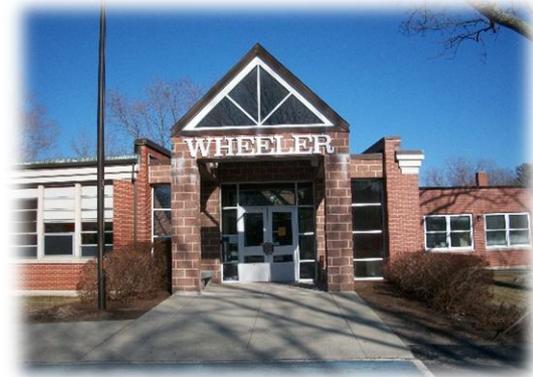






## Objectives of the Ad Hoc Building Committee

- ❖ To conduct studies regarding the needs of the respective school facilities and methods of construction, financing and related matters required to meet those needs.
- ❖ Priorities as directed by the Tri-Board
  - ❖ Improve the science classrooms / labs
  - ❖ Relocation of the elementary administration office to the front of the school
  - ❖ All building, fire and health code requirements



## Safety

- ❖ Asbestos, lead and PCB removal in all buildings
- ❖ Discontinue use of the multipurpose room for physical education at NSES
- ❖ Move computer room to the first floor at NSES
- ❖ Relocation of the Main Office to the front of NSES
- ❖ Discontinue use or modification of the tunnel under Route 2

## Maintenance / Energy

- ❖ Replace windows
- ❖ Improve building envelope insulation
- ❖ Update buildings to meet current codes (Fire, Building, ADA, Health, Energy)
- ❖ Update buildings to meet State standards for Acoustic & Natural Lighting
- ❖ Update buildings to meet State standards for Indoor Air Quality
- ❖ Fix / Replace Roof
- ❖ Title IX and Code upgrade at the Gymnasium
- ❖ Update mechanical, plumbing & electrical systems where necessary

## Educational Upgrades

- ❖ Renovate classrooms at NSES for the new PK thru 6<sup>th</sup> Grade Elementary School
- ❖ Technology upgrades (items not completed through recent grants)
- ❖ New Central Kitchen and dedicated space for a Cafeteria / Multipurpose space at NSES
- ❖ All programs available at the first level at NSES
- ❖ Space for meetings & storage at all schools
- ❖ Update Science (Biology, Chemistry, Physics Labs)
- ❖ New space for the Wheeler Cafeteria
- ❖ New Chorus room and updated Band room



SCIENCE – NEW LABORATORIES



CLASSROOM – LIGHTING



MAIN OFFICE – SECURITY



DEDICATED CAFETERIA SPACE



# Steps the Ad Hoc Building Committee has taken to date:

- ❖ Looked at renovation approaches that minimize construction cost
  - ❖ Demolish fewer walls
  - ❖ Maintain existing plumbing infrastructure wherever possible
- ❖ Weighed a number of different options for renovation
  - ❖ Renovating space for additional classrooms at the Elementary school resulting in a PK thru 6<sup>th</sup> configuration made sense educationally. Fiscally it resulted in approximately 10% more reimbursement from the state and brings our Elementary school project to the full reimbursement rate of 46.07%
  - ❖ Committee performed strategic environmental HAZMAT testing to have a better sense of the cost of remediation
- ❖ In order to maximize state reimbursement at both schools the committee decided on the “Renovate as New” approach (currently 46.07%) at the Elementary School and an “Additions and Alterations” approach at the High School.
  - ❖ Renovate As New "automatically" requires fixing most glaring issues such as PCB/HAZMAT remediation, windows, roofs, room acoustics, temperature (heating/cooling), code, electrical, fire, health.
- ❖ Met with the State of Connecticut School Construction Grants staff to review scope and funding
- ❖ Met with school administrators & faculty to review program needs and concept designs
- ❖ Three workgroups were formed for further in-depth exploration of the following:
  - ❖ Finance
  - ❖ MS/HS Building Use
  - ❖ Communications
- ❖ Discussed deed and solutions with Wheeler Library board



# Construction Approaches Discussed for the Project:

- ❖ Renovation of the Middle/High School at the current location.
  - ❖ Costs more than proposed approach. Construction phasing would be difficult & project would take nearly 4 years to complete. Current MS/HS cannot easily be modified to meet codes.
  
