

TOWN OF WELLESLEY



MASSACHUSETTS

BOARD OF SELECTMEN

TOWN HALL • 525 WASHINGTON STREET • WELLESLEY, MA 02482-5992

JACK MORGAN, CHAIR
MARJORIE R. FREIMAN, VICE CHAIR
ELLEN F. GIBBS, SECRETARY
ELIZABETH SULLIVAN WOODS
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BLYTHE C. ROBINSON
EXECUTIVE DIRECTOR OF GENERAL GOVERNMENT

SELECTMEN'S MEETING

TENTATIVE AGENDA

Wellesley Town Hall – Juliani Room

7:00 P.M. Monday, September 24, 2018

Amended

1. 7:00 Call to Order – Open Session
 - Announcements
2. 7:02 Citizen Speak
3. 7:05 Execute Planning Month Proclamation
4. 7:10 Joint Meeting with Planning Board & Housing Development Corporation - Adopt Housing Production Plan
5. 7:40 Joint Meeting with School Committee
 - Presentation of Middle School Study Results
6. **8:15 Vote Special Town Meeting Motion for Hardy/Upham MSBA project**
7. 8:20 Set Operating Budget Guidelines for FY20
8. 8:35 Discuss Capital Planning – Prepare for October 10th Meeting
9. 8:55 Discuss and Approve Tolles Parson Center Holiday Hours and Staffing
10. 9:10 Execute November Election Warrant
11. 9:15 Executive Director's Report
 - Approve Draft Minutes
12. 9:20 New Business and Correspondence

Next Meeting Dates: Tuesday, October 2, 2018 5:00 pm – Middle School Library
Wednesday, October 3, 2018 6:30 pm – Middle School Library

Board of Selectmen Calendar – FY19

Date	Selectmen Meeting Items	Other Meeting Items
10/1 Monday	No Meeting - Wellesley Club	
10/2 Tuesday	Meeting – 5pm – Middle School Library STM -7pm STM #3 Motion - vote to approve Joint Election - Recreation Commission Member Discuss Marathon Policy Meet w PBC - Sewer Line (probably not) GPA discussion	
10/3 Wednesday	STM –If necessary: 6:30pm – Middle School Library	
10/8 Monday	TOWN HALL CLOSED (COLUMBUS DAY)	
10/9 Tuesday	No Meeting	
10/10 Wednesday	Meeting – 4PM –6:30PM Great Hall Meet with Department Heads & Board Chairs – RE: FY20-24 Capital Planning	
10/15 Monday	No Meeting	
10/16 Tuesday	Meeting – 4pm-6pm Juliani Room	
10/22 Monday	Meeting	
10/29 Monday	Meeting MLP - Overview of Internet Service to Commercial customers	
11/5 Monday	No Meeting – Wellesley Club	
11/6 Tuesday	Election Day	
11/12 Monday	TOWN HALL CLOSED – Veterans Day	
11/13 Tuesday	Meeting FMD Capital Presentation	
11/19 Monday	Meeting Approve Boston Marathon Charity and Bib Entries Set War Memorial Scholarship Amount	
11/22 Thursday	TOWN HALL CLOSED - Thanksgiving Day	
11/26 Monday	Meeting	
12/1 Saturday	Meeting BOS Operating Budget Meeting	

Date	Selectmen Meeting Items	Other Meeting Items
12/3 Monday	Meeting Tax Classification Public Hearing Discuss BOS Operating Budgets Approve 2018 CV and Alcohol License Renewals Open ATM Warrant	
12/10 Monday	Meeting Audit Committee	
12/15	900 Worcester Anticipated Rink Completion	
12/17 Monday	Meeting	
12/24 Monday	No Meeting	
12/25 Tuesday	TOWN HALL CLOSED – Christmas Day	
12/28 Friday	Close ATM Warrant	
12/31 Monday	No Meeting	
1/1 Tuesday	TOWN HALL CLOSED – New Year’s Day	
1/7 Monday	No Meeting – Wellesley Club	
1/8 Tuesday	Meeting Diversity Program w/WOW?	
1/14 Monday	Review ATM Warrant	
1/21 Monday	MLK – Town Hall Closed	
1/22 Tuesday	Execute ATM Warrant	
1/28 Monday		
2/4 Monday		
2/11 Monday		
2/18 Monday	President’s Day – Town Hall Closed	
2/9 Tuesday		
2/25 Monday		
3/4		

9/20/2018

Date	Selectmen Meeting Items	Other Meeting Items
<i>Monday</i>		
<i>3/11 Monday</i>		
<i>3/18 Monday</i>		
<i>3/25 Monday</i>	Start of ATM	

Notes

Quarterly updates

- *Traffic Committee (Deputy Chief Pilecki)*
- *Facilities Maintenance (Joe McDonough)*
- *Wellesley Club Dates 10/1/18, 11/5/18, 1/7/19, 3/4/19*

SEPTEMBER 24, 2018 MOTIONS

3. **MOVE** that the Board execute a proclamation in recognition of October being National Planning Month.

4. **MOVE** to convene a joint meeting with the Planning Board and Wellesley Housing Development Corporation.

MOVE to elect Jack Morgan as chair of the joint meeting.

MOVE to elect Catherine Johnson as Secretary of the joint meeting.

MOVE The Board of Selectmen/Planning Board, following a duly posted public hearing, approve the Wellesley Housing Production Plan dated September 24, 2018, and authorize the chair of the Board of Selectmen to submit the plan to DHCD for approval.

MOVE to dissolve the joint meeting.

5. **MOVE** to convene a joint meeting with the School Committee

MOVE to elect Jack Morgan as chair of the joint meeting.

MOVE to elect Matt Kelley as Secretary of the joint meeting.

MOVE to dissolve the joint meeting

6. **MOVE** to approve Article 2, Motion 1 for the Special Town Meeting.

7. **MOVE** to adopt an operating budget guideline for FY20 as follows:

- School budget 3.0%
- All other Town Departments 2.5%

10. **MOVE** that the Board execute the warrant for the November 6, 2018 State election.
11. **MOVE** that the Board approve the minutes of the September 11th and September 12th meetings.

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As we have planned, the meeting is on Monday night and will begin at 7:00 PM.

1. Call to Order – Open Session

We have revised this section of the agenda to clarify that when the Board opens a meeting it does so directly into open session. Also, the agenda notes that this is the time where the Board will typically make any announcements that they want residents to be aware of.

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EXECUTIVE DIRECTOR OF GENERAL GOVERNMENT

MEMORANDUM

DATE: September 21, 2018
TO: Board of Selectmen
FROM: Blythe C. Robinson, Executive Director
SUBJECT: Weekly Report

Below are various activities of our office and various departments that I would like to bring to your attention.

- Next week I've scheduled a meeting with FMD, DPW and MLP to discuss a plan to winterize the properties we bought on Route 9. At the very least we need to shut down the utilities and drain pipes so that we have no damage. We want to make sure this is done well ahead of cold weather. DPW has been great about mowing the lawns this year so the lots don't look unkempt.
- The HR board next meets October 16th and will be taking up the topic of building inspector compensation. Scott has told me he will schedule a meeting with department heads to talk about classification and compensation in general in the coming weeks though no date has been set.
- Stephanie is settling in well. She is getting up to speed on town meeting procedure to help with that, and will be digging into webpages shortly, starting with the Selectmen's. If you have any particular interests or concerns about our page, please let us know so we can address those.
- Meghan and Michael had a meeting this week with people from a startup company called Bonzer. Bonzer's mission is to have short term rentals of electric cars that can be used for trips of less than s than five miles and not on the highway. Their model is

something like Antbike. They are already operating in Cambridge and want to pilot a program here. We'll have more details to follow.

- The IT Department led a meeting with various department heads to select a software solution for time and attendance tracking. The preferred solution is Kronos. DPW has been using this for years and was in need of an upgrade to that solution. We also looked closely at Novatime which was just implemented by the schools. That solution was a little more expensive and didn't offer any features we can't get with this. We now turn to determining how to fund it as it wasn't budgeted this year. We may implement it in DPW because they had budgeted for it, and roll it out to other departments in the next budget year.
- In a follow up to the issues on Fife Road, I learned late yesterday that the end of the street where this house is being renovated is likely to be a private way, as the Town did not accept the entire length. We are still doing research and have reached out to the owner to inform them that they are very strongly urged to address the runoff that they have caused. I have spoken to one neighbor and have a call into the other.
- Electronic permitting continues towards implementation. IT has sent 75,000 building permit records (not including building plans) to the software firm to load, which means that eventually people will be able to look up records of permits on their properties back to around 1900.
- Our office retrofit will take place on Monday and Tuesday the 24th & 25th where the old cubicles will be removed and in their place three larger cubicles will be placed utilizing refurbished panels and the desks & file drawers that we have. Meghan, Cay and Stephanie will be working from other spots these two days, but it is all for a better work environment!
- I will be traveling on Saturday to the International City/County Management Association annual conference in Baltimore, Maryland. I will be returning to the State on Wednesday the 26th and back at the office on the 27th. Of course I'm available by phone and email should you need me during this time.

2. **Citizen Speak**

At the meeting we will have a final copy of the public comment policy for you to execute. Once it is signed it will be posted to our page on the website, and linked from future agendas so that it is easy to find for those who would like to review it.

3. **Execute Planning Month Proclamation**

October is National Planning month! The Selectmen over the past several years have recognized Planning Month and the Planning Staff/Boards role with a proclamation. This is the 3rd proclamation the Board will have signed over the past few years.

MOVE that the Board execute a proclamation in recognition of October being National Planning Month.

TOWN OF WELLESLEY



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WELLESLEY BOARD OF SELECTMEN

PROCLAMATION

Community Planning Month

- WHEREAS:** Change is constant and affects all cities, town, suburbs, counties, rural areas; and
- WHEREAS:** Community planning and plans can help manage this change in a way that provides better choices for how people work and live; and
- WHEREAS:** Community planning provides an opportunity for all residents to be meaningfully involved in making choices that determine the future of their community; and
- WHEREAS:** The full benefits of planning requires public officials and citizens who understand, support, and demand excellence in planning and plan implementation; and
- WHEREAS:** The month of October is designated as National Community Planning Month throughout the United States of America and its territories; and
- WHEREAS:** The American Planning Association and its professional institute, the American Institute of Certified Planners endorse National Community Planning Month as an opportunity to highlight the contributions sound planning and plan implementation make to the quality of our settlements and environment: and

WHEREAS: The celebration of National Community Planning Month gives us the opportunity to publicly recognize the participation and dedication of the members of the Planning Board and other citizen planners who have contributed their time and expertise to the improvement of the Town of Wellesley; and

WHEREAS: We recognize the many valuable contributions made by professional community and regional planners of the Metropolitan Area Planning Council and the Town of Wellesley and extend our heartfelt thanks for the continued commitment to public service by these professionals; and

NOW, THEREFORE, BE IT RESOLVED THAT, the month of October 2018 is hereby designated as **Community Planning Month** in the Town of Wellesley in conjunction with the celebration of National Community Planning Month.

Adopted this 24th day of September, 2018.

Jack Morgan, Chair

Marjorie R. Freiman, Vice Chair

Ellen F. Gibbs, Secretary

Thomas H. Ulfelder

Elizabeth Sullivan Woods

The Wellesley Board of Selectmen

4. Joint Meeting with Planning Board & WHDC - Adopt HPP

On October 30th of last year, the Selectmen, Planning Board and Housing Development Corporation held a joint meeting to discuss responses to the RFP to hire a firm to develop the plan. Fast forward to Monday night at which the three groups will convene again to accept the plan. A copy of the final document is included in your book for review. The HPP Working Group recommends that the boards adopt the plan so it can then be submitted to the State for approval. A formal vote is only required by the Planning Board and Board of Selectmen. At this time Bob Kenney will be attending for the WHDC, but he was unsure if there would be a quorum.

MOVE to convene a joint meeting with the Planning Board and Wellesley Housing Development Corporation.

MOVE to elect Jack Morgan as chair of the joint meeting.

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MOVE The Board of Selectmen/Planning Board, following a duly posted public hearing, approve the Wellesley Housing Production Plan dated September 24, 2018, and authorize the chair of the Board of Selectmen to submit the plan to DHCD for approval.

MOVE to dissolve the joint meeting.

Wellesley Housing Production Plan



Town of Wellesley
September 24, 2018

Consultants:



J M Goldson

community preservation
+ planning

Wellesley Housing Production Plan 2018

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INTRODUCTION

In 2016, Wellesley embarked on a unique and comprehensive community planning process to develop what is known as the Unified Plan. Serving both as an update of the 2007 Wellesley Comprehensive Plan and a strategic plan for the Town, the Unified Plan is a plan for Wellesley's physical evolution and economic well-being and a vision to cohere local government decision-making. The process to develop the Unified Plan came at the heels of a contentious, difficult, and polarizing process that called upon Wellesley voters to decide whether to change their form of government to a modern, more centralized town manager framework, an effort that was not successful. In many ways, residual tension from defeat of the town manager proposal persists today.

Against the backdrop of deep divisions about considerations related to how the Town would operate in the future, Wellesley suddenly found itself with plans for several Chapter 40B developments all within a matter of weeks. What would have been hard for a peaceful town to manage became very challenging for Wellesley officials, staff, and residents. Today, the Zoning Board of Appeals is considering five comprehensive permit applications with a combined total of 228 mixed-income housing units. There are more projects that have either received Project Eligibility (PE) determinations or are anticipated to receive them soon. While difficult, the town government process made it apparent that Wellesley residents prefer a form of government that approaches problems collaboratively, based on consensus. It is in this vein that the Board of Selectmen, Planning Board, and Housing Development Corporation set out to develop this Housing Production Plan with broad participation, input, and support.

Housing in Wellesley is coveted real estate. The monthly rents for homes and apartments in Wellesley exceed what landlords charge in most of Greater Boston, except perhaps in Downtown Boston or the Seaport District. Norfolk County ranks forty-second out of the top 100 wealthy counties in the country, and Middlesex County is not far behind. Throughout the Boston Metro area, the housing wage necessary to afford a modest two-bedroom apartment is \$33.46 per hour.¹ That may seem manageable to many Wellesley residents, but it represents far more than the earnings of employees in Wellesley's retail, food service, or health care establishments. It is little wonder that 65 percent of the people who work in Wellesley each day commute from some other town.²

¹ National Low-Income Housing Coalition, *Out of Reach 2018*, 119.

² U.S. Census Bureau, *Commuting (Journey to Work)*, 2009-2013 5-Year American Community Survey Commuting Flows (2013).

What has Wellesley done to create more affordable housing?

Despite Wellesley's exceptionally high housing costs, the limited inventory of affordable units in Wellesley is not because the town has ignored its obligations to provide affordable housing. The opposite is true. Of the 575 units on the Chapter 40B Subsidized Housing Inventory (SHI) today, most have come about because of efforts by the Wellesley Housing Authority, Wellesley Housing Development Corporation (WHDC), Town boards and commissions, and Town staff. The WHDC's very existence owes to a home rule petition filed with the General Court in 1998.³ Wellesley has taken many steps to address affordable housing, including the following:

- **1998:** The Town of Wellesley submitted a home rule petition to the General Court to establish the WHDC.
- **2004:** The Community Preservation Committee provided \$65,000, in addition to HUD funds, to create a group home for people with disabilities at 4 Marshall Road.
- **2004:** Town Meeting adopted an Inclusionary Zoning Bylaw (IZB), requiring residential projects in commercial districts to provide 20 percent affordable housing, and commercial projects over 10,000 square feet to provide 2 percent affordable housing (1 unit for every 50,000 square feet constructed).
- **2005:** Town Meeting amended the IZB to apply to subdivisions with more than five new lots, thereby making new subdivisions include 20 percent affordable housing.
- **2007-2008:** Permitting began for projects at 978 Washington Street and the former Wellesley Inn site at 576 Washington Street in Wellesley Square. Though delayed by the recession, these projects have been completed, resulting in seven SHI-eligible units at 978 Worcester and five SHI-eligible units at 576 Washington Street. Both projects were developed under the Town's IZB bylaw. The 978 Worcester St. project also provided a payment in-lieu for one unit.
- **2007:** The Linden Square project was completed, including seven affordable housing units created under the IZB. (The Town recently discovered that these units are not listed on the SHI. They are being added at this time.)
- **2007:** Town Meeting amended the definition of Floor Area Ratio in the Zoning Bylaw to exempt affordable units created under the IZB from the maximum FAR. This change

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³ Secretary of the Commonwealth, Acts and Resolves by the General Court. Chapter 311 of the Acts of 1998: An Act Establishing the Wellesley Housing Development Corporation.

- provides for the necessary increase in density to produce affordable housing in commercial districts.
- **2007:** Wellesley adopted an award-winning Comprehensive Plan in 2007 with numerous recommended actions for affordable housing.
 - **2009:** Permitting for the CVS resulted in a payment of in-lieu under the IZB.
 - **2011:** The ZBA approved a comprehensive permit for Wellesley Commons at 65-71 Washington Street, resulting in one new SHI-eligible homeownership unit.
 - **2012:** The Town approved Waterstone at Wellesley, 27 Washington Street, under the Residential Incentive Overlay (RIO) district in Wellesley Lower Falls. This project created 82 independent living units for seniors, all listed on the SHI. It also includes seven affordable assisted living units not listed on the SHI because of DHCD policies, but they are permanently deed restricted to be affordable.
 - **2012:** The Wellesley Housing Development Corporation purchased and renovated a two-family dwelling at Peck Ave and a single-family dwelling at 6 Mellon Road, creating three affordable units. At the same time, the Town also purchased 9 Highland Road for affordable housing. It is omitted from the SHI because the deed restriction does not meet DHCD requirements. This problem will be cured when the unit is resold.
 - **2013/2014:** The ZBA approved a comprehensive permit for 139 Linden Street, which added two units to the SHI.
 - **2013:** Town Meeting amended the Wellesley Square Zoning District to create a special permit to provide for density. This action benefited and allowed the previously stalled Wellesley Inn project to proceed.
 - **2016:** The Planning Board approved a definitive subdivision plan for 135 Great Plain Ave. that included a payment in-lieu for 2.4 units. (This site is now the subject of a 44-unit comprehensive permit application.)
 - **2016:** The Town began work on the first Unified Plan in the Commonwealth. This planning process brings together the Town's strategic plan and comprehensive plan. The Board of Selectmen and Planning Board are expected to adopt the final plan in 2018. It includes a housing strategy with a variety of mechanisms to increase housing type and



affordability. Several of the strategies in the Unified Plan have been incorporated in Section 5 of this Housing Production Plan.

