



Burlington School District
Infrastructure Planning History and Burlington High School Process

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1. Purpose, Vision, and Pedagogical History

Burlington, VT is a city surrounded by educational institutions. Our city founded The University of Vermont as a private university in 1791, the same year Vermont became the 14th U.S. state. The citizens of Burlington helped fund the university's first edifice "Old Mill", and, when it was destroyed by fire in 1824, also paid for its replacement.

A resident of Burlington, educational philosopher and UVM Professor John Dewey's writings were pivotal to the country's educational reforms during the early 20th century. He opposed the authoritarian structure and rote learning inherent in most schools, arguing that students must be invested in their schoolwork to learn. Dewey wanted schools to be run along democratic lines to prepare students to be active citizens.

Schools, he wrote, must offer "an embryonic community life, active with types of occupations that reflect the life of the larger society and permeated throughout with the spirit of art, history and science. When the school introduces and trains each child of society into membership within such a little community, saturating him with the spirit of service, and providing him with instruments of effective self-direction, we shall have the deepest and best guarantee of a larger society which is worthy, lovely and harmonious."

In 2006 the New England Association of Schools and Colleges (NEASC) report (Appendix A) put Burlington School District (BSD) on warning for conditions at Burlington High School (BHS) relating to handicap accessibility, science labs safety, sewage leaks on football field, safety conditions of Auditorium; the overall consensus was that the building was not set up for 21st Century learning. This warning resulted in BSD investing in an elevator in F building, and a partial upgrade to two Science Labs and the turf athletic field.

In 2008, a 21st Century Schools study was completed by BSD consultant Frank Locker, Principle with Educational Planning consulting (<http://franklocker.com>). Frank Locker's visionary document deeply embedded Dewey's educational philosophy, which found disciples in multiple policy think tanks at that time, including the National Academy Foundation and Knowledgeworks, a nonprofit focused on providing innovative education approaches and advancing aligned education policy.

Locker's current assignments include leading Educational Visioning for Sidwell Friends School in Washington DC. His expertise is in student-centered learning and his comprehensive District plan laid the foundation for the our capital planning process, and programmatic changes that were supported by a Nellie Mae Foundation grant to Burlington and Winooski Partnership for Change.

The 21st Century Schools Plan included ambitious plans for redesigning Burlington's approach to delivering education through integrated, interdisciplinary teaching with project-based learning, internships through teams of two-three teachers, and significant changes to class block scheduling.

Soon after Locker introduced BSD to these new educational delivery concepts, many of them were also adopted and codified into law through Vermont's Act 77, passed in 2013. This legislation requires all Districts to transition to Proficiency Based Learning in grades 7-12. As we enter our six year of Act 77, BHS Class of 2020 is on track to be our inaugural Proficiency Based Learning (PBL) graduating class.

BSD has remained focused on finding resources to adopt the strategic vision in the Locker Plan. To create an incentive for school districts to adopt the educational approaches articulated by Locker, the Nellie Mae Foundation offered a five year planning grant in excess of 3 million dollars dedicated to student centered learning. We were fortunate to receive a portion of this grant and began working on a plan that supported our BHS campus.

Beginning in 2012, this grant allowed Burlington and Winooski to undertake a comprehensive redesign of how the Districts administer and deliver educational programming at the high school level. Partnership for Change enabled some high school teachers to gain training as coaches in team teaching, interdisciplinary curriculum, and project-based learning, which led to the ninth grade academies, the Year End Studies program, and a block scheduling approach that would support greater access to experiential learning opportunities and foster greater personalized learning.

More recently, advisory periods were created to experiment with one-on-one meetings between students and their advisor in an effort to guide students along a more personalized learning plan through their high school years. Other minor changes have also been implemented in the past few years, however, ***the high school's physical limitations represent one of the District's greatest impediments to restructuring pedagogical, curriculum and scheduling changes needed to make greater strides towards proficiency-based and personalized learning.***

2. Detailed BHS Infrastructure Challenges

BHS is composed of five main buildings, labeled A, B, C, D, and E. There is also an F building, which contains Burlington Technical Center (BTC), a regional technical center that is attended by students from Burlington as well as other high schools in Chittenden County.

