

Town of Berlin

Renovations, Additions, Code, Accessibility Study and
Preliminary Plans

Proposed Plan 2010

Berlin High School
Berlin, Connecticut



Exterior Perspective – Proposed Front Entrance

November 18, 2010
Revised December 8, 2010

Silver/Petrucelli + Associates

Architects / Engineers / Interior Designers



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Town of Berlin

**Renovations, Additions, Code, Accessibility Study and
Preliminary Plans
Proposed 2010 Plan
Berlin High School**

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Berlin High School
139 Patterson Way
Berlin, Connecticut 06037

November 18, 2010
Revised December 8, 2010

Prepared by:



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Town of Berlin

Berlin High School Renovations, Additions, Code and Accessibility Study

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Acknowledgements

We wish to thank the Town of Berlin for the opportunity to serve the town's education facilities needs and Berlin High School in this manner. We would also like to thank the local officials, Board of Education, administrators, teachers and staff of the high school for their enthusiasm, helpfulness and input, as their feedback and comments have been invaluable to the thoroughness of this report.

Executive Summary

This report is the result of a study commissioned by the Town of Berlin, Connecticut to assess the current condition of the Berlin High School facility and grounds with regards to code compliance and accessibility and make corrective recommendations to the Public Building Commission. The architects and engineers were directed to develop plans with an emphasis on cutting overall costs and minimizing building additions to maximize the state reimbursement of the project while meeting the Educational Specifications and statement of needs developed by the Board of Education.

Per the Request for Qualifications, the scope of this report is broadly defined as follows:

“To provide services for code and accessibility renovations to the Berlin High School located at 139 Patterson Way, Berlin, CT. The Statement of Need, dated April 17, 2009, outlines deficiencies from the NEASC Accreditation Report and Office of Civil Rights in its Compliance Review Report. In addition to other deficiencies, the lack of sufficient classroom stations for special education, science labs, inadequate fields, indoor air quality and code/accessibility items were the primary concern.”

The New England Association of Schools and Colleges (NEASC) Commission on Public Secondary Schools in a letter dated February 5, 2009 lists the following specific items as recommendations for action:

“Develop a plan for reconfiguring the science labs and classrooms and the upper level of the library/media center to better support curriculum and instruction.”

“Conduct a formal air quality study with particular attention to the science classrooms in order to verify that the completed upgrades have corrected any perceived air quality problems.”

Additional focus was provided by the Berlin Board of Education in the Educational Specifications dated April 13, 2009 which summarized the facility deficiencies cited by NEASC. These included:

“The lack of sufficient classrooms/learning stations, including the lack classes specifically set aside for special education, resulting in those classes being scheduled in the upper level of the library, which in turn limits general access to the library.”

“The lack of spaces that provide confidentiality where necessary”

“The very limited availability of science labs”

Town of Berlin

Berlin High School Renovations, Additions, Code and Accessibility Study

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“The air quality concerns, particularly in the science labs.”

“The inadequate on-site athletic facilities combined with the difficulties of transporting students to the off-site athletic complex.”

This report addresses the above deficiencies with comprehensive building and site recommendations which utilize cost effective design solutions while meeting the stated program goals. In addition the architects met with the high school educators and administrators to develop a broad list of existing program requests and needs which provided a finer level of details necessary for proper facilities master planning.

The issues addressed in this report also include current physical plant deficiencies at the school with regard to building and fire code conformance, including the Americans with Disabilities Act (ADA), health and life safety issues, as well as mechanical, electrical and plumbing system issues.

This report was prepared by Silver/Petrucelli + Associates, Inc. Architects and Engineers (S/P+A) of Hamden, Connecticut, a firm specializing in municipal and school programming, planning and design, feasibility analyses and building condition investigations including building envelope surveys, as well as window and roof repair and replacement. Site review, study and design services were completed by Tavella Design Group of Hamden.

Process

The information contained in this report was gathered by S/P+A and Tavella Design Group via meetings and interviews with school administrators and the principal, Board of Education, the high school staff and teachers including custodians, curriculum coordinators and IT personnel for the school district. In addition, the architects met with the local Fire Marshal and Building Official and contacted the Health Department to discuss first hand building code deficiencies, concerns, expectations as well as any existing code modifications already in place for the building. To round out the process the team of architects and engineers met with the Public Works staff to discuss maintenance and site design issues. Extensive on-site facilities evaluations by the architects, mechanical, electrical engineers and landscape architects were conducted as well.

This data was organized and appears in sections of this report in the form of meeting minutes, building condition narratives, floor plans, and spreadsheets detailing the specific code or maintenance issue or deficiency, with suggested recommendations including corrective actions, cost estimates and prioritization and timelines.

Report Findings

Overall, Berlin High School is in need of physical plant and site improvement upgrades, including special education classrooms and offices, science department reconfigurations and expansion, technology advancements, and extensive mechanical and electrical system upgrades. Many of the needs are customarily expected of a building this age and considering its extensive use. The sports fields suffer from a lack of handicap accessibility and overuse during the course of the school year. The

Town of Berlin

Berlin High School Renovations, Additions, Code and Accessibility Study

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existing floor plan layout of each level is problematic, most notably for inefficiency of program spaces and extensive circulation network. The buildings stair circulation is generally undersized and less than convenient for the occupants.

The school buildings and grounds do not fully comply with current Building and Fire Codes, and do not meet some of the Federal ADA accessibility guidelines for non-discrimination. For example, many of the program areas have counters and sinks which do not meet ADA guidelines and required maneuvering clearances are lacking at many doors.

Congestion and problematic traffic patterns also negatively impact the school campus since the bus pick up and drop off and the student drop off all converge on Patterson Way, which creates long cue lines of buses and traffic extending into the adjoining neighborhood roadways, especially during the morning commute.

This report, featuring the Proposed Plan 2010, identifies current and future needs and offers specific recommendations which will assist the Town in future capital and master planning for the school for years to come. The summary pages which follow quickly identify at a glance the proposed program & square footage reductions, cost reductions achieved from the previous option #2 and the overall proposed project costs.