- **2018: Actions by the Town:**
 - March 2018: The Board of Selectmen released a Request for Proposals (RFP) to develop the Tailby and Railroad Parking Lots near the Wellesley Square MBTA station for affordable housing and parking.
 - March 2018: The Planning Board sought FY19 funds to develop a sub-area study and plan to support the development of additional affordable housing. (CPA funds were also requested for this project.)
 - April 2018: With the Community Preservation Committee's recommendation, Town Meeting approved \$200,000 to the Wellesley Housing Authority to study the redevelopment potential of the Barton Road public housing property.
 - May 2018: The Board of Selectmen and WHDC purchased two additional rental units at 978 Worcester Street, bringing the affordability percentage to 25 percent and adding the total 36-unit development to the Town's SHI, a net increase of 29 units.
 - June 2018, John Hancock announced plans to redevelop the Wellesley Office Park and wants to partner with the Town to construct 350 rental housing units.

While Wellesley has taken steps to create affordable housing, the needs, constraints and challenges that existed when Wellesley completed the Comprehensive Plan in 2007 remain true today. The description of Wellesley in 2018 is not much different than it was eleven years ago.

What can this plan do for Wellesley?

The main purpose of this HPP is to help Wellesley implement the new Unified Plan and make steady progress toward meeting and exceeding the 10 percent statutory minimum. In doing so, the HPP creates an opportunity to:

- Assess demographic and housing data;
- Identify local housing needs;
- Recognize a community's ongoing efforts;
- Identify housing development barriers;
- Educate the public about Wellesley's need for more affordable housing and a wider variety of housing types;



- Identify specific locations and sites that would be appropriate for affordable and mixed-income housing development; and
- Guide future mixed-income housing development to these optimal sites and locations.

With a DHCD approved HPP in place, Wellesley may be able to manage the flow of new Chapter 40B proposals. However, the HPP will be effective for this purpose *only* if the Town implements it. Implementation of this plan and the new Unified Plan will be critical for Wellesley if a comprehensive permit were denied based on conflicts with local plans. Two recent Housing Appeals Committee (HAC) cases lay out the issues and requirements associated with planning for affordable housing. Excerpts from these decisions, shown on the

If the Town wants to direct higher-density housing to locations other than established neighborhoods, it needs to carry out strategies that will be effective toward that end. It also needs to work on ways to introduce modestly scaled affordable units in the established neighborhoods.

next page, could assist present and future readers to understand what the Town needs to do to help the Board of Appeals if an objectionable comprehensive permit is denied in the near future. These excerpts speak to the vital importance of *consistent* plan implementation. In short, having a plan is not enough; plan implementation is essential.

It is very unlikely that Wellesley's desire to protect the character of its single-family neighborhoods would rise to the level of a local planning concern that outweighs the regional need for affordable housing. If the Town wants to direct higher-density housing to locations other than established neighborhoods, it needs to carry out strategies that will be effective toward that end. It also needs to work on ways to introduce modestly scaled affordable units in the established neighborhoods. Doing so will create a track record that illustrates how Wellesley has both protected the single-family neighborhoods *and* provided affordable housing choices within them.

Community engagement

As part of the HPP process, the Town sought public involvement to include a variety of opinions on the production and retention of affordable housing in Wellesley. Public workshops were designed to be interactive, encouraging residents to talk and collaborate in some "hands-on" activities and to help the consultants understand the Town. Input provided by participants in these workshops has been used to direct the plan in several key ways. Wellesley's HPP has benefited from thoughtful input from the participants in three community workshops - April 7, May 3, and June 12, 2018 - and guidance from representatives of the Board of Selectmen, Planning Board, and Wellesley Housing Development Corporation. The consulting team also interviewed residents and others with knowledge of the housing situation in Wellesley.

COMMUNITY MEETING #1: APRIL 7, 2018

The first of three community-wide meetings for the Wellesley Housing Production Plan (HPP) took place on Saturday, April 7, at 9:30. Approximately 45 people attended, including two who did not sign the attendance sheet.

The meeting included informal small-group discussion time during registration, a presentation by the consultants, and an hour-long discussion period designed to elicit ideas about two topics: the ideal vision of housing in Wellesley, and an assessment of opportunities for and barriers to achieving the vision. Each table had a volunteer from the HPP working group whose job was to facilitate and record the group's discussion (about five to seven participants per table and a total of seven tables). At the end of the one-hour discussion period, each facilitator summarized what group members had said. The following summarizes key ideas and concerns that emerged during the first community meeting.

- **Housing Vision for Wellesley**

- Protect the character of established neighborhoods
- Strategically locate affordable housing near public transportation, goods and services, and schools, and in walkable locations
- Site more densely developed housing in and near the business districts, e.g., mixed-use buildings or multifamily buildings adjacent to commercial buildings
- Geographically distribute affordable housing throughout the town so that no neighborhood is overburdened
- Allow more housing choices in established neighborhoods, such as the ability to convert existing single-family homes to two-family or small multi-family dwellings
- Develop Town-owned property, e.g., the North 40 parcel or the Tailby Lot as a preferred way to create more housing
- Provide for additional development, infill, or reuse of existing properties in office park settings, e.g., Harvard Pilgrim or Sun Life, or the public housing on Barton Road (Wellesley Housing Authority)
- Remove the value of land from the cost of housing: consider a community land trust approach



- **Housing Opportunities**

- Pursue development of Town-owned property, e.g., North 40, Tailby Lot, Wellesley Middle School, Morton Circle
- Create more housing for employees at major institutions, e.g., Babson, Wellesley, Dana Hall, Tenacre
- Develop housing on surplus land at MassBay Community College or the Sisters of Charity/Seton Residence
- Allow accessory dwelling units and “age friendly” multifamily use of existing residences
- Identify redevelopment possibilities along Worcester Street/Route 9
- Zone for more diverse housing with overlay districts or reducing regulatory barriers, e.g., multifamily conversions
- Preserve existing small homes

- **Housing Barriers or Constraints**

- Conservation restrictions limit the amount of Town-owned land that can be developed for housing
- Tension between the desire to avoid, isolated large developments, preserve the character of existing single-family neighborhoods, and accommodate 400+ additional Chapter 40B units into those neighborhoods without scale and density
- The Town’s zoning substantially restricts what developers can do: use regulations, maximum density, maximum height, parking
- Wellesley’s high income/high household wealth profile, prestige, very high land values, and the economics of teardowns contribute to loss of smaller, relatively affordable homes
- Lack of opportunities for seniors to downsize interferes with “natural” turnover in housing stock and forces them to sell to a developer or let the house fall into disrepair because they cannot maintain it
- Lack of funding for affordable housing
- Lack of public awareness or understanding of Chapter 40B and affordable housing needs
- Perceptions of affordable housing
- Lack of public consensus and public commitment to housing

- Traffic, parking, limited in-town public transportation all contribute to mobility constraints

COMMUNITY MEETING #2: MAY 3, 2018

The second of three community-wide meetings for the Wellesley Housing Production Plan (HPP) took place on Thursday, May 3, at 7 PM. Approximately 30 people attended the meeting. The purpose of the meeting was to get community feedback on a set of goals for the HPP. It included a presentation by the consultants, followed by an open house-style activity designed to inform participants of the purpose of each goal and gather public opinion on the importance of incorporating the goal into the HPP. The results from this exercise and additional feedback from participants are summarized below.

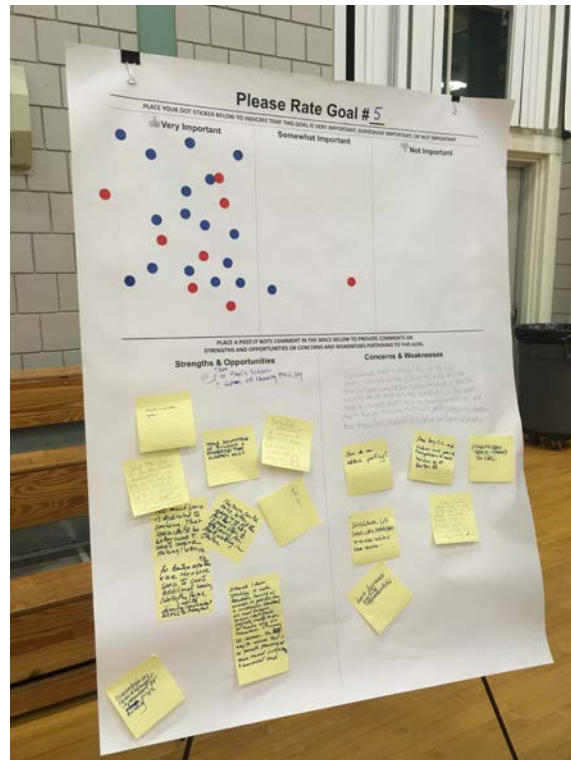
• Main Conclusions

- Participants feel strongly that Wellesley should strive to reach the affordable housing goal of 10 percent to maintain local control.
- Many participants were in favor of at least slightly increased density, more housing choice, and increased racial and socio-economic diversity.
- The most major concerns were increased traffic with the increase in density, the lack of public transportation access that some new developments might face, and the potential change in the character of Wellesley with new housing development.
- Participants favored creating more housing through redevelopment of existing buildings, as long as those units allowed for residents to be a part of the community and have access to town services and resources.

• Comments on Draft Housing goals

Goal 1: Create a variety of affordable and mixed-income housing that helps to make Wellesley a welcoming community for people with diverse socio-economic backgrounds.

Twenty-two participants marked this goal as “very important”, and three marked it as “somewhat important”. Many commenters saw the benefits of having a more diverse community, and some asked how to best educate the public on these benefits. Some suggested developing support systems for the socio-economically diverse population and to



promote diverse businesses to help integrate the community. Several comments mentioned MassBay as an opportunity to meet this goal. Others expressed concerns about neighborhood resistance to any housing other than single-family and they worried about how to meet this goal.

Goal 2: Provide more housing options, including affordable and market-rate housing options, for low- and middle-income families, seniors, and individuals with disabilities, through a variety of mechanisms to increase housing choice.

Twenty-one people marked this goal “very important”, and four marked it “somewhat important”. Some strengths of this goal were that it would enable people who work in town (i.e. teachers, police officers) to live in town, it would diversify talents and skills sets in town, and it would offer more opportunities for intergenerational interaction by helping young families and elderly residents. Some participants noted opportunities, including promoting smaller projects in residential neighborhoods, creating higher density zoning on upper floors in commercial business districts, and creating cluster developments on larger parcels. Some concerns regarding this goal were that the increase in density would increase traffic and have the potential to change the character of the town, and that while the focus on low- and middle-income families is important, families with 80-120 percent AMI also need affordable housing in Wellesley.

Goal 3: Actively strive to incrementally achieve state’s MGL c.40B 10% goal for affordable housing by producing at least 45 units annually that count on the state’s subsidized housing inventory, through local actions and approval of private development, especially development of rental housing units. Create at least 400 housing units that are permanently affordable to income-eligible households by 2028.

Twenty-three people marked this goal as “very important”, three people marked it as “somewhat important”, and one person marked it as “not important”. Most commenters emphasized the importance of Wellesley being able to control its own destiny by striving not just for safe harbor but for the full 10 percent. Some commenters felt that this goal could help to meet other goals, but others expressed concern that if meeting this goal is not done in a thoughtful way, other goals, such as housing choice and diversity, could be at risk.

Goal 4: Encourage new development and repurposing of existing buildings to create affordable and mixed income housing that: (a) reinforces the development patterns of Wellesley’s residential neighborhoods and maintains a predominantly single-family character in established single-family neighborhoods; (b) strengthens the vitality of business districts and commercial corridors with diverse housing types; and (c) promotes housing development in walkable areas with convenient access to shops, services, public transportation, parks, schools, and other neighborhood destinations.

Every participant rated this goal as “very important” (25 people). Participants emphasized the repurposing of existing buildings to be an important aspect of the goal, and they stated that walkability and access to public transportation and town services is essential when considering placement of affordable housing. Some opportunities discussed were selling

and developing St. Paul's school building and the Sisters of Charity property or creating more mixed-use housing in Wellesley Square. Concerns residents had were the availability of parking and whether development that is not necessarily walkable but has easy access to highways should also be prioritized. One comment suggested that this type of development might not be good for the community aspect of residents living there.

Goal 5: Promote the development of surplus institutional and town-owned land as well as the redevelopment of office parks and existing affordable housing complexes to create desirable mixed-income and mixed-use neighborhoods, where feasible.

Twenty-three participants rated this goal as "very important", and two rated it as "somewhat important". Commenters mostly wanted to focus on redevelopment rather than new development to preserve as much open space as possible. They emphasized that it was important for these developments, whether they were new or redevelopments, to be close to services and able to connect to town life. One concern was regarding the potential decrease in parking in town. Another commenter was enthusiastic about redevelopment but acknowledged that a large amount of development projects would have to take place to realistically maintain SHI growth.

- **Strategies**

A final station asked participants what their ideas were for addressing housing needs in Wellesley, and what they think should be further explored in the planning process. Here are some of the responses.

- Talk to people who live in affordable housing
- Share what other towns are doing across the country
- Improve access to public transportation
- More community education about the benefits of a diverse community to children and families
- More accessory apartments in limited areas
- Change zoning to create slightly denser development
- Engage the neighborhoods to consider how to welcome new residents before they come, to be welcoming and integrate into the community.
- Local incentives to support affordable housing
- Mixed-use properties in places such as Wellesley Square
- Mass Bay rental units to allow students to live nearby; could also support Mass Bay faculty and staff

COMMUNITY MEETING #3: JUNE 12, 2018

The final community meeting occurred on June 12, 2018. Approximately 40 people attended the meeting, including members of the Board of Selectmen, Planning Board, and WHDC. The meeting's purpose was to solicit opinions from community members on transformation areas in Wellesley and what types of development would be suitable for the town. Consultants presented information about housing needs in Wellesley, participants gave comments and suggestions in an open house exercise, and a final group exercise allowed participants to discuss with one another and choose what types of housing would be suitable in which areas of town.

- **Main Conclusions**

- Participants are open to increased density if it is done wisely and tastefully.
- A main priority of housing development is to meet the 10 percent goal for affordable housing, and community members want this to be the focus for any new development.
- Key transformation areas that participants were generally in favor of included Wellesley Square, North 40, and sites in the east part of town.

- **Open House Stations**

Where are Wellesley's key transformation areas? Where is change most likely to occur in Wellesley? Where could change accommodate multifamily housing? Mixed-use developments?

The first station presented a map of Wellesley showing potential development sites and asked participants to leave comments answering the question above and responding to the suggested sites on the map. Participants left check marks by each development site, shown in the image below. The most popular sites were **North 40**, with ten check marks and two X marks, **Office Park** with 12 check marks, and **Wellesley Square & Neighborhoods**, with 14 check marks and one X mark. The area in the east part of town on the Newton line, which includes the office park, the **National Guard Site**, and **WHA Barton Rd**, received a good deal of support on the map, though one commenter noted that there are already many projects there that are affecting traffic, and suggested more projects in areas where there is less density.

Some key transformation areas that participants noted were Barton Road, Wellesley Square, North 40, and areas that had access to public transportation. These areas would be suitable for mixed-use or multifamily development. However, there were participants who disagreed that any of those would be good options, citing congestion and 40B projects that are already in the area. One area that a couple of commenters did not think was a good location for development was the Linden Street neighborhood, as there is already traffic congestion in the area and it is not ideal for access to public transportation.

What is the ONE most important step Wellesley should take to work toward or reach the 10 percent affordable housing goal under Chapter 40B?

Responses shared by participants included the following:

- Zoning for multifamily
- Make a dent in the SHI gap by approving development that will count completely towards the affordable housing goal
- Repurpose currently developed areas for more housing
- Pursue affordable elderly and disabled housing
- Create mixed-income housing areas
- Public housing in areas that are central to public transportation, have access to shopping areas, and encourage walkability
- Ensure that housing units complement rather than overwhelm the existing neighborhood (in terms of density and design)

GROUP EXERCISE

Following the open house, participants returned to their tables to partake in a group exercise. Each group had sets of Lego bricks in different sizes, where each size pertained to a different housing type: single-family, duplex, three- or four-unit building, larger multi-family, etc. The consultants asked participants to use all the Legos on a large map of Wellesley, placing them in areas where they believe development of that type of housing would be suitable.



Group A

As shown above on the left, Group A concentrated some larger developments (black and orange Legos) in the Barton Road area and the Office Park. There is also high density in the Wellesley Square area. They chose to scatter some smaller units (blue and yellow) across town. Group B (above right) chose similar areas for their large developments but added a large building near the Needham town line and another just north of Route 9, near the Hardy School.



Group B

Group C (left, below) concentrated density (red, black, and orange blocks) in a few areas: on the Needham line near Babson College, in Wellesley Square, in the Lower Falls vicinity of Walnut Street, and in the east part of town where Barton Road and the office park are. They combined some of the smaller two- to four-family units to create multi-family, and they scattered single-family houses evenly across town. Group D (right, next page), while keeping density in Wellesley Square and the eastern part of town, scattered their two- to four-family units (red and orange blocks) along the main streets of town. One unique choice this group made was to add some single-family units on the western side of Lake Waban.

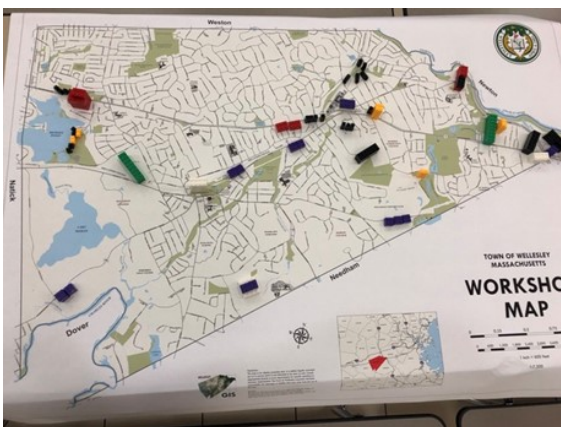


Group C

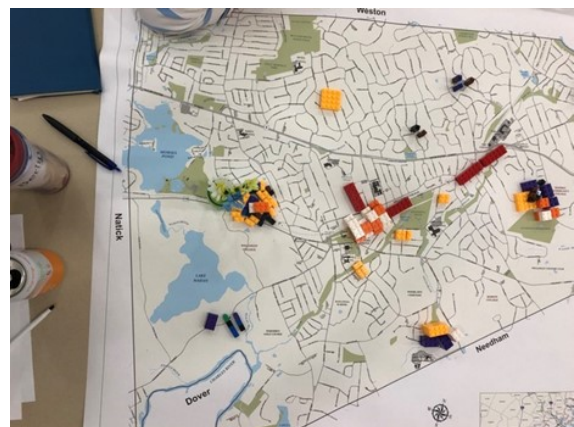


Group D

Group E (below, left) stacked some of their larger development blocks (green, red, and black blocks) and clustered some of their smaller development blocks to create high density in less space. Many of their proposed developments are along main roads in Wellesley and include the Fells Road area, the Wellesley Hills T station area, and the eastern part of town. Lastly, Group F (right) clustered their developments more so than any other group. They chose to stack multi-family blocks in the Wellesley Square area and added more units in the MassBay Community College/Sisters of Charity area than the other groups. The group clustered some smaller units in the North 40 area as well.