BHS Building Layout by Curriculum

- A building is the largest; it houses the school's cafeteria, gymnasium, music department, auditorium, and a few classrooms.

- B building is occupied by foreign-language and art classrooms, with the school's library on the first floor.
- C building is occupied by the English and the history departments.
- D building contains mostly exploratory programs, such as computer literacy and health.
- E building is used by the mathematics and science departments.

The lay-out and age of this campus poses a number of problems.

1. Classrooms prohibit full implementation of personalized and proficiency-based learning practices that support closing the achievement gap:
 - Current structure compartmentalizes teachers by subject, lacks planning rooms to develop interdisciplinary curriculum and other practices that achieve personalized and proficiency-based learning
 - Students work in outdated 1960's single purpose, inflexible, standalone classrooms with inadequate furniture and space to support both large classroom learning and small group discussions and projects
 - Science labs are insufficient for today's larger class sizes and STEM equipment is in need of replacement
 - Insufficient technology infrastructure (wifi, phones, security, electricity) for teachers to incorporate web-based and other technologies educational practices into lessons
2. Building does not meet current accessibility standards:
 - Buildings are connected by unheated, outdoor, often non-ADA compliant walkways
 - Students often traverse seven stories from top to bottom throughout each day
 - Elevators are outdated and located in undesirable and inaccessible locations
 - The campus contains unreasonable routes for people with physical challenges and disabilities, many of which violate ADA laws and regulation
 - There are excessive travel paths which prevent students with disabilities from arriving at classes on time, which restricts their access to an equal education
3. \$30+ million already needed for deferred maintenance (see section 3D):
 - Structure has a low-performing thermal envelope with insufficient windows and insulation
 - Many sections of the campus have crumbling infrastructure
 - There is outdated electrical, plumbing, sewage that requires wasted investment in maintenance and repairs
4. Safety and security are major concerns
 - Grounds and courtyards cannot be made safe and secure without investment
 - There are an excessive number of building entrances
 - Students often travel outdoors to class and/or prop doors open to allow others to travel these routes
 - a. Students traveling this route have been locked out of the building during extreme cold

3. Summary of District Infrastructure and Capital Planning 2008-2018

A. 2008 – 2013

Between 2008 and 2013, BSD focused on multiple infrastructure and capital challenges:

1. Redeveloping the high school to implement the vision in the Locker Plan
2. Attending to large capital needs in the elementary and middle schools
3. Budgeting for annual preventive maintenance needs
4. Managing the challenge of failing schools in the Old North End accompanied by increasing enrollment related to new Americans settling in Burlington
5. Equipping middle and high school students with laptops over a three-year timeframe

Concurrently with the Locker document, a capital needs plan was initiated in 2008 and a Master Planning Interim Report* was completed by District architect Colin P. Lindberg. The master capital plan included a vision for the high school and magnet schools, major improvements to all campuses across the District, and an approach to fund preventive maintenance through an annual budgetary set-aside.

The sum total of the District's 10 year capital needs identified through this plan amounted to \$226,159,520.01 million, of which \$40M was identified for BHS alone. This \$226M plan was deemed to be too expensive and did not receive serious consideration or support from City Council.

**The District's master capital plan is a large, hard-copy document on 11x17 paper that is available for viewing in person. Portions of the document as they related specifically to BHS and BTC are available in Appendix B.*

B. Planning 2010-2013

After the Master Plan failed to find footing, subsequent efforts were made to pare down its overall scope by grouping priority projects that could be more easily funded through the District's access to the City's annual bonding process, which allow BSD to borrow up to \$2M annually without voter approval. This eventually resulted in a voter-approved bond for renovations at Flynn, the Sustainability Academy and Champlain Elementary (\$9.6M bonded, \$13M total cost), and included funds for design components at other campuses, such as the Edmunds Middle School elevator.

More granular planning occurred between 2010-2013 primarily through the Infrastructure and Technology Committee (ITC) chaired by then-Commissioner Bernie O'Rourke. Although the District's goal was to tackle annual priorities through the City's \$2M bond allowance for schools, memos from 2013 state that, "the current annual bond capacity is not sufficient to meet the capital project needs of the district. Recent discussion has focused on a separate process for the two major facilities, BHS and Edmunds. These two sites account for the largest needed capital improvements, without considering sorely needed renovations." The 2013 memos recommended that the \$2M per year capital funding bonding continue, and the District pursue separate bonding for major renovations at BHS and Edmunds (Appendix C).