- ❖ “Switching” the MS/HS with the Elementary School for space utilization.
  - ❖ Costs more than the proposed approach. Phasing and moving kids would be extremely difficult and disruptive to students over several years.
  
- ❖ Piecemeal Approach – do the bare minimum not as one project, but as several ongoing projects over multiple years.
  - ❖ Costs more and we get less. (see next slide)
  
- ❖ Renovation of one school first, than another school years later
  - ❖ Difficult to estimate the costs as projection due to unknown reimbursement and interest rates, however, we estimate the cost to be several million more over time using this approach and our reimbursement rate would be much lower using this approach.
  
- ❖ Do nothing at all
  - ❖ This is not an option if we keep educating our children in North Stonington due to the severity of the issues our facilities have.



# FOR EXAMPLE - Capital Improvement Projects Approach

This approach assumes that the existing building and grade configuration will be maintained at each facility and no demolition will occur.

- ❖ HAZMAT Remediation & Replacement at all Schools: \$13.9M Gross - \$10.2 Net
- ❖ Indoor Air Quality – Ventilation & Air conditioning: \$ 8.9M Gross - \$7.1 Net
- ❖ Roof Replacement: \$ 3.2M Gross - \$1.9 Net
- ❖ Fire Suppression Sprinklers in Schools: \$ 2.0M Gross - \$1.4 Net
- ❖ Security - Route 2 Connector and location of Office: \$ 2.5M Gross - \$1.9 Net
- ❖ Update Code & ADA Deficiencies: \$ 5.2M Gross - \$3.6 Net
- ❖ Existing Science Labs Updated: \$ 2.3M Gross - \$1.8 Net
- ❖ Kitchens – Existing equipment and Staffing to remain
- ❖ No Site work
- ❖ No Building Additions or Demolition

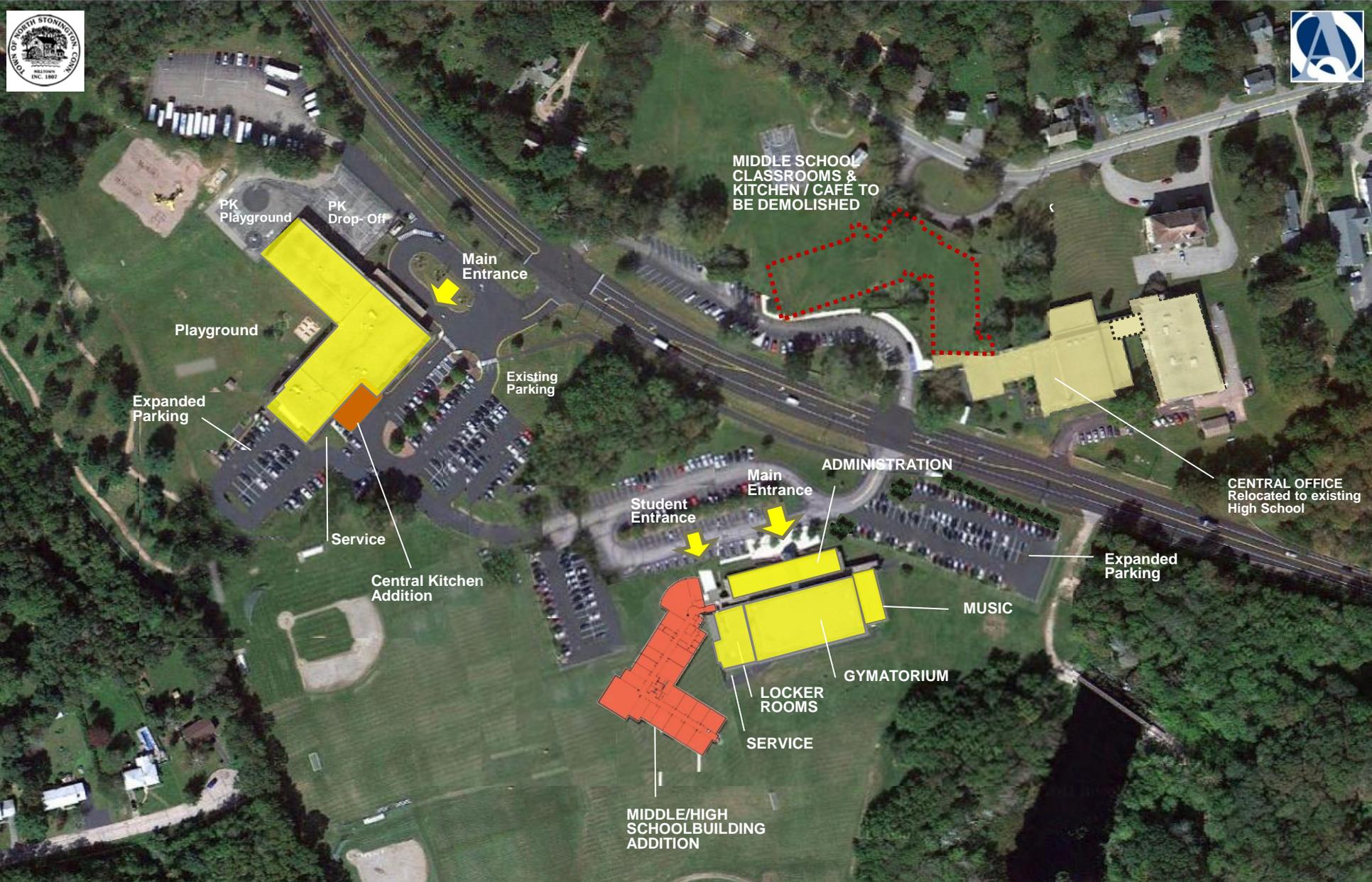
Total Cost \$38 Million, with a Net Cost to the Town of \$27.9 Million

Assumes phased renovations in multiple small projects encompassing summers. All repair and replacement costs will not be eligible for reimbursement. Reimbursement percentages may be lower due to annual changes of reimbursement rates and the limited scope of each project.



**This leads us to the approach that makes the most sense educationally & fiscally for our town as voted unanimously by our committee....**





- BUILDING DEMOLITION
- BUILDING RENOVATIONS
- BUILDING ADDITION
- BUILDING TO REMAIN



School Modernization Plan  
NORTH STONINGTON - CT

SITE PLAN



## Project Scope

Central Kitchen Addition	2,600 SF
Major Renovations	10,000 SF
Moderate Renovations	7,500 SF
Minor Renovations	13,500 SF
Code / ADA Only	24,296 SF

## Enrollment Projections

NSES PK-6<sup>th</sup> Grade 456 Students Projected Max in 2015-16

## Concept Design

- Meets Program Space Needs
- Dedicated Gymnasium
- New Addition for a Central Kitchen and Cafeteria
- Main Office at the Main Entry
- Meets or exceed Space Guidelines
- Code / ADA Improvements
- Additional Student and Staff Toilets

## KEY PLAN

Storage	S
Toilet	T
Janitors Closet	J
Conference	C
Office	O
Social Worker	SW
Psychologist	Psy
Reception	R
Principal	P
Reading	Rd
Speech	Sp
Waiting	W
Faculty Toilet	FT
Receiving	Rec
Kindergarten	K
Pre-Kindergarten	PK
Resource	Res
Occupational & Physical Therapy - OT/PT	



# Project Scope

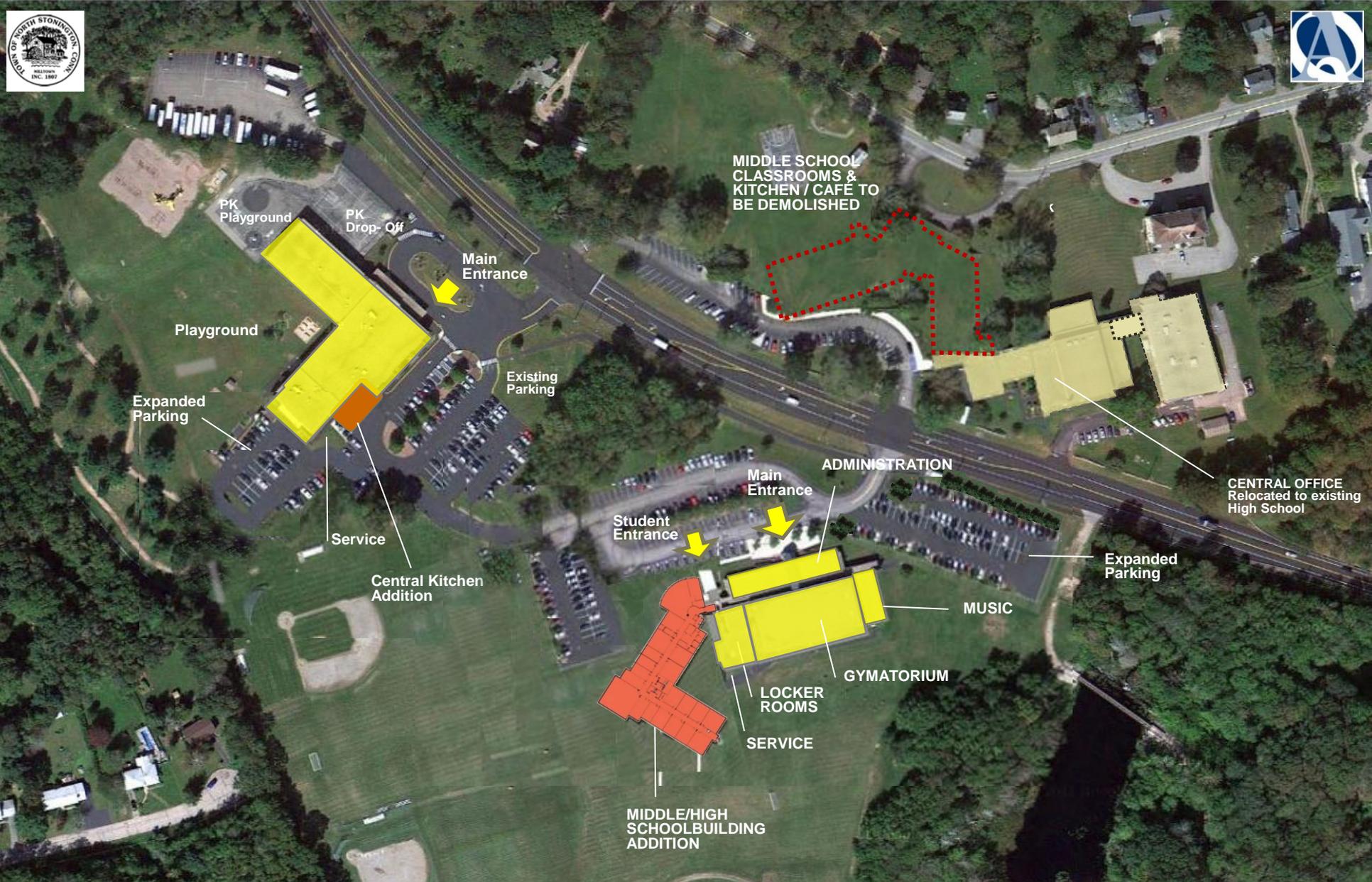
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Major Renovations	10,000 SF
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Code / ADA Only	24,296 SF



## KEY PLAN

Storage	S
Toilet	T
Janitors Closet	J
Conference	C
Office	O
Social Worker	SW
Psychologist	Psy
Reception	R
Principal	P
Reading	Rd
Speech	Sp
Math Intervention	Math Int
Waiting	W
Faculty Toilet	FT
Receiving	Rec
Kindergarten	K
Pre-Kindergarten	PK
Resource	Res
Occupational & Physical Therapy - OT/PT	





-  BUILDING DEMOLITION
-  BUILDING RENOVATIONS
-  BUILDING ADDITION
-  BUILDING TO REMAIN

School Modernization Plan  
NORTH STONINGTON - CT

SITE PLAN





# Project Scope

Addition at Gymnasium	44,500 SF
Demolition	25,000 SF
Major Renovations	7,500 SF
Moderate Renovations	10,000 SF
Minor Renovations	2,500 SF
Code / ADA Only	5,770 SF

# Enrollment Projections

Wheeler 7-12 Grade 362 Students Projected  
Max in 2019-20

MIDDLE / HIGH SCHOOL  
BUILDING ADDITIONS



BOE / CENTRAL  
OFFICE RELOCATED

MAIN ENTRANCE

STUDENT ENTRANCE

MAIN OFFICE

Speech &  
Language  
Pathologist

MCR

SSC

WBS

NURSE

TOILETS

W

R

Conf

P

T

S

AP

Conf

AD

S

STAIR

Boys Locker

Visit Team

Ramp

STAGE

BAND

T

PE

T

PE

T

PE

Tr

GYM / AUDITORIUM

S

S

Pr

Pr

HVAC & BOILER PLANT  
LOWER LEVEL

## KEY PLAN

Storage	S
Toilet	T
Conference	C
Office	O
Athletic Dir	AD
Social Worker	SW
Psychologist	Psy
Reception	R
Principal	P
Assistant Principal	AP
Reading	Rd
Waiting	W
Faculty Toilet	FT
Resource	Res
Special Ed	S Ed
Guidance Councilor	GC
Practice Room	Pr
Trainer	Tr
Media Classroom	MCR
WB Studio	WBS
Student Study Center	SSC
Elevator	E

Renovated Gymnasium  
and locker rooms

7TH & 8TH  
GRADES

Science Labs

FUTURE  
EXPANSION  
IF REQUIRED





### KEY PLAN

Storage	S
Toilet	T
Conference	C
Office	O
Athletic Dir	AD
Social Worker	SW
Psychologist	Psy
Reception	R
Principal	P
Assistant Principal	AP
Reading	Rd
Waiting	W
Faculty Toilet	FT
Resource	Res
Special Ed	S Ed
Guidance Councilor	GC
Practice Room	Pr
Trainer	Tr
Media Classroom	MCR
WB Studio	WBS
Student Study Center	SSC
Elevator	E



# PROJECT SCOPE & BUDGET

## Scope at both Schools includes:

- ❖ Meet Educational Specifications.
- ❖ Address Hazmat & Health Concerns.
- ❖ Address Lack of Storage.
- ❖ Consider Alternative Energy
- ❖ Meet New Security Standards.
- ❖ Address all NEASC Citations.
- ❖ Comply with Title IX legislation.
- ❖ Update Building Infrastructure.
- ❖ Optimize Building Utilization
- ❖ Meet Educational Space Needs
- ❖ Maximize State Reimbursement
- ❖ Address All Codes Deficiencies.

## Budget

<i>NSES Project Cost</i>	<i>\$14.44M</i>
<i>State Reimbursement</i>	<i>\$ 6.55M</i>
<i>NSES Cost to Town</i>	<i>\$ 7.89M</i>
<i>WMHS Project Cost</i>	<i>\$23.73M</i>
<i>State Reimbursement</i>	<i>\$10.41M</i>
<i>NSES Cost to Town</i>	<i>\$13.32M</i>
<i>Total Project Cost</i>	<i>\$38.17M</i>
<i>State Reimbursement</i>	<i>\$16.96M</i>
<b><i>*Total Cost to North Stonington</i></b>	<b><i>\$21.21M</i></b>

- *The total Cost to the Town of North Stonington is estimated at \$20.85M if a full Space Standard Waiver is approved for the Wheeler Middle / High School project.*

### Budget Parameters

Escalation projected at 3% Per Year  
Combined Bid Economy Of Scale In Bids  
Construction Start June 2017 at both Schools  
Partial/Hybrid Modular Construction

*The Ad Hoc Building Committee is exploring alternative construction methods, energy conservation strategies, and the purchase of maintenance supplies for potential additional cost savings for the project as well as the ongoing operational budgets.*





# Instructional Opportunities

- ❖ Decreased passing time between buildings alone increases instructional time for students
- ❖ Flexible use of space allows for opportunities to expand program options to meet the current and future needs of students
- ❖ Expanding/Enhancing the Program of Study (scheduling flexibility, virtual classrooms)
- ❖ Early Childhood Requirements for space and developmentally appropriate instruction
- ❖ Meeting the National Science Teachers' Association recommendations for learning environments and STEM (science, technology, engineering and mathematics) programming
- ❖ Providing an environment to support 21<sup>st</sup> Century Skills- innovation, collaboration, critical thinking, and research



# How our Plan will improve Academic Performance

- ❖ Better ventilation in facilities will lead to fewer health issues that currently result in absenteeism and a reduction in health complaints
- ❖ Since individuals associate various feelings with various settings, aesthetic improvements to the building will generate positive attitudes amongst students and teachers
- ❖ Temperature control will reduce stress and improve academic performance
- ❖ Improved lighting & acoustics will allow for students to be more focused
- ❖ Instructional time will be added by removal of the tunnel
- ❖ Increased security and safety measures will put students at comfort and improve discipline
- ❖ Sufficient space in science labs will allow for more effective instruction

Sources used:

[http://bondsforschools.dadeschools.net/Files/Benefits\\_of\\_Modernizing\\_School\\_Facilities.pdf](http://bondsforschools.dadeschools.net/Files/Benefits_of_Modernizing_School_Facilities.pdf)

<http://www.21csf.org/csf/home/Documents/ResearchImpactSchoolFacilitiesFeb2010.pdf>

<https://www.tn.gov/assets/entities/tacir/attachments/SchFac.pdf>



# Economic Benefits based on Yale Research Study

- ❖ Research shows that, holding all else constant, homes in high-performing school districts sell for higher prices than homes in low-performing school districts
- ❖ Several studies have shown that people are more willing to live in a neighborhood with good schools even if it means paying higher taxes
- ❖ The impact can measure in the thousands of dollars and increase home values as much as fourteen percent
- ❖ In a study done using data from a 15 year construction program to revitalize the New Haven area school district's buildings, Yale researchers found that school construction has a significant and large effect on home prices, with home prices rising 11.1 percent following construction. They also found that this effect does not diminish significantly over time.
- ❖ For fiscal year 2015-16 the real estate portion of our grand list totaled \$456,275,503.00
  - ❖  $\$456,275,503.00 \times .0261 \times .111 =$  approximately \$1.3 million
- ❖ Should the Yale study hold true for North Stonington, this is a potential for \$13 million dollars in revenue over the next 10 years if we move forward with this project!

Source: Christopher Neilson, Seth Zimmerman, Yale University 2011, "The Effect of School Construction on Test Scores, School Enrollment, and Home Prices." Discussion Paper No. 6106, Kane, Staiger and Samms 2003, Barrow and Rouse 2002, Hilber and Mayer 2002, Downes and Zabel 2002, Figlio and Lucas 2001, Bogart and Cromwell 2000, Clark and Herrin 2000, Black 1999, Brasington 1999, Hayes and Taylor 1996, Bogart and Cromwell 2000, Hayes and Taylor 1996, Figlio and Lucas 2001, Bogart and Cromwell 2000, Black 1999.



# Project Rationale

- ❖ The Ad-Hoc Committee, and the committee before us has determined doing the project in this manner will be the smartest approach because we will receive 46.07% reimbursement from the state to do the project as a “renovate as new” / “alterations” project. i.e. *we don't have to foot the whole bill as a town.*
- ❖ There are an abundance of fixes that must happen at each of our buildings which have been outlined. We recognize that these are things that have to be addressed and the needs at both schools are equally urgent. Not fixing these issues will likely result in the demise of the schools ultimately resulting in potential school closure.
- ❖ Delaying this project will cost our town millions of dollars in increased cost due to rising interest rates and project escalation as well as lost revenue that would likely be realized through this investment.
- ❖ The project we have proposed addresses all the need in an affordable and educationally sound manner for our town.

Source- State of CT [http://www.ct.gov/opm/lib/opm/igp/munfinsr/fi\\_2009-2013\\_asof\\_2-3-15.pdf](http://www.ct.gov/opm/lib/opm/igp/munfinsr/fi_2009-2013_asof_2-3-15.pdf)





# PROJECT BENEFITS

## WHEELER MIDDLE AND HIGH SCHOOL

- Buildings consolidated at the west side of route 2 addressing security concerns
- Building and infrastructure updated to meet all current codes – Health / Safety / Fire
- Building air quality, lighting & acoustics updated to meet State Standards
- All hazmat remediated
- Energy efficient green buildings
- New science labs and instructional classrooms
- All educational needs addressed in the academic building addition

## NORTH STONINGTON ELEMENTARY SCHOOL

- Main office at building entrance
- Building and infrastructure updated to meet all current codes – Health / Safety / Fire
- Building air quality, lighting & acoustics updated to meet State Standards
- All hazmat remediated
- Energy efficiency optimized
- New Central Kitchen and dedicated cafeteria and multipurpose room
- All educational needs addressed