Group E



Group F

Data sources

Information for the Wellesley HPP comes from a variety of sources, including the Town, previous plans and studies, the Metropolitan Area Planning Council (MAPC), state agencies, proprietary data, the U.S. Department of Housing and Urban Development, and Bureau of the Census. The most frequently used sources of data are as follows:

- The **Census of Population and Housing** (decennial census): mainly Census 2010, though some tables from Census 2000 were relied upon as well.
- The **American Community Survey (ACS)**: The ACS provides demographic and housing estimates for large and small geographic areas every year. Although the estimates are based on a small population sample, a new survey is collected each month, and the results are aggregated to provide a similar, “rolling” dataset on a wide variety of topics. In most cases, data labeled “ACS” in this plan are taken from the most recent five-year tabulation: 2011-2016 inclusive. Note: population and household estimates from the ACS may not align as well as one would like with local census data collected by the Town. However, to allow for a consistent basis of comparison between Wellesley and other communities, this HPP relies on ACS estimates.
- HUD Consolidated Planning/**Comprehensive Housing Affordability Strategy (CHAS) Data**. Created through a combined effort of the U.S. Department of Housing and Urban Development (HUD) and the Census Bureau, this dataset is a “special tabulation” of ACS. According to the HUD guidance, “these special tabulation data provide counts of the numbers of households that fit certain combinations of HUD-specified criteria such as housing needs, HUD-defined income limits (primarily 30, 50, and 80 percent of median income) and household types of particular interest to planners and policy-makers.” The most recent CHAS Data are based on the ACS 2008-2012 estimates.
- **Wellesley GIS**: The Town’s Geographic Information System (GIS) provided numerous GIS databases for use in this plan. The databases were used to map existing land uses, recent housing sales, recent single-family teardown/rebuild projects, zoning, infrastructure, natural resources, and other factors.
- **The Warren Group/Real Estate Records Search**: The consulting team tapped the Warren Group’s extensive real estate transaction databases to sample sales volume and sale prices in various parts of Wellesley.
- **UMass Amherst/Donohue Institute**: This source was relied upon for population projections and trends, and building permit trends.

Many other publications were also reviewed during the development of this plan as well. Extensive and invaluable guidance was received throughout from the Wellesley Planning Department.



CHAPTER TWO

HOUSING NEEDS ASSESSMENT

Key findings

- Wellesley is a town of homeowners. Over 82 percent of Wellesley households own their residence.
- Out of 7,111 homeowners, 6,699 – or 94 percent – live in detached single-family dwellings.
- Wellesley has the third highest median household income in Massachusetts.
- Wellesley has very little racial, ethnic, or class diversity. Black or African Americans make up a much smaller percentage of the total population in Wellesley than in the Boston Metro area as a whole. Moreover, federal census data indicate that over half of all blacks counted as part of Wellesley's total population are students and faculty at Wellesley and Babson.
- In 2017, Wellesley ranked tenth in the Boston Metro area for total number of housing sales. Since 2010, some 2,600 homes have sold in Wellesley.
- According to the Town's recently completed Unified Plan, the total number of housing units in Wellesley rose by just 218 units between 2000 and 2017. In 2017, the median single-family sale price in Wellesley was \$1.3 million.
- Wellesley is redeveloping. Most new housing construction in Wellesley occurs due to teardowns. Since 2009, the Wellesley building department has issued 575 residential demolition permits. Redevelopment of older housing stock brings higher asset value to the community, but in most cases, it does not produce a net increase in housing units.



Population characteristics

Wellesley and the surrounding communities have absorbed modest population growth over the past few decades. Echoing Greater Boston trends, Wellesley’s population growth rate accelerated with the “Baby Boom,” only to reverse with a slight population decline from 1970-1990 as household sizes fell throughout the U.S. Since 1990, however, Wellesley has been gaining residents again, narrowly outpacing the rate of growth in Norfolk County. Today, the Census Bureau estimates Wellesley’s total population at 29,215.⁴ Citing projections from the Metropolitan Area Planning Council (MAPC) and the University of Massachusetts Donohue Institute, Wellesley’s *Unified Plan* anticipates another cycle of population decreases through 2035, yet at the same time, modest growth in total households.⁵ This is generally consistent with conditions throughout Boston’s west suburbs, where household formation rates continue to rise while household sizes drop.

POPULATION AGE

Wellesley’s population age characteristics come as no surprise. Like virtually all communities in the Northeast, Wellesley has a “graying” population and a shrinking supply of younger adults. And, while available population projections point to a gradual decline in dependent children as well, Wellesley has a large share of people under 19 years compared with other Boston suburbs. Its prestigious school district has an undeniable impact on the homebuying choices made by wealthy families in the Greater Boston area. According to the Census Bureau, over half of all families in Wellesley (and 43 percent of all households) have children under 18.⁶ The size of the under-19 and over-65 population combined produces a staggering **age dependency ratio** of 0.93. These are not ordinary statistics.

RACE, ETHNICITY, CULTURE, AND GEOGRAPHIC MOBILITY

Wellesley has limited racial and ethnic diversity. Minorities comprise about 17 percent of the town’s total population (see Table 2.1), with Asians making up a larger percentage than all other racial groups combined and half of all foreign-born residents as well. The Latino community, which is primarily white, represents less than 5 percent of the total population.⁷ By contrast, the black or African American population in Wellesley is quite small – under 3 percent of the total – a fact not lost on many of the town’s affordable housing organizations and supporters. During an interview for this housing plan,

Table 2-1. Population by Race		
Race	Wellesley	Boston Metro
White	82.5%	77.3%
Black	2.4%	8.0%
American Indian or Alaskan Native	0.1%	0.2%
Asian	11.0%	7.3%
Native Hawaiian or Other Pacific Islander	0.1%	0.0%
Other Race (Unspecified)	0.9%	4.1%
2+ Races	3.0%	3.1%
Source: ACS 2012-2016, B03002.		

⁴ U.S. Census Bureau, American Community Survey (ACS) Five-Year Estimates, 2012-2016, B01003. “Total population” includes people in group quarters, e.g., college dormitories.

⁵ *Wellesley Unified Plan* (Draft), “Understanding Wellesley Today,” 8.

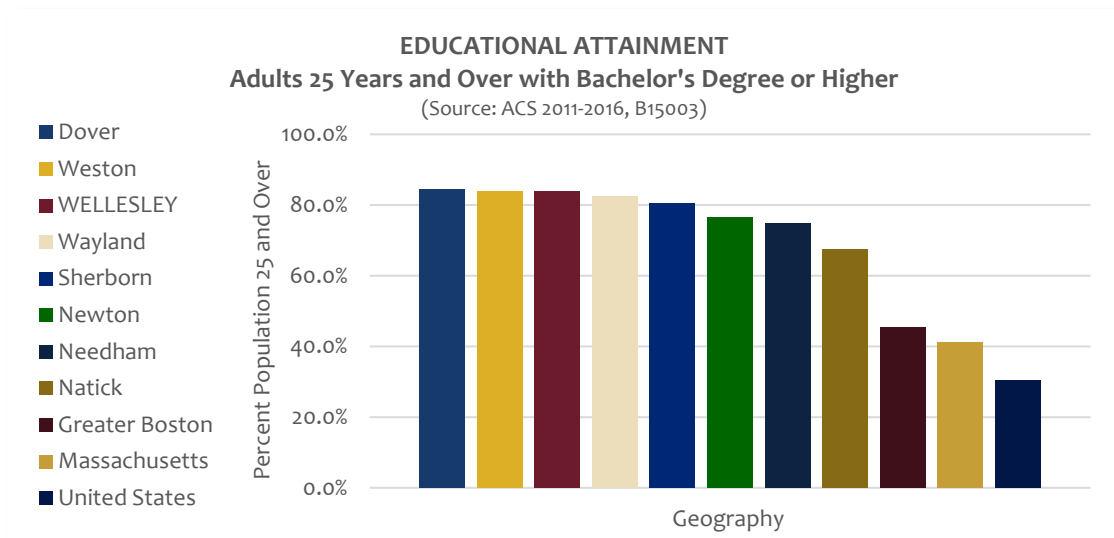
⁶ ACS 2012-2016, B11003, and Barrett Planning Group.

⁷ ACS 2012-2016, B03002, and Barrett Planning Group.

one commenter said she often wonders what residents mean when they say they want to maintain Wellesley as a town that welcomes diversity. Faculty and students at Wellesley College and Babson College represent over 50 percent of the town's entire black population.⁸ The unusually small percentage of blacks in Wellesley matters because throughout the Boston Metro area and nationally, the largest racial and ethnic disparities in wealth occur among blacks born in the U.S. and Latino blacks.⁹ Achieving housing equity for very low-income households can be very challenging in an affluent suburb because the gap between what they can afford and prevailing market values invariably requires deep subsidies.

EDUCATION

Wellesley residents are extraordinarily well educated, and so are their counterparts in the surrounding towns. Educational attainment is one of several measures that separates Greater Boston suburbs from the rest of the state and even more from the rest of the nation. Over 80 percent of Wellesley adults 25 years and over hold at least a bachelor's degree and over 50 percent hold a graduate or professional degree. Wellesley residents value and benefit from living in a region with many colleges and universities in addition to those within their own town.



LABOR FORCE AND EMPLOYMENT

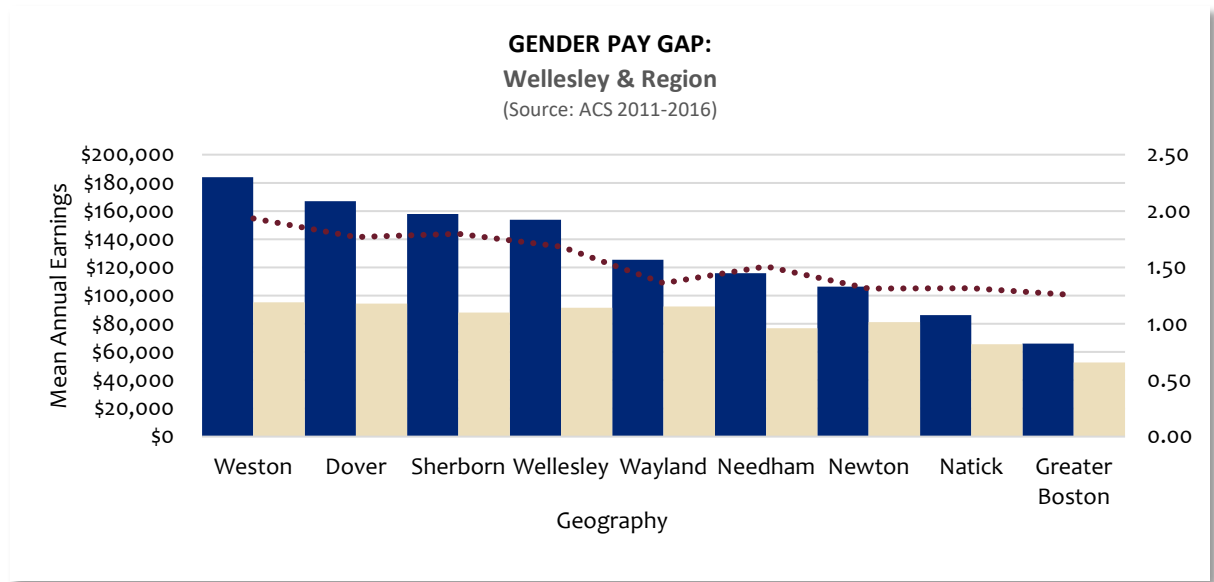
A community's **labor force** includes all civilian residents 16 years and over with a job or in the market for one. Wellesley's labor force includes approximately 13,000 people, 95 percent of whom are employed. The town is fortunate to have some large institutions and other private employers because they offer desirable employment for highly skilled and highly educated workers. As a result, Wellesley has a large percentage of residents 16 years and over working locally – about 35 percent (4,246 people) – and many residents who walk or bike to

⁸ ACS 2012-2016, B02001 (calculated by census block group), and Barrett Planning Group.

⁹ Tatjana Meschede, et al. *Wealth Inequalities in Greater Boston: Do Race and Ethnicity Matter?* CDP 2016-02. (Federal Reserve Bank of Boston, 2016).

work – about 12 percent.¹⁰ The town also has a sizeable group of telecommuters and self-employed people working at home, which is not uncommon in affluent communities.

Consistent with the town’s educational profile, Wellesley residents tend to work in fields requiring advanced degrees and in high-wage occupations. Higher education, health care, science and technology, professional services, finance, and management dominate the list of industries that employ Wellesley residents.¹¹ On average, Wellesley men with full-time employment earn \$153,836 per year, which is very high for the Greater Boston region overall but consistent with other west suburbs. Still, the gender pay gap persists in Wellesley and so many affluent towns, with men earning almost 1.7 times the annual salaries of women – a ratio dramatically higher than that of Greater Boston as a whole.¹² Without substantial child



support, a single woman with children and a full-time job would find it very difficult to live in Wellesley. As illustrated later in this chapter, it can even be harder for single women without children, especially older women.

THE JOBS-HOUSING (IM)BALANCE

The Executive Office of Labor and Workforce Development (EOLWD) reports that Wellesley has about 1,500 employer establishments with a combined total of 18,000 average monthly payroll jobs and an average weekly wage of \$1,576.¹³ The employment base (payroll jobs) is much larger than Wellesley’s total housing inventory, currently estimated at 9,023 year-round units. The **sustainability** goal for a local economy is 1.0-1.5 jobs per housing unit: enough jobs to give residents meaningful opportunities to work locally and enough housing units to give local workers meaningful options to live in the town. The **jobs-to-housing ratio** in Wellesley is

¹⁰ ACS 2012-2016, B08301, and Barrett Planning Group.
¹¹ ACS 2011-2016, C24050, and Wellesley Unified Plan (Draft), Chapter 9 (2018), 3.
¹² ACS 2011-2016, DP-03.
¹³ EOLWD, ES-202, Town of Wellesley, 2016 Annual Report, All NAISC Codes.

1.99, which means there are nearly two jobs for every one housing unit, i.e., potential demand that substantially exceeds the supply.

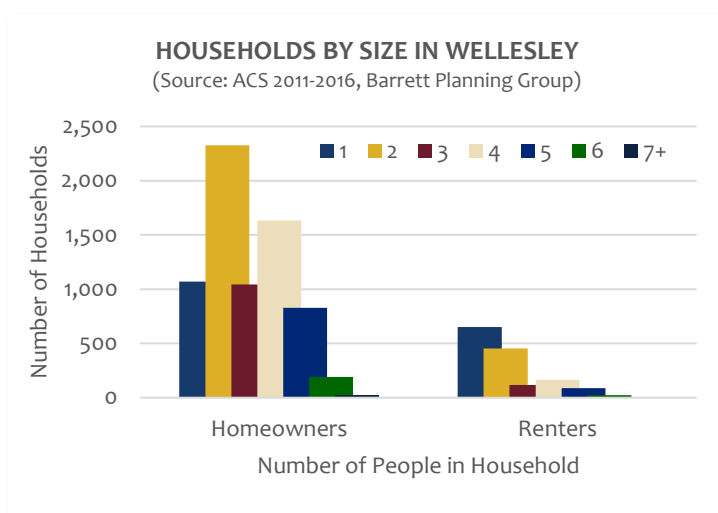
The jobs-to-housing ratio in Wellesley may be skewed slightly by the presence of college campuses with some of their workforce housed on site. For example, Wellesley College owns approximately 60 homes that serve as faculty housing. However, even with a reasonable estimate of the on-campus live/work population, the difference is not large enough to have a material impact on the ratio. Most people working in Wellesley commute from other towns every day, and this can be seen in the estimated size of its “workplace” or daytime population: 23,220 workers, which includes 4,246 who live in Wellesley.¹⁴

Household characteristics

Housing is a product, and households can be thought of as consumers. The housing needs and preferences of households vary by age group, household size, commuting distances, access to goods and services, and clearly, what people can afford for rent or a mortgage payment. The size and composition of a community’s households often indicate how well suited the existing housing inventory is to residents. In turn, the number and type of households and their spending power influence overall demand for housing.

HOUSEHOLDS AND FAMILIES

The Census Bureau divides households into two broad classes: families and non-families. A **family household** includes two or more related people living together in the same housing unit, and a **non-family household** can be a single person living alone or two or more unrelated people living together¹⁵ Town-wide, non-families comprise about 23 percent of all households in Wellesley.¹⁶ Compared with surrounding cities and towns, Wellesley’s family household rate of 77 percent is on the lower end, but much higher than the state average. As for family type, married couples make up an exceptionally high 91 percent of all families in Wellesley (and 70 percent of all households).¹⁷



¹⁴ Census Bureau, Journey to Work Tables.

¹⁵ People not counted as members of a household are counted in the group quarters population, i.e., college students or nursing home residents. See also, Appendix A, Glossary. For zoning and federal Fair Housing Act purposes, the definition of “family” differs from that used by the Census Bureau.

¹⁶ ACS 2012-2016, B11001, “Household Type (Including Living Alone),” and Barrett Planning Group.

¹⁷ Ibid.