C. 2013-2015, Guiding Principles for High School Capital Planning

As the 2013 ITC Committee honed its approach to tackling capital projects, the Locker Plan's design framework for the high school was revisited in order to achieve the Partnership for Change programmatic goals funded by the Nellie Mae grant.

The Locker Plan features a discussion of how aging, 40 year-old-buildings are not designed for interdisciplinary academies and personalized learning because a successful pedagogical transformation requires spaces to accommodate the new ways in which interactions occur between teachers, students, and, of course, teachers and students.

Locker identified physical features required to accommodate personalized learning through an interdisciplinary and project-based approach to education:

- Classrooms contiguously located to facilitate common planning time for teachers
- Flexible learning areas - spaces to accommodate "small learning communities"
- Small group break-out rooms and maker spaces

The current BHS lay-out represents the antithesis of the physical environment needed to support the personalized and project-based, interdisciplinary learning vision embodied first in the educational philosophy of John Dewey, and recently echoed in 21st century learning policy recommendations (which, again, were passed codified into Vermont law via Act 77's passage in 2013).

To illustrate the kind of building that would foster this 21st century learning process, Locker introduced a Visioning Team that worked with him to identify the features needed in a new high school. The Visioning Team included teachers, parents, administrative staff, and community members. The Team reviewed classroom/learning studio concepts from fourteen exemplar schools from the USA, the United Kingdom, and Australia. Working in four teams they ranked the schools for appropriateness for the future BHS/BTC redesign. Through this work, Locker found:

- The least favored exemplar was the most traditional of all the schools presented, with isolated classrooms and virtually no supporting spaces. This exemplar is most like the current school building.
- The Team indicated that the second least favored school they reviewed was a school organized around student-initiated project-based learning which does not have classrooms, but rather student work-stations in open clusters.
- *Both the most traditional and the most non-traditional of all of the choices were least favored.*

The Locker Plan Visioning Team established a desire for the future facility to be strongly supportive of active and more engaged learning that often demands spaces for multiple small groups of students and team projects that enhance the learning process. This requires a shift from the traditional classroom where students work individually or in pairs on projects that must be completed out of school, which creates logistical and pedagogical barriers for many students. At the same time, it requires a shift towards more flexible spaces that can accommodate both a full class and smaller break-out groups.

Locker documented that, “the exemplar deemed most appropriate by the Team was a high school that contained a suite of classrooms and an applied science lab encircling a common presentation/collaboration/breakout space, with a teacher planning center.”

The design principles that arose in this process included:

- Flexible, interconnected, classrooms supported by collaboration/breakout/commons spaces
- Classrooms could be larger, intended for two teachers synchronously team teaching
- Flexible furniture
- A variety of learning spaces, including collaboration booths, project rooms/makerspaces, and presentation spaces to support learning in addition to classrooms
- Places for independent student study
- Teacher collaboration facilitated by the building, such as connections between the rooms and teacher planning centers to support collaboration and community

All of the administrative, programmatic, and curriculum changes that Locker’s work inspired were carried forward into the District’s on-going aspirational vision for a new high school. A BHS Renovation/Oversight subcommittee was formed in 2013, with leadership by then-Building Administrator Amy Mellencamp, and teachers, staff, and parents worked with an architectural firm to explore the Locker Plan criteria as the foundation for redesigning the campus.