Proposed Program & Square Footage Reductions:

Berlin High School

Code Compliance, Accessibility Improvements & Renovate as New

Based on Proposed Plan 2010

November 18, 2010

Significant Area reductions compared to Option 1 & Option 2

1. Reduce/relocate existing wood shop	1,000 s.f.
2. Reduce/relocate existing metal shop	1,000 s.f.
3. Reduce/relocate existing auto shop	1,000 s.f.
4. Reduce/relocate existing electronics shop	1,000 s.f.
5. Reduce/relocate existing photography shop	1,000 s.f.
6. Eliminate lower gymnasium	2,800 s.f.
7. Reduce/relocate weight room	1,250 s.f.
8. Reduce media center	1,750 s.f.
9. Reduce/relocate art classrooms (x2)	1,500 s.f.
10. Reduce auditorium proposal to 650 seats	1,500 s.f.
11. Reduce lower level boys locker room	2,000 s.f.
12. Reduce music program	1,000 s.f.
13. Reduce individual department offices	1,400 s.f.
14. Eliminate receiving area addition	1,800 s.f.
 Total Reduction	 20,000 s.f.
<u>Circulation & structure reduction</u>	<u>5,000 s.f.</u>
Total square footage reduction:	25,000 s.f.



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Architects / Engineers / Interior Designers

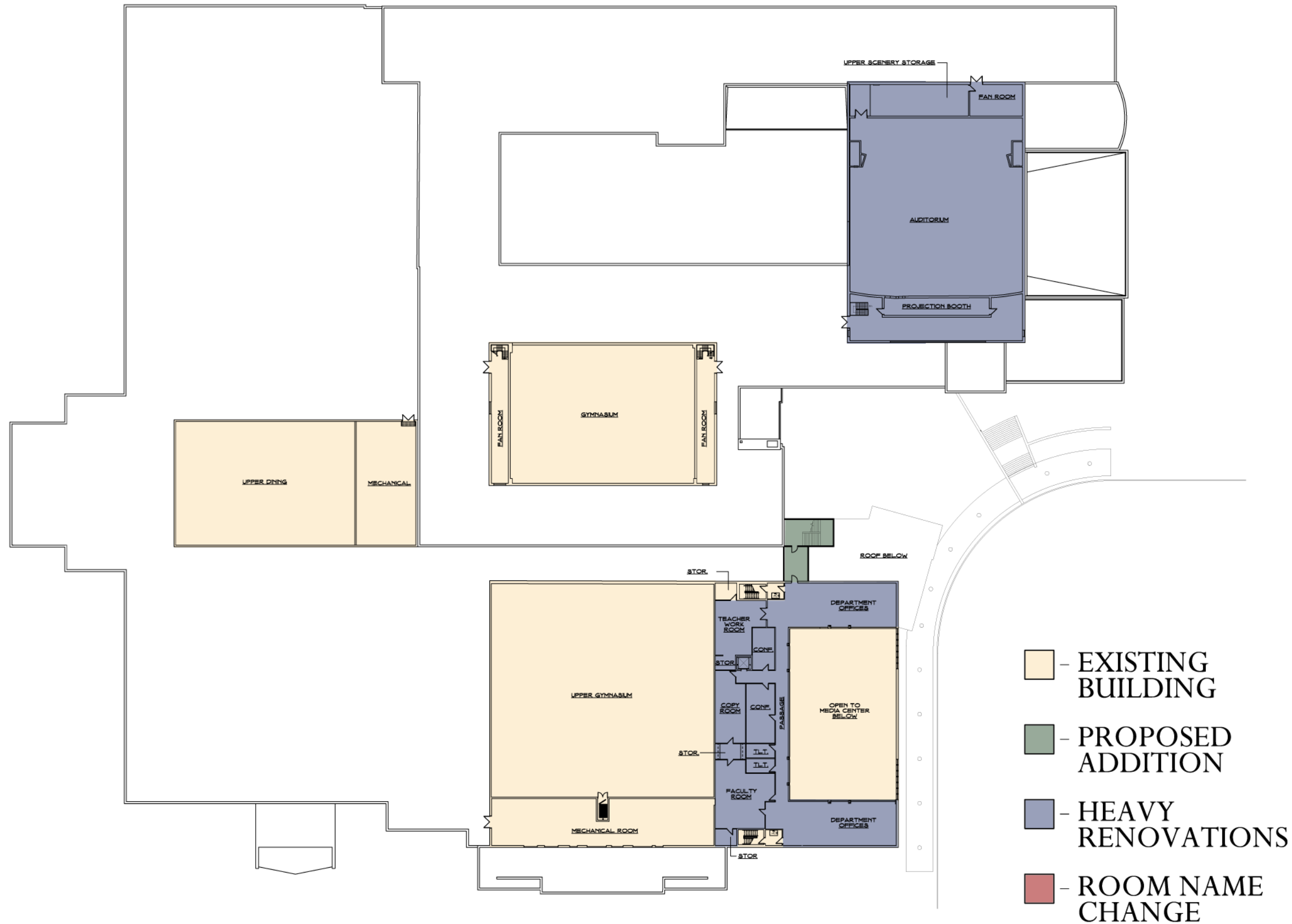


MAIN LEVEL FLOOR PLAN

SCALE: 1/4" = 20'-0"

1
A2





- EXISTING BUILDING
- PROPOSED ADDITION
- HEAVY RENOVATIONS
- ROOM NAME CHANGE

UPPER LEVEL FLOOR PLAN
 SCALE: 1" = 20'-0"
1
A3.2



Revision:	Description:	Date:	Revised By:

PROVIDE ACCESSIBLE ROUTES
FROM PARKING LOT TO BOTH
BLEACHER AREAS

PROVIDE 2 MEANS OF ACCESS
AND ACCESSIBLE SEATING TO
BOTH SETS OF BLEACHERS

PROVIDE NEW HANDICAPPED
ACCESSIBLE PRESS BOX

RESTRIPE AND REGRADE FOR
NEW CODE COMPLIANT
HANDICAPPED PARKING SPACES

PLACE REQUIRED NUMBER OF
ACCESSIBLE SPACES IN
LOCATIONS CLOSEST TO USE
THROUGHOUT LOT

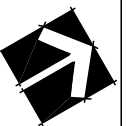
ACCESSIBLE ROUTE
-TYPICAL

PROVIDE PAVED ACCESSIBLE
VIEWING AREAS TO BOTH
SIDES OF BASEBALL AND
SOCCER FIELD

PROVIDE PAVED ACCESSIBLE
WALKWAYS TO DUGOUTS/TEAM
BENCH AREAS AND
ACCESSIBLE VIEWING AREAS
FOR ALL 3 ATHLETIC FIELDS

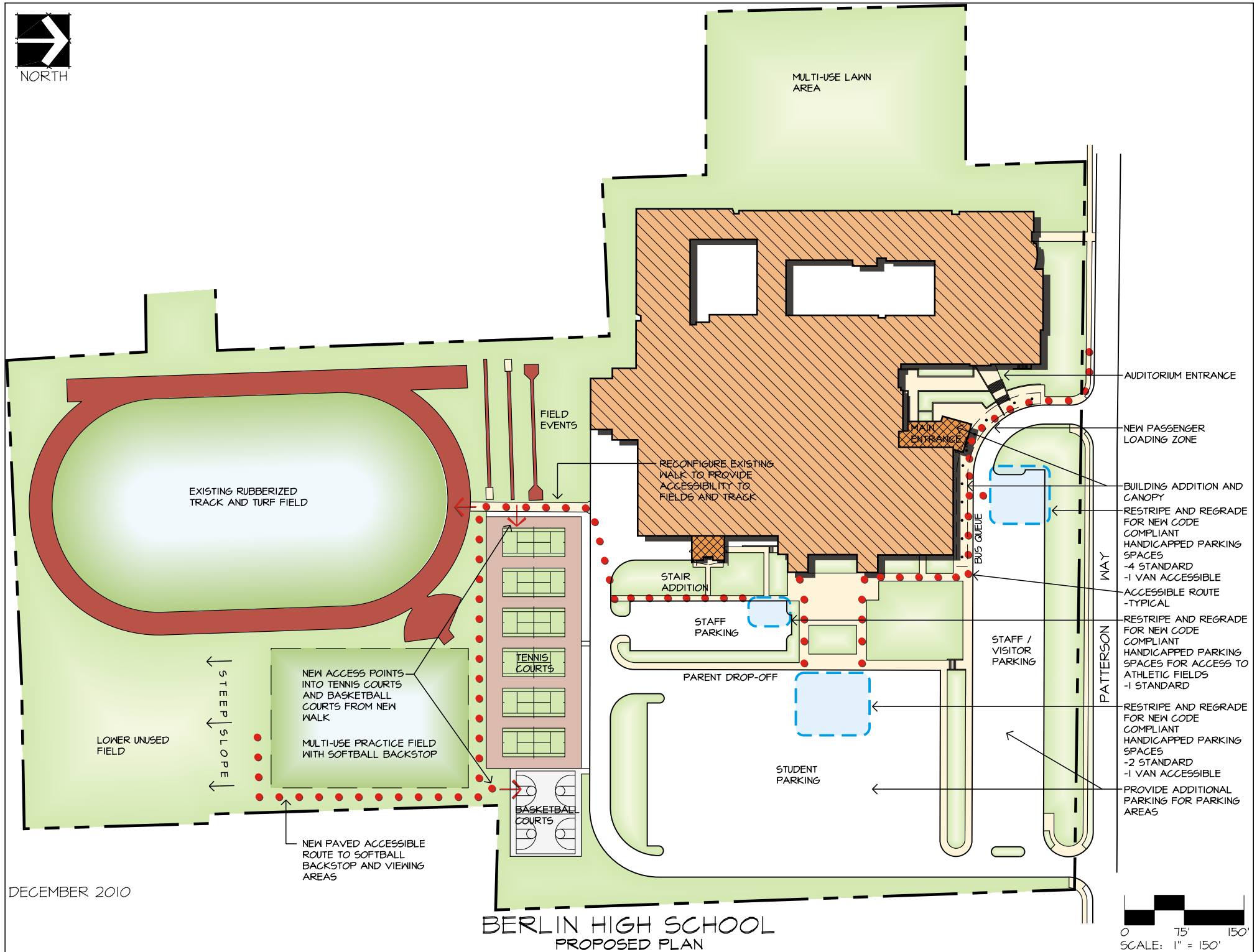
DECEMBER 15, 2009

BERLIN HIGH SCHOOL - SAGE PARK



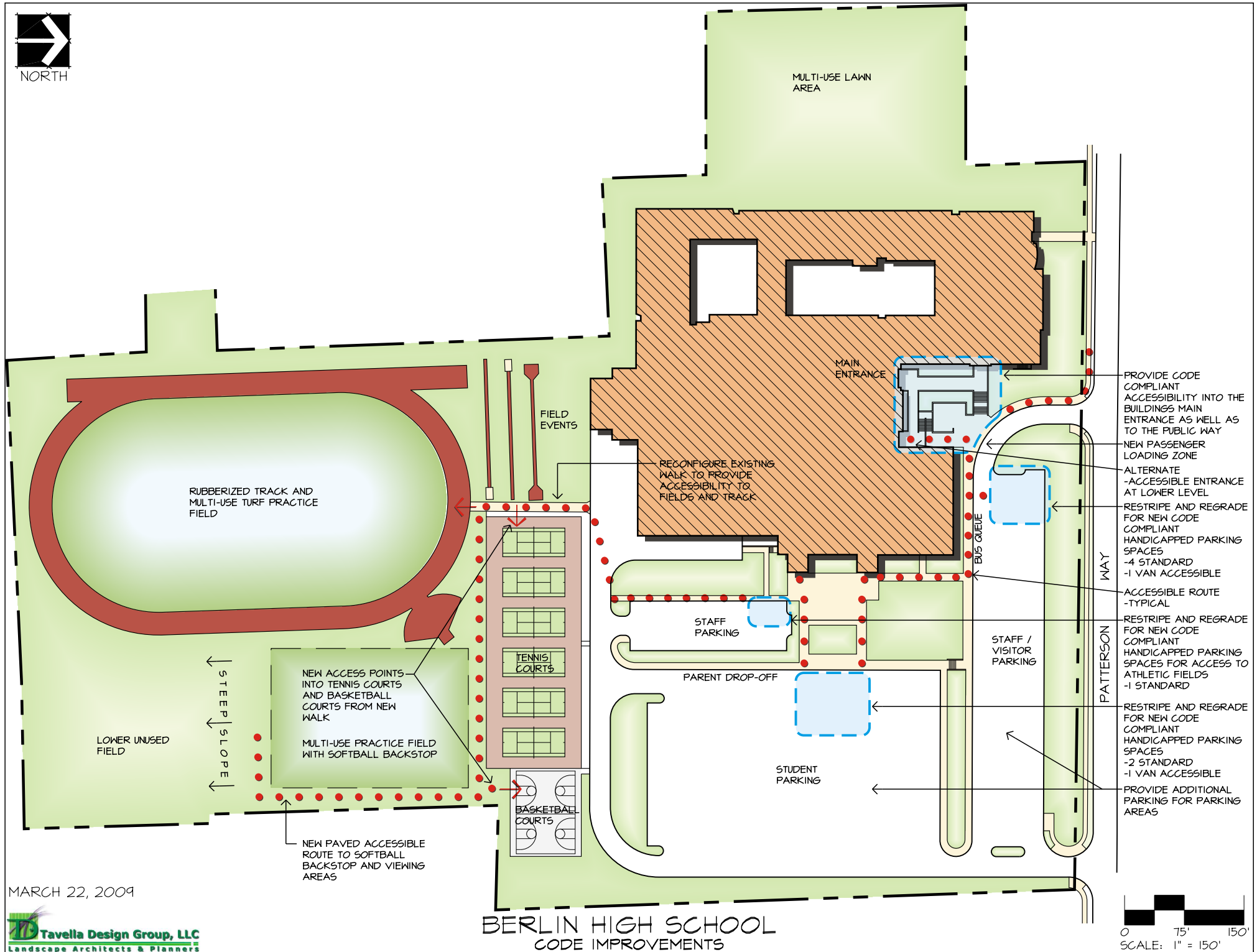
NORTH

0 200' 400'
SCALE: 1" = 400'

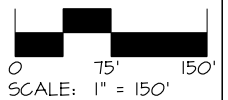


DECEMBER 2010

BERLIN HIGH SCHOOL PROPOSED PLAN



MARCH 22, 2009





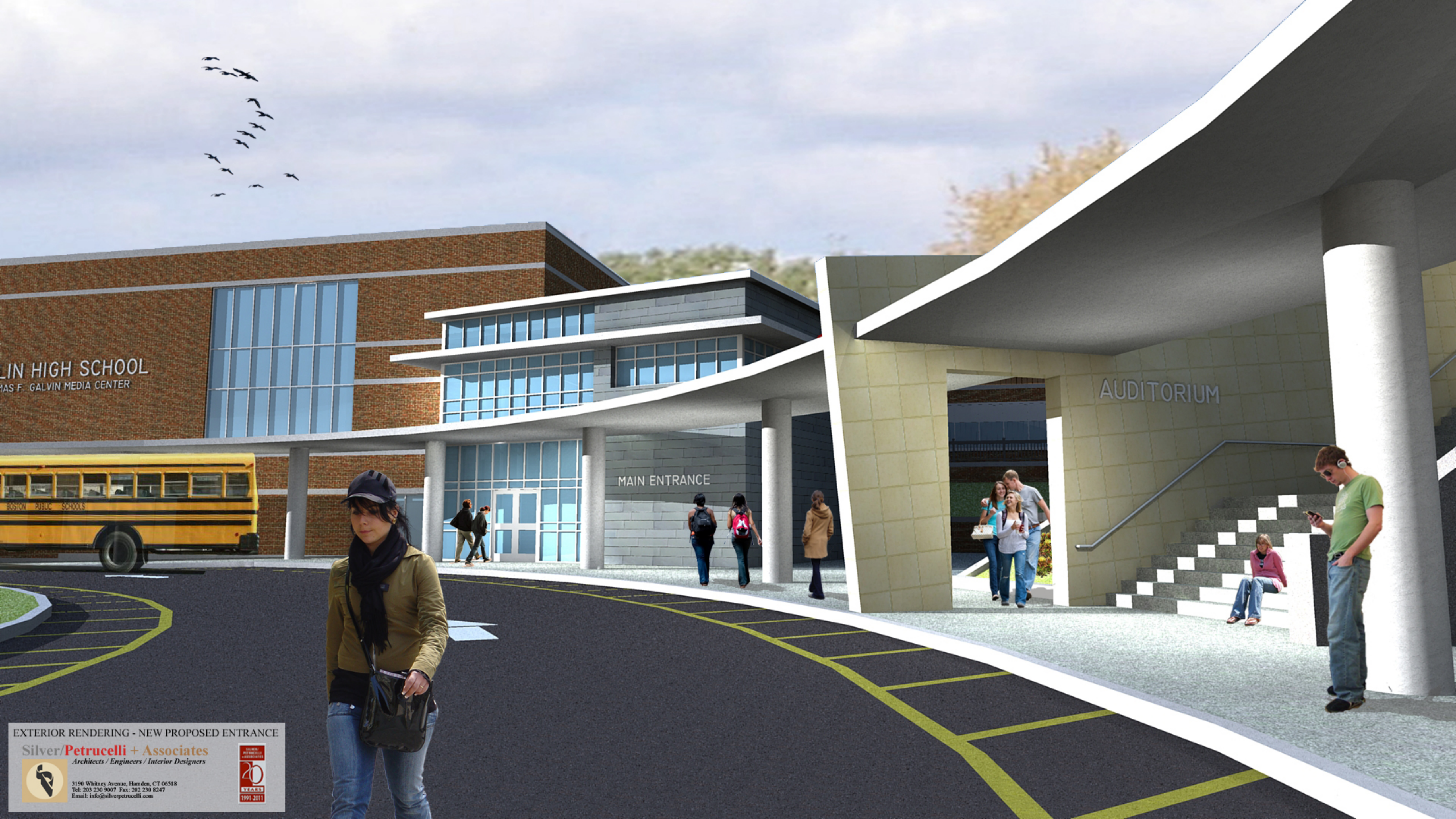
EXTERIOR RENDERING - NEW PROPOSED ENTRANCE

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LIN HIGH SCHOOL
MAS F. GALVIN MEDIA CENTER

MAIN ENTRANCE

AUDITORIUM

EXTERIOR RENDERING - NEW PROPOSED ENTRANCE

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EXTERIOR RENDERING - NEW PROPOSED ENTRANCE

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INTERIOR RENDERING - NEW 2-STORY LIGHT WELL

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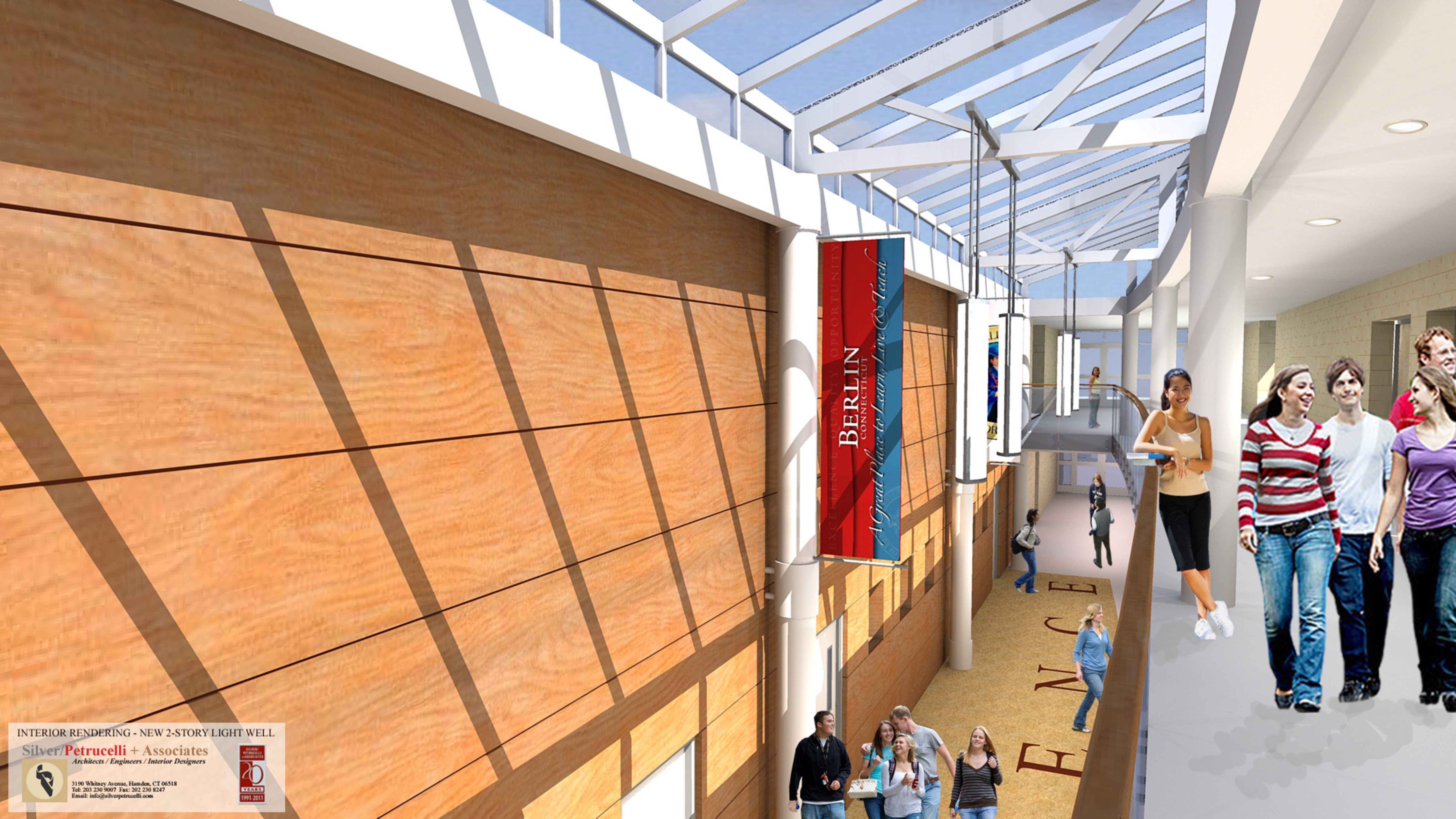


INTERIOR RENDERING - NEW 2-STORY LIGHT WELL

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Summary of Cost Reductions:

Berlin High School

Code Compliance, Accessibility Improvements & Renovate as New

Based on Proposed Plan 2010

November 18, 2010

A. Eliminate new turf field – keep existing grass:	\$787,500
B. Eliminate turf field drainage enhancements:	\$78,750
C. Eliminate new track – keep existing:	\$420,000
D. Eliminate construction of 2 new tennis courts:	\$141,750
E. Eliminate construction of 1 new basketball court:	\$42,000
F. Eliminate West field enhancements:	\$26,250
G. Reduce new Plant Material (50%)	\$52,500
H. Reduce Main Office / Entry Addition (from 15,000 s.f. to 4,000)	\$3,465,000
I. Reduced Auditorium Addition Scope (5,000 s.f.)	\$825,000
J. Eliminate music Additions (5,000 s.f.)	\$1,575,000
K. Eliminate South courtyard 3 classroom addition (2,500 s.f.)	\$787,500
L. Eliminate Kitchen & Paint Booth addition (2,000 s.f.)	\$630,000
M. Eliminate Alternative Energy Allowance	\$2,000,000
N. Soft Cost reductions	\$171,884
O. Contingency reductions	\$2,436,165
P. Miscellaneous plan changes	(\$145,426)

Total Reduction from previous Plan: \$13,293,873

Original reimbursement rate = $47.14 \times .6288 = 29.64\%$

Revised reimbursement rate = $47.14 \times .6860 = 32.34\%$



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Architects / Engineers / Interior Designers

Berlin High School Additions and “Renovate as New”
Opinion of Probable Construction Costs Summary – Proposed Plan 2010
Silver Petrucelli & Associates, Architects & Engineers
November 18, 2010

Construction Costs	\$54,255,390
Alternative Energy Allowance (design & construction)	\$0
Fixtures, Furniture & Equipment	\$1,500,000
Technology upgrades	\$250,000
Special Inspection Fees	\$157,500
Geotechnical Design / Boring Fees for Fields and Pavements	\$68,250
Environmental Design and Construction Administration	\$52,500
Construction Managers Fee	\$1,627,662
Construction Manager Pre-Construction Costs	\$162,766
Architecture & Engineering Fees (3.5%):	\$1,898,939
Commissioning Fees:	\$275,000
Insurance (town) and Legal ads	\$26,250
Permit Costs (.26/\$1000 State Education Permit Fee)	\$14,106
Financing	\$545,555
Construction, Estimating and Owner Contingency	\$8,138,309
Miscellaneous Administration Fees	\$42,000
Printing Costs	\$75,000
Additional Soft Costs:	\$850,000
Phone System	
Custodial Costs	
Security Services	
Construction/record survey	
Destructive testing	
Utility Charges	
Builders Risk	
Winter Protection	
Total Project Cost	\$69,939,227

Section I - Introduction

Report Overview and Purpose

Silver/Petrucelli +Associates, Inc. Architects and Engineers was retained by the Town of Berlin, Connecticut to conduct a facilities study of Berlin High School for code & accessibility renovations and program space improvements for both short and longer term needs.

This report analyzes the current facility and grounds with regard to building and fire code compliance, accessibility (ADA) and indoor air quality standards (IAQ), which require modifications to the building or spaces to satisfy the future educational programmatic needs as noted in the NEASC report and stated by the high school department heads.

This report includes this review and makes projections for educational space needs 10+ years in the future, including overall master planning for the school.

1. The code compliance effort is to determine the relative compliance of the facility and grounds and their architectural, mechanical, plumbing or electrical systems with the current building and life safety codes. Connecticut Building, Fire, and Health Codes as well as Federal OSHA and Americans with Disabilities Act (ADA) requirements are incorporated in the review of the facility. With the exception of the Connecticut Building Code, all of these codes are retroactive and currently enforceable, depending on the managing agency or authority. Should any of the code conformance work disturb existing asbestos containing materials or systems, the cost of this abatement work should be added to the cost estimates.
2. The study will also analyze the educational programmatic space needs per meetings and interviews with the superintendent of schools and each principal. The architect will provide alternate design solutions that address these needs. Through the use of floor plans, the architect will show locations of the proposed improvements and addition(s).

Report Services

The following services were provided to complete the facility analysis, enrollment projections and on-going and long-term maintenance needs and capital and master planning:

1. The project was initiated with a kick-off meeting including the architects, superintendent of schools, principal, Town administrators and Fire Marshal to outline the goals and requirements of this project.
2. Subsequent meetings and interviews were held with the Principal, teachers and staff of the high school, including the science faculty, special education department, math, language arts, english, physical education, music and technical education teachers among others.
3. The architects and engineers reviewed the available existing drawings of the school and field verified existing conditions to document site and building floor plans in CAD format.

3. The architects discussed prior code violation reports, and/or items noted at the school in a Town of Berlin

Berlin High School Renovations, Additions, Code and Accessibility Study

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meeting with Building Official and Fire Marshal.

4. Code conformance field surveys were conducted of the existing facility and grounds by architects, landscape architects and engineers with regard to architectural, site, mechanical, electrical and plumbing systems.
5. Code evaluations and interpretations and the associated recommendations and cost estimates to remedy each code violation.
6. Code modification development where applicable.
7. Development of space re-utilization and space alternatives.
8. Preparation of drawings, building alteration, Renovate as New and addition options, reports and estimates.
9. Preparation of a progress report for indoor air quality and programming for review by the Public Building Commission.
10. Preparation of the final draft report including revising the report including feedback and comments and the revision of selected proposed floor and site plans for final review.
11. Final editing and preparation of final report for distribution to the Public Building Commission
12. Attend Town meetings to present report and answer questions posed by community.

Interviews and Data Collection

An integral part of any space evaluation study and master plan is the development of an understanding of the educational program as it is currently being carried out in the school system. This includes determining the educational program elements that are working well as well as those which are not working well or are deficient.

The focus of study is on the immediate needs and deficiencies of the high school building as previously documented in the Office of Civil Rights (OCR) field checklist and summary, NEASC reports and the Berlin Board of Education Educational Specifications. The subsequent field investigations and meetings not only confirmed specific code and accessibility violations but also reviewed in more detail the overall educational program needs and current building system limitations. Data collection and systems analysis were undertaken by the engineers in determining the status of the building indoor air quality. The mechanical units were examined and the building air supply and return systems were reviewed in each area of the building. The architects and engineers also sought and received input from the school staff, including custodians and maintenance personnel on seasonal and year round observations, related to building comfort and air quality, as this study was conducted over a limited time period of the calendar year. The recommendations for Option #1 address point by point the immediate code and accessibility renovation needs while proposing a minimal addition required to satisfy the program space needs.

Town of Berlin

Berlin High School Renovations, Additions, Code and Accessibility Study
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The study also looked at future high school needs. It is important to gather information regarding future educational programs and technology, directions in teaching and curriculum, and how technology or other teaching tools are anticipated to affect the educational programs and thus the school facilities and their spaces for the future. Where possible the high school faculty were asked to identify current trends in their programs and foreseeable future needs to assist in master planning for the existing building and possible future capital expenditures for the Town. Many of the school staff members noted that a similar process had been undertaken in 2007 to identify their program needs for the planning of a new Berlin high school. In almost all cases the stated needs of the new high school report two years ago coincided with the current requests. The previous report thus served as a reliable point of reference in determining needs and separating “wish list” items from core needs and deficiencies. The recommendations for the previous Option #2 and the current 2010 Proposed Plan go beyond the immediate school program and building system needs to identify longer term improvements, renovations and additions, to maintain quality high school programs in the existing building for the next 20 years and beyond.

Meeting Minutes and Notes

Refer to attached minutes and notes.

Section III – 2010 Proposed Plan

2010 Proposed Plan

The current plan re-examines the previous options and combines elements of each to form a new plan and direction for the high school. The 2010 plan incorporates the code renovations and most of the program improvements of the previous option #1 while adding scaled back “renovate as new” features of the previous option #2. This plan makes significant square footage cuts and cost reductions from option #2 while meeting the educational needs of the high school now and in the foreseeable future. The previous options are listed below for reference and to illustrate how they helped shape the current plan.

Previous Option #1 – Code Renovations and Program Improvements

This option highlights specific areas, both programmatic and physical, of proposed renovations and expansion which are considered to be of the highest importance. Option #1 identifies code violations and provides corrective action for each item while addressing program deficiencies cited by NEASC with proposed additions and renovations.

Code Violation:

Non-accessible front entrance
Missing/non-compliant signage
Non-accessible staff toilets
as req'd.
Non-accessible student toilet rooms
Non-accessible drinking fountains
Knob door handles/no tactile warning
Push/pull clearances and insufficient door widths
Steps at exterior doors
Non-accessible cabinets, sinks and/or counters
Non-accessible greenhouse aisle/workstation
Science workstations, sinks and fume hoods
Music recording studio steps
Band and chorus room tiered riser sections
Male and female coaches offices steps
Male and female coaches offices toilets/lockers
Wrestling/Gymnastics lower level gym steps
adjacent
Remote exits required in gymnasiums
Stairs and railings
Missing/non-compliant area of refuge (AOR)
Non-compliant rating at top of wall (fire rated enclosures)
No female team room (OCR citation)
Insufficient drinking fountain count (IPC)
Insufficient toilet fixture count (IPC)
No accessible toilet facilities for fields at school
Missing fire alarm notification devices
Missing emergency lighting in interior windowless areas
Missing emergency lighting outside exit doors
Electrical service has greater than 6 disconnects at main

Corrective Action:

Provide extensive switchback ramp system to existing entry
Provide compliant signage where missing
Provide compliant fixtures, grab bars, clearances, etc.

Provide compliant fixtures, grab bars, clearances, etc. as req'd.
Replace with new (many have been upgraded) compliant
Replace door hardware at all non-compliant locations
Modify doors & frames and/or provide power assist operators
Modify grading and repave as required.
Replace sections of cabinetry, counters and sinks as req'd.
Replace with new compliant (in proposed addition)
Replace with new compliant (in proposed addition)
Reconfigure for accessible ramp or lift
Remove tiers & improve efficiency, per input of music staff
Reconfigure for accessible ramp or lift
Provide compliant fixtures, grab bars, clearances, etc. as req'd.
Provide accessible ramp system or infill floor flush w/

Provide new remote doors/exits where required
Upgrade stairs and railings and/or seek modification
Add and/or upgrade AOR as required.
Upgrade top of wall condition as required.
Provide new female team room adjacent to female lockers
Provide additional drinking fountains throughout facility
Provide additional restrooms, including on upper level
Provide accessible restrooms with direct exterior access
Provide fire alarm notification devices where required
Connect additional lighting to generator system
Replace some fixtures & connect others to generator
Add main service disconnecting means

Town of Berlin

Berlin High School Renovations, Additions, Code and Accessibility Study

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Option #1 includes all of the items listed above in addition to a handful of potential code modifications for items such as existing west egress stair from upper level and existing ramps on main level being slightly steeper than ADA requirements, thus non-compliant. Indoor air quality improvements and recommendations such as adding supply air to the original section of the school and replacing lined ductwork are also included in this option. Refer to the mechanical narrative for a full IAQ accounting.

On the program side Option #1 directly addresses NEASC citations and proposes plan solutions for additional labs and larger science classrooms, relocated and expanded special education classrooms and support spaces, a redesigned upper level plan layout and additional general classrooms to meet the needs of several academic departments.

Previous Option #2 – Renovate as New

This option is expansive in scope affecting virtually all areas of the building. It includes all of the items noted in option #1 but proposes significantly more additions and renovations to the building meeting most, or all, of the program needs and requests identified by the school staff.

Option #2 proposes four addition areas over and above the science addition proposed in Option #1. The largest of these would include a new, accessible lower level front entrance, improved vertical circulation and main office suite directly adjacent to the bus drop off loop shifting the focus of activity and center of circulation closer to the library. The new main office would add several rooms lacking in the existing space confines, such as an adjacent security booth, record storage room, a tardy room, an additional conference room and restrooms.

Another addition would house an 800 seat auditorium and expanded music program in the vicinity of the existing auditorium, the northwest corner of the original building. The music program has many space needs such as instrument storage, a piano instruction room, enlarged ensemble and jazz band rooms and additional practice rooms.

Smaller additions are also proposed in the small courtyard and receiving area in the rear of the building. The courtyard infill addition would provide up to 3 new general classrooms while the receiving area addition would provide needed space for lower level kitchen storage, loading dock storage and potentially minor program space for adjacent technology education.

As the name suggests, Renovate as New also requires upgrading of the existing building systems, envelope and interior finishes. With this option a detailed investigation of the brick cavity walls, windows and roofing systems would be required with the probability that most roofs and windows would be replaced altogether. Interior finishes, furniture and equipment would also be examined for remaining lifespan and serviceability for long term use.

Site Work for Renovate as New

While development of the parcel at Berlin High School is not absolutely necessary to meet education

Town of Berlin

Berlin High School Renovations, Additions, Code and Accessibility Study

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requirements, maintaining a unified education campus is preferred. The unified campus including athletic facilities for Physical Education classes and team sports helps maintain consistency in the education program, and supervision of students. To maximize land use at Berlin High School, and minimize transportation requirements for team sports, we recommend development of Berlin High School and the parcel across the street. Improvements will include reconstruction of existing facilities to create safer playing fields for students. The improvements are in addition to minimal improvements to address accessibility concerns reviewed earlier. Though fields, such as the football field at the High School is not necessary for Code Improvements, TDG recommends such improvements, since it creates a safer play environment for students. Improvements for accessibility to Sage Park are necessary for use of the fields, if the school continues to utilize the facility for team sports.

Development of the parcel across the street from the school affords a greater number athletic fields at the school, that reduces costs for transportation to off site facilities.

Vehicle Circulation

Overall, vehicle circulation functions well. Changes proposed are intended to improve current parent drop-off, retaining the existing bus drop-off area and staff parking area. While an interior parent drop may function better and provide for improved circulation on Patterson Way, it is unlikely to change the current pattern of parents stopping along the roadway. Because of this, we propose improvements along Patterson Way, that defines a drop-off area for parents. The improvements are intended to create a safe environment where students can exit vehicles onto defined walkways. Congestion currently experienced along Patterson Way would continue, but it is believed the slowed speeds due to congestion can contribute to a safer environment, where it is expected that students will cross the street. Improvements to the parent drop off includes:

- A defined parent drop off area along Patterson Way
- Pavement improvements on Patterson Way, such as pavers, that would help calm traffic and define the school zone where students may be crossing.
- While road crossing is a safety concern, further design and discussions with the Town are necessary to assure designs that meet optimal requirements for the Town.

Parking Improvements

Per meetings with School Administrators, a sufficient number of parking spaces exist for staff, visitor, and students. Reconfiguration of parking areas can provide for more efficient use of exist land area. Additionally, vegetated islands would be considered that would help provide shade, and help in reducing the “heat island” effect caused by such large parking areas. Options exist for placing student parking on the open space parcel across the street, creating the opportunity for an athletic field where the current parking area exists for students. Parking on the other side of the street increases the number of students that would cross Patterson Way on a daily basis, and may be more difficult to monitor for school administrators. Such options would be evaluated further during the development of a Schematic Site Plan.

Town of Berlin

Berlin High School Renovations, Additions, Code and Accessibility Study
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Athletic Facilities Improvements

Renovation to existing fields at the High School should include development of the lower field, that is currently unusable because of drainage problems. Development of the lower field would expand open space that can be utilized by Physical Education Department, as well as the Town's Recreation Department. The multitude of fields would also permit the Recreation Department, that currently maintains the fields at the School, to rest fields. The resting of fields is critical for maintaining a healthy stand of turf. Additional athletic facilities improvements at the current high school parcel include:

- Renovation of the existing multi-use field
- Renovation of the western soccer field (non-regulation size)
- Rehabilitated Tennis Courts, with lighting.
- Rehabilitated Basketball Courts

General Site Improvements

In development of the site, reconstruction would include new walkways and improved pedestrian access to the site. This may include improved walkways from Madison Drive to enhance access from the surrounding neighborhood for pedestrians. Additionally, drainage analysis is required due to the change of pervious, and impervious areas due to construction, along with impacts to potential changes because of the installation of synthetic turf field. Additional improvements should strive to coordinate the education program for outdoor opportunities for the curriculum, for programs such as science and art. In summary, general site improvements will include:

- Walkway reconstruction / Pedestrian enhancements
- Drainage improvements
- Outdoor Education opportunities.

Electrical Improvements

The electrical scope for Option #2 would include replacement of essentially all interior and exterior lighting systems. It would also include replacement of more of the electrical distribution than is proposed under Option #1 though some elements could still remain. The fire alarm, public address, telephone, master clock and CATV systems would be completely replaced under Option #2.

A Renovate as New project has many advantages over basic additions and renovations for older buildings such as Berlin High School. For a Renovate as New project, as defined by the State Department of Education, the Town agrees to renovate the entire building and all systems to a "like new" condition (certifying them for 20 years) and in exchange the State broadens reimbursement dollars to include replacement of existing building systems not typically covered by reimbursement. Renovate as New has demonstrated in numerous cases around the State significant renovation savings for local taxpayers.

2010 Proposed Plan

Town of Berlin

Berlin High School Renovations, Additions, Code and Accessibility Study
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The current plan in many respects is a hybrid of the previously studied options included in this report. It addresses immediate building and program deficiencies and also addresses longer term needs of the school while maximizing the state reimbursement, minimizing costs to the Town.

Building Renovations and Additions

The additions are similar in scope to previous option #1, a new science wing on the main level located over the existing technology education classrooms and a new main entrance to address accessibility and security requirements. The existing building will be fully renovated under the “renovate as new” category for many of advantages noted above in previous option #2. The renovation will include replacement of all mechanical, electrical and plumbing systems as well as major exterior envelope elements such as roofing, windows and doors. Indoor air quality improvements are an integral component of the current plan. The renovation will also update the building interior with new finishes; walls, floors, ceilings, cabinetry and doors. Twenty first century technology upgrades are planned throughout the building.

The auditorium will be reconfigured and grow from less than 400 seats to 650 seats which will allow assemblies of half the school at one time. This expansion will occur within the existing footprint of the building as will the expansion of the music program. Several school programs will be relocated around the building as part of the renovations, including the main office which will be moved into the lower level adjacent to the new main entrance. The vertical connection between the lower and main levels will be enhanced by rebuilding two stairways and adding a two story lightwell to visually connect the corridor networks. A few program spaces, such as the media center, technology education and weight room will be reduced in size in the current plan.

Site Improvements

The current plan proposes to reconstruct the existing tennis and basketball courts, not provide additional courts. The existing track and football field would remain essentially unchanged with only minor accessibility upgrades. The focus of the site improvements will be correcting accessibility deficiencies as well as addressing maintenance items which may include pavement and drainage improvements. The Sage Park code and accessibility improvements are also included in the current plan.