HOUSEHOLD SIZE & COMPOSITION

Wellesley may not have the region's largest percentage of family households, but it ranks near the top of the Greater Boston area for family size. Over 34 percent of its households include four or more people, and since 1990 Wellesley's average family size has gradually increased even as household sizes overall have dipped. Today, the Census Bureau estimates that Wellesley's average household includes 2.84 people and the average family, 3.32. This seems consistent with findings in the Unified Plan that the primary group of households moving into Wellesley are "adults in the 35- to 44-year-old range in households with their children" while those moving out include young people leaving Wellesley to attend college or moving to job centers in other parts of the country and people in their seventies and older.¹⁸

The fact that Wellesley has a large percentage of families with dependent children seems widely understood in the town, but the characteristics of other types of families and nonfamily households matter as well. Single people living alone comprise some 20 percent of all Wellesley households and 87 percent of all nonfamily households. An unusual feature of Wellesley's one-person households is that about 60 percent are senior citizens: low compared with many suburbs and small towns.

HOUSEHOLD WEALTH

Household income influences where people live, their health care and quality of life, and the opportunities they can offer their children. Wellesley's prestige is inextricably tied to the wealth of its households, and this has been true for a long time. Table 2.2 offers a snapshot of three median income indicators – all households, family households, and non-family households – that have an

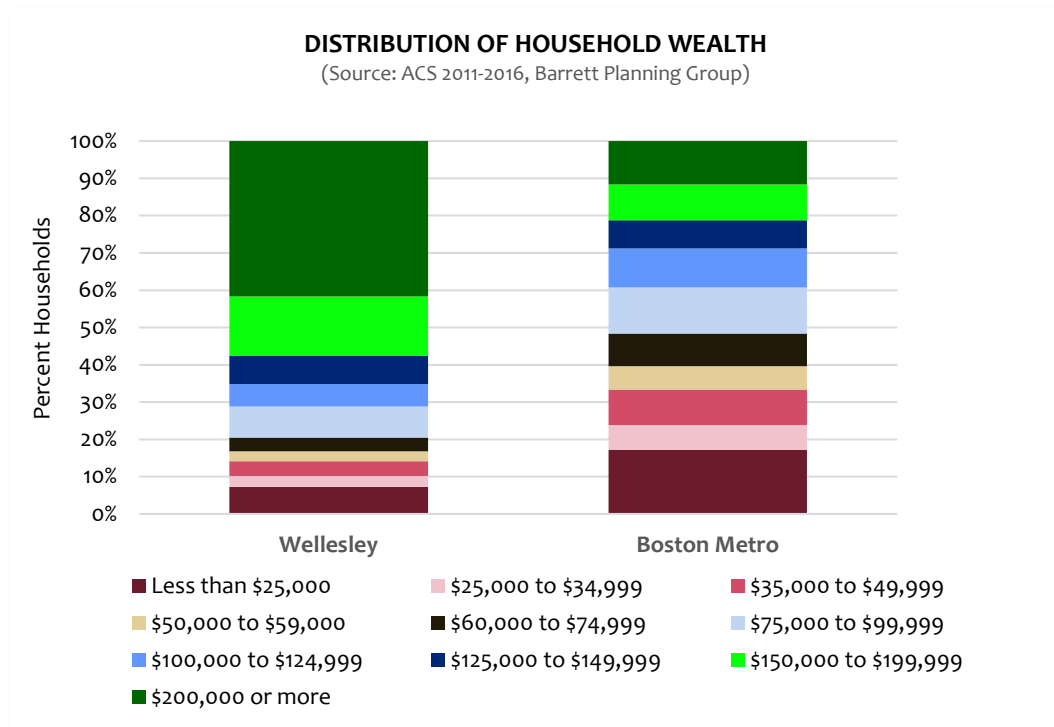
Town	Median Household Income	Median Family Income	Median Nonfamily Income
Dover	\$189,265	\$205,139	Not Reported
Natick	\$104,372	\$135,824	\$51,932
Needham	\$139,477	\$166,931	\$54,919
Newton	\$127,402	\$170,639	\$56,907
Sherborn	\$158,250	\$168,036	\$63,125
Wayland	\$157,500	\$191,134	\$44,448
WELLESLEY	\$171,719	\$200,817	\$74,000
Weston	\$191,744	\$235,766	Not Reported
Greater Boston	\$77,809	\$98,431	\$45,866
Source: ACS 2011-2016.			

important place in any conversation about housing affordability. As seen below, Wellesley is the third wealthiest town in the immediate area, behind Weston and Dover, in terms of median household and median family income. However, the nonfamily median income in Wellesley exceeds that of all the surrounding communities and ranks third for the state.¹⁹ This reflects, at least in part, the fact that Wellesley's one-person households include a broader mix of people than elderly seniors (75 years and over), whose incomes tend to be very low, especially among women. Single people living alone in Wellesley cover all age groups of owners and renters 24 years and over.

¹⁸ Wellesley Unified Plan, (Draft, 2018), 7-5.

¹⁹ ACS 2012-2016, B19202.

Median income statistics shed light on a community's relative economic position, but they also can mask extreme differences in household wealth. The next chart compares Wellesley and the Boston Metro area by the percentage of households in a range of incomes. The chart reinforces that Wellesley has a disproportionate concentration of households in the highest income band, i.e., there is greater income inequality in Wellesley than in surrounding region. As shown later in this section, statistics from the U.S. Department of Housing and Urban Development (HUD) show that 17 percent of Wellesley's households have incomes that fall within the meaning of **low or moderate income**, and about 72 percent of these households spend more of their monthly income on housing than is generally considered affordable. (See "Housing Cost Burden").



Comparing household incomes by household type or age offers another way to explore household income advantages and limitations. It is not uncommon for seniors to have lower incomes than young families, and this applies to Wellesley, too. However, Wellesley stands out for the degree of difference between the incomes of its young families (householders between 25 and 44 years) and their Boston Metro counterparts. In Wellesley, the median income for this group is \$217,222: 2.5 times more than the Boston Metro median income for the same group of householders, \$88,000. Furthermore, both regionally and nationally, the highest-income householders are between 45 and 64 years, but this is not the case in Wellesley, where their median income is 90 percent of the median for the younger cohort. And, the

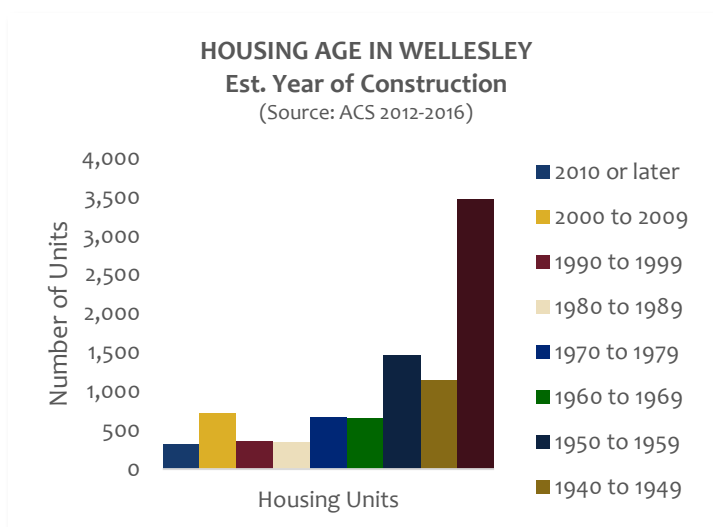
younger cohort represents most movers into Wellesley.²⁰ Single women without children and single retirees (people 65 and over) have the lowest incomes in Wellesley.

Housing characteristics & trends

WELLESLEY'S HOUSING SUPPLY

Wellesley has approximately 9,134 housing units. The overwhelming majority are detached single-family homes, and while many are older homes built before 1940, about 11 percent (over 1,000 units) have been constructed since 2000. Most of these did not add to the town's housing supply. Instead, they replaced older homes that were torn down to make way for new, larger residences.

Since 2009, Wellesley's building department has issued 575 residential demolition permits. Some of the town's neighborhood streets have been virtually transformed by the prevalence of teardown activity, such as Westgate, Wynnewood Road, Patton Road, or Benvenue Street, and several interconnected streets north of Route 9, or Livingston Road and Ridge Hill Farm Road near the Dover/Needham line.²¹ While words like "redevelopment" sometimes make people cringe, Wellesley is obviously redeveloping. The effects can be seen in just about every neighborhood in town. Nearly all the replacement housing consists of large single-family dwellings, though near Wellesley Square, two-unit residential condominiums have been built as well.²²



²⁰ ACS 2012-2016, B19049.

²¹ Wellesley Planning Department, "SFR Demo Permits 1-1-2009 to 2-18-2018" (Excel).

²² Wellesley Planning Department, "SFR New Permits 1-1-2009 to 2-18-2018" and "2-Family New Permits" (Excel).

HOUSING TYPES AND SIZES

Wellesley's homes are large, and the redevelopment process has made them even larger. Assessor's data reveal not only useful information about housing values and types, but also sizes – in residential floor area – and number of rooms, and a host of other information about style and structure trends, including housing age. Over time, the houses in Wellesley have increased in living area, or the floor area occupied as living space, as well as rooms, and most likely accessory features as well (such as garages, barns, and so on). While facts about the latter were not available for this housing plan, the amount of residential floor space, building age, and value statistics can be gleaned from the assessor's database.

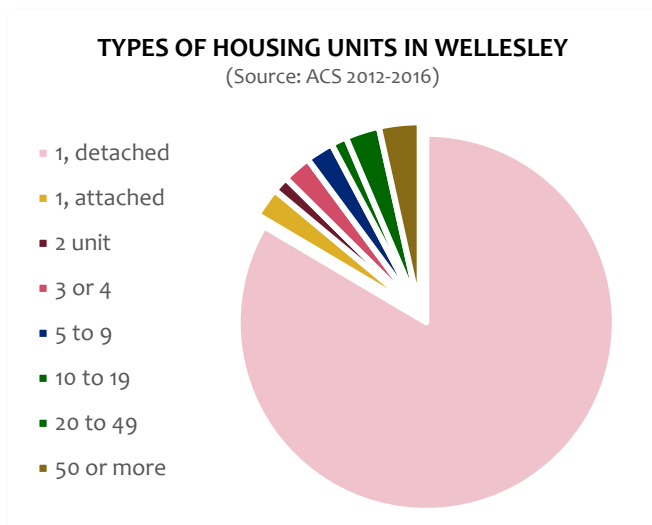


Table 2.3. Change in Size and Values in Wellesley's Single-Family Home Inventory

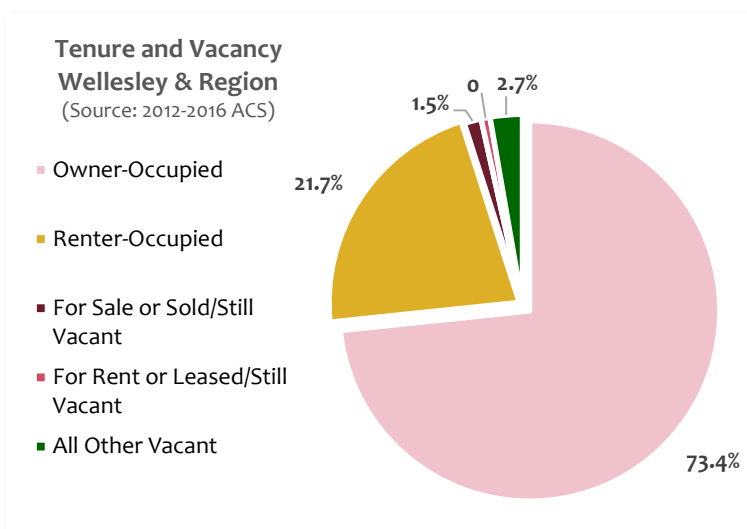
Age of Dwelling (Year Built)	Average Lot (Sq. Ft.)	Average Residential Floor Area (Sq. Ft.)	Average No. Rooms	Land Value to Building Value Ratio
2000 to Present	21,418	4,651	10	0.578
1980-1999	21,166	3,715	9	0.927
1960-1979	22,126	2,654	8	1.465
1945-1960	16,900	2,275	8	2.618
1920-1944	15,871	2,475	8	2.387
1900-1919	16,061	2,681	8	2.772
1865-1899	17,579	2,789	8	2.746
Pre-1865	24,855	2,592	9	3.248
Source: Wellesley's Assessor's Parcel Database (2014) and Barrett Planning Group LLC.				

As shown in Table 2.3, suburban redevelopment has ushered into Wellesley a generation of larger, very valuable homes. Demolition and rebuild projects will continue in Wellesley in neighborhoods with homes approximately 50 years old and older because the land is worth more than the existing residences (expressed in this table as a **land-value ratio**).

HOUSING OCCUPANCY

The prevalence of single-family homes goes together with high homeownership rates in just about every town, and Wellesley is no exception. Over 82 percent of all units in Wellesley are owner-occupied, and census tract data indicate that some of the renter-occupied units are housing for employees of Wellesley College or Babson College, and to a more limited extent at Dana Hall. There are very few vacancies in

Wellesley, where the homeownership vacancy rate hovers around 1 percent and the rental vacancy rate, 5 percent. Both statistics point to a tight housing market. For the past seven years, Wellesley has placed in the top 20 Greater Boston communities for number of single-family housing sales, ranking tenth for the entire region in 2017.²³



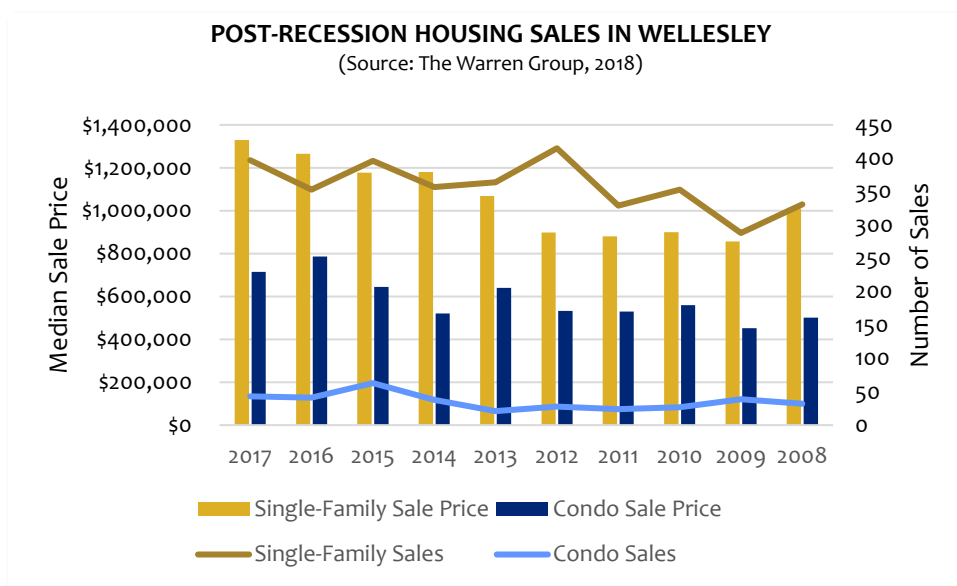
The competition for a home of one's own in Wellesley drives the value of land and the cost of housing. Moreover, the homeownership vacancy rate in all the towns around Wellesley is less than 3 percent, so there are remarkably few opportunities for young wage earners to choose one of these communities. Out of the 61,000 units in the inventory of owner-occupied and for-sale homes in Wellesley and the surrounding towns, only 450 are for sale and just over 700 have sold but have not yet closed. Vacant and available rental units are very hard to find, as indicated in the chart above. This has contributed to the uptick in applications to build rental housing in so many of Boston's west suburbs.

HOUSING SALE PRICES

Homes for sale in Wellesley cater to homebuyers with the means to "buy up" in Greater Boston and, quite often, homebuyers with children under 18. The chart below tracks median sale prices and sales volume statistics for Wellesley since 2008, covering the period of contraction and recovery in the region's residential real estate market. Current real estate sales data from *Banker & Tradesman* show that Wellesley's housing market remains highly competitive and its home sellers can command top dollar for a single-family residence. The median sale price for all of 2017 was \$1.3 million, but in 2018, the median sale price had already reached \$1.3 million by the end of January alone – at a time when sales volume tends to be at the lowest point of the year. None of these sales involved first-time homebuyers. The average mortgage loan for homes recently purchased in Wellesley is anywhere from 60 to 70 percent of the sale price.²⁴

²³ The Boston Foundation, *Greater Boston Housing Report Card 2017, Ideas from the Urban Core: Responsive Development as a Model for Regional Growth*, 21.

²⁴ *Banker & Tradesman*, Real Estate Records (Online), YTD January 2018.



Estimates published by the Census Bureau indicate that about 20 percent of Wellesley's homeowners moved into their present residence after 2009. This seems consistent with findings in the *Greater Boston Housing Report Card 2017*, which ranks Wellesley (and Newton) among the top Greater Boston communities for housing sales volume since 2011.²⁵

MARKET RENTS

Like home prices, market rents run very high in Wellesley, and there are only a few units available at any given time. An informal survey conducted for this plan produced a limited list of available properties, many of which are not apartments, as shown below. Wellesley is like many single-family suburbs where most of the rental supply consists of detached single-family homes and small attached or multi-unit buildings. In fact, 54 percent of Wellesley's renter-occupied housing units are one- to four-unit residences, many of which are condominiums not occupied by the owners. Excluding single-family homes, Wellesley's rental housing is dominated by small units. The

Table 2.4. Rental Listings in Wellesley, February 2018 (Sample)

Location	Unit Size	Asking Rent
Hastings Village (Apartment)	2 BR	\$2,600
Worcester Street (House)	5 BR	\$4,750
Apartment (Location Undisclosed)	2 BR	\$3,600
Longfellow Road (House)	4 BR	\$3,950
Cedar Street (Condo)	3 BR	\$2,300
Cedar Street (Apartment)	2 BR	\$2,500
Lawrence Road (Condo)	3 BR	\$3,600
Washington Street (Apartment)	2 BR	\$1,850
Lathrop Road (House)	4 BR	\$5,000
Worcester Street (Apartment)	2 BR	\$2,900
Central Street (Apartment)	1 BR	\$1,800
Linden Street (Apartment)	2 BR	\$2,100
Westwood Road (House)	5 BR	\$7,400
Wareland Road	2 BR	\$2,590

Source: Trulia, Zillow, and Apartment Guide.

²⁵ ACS 2012-2016, B07001, B25038, and Barrett Planning Group.

multifamily apartment and condo-for-rent inventory consists almost entirely of 1- or 2-bedroom units designed for small households, yet the monthly rents clearly exceed what most single people can afford and, in many cases, they also exceed what a young employed couple could afford. In the table above, the rents would require an annual household income of anywhere from \$74,000 to \$144,000, not including the single-family houses.²⁶

Housing affordability & housing needs

Under a 1969 Massachusetts law, all communities are supposed to have housing that is affordable to **low-income households** and remains affordable to them even when home values appreciate under robust market conditions. Another type of affordable housing - generally older, moderately priced dwellings without deed restrictions, and which lack the features and amenities of new, high-end homes - can help to meet housing needs, too, but only if the market allows. There are other differences, too. For example, any household - regardless of income - may purchase or rent an unrestricted affordable unit, but only a low- or moderate-income household qualifies to purchase or rent a deed restricted unit. Both types of affordable housing meet a variety of housing needs and both are important. The difference is that the market determines the price of unrestricted affordable units while a legally enforceable deed restriction determines the price of restricted units. Today, Wellesley has very few affordable units, unrestricted or deed restricted. Furthermore, unrestricted units that may have offered a pathway to owning a home in the past have been a key target of teardown/rebuild projects in Wellesley's older neighborhoods.

CHAPTER 40B SUBSIDIZED HOUSING INVENTORY

When people refer to "Chapter 40B," they usually mean the state law that provides for low- and moderate-income housing development by lifting local zoning restrictions. However, G.L. c. 40B - Chapter 40B proper - is actually the Commonwealth's regional planning law and the parent legislation for agencies like MAPC. The four short sections that make up the affordable housing provision were added in 1969, and they are called "Chapter 40B" in this plan to be consistent with affordable housing nomenclature in Massachusetts. Nevertheless, remembering the regional planning umbrella for affordable housing can help local officials and residents understand the premise of the law and reduce confusion and misinformation.

Chapter 40B's purpose is to provide for a regionally fair distribution of affordable housing for people with low or moderate incomes (see Table 2.7). Affordable units created under Chapter 40B remain affordable over time because a deed restriction limits resale prices and rents for many years, if not in perpetuity. The law establishes a statewide goal that at least 10 percent of the housing units in every city and town will be deed restricted affordable housing. This 10 percent minimum represents each community's "regional fair share" of low- or moderate-income housing. It is not a measure of housing needs.

Chapter 40B authorizes the Zoning Board of Appeals (ZBA) to grant a **comprehensive permit** to pre-qualified developers to build affordable housing. "Pre-qualified developer" means a developer that has a "Project Eligibility" letter from a state housing agency. A comprehensive

²⁶ ACS 2012-2016, B25024, and Barrett Planning Group.

permit covers all the approvals required under *local* bylaws and regulations. Under Chapter 40B, the ZBA can waive local requirements and approve, conditionally approve, or deny a comprehensive permit, but in communities that do not meet the 10 percent minimum, developers may appeal to the state Housing Appeals Committee (HAC). During its deliberations, the ZBA must balance the **regional need for affordable housing** against valid local concerns such as public health and safety, environmental resources, traffic, or design. In towns that fall below 10 percent, Chapter 40B tips the balance in favor of housing needs. In addition, ZBAs cannot subject a comprehensive permit project to requirements that “by-right” developments do not have to meet, e.g., conventional subdivisions.

The 10 percent statutory minimum is based on the total number of year-round housing units in the most recent federal census. For Wellesley, the 10 percent minimum is currently 909 units (Table 2.5). At 6.33 percent, Wellesley falls short of the 10 percent minimum by 334 units.

Table 2.5. Wellesley Subsidized Housing Inventory			
Development	Location	Type	Units
Barton Road Development	190 Barton Rd.	Rental	90
Dean House/List House	41 River St./315 Weston Rd.	Rental	57
Kilmain House	505-513 Washington St.	Rental	40
Morton Circle Development	487-503 Washington Street	Rental	36
Linden Street Development	Waldo Ct./Linden	Rental	12
Ardemore at Wellesley	4 Cedar Street	Rental	36
Jubilee House	10 Cross St	Rental	4
Glen Grove	50 & 60 Grove Street	Rental	125
Townhouses at Edgemoor Circle	Edgemoor Ave and Overbrook Drive	Ownership	3
DDS Group Homes	Confidential	Rental	12
Walnut Street Fire Station	182 Walnut Street	Ownership	1
Hastings Village	54-66 Hastings St	Rental	52
Wellesley Manor	874-878 Worcester St	Ownership	7
Peck Avenue & Mellon Road	Peck Avenue & Mellon Road	Ownership	3
Waterstone at Wellesley	27 Washington St	Rental	82
Wellesley Commons	65 Washington Street	Ownership	1
The Belclare Condominium	580 Washington & 53 Grove	Ownership	5
Wellesley Place	978 Worcester Ave	Rental	7
Linden Street	Linden Street	Rental	2
		Total	575
		10% Minimum	909
		Shortfall	334
Source: Massachusetts Department of Housing and Community Development, 2018, Note: The Town of Wellesley’s records differ slightly from DHCD’s. This plan reports the official SHI from DHCD, as of January 26, 2018.			

Due to its prestige, extraordinarily high market prices, high land values, and zoning policies that are out of alignment with regional housing demand, Wellesley has become vulnerable to applications for comprehensive permits. What is happening in Wellesley now echoes conditions in Brookline, Newton, and Wayland, where the ZBAs have faced multiple comprehensive permits filed very close together. By contrast, Needham and Natick no longer

face the threat of unwanted comprehensive permits because they meet the 10 percent minimum, at least until the Census Bureau publishes new housing statistics with Census 2020. At that time, the denominator (total year-round housing units) will change and some towns that currently exceed 10 percent could fall below the statutory minimum.

Table 2.6 shows that as of September 2018, the Wellesley ZBA has received five comprehensive permit applications, most of which involve developments with Project Eligibility from MassHousing,

Address	Type	Total Units	Units Eligible for SHI	Actually Affordable Units
1-8 Delanson Circle	Rental	90	90	18
148 Weston Road	Rental	55	55	11
135 Great Plain Ave.	Owner	44	11	11
680 Worcester St.	Rental	20	20	5
16 Stearns Road	Owner	36	9	9
Total		245	185	54

the largest state subsidizing agency. One other project is seeking a Project Eligibility letter as well. Although MassHousing originally denied Project Eligibility for two projects (680 Worcester Street and 16 Stearns Road), both were subsequently approved with only *de minimis* changes to the first set of plans. Even if all the proposed developments eventually received a comprehensive permit, the combined increase in the Subsidized Housing Inventory would be 249 units – still 85 short of the 10 percent minimum. With a DHCD-approved Housing Production Plan, however, either Delanson Circle or 148 Weston Road would make the Town eligible for a “safe harbor” one-year plan certification (see Section 1 and the Appendix)..

MEASURING HOUSING NEEDS

One measure of housing needs is the shortfall of Chapter 40B units. However, Chapter 40B developments usually respond to the strength of a regional housing market, so comprehensive permits do not always address the affordable housing needs of a community or region. Furthermore, low-and moderate-income households make up a significantly larger percentage of all households than 10 percent. This can be seen in Wellesley, where 17 percent of the town’s households have incomes that would qualify for a Chapter 40B unit. Understanding housing needs requires a more nuanced approach than can be gleaned from a community's Chapter 40B "gap." It involves an assessment of needs and barriers that exist within individual communities and the region of which they are part.

Housing needs are not limited to low- or moderate-income people, but often, other needs overlap with economic need. Accessible homes for people with disabilities, small housing units for older people who do not want the maintenance responsibilities of a single-family home, and a base of modestly priced apartments for young citizens entering the workforce are common needs throughout Massachusetts. About 10.5 percent of Wellesley’s population has a disability, but except for senior housing and a very small inventory of group home units, Wellesley has very little barrier-free housing. The same populations – seniors, young workers, and people with disabilities – have needs for housing near goods and services, yet there are not many affordably priced housing units near any of Wellesley’s village centers. Furthermore, while there are “over-55” age-restricted developments in and around Wellesley,

many of the units are expensive condominiums or townhouses. Meanwhile, housing that would meet the needs of lower-income seniors has become increasingly difficult to build due to a shortage of federal and state housing subsidies.

WELLESLEY'S HOUSING AFFORDABILITY GAP

There is an enormous **affordability gap** in Wellesley. In addition to market-rate rents that far exceed the maximum affordable housing payment for low- or moderate-income people, the for-sale market is out of reach for low- or moderate-income and middle-income homebuyers. For example, a three-bedroom condominium with an asking price of \$216,800 (rounded) would be affordable to a moderate-income purchaser, but in 2017, the median condominium sale price in Wellesley was \$715,000. Moreover, while a moderate-income homebuyer could afford to purchase a \$248,300 single-family home, last year's median sale price was \$1.3 million – that is, a price roughly 5.5 times greater than the maximum affordable purchase price for a Chapter 40B homeownership unit.²⁷ The \$216,800 per-unit gap for a condominium and \$1+ million per unit gap for a single-family home far exceeds the maximum per-unit subsidies available from most state and federal housing programs, and this is a key reason for the very high density found in many Chapter 40B developments in Boston's west suburbs.

HOUSING COST BURDEN

A disparity between growth in housing prices and household incomes contributes to a housing affordability problem known as **housing cost burden**. The U.S. Department of Housing and Urban Development (HUD) defines housing cost burden as the condition in which low- or moderate-income households spend more than 30 percent of their monthly gross income on housing. When they spend more than half their income on housing, they are said to have a **severe housing cost burden**. Housing cost burden – not Chapter 40B – is the key indicator of affordable housing need in cities and towns. Table 2.7 reports HUD's current housing program income limits by family size for the Boston Metro Area and the maximum housing payment that is affordable in each tier. "Low" and "moderate" incomes are based on percentages of the HUD Area Median Family Income (HAMFI), adjusted for household size. What low- and moderate-income households can afford is far less than prevailing market rents in Wellesley.

In Wellesley, 1,055 low- or moderate-income households are housing cost burdened (71 percent) and 745 are severely cost burdened (51 percent).²⁸ Table 2.8 reports of low- or moderate-income households and housing cost burden in Wellesley by tenure. Low- or moderate-income households are eligible to purchase or rent Chapter 40B affordable units.

²⁷ Maximum affordable purchase prices calculated with DHCD "Local Initiative Program" affordability assumptions: 30% FRM, interest rate @ 4.4 percent based on most recent Freddie Mac Mortgage Market Survey, 5% downpayment, and household income for pricing purposes at 70% of the Boston Metro HUD median income for a family of four. Wellesley FY 2018 tax rate of \$11.95 per thousand.

²⁸ CHAS 2010-2014.

Table 2.7. Low & Moderate Income Limits and Affordable Housing Costs

	Low Income		Moderate Income	
Household Size (# People)	HUD Income Limit	Maximum Affordable Housing Payment	HUD Income Limit	Maximum Affordable Housing Payment
1	\$37,750	\$944	\$56,800	\$1,420
2	\$43,150	\$1,079	\$64,900	\$1,623
3	\$48,550	\$1,214	\$73,000	\$1,825
4	\$53,900	\$1,348	\$81,100	\$2,028
5	\$58,250	\$1,456	\$87,600	\$2,190
6	\$62,550	\$1,564	\$94,100	\$2,353

Source: U.S. Department of Housing and Urban Development, FY 2018 Boston Metro Income Limits.

Table 2.8. Low- and Moderate-Income Households and Housing Cost Burden in Wellesley

Household Income Group	Total	% Cost Burdened	% Severely Cost Burdened
Low-Income Households	1,060	75.5%	58.5%
Owners	550	91.8%	68.2%
Renters	510	56.9%	48.0%
Moderate-Income Households	410	62.2%	30.5%
Owners	310	61.3%	29.0%
Renters	100	70.0%	40.0%

Source: HUD, Comprehensive Housing Affordability Strategy (CHAS) Data. Low and moderate income limits are shown in Table 2.7.



CHAPTER THREE

POTENTIAL BARRIERS TO AFFORDABLE HOUSING DEVELOPMENT

This section describes Wellesley's natural and built environment, focusing on conditions that limit housing growth in Wellesley. The information presented here is largely based on other planning documents, including the 2015 *Wellesley Open Space and Recreation Plan* and the Draft *Unified Plan*. Specific environmental elements that can affect housing development include land and water resources, wildlife habitat, scenic features, and contaminated sites. Local regulations also limit the amount of housing development and types of housing that can be built. In most cases, these local regulations form the basis for the waivers that comprehensive permit developers ask the ZBA to grant in order for them to build affordable housing.

Key findings

- Wellesley relies on groundwater for much of its public water supply, and the town contains two major aquifers. Additional water is provided by the MWRA as needed.
- The vegetated wetlands in Wellesley are some of the most important natural resources in the Town because of the unique habitat they offer for endangered or threatened species.
- Wellesley has two areas designated as Priority Habitat: along the northern shore of the Charles River at Elm Bank and an area in the Cochituate Aqueduct. Priority Habitats are not protected by law, but the species that may use these habitats are protected.
- Wellesley has the basic municipal infrastructure and utilities required for land development: public water and sewer service, adequate roads, and some public transportation facilities. Its schools have entered a period of declining K-12 enrollment.
- Wellesley's zoning does little to encourage a range of housing types or the density required to support affordable housing development on privately owned land. Taken together, the zoning and non-zoning requirements Wellesley imposes on housing construction effectively encourage developers to pursue Chapter 40B comprehensive permits.
- The potential for conflicts exists between some of the housing and residential development goals in Wellesley's new *Unified Plan* and the realities of affordable and mixed-income housing development. The potential conflicts involve scale, density, housing types, and settings. As the *Unified Plan* makes clear, the Town will need to use

strategic redevelopment to achieve multiple goals and identify development opportunities that solve more than one challenge at a time.

Environmental limitations

TOPOGRAPHY AND SOILS

Wellesley's rolling hills are the legacy of the continental glacier that once extended beyond Cape Cod. Maugus Hill is the largest of six drumlins in the Town. Kames can be found in Wellesley College's Nehoiden and Wellesley Country Club golf courses, while eskers snake around Morses Pond, Longfellow Pond, and Town Forest along Rosemary Brook. Lake Waban and Morse's Pond are depressions left by melted blocks of ice as the land took on its present appearance. Glacial erratics are scattered throughout the town. These large boulders were transported by the glacier to their present sites. Boulder Brook Reservation is named for its collection of erratics, including one aptly named Elephant Rock. "Problem Rock" is found at Grove and Dover Streets. Isolated round ponds are kettle holes left when great blocks of ice melted.

Like Wellesley's topography, its soil patterns vary from north to south. On the north side of town, the soils are generally well suited for development. However, other conditions constrain development in this part of Wellesley, notably steep slopes near the Weston town line and wet soils associated with Bogle, Boulder and Cold Stream Brooks. In addition, a large area stretching from Rocky Ledges to Cliff Road consists of soils with severe development limitations because of shallow depth to bedrock. Even here, though, there are pockets of moderately deep, well-drained soils, that can accommodate development, and much of this area has been developed for lots close to the minimum allowed by zoning (20,000 sq. ft.).

South of the railroad line, there are several soil groupings that can support development and woodland production. The southernmost part of Wellesley contains large areas of soils that have severe restrictions for development because of either topography or wetness.

WATER RESOURCES

Wellesley is in the middle of the Charles River Watershed, one of three watersheds to flow into Boston Harbor. Six stream systems flow through the Town to the main stream of the Charles River on the north and south borders. They include the Waban Brook, Fuller Brook, and Pollock Brook, which drain the westerly two-thirds of the Town, and four stream systems that drain the easterly third of Wellesley toward the Charles River, opposite Newton: Cold Stream Brook, Rosemary Brook, Academy Brook, and Hurd Brook.

Wellesley's ponds and lakes range from Morses Pond and Lake Waban to small ponds scattered throughout Town. Lake Waban is a "Great Pond" because it covers ten or more acres, which makes it subject to state environmental regulations. Many of Wellesley's ponds have algal blooms caused by fertilizer pollutants and high amounts of sedimentation. In 1998, Wellesley began implementing the Pond Restoration Master Plan, which set priorities for improving and restoring the town's smaller ponds. The plan has resulted in the dredging and

restoration of Rockridge Pond through removal of 6,000 yards of sediment and replacement of the pond outlet structure and drain; restoration of Bezanson Pond and Reeds Pond; and a feasibility study of the Town Hall Duck Pond.

Because of the extensive urbanization, Wellesley's streams and ponds are susceptible to degradation of water quality. Morses Pond, on the Wellesley-Natick town line, serves multiple uses. Several areas along its shores are densely developed for housing. Wellesley has two public water supply wells and a swimming beach on the easterly side of the pond, and a major open space corridor (Cochituate Aqueduct) passes along the north and east sides. Morses Pond is also vulnerable to the pressures of urbanization, for Worcester Street (Route 9) crosses two of the pond's tributaries, and there is extensive commercial strip development both in Natick and Wellesley.

Wellesley obtains most of its public water from groundwater, which is drawn from municipal wells at five locations throughout the Town with a total yield of 3.0 million gallons per day (mgd). Additional water is provided by the Massachusetts Water Resources Authority (MWRA), which when needed delivers 3.5 mgd to the Town, for a total potential supply of 6.5 mgd. Since 1980, the Town has encouraged water conservation through increased rates during the summer season. In 2003, Town Meeting adopted a Restriction on the Use of Water Supply Bylaw that empowers the Town to restrict or ban outside watering.

Wellesley lies over two major aquifers, portions of which are protected by the Water Supply Protection District that Town Meeting instituted in 1987.

- The Waban Brook Alluvial Aquifer begins in Weston and Natick and extends to the Charles River through the westerly part of Wellesley. Natick and Wellesley have water supply wells in this aquifer adjacent to Morses Pond, and Wellesley College's wells are located on its campus on the easterly side of Lake Waban. Of all the Town wells, those at Morses Pond are known to be the most influenced by surface water quality. Approximately 35 percent of the Waban Brook basin lies within Wellesley. In 1987, Wellesley created a Water Supply Protection District and based the Waban Brook portion of the district on the basin boundary.
- The second major aquifer in Wellesley, the Rosemary Brook Valley Aquifer, extends from downtown Needham to the easterly part of Wellesley. Wellesley has four municipal wells in the Rosemary basin, and the Wellesley Country Club has two private wells that are used solely for irrigation of the golf course. As in the case of the Waban Brook aquifer and basin, the Rosemary Brook basin demarcation is used to denote the overall recharge area for this aquifer. About 40 percent of the Rosemary Brook basin, or 982 acres, is in Wellesley, with the remaining 60 percent (1450 acres) in Needham.