The committee then assisted with the District’s development of a Request for Proposals from architectural firms to develop schematic designs. Black River Design was chosen through this process and granted the contract for what was supposed to be a 16-month engagement.*

Working with Black River, the team’s work focused on addressing extensive deferred maintenance issues, safety and ADA deficiencies, classroom configuration and layout, campus security, and “green” building solutions. The team created a plan for a layout that achieves the following goals:

- Promotes an interdisciplinary approach to teaching and learning with flexible learning spaces to accommodate small, medium and large groups of students
- Reflects personalized and proficiency based learning through a centralized layout that fosters trans-disciplinary collaborations between teachers and students
- Is flexible enough to adapt to changes in technology and pedagogy
- Provides shared workspace among professional faculty to work together, to share ideas and engage in ongoing professional conversation required to comply with Act 77
- Reduces travel paths and condenses instructional areas
- Creates accessible routes that provide inclusion for differently-abled students who are often scheduled into courses based on physical limitations instead of desired subject matter
- Creates a single entrance drop-off and secure entry points
- Creates space for the ninth grade academies
- Decentralize individual academic departments and centralizes all faculty offices
- Addresses facility needs for the ONTOP program
- Enlarges cafeteria space
- Creates new image and public facade for the school
- Provides additional physical and community athletic facilities, with athletic support spaces (training room, changing rooms) and accessible to ballfields

- Provides additional stage support space
- Creates informal student gathering spaces
- Eliminates deferred and preventative maintenance needs
- Completes mechanical /electrical /plumbing upgrades for high energy efficiency performance
- Houses property services staff
- Features updated science labs dispersed throughout the campus
- Accommodates future technology advancements and meet the ever-changing needs of technology and learning styles and abilities
- Is first certified Collaborative for High Performance Schools (CHPS) school in Vermont, recognizing that kids and adults have better cognitive functionality “in schools with good lighting, clean air, and comfortable classrooms”
- Offers natural light and usable outdoor classroom space

With this information, Black River Design ultimately submitted 3 renovation/redevelopment scenarios to the School Board for consideration:

- A) full renovation with small additions (\$67 million)
- B) partial demolition with a large addition (\$73 million)
- C) new building and full demolition (\$94 million)

**Note that BSD is now five years into this work with Black River; there is no money left from that initial contract, but the firm remains involved in the process.*

D. 2015-2016, A Pause on BHS

Once the District received the recommendations, we began to garner feedback from the school board and other entities, including Mayor Weinberger. When we presented these plans, we were encouraged, due primarily to cost concerns, to put the BHS/BTC planning on hold and use city resources to better study the needs of all of the District’s facilities.

The current property services director worked with capital needs consultants White & Burke and Michael Smith to create a Master Plan for BSD, which coincided with the City of Burlington’s 2016 Infrastructure Plan for a Sustainable City, which itself noted the work being done towards planning a new high school: *“Total School District need will be a function in large part of the District’s vision for the future of Burlington High School – the School Board is weighing options that range from necessary repairs to the facility to a complete rebuild (the latter option is substantially more expensive).”*

Through 2015 and 2016, White & Burke and Smith worked with staff to review many of the capital needs documents that existed and inventory minor and major needs that still remained. As part of this long range planning effort, the District hired EMG to perform a Facility Condition Assessment (FCA) of the 10 school facility sites. EMG interviewed building maintenance staff and reviewed available engineering studies, construction documents, and utility data to familiarize themselves with the physical conditions of the buildings and to perform a preliminary energy use analysis. The EMG teams then inventoried and evaluated each of the BSD buildings and properties to benchmark current conditions and establish replacement values. This comprehensive FCA evaluated site conditions (including parking lots), building envelopes, mechanical/HVAC, electrical, plumbing, fire protection and accessibility. EMG

identified more than \$76 million of needed improvements over the next 20 years to address deferred and preventative maintenance issues. Of this \$76 million in total differed need, ***an estimated \$31.5 million in needs was identified at Burlington High School alone. This number, again, only related to keep the facility as is, and was not related to the previous plans put forth by Black River Design.***

E. 2017 – 2018, Re-Engaging the Community

While the needs assessments were underway, the school board also continued discussing how the Partnership for Change pedagogical changes would come about, at a minimum to comply with Act 77, but more aspirationally to close the achievement gap and increase post-secondary enrollment in higher educational and vocational programs. Time and time again, the high school's physical limitations emerged as one of the most significant barriers to programmatic changes.

In Fiscal Year 2016, the Obeng Administration took the White & Burke and Smith report to the next step of developing detailed scopes of work for the District's multiple campuses. Projects that were deferred and planning that was incomplete came to life again, with a multi-pronged approach that included the asking voters to approve a \$19 million bond while also planning to apply the District's annual \$2M bonding authority. The combined \$39 million plan would seek to repair and replacement of building systems, amenities and accessibility improvements, such as the Hunt roof replacement, Edmunds Elementary School elevator, completion of Champlain Elementary School windows, and safety & security upgrades in many schools. Voters approved the ask for an additional \$19 million in borrowing in March of 2017.

For BHS, Superintendent Obeng formed an ad hoc committee comprised of parents, District staff, and community members, to carry the work. The Re-Envisioning Committee itself was made up of two committees, a Steering Committee with 5 members, and a Resource Committee of about 40 members (15 of which were the most highly engaged).

The Steering Committee guided the work and had many joint meetings with the Resource Committee, and both worked closely with the District's property services director and Black River architects. The Re-Envisioning Committee reviewed and revised information from the 2013-2015 team sessions, and held community input sessions and explained design concepts from the Locker Plan and Partnership for Change. This work re-solidified the design directives from prior work.

Following this, the ReEnvisioning Committee decided to bring forward two design concepts:

- 1) a new building
- 2) the renovation of A and B buildings with new construction surrounding the two buildings.

A third design concept from the 2013-2015 era of renovating all of the current BHS buildings was discarded due to the high cost and the thought that the concept would not meet enough of the design directives. The committee requested that Black River Design bring the plan for renovation using existing assets up to the same level of detail as the new building concept.

After pricing both options, the Committee presented them to the community through PTO and NPA meetings, culminating with a presentation to the school board. The final recommendation that emerged between January and April 2018 was for redeveloping the current structure because nearly all of the design directives could be achieved for a lower cost than a new campus, and without displacing students during construction.

With the preference for a renovated building decided through an April 2018 board resolution, Black River Design developed more detailed schematic designs with site and HVAC engineers, and an independent cost estimator who provided current construction costs that also include a 4% inflator in each line item, with an additional 10% overall project contingency.

In April 2018, the School Board accepted the ReEnvisioning Committee's recommendation to the superintendent of expansion and renovation with partial demolition (Appendix D). This recommendation took more than a year to present to the board as the ReEnvisioning Committee, formed in 2017, read of all the previous stakeholder input reports and held additional sessions to gather more feedback. **On April 10, 2018, the Burlington School Board of School Commissioners approved the following resolution:**

Be it RESOLVED that the Burlington School Board propose a bond in November 2018 to the community to support the ReEnvisioning and renovation option for Burlington High School/Technical Center. AND BE IT FURTHER RESOLVED that a ReEnvisioning Campaign be developed to garner public support and other sources of revenue for the project.

In August, 2018 Burlington School District employees presented the board with what they viewed as the three best options to complete this work based on cost-effectiveness and the least amount of disruption to students.

Option 1: \$60 Million. Option includes using minimal work to heating and insulation systems, and limited amount of renovations at BTC. Modeled on CHPS standards but does not include certification. Fit-up budget only for new spaces.

Option 2: \$65 Million. Option includes using more durable, longer-lasting materials. Renovations to BTC are still limited. Project meets basic CHPS requirements for certification and allows for better heating and insulation.

Option 3: \$68.5 Million. Option includes using highest quality materials with complete renovations to BTC building. Also allows for some salvaging of demolished buildings, significant heating, and cooling upgrades, and results in a higher CHPS certification. The District also shared a survey with the board which showed that of the 401 people who took the survey, more than 70% of respondents would support a bond on the November ballot of \$68.5 million or more.

On August 21st, the Burlington Board of School Commissioners approved a resolution to ask City Council to allow BSD to place a \$70M bond on the November ballot. The \$70 million resolution represented board support for the \$68.5 million plan presented by the School District and adds an additional \$1.5 million into the project for air conditioning and other contingencies. On Monday, August 27, BSD presented the plan to City Council and the Mayor.

F. November Bond Timeline 2018-2022

If a bond were to pass in November, detailed planning and engineering work would begin with extensive engagement with teachers, staff, parents and community constituents, within the parameters of the existing schematic designs and budget.

Without the assurance that the project can begin in 18 months, more specific and detailed plans cannot be developed. Target date for groundbreaking would be spring construction season, 2020. Construction

would be phased in order to avoid temporary relocation of students, with a target completion date of 2022.

4. Plan BTV Connection

In alignment with the City's 2014 PlanBTV, the BHS Re-Envisioning proposal achieves three of the PlanBTV priorities.

- 1. Maintaining and upgrading existing facilities and infrastructure is preferred over new construction.**

The proposed BHS/BTC facility will be renovated in order to maximize efficiency, conserve resources, and support increased levels of campus development without degrading the natural environment.

- 2. The BHS Re-Envisioning proposal supports Burlington's position as a leader in the development and implementation of energy efficient buildings that reduce energy costs, environmental quality, improve security, sustainability and enhance economic vitality.**

Included in this design and cost is the opportunity for the Burlington School District to adopt the "Collaborative High-Performance School Standards" (CHPS) that represent the industry's green standard for schools, comparable to LEED or National Green Building Standards for commercial buildings.

CHPS is a nonprofit membership organization that provides school districts with resources such as a well-respected six-volume best practices manual, training and conferences, a high performance building rating and recognition program, and other tools for creating healthy, green schools. CHPS guidance for results in buildings that are energy, water and material efficient, well-lit, thermally comfortable, acoustically sound, safe, healthy, and easy to operate.

- 3. The BHS Re-Envisioning proposal has been driven by community members will elevate the quality of Burlington's educational institutions for students and community members alike.**

In partnership with families and the community, this plan creates ensures the community will receive excellent and diverse educational opportunities, services and facilities to educate and inspire youth to be contributing members of our society and their communities. Additionally, components of this project such as full ADA accessibility, air conditioning, and auxiliary gymnasium/meeting space are all things that, while generated by thinking about students first, will ensure that this new facility can be utilized by the Burlington community year-round, thus meeting the Long-term PlanBTV goal which asked BSD to "Consider ways to expand the use of school facilities for other community activities, and to design additions that lend themselves to multiple uses."

5. Conclusion

There is a narrative circulating which seems to suggest the plans to redeveloped Burlington High School have been rushed and does not adequately consider or address the needs of today's or future years' students. This couldn't be further from the truth. Experts have engaged the BSD community in the redesign of the Queen City's high school for years.

By moving forward with this plan, BSD can offer students the fully accessible, state of the art facility that they not only deserve, but that they need in order to truly be prepared for the world post-graduation. This new facility seeks to foster transdisciplinary collaboration while desegregating students with mobility challenges or whose native language is something other than English. It gives separate but connected spaces for 9th Graders and the BSD On-Top program, both of which need to be in the high school, but also need a space they can call their own. The new space is one which the community will be able access year-round, and is one the City can be proud to showcase to those seeking to move to Vermont.

In short, the newly renovated high school will help strengthen student achievement by truly reflecting the District's mission to cultivate caring, creating and courageous people through a collaborative and welcoming learning environment.

APPENDIX A

NEASC BHS Accreditation (2006)

NEASC BHS Accreditation (2017)

ATTACHMENTS ENCLOSED

NEASC is an independent, voluntary, nonprofit membership organization which connects and serves over 1500 public, independent, and international learning communities in the US and worldwide. Founded in 1885, the New England Association of Schools and Colleges (NEASC) has been working to establish and maintain high standards for all levels of education longer than any other accreditation agency in the United States. A globally recognized standard of excellence, [NEASC Accreditation attests to a school's high quality and integrity](#). The NEASC commissions decide matters of accreditation in the context of research-driven standards reviewed by their membership.

APPENDIX B

Excerpts from BSD Master Planning Interim Report (August 28, 2008)

2008: The Burlington School Master Plan

Burlington School District - Master Planning Interim Report
Colin P. Lindberg AIA, August 28, 2008

As part of the District's 21st Century Master Plan, a review and development of all facilities is in progress. An educational plan has been provided after comprehensive review by DeJong-Locker with many involved in school operations.

The District's ten sites contain over 600,000 SF of existing space, and the capital improvements propose around 150,000 SF of additional space.

The focus at this time is the concern for three sites that are in conflict with the current zoning ordinance: Barnes, Wheeler and BHS. The High School use is not allowed under the current zoning, yet this site does have ample excess lot coverage.

BHS will require a complete renovation as well as additions.

BHS - RCO-RG (Recreation, Open & Conservation)

Acreage: 44

Bldg Area: 236,169 SF

Built: 1963

Existing Programs: High School, Technical Center and ON TOP

The schedule is to provide plans and costs for a November 2008 vote. One important fact is the realization that many school buildings were constructed 50 years ago when heating oil was 15 cents per gal. Wall insulation was not used and the envelope of most of the buildings had minimum window efficiency.

For the key focus of this facilities improvement, the greening of the structures must be done. The cost of heating and ventilation, with proper controls is just common sense. Burlington Schools is moving forward to provide great places for children to learn and teachers to teach.

2008 BHS Master Plan Concept

The functions at the high school will require swing space to allow renovation of the several wings of the facility. The functions that need to be the prime accent under this scenario might be the library, and the cafeteria. The existing location, size and space should be expanded and the focus of the complex. To that end the plan shows the following:

1. A new wing that connects the main east entrance.
2. A modification of the parking that allows drop off and pick up and provided covered structure that changes the existing sloped lot, and provided two levels of parking and a green roof for the focus of the new east wing. 375 cars will reduce stormwater management and snow 2. (cont)....removal is reduced. On the main level a sense of arrival and lobby that serves the existing building and new functions.

3. The first floor will have food service and cafeteria support space for community use.
4. Day lighting and the southern exposure will face the green plaza that is above the parking decks. The street image is powerful and expresses positive growth of this important high school complex.
5. The new kitchen will be accessed from the new drop off road and us a continuation of the circular drive that will be the drop off for the main entrance.
6. The three stories of the center building contain central office and two floors above will provide flexible teaching space. The lab function on the top floor will decentralize sciences and provide four wall labs with prep rooms and natural day lighting from roof windows.
7. The other major structure will be just south of the existing south wall of the A building and will house the Library at the top floor. This function would also open to the roof-top green above the parking decks.
8. The view of the new playing fields and the southern exposure will be ideal for the library and the support facilities. This will allow use after hours for the community and will be an architectural feature.

Outline scope of work – BHS & Tech Center

The site requires improvement of the existing roads and green areas. The parking structure will remove simple access for at least a summer. The existing parking needs to be relocated on a temporary basis. Blasting will require a short total rerouting of all access from the east side. The elevator that is planned will also be constructed during the summer schedule.

The expanded new construction for the three building elements that connect A building should be the first phase. The three-story building should be constructed first to provide swing space for the other wing at the high school that will require total renovations. The replacement of the heating system will not be required (wood chip and gas boilers) but the distribution network now on the roof will be replaced, and within the rooms a revised heating and ventilation network will be installed.

The replacement work on the windows for A,B,C,D and E will be replaced as well as the units in F. The wall system is not planned to be modified on the exterior due to the solid brick and concrete skin. The inner wall in most cases will be cased out to allow additional insulation and general improvement of the finishes.

- New security and fire alarm is a safety issue and needs to be upgraded.
- New lighting and electrical upgrades will be included.
- A complete roofing replacement is not planned due to the upgrade of the complex a few years ago.
- Estimated time for modifications (18-24 months) for the initial phase. Moving costs and relocation and transportation may be needed if summer programs are planned during construction.

MASTER PLAN BHS BUDGET ESTIMATE 2008

Burlington High School and BTC - 2008 Estimated Renovation Cost

BHS	214,569 SF	BTC	21,600 SF
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Students	1160	Students	145
Cost Per SF	\$175 SF	Cost Per SF	\$200 SF
Costs	\$37,549,575	Cost	\$4,320,000

BHS & BTC "Buildings Only" Renovation Estimate: \$37,553,895

Burlington High School – 2008 Additional Renovation Cost:

Expanded Space/Program Needs 87,500 SF (1160) Students
 Estimated cost per/ft for New Construction \$250 SF
 Preliminary Estimate Renovation Costs \$21,875,000
 Parking (375 Cars) 11,250 SF @ \$33.33 SF = \$3,100,000
 Surface Structure 6,000 SF @ \$40 SF = \$2,400,000
 Soil, Drainage, Drive, Landscape 6,000 SF @ \$17 SF = \$1,020,000

2008 BHS Additional Space & Renovation Costs = \$29,545,000

Burlington Technical Center – 2008 Additional Renovation Cost:

Expanded Space/Program Needs 2,000 SF (145) Students
 Estimated cost per/ft for New Construction \$250 SF
 BTC Preliminary Estimate Additional Costs \$500,000

2008 BTC TOTAL ESTIMATE COSTS = \$4,820,000

2008 BHS & BTC (Renovation & Expanded Space Needs)=\$34,365,000

**2008 BHS and BTC Renovation, Additional Space, Upgrade
 Estimated Combined Costs: \$71,918,895**

The total estimate does not include:

- Abatement Costs
- Site improvement costs
- Contingency
- Fees & Permits
- Site Acquisition
- Swing Space
- Furniture and Equipment
- District Legal Fees and Litigation Costs.

2008 BHS Proposed Planning - Cost Estimates - Colin Lindberg AIA

A. 2008 Proposed Renovation \$58M Plan:

- Demolish C and D buildings, repurpose or demolish E
- Improve accessibility
- Consolidate travel
- Secure entrance
- Create new community athletic facilities
- Modernize flexible spaces
- New public building facade/image
- Upgrade thermal envelope
- Improve energy efficiency with new mechanical, electrical, and plumbing systems

B. 2008 Proposed New Building - \$84M Plan:

- Brand new building with secure entrance
- Little to no impact on student learning during construction
- Improve accessibility and consolidate travel
- Create new community athletic facilities
- Modern flexible spaces
- New public building facade/image
- Upgraded thermal envelope
- Improve energy efficiency with new mechanical, electrical, and plumbing systems

General Comparison of the Two Concepts - Colin Lindberg AIA

General District Wide Recommendations

Build Green

- The use of sustainable & green building materials and products for both existing and new.

Reduction of Heating Costs

- Improve Schools envelope, increasing R value in both exterior walls and roof and upgrading to modern and efficient heating systems.

Improve Indoor Air Quality

- Ventilation and Controls Improvements

Improve Safety

- Improve fire alarm, sprinkler and other life safety systems integration

Decrease Electrical Dependency

- Utilize adequate natural day light, motion sensor controls, upgraded & efficient lighting and updated electrical services.

(continue)

Improve ADA Access

- Improvements throughout the campus including elevators, ramps and other accessibility standard improvements.

Technology Integration - Technology Upgrades - Technology Equipment

Additional Space Needs

To meet facilities program findings and those of 21st Century Education the district will add 150,000 SF throughout the various district schools.

The 2008-2018 Master Plan was broken out into a 9 year, 3 phase Construction Implementation Schedule. Phase I included all of BHS and BTC renovation and new construction. Phases II and III included the District's other schools' capital projects. (Appendix E)

2008 Potential Bond (3) Phases

Year 1-3 - \$98,642,498M

Year 4-6 - \$65,091,748 M

Year 7-9 \$62,425,273 M

TOTAL: \$226,159,520

	Partial Renovation	New Building
Estimated Cost	~ \$58 million	~ \$84 million
Impact on Student Learning	Minimal	Least Impact
Pros	<ul style="list-style-type: none"> • Meets all planning objectives • Lowest cost option • Stable site • Maximizes existing space • Keeps existing boiler plant 	<ul style="list-style-type: none"> • Meets all planning objectives • Brand new - more flexibility
Cons	<ul style="list-style-type: none"> • Potential unforeseen costs • Not all new • Potential environmental concerns with demolition • Potential disruption with moving students around 	<ul style="list-style-type: none"> • Proximity to North Avenue • Move existing boiler plant • Potential stormwater issues • Lacks future expansion options • Displaces ballfields • Unknown use and possible demolition of existing buildings

For the key focus of this facilities improvement, the greening of the structures must be done. The cost of heating and ventilation, with proper controls is just common sense. Burlington Schools is moving forward to provide great places for children to learn and teachers to teach.

APPENDIX C:
Proposed BSD Facilities 5 Year Plan (Dec 31, 2013)
(Attachment)