acoustically appropriate space with high ceilings large enough to accommodate 30 students. A lockable cabinet or closet to house equipment, conductor's chair, and podium, and built-in and lockable stereo equipment and tuner are needed. The classroom should be designed for an integrated approach to technology and multiple furniture arrangements Access to the multipurpose room will help to solve schedule conflicts.

### **Program Activities**

Support the instruction and practice of various levels of music and art programs. Display of student work and storage on ongoing projects and band instruments is required.

### **Loose Furnishings**

- Modular rectangular art tables with chairs
- Music stands w/ carts
- Program equipment
- Storage for music folders
- Chairs
- Mobile computer stations
- Teacher Desk and Chair
- Piano
- Lateral file cabinet

### **Fixed Equipment**

- Acoustical treatment
- Marker/white board
- Tack board & display boards
- Projection screen/surfaces
- Display and book shelves
- Tall wardrobe and storage cabinet
- Fixed cabinets and accessible work surfaces

### **Finishes**

floor material:	TBD		
base material:	TBD		
wall material:	TBD	finish:	TBD
ceiling material:	Acoustical Tile	height:	18'-0" minimum
hardware:	ada compliant		
lighting	multi level direct/indirect		
fire extinguisher & suppression	per code		

### **Special Requirements**

- Specialty lighting
- Deep sinks with clay traps
- HVAC systems including Air Conditioning
- Natural and indirect Lighting
- Operable windows
- Acoustical Controls and Sound Transmission

### **Technology**

- Power outlet - floor and walls
- Media projection system
- Smart boards
- Voice, video and data ports
- Security
- Portable sound system
- Technology equipment per the schools technology plan



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## **Educational Program Specifications – Media Center**

### **Program Objectives**

The mission of the media center is to ensure that students develop both an enjoyment of reading and the information gathering skills that enable them to be independent, effective, responsible, critical, and creative users of ideas and information. Data should be available in a variety of formats, including print, non-print, and electronic.

The media center also coordinates the use and maintenance of instructional equipment. The library will consist of student seating areas with tables and study carrels, technology areas for student access to computers and AV equipment, classroom areas for instruction, shelving and storage for materials, a circulation area, small group meeting area, production room, library staff offices and workroom, storage room for equipment, and a professional library area for teachers.

The media center will consist of a staff and student production area, offices for the media specialist, secured storage areas, and areas for copying and laminating.

### **Program Activities to be Accommodated**

The library will house individual and class research using/viewing print, non-print, and computer resources; student instruction and activities in classroom areas; student pleasure reading; circulation of materials; student copying and compilation of research; library staff processing of materials; storage of materials and equipment; and professional reading and research for teachers.

### **Space Occupancy and Design Criteria**

The library will have seating for up to 30 students, including space for a minimum of 10 computers, a small group meeting area, an office for the library media specialist.

The following is a partial list of design elements that should be incorporated into the spaces:

- The Media Center configuration should maximize flexibility and provide lecture as well as general seating and computer workstation space.
- Access to technology should be provided through the Media Center.
- Digital projection systems should be utilized for visual display.
- Interactive whiteboards should be installed in designated areas.
- Ceiling height and windows should maximize natural light and accommodate day-lighting.
- Cabinets and casework appropriate to the media center functions should be provided.
- Special consideration should be given for sound transmission.
- Speaker systems should be incorporated into designated instructional areas.
- Whiteboards, Tack boards and projection screens will be provided at each designated instructional areas
- Dedicated storage should be provided.
- Adjustable multi directional lighting.
- Enhanced ventilation requirements.
- The library workroom should be located near the circulation desk-and should have a sink. Maximum sight lines and visibility throughout the library space for supervision are needed.

### **Existing Conditions**

Significant air quality concerns since the library media center lacks adequate fresh air exchange.

### **Current Space Limitations:**

The library / Media Center lack amenities in the support spaces.



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### **Proposed Program and Concept Plan**

The educational program space outlined below is based on renovating the existing facility to meet the program objectives established for Colebrook Consolidated School.

### **Design Concept:**

The Media Center, storage, office and workrooms are located on a single level space with high ceiling, abundant natural light and easy access to the student and the community.

### **Program Requirements**

Student seating areas with tables and study carrels, technology areas for student access to computers and AV equipment, classroom areas for instruction, shelving and storage for materials, a circulation area, small group meeting area, storage room for equipment, and a professional library area for teachers.



## Educational Program Specifications - Media Center

Quantity: 1  
Proposed SF: 1200 SF

### Space Design Concept

The media center should be designed for an integrated approach to technology and multiple furniture arrangements and classroom configurations.

### Program Activities

The library will have seating for up to 30 students, including space for a minimum of 10 computers, a small group meeting area, office for the library media specialist; and professional library.

### Loose Furnishings

- Tables with chairs
- Circular tables for small groups with chairs
- Mobile computer stations
- Carrels
- Shelving

- Acoustical treatment
- Marker/white board (Multiple)
- Tack board & display boards
- Projection screen/surfaces
- Display and book shelves

### Finishes

- |                                 |   |         |     |
|---------------------------------|---|---------|-----|
| Floor material:                 | TBD   |         |     |
| Base material:                  | TBD   |         |     |
| Wall material:                  | TBD   | finish: | TBD |
| Ceiling material:               | Open ceiling                                  |         |     |
| Hardware:                       | ADA compliant                                 |         |     |
| Lighting                        | Multi level direct/indirect                   |         |     |
| Windows                         | Operable with blinds - Maximize natural light |         |     |
| Fire extinguisher & suppression | per code                                      |         |     |

### Special Requirements

- Specialty lighting
- HVAC systems including Air Conditioning
- Natural and indirect/direct Lighting
- Operable windows

### Technology

- Power outlet - floor and walls
  - Media projection system
  - Voice, video and data ports
  - Security
  - Portable sound system
  - Technology equipment
  - Wireless & Hard wired Network
  - Integrated public address system
- per the district's technology plan  
per the district's technology plan



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## Educational Program Specifications - Media Center Work Room and Office

Quantity: 1  
Proposed SF: 150 to 250 SF

### Space Design Concept

The office/workroom should be designed to accommodate the media specialists desk and the work/planning area, copier, limited equipment and secure media storage.

### Program Activities

Media specialist office including the planning and preparation area.

### Loose Furnishings

- Desks and Chair
- Computer stations
- Work table and Chair
- Lateral/vertical file cabinet

### Fixed Equipment

- Acoustical treatment
- Marker/white board (Multiple)
- Tack board & display boards
- Display and book shelves
- Tall wardrobe and storage cabinet
- Fixed cabinets and accessible work surfaces

### Finishes

Floor material:	Carpet		
Base material:	Vinyl		
Wall material:	Block / Sheetrock	finish:	Paint
Ceiling material:	Acoustical Tile	height:	8'-0" minimum
Hardware:	ADA compliant		
Lighting	Multi level direct/indirect		
Windows	Operable with blinds - Maximize natural light		
Fire extinguisher & suppression	per code		

### Special Requirements

- Specialty lighting
- HVAC systems including Air Conditioning
- Natural and indirect/direct Lighting
- Operable windows

### Technology

- Power outlet - floor and walls
  - Media projection system
  - Voice, video and data ports
  - Security
  - Portable sound system
  - Technology equipment
  - Wireless & Hard wired Network
  - Integrated public address system
- per the district's technology plan  
per the district's technology plan



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## **Educational Program Specifications - Media Center Storage**

Quantity: 1  
Proposed SF: 200 to 250 SF Each

### **Space Design Concept**

The storage should be designed to accommodate supplies, media storage and department specific equipment.

### **Program Activities**

Storage of educational materials.

### **Fixed Equipment**

Shelves  
Secure storage cabinet

### **Finishes**

Floor material:	VCT
Base material:	Vinyl
Wall material:	Block / Sheetrock
Wall Finish:	Paint
Ceiling material:	Acoustical Tile
Ceiling height:	8'-0" minimum
Hardware:	ADA compliant - Lockable
Lighting	Standard
Fire extinguisher & suppression	per code

### **Special Requirements**

HVAC systems

### **Technology**

Power outlet - walls  
Security



## Educational Program Specifications – Physical Education & Fitness

### Program Objectives

The physical education/health programs goal is to facilitate all students so that they can develop their physical capacities and capabilities in order to help them understand their strengths and weaknesses.

### Program Activities to be Accommodated

The facilities will accommodate physical education and athletic activities for the entire student population. The facilities required to achieve the department's goal for physical education/health and athletics, are identified below.

- Main gymnasium
- Storage for all equipment
- Outdoor Equipment Storage

### Space Occupancy and Design Criteria

The individual's utilization the space include the students and teacher, volunteers and the community. The following is a partial list of design elements that should be incorporated into the design of the PE spaces:

- The Gymnasiums should maximize flexibility.
- Access to technology should be provided through the instructional.
- Digital projection systems should be utilized for visual display.
- Ceiling height and windows should maximize natural light and accommodate day-lighting.
- Speaker systems should be incorporated into all instructional spaces.
- Adjustable multi directional lighting.
- Enhanced ventilation requirements.
- Natural light should be provided in the gymnasiums.
- Provisions for the storage of equipment for all sports activities.
- All facilities should meet Title IX requirements.

### Existing Conditions:

### Proposed Program and Concept Plan

The program developed for the Physical Education program is based on meeting the curriculum need of Colebrook Consolidated School. Right sizing the program areas, addressing ADA/OCR; and resolving the natural light environmental issues have been the programming priorities.



## Educational Program Specifications – Multi-Purpose Room /Cafeteria/Gymnasium

**Program Objectives/Goals:** The Colebrook Consolidated School Multi-Purpose Room serves a multitude of functions for the school and entire Colebrook community. The Multipurpose room should be designated as the cafeteria and assembly area the food service program is a vital part of today's educational service and is an integral part of the overall educational plan for a school facility program. Nutrition requirements based on a healthy diet, sufficient time for serving, and eating arrangements must be given a high priority as they contribute to the health and welfare of all students and staff. The dining area should accommodate a minimum of 50 students at a time. The Multi-Purpose Room should be designed as a comfortable and multifunctional space as it typically serves as a banquet facility, school activities venue, meeting room, and home to other after school and community activities. After school hours the town of Colebrook makes use of the room for Park and Recreation activities, Boy and Girl Scouts, large town meetings and location for the town emergency shelter.

The physical education/health programs goal is to facilitate all students so that they can develop their physical capacities and capabilities in order to help them understand their strengths and weaknesses.

The kitchen/food preparation area that will accommodate hot and cold meal serving lines is imperative. A separate washing/disposal area for elimination of waste and cleaning utensils should be maintained. This area should be readily accessible to the serving area for quick redistribution of food to the young students. There should be an access area for quick and convenient disposal of solid waste products and paper trash without distraction to diners or school traffic.

**Program Requirements and Activities-** The main school use for the Multi-purpose room would be to serve as cafeteria, gymnasium and assembly room.

- Technology – Whiteboard/Smart-board capabilities
- Sound System
- Main Gymnasium
- Storage space for cafeteria tables.
- Storage for all equipment

**Space Occupancy:** Daily students, kindergarten through grade six, eat lunch in 30 minute lunch waves. Currently there are 28 cafeteria tables to seat half of the student population during one lunch wave. The space should be designed as a flexible environment that is able to accommodate a number of lunch wave and appropriate assembly activities. The room is used as a gymnasium for physical education instruction. The room is also used for after school activities, athletic activities, scouts, town meetings, park and recreation and other community use activities. There is a need for three doors for entrance and exit as well as emergency exits; Windows are a necessary for natural light.

### Existing Conditions:

- Serves as the gymnasium, cafeteria, and a community room.
- Tile floor that is continually slippery for PE classes
- 10 cafeteria tables that are stored within the room even during PE classes
- Limited space for PE storage – old cold storage closet
- Storage of folding chairs
- Lack of adequate ventilation



## **Educational Program Specifications – Multi-Purpose Room /Cafeteria/Gymnasium**

Quantity: 1

Proposed SF: 3,300

### **Space Design Concept:**

The **Multi-purpose Room** should be designed for appropriate set up of the cafeteria tables for lunch, storage of the cafeteria tables when not in use, for a gymnasium, for an integrated approach to technology, and a physical space large enough for various learning tasks and gatherings.

- Infrastructure that supports and enhances current and future technology (including multiple outlets on walls)
- Furniture and equipment designed for multi-aged students and adults

### **Program Activities**

- The Colebrook Consolidated School Multi-Purpose serves a multitude of functions for the school and entire Colebrook community including the cafeteria, gymnasium and assemblies.

### **Loose Furnishings**

10 cafeteria tables with attached seating

2 rectangular tables

Portable gym equipment

### **Fixed Equipment**

Acoustical treatment

Marker/white board (Multiple)

Tack board & display boards

Projection screen/surfaces

Sound system

### **Finishes**

Floor material:

TBD

Base material:

TBD

Wall material:

TBD

finish:

Paint

Ceiling material:

Acoustical Tile

height:

TBD

Hardware:

ADA compliant

Lighting

Multi level direct/indirect

Windows

Operable with blinds - Maximize natural light

Fire extinguisher & suppression

per code

### **Special Requirements**

Specialty lighting

Basketball backboards.

Protection for all equipment

Drinking fountains

Provisions for floor scansions for volleyball and other sports

HVAC systems including Air Conditioning

Natural and indirect/direct Lighting

### **Technology**

Power outlet - floor and walls

Media projection system

Voice, video and data ports

Security

Sound system

Technology equipment

per the district's technology plan

Wireless & Hard wired Network

per the district's technology plan

Integrated public address system



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## **Educational Program Specifications – PE Storage**

Quantity: 2  
Proposed SF: 350 to 500 SF

### **Space Design Concept**

The storage should be designed to accommodate department specific equipment separated as indoor and outdoor equipment.

### **Program Activities**

Storage of PE Equipment.

### **Fixed Equipment**

Shelves

### **Finishes**

Floor material:	TBD
Base material:	TBD
Wall material:	TBD
Wall Finish:	Paint
Ceiling material:	TBD
Ceiling height:	TBD
Hardware:	ADA compliant - Lockable
Lighting	Standard
Fire extinguisher & suppression	per code

### **Special Requirements**

HVAC systems exhaust

### **Technology**

Power outlet - walls  
Security



**Educational Program Specifications – Kitchen & Servery**

Quantity: 1  
Proposed SF: 500 SF

**Space Design Concept**

An efficient commercial kitchen with appropriate support spaces.

**Program Activities**

Preparation and serving meals, primarily lunch.

**Loose Furnishings**

- Food preparation and serving utensils equipment
- Tables
- Portable carts
- Portable serving stations
- Portable hot and cold food storage units

Acoustical treatment

- Marker/white board (Multiple)
- Tack board & display boards

Acoustical Tile

- yes – Limited to the offices and planning areas
- yes

**Finishes**

- |                                 |   |         |       |
|---------------------------------|---|---------|-------|
| Floor material:                 | TBD   |         |       |
| Base material:                  | TBD   |         |       |
| Wall material:                  | TBD   | finish: | Paint |
| Ceiling material:               | Acoustical and Open ceiling                   |         |       |
| Hardware:                       | ADA compliant                                 |         |       |
| Lighting                        | Multi level direct/indirect                   |         |       |
| Windows                         | Operable with blinds - Maximize natural light |         |       |
| Fire extinguisher & suppression | per code                                      |         |       |

**Special Requirements**

- Specialty lighting
- Hand Sinks
- Food preparation equipment
- HVAC systems including Air Conditioning
- Natural and indirect/direct Lighting
- Power requirements for portable hot and cold food serving units

**Technology**

- Power outlet - walls
- Voice, video and data ports
- Security
- Technology equipment per the district's technology plan
- Wireless & Hard wired Network per the district's technology plan
- Integrated public address system



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## Educational Program Specifications – Kitchen Storage

Quantity: 3  
Proposed SF: 150 to 350 SF Depending on the specific use.

### Space Design Concept

The storage should be designed to accommodate supplies, food prep and service related products.

### Program Activities

Storage of food service related materials.

### Fixed Equipment

Shelves  
Secure storage cabinet

### Finishes

Floor material:	TBD
Base material:	TBD
Wall material:	TBD
Wall Finish:	Paint
Ceiling material:	Acoustical Tile
Ceiling height:	8'-0" minimum
Hardware:	ADA compliant - Lockable
Lighting	Standard
Fire extinguisher & suppression	per code

### Special Requirements

HVAC systems exhaust

### Technology

Power outlet - walls  
Security



### Educational Program Specifications – Administrative Offices

**Program Objectives/Goals:** The administrative offices will be designed to support the efficient operation of Colebrook Consolidated School. The administrative suite has space for the waiting and reception area, office area for two support/secretarial staff, the office of the school principal and the office of the district superintendent. The administrative offices should be located at the main school entrance and provide control for all visitors and students entering and leaving the school.

**Program Requirements and Activities:** The administrative facilities will accommodate offices, and other administrative support spaces including the following:

- Offices
- General & student record storage
- Secretarial stations
- Waiting Area
- Storage Space/ Closet

**Space Occupancy:** The administrative office space is utilized by the administration, faculty and staff, students, parents, volunteers and the community.

**Existing Conditions -** The existing office space is located at the existing entrance of the building and does pose a security risk. There is no secure vestibule. There is a small waiting area with the staff mailboxes in the same location. Student records are stored in the main room. The space is shared by the administrative assistant and the bookkeeper. The principal's office is adjacent to the office space. There is no superintendent's office in the facility.

**Space Design Concept:** The administrative office area provides space for the school's communication, organization and administrative functions.

- The main office entrance will lead all visitors to pass through a secure vestibule
- Built-in, fireproof cabinetry for student records and school documents
- Principal and superintendent office with built-in cabinets and meeting space
- Ceiling height and windows should maximize natural light and accommodate day-lighting
- Cabinets and secretarial workstations
- Waiting areas should be provided.
- Individualized temperature control for all spaces.
- Communication and video security control to all spaces and egress points.



## Educational Program Specifications – Principal’s Office/ Superintendent’s Office

Quantity: 2  
Proposed SF: 200 to 250 SF each

**Space Design Concept:** The office should be designed to allow visibility of central work area and include adequate space for a small conference/meeting area. Built in cabinetry and desk will support space organization

**Program Activities** - Administrative offices of the principal, superintendent and small meeting groups

### Loose Furnishings

- Conference table and chairs
- Computer station
- Desk and Chair
- Lateral file cabinet
- Book Shelves

### Fixed Equipment

- Acoustical treatment
- Tack board & display boards
- Book shelves
- Tall wardrobe and storage cabinet
- Fixed cabinets and accessible work surfaces

### Finishes

- |                                 |   |         |       |
|---------------------------------|---|---------|-------|
| Floor material:                 | Carpet  |         |       |
| Base material:                  | Vinyl   |         |       |
| Wall material:                  | Block / Sheetrock                             | finish: | Paint |
| Ceiling material:               | Acoustical                                    |         |       |
| Hardware:                       | ADA compliant                                 |         |       |
| Lighting                        | Multi level direct/indirect                   |         |       |
| Windows                         | Operable with blinds - Maximize natural light |         |       |
| Fire extinguisher & suppression | per code                                      |         |       |

### Special Requirements

- HVAC systems including Air Conditioning
- Natural and indirect/direct Lighting
- Operable windows

### Technology

- Power outlet - floor and walls
- Voice, video and data ports
- Security
- Technology equipment per the district’s technology plan
- Wireless & Hard wired Network per the district’s technology plan
- Integrated public address system
- Television hook-up





## Educational Program Specifications – Secretarial Area

Quantity: 1  
 Proposed SF: 500 to 600 SF (Room for administrative assistant and bookkeeper))

### Space Design Concept

The secretarial stations will be designed to facilitate efficient operations and planning functions of the school. The space should be open and inviting to all visitors, yet also provide privacy of records. Secure casework must be provided for storage of records and supplies. There should be a counter that designates the waiting area from the secretarial area.

### Program Activities

Support administrative staff and school operations.

### Loose Furnishings

- Computer Workstations with chair
- Work Tables
- Desk and Chair
- Lateral file cabinet
- Visitor Chairs
- Copy Machine

### Fixed Equipment

- Acoustical treatment
- Tack board & display boards
- Flag Bracket & Flag
- Display and book shelves

- Fixed cabinets and accessible work surfaces
- Staff Mailboxes

### Finishes

Floor material:	Carpet		
Base material:	Vinyl		
Wall material:	Block / Sheetrock	finish:	Paint
Ceiling material:	Acoustical Tile	height:	8'-0" minimum
Hardware:	ADA compliant		
Lighting	Multi level direct/indirect		
Windows	Operable with blinds - Maximize natural light		
Fire extinguisher & suppression	per code		

### Special Requirements

- Specialty lighting Task lighting
- HVAC systems including Air Conditioning
- Natural Lighting
- Operable windows

### Technology

- Power outlet - floor and walls
- Voice, video and data ports
- Security
- Technology equipment per the district's technology plan
- Wireless & Hard wired Network per the district's technology plan
- Integrated public address system
- Television hook-up





## **Educational Program Specifications – Health Office / Nurse**

**Program Objectives/Goals:** The elementary school health office works to maintain student health through screening performed during the school year, medicating and supporting students with health plans, and aiding and comforting ill or injured students. The nurse and health aide help students achieve and maintain high standards of health. The school nurse also acts as a resource person for health education programs, families, students and provides support to school personnel. The nurse should be involved in the coordination with special education students.

**Program Requirements and Activities:** - Currently Colebrook Consolidated School 95 students are serviced by fulltime nurse in the Health Office. The program encompasses many activities, including routine and special physical examinations, screening tests, vision and height/weight assessments, hearing assessments, scoliosis exam, and follow-up immunization against communicable disease.

- Supporting students with healthcare plans
- Responding to students with injuries or common illnesses
- Yearly screenings
- Maintaining student health records
- Verifies student health forms to ensure health of the community

**Space Occupancy:** The health office must have space for the following:

- Nurse's Office Space
- Waiting area for up to 5 students
- Area for children with infection who need to be isolated
- Handicapped accessible restroom with storage

**Existing Conditions:** The Health Room is currently made up of an office with one desk, all file cabinets and storage cabinets, and chairs for students who are waiting for help.



## Educational Program Specifications – Health Office

Quantity: 1

Proposed SF: 300

### Program Requirements

The Health Office should have adequate private space for health examinations, conferences with students/parents, rest, and isolation. An accessible toilet must be included in the overall health program area.

### Space Design Concept:

Student Records Vault

Waiting area for up to 5 students

Examination Area/Room (with dressing room) \*\* within the exam area/room- a separate area for medication pass and diabetics- currently there is no privacy for these students. Not only do other students walk in on them but parents and teachers \*

Sink & storage

Nurse’s Office Space – one desks

Isolation Space

Handicap Bathroom and sink

### Program Activities

Support the health and well-being of the Colebrook Consolidated School community

### Loose Furnishings:

1 Desk and Chairs

Waiting area chairs or bench

Bed

### Fixed Equipment

Marker/white board

Tall wardrobe and storage cabinets

Fixed cabinets and accessible work surfaces

### Finishes

floor material:	TBD	base material:	TBD
wall material:	TBD	finish:	TBD
ceiling material:	TBD	height:	8'-0" minimum
hardware:	ada compliant	lighting	multi level direct/indirect
fire extinguisher & suppression	per code		

### Special Requirements

Specialty lighting

HVAC systems including Air Conditioning

Natural and indirect Lighting

Operable windows

### Technology

Power outlet - floor and walls

Security

Technology equipment per the schools technology plan



## **Educational Program Specifications – Health Office Storage**

Quantity: 1  
Proposed SF: 150

### **Program Needs:**

Storage space for special needs equipment  
Locked storage for medical supplies  
Storage for extra clothing  
Fireproof file cabinets for student records

### **Program Activities**

Storage of health related equipment and secure medicine storage cabinet

### **Loose Furnishings**

Lateral file cabinet

### **Fixed Equipment**

Storage space for special needs equipment  
Medical supply storage  
Secure storage cabinet



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## **Educational Program Specifications – Faculty Lounge / Workroom**

**Program Objectives/Goals:** The Faculty Lounge / Workroom serves as a space for the teachers to collaborate, work, eat meals and prepare materials for students.

**Program Requirements and Activities:** The faculty and staff utilize this room to meet and collaborate in teams, prepare work for students, communicate with families by phone, and prepare and eat meals.

### **Faculty Lounge**

Appliances, seating, and room for adults to eat, and socialize  
Team collaboration

**Space Occupancy:** The 30 faculty and staff members use the space throughout the day and evening as well as PTO members and community members.

### **Existing Conditions:**

The room is a small kitchen space with a large table and 6 chairs.



## Educational Program Specifications – Faculty Lounge /Work Room

Quantity: 1  
Proposed SF: 400 SF

### Space Design Concept:

Faculty Lounge: A space with comfortable seating that teachers can use in their free or lunch time for informal discussions with co-workers.

- Appliance for refrigeration and preparation of food
- Table and chairs seating for at least 15 adults
- Private area for phone calls
- Comfortable seating for at least 5 – 6 adults
- Copy Machine
- Heavy Duty Laminator
- Large table for project work
- Seating

### Program Activities

Provide appropriate and comfortable area for break and lunch times and space for preparation of instructional materials.

### Loose Furnishings

#### Faculty Lounge

Circular table for small groups with chairs  
Comfortable Chairs

#### Fixed Equipment

Acoustical treatment  
Marker/white board (Multiple)  
Tack board & display boards  
Display and book shelves  
Fixed cabinets and accessible work surfaces

### Finishes

Floor material:	Tile		
Base material:	Vinyl		
Wall material:	Block / Sheetrock	finish:	Paint
Ceiling material:	Acoustical Tile	height:	8'-0" minimum
Hardware:	ADA compliant		
Lighting	Multi level direct/indirect		
Windows	Operable with blinds - Maximize natural light		
Fire extinguisher & suppression	per code		

### Special Requirements

HVAC systems including Air Conditioning

### Technology

Power outlet - floor and walls  
Voice, video and data ports  
Security  
Technology equipment  
Wireless & Hard wired Network  
Integrated public address system



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## **Educational Program Specifications – Faculty Lounge/Workroom Storage**

Quantity: 1

Proposed SF: 150 to 250 SF Each

### **Program Activities**

Storage of food and eating materials

Storage of food and educational materials

### **Loose Furnishings**

Refrigerator

Copiers

Laminators

Work table and chairs

Bookcases

### **Fixed Equipment**

Storage space

Storage cabinet

Storage space for each teacher's materials

Curriculum material shelves

Secure storage cabinet

### **Technology**

Power outlet – wall



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## **Educational Program Specifications – Facilities Management and Support**

### **Program Objectives**

The physical plant and building systems infrastructure at Colebrook Consolidated School must meet the latest building, Fire and Life Safety codes adopted by the State of Connecticut. In addition the renovated facility must meet and/or exceed the High Performance building standards adopted by the State, and achieve a LEED Silver or equivalent certification. Alternative energy systems, energy efficiency and sustainable design solutions, should be implemented in the development of the project to attain the communities goal of environmental stewardship.

### **Program Activities to be Accommodated**

The facilities management department is responsible for the maintenance of Colebrook Consolidated School and will address the building systems and spaces identified below:

- Main Boiler Plant
- Emergency Generator
- Electrical Service and distribution
- Power Backup Systems
- Domestic Hot and Cold Water Systems
- Heating, Ventilation and Air Conditioning
- Fire Alarm Systems
- Sprinkler Systems
- Waste Water Systems
- Storm Drainage Systems
- Alternative Energy Systems
- Plant Maintenance / Custodial
- Building Receiving and Storage
- Equipment Storage
- Toilet Facilities
- Janitors Closets
- Maintenance Area
- Custodial Work room
- Building and Grounds

### **Space Occupancy and Design Criteria**

The individuals utilizing the facilities management and maintenance spaces include custodians and building engineers and contract staff, and school administration. The following is a partial list of design elements that will be incorporated into the design of the Building Systems:

- **Fire Protection Systems**
  - The existing service entrances are recommended to be retained and reconfigured for final special layout.
  - A sprinkler system distribution is to be configured based on final special layout.
  - Complete system is recommended to be recertified at project completion.
- **Plumbing Systems**
  - Replace existing domestic cold water mains and modify service entrance for new special layout as needed.
- **Sanitary Service**
  - Completely camera survey exiting sanitary network in conjunction with complete cleaning of all pipes.
  - Reconfigure pipes to accommodate new special layouts.
- **Storm System**



- Completely camera survey existing storm network in conjunction with complete cleaning of all pipes to accommodate adding and connecting new risers.
- **Domestic Hot Water**
  - Provide centralized domestic hot water production for facility.
  - Replace all existing domestic hot water mains as needed.
- **Heating**
- **Ventilation**
  - Provide air conditioning in all spaces.
  - All major spaces to receive new roof mounted air handling units.
  - Each individual space to be provided with variable air volume air conditioning. The building to be provided with high efficiency centralized air conditioning network. Central chiller preferred. Alternates systems to be evaluated.
  - Replace all exhaust fans.
  - Replace all existing exhaust ductwork.
  - Replace temperature control system throughout with electric/electronic.
- **Electrical Systems**
  - Replace all existing electrical panels prior >91.
  - Allow for replacing of all lighting in school with energy efficiency lighting.
  - Modify existing telephone system for new layouts.
  - Modify clocks for new layouts.
  - Provide new fire alarm throughout facilities (expand existing network).
- **Security System**
  - Upgrade existing system to comply with state standards.
- **Technology Infrastructure**
  - Install an updated wired and wireless infrastructure throughout the facility

**Existing Conditions:** The current condition of the building systems are described in the updated facilities study.

### **Current Space Limitations:**

Lack of dispersed storage space through all areas of the building.

### **Proposed Program and Concept Plan**

The program developed for the Building maintenance and support facilities is based on meeting the latest codes and the space requirements of the energy's systems that will be designed for Colebrook Consolidated School. Addressing ADA/OCR and resolving the natural light environmental issues will be programming priorities. The proposed plan will provide the opportunity for additional storage.

### **Design Concept:**

The design approach reorganizes the existing program to meet the following priorities:

- Provide dispersed space for general storage, janitor's closet and mechanical equipment.
- The use of smaller energy efficient equipment will reduce the boiler plant footprint and increase general storage capacity.
- Toilet facilities will be renovated and made accessible throughout the facility.

### **Program Requirements**

The key spaces requirements of the Facilities Management office includes, space for the building MEP & FP Systems, Storage, Maintenance department space, building circulation and toilets.



## Educational Program Specifications – Maintenance Office & Workroom

Quantity: 1  
 Proposed SF: 200 to 300 SF

### Space Design Concept

The maintenance office and work room space should be centrally located. The space will function as a meeting room for the custodial staff and will house maintenance related equipment.

### Program Activities

Planning and support area for the maintenance staff.

### Loose Furnishings

Extension ladder	Custodial carts	
Computer stations	Thirty foot man lift	Flat cart
Lateral and Vertical file cabinet	Pallet jack	Vacuum Cleaners
Workbench with Vise	Desk Mover	Floor Machines
Maintenance Tools	Hand Truck	First Aid Kit
Stepladders	Floor Fans	Sweepers

Acoustical treatment  
 Marker/white board (Multiple)  
 Tack board & display boards  
 Book shelves  
 Storage cabinet  
 Fixed cabinets and accessible work surfaces  
 Sink

### Finishes

Floor material:	VCT / VET		
Base material:	Vinyl		
Wall material:	Block / Sheetrock	finish:	Paint
Ceiling material:	Acoustical ceiling		
Hardware:	ADA compliant		
Lighting	Standard		
Windows	Maximize natural light		
Fire extinguisher & suppression	per code		

### Special Requirements

Specialty lighting  
 HVAC systems including Air Conditioning  
 Natural and indirect/direct Lighting

### Technology

Power outlet - floor and walls  
 Voice, video and data ports  
 Security  
 Technology equipment per the district's technology plan  
 Wireless & Hard wired Network per the district's technology plan  
 Integrated public address system



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## **Educational Program Specifications – Maintenance Storage**

Quantity: 2

Proposed SF: 150 to 500 SF Each

### **Space Design Concept**

Storage rooms shall be provided throughout the school. The larger storage areas should be located adjacent to the custodial work room and the boiler plant. Chemical and combustible material storage should be in appropriately rated and vented rooms and cabinets. Equipment that uses gasoline should be stored in rooms with direct access to the exterior and in fire rated rooms.

### **Program Activities**

Storage of maintenance related supplies and equipment.

### **Loose Furnishings**

Industrial Shelves

Chemical Storage Cabinets

### **Fixed Equipment**

Acoustical treatment

Tack board & display boards

Storage cabinet

Fixed cabinets and accessible work surfaces

### **Finishes**

Floor material:

Concrete

Base material:

N/A

Wall material:

Block / Sheetrock

Ceiling material:

Sheetrock

Hardware:

ADA compliant

Lighting

Standard

Windows

no

Fire extinguisher & suppression

per code

height: finish: Paint  
10'-0" minimum

### **Special Requirements**

Explosion proof fixtures

HVAC systems including Air Conditioning

### **Technology**

Power outlet - floor and walls

Voice, video and data ports

Security

Integrated public address system



## Educational Program Specifications – Facilities Boiler Plant

Quantity: 1  
Proposed SF: 500 SF

### Space Design Concept

The boiler room will house the heating equipment for the operation of the school.

### Program Activities

Mechanical room for boiler plant operation.

### Loose Furnishings

Safety equipment  
First Aid Kit

### Finishes

Floor material:	Concrete		
Base material:	None		
Wall material:	Block / Sheetrock	finish:	Paint
Ceiling material:	None		
Hardware:	ADA compliant		
Lighting	Utility Standard		
Windows	No		
Fire extinguisher & suppression	per code		

### Special Requirements

Ventilation of equipment per code

### Technology

Power outlet - floor and walls  
Voice and data ports  
Security  
Technology equipment  
Wireless & Hard wired Network  
Integrated public address system



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## **Educational Program Specifications – Sprinkler Room**

Quantity: 1  
Proposed SF: 250 to 300 SF

### **Space Design Concept**

Sprinkler room for the fire suppression system

### **Program Activities**

Mechanical equipment space

### **Loose Furnishings**

None

### **Finishes**

Floor material:	Concrete		
Base material:	None		
Wall material:	Block / Sheetrock	finish:	Paint
Ceiling material:	None		
Hardware:	ADA compliant		
Lighting	Utility Standard		
Windows	No		
Fire extinguisher & suppression	per code		

### **Special Requirements**

Ventilation of equipment per code  
Area drain in dock recess area

### **Technology**

Power outlet - floor and walls  
Voice and data ports  
Security  
Technology equipment  
Wireless & Hard wired Network  
Integrated public address system



## Educational Program Specifications – General Toilets and Janitors Closets

Quantity: 2  
Proposed SF: 150 to 750 SF

### Space Design Concept

The toilets should be located in pairs with a boys and girls toilet. Additional toilets will be located in proximity to the assembly spaces such as the auditorium and gymnasiums etc. All Toilets will be accessible with a HC stall. Kindergarten and Pre-Kindergarten classrooms will include individual toilets.

### Program Activities

Rest room for all occupants

### Loose Furnishings

Toilet accessories such as soap, toilet paper etc.

### Fixed Equipment

Acoustical treatment  
Toilet accessories  
Toilet Partitions  
Accessible counter surfaces

### Finishes

Floor material:	Ceramic Tile	
Base material:	Ceramic Tile 6 feet high minimum	
Wall material:	Block / Tile	finish: Ceramic Tile
Ceiling material:	Moisture resistant Acoustical Tile	height: 8'-0" minimum
Hardware:	ADA compliant	
Lighting	Multi-level direct	
Windows	Translucent - Maximize natural light	
Fire extinguisher & suppression	per code	

### Special Requirements

HVAC systems including Air Conditioning  
Sensor activated  
Floor drains  
Changing tables in specific toilets

### Technology

Power outlet - walls  
Security  
Wireless & Hard wired Network  
Integrated public address system



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**Educational Program Specifications – General Building Envelope**

**Design Concept**

The building envelope consists of the exterior wall, window system, and roof.

**Special Requirements**

- Roof pitch with a 1/2" per foot slope
- White reflective roof
- Energy efficient triple pane windows – Window type Hoppers/Awning and/or Sliders
- Sunshade devices will be installed
- Additional insulation of exterior wall if feasible.
- Photovoltaic panels at designated areas of the building.

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PLANNING CONCEPTS



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## Planning Concepts

### Energy Conservation and Sustainable Design

With a goal of educating future global leaders, renovations and additions to the Colebrook Consolidated School have the opportunity to become examples and a teaching tool to future stewards of the environment. Through the renovation of the facility, the school can improve the impact on the environment and reduce operating costs while educating staff, students & community members on the values of sustainable or “green” design. With careful planning, a building and an educational program can come together to teach students the value of their environment, and their own impact on our ecological future. By raising students’ awareness of their surroundings and the impact of human actions on the environment, schools have the opportunity, in a single building program, to create a sense of environmental citizenship that will influence their students well beyond the classroom walls. There is no standard sustainable formula that can be applied to every expanded or new school facility under construction, however, the goals outlined below can assist schools in developing a green plan that best represents and serves its community.

#### Low Environmental Impact

Maximizing the benefits of a building site can help facilities on a variety of levels. From preserving native landscape to effective storm water and wastewater management, a thoughtful building plan can lessen a facility’s impact on the original environment of a school site. Even the color of roof and paving surfaces can impact the energy usage of the facility. Sound site design strategies are not only good for the environment; they can also provide opportunities for students to learn about native plant and animal species, effective water management and other important green concepts. *The Colebrook Consolidated project design team has incorporated energy conservation strategies into the design and if this project moves forward, the design team will work with the school staff to integrate the sustainable and energy conservation concepts into the curriculum.*

#### Environmental Quality

Preserving the natural environment also translates to maintaining an elementary environmental quality within school facilities. Indoor Air Quality (IAQ) is just one element of the building environment that affects students, teachers and staff. In fact, many school districts have closed facilities due to health concerns that center on the real or perceived air quality within a building. Several environmental strategies, from the use of non-toxic materials to the types of natural and mechanical ventilation, have been proven to greatly increase the air quality within schools. ***This is particularly important to the Colebrook Consolidated School project due to the lack of a mechanically operated ventilation system.***

#### Sustainable Ideas in Education

Buildings are typically thought of as shelter for our activities; however, as buildings work to preserve our environment, they also become invaluable teaching tools. With the combination of modern technology and well designed “green” buildings students can learn: How much carbon is emitted into the atmosphere when we turn on a light switch? How much energy can we derive directly from the sun? How does air flow through a building and provide natural ventilation? Students can learn the answers to these and many other questions through the use of building control systems linked to in-house audio-visual equipment that provide real-time feedback to students on the building systems as they wander the halls of their school.

In the end, green architecture succeeds on many levels -from improving educational environments, enhancing curriculum, and reducing operating costs to preserving our rapidly depleting natural resources. Taking the time to initiate and maintain a green plan demonstrates a commitment to our students’ future. *The QA design team has evaluated the Colebrook Consolidated School Project for a LEED – Leadership in Energy and Environmental Design, certification and will work with the Town and Board of Education leadership to develop a LEED Silver or Better rating for CCS.*



### Energy Reduction

Reducing the amount of energy consumed by a facility preserves the environment while also reducing operating costs over a building's life cycle. Along these lines green buildings offer an opportunity to optimize the indoor environment by using daylight as the primary source of illumination. Studies demonstrate dramatic test score increases and other student benefits in schools that incorporate sound day lighting strategies versus those that rely heavily on artificial lighting and provide minimal or no daylight. Powerful computer software allow architects and engineers to carefully design and test building facades with window sizes and placement that effectively bring daylight into the interior of a building and reduce the reliance on artificial lights. As the cost of artificially lighting an average school can amount to approximately one-third of the overall energy usage, day lighting represents a sound investment in both reduced energy costs and improved student performance. *The design team recommends several energy reduction measures including Photovoltaic Panels. The analysis of any alternative systems must include a pay-back calculation that will help the Town Leadership to select the most cost effective system.*

The replacement of existing building systems will provide an opportunity to introduce high efficiency systems for heating, cooling and ventilation. Currently there are a number of inefficient window air-conditioning units that would be replaced with a centralized system. The new code requirements for increased outside air will result in an increase in energy consumption as the air must be tempered prior to circulation. The installation of energy efficient systems, including LED lighting will off-set the increased energy demands brought on by technology utilization and building and health codes



## Codes - Building, Life Safety and ADA

All proposed projects, including the Alterations or “Renovate-as-New” approach at Colebrook Consolidated School will address all code deficiencies that are currently identified in this report as well as Office of Civil Rights (OCR) and ADA violations. Once completed, the renovated facility will meet all the latest codes. The Bureau of School Facilities review will be based on the following:

### CONNECTICUT STATE DEPARTMENT OF EDUCATION (SDE) BUREAU OF SCHOOL FACILITIES (BFU)

#### GENERAL CODE OVERVIEW

##### CURRENT FIRE SAFETY CODE

Section 29-292-10e;

(a) The provisions of Part I, Part II and Part V of this code shall apply to all occupancies and uses located within a building or structure.

(b) The provisions of Part III of this code shall apply to: (1) The design and construction of new buildings and structures, and (2) Buildings undergoing repairs, alterations and additions, and (3) Buildings and structures undergoing a change of occupancy or use as specified in section 29-292-11e of the regulations of Connecticut State Agencies. (4) For existing occupancies subject to an abatement order for violations of Part IV of this code, only new fire protection, electrical and mechanical system work shall be subject to the requirements of Part III.

(c) The provisions of Part IV of this code shall only apply to existing occupancies and uses located within existing buildings and structures.

##### CURRENT BUILDING CODE

Section 101.2. The provisions of this code shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures. (see exception for existing buildings option).

**Note** that under Section 102.2, the provisions of this code shall not be deemed to nullify any provisions of local, state or federal law.

##### FEDERAL ACCESSIBILITY LAWS

**Program accessibility** is required in an existing designated school (an existing building is one where the groundbreaking was before June 3, 1977). The district may comply through such means as redesign of equipment, reassignment of classes or other services to accessible buildings, assignment of aides to beneficiaries, home visits, delivery of health, welfare, or other social services at alternate accessible sites, alteration of existing facilities and construction of new facilities in conformance with the requirements of 34 C.F.R. Section 104.23, or any other methods that result in making its programs or activities accessible to handicapped persons.

If the groundbreaking was after June 3, 1977, federal law defines it as a new building and it should have been constructed to the appropriate code at the time. The current state building code and federal accessibility regulations require that all new work be accessible to persons with disabilities. **Note that state codes or waivers do not take precedence over federal requirements.**

Federal law required districts to complete a **self-evaluation** and **transition plan**. Included in this plan is a derived percentage of designated buildings. If this has not been done, SDE recommends that a minimum of 50 percent of an LEA's schools of each type be designated accessible for persons with disabilities, i.e., complete accessible routes and programs per Section 504 of Rehabilitation Act of 1973.

The **deadline for compliance** with Section 504, Rehabilitation Act of 1973 was **June 3, 1980**.

The **deadline for compliance** with the Americans with Disabilities Act was **January 26, 1995**.

Regardless of the effective dates, all programs shall be accessible to, and usable by persons with disabilities.



### **FEDERAL ACCESSIBILITY LAWS (cont.)**

Refer to the Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities: Building Elements Designed for children's use; Final Rule (Federal Register January 13, 1998) for **children's dimensions and anthropometrics** (concentrating on the "Primary User Group" of the element).

**Title IX** prohibits discrimination on the basis of sex in any educational program or activity receiving federal financial assistance.

### **STATE DEPARTMENT OF CONSUMER PROTECTION**

Miscellaneous equipment

Furnishings

Professional licensing.

Public playground regulations

### **U.S. CONSUMER PRODUCT SAFETY COMMISSION**

Playground equipment (refer to Section 9 of this manual).

Guidelines and recommendations for retrofitting bleachers.

### **FIRE EVACUATION PLAN**

A fire evacuation plan for each floor (posted in the corridors) of each school shall be established for all students, staff, and general public in conjunction with and approved by the local fire marshal. The fire evacuation plan must include provisions for persons with disabilities and be in concert with the required "Public Entities' Policies and Procedures to Evacuate" (persons with disabilities). Review your plan with the local authorities.

**SEE SECTIONS 3 and 6** for specific requirements for the:

Department of Public Safety (Fire Code and Building Code)

Department of Environmental Protection

Department of Public Health

Department of Transportation (State Traffic Commission)

Department of Labor

Federal Accessibility Laws



## **Technology**

Technology is a key element in all contemporary schools. Just as technology is reshaping other institutions, it offers schools exciting new ways not only to meet student/learner needs but also to manage facility operations. Technology's impact on the instructional environment should be reflected in the design of the facilities by accommodating technology infrastructure systems that account for advancements in both wired and wireless technologies. At Colebrook Consolidated School, in particular, a wireless network will enable students to access the internet from anywhere within the school.

New technology and interactive tools supporting collaborative activities over the Internet are impacting facility power and data requirements. As educators, teachers, and students are developing new Internet resources, school facilities must be prepared to accommodate instant access to the World Wide Web. To accommodate this growing use of technology, each and every room in the new addition should be considered a potential learning environment. The phasing of any additions will also require the continued accommodation of new technologies as they become more available, affordable and accessible for students, staff and administrators. Access to areas of technology concentration for afterhours use by students and community is also a consideration for the design team. Informal spaces such as the Gymnasium, Hallways or the Lobby Spaces at the entrance should also be equipped with the potential for network connections and support impromptu learning opportunities.

It will be important for the design team to coordinate with the school's technology staff, working closely to identify facility design opportunities that support the use of instructional technologies. Examples of areas to discuss with the technology director are: access to power and data, controllable light levels, spaces equipped for independent and/or self-directed instruction, and mechanical systems that will accommodate a potential heat gain from increased number of sources (computers, monitors, electronic music and recordings systems etc.).

To further the idea that the entire facility is a learning environment, the design of the building should also allow the possibility for digital expression, both audio & digital. While it is customary for classrooms to have a large format monitor, TV or LCD projector, other opportunities include monitors or projection capabilities in small group rooms, informal student spaces, performance spaces, dining rooms and public spaces.

The challenge with integrating instructional technologies into the design of an educational facility is directly linked to the magnitude of technological changes likely to occur over the next 25 years. Any new spaces will successfully meet this challenge by acknowledging the many possibilities of technology and providing the agility to accommodate them.



## Safety and Security

The successful creation of a safe and secure learning environment depends on the integration of “active” and “passive” design strategies. The active approach uses hardware security systems such as cameras or motion detectors. Passive security is based on program and facility design, building and site configuration, and community participation.

Other potential safety and security concerns must be evaluated in the early design stages. An example on the Colebrook Consolidated School project includes the separation of proposed student educational spaces from areas that would be open after hours for the community and the secure, planning must take into account the secure separation

Still other means including passive measures for program and building configuration can be the primary means to foster safety and security while active security measures are applied where and when they are deemed necessary. In addition, the new program space at the Colebrook Consolidated school can take advantage of building technology, signage and landscaping to further enhance site and building security.

Passive Security Concepts Include but are not limited to;

- Room organization that minimizes student travel time throughout the building
- Well defined entrances and exit only areas
- Planning that avoids blind spots, un-necessary corners, and corridor recesses greater than one foot
- Locating administrative and teacher preparation areas or offices with good visual contact of major circulation areas [i.e., corridors, bus drop-off, parking]
- Locating actively programmed elements around the periphery of the school building so that there is “natural surveillance” from within the school to outdoor areas such as parking lots and playfields.
- Minimizing windowless, blank walls at the periphery of the building, particularly when these uses face residential areas, and parking lots.
- Planning spatial relationships in such a manner that there are natural transitions from one location to another.
- Locating restrooms in close proximity to teach and instructional rooms to minimize students wandering the halls.
- Locating areas likely to have significant community [after school] use close to parking and zoned so these areas can be closed off from the rest of the building
- Providing for natural integration of students and staff during class changes
- Providing a high degree of ‘transparency’ within the building.
- Creating Secure Vestibules at all major points of access to the building.

Active Security Concepts Include but are not Limited to;

- A security system design that identifies all device locations for internal and external building zoning.
- A security system that will include a provision for accessing cameras and recorded data remotely in the event the building was to become inaccessible.
- An auto-connecting system to police and fire authorities when an alarm is tripped is advisable.

Uses of Technology Include but are not limited to;

- Providing phones in every instructional and support area
- Building-wide public address system designed to be heard throughout the school and on the play fields when needed



- Motion or infra-red detectors which can also be configured to conserve lighting costs
- Video cameras that are used for instructional purposes could also be used for security and risk management purposes during non-school hours

Site Planning, Vehicular and Pedestrian Traffic Concepts Include but are not limited to;

- The addition envelope should be sensitive to how it responds to the proximity of pedestrian walkways. (Consider window size and location, climbing access to the roof, etc.)
- Clear signage to indicate public entries with easily controllable entry lobbies.
- A bus drop-off area separated from other vehicular traffic
- Separate student, staff and community parking areas
- Separate student [pedestrian] site circulation flow from roadways
- Landscaping and Lighting
- The use of trees and low bushes [less than 3 feet high] to deter hiding
- General, non-intrusive site lighting of all parking, pedestrian and entry areas
- General exterior building lighting and illuminate public areas, window areas and potentially dark corners or surfaces
- Security lighting at selected building and parking lots with photocell timer with on/off capacity
- Separate athletic fields from informal gathering areas
- Locate athletic facilities away from building, isolated by fences



## Furniture and Equipment

The planning for Colebrook Consolidated School's renovation and expansion must also take into account FF&E. The implementation of a furniture program is critical in the success of the school facility, a process that brings closure to facilities planning by ensuring that the facility and its furnishings compliment and connect with the school's educational goals. Expectations for academic programs and community life translate into extended hours of usage and performance requirements for facilities and furnishings. Integration of furniture planning with the building design supports: Student-centered decision making; Flexible, program driven facilities; A variety of teaching practices; Technology integrated with learning; Formal and informal interaction, promoting teams and community; Increasing requirements for flexibility, agility, and multi-function; A recognition that schools in competition for students and teachers necessitate a consistent image and real benefits for the learner.

Several strategies enable furniture and facilities to support the education process: Plan ahead: To avoid planning disconnects, furniture scope and concepts need to be planned with the initial stages of a project. This allows the school to maintain control over budget, schedule, the physical coordination between facilities and furniture and more importantly allows the spaces to work as planned. Recognize that people work in different modes throughout the day: Flexible and adaptive furniture should meet needs for varying teaching and learning styles.

Understand the need for connectivity to technology is increasing. Smaller computers and powerful networks allow a whole classroom to be connected at once. Furniture needs to accommodate computers at times and hands-on project work at others. Students with laptops and handheld devices require connectivity in locations previously unconsidered: informal benches, courtyards, or common space such as the lobby or gallery area. Furniture can address ergonomic issues that promote student well-being: Seating concepts should relate to desk concepts. Modular and adjustable furniture should meet ergonomic needs of individual users. Flexible / agile / multi-functional: Furniture that can meet several needs will stretch the budget, increase functionality, and potentially open floor area within the facility. In addition to specifying modular furniture within one room, opportunities to share furniture within the building should be explored, keeping in mind that furniture for 21st century schools must respond to ever-changing performance requirements. Don't forget about public areas: Furniture can support informal learning. Lounge seating with tablet arms, furniture with wheels to encourage impromptu arrangements, and café tables can all reinforce student interaction.



## **Community Use**

Colebrook Consolidated School is a true community facility typical to most 21st century learning centers. As one evaluates the use of the public zone of the building it is clear that although education is the primary use, community events in the gymnasium, media center and athletic field are extensive. Therefore it is imperative that the planning and development of the Colebrook Consolidated School renovation and/or addition project to take into consideration how the community will use the facility after school hours.

Planning concepts should include the following:

The gymnasium and media spaces must facilitate the movement from the parking areas during educational and community events, providing direct access from the major parking areas.

A large gathering area must serve as pre-function space for users prior to and exiting a sports or other community events.

Performance and support functions must be available for community groups without compromising the security of the overall facility.



### Flexibility and Agility

Understanding that change is a constant for school facilities, the design of the renovated Colebrook Consolidated School must be flexible and agile. The spaces should be equipped with the necessary tools and furniture to encourage collaboration, self-directed learning and the many varieties of teaching, exploration and discovery that are the trademark of superior and healthy educational environments. To accommodate the ever changing world of educational theory, these environments have the power to change not just year-to-year but day-to-day.

In support of this dynamic and agile learning environment all elements of the renovated facility should be designed to support possible re-configurations of its interior space. These design elements could include, but are not limited to:

Interior partitions that are de-mountable or non-load bearing

Using circulation areas as potential break-out spaces.

Creating space that can adapt to a variety of teaching and learning styles (lecture, team work, self-directed, individual).

While all of these traits provide one level of flexibility, perhaps a much more important level of flexibility would be demonstrated in a facility that allows for different curricular models to exist without the reconfiguration of existing space.

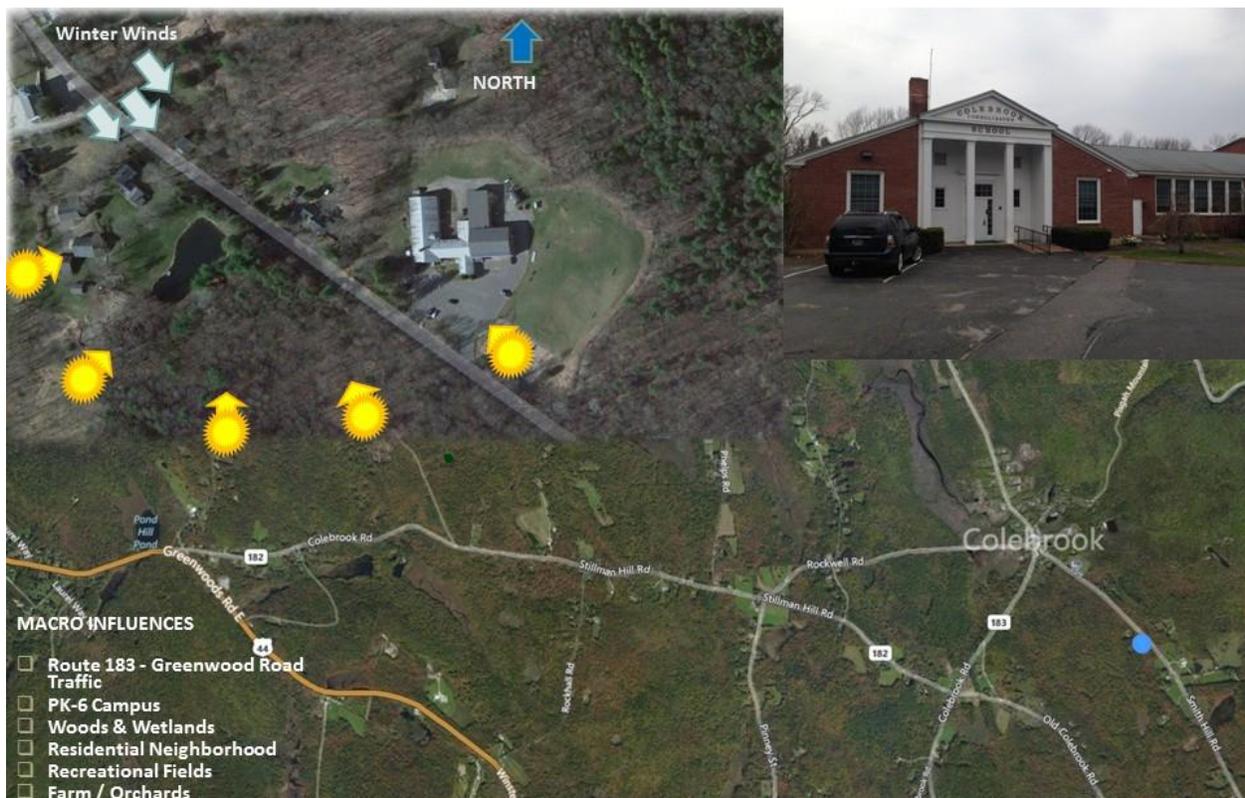


## Site Analysis / Evaluation

Colebrook Consolidated School is located on 13 acres off Smith Hill Road in Colebrook Connecticut. The site is bounded by single family residential zones on the north, and west boundaries and a wooded corridor on the east property line. The site is tiered with the high point at the entrance on Smith Hill Road, sloping down to the main entry. The site slopes to the north with a second plateau at the community/gymnasium entrance and finally the low point at the woods behind the school. The elevation change is approximately 12 feet. There is one point of access to the site, which are the main entrance and egress drives off Smith Hill Road which is the bus drop off and the parent drop-off.

The site access creates a parking zones on the south side of the site with designated visitor, handicapped accessible and general parking. The first is a north south strip on the east side of the site, which is primarily accessed from Smith Hill road. The service access to the Kitchen is on the west side of the building.

## Site Circulation



Parking and traffic circulation is an important aspect of project planning. Due to the limited enrollment at the elementary school there are minimal parking problems at Colebrook Consolidated school. Currently, the elementary school site has approximately 36 parking spaces which includes 2 HC Accessible spaces. There is space for additional parking spaces on the northeast side of the building adjacent to the service access. There is a need for informal parking for events which can be accommodated by reconfiguring the existing parking areas to increase parking efficiency and to improve vehicular circulation. The existing bus loading/drop-off zone along the main entrance and the parent drop-off area need to be clearly defined to improve site safety. The elementary school renovation and addition project will not require approval from the State Traffic Commission due to the size of this facility and parking.

# Colebrook Consolidated School

## Educational Specifications

January 7, 2015



A key aspect to the site improvement is the provision for full accessibility of all fields, bleachers etc. This is particularly important to the north side of the building where there is a four to six feet change in elevation. Accessible routes to home and visitor bleachers, the playground and playscapes must be addressed.

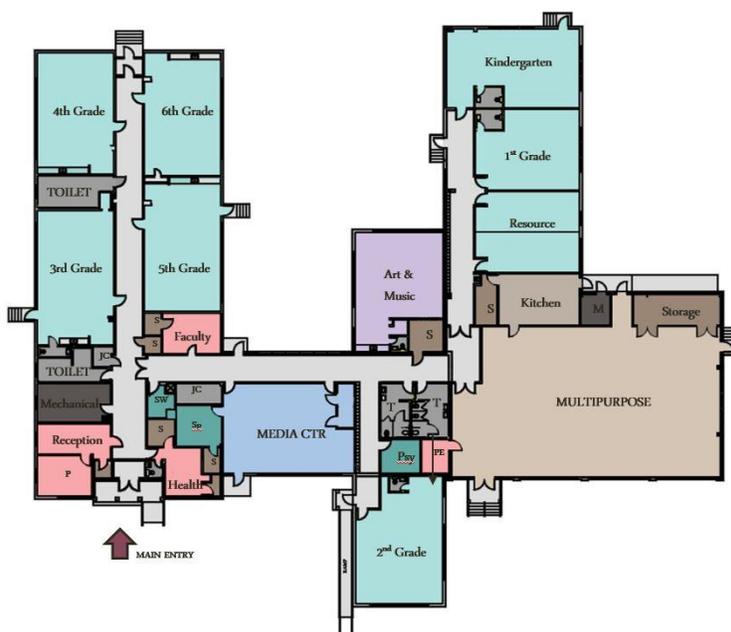




## Concept Designs

At the conclusion of the study process, Quisenberry Arcari, along with the Building Committee and School Leadership finalized the attached concept designs. They reflect several weeks of fast-paced, intensive collaboration between the projects' leadership, faculty, staff, and other constituencies including the QA Architectural team. The facility concept design priorities include;

1. A facility that is fully accessible to all individuals with disabilities. – Priority One
2. A facility that is code compliant and meets all building and fire codes, addresses life safety requirements and health codes. – Priority One
3. Update the mechanical (HVAC), electrical, plumbing and fire protection systems. – Priority One
4. Replacement of the septic system. - Priority One
5. Improve and implement safety and security measures throughout the facility. – Priority One
6. Roof Replacement – Priority Two
7. Space adjacencies that enhance / improve intra-departmental communications and teacher collaboration. – Priority Two
8. Simplification of internal building circulation. – Priority Two
9. Right sizing classrooms to accommodate the class sizes. – Priority Two
10. Improve the efficiency of the existing space utilization and provide flexibility of instructional spaces. – Priority Two
11. Reorganize and develop academic programs around 21<sup>st</sup> Century educational pedagogy. – Priority Two
12. Develop a ubiquitous technology environment. – Priority Two
13. Develop a plan that optimizes energy savings and infuses sustainable design principals in all aspects of the facility. – Priority Two
14. Develop the building as an educational tool that incorporates the building infrastructure, energy management systems and sustainable design principals into the curriculum. – Priority Two
15. Appropriate sound amplification levels introduces natural light to all spaces. – Priority Two
16. A community based facility that optimizes after hour use while maintaining the separation of the public and private/academic spaces. – Priority Two



PLAN OF EXISTING CONDITIONS

# Colebrook Consolidated School

## Educational Specifications

January 7, 2015



**Concept Design 1 Base Option** – The criteria for the base option was to focus on priority one items that were identified by the Board of Education. In addressing the code and ADA requirements certain building renovations, site and fire protection items were included in this option. The following is a list of items that are included in this option

**Fire protection:**

Provide fire sprinkler system throughout existing building, including fire pump and storage tank.

**Plumbing:**

Ada upgrades.

Replace water heater serving original section of building.

**HVAC:**

Existing boilers to remain. (Note: may require replacement within 5 to 10 years).

Existing terminal heating equipment to remain.

Heat/energy recovery ventilation systems throughout.

Limited air conditioning (offices/media center).

New energy management system throughout.

**Electrical:**

Replace existing fire alarm system throughout the school with a code compliant addressable control panel and initiation, and notification appliances to meet ADA requirements.

Most of the existing lighting is t-8 although some t-12 lighting remains. Up-grade existing t-12 lighting with led, energy efficient type. Include motion sensors for maximum energy savings.

Provide code required egress normal lighting

Provide code required emergency lights (battery units with remote heads for.

Upgrade existing panel board located in corridor of the 1952 original section of the school.

Replace existing cloth covered branch circuit wiring throughout the 1952 original section of school.

Replace wiring devices in the 1952 original section of the building.

Provide branch circuits for new ventilation systems as required.

Existing generator to remain. Separation of critical loads as generator will not fully support building.

Energy recovery ventilation system may require upgrade of the existing 400a, 240/120v, and 1-phase service to 600a.

**Security:**

Secure vestibules

Laminate glass / 3m film

Door and interior sensors

Cameras

Lockdown capabilities

**HAZMAT Remediation:**

PCB & Asbestos

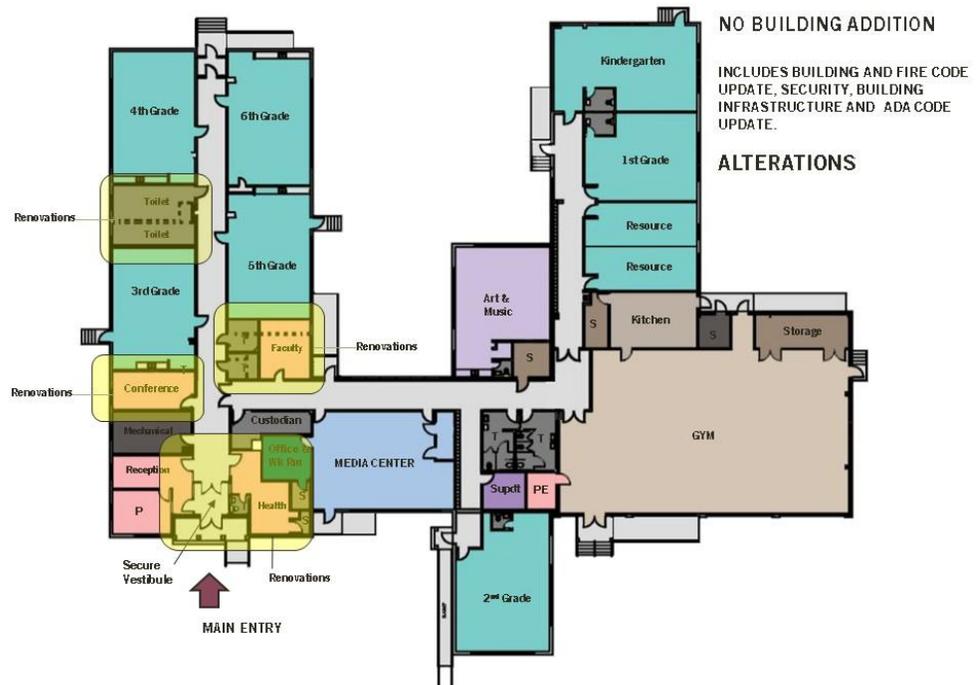
**Site & Utilities:**

ADA Site Access.

Utilities & sprinkler storage.

**Septic System:**

Not addressed due to insufficient data.



CONCEPT DESIGN 1 - BASE OPTION



**Concept Design 2** – The criteria for option two included all priority one items and added specific issues that impact educational programs. This approach relocated the main office to the existing first grade classroom and reconfigured the west classroom wing to accommodate grades two through six. This design right sizes classrooms based on the projected enrollment and provides additional space for support functions. The building addition is limited to a secure entry vestibule. The approach is an “Alterations & Additions” project as defined by the State Department of Education. The following is a list of items that are included in this option

**Fire protection:**

Provide fire sprinkler system throughout existing building, including fire pump and storage tank.

**Plumbing:**

Ada upgrades.  
Replace water heater serving original section of building.  
Replace existing domestic water piping in 1952 original section of building.  
Plumbing modifications related to reconfiguration of kitchen / servery.

**HVAC:**

Existing boilers to remain. (Note: may require replacement within 5 to 10 years).  
Existing terminal heating equipment to remain.  
Heat/energy recovery ventilation systems throughout.  
Limited air conditioning (offices/media center).  
New energy management system throughout.  
Replace existing boilers, pumps, etc.  
Replace existing terminal heating equipment.  
Replace kitchen hood / ventilation system.  
Replace existing hydronic distribution piping in 1952 original section of the building.  
Fully air condition building.  
Meet High Performance Building Standards.

**Electrical:**

Replace existing fire alarm system throughout the school with a code compliant addressable control panel and initiation, and notification appliances to meet ADA requirements.  
Most of the existing lighting is t-8 although some t-12 lighting remains. Up-grade existing t-12 lighting with led, energy efficient type.  
Include motion sensors for maximum energy savings.  
Provide code required egress normal lighting  
Provide code required emergency lights (battery units with remote heads for.  
Upgrade existing panel board located in corridor of the 1952 original section of the school.  
Replace existing cloth covered branch circuit wiring throughout the 1952 original section of school.  
Replace wiring devices in the 1952 original section of the building.  
Provide branch circuits for new ventilation systems as required.  
Existing generator to remain. Separation of critical loads as generator will not fully support building.  
Energy recovery ventilation system may require upgrade of the existing 400a, 240/120v, and 1-phase service to 600a.  
Up-grade existing lighting throughout with led, energy efficient type. Include motion sensors for maximum energy savings.  
Provide technology boxes and raceways for reprogrammed spaces.  
Electrical modifications related to reconfiguration of kitchen / servery.  
Air conditioning system may require upgrade of the existing 400a, 240/120v, 1-phase service to 800a, 240/120v 1 phase with pad mount transformer

**Security:**

Secure vestibules  
Laminate glass / 3m film  
Door and interior sensors  
Cameras  
Lockdown capabilities

**HAZMAT Remediation:**

PCB & Asbestos

**Site & Utilities:**

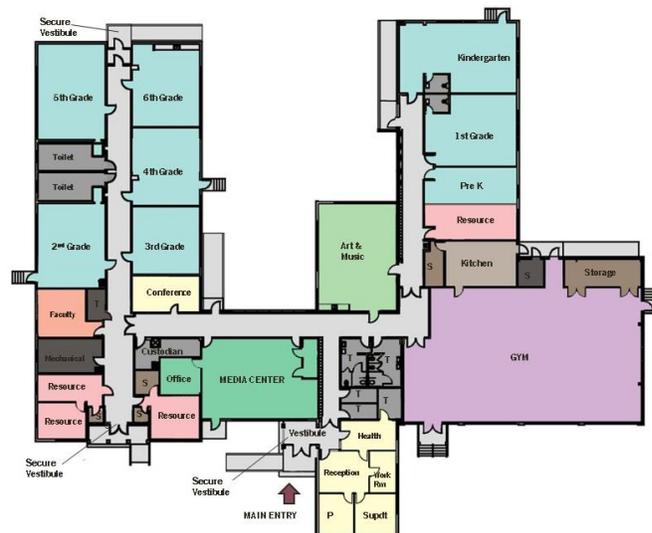
ADA Site Access.  
Utilities & sprinkler storage.

**Septic System**

Not addressed due to insufficient data.

**Educational Program Requirements:**

Entry Vestibule Additions  
Classroom modification and Administrative offices relocation  
Update Toilets and Infrastructure.



CONCEPT DESIGN 2 - ALTERATIONS & ADDITIONS

# Colebrook Consolidated School

## Educational Specifications

January 7, 2015



**Concept Design 2A** – The criteria for option two included all priority one items and added specific issues that impact educational programs. This approach relocated the main office to the existing first grade classroom and reconfigured the west classroom wing to accommodate grades two through six. This design right sizes classrooms based on the projected enrollment and provides additional space for support functions. The building addition is limited to a secure entry vestibule. The approach is a “Renovation Status” project as defined by the State Department of Education which will result in an as new facility. The following is a list of items that are included in this option

### Fire protection:

Provide fire sprinkler system throughout existing building, including fire pump and storage tank.

### Plumbing:

Ada upgrades.  
Replace water heater serving original section of building.  
Replace existing domestic water piping in 1952 original section of building.  
Plumbing modifications related to reconfiguration of kitchen / servery.

### HVAC:

Existing boilers to be replaced  
Existing terminal heating equipment to be replaced.  
Heat/energy recovery ventilation systems throughout.  
Limited air conditioning (offices/media center).  
New energy management system throughout.  
Replace existing boilers, pumps, etc.  
Replace existing terminal heating equipment.  
Replace kitchen hood / ventilation system.  
Replace existing hydronic distribution piping in 1952 original section of the building.  
Fully air condition building.  
Meet High Performance Building Standards.

### Electrical:

Replace existing fire alarm system throughout the school with a code compliant addressable control panel and initiation, and notification appliances to meet ADA requirements.  
Most of the existing lighting is t-8 although some t-12 lighting remains. Up-grade existing t-12 lighting with led, energy efficient type.  
Include motion sensors for maximum energy savings.  
Provide code required egress normal lighting  
Provide code required emergency lights (battery units with remote heads for.  
Upgrade existing panel board located in corridor of the 1952 original section of the school.  
Replace existing cloth covered branch circuit wiring throughout the 1952 original section of school.  
Replace wiring devices in the 1952 original section of the building.  
Provide branch circuits for new ventilation systems as required.  
Existing generator to remain. Separation of critical loads as generator will not fully support building.  
Energy recovery ventilation system may require upgrade of the existing 400a, 240/120v, and 1-phase service to 600a.  
Up-grade existing lighting throughout with led, energy efficient type. Include motion sensors for maximum energy savings.  
Provide technology boxes and raceways for reprogrammed spaces.  
Electrical modifications related to reconfiguration of kitchen / servery.  
Air conditioning system may require upgrade of the existing 400a, 240/120v, 1-phase service to 800a, 240/120v 1 phase with pad mount transformer

### Security:

Secure vestibules  
Laminate glass / 3m film  
Door and interior sensors  
Cameras  
Lockdown capabilities

### HAZMAT Remediation:

PCB & Asbestos

### Site & Utilities:

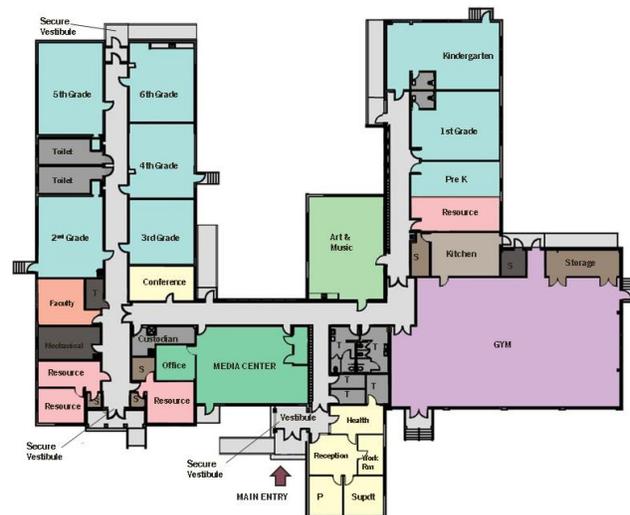
ADA Site Access.  
Utilities & sprinkler storage.

### Septic System

Not addressed due to insufficient data.

### Educational Program Requirements:

Entry Vestibule Additions  
Classroom modification and Administrative offices relocation  
Update Toilets and Infrastructure



CONCEPT DESIGN 2A – RENOVATE AS NEW



**Concept Design 3** – The criteria for option three included all priority one items and added specific issues that impact educational programs. This approach relocated the main office to the existing first grade classroom and reconfigured the west classroom wing to accommodate grades two through six. This design right sizes classrooms based on the projected enrollment and provides additional space for support functions. The building addition includes a classroom space and a secure entry vestibule. The approach is a “Renovation Status” project as defined by the State Department of Education which will result in an as new facility. The following is a list of items that are included in this option

**Fire protection:**

Provide fire sprinkler system throughout existing building, including fire pump and storage tank.

**Plumbing:**

Ada upgrades.  
Replace water heater serving original section of building.  
Replace existing domestic water piping in 1952 original section of building.  
Plumbing modifications related to reconfiguration of kitchen / servery.

**HVAC:**

Existing boilers to be replaced  
Existing terminal heating equipment to be replaced.  
Heat/energy recovery ventilation systems throughout.  
Limited air conditioning (offices/media center).  
New energy management system throughout.  
Replace existing boilers, pumps, etc.  
Replace existing terminal heating equipment.  
Replace kitchen hood / ventilation system.  
Replace existing hydronic distribution piping in 1952 original section of the building.  
Fully air condition building.  
Meet High Performance Building Standards.

**Electrical:**

Replace existing fire alarm system throughout the school with a code compliant addressable control panel and initiation, and notification appliances to meet ADA requirements.  
Most of the existing lighting is t-8 although some t-12 lighting remains. Up-grade existing t-12 lighting with led, energy efficient type.  
Include motion sensors for maximum energy savings.  
Provide code required egress normal lighting  
Provide code required emergency lights (battery units with remote heads for.  
Upgrade existing panel board located in corridor of the 1952 original section of the school.  
Replace existing cloth covered branch circuit wiring throughout the 1952 original section of school.  
Replace wiring devices in the 1952 original section of the building.  
Provide branch circuits for new ventilation systems as required.  
Existing generator to remain. Separation of critical loads as generator will not fully support building.  
Energy recovery ventilation system may require upgrade of the existing 400a, 240/120v, and 1-phase service to 600a.  
Up-grade existing lighting throughout with led, energy efficient type. Include motion sensors for maximum energy savings.  
Provide technology boxes and raceways for reprogrammed spaces.  
Electrical modifications related to reconfiguration of kitchen / servery.  
Air conditioning system may require upgrade of the existing 400a, 240/120v, 1-phase service to 800a, 240/120v 1 phase with pad mount transformer

**Security:**

Secure vestibules  
Laminate glass / 3m film  
Door and interior sensors  
Cameras  
Lockdown capabilities

**HAZMAT Remediation:**

PCB & Asbestos

**Site & Utilities:**

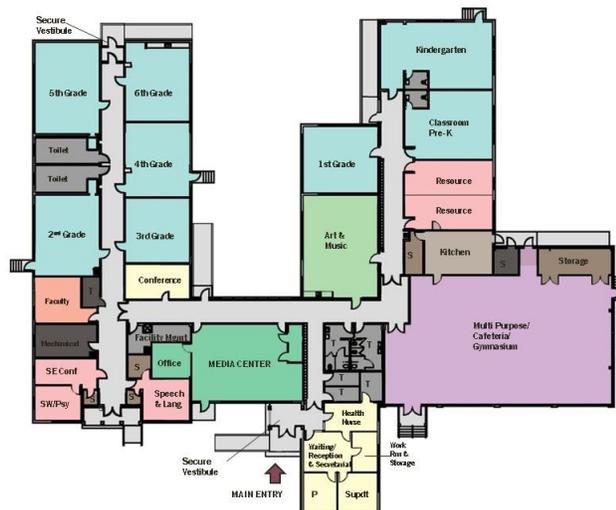
ADA Site Access.  
Utilities & sprinkler storage.

**Septic System**

Not addressed due to insufficient data.

**Educational Program Requirements:**

Entry Vestibule Additions  
Classroom Addition  
Classroom modification and Administrative offices relocation  
Update Toilets and Infrastructure.



CONCEPT DESIGN 3 – RENOVATE AS NEW

6

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**FINANCIAL DATA**



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## Financial Data – Estimates and State Reimbursement

### Budget Estimates

The Town of Colebrook is evaluating several options including sending students to a regional school and closing the current facility. If the decision is made to maintain the existing facility, the Colebrook Consolidated School alterations or renovation project would potentially start construction in July of 2016 with a phased completion anticipated in August of 2017. Over the course of the facility study, the project team evaluated several options. The Town Leadership and the Board of Education will select an option that could range from Option One, a basic code update project, to Option Three which would be an addition and renovation project based on “Renovation” status which results in the full renovation of the existing school building and site resulting in a facility that meets a new building criteria.

- Provide secure entry vestibules.
- Relocation and expansion of the administrative offices, with direct sightlines to the main entry.
- Expand the existing Band Room and repurpose it for the Media Center.
- Provide additional Resource spaces.
- Right size classroom spaces.
- Address all code deficiencies, to meet current Health, Fire and Building code requirements.
- Address all accessibility requirements per ANSI, UFAS, ADA as well as all citations in the OCR report.
- Fully upgrade the Mechanical, Electrical, Plumbing and Fire Protection infrastructure to meet requirements of a High Performance School as well as the integration of sustainable energy and environmental principals.
- Update of the technology infrastructure to meet the proposed Colebrook Public Schools Technology Plan.
- Provide additional multiuse classroom space.
- Increase toilet fixture count in student toilets and add accessible units.

The project cost estimate anticipates project development, escalation and contingency expenditures based on a projected July 2016 construction start, as noted below:

Construction escalation for 18 months at 4% annually:

Owners Project Development cost Contingency at 5%:

Construction contingency of 7.5%

Furnishings, Equipment and Technology allowance of \$50,000.

This project is eligible for a school construction grant provided by the State of Connecticut Department of Education. Based on a preliminary review the project could also be eligible for a space standard waiver. If the waiver is realized, the total cost to the Town of Colebrook for this project would further decrease.

The following construction estimates identify project costs based on three distinct approaches, and highlight the advantages and disadvantages associated with each approach. Each scenario anticipates a projected high enrollment of 98 students based on the Dr. Peter Prowda’s enrollment projection in the year 2013. Additionally each scenario projects an estimated state reimbursement based on no space standards waiver.

1. Limited Renovations and Code / Infrastructure update
2. Limited Renovations and Additions
3. A Full Renovation and Additions Project under the “Renovation” Status.

***The Furniture and Equipment budget has been established for all project scenarios. The budget anticipates the reuse of most of the existing furniture in the new or renovated facility.***



**State of Connecticut Reimbursement**

*The State of Connecticut reimbursement rate for educational construction projects for the Town of Colebrook in 2015 is 37.5%. The rate will vary from year to year based on AENGLC ranking of the town.*

The State of Connecticut Department of Education provides grants for school construction projects to all public school systems. The eligibility of a school project for State funding is governed by the Connecticut General Statutes (CGS) and the grant application is administered by the State Department of Education Grants Division. Each municipality must apply for the grant by June 30th of each year and the funding is approved the following year. The Town of Colebrook has applied for and received several school construction grants over the years and specifically was funded for the last construction project that included renovations and code updates.

In considering the Colebrook Consolidated School renovations and additions project for state reimbursement several regulations must be evaluated. These include laws that will determine the project eligibility, priority, and estimated percentage of the project cost that is for the state grant. Additionally, the Town of Colebrook must meet the requirement of the Bureau of School Facilities and ultimately an audit of the project. Regulation of the State Board of Education Concerning School Construction Grants can be reviewed in the Connecticut General Statutes Section 10-287 c-1 to 10-287 c-21

**Reimbursement based on Space Standards worksheet.**

**Space Standards** - For grant purposes, a maximum allowable square footage per pupil is determined for a facility. This maximum is based upon the projected enrollment for the project, grades housed at the school, and the amount of square footage, if any, constructed prior to 1950. See C.G.S. 10-287c-15(a). Space standards do not apply to the following: projects solely for correction of code or health violations, roof replacements, vocational agriculture equipment projects, board of education central administration projects, and projects solely for purchase of a building (with no Alteration, Extension, or Renovation component).

In actual construction, districts are not limited to the maximum allowable square footage per pupil. However, grant reimbursement is reduced to reflect the degree by which a school exceeds the maximum allowable square footage. The maximum allowable square footage per pupil is compared to the actual square footage per pupil. If the resulting ratio is less than one, the building is considered to be oversized for grant computation purposes. Therefore, the ratio is applied to all project costs (except site and building purchase costs), and there is a corresponding grant reduction. For grant computation purposes, the grade range and projected enrollment for a project are applied to the table below to calculate a maximum allowable square footage per pupil.

Projected Enrollment	Pre-K and K	1	2	3	4	5	6	7	8	9	10	11	12
Allowable Square Footage per Pupil													
0 - 350	124	124	124	124	124	156	156	180	180	180	194	194	194
351 - 750	120	120	120	120	120	152	152	176	176	176	190	190	190
751 - 1500	116	116	116	116	116	148	148	170	170	170	184	184	184
Over 1500	112	112	112	112	112	142	142	164	164	164	178	178	178

The existing Colebrook Consolidated School currently exceeds the maximum allowable size of 12,901 SF set by the Space Standards for an enrollment of 97 students. The existing building size calculation of 19,920 square feet is therefor in excess of the standard by 7,019 SF and will result in the reduction of the 2015 reimbursement rate of 37.5% on eligible items. It is expected that the proposed additions to the existing building will further reduce the current 2015 rate of 37.5%. The exact rate will be a function of the highest student enrollment projection in the eight year window and the rate established for the Town of Colebrook when the project is filed with the DOE.

The reimbursement calculations and the net cost to the Town of Colebrook noted below are based on the following assumptions:

1. Highest enrollment projection through 2013 of 97 based on Peter Prowda’s Enrollment Projection of 2013
2. Existing building area of 19,600 SF



3. No Space standards waiver in the current calculations – (Approximately 50% to 100% is anticipated through the space standard waiver; however the final area will be based on review with the DOE).
4. Estimated ineligible cost of 5% (final value to be determined through the updated estimate).
5. Limited eligibility costs of 2.5% (final value to be determined through estimate).
6. Estimated Budgets are based on a construction start in July 2016. Under a construction start date of July of 2016 the budget must reflect escalation and changing market conditions. The design team has updated the budget to reflect an escalation of 4% over an eighteen month period.

QA Architects has evaluated several options for the renovations and expansion of Colebrook Consolidated School.

*Under the project classification of 'Additions and Alterations', any work considered to be repair or replacement would not be eligible for reimbursement. For example, the cost of replacing the existing boilers is not reimbursable. However, the cost of adding new controls for the heating system would be eligible because they do not currently exist in the building. Several items are also limited in eligibility or not included in the scope of work because they would not be eligible for reimbursement. **It should be noted that this approach would not be a comprehensive update of the entire facility and would not meet the educational specifications.** Additionally, Space standard waivers under this approach are seldom received.*

The Superintendent of Schools for the Town of Colebrook can submit a written request for a space standards waiver, citing the factors such as inherent inefficiencies of the existing building design and changes in the program/curricular requirements in education that have impacted the physical plant, thereby exceeding the space standards. The waiver request is made to the Commissioner of Education and is typically reviewed with the Bureau of School facilities. The probability of a waiver request approval on a renovation and additions project is not high.

If the project was to be submitted under the 'Renovation' status, it would require all spaces to be renovated to an "as new" condition and the overall project costs will increase. However, all costs would be eligible for reimbursement, as applicable under a new construction project. The probability of an approval of the state standards waiver request is also greatly increased under this grant status. Based on the additional eligible area approved by the State Department of Education, the Town of Colebrook would potentially receive the same reimbursement rate for the cost of the additional area deemed eligible.

## RENOVATION

These are projects which comply with the definition of *Renovation* as stated in [Section 10-282](#) of the Connecticut General Statutes. Under this section, a *Renovation* is a school building project to totally refurbish an existing building and which results in the renovated facility taking on a useful life comparable to that of a new facility. While a *Renovation* may include some features of an *alteration*, it is much more comprehensive and must address all aspects of the building. The benefit of being classified as a *Renovation* is that many of the costs considered ineligible for reimbursement in an *alteration* may be considered eligible in a *Renovation*.

This project type was established in support of local decisions **to renovate existing schools or to purchase and renovate existing buildings when doing so represents a cost-effective alternative selected after diligent consideration of constructing a new facility.** If your district has a need for additional space due to increased enrollment, you might thoroughly research and pursue the alternatives of building a new school versus renovating a closed school building. In another situation, you might be reviewing the current and future educational adequacy of an old elementary school still in use. In order to provide a safe and appropriate learning environment, you might research and pursue the alternatives of building a new school versus renovating the existing school.

**Your grant application may include a request for *renovation* status, however, a project is not considered a *renovation* until the School Facilities Unit has reviewed your submissions and formally approved the project as a *renovation*. (These submissions would be made in accordance with the [Guidelines](#) for Determining Eligibility of School Construction Projects for Status as Renovations as Defined in C.G.S. 10-282.)**



### Examples of Renovations

- completely gutting a closed high school and converting it to a middle school
- completely gutting a vacant BOE office building and converting it to an alternative high school
- completely gutting a middle school and restoring it to *like new* condition for continued middle school use

**Reminder: These qualify as *renovations* only if approved by SDE after confirmation that they represent a cost effective alternative selected after diligent consideration of constructing a new facility.**

### **GUIDELINES FOR DETERMINING ELIGIBILITY OF SCHOOL CONSTRUCTION PROJECTS FOR STATUS AS RENOVATIONS AS DEFINED IN C.G.S. 10-282**

1. The applicant must make written application for such status.
2. The applicant must have gone through a formal process of evaluating the proposed project. Professional estimates must be available to document that significant cost savings will result.
3. The entire facility must be brought into 100 percent compliance with all applicable codes (including handicapped accessibility) when this renovation project is complete. Partial renovations of an entire facility or complete renovations of a wing of a facility do not qualify.
4. The renovation must incorporate education technology capability throughout the facility, as recommended in the *Guidelines for Technology Infrastructure in Connecticut Schools*.
5. It must be determined by a structural engineer that the structural integrity of the original building has not been compromised and is adequate to provide for continued occupancy for a period of time comparable to that of a new facility.
6. A detailed report on all existing building systems must be provided, including HVAC and electrical systems, water, roofing, lighting, plumbing, energy monitoring, communications and security systems. Professional opinions must be provided that all systems will have a useful life of at least 20 years following the construction project.
7. All new and replacement windows must be energy efficient.
8. The site of the existing facility must be central to the area served and adequate to provide the educational programs offered.
9. Any other analysis deemed necessary by the Department to properly evaluate the request must be provided.

**Prior to pursuing requirements 3 through 9, districts are strongly advised to submit documentation in support of Item 2. Failure to receive SDE approval for Item 2 will negate any need to pursue Items 3 through 9.**



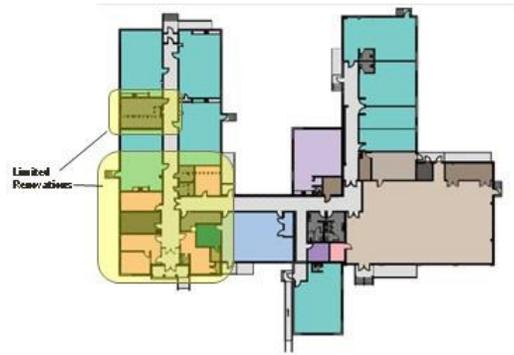
**Budget Estimate Consolidated Project Approach**  
**Concept Design 1 Base Option –Alterations & Code**

The budget is based on the design criteria with a focus on priority one items that were identified by the Board of Education, that include Code and Mechanical, Electrical and Plumbing upgrades. In addressing the code and ADA requirements certain building renovations, site, and fire protection items were required in this option. Although the space standard does not apply to the code work, the building infrastructure work as repair or replacement is not eligible for reimbursement.

**BUDGET ESTIMATE – ALTERATIONS CONSOLIDATED PROJECT APPROACH**

**CONSTRUCTION**

<b>HAZMAT REMEDIATION</b> PCB & ASBESTOS	\$ 211,300
<b>SITE &amp; UTILITIES</b> BUILDING & SITE ACCESS UTILITIES & SPRINKLER STORAGE	\$ 325,000
<b>BUILDING CODES &amp; RENOVATIONS</b> RENOVATIONS MIN REQUIRED TO MEET CODE BUILDING , FIRE AND ADA CODE MEP & FIRE PROTECTION INFRASTRUCTURE SECURITY	\$ 2,050,000
<b>General Contractor</b> GENERAL CONDITIONS OH & P	\$ 425,000
<b>CONTINGENCIES</b> CONSTRUCTION & DESIGN 12.5% ESCALATION 18 MONTHS @4% Per year	\$ 557,000
<b>PROJECT DEVELOPMENT</b> CONSULTANT FEES SURVEYS / GEOTECHNICAL / HAZMAT LANDUSE APPROVALS TESTING & COMMISSIONING BONDING / FINANCING / INSURANCE	\$ 672,500
<b>TOTAL PROJECT COST</b>	<b>\$ 4,240,800</b>
<b>ESTIMATED REIMBURSEMENT</b>	<b>\$ 671,500</b>
<b>NET COST - TOWN OF COLEBROOK</b>	<b>\$3,569,300</b>



**PRIORITY ONE ITEMS ADDRESSED**

- CODE COMPLIANCE**  
HEALTH / FIRE / BUILDING / ADA / INDOOR AIR QUALITY
- BUILDING INFRASTRUCTURE SYSTEM UPGRADES**  
MECHANICAL / PLUMBING / ELECTRICAL
- SAFETY & SECURITY SYSTEMS**  
MECHANICAL / PLUMBING / ELECTRICAL
- BUILDING INFRASTRUCTURE SYSTEM UPGRADES**  
BUILDING SPRINKLER SYSTEM – (Identified as priority 2)
- SEPTIC SYSTEM**  
NOT ADDRESSED DUE TO INSUFFICIENT DATA



**Budget Estimate Multiple Project Approach  
 Concept Design Option 1A –Alterations & Code**

The budget is based on the design criteria with a focus on priority one items that were identified by the Board of Education that include Code and Mechanical, Electrical and Plumbing upgrades. In addressing the code and ADA requirements certain building renovations, site, and fire protection items were required in this option. Although the space standards do not apply to the code work the cost of the building modifications will be impacted by the space standards. Additionally infrastructure work will be categorized as repair or replacement and will not be eligible for reimbursement. The multiple project approach assumes several bid packages over a number of years. This results in cost increases in construction escalation, general conditions and there is the potential for rework in areas where work was performed in earlier phases.

**BUDGET ESTIMATE – ALTERATIONS MULTIPLE PROJECT APPROACH**

**CONSTRUCTION**

<b>HAZMAT REMEDIATION</b> PCB & ASBESTOS	<b>\$ 211,300</b>
<b>SITE &amp; UTILITIES</b> BUILDING & SITE ACCESS AND UTILITIES – \$100,000 SPRINKLER STORAGE, FIRE PUMP AND SERVICE - \$225,000	<b>\$ 325,000</b>
<b>BUILDING CODES &amp; RENOVATIONS</b> RENOVATIONS MIN REQUIRED TO MEET CODE - \$368,000 BUILDING, FIRE AND ADA CODE – 558,000 MEP & FIRE PROTECTION INFRASTRUCTURE – \$906,000 BUILDING SPRINKLER SYSTEM – \$102,500 SECURITY - \$115,500	<b>\$ 2,050,000</b>
<b>General Contractor</b> GENERAL CONDITIONS Including OH & P	<b>\$ 625,000*</b>
<b>CONTINGENCIES</b> CONSTRUCTION & DESIGN 12.5% ESCALATION 18 MONTHS @4% Per year	<b>\$ 957,000*</b>
<b>PROJECT DEVELOPMENT</b> CONSULTANT FEES SURVEYS / GEOTECHNICAL / HAZMAT LANDUSE APPROVALS TESTING & COMMISSIONING BONDING / FINANCING / INSURANCE	<b>\$ 772,500*</b>
<b>TOTAL PROJECT COST</b>	<b>\$ 4,940,800*</b>
<b>ESTIMATED REIMBURSEMENT</b>	<b>\$ 671,500</b>
<b>NET COST - TOWN OF COLEBROOK</b>	<b>\$4,269,300*</b>



**PRIORITY ONE ITEMS ADDRESSED**

- CODE COMPLIANCE**  
HEALTH / FIRE / BUILDING / ADA / INDOOR AIR QUALITY
  - BUILDING INFRASTRUCTURE SYSTEM UPGRADES**  
MECHANICAL / PLUMBING / ELECTRICAL
  - SAFETY & SECURITY SYSTEMS**  
MECHANICAL / PLUMBING / ELECTRICAL
  - BUILDING INFRASTRUCTURE SYSTEM UPGRADES**  
BUILDING SPRINKLER SYSTEM – (Identified as priority 2)
  - SEPTIC SYSTEM**  
NOT ADDRESSED DUE TO INSUFFICIENT DATA
- NOTE \*** Indicates that the cost will increase with a multiple bid project approach. Additionally, State reimbursement may decrease



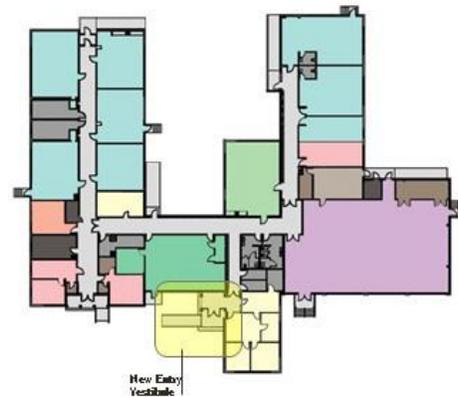
## Budget Estimate Consolidated Project Approach Concept Design Option 2 –Additions & Alterations

The budget is based on the design criteria with a focus on priority one items that were identified by the Board of Education that include Code and Mechanical, Electrical and Plumbing upgrades as well as requirements of the educational specifications. In addressing the code and ADA requirements certain building renovations, site, and fire protection items were required in this option. Although the space standards do not apply to the code work the cost of the building modifications will be impacted by the space standards. Additionally infrastructure work will be categorized as repair or replacement and will not be eligible for reimbursement. This approach relocated the main office to the existing first grade classroom and reconfigured the west classroom wing to accommodate grades two through six. This design right sizes classrooms based on the projected enrollment and provides additional space for support functions. The building addition is limited to a secure entry vestibule. The approach is an “Alterations & Additions” project as defined by the State Department of Education.

### BUDGET ESTIMATE - ALTERATIONS

#### CONSTRUCTION

<b>HAZMAT REMEDIATION</b> PCB & ASBESTOS	<b>\$ 211,300</b>
<b>SITE &amp; UTILITIES</b> BUILDING & SITE ACCESS UTILITIES & SPRINKLER STORAGE	<b>\$ 325,000</b>
<b>BUILDING ADDITIONS &amp; RENOVATIONS</b> NEW ADDITIONS. RENOVATIONS MEP & FIRE PROTECTION INFRASTRUCTURE SECURITY	<b>\$ 3,159,700</b>
<b>CONTINGENCIES</b> CONSTRUCTION & DESIGN ESCALATION 18 MONTHS	<b>\$ 676,000</b>
<b>PROJECT DEVELOPMENT</b> CONSULTANT FEES SURVEYS / GEOTECHNICAL LANDUSE APPROVALS FFE & TECHNOLOGY BONDING & FINANCING	<b>\$ 906,000</b>
<b>TOTAL PROJECT COST</b>	<b>\$5,278,000</b>
<b>ESTIMATED REIMBURSEMENT</b>	<b>\$ 548,200</b>
<b>NET COST - TOWN OF COLEBROOK</b>	<b>\$4,729,000</b>





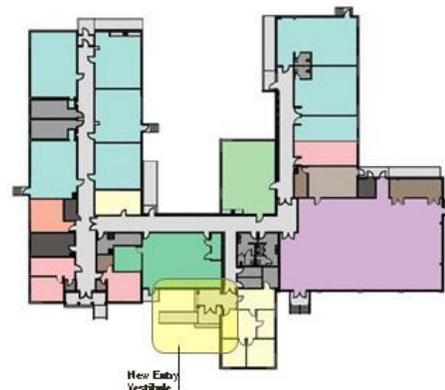
**Budget Estimate Consolidated Project Approach**  
**Concept Design Option 2A –Additions & Alterations “Renovate As New”**

The budget is based on the design criteria with a focus on priority one items that were identified by the Board of Education that include Code and Mechanical, Electrical and Plumbing upgrades as well as requirements of the educational specifications. In addressing the code and ADA requirements certain building renovations, site, and fire protection items were required in this option. Although the space standards do not apply to the code work the cost of the building modifications will be impacted by the space standards. As a “Renovate as New” scope the infrastructure work categorized as repair or replacement and will be eligible for reimbursement. This approach relocated the main office to the existing first grade classroom and reconfigured the west classroom wing to accommodate grades two through six. This design right sizes classrooms based on the projected enrollment and provides additional space for support functions. The building addition is limited to a secure entry vestibule. The approach is a “Renovate as New” project as defined by the State Department of Education, will significantly increase state reimbursement. However the renovate as new approach also requires that all building systems and component have a “As New” or 20 year life expectancy, thereby increasing the scope of the work. The renovation status project will also increase the opportunity for the project to be approved for a space standards waiver.

**BUDGET ESTIMATE – RENOVATE AS NEW**

**CONSTRUCTION**

<b>HAZMAT REMEDIATION</b> PCB & ASBESTOS	<b>\$ 211,300</b>
<b>SITE &amp; UTILITIES</b> BUILDING & SITE ACCESS UTILITIES & SPRINKLER STORAGE	<b>\$ 325,000</b>
<b>BUILDING ADDITIONS &amp; RENOVATIONS</b> NEW ADDITIONS. RENOVATIONS MEP & FIRE PROTECTION INFRASTRUCTURE SECURITY	<b>\$ 4,166,700</b>
<b>CONTINGENCIES</b> CONSTRUCTION & DESIGN ESCALATION 18 MONTHS	<b>\$ 860,500</b>
<b>PROJECT DEVELOPMENT</b> CONSULTANT FEES SURVEYS / GEOTECHNICAL LANDUSE APPROVALS FFE & TECHNOLOGY BONDING & FINANCING	<b>\$ 968,000</b>
<b>TOTAL PROJECT COST</b>	<b>\$ 6,531,500</b>
<b>ESTIMATED REIMBURSEMENT</b>	<b>\$ 931,750</b>
<b>NET COST - TOWN OF COLEBROOK</b>	<b>\$5,599,750</b>



**100% SPACE STANDARD WAIVER**  
**\$ 2,232,300\***  
**\$ 4,299,200**

\*When a project is submitted under the ‘Renovation’ status it requires all spaces to be renovated to an “as new” condition and the overall project costs will increase. However, all costs would be eligible for reimbursement as applicable under a new construction project. The probability of an approval of the state standards waiver request is also greatly increased under this grant status. Space standard waivers can range from 30% to 100%. The exact waiver will not be known until the request for the waiver is submitted to the state, reviewed, and approved. As an example, if a 50% waiver is granted by the state the estimated reimbursement would be \$1,681,750.



**Budget Estimate Consolidated Project Approach**  
**Concept Design Option 3 –Additions & Alterations “Renovate As New”**

The budget is based on the design criteria with a focus on priority one items that were identified by the Board of Education that include Code and Mechanical, Electrical and Plumbing upgrades as well as requirements of the educational specifications. In addressing the code and ADA requirements certain building renovations, site, and fire protection items were required in this option. Although the space standards do not apply to the code work the cost of the building modifications will be impacted by the space standards. As a “Renovate as New” scope the infrastructure work categorized as repair or replacement and will be eligible for reimbursement. This approach relocated the main office to the existing first grade classroom and reconfigured the west classroom wing to accommodate grades two through six. This design right sizes classrooms based on the projected enrollment and provides additional space for support functions. The building addition includes a secure entry vestibule and an instructional classroom. The approach is a “Renovate as New” project as defined by the State Department of Education, will significantly increase state reimbursement. However the renovate as new approach also requires that all building systems and component have a “As New” or 20 year life expectancy, thereby increasing the scope of the work. The renovation status project will also increase the opportunity for the project to be approved for a space standards waiver.

**BUDGET ESTIMATE – RENOVATE AS NEW**

**CONSTRUCTION**

**HAZMAT REMEDIATION** \$ 211,300  
PCB & ASBESTOS

**SITE & UTILITIES** \$ 325,000  
BUILDING & SITE ACCESS  
UTILITIES & SPRINKLER STORAGE

**BUILDING ADDITIONS & RENOVATIONS** \$ 4,447,100  
NEW ADDITIONS.  
RENOVATIONS  
MEP & FIRE PROTECTION INFRASTRUCTURE  
SECURITY

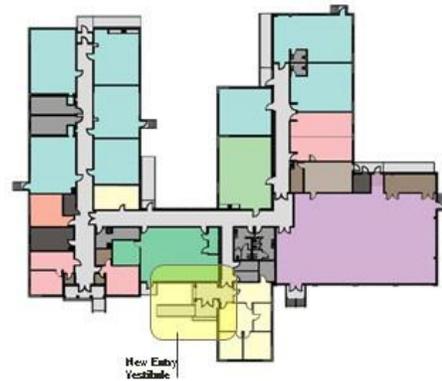
**CONTINGENCIES** \$ 912,000  
CONSTRUCTION & DESIGN  
ESCALATION 18 MONTHS

**PROJECT DEVELOPMENT** \$ 985,750  
CONSULTANT FEES  
SURVEYS / GEOTECHNICAL  
LANDUSE APPROVALS  
FFE & TECHNOLOGY  
BONDING & FINANCING

**TOTAL PROJECT COST** \$ 6,881,150

**ESTIMATED REIMBURSEMENT** \$ 955,900

**NET COST - TOWN OF COLEBROOK** \$5,925,250



**100% SPACE STANDARD WAIVER**

**\$ 2,353,200\***

**\$ 4,527,950**

\*When a project is submitted under the ‘Renovation’ status it requires all spaces to be renovated to an “as new” condition and the overall project costs will increase. However, all costs would be eligible for reimbursement as applicable under a new construction project. The probability of an approval of the state standards waiver request is also greatly increased under this grant status. Space standard waivers can range from 30% to 100%. The exact waiver will not be known until the request for the waiver is submitted to the state, reviewed, and approved. As an example, if a 50% waiver is granted by the state the estimated reimbursement would be \$1,681,750.