A significant potential water supply source is the Elm Bank area, located alongside the Charles River in Dover adjacent to Wellesley and Natick. The site is currently owned by the Commonwealth of Massachusetts, which allows three uses: a riverfront park, water supply for the Towns of Dover, Natick, Needham and Wellesley, and affordable housing.

FLOOD HAZARD AREAS

Floodplains are land areas that are likely to flood during a storm event and are classified according to the average frequency of flooding. For example, the “100- year floodplain” is that area of land that will be flooded, on average, once in every 100 years. Floodplains are delineated by topographical, hydrological, and development characteristics of a particular area. In Wellesley’s case, the Federal Emergency Management Agency (FEMA) last mapped the 100-year and 500-year floodplains in 2012. The FEMA study found that most of Wellesley’s flooding problems stem from water backup caused by culverts, bridge crossings, and dams.

The widest floodplains occur on Fuller Brook near the Needham town line and the Town’s Recycling and Disposal Facility, along Fuller and Caroline Brooks upstream of their confluence (including Wellesley High School and much of Smith Street), and on the Charles River near William Street. Smaller floodplains are located adjacent to Boulder Brook at Worcester Street (Route 9) and Lexington Road; in the Boulder Brook Reservation; on Fuller and Waban Brooks near the Charles River; on Rosemary Brook in the Town Forest upstream of the Oakland Street crossing; and on the Charles River near Livingston Road and Winding River Circle.

WETLANDS AND WILDLIFE HABITAT

The vegetated wetlands in Wellesley are some of the most important natural resources, offering unique habitat for locally threatened species of amphibians and the ecosystems in which they thrive. The west side of Sabrina Lake is held in trust by the Wellesley Conservation Council, Inc. as the Guernsey Sanctuary. Wetlands on private land are protected by the state’s Wetlands Protection Act and local regulations.

Wellesley also has several certified vernal pools. Vernal pools are wet depressions in the land that flood only part of the year. Many rare and valuable species depend on them. The Natural Heritage and Endangered Species Program (NHESP) identifies twelve certified vernal pools within Wellesley which include the north shore of Sabrina Lake in the Guernsey Sanctuary, the northerly corner of the “North 40” on Weston Road, two in the Boulder Brook Reservation, Boulder Brook where it crosses Route 9, and near Cold Stream Brook in the Farms area. By analyzing aerial photographs, state environmental scientists have identified thirty-two additional potential vernal pools in Wellesley.

Wellesley has two small areas designated as Priority Habitat under the Massachusetts Endangered Species Act (MESA): along the northern shore of the Charles River at Elm Bank and a small area in the Cochituate Aqueduct between Forest Street and Laurel Avenue. Priority Habitat Areas indicate where the NHESP estimates the existence of habitat for state-listed rare species. These estimates are based on species population records, habitat requirement, and landscape information. Priority Habitats per se are not protected by law, but the rare species that may use these habitats are protected.

SCENIC ROADS

Wellesley's streets and parks have been planned and are maintained to high standards, allowing for many otherwise average suburban landscapes to be deemed "scenic." Wellesley has a variety of scenic roads – that is, roads the Town has designated as scenic under the Massachusetts Scenic Roads Act. These roads are protected by special regulations so that trees and stone walls within the right-of-way will be protected and will not be altered except after a public hearing and after consideration of the work by the Planning Board and Natural Resources Commission. They include Benvenue Street, Brookside Road, Cartwright Road, Cheney Drive, Pond Road, Squirrel Road, and The Waterway/Brookway.

ENVIRONMENTAL HAZARDS

According to the Massachusetts Department of Environmental Protection (DEP), Wellesley has two "Tier I" hazardous waste sites: The old Paint Shop site adjacent to Paint Shop Pond and Alumnae Valley west of College Road. Paint Shop Pond had one of the most serious chemical contaminations in the state until it was remediated by Wellesley College in 2003-2004. Arsenic and chromium-laden waste was dumped from a large paint pigment factory that operated east of the pond from the 1880s to 1930s. The toxic waste had affected nearly 40 acres of former wildlife habitat, killed amphibians, and rendered soils too toxic for plant growth. This property is in a high-yield aquifer recharge area.

A Groundwater Protection Study prepared by MAPC in 1982 identified several sites in the Waban Brook and Rosemary Brook basins that had been used in the past to dump solid waste. They include:

- An area east of the Morses Pond pumping station was used for a brief period in 1980 to dump ballast from the railroad. Materials were removed within one month of disposal, and test results indicated no evidence of pollution of the Morses Pond wells.
- A portion of the "North 40" off Turner Road was used as a temporary dump-and-cover landfill for household wastes during the late 1950s and early 1960s.
- The old Paint Shop site described above.
- Ash was formerly dumped at Nehoiden Golf Course off Washington Street. Wellesley College has built an equipment shed on the site of the original incinerator. Studies have shown no leachate problems in the nearby Fuller Brook and Lower Waban Brook.
- Closed landfills are at the playing fields between the Middle School on Linden Street and the Sprague Elementary School, were remediated as required by the Mass DEP and now a fully functional playing field.

The Department of Public Works facility off Woodlawn Avenue is also a closed landfill.

Preservation priorities

OPEN SPACE

Wellesley has identified about 30 properties as priority candidates for land conservation, many of which occur along Washington Street, Pond Street, and the Aqueduct. While some of these properties may be poor candidates for new housing development, others may have potential for a mix of open space and residential development.

HISTORIC PRESERVATION

Wellesley has a rich inventory of historic resources and the character of many of its neighborhoods and commercial areas are defined by historic buildings, structures, landscapes, and objects. Over 1,100 buildings, one cemetery, and 125 objects and structures are listed on the Massachusetts Cultural Resources Information System (MACRIS). Among these historic resources are 63 properties in Wellesley's five districts listed on the National Register of Historic Places:

- Hunnewell Estates Historic District
- Cochituate Aqueduct Linear District
- Sudbury Aqueduct Linear District
- Elm Bank
- Fuller Brook Park

MACRIS also identifies 47 properties listed individually on the National Register of Historic Places. A National Register district does not restrict private use or changes to properties. However, it facilitates rehabilitation tax incentives for owners of income-producing properties and provides limited protection from adverse effects of federal and state projects.

Infrastructure and public facilities

INFRASTRUCTURE

Wastewater Capacity. The sewer system in Wellesley discharges to the Massachusetts Water Resources Authority (MWRA) Deer Island Sewer Treatment Plant, which serves 43 Greater Boston communities. While most properties in Wellesley are connected to the public sewer system, 203 properties still rely on septic systems for wastewater disposal. The Deer Island plant in Boston Harbor treats approximately 3.85 MGD (million gallons per day) of sewage per day from Wellesley and sends the treated effluent nine miles out into the Gulf of Maine. The Deer Island plant has a peak capacity of 1.2 billion gallons per day, with average flows of 380 million gallons per day.

Stormwater. Wellesley has begun to address discharges into stormwater drains by adopting Municipal Stormwater Drainage System Rules and Regulations in 2005. Through these rules,

Wellesley complies with the Environmental Protection Agency's Phase II Stormwater Regulations.

Drinking Water. According to the Wellesley Department of Public Works (DPW), 61 percent of Wellesley's drinking water is from local well supplies and 39 percent from the MWRA. The MWRA transmits water to many Greater Boston cities and towns from the Quabbin and Wachusett Reservoirs and the Ware River and other surface water supplies in Central Massachusetts. Wellesley's local water supplies consist of ten wells located within the Town. Water pumped from the wells is treated at the DPW's three corrosion control and iron/manganese removal facilities and distributed to customers through a 140-mile network of street mains. The distribution system also includes two large storage facilities with a combined capacity of nearly six million gallons.

TRANSPORTATION FACILITIES & SERVICES

Wellesley has three Massachusetts Bay Transit Authority (MBTA) commuter rail stations: Wellesley Square, Wellesley Hills, and Wellesley Farms on the Framingham/Worcester Line. The MetroWest Regional Transit Authority's #1 and #8 busses also serve Wellesley, making connections from Natick to Wellesley College, Wellesley Square, Wellesley Hills, MassBay Community College, Babson College, Lower Falls, and the Woodland MBTA Station. The colleges also provide shuttles for their students, staff and faculty.

Wellesley has one marked bicycle lane on a limited segment of Washington Street. The DPW is creating new bicycle markings on Cliff Road and Kingsbury Street.

SCHOOLS

Wellesley has 10 public schools (Preschool at Wellesley Schools, seven elementary schools, one middle school, and one high school) and enrolls approximately 5,000 students each year. In addition to the public schools, there are six private elementary, middle and/or high schools in Wellesley with a total enrollment of 1,166 students, the largest of which is Dana Hall School.

Enrollment in the Wellesley Public Schools increased from 2012 to 2016 but has decreased in the last two years. Per enrollment projections from FutureThink, K-12 enrollment in Wellesley is expected to decline about 7 percent from 2017 to 2027. In March 2017, the Wellesley School Committee considered a recommendation from the Hardy, Hunnewell, and Upham (HHU) Master Plan Committee to rebuild schools at all three HHU sites to meet better standards of education and to plan for elementary enrollment changes. The School Committee agreed to rebuild at least two schools with 19 classrooms in each, with the third under consideration based on enrollment.

Regulatory framework

ZONING

Wellesley's Zoning Bylaw (ZBL) reflects practices and policies that have not kept pace with changes in modern land use regulation. Updated incrementally over time, the ZBL today

contains 24 use districts and six overlay districts, and some unusual project review requirements. It is a difficult bylaw to follow and understand, in part because it has so many districts and in part because it lacks the graphics, illustrations, and use of color that make contemporary bylaws and ordinances much easier to interpret. As Wellesley's *Unified Plan* notes, the town faces several significant land use and zoning challenges due in part to the following conditions:

- Wellesley's mostly built-out character;
- Wellesley has relatively few sites suitable for redevelopment or development;
- There are continuing "character" concerns about tear downs and replacement houses;
- There are concerns about traffic and other potential impacts of additional housing development;
- Wellesley lacks clear design standards and guidelines for impacts on the public realm of private development; and
- Wellesley does not have a consistent venue for boards, commissions, and departmental staff to collaborate about development and preservation issues.

These conditions, coupled with Wellesley's hard-to-navigate zoning, very high land costs, and potential for highly profitable market-rate sales and rents, have contributed to the recent arrival of several Chapter 40B comprehensive permits.

The ZBL in Wellesley is what planners typically describe as "pyramid" or "cumulative" zoning, i.e., a framework that builds from a set of most restrictive districts to less restrictive districts with successively fewer requirements. In Wellesley, the single residence districts are the most restrictive areas and the foundation of the "pyramid." As the permitted density or intensity of use increases in other residential zones and then as commercial and industrial uses are allowed in as well, the uses permitted in more restrictive districts are still allowed. However, single-family or two-family developments would create land use conflicts if they were constructed in the Industrial or Administrative and Professional Districts.

Wellesley has an **inclusionary zoning** provision that applies to developments requiring "Project of Significant Impact" (PSI) approval in the Business Districts, Business Districts A, Industrial Districts, Industrial Districts A, and Wellesley Square Commercial District, and to any single-family residential development with five or more units.²⁹ In a given development, the minimum affordable housing requirement is one affordable unit for every five residential units or, in a mixed-use project, one affordable unit per five units plus one per 50,000 sq. ft. of nonresidential floor space. There is no specific density incentive or other cost offset for providing affordable units. Wellesley allows "in-lieu" payments to the Wellesley Affordable

²⁹ A Project of Significant Impact (PSI) is any development of 10,000 or more sq. ft. or renovation of 15,000 or more sq. ft. in a building of at least 15,000 sq. ft. of existing space, if the proposed use will be different from the existing use. The PSI is a special permit review and approval process.

Housing Corporation's trust fund. The amount of the fee per unit approximates the affordability gap described in the previous section.

Wellesley has had a Large House Review (LHR) bylaw since 2008. The bylaw was recently updated and strengthened. LHR reflects the Town's concerns about the impact of teardowns and "mansionization" on Wellesley neighborhoods, so the bylaw is triggered by size (floor area) increases. It applies to any proposed residence (new construction or alterations) that will exceed the floor area limit for the single-family district in which it is located, excluding changes to non-conforming properties (handled by the ZBA) or alterations that increase living space within an existing building without any exterior change to the structure, e.g., converting an attic to living space. In Wellesley and most towns with this type of zoning, LHR is a design review process, not a prohibition against large houses. The purpose is to ensure design compatibility and mitigate impacts on neighboring properties. While the Planning Board has final approval powers, the first required step in the permitting process involves the Design Review Board.

Wellesley recently adopted a Natural Resource Protection Development (NRPD) bylaw, too. Inspired by the Natural Resource Protection Zoning (NRPZ) in the Commonwealth's Smart Growth Toolkit, Wellesley's NRPD applies to the development of any property that can be divided into five or more lots. It requires at least half the site to be set aside as open space, and through a complicated formula the allowable number of lots can be determined. Unlike most NRPZ bylaws, however, Wellesley sets a floor on the reduced lot size allowed in a covered project, and it does not provide flexibility to mix housing types. All units must be detached single-family residences. The bylaw allows the Planning Board to grant a special permit for relief from NRPD requirements, but only if a different approach to the site would provide as much natural resource protection as a conforming development.

LOCAL HISTORIC DISTRICTS

There are 67 properties in Wellesley's Local Historic District, The Cottage Street Historic District. This district contains multiple properties located on Cottage Street, Washington Street, Abbott Street, Waban Street, and Weston Road outside of Wellesley Square.

Four other historic districts are single properties. Wellesley created its first two single building historic districts in 2011: the Methodist Meeting House Historic District and the Tufts House Historic District. The 2014 Annual Town Meeting voted unanimously to approve the creation of two additional single building Historic Districts: the Sylvia Plath House Historic District and the Fiske House Historic District.

Towns may establish Local Historic Districts per G.L. c. 40C to protect historic resources. Property owners must submit any exterior changes that are visible from a public way, park, or body of water to a local district commission for approval. A variety of exterior features are often exempt such as air conditioning units, storm doors, storm windows, paint color, and temporary structures. The decision on which features are exempt from review depends on the specifics of the local bylaw. In Wellesley, the Town-appointed Historic District Commission (HDC) oversees the review process, which consists primarily of an application by the property owner, a public hearing, and a written decision by the HDC.

NEIGHBORHOOD CONSERVATION DISTRICTS

Wellesley has one Neighborhood Conservation District (NCD): the Denton Road NCD. NCDs were authorized by vote at Town Meeting in 2007 in response to the increasing pace of home demolitions starting in the early 2000s. An NCD is a legally designated area that can protect property owners in distinctive neighborhoods that may not be eligible for protection as Historic Districts. Unlike Historic Districts that focus on architectural details of individual buildings, an NCD addresses neighborhood characteristics. NCD bylaws set design guidelines that are tailored to the needs of the neighborhood and administered by each NCD's own commission. The NCD commission encourages construction and alterations consistent with neighborhood character.

DEMOLITION DELAY REVIEW BYLAW

Adopted in August 2017, the Historic Preservation Demolition Review Bylaw applies to any building used as a dwelling (as defined in the State Building Code) that was built on or prior to December 31, 1949. Under the Bylaw, if an owner intends to demolish such a building, entirely or by removing or enveloping 50 percent or more of the existing exterior structure, then additional review by the Wellesley Historical Commission is required. The Historical Commission may determine if the dwelling should be "preferably preserved." If so, a 12-month delay would be imposed on any permits by the Building Department to demolish the dwelling.

LOCAL WETLANDS BYLAW

Wellesley has a local wetlands protection bylaw that requires varying levels of permitting for activities the Wetlands Protection Committee deems to have an impact on wetland interests and values, including public or private water supply, groundwater, flood control, erosion and sedimentation control, storm damage prevention, water pollution prevention, fisheries, wildlife habitat, and recreation. The Massachusetts Wetlands Protection Act, G.L. c. 131, § 40, and the Wellesley Wetlands Protection Bylaw prohibit altering land, water, or vegetation in lakes, streams, wetlands, floodplains, or areas within 100 feet of wetlands and 200 feet of perennial streams without a permit from the Wellesley Wetlands Protection Committee. Some Bylaw Resource Areas are different from or are not identified in the state wetlands law. An applicant whose project triggers both the state act and local bylaw must comply with the bylaw's more restrictive requirements.



CHAPTER FOUR

HOUSING GOALS

The challenge

The 2018 Unified Plan describes the community's vision of Wellesley as a place that welcomes diversity, fosters a sense of community and community building, and preserves the character of the town's residential neighborhoods, commercial centers, and open spaces.

Yet, today Wellesley . . .

- Has little racial, ethnic, or class diversity
- Lacks adequate housing options to support a population with diverse housing needs, including single-person households, 60 percent of which are seniors living alone
- Has little housing that is affordable to households with low or moderate or middle incomes, despite an estimated 17 percent (about 1,445 households) of the town's total households having incomes in the low- or moderate-income range

By preparing this Housing Production Plan and increasing its supply of low- or moderate-income units, Wellesley could become eligible for a flexible approach to managing the comprehensive permit process. To qualify for the flexibility that a Housing Production Plan offers when it is approved by the Department of Housing and Community Development (DHCD) Wellesley needs to meet an affordable housing production standard - a minimum numerical target - and obtain certification from DHCD that standard had been met. The minimum target is 0.5 percent of the Town's year-round housing inventory - 45 units - as reported in the most recent decennial census, and the target must be met within a single calendar year. If DHCD finds that Wellesley has met the annual standard, the one-year certification will take effect as of the date that Wellesley achieved the numerical target for that calendar year. If the Town's new affordable housing production is equal to or greater than the 1 percent of its year-round housing inventory (91 or more units), the certification will remain in effect for two years.

Goal-setting process

To develop the goals of this Housing Production Plan, the Wellesley Planning Board, Board of Selectmen, and Wellesley Housing Development Corporation sponsored workshops-style public meetings on April 7, May 3, and June 12, 2018. The purpose of these workshops was to

engage residents and community members in an interactive process that served to provide information about housing needs, solicit the participants' ideas, and obtain their feedback on draft goals.

Participants had to grapple with an important challenge: How can Wellesley provide for more housing options, including affordable housing to achieve the state's goal under Chapter 40B, while preserving and enhancing the character of the town's residential neighborhoods, commercial centers, and open spaces? With this core challenge in view, Wellesley's HPP is guided by the following five goals.

GOAL 1: CREATE A VARIETY OF AFFORDABLE AND MIXED-INCOME HOUSING THAT HELPS TO MAKE WELLESLEY A WELCOMING COMMUNITY FOR PEOPLE WITH DIVERSE SOCIO-ECONOMIC BACKGROUNDS.

This goal recognizes that an adequate housing supply can help stabilize prices and enhance affordability. Wellesley can promote this goal by overcoming barriers to creating multi-family housing, rental housing, town homes, modest-sized single-family houses on small lots, and accessory dwelling units.

GOAL 2: PROVIDE MORE HOUSING OPTIONS, INCLUDING AFFORDABLE AND MARKET-RATE HOUSING OPTIONS, FOR LOW- AND MIDDLE-INCOME FAMILIES, SENIORS, AND INDIVIDUALS WITH DISABILITIES, THROUGH A VARIETY OF MECHANISMS TO INCREASE HOUSING CHOICE.

Similar to the first goal, this goal promotes creating more housing options, but for the purpose of creating more affordable and accessible options, including two-family housing, multi-family housing, conversion of single-family houses to multifamily, accessory apartments and detached accessory dwelling units, mixed-use housing, mansion-style condos, and the community land trust model.

GOAL 3: ACTIVELY STRIVE TO ACHIEVE STATE'S CHAPTER 40B 10 PERCENT MINIMUM FOR AFFORDABLE HOUSING BY ANNUALLY PRODUCING AT LEAST 45 UNITS THAT COUNT ON THE SUBSIDIZED HOUSING INVENTORY, THROUGH LOCAL ACTIONS AND APPROVAL OF PRIVATE DEVELOPMENT, ESPECIALLY DEVELOPMENT OF RENTAL HOUSING UNITS.

This goal aligns with a goal of the Unified Plan to create at least 400 housing units that are permanently affordable to income-eligible households by 2028 and would enable to the town to achieve "safe harbor" through certification of this Housing Production Plan, once approved locally and by the state. Achieving safe harbor allows the Zoning Board of Appeals (ZBA) more flexibility to deny a Comprehensive Permit application. Per the Massachusetts Department of Housing and Community Development (DHCD) Comprehensive Permit Regulations (760 CMR 56), there are three conditions under which a denial of a Comprehensive Permit will be upheld:

1. The municipality achieves one or more of the Statutory Minima, e.g., the 10 percent minimum;
2. DHCD certifies the municipality's compliance with the goals of its approved Housing Production Plan; or
3. The municipality has made recent progress toward the Statutory Minima (i.e., large project or related application previously received). This goal can be accomplished by permitting one or more developments within one calendar year that increase the SHI by at least 45 units.

GOAL 4: ENCOURAGE NEW DEVELOPMENT AND REPURPOSING OF EXISTING BUILDINGS TO CREATE AFFORDABLE AND MIXED INCOME HOUSING THAT:

- Reinforces the development patterns of Wellesley's residential neighborhoods and maintains a predominantly single-family character in established single-family neighborhoods
- Strengthens the vitality of business districts and commercial corridors with diverse housing types
- Promotes housing development in walkable areas with convenient access to shops, services, public transportation, parks, schools, and other neighborhood destinations

Although many residents view Wellesley as largely built-out, there are opportunities to repurpose existing buildings, redevelop underutilized properties, and create infill development in existing residential neighborhoods. Workshop participants expressed the desire for smart, secondary growth that maintains the character of what people want in Wellesley while increasing the value and livability in the town. They want to move forward in a planned, thoughtful way.

GOAL 5: PROMOTE THE DEVELOPMENT OF SURPLUS INSTITUTIONAL AND TOWN-OWNED LAND AS WELL AS THE REDEVELOPMENT OF OFFICE PARKS AND EXISTING AFFORDABLE HOUSING COMPLEXES TO CREATE DESIRABLE MIXED-INCOME AND MIXED-USE NEIGHBORHOODS, WHERE FEASIBLE.

Wellesley has a variety of key transformation areas that could be appropriate opportunities for redevelopment to create mixed-income, multi-family, and/or mixed-use residential developments including properties in commercial areas, office parks, municipal property, and institutional properties.

Wherever possible, it will be important for affordable units produced under this HPP to be eligible for listing in the Chapter 40B Subsidized Housing Inventory (SHI). For non-comprehensive permit units, this means making sure the units meet the requirements of DHCD's Local Initiative Program (LIP) by virtue of a qualifying local action, such as:

1. Zoning approval, such as “by right” or special permits for affordable housing;
2. Funding assistance, such as CPA;
3. Provision of land or buildings that are owned or acquired by the Town and conveyed at a price that is substantially below-market value.

To be counted as part of the SHI, the units must meet the following criteria:

1. A result of municipal action or approval;
2. Sold or rented based on procedures articulated in an affirmative fair marketing and lottery plan approved by DHCD;
3. Sales prices and rents must be affordable to households earning at or below 80 percent of area median income; and
4. Long-term affordability is enforced through affordability restrictions, approved by DHCD.
5. Additionally, the SHI New Units Request Form must be submitted to DHCD.



CHAPTER FIVE

HOUSING DEVELOPMENT STRATEGIES AND ACTION PLAN

Overview

DHCD encourages cities and towns to prepare, adopt, and implement a Housing Production Plan that demonstrates an annual increase in Chapter 40B units equal to or greater than 0.50 percent of the community's year-round housing units. By systematically increasing its low- and moderate-income housing inventory, Wellesley could gain more control over when, where, and how much affordable housing should be built and encourage Chapter 40B comprehensive permits in the most appropriate locations.

As noted elsewhere in this plan, however, Wellesley's housing needs go beyond Chapter 40B. Just as the town has housing diversity needs, it also has many options available to address them. Implementing the Unified Plan, removing regulatory barriers to housing production, providing leadership from the Board of Selectmen, Planning Board, and others, making public land available for housing development, and informing the public about Wellesley's varied housing needs will be critical components of a successful housing program. The strategies outlined in this plan fall into four groups, and all the strategies relate in one or more ways to the types of actions this Housing Production Plan is required to address.

- **Regulatory Reform:** These strategies have significant potential in Wellesley and they could be coordinated with implementing the Unified Plan. Within Wellesley's reach are policies and techniques to make permitting more efficient, allow more housing and more types of housing in Wellesley, and capitalize on existing assets are all within the Town's reach.
- **Assets:** The focus of these strategies is to protect and improve the quality of existing affordable housing, expand the Town's funding commitments to affordable housing development, and use Town-owned land to increase the affordable housing supply.
- **Leadership, Education, and Advocacy:** Wellesley can combine several approaches into an education program that reaches key decision makers, property owners, neighbors, and people most at risk from the effects of limited housing choices. There is a tendency in Wellesley to view affordable housing as primarily an urban problem more than a matter that affects affluent suburbs, yet this kind of thinking is exactly why Chapter 40B was enacted 49 years ago.

- **Planning and Public Policy:** The Town could become an effective partner with developers and other housing organizations and create a more welcoming environment for housing development. Strategies such as establishing guidelines for “friendly” comprehensive permits could help Wellesley communicate to developers what types of projects are most likely to address local concerns and move quickly through the permitting process. In addition, the Town should move forward with implementing the housing and land use recommendations of the Unified Plan because they will help Wellesley expand affordable housing opportunities in a variety of settings.

Required action plan elements

760 CMR 56.03(d)(1) Identification of zoning districts or geographic areas in which the municipality proposes to modify current regulations for the purposes of creating SHI Eligible Housing developments to meet its housing production goal.

ZONING DISTRICTS

There are at least four zoning districts in Wellesley where the Town could encourage or require affordable units in new development, infill, or redevelopment. These exemplify opportunities for **regulatory reform**. (For district locations, see Zoning Map.)

- The **Administration and Professional (AP) District** covers land near Route 128/I-95 and Route 9. It includes the 26-acre Wellesley Office Park, situated between Route 128 and the Charles River and owned by John Hancock Real Estate. Wellesley has been approached by representatives of the office park and a national multifamily developer with an interest in developing 300 or more apartments in this location. Currently multifamily housing is not allowed in the AP district, but the Town could consider strategies such as:
 - Amending the AP use and dimensional regulations to pave the way for multifamily and mixed-use development, either by special permit or as-of-right, subject to the Project of Significant Impact (PSI) review process;
 - Adding all or a portion of the AP district to the Residential Incentive Overlay (RIO) district, which provides for multifamily development in underlying nonresidential areas, also subject to the PSI review process; or
 - Creating a **Chapter 40R** overlay district to accommodate multifamily development as-of-right in a specific portion of the AP district. This option can include special site plan review and design review procedures, but since Wellesley’s PSI process requires a special permit, it could not apply to the Chapter 40R district. At least 20 percent of the units in Chapter 40R developments must be affordable to lower-income households, though many towns have set the minimum affordability requirement at 25 percent (so that all rental units will count on the Subsidized Housing Inventory).

A potential advantage to allowing multifamily and mixed-use development in this location – at densities that can support mixed-income apartments with appropriate amenities– is that the office park can accommodate large buildings without creating an

inherent use conflict with abutting single-family neighborhoods. Support for this concept can be found in Wellesley's new Unified Plan, too.

- The **Wellesley Square Commercial (WSC) District** includes the compact commercial village around Central Street, Church Street, Grove Street, Linden Street, and Weston Road. It is a civic, social, and governmental center for the town. This district should be amended to encourage upper-story dwelling units over storefronts. Similar amendments could be introduced in the **Linden Street Corridor (LSCO) District** as well.
- Wellesley's **General Residence (GR) District** needs to be overhauled. It includes neighborhoods around Wellesley Square and Linden Street, along Washington Street by Wellesley Avenue, and in the vicinity of the Wellesley Hills train station. Though zoned for townhouses, this district is governed by density parameters that are quite low for infill and reinvestment. The use regulations would need to be updated, too. The GR district is a classic example of a zone that could encourage so-called “**missing middle**” housing, but the zoning that makes “missing middle” feasible does not exist in Wellesley.



- **Residential Incentive Overlay (RIO) District.** Wellesley created the RIO in 1998 following completion of the Wellesley Lower Falls planning and zoning study (Goody Clancy and Connery; 1997). It applies to portions of the Business, Industrial and AO districts north of Washington Street in the Lower Falls area and allows multifamily development in what are otherwise non-residentially zoned locations. To date, only one developer has used it: National Development, for construction of the Waterstone at Wellesley senior residential community. In addition to considering other locations where the RIO could apply, the Town should evaluate the provisions of this district to determine whether it needs to be updated to make it a more usable tool.

Years ago, the prevailing practice in Wellesley involved codifying development that already existed on the ground and creating new provisions in small, very precise physical units to accommodate proposed projects. The Zoning Map attests to this history. Innovations such as the Linden Street Corridor Overlay District (LSCOD) came later, but the Euclidean roots of Wellesley's zoning are unmistakable. This practice has led to a proliferation of small, finely tuned districts, a few of which are virtually identical. Moreover, split lots abound in Wellesley – a problem the town has addressed, incrementally, in overlay districts, but most of the town lies in districts with lots that are complicated by more than one set of rules.

AREAS

As Wellesley looks to implement both this HPP and the new Unified Plan, it is an ideal time to consider new zoning innovations in the following areas. Under existing conditions, what the Town wants to see in many areas will not be possible without updated zoning and a policy framework that welcomes town-developer partnerships.

- **Worcester Street (Route 9) and Cedar Street**, which currently consists of several zones, all in small doses: the Business District, Business A, Single Residence 10, AO, and GR.
- **Worcester Street/Route 128**, which includes not only the AO district, but also Single Residence 10 and Limited Business.
- Any of the following areas could be appropriate settings for some “missing middle” housing innovations: land along **Walnut Street in Wellesley Lower Falls**; the vicinity of the **Wellesley Hills train station**; **Worcester Street around Fells Road/Fells Circle/Weston Road** toward the west, or **Worcester and Overbrook** near the Natick town line. Currently, the Worcester Street/Fells Road area includes a mix of Single Residence, Business, and Business A zoning, and Worcester/Overbrook contains some larger Business/Business A properties. There are existing Chapter 40B developments in these locations as well.
- The **neighborhoods adjacent to Wellesley Square**, which include – in addition to the GR district – the Limited Residence and Multifamily Residence districts. Multifamily Residence exists in only two locations in Wellesley: four small contiguous lots on Washington Street near Wellesley Square and a parcel that extends between Seaver and Park Streets.
- In any of the single-family neighborhoods, the potential may exist to create **small affordable units on nonconforming lots** that are otherwise unbuildable. The units will probably require some form of subsidy. Still, making additional land available could support production of scattered-site units by mission-based organizations like Wellesley Housing Development Corporation or Habitat for Humanity.

760 CMR 56.03(d)(2) Identification of specific sites for which the municipality will encourage the filing of Comprehensive Permit applications.

Wellesley has four opportunity areas where Chapter 40B comprehensive permits would be an appropriate vehicle for providing higher-density multifamily development. Any of these options will require the Town to embrace new ideas about housing **policy** and most likely a commitment of Town funding. Wellesley will need to work in partnership with developers and private property owners, and in some cases the Commonwealth of Massachusetts. Appropriate locations for comprehensive permit applications include the following. Municipally owned sites are discussed in a later section of this chapter.

- The **MassBay Community College** campus along Worcester Street and Oakland Street clearly has surplus land – that is, land the college does not use and is unlikely to ever need for educational purposes. The Town and Commonwealth should work collaboratively on a disposition plan for surplus property in this location. It is ideally located with direct

access to a regional highway and close to the Wellesley Hills train station. Mixed-income housing here could provide options for students, faculty, and others seeking the opportunity to live and work in Wellesley.

- The **Sisters of Charity** property, also off Oakland Street, includes a retirement residence and a considerable amount of vacant land. This property is also close to a community park and single-family residential neighborhoods.
- The former **Army National Guard Reserve** property at the end of Minuteman Lane (off Worcester Street) is another opportunity site.
- The Wellesley Housing Authority's **Barton Road** public housing development needs reinvestment. This project is an older townhouse-style community with 90 family units. Separated from all its neighbors by woodlands and situated directly next to Route 128, the Barton Road housing development is all but segregated from the rest of Wellesley. It needs to be redeveloped, but the capital cost is prohibitive without substantial subsidies and, most likely, relief from some of the requirements that apply to public construction projects under G.L. c. 149. In addition, the project would have to include funding for tenant relocation. According to the **Massachusetts Housing Partnership (MHP)**, the feasibility of public housing redevelopment generally requires three market-rate units for each low-income replacement unit. The Town has appropriated \$200,000 to help the Housing Authority study the feasibility of redeveloping the Barton Road housing.

760 CMR 56.03(d)(3). Characteristics of proposed residential or mixed-use developments that would be preferred by the municipality (examples might include cluster developments, adaptive re-use, transit-oriented housing, mixed-use development, inclusionary housing, etc.).

Wellesley has a long-standing policy of protecting established single-family neighborhoods from changes in use. This principle is reinforced by the Zoning Bylaw and articulated in the Unified Plan, its predecessor the Wellesley Comprehensive Plan, and the Affordable Housing Policy. While this policy matters to townspeople, it is critical for residents and town officials to understand that until Wellesley reaches the 10 percent minimum under Chapter 40B, the single-family neighborhoods *will* see more comprehensive permit activity. It will take well-informed leadership and flexible policies to accommodate some residential use changes, especially in older neighborhoods where so much of the demolition/rebuild activity has already taken place.

Residents who participated in the public meetings for this plan identified some preferences for the types of housing they would like to see in Wellesley. Below are some of the ideas people expressed, together with ways to make comprehensive permit developments as compatible as possible with nearby single-family residences.

- Well-designed **multifamily apartments** could be considered in numerous locations along Worcester Street/Route 9, within the AO district, and near the train stations. Context is everything, so a multi-story development that works well in an office park would not be appropriate along Route 9 on sites that directly abut single-family neighborhoods.

Designing for transitions should be part of the plan in these settings, e.g., upper-story step backs, deeper yards with generous buffers, and lower-density housing closer to the neighborhood side of the property.

- Multifamily units can also be created through **single-family conversions**. This approach provides opportunities to preserve some existing older structures instead of losing them to the teardown/rebuild market. It also offers a seamless way to mix housing types in established single-family neighborhoods. This approach to creating more housing options gained many positive responses during the Unified Plan process.
- Clusters of **cottage-style homes** could provide desirable homeownership options both for downsizing seniors and young families. This method of creating housing choices in Wellesley may be hard for private developers because of the town's exceptionally high land values, but mixed-income cottages could be feasible on private land at a fairly high density or municipally owned land because the town could choose to offer the land at below-market value.
- **Accessory apartments** should be a relatively "barrier free" housing choice in Wellesley. In the past few years, numerous communities have adopted zoning that makes it easier for single-family homeowners to create accessory apartments. By complying with a set of basic requirements and design standards in the zoning bylaw, a homeowner with an eligible property can obtain approval to construct an accessory unit by applying for a building permit and filing a simple site plan. Most towns still require a special permit for free-standing accessory dwellings, e.g., back yard cottages, carriage houses, or units above a detached garage, but an accessory apartment inside a single-family home can be almost invisible to the neighborhood.
- **Senior housing** is a critical need in Wellesley with or without income restrictions. Many participants in the HPP process pointed that current zoning does not provide for "downsizing" opportunities that would help older residents choose to stay in town as their housing needs change. A well-thought-out senior housing bylaw needs to accommodate a variety of residential options, from detached cottages to independent living apartments, assisted living, and memory care, all with enough density to support the requisite residential amenities.

760 CMR 56.03(d)(4). Municipally owned parcels for which the municipality commits to issue requests for proposals to develop SHI Eligible Housing; and/or participation in regional collaborations addressing housing development.

There are scores of examples of affordable housing on town-owned land in Massachusetts. It is probably one of the easiest strategies for increasing the supply of affordable units in any city or town. Wellesley has recently pursued a town-owned land development strategy through a Request for Proposals (RFP) process for the Tailby Parking Lot at Crest Road and Linden Street and the Railroad Parking Lot at Grove Street and Railroad Avenue

- As Wellesley's Unified Plan points out, Wellesley purchased the **North 40** property from Wellesley College to control how the land is used in the future. This parcel is large enough

to accommodate multiple uses and meet multiple needs. Representatives of conservation, housing, and other interests must work cooperatively on a disposition plan that can provide as many public benefits as possible, including affordable housing. A compact, dense, low-rise development in this location could create an attractive neighborhood, give future residents of the project easy access to goods and services, and protect most of the land for conservation and open space purposes.

- There could be opportunities to create some affordable or mixed-income housing in **Wellesley Hills** on property owned by the Wellesley Community Center, the Town of Wellesley (Public Works Department), and Wellesley Hills Congregational Church – that is, where Washington Street crosses Worcester Street. A small development in this location would require a partnership of the Town, the non-profit owners of the community center, and the church, but there is land here that is also close to some services and the commuter rail.
- Wellesley’s most recent Open Space and Recreation Plan (OSRP) identifies about 30 properties as priorities for **open space** protection. It may be that all the parcels merit protection, but the Planning Department should initiate a process that includes open space, recreation, and housing experts to evaluate the conservation and development suitability of each site. As the town acquires more land for open space in the future, Wellesley could prioritize sites that also have housing potential as part of an ongoing effort to meet both types of needs. The same exorbitant land costs that make open space acquisition challenging in Wellesley also make it difficult to create more affordable housing.

760 CMR 56.03(d)(5). Participation in regional collaborations addressing housing development.

There are two opportunities for Wellesley to explore regional initiatives for housing, and possibly more. The two most immediate possibilities are as follows.

- The **WestMETRO HOME Consortium** includes thirteen communities west of Boston, organized under leadership from the City of Newton. The federal Home Investment Partnership Program – HOME – is a block grant program launched by the U.S. Department of Housing and Urban Development (HUD) under the National Affordable Housing Act of 1990. Since the funds are only available on an “entitlement” basis to cities with very high need indicators, Newton worked early on with neighboring towns to form a consortium that would qualify for entitlement funding under a different set of eligibility criteria. A consortium must be comprised of contiguous cities and towns.

The WestMetro HOME Consortium uses HOME funds to make grants and loans to developers to subsidize deeply affordable housing. Wellesley could take advantage of this resource to assist with acquisition, development, or preservation of affordable units, working with the Wellesley Housing Development Corporation, other non-profits, or for-profit developers.

- The **Regional Housing Services Office (RHSO)**, currently based in Concord, is the brainchild of the Hanscom Area Towns (HATS) Committee and Metropolitan Area Planning Council (MAPC), which worked collaboratively on a study of options for regionalizing housing programs and services. Their efforts led to an interlocal agreement between Bedford, Lincoln, Concord, Lexington, Sudbury, and Weston to form the RHSO. Since its inception, the RHSO has grown to include Acton and Burlington. The RHSO has full-time staff available to help member communities with a wide range of housing services, from managing affordable housing lotteries and monitoring affordable housing restrictions to helping communities plan for affordable housing development.

Important implementation tools

Wellesley needs to increase local capacity to plan for affordable housing, work with state subsidizing agencies, developers, and neighborhoods, and advise the planning department and local officials about broad housing policy issues. Public education about affordable housing – policies, design, who benefits and how, positive and negative impacts – is important for neighbors, policy-makers and leaders, residents and landlords. People with the most accurate knowledge will become the best advocates for affordable housing.

ONE PLAN, ONE VOICE

The Town's new Unified Plan is the umbrella for this HPP, and it needs to be the principal guidance document for present and future endeavors to meet Wellesley's obligations for fair and affordable housing. The Town has been guided by an Affordable Housing Policy that Town Meeting originally adopted in the late 1980s, and to a point it has value. However, Wellesley has just completed a model planning process and has begun to implement it by undertaking this HPP. Focusing on Unified Plan implementation is the most important step Wellesley can take to create affordable housing *and* manage Chapter 40B. Coupled with details contained in this HPP, the Unified Plan – not the Affordable Housing Policy – should be the standard for evaluating future requests for comprehensive permits and future local initiative opportunities.

PROVIDE LEADERSHIP AT THE TOP

Chapter 40B was enacted in 1969 at a time when throughout the state, the Zoning Board of Appeals (ZBA) was only town board that could grant special permits and variances, so it made sense to give ZBAs authority for comprehensive permits as well. From a 1969 perspective, local regulations were the main barrier to constructing affordable housing, yet in 1969, both the federal and state governments were consistently subsidizing low-income housing development. At the time, no one could have anticipated the eventual abdication of federal responsibility for housing for the poor, or how the industry would change over the next two decades. The notion that municipalities might provide funding to create low- or moderate-income housing or work as partners with affordable housing developers was barely on the horizon at the end of the 1960s. The same can be said for comprehensive planning – almost non-existent in suburbs and small towns until the federal government provided Section 701 planning grants in the 1960s.

Since 1969, the roles and responsibilities of cities and towns have changed considerably. Many functions that seem ordinary or essential today did not exist in 1969, e.g., a Council on Aging, a Youth Commission, or a Human Services Department. Forty years ago, no community anticipated that it would ever play a significant, activist role in affordable housing. At best, communities knew in 1969 that the legislature had imposed more permitting responsibilities on them and in many cases, they resented their new-found powers.

By the mid-1980s, it had become clear that local governments had to mobilize for affordable housing development and not simply wait for the arrival of comprehensive permits. Over time, other municipal officials have taken on new duties and learned the value of collaboration for affordable housing. Working together, the Wellesley Board of Selectmen and Planning Board can help by providing leadership and support for meeting the Town's housing needs. For example, representatives of both boards have participated in a working group to develop this Housing Production Plan. They could also play an instrumental part in building consensus among groups that need to work together to increase the supply of affordable housing in Wellesley. Two key policy-level boards working as partners to convey a unified message about affordable housing would be a significant step forward in Wellesley. Most people do take it seriously when their elected officials lead by example.

On a going-forward basis, the Town should pursue affordable and fair housing training resources for the Board of Selectmen, Planning Board, and other policy-level bodies. Non-profit advocacy and education organizations that provide fair and affordable housing training and technical assistance are listed in the Appendix.

CREATE A HOUSING COORDINATOR POSITION

Positioning Wellesley to build its housing supply in the many ways described in this plan requires resources, including time and money. The Town has well-qualified staff and volunteers dedicated to community planning and housing, and partners who are committed to meeting housing needs. However, there needs to be a central "point person" with the time, authority, and resources to work on housing policy and housing strategies in Wellesley. Like other towns in Massachusetts that are trying to tackle complex housing policy concerns, Wellesley would benefit from having a housing professional on staff to coordinate affordable housing education and policy, work with developers and neighborhoods, serve as liaison with the subsidizing agencies, provide support to the Board of Appeals for comprehensive permits, monitor affordable housing restrictions, and advise Town boards about potential opportunities to increase the supply of affordable housing.

Funding for this position is an allowable use of Community Preservation Act (CPA) funds. An in-house Housing Coordinator or Housing Specialist, coupled with participating in the Regional Housing Services Office, would significantly help Wellesley move forward with implementing this plan and the housing recommendations of the Unified Plan.

REVISIT THE POWERS OF THE WELLESLEY HOUSING DEVELOPMENT CORPORATION

When the Town of Wellesley petitioned the General Court to establish the Wellesley Housing Development Corporation in 1997, the Municipal Housing Trust legislation (G.L. c. 44, §55C)

was seven years in the future. Wellesley's petition occurred at a time that many towns were taking similar steps, all for similar reasons: to have a local non-profit vehicle for affordable housing development. Some communities wanted an agent that could work their housing authority or redevelopment authority by acting as a non-profit development partner or pass-through for funding. Others wanted an entity that could become rental property managers for projects developed by other (usually for-profit) organizations. And, still others had access to funding sources like the federal HOME Program or mitigation payments from for-profit developers, and they wanted to establish a local agent to invest those dollars in creating and preserving affordable housing. For these and other reasons, the state legislature passed a flurry of similar home rule petitions between the mid-1990s and early 2000s, precisely as market was recovering from the deep recession a few years earlier.

However, the Department of Revenue (DOR) became concerned about the variety of special revenue accounts that would have to be tracked, many having unique local rules. This, coupled with passage of the Community Preservation Act (G.L. c. 44B) in 2000 and leadership from the Citizens Housing and Planning Association (CHAPA), provided backdrop for passage of the Municipal Housing Trust bill in 2004.

On one hand, the WHDC's powers mirror those of other non-profit organizations; on the other hand, its ability to exercise those powers hinges almost entirely on approval by the Board of Selectmen.³⁰ This may work for Wellesley, but a non-profit or semi-public entity that has more autonomy – an organization closer to the concept of a Municipal Housing Trust – could give the Town an entity that has powers similar to the Wellesley Natural Resources Commission, also a product of home rule legislation but with substantially separate authority to carry out its responsibilities.³¹ Instead of establishing a Municipal Housing Trust, Wellesley may have opportunities to revise and update the WHDC's status and allow it to work as a more independent agent of affordable housing development. Another model the WHDC may want to review is the **community land trust**, the most widely used vehicle for creating affordable housing in many parts of the United States.

ESTABLISH AND WORK WITH A COMMUNITY LAND TRUST

A community land trust (CLT) is a nonprofit organization that develops and protects affordable housing. It can also be used for other types of development, nationally the main purpose of the CLT is to have an agent that can develop affordable housing and keep it affordable over the long term. The CLT ensures affordability because it retains ownership of the land and controls the resale process of the buildings. The owner can retain some equity upon resale, but the sale price is restricted at prices affordable to eligible buyers and the land stays with the CLT. In the classic CLT model, membership includes residents of the leased housing, community residents, and representatives of town government, funding agencies, and non-profit organizations.

Massachusetts has several examples of CLT and CLT-like organizations:

³⁰ See Appendix for text of Chapter 311 of the Acts of 1998.

³¹ Secretary of the Commonwealth, Acts and Resolves, Chapter 555, An Act Authorizing Certain Bylaws and Amending Certain Acts Relating to the Town of Wellesley.

- The Dudley Square Neighborhood Initiative, Boston
- The Rural Land Foundation, Lincoln, which developed, owns, and manages the South Lincoln commercial center by Lincoln Station.
- Amherst Community Land Trust, Amherst
- Bread and Roses Housing, Lawrence
- CLT of Cape Ann/Harborlight Community Partners, Beverly
- Island Housing Trust, Martha's Vineyard
- Worcester Common Ground, Worcester

CONNECTING HISTORIC PRESERVATION WITH HOUSING AFFORDABILITY

As a substantially built-out community, Wellesley will probably see much of its future affordable housing created from redevelopment and reuse of existing properties. The Town should explore options to engage in historic preservation projects that include creation of affordable housing. Pairing preservation with affordability can be encouraged both with Community Preservation Act (CPA) funds and regulatory changes, e.g., density and land use relief made available to owners of older buildings that may otherwise be demolished and replaced with large, expensive single-family homes. Moving a small older home to spare it from demolition and allowing it to be placed on another lot with an existing residence could be an appealing way to create detached accessory apartments.

PARTICIPATE IN CHAPA'S MUNICIPAL ENGAGEMENT PROGRAM

Wellesley should consult with the Citizens Housing and Planning Association (CHAPA) about participating in a new initiative, the Municipal Engagement Program. CHAPA has piloted the program this year in two communities (Acton and Medford) and it expects to work with five or six additional communities in 2018-2019. The program's focus is building a broader base of advocates for affordable housing, outside the local government "mainstream," to promote broader and deeper understanding about housing needs and opportunities to address them. The Cape Cod Commission, in partnership with the Housing Assistance Corporation of Cape Cod and the Community Development Partnership, recently conducted a similar program on Cape Cod and plans to offer it again this year.

STRENGTHEN PUBLIC INFORMATION AND EDUCATION EFFORTS

While many residents know first-hand about Wellesley's very high housing prices and some have encountered housing affordability problems, it seems clear that many residents still have negative ideas about what affordable housing is and what having more of it will do to detract from Wellesley's character and prestige. Beyond the three community meetings held for this HPP, Wellesley needs more opportunities to engage residents in conversations about affordable housing, to dispel myths, and to build local support to increase the supply of affordable units.

At minimum, the Town should add to its official website a page dedicated to affordable housing. The existing page about current Chapter 40B applications is helpful, but it focuses on the statute and the development applications currently before the ZBA. There is no information about local or regional housing needs, what “affordable housing” is and who is served by it, why the provision of affordable housing is a matter of basic social fairness, and how affordable housing at a variety of levels affects the Town’s and region’s economy. An early task for the new Housing Coordinator would be to develop content for a housing information web page. In addition, well-planned outreach to local groups needs to occur through speakers or information meetings. For example, Wellesley could invite representatives from other towns to speak about innovative housing strategies in their communities, or ask the Massachusetts Housing Partnership to make a presentation about local and regional housing needs at a televised meeting of the Board of Selectmen or Planning Board. Organizing panel presentations with Wellesley’s faith-based communities, realtors, Council on Aging, social services organizations, and others could help to build community awareness, improve communication, reduce misinformation, and enlist support.

The Housing Toolbox for Massachusetts Communities is a helpful resource for educating the community and gaining support for affordable housing. More information about this resource can be found in Appendix.

MAKE GOOD USE OF CHAPTER 40B AS A VEHICLE FOR CREATING AFFORDABLE HOUSING

Wellesley should actively pursue partnerships with non-profit and for-profit developers that have collaborated with cities and towns on so-called “friendly” Chapter 40B developments. Local funds should be dedicated and prioritized for well-planned rental developments. A well-known example of municipal funding that fundamentally changed the outcome for a comprehensive permit project is Easton’s Shovel Shop Village. There, the Town intervened to save a historic mill complex from demolition by a mixed-income housing developer. Easton partnered with another developer and invested \$7.5 million in Community Preservation Act (CPA) funds to save the buildings. The project was permitted under Chapter 40B, not through a zoning change.

EXPLORE LOCAL PROPERTY TAX INCENTIVES FOR AFFORDABLE HOUSING

Affordable housing production will not happen without predictable, adequate funding for acquisition, pre-development, development, management, and monitoring. There is growing interest in Massachusetts (and beyond) in using local government tax policy as a mechanism for creating affordable housing. While there are very few models available, a few cities have established tax incentive programs and recently, the Town of Amherst secured passage of a home rule petition with broad powers to allow special incentives and tax increment financing agreements (TIF) for production of affordable units (Appendix). Wellesley could consider instituting a similar approach and target it to encourage sustainable projects that can be difficult to carry out, e.g., redevelopment/reuse projects or intensification of existing uses, or to encourage development of employer-assisted housing. Another option is to provide property tax exemptions to owners who rent units to low- or moderate-income households, similar to a program that has existed in Provincetown for several years.

APPENDIX

A. Glossary

Affirmative Fair Housing Marketing Plan (AFHMP). A plan that meets the fair housing and non-discrimination requirements of the Department of Housing and Community Development (DHCD) for marketing affordable housing units. The plan typically provides for a lottery and outreach to populations protected under the federal Fair Housing Act of 1968, as amended. The plan must be designed to prevent housing discrimination on the basis of race, creed, color, national origin, sex, age, disability, familial status, sexual orientation, gender identity, or any other legally protected class under state or federal law.

Affordable Housing. As used in this report, "affordable housing" is synonymous with low- or moderate-income housing, i.e., housing available to households with income that does not exceed 80 percent of area median income and at a cost that does not exceed 30 percent of their monthly gross income.

Affordable Housing Restriction. A contract, mortgage agreement, deed restriction or other legal instrument, acceptable in form and substance to the Town, that effectively restricts occupancy of an affordable housing unit to a qualified purchaser or renter, and which provides for administration, monitoring, and enforcement of the restriction during the term of affordability. An affordable housing restriction runs with the land in perpetuity or for the maximum period allowed by law. It should be entered into and made enforceable under the provisions of G.L. c. 184, §§ 31-33 or other equivalent state law.

Affordable Housing Trust. The mechanism used to account for and report revenues and expenditures for affordable housing, including but not limited to Community Preservation Act (CPA) receipts and other affordable housing funding sources.

Age-Dependency Ratio. A measure defined by dividing the combined populations under 18 years and 65 years and over by the 18-64 years population and multiplying by 100.

Area Median Income (AMI). The median family income, adjusted for household size, within a given metropolitan or non-metropolitan area, updated annually by HUD and used to determine eligibility for most housing assistance programs. For Wellesley, AMI is based on the Boston-Cambridge-Newton Median Family Income.

Average-Income Household. Loosely defined term for households with incomes over the maximum for affordable housing but typically outpriced by housing costs in affluent suburbs. An income between 81 and 120 percent of AMI generally encompasses average-income households.

Chapter 40A. G.L. c. 40A, the state Zoning Act. The current version of the Zoning Act was adopted in 1975 (1975 Mass. Acts 808).

Chapter 40B. G.L. c. 40B, § 20-23 (1969 Mass. Acts 774), the state law administered locally by the Board of Appeals in order to create affordable housing. It provides eligible developers with a unified permitting process that subsumes all permits normally issued by multiple town boards. Chapter 40B establishes a basic presumption at least 10 percent of the housing in each city and town should be affordable to low- or moderate-income households. In communities below the 10 percent statutory minimum, affordable housing developers aggrieved by a decision of the Board of Appeals can appeal to the state Housing Appeals Committee, which in turn has authority to uphold or reverse the Board's decision.

Chapter 40R. G.L. c. 40R (2004 Mass. Acts 149, s. 92), a state law that provides for overlay districts with variable densities for residential development and multi-family housing by right (subject to site plan review). At least 20 percent of the units in a Chapter 40R district have to be affordable to low- or moderate-income people.

Chapter 44B. G.L. c. 44B (2000 Mass. Acts 267), the Community Preservation Act, allows communities to establish a Community Preservation Fund for open space, historic preservation, and community housing by imposing a surcharge of up to 3 percent on local property tax bills. The state provides matching funds (or a partial match) from the Community Preservation Trust Fund, generated from Registry of Deeds fees.

Comprehensive Permit. The unified permit authorized by Chapter 40B, §§ 20-23, for affordable housing development.

Community Development Block Grant (CDBG). Under the Housing and Community Development Act of 1974, as amended (42 U.S.C. 5300 et seq.), the U.S. Department of Housing and Urban Development (HUD) makes funds available each year for large cities ("entitlement communities") and each of the fifty states (the Small Cities or "non-entitlement" program). CDBG can be used to support a variety of housing and community development activities provided they meet one of three "national objectives" established by Congress. Housing activities are usually designed to meet the national objective of providing benefits to low- or moderate-income people. Funds may be used for housing rehabilitation, redevelopment of existing properties for residential purposes (in some cases), making site improvements to publicly owned land to support the construction of new housing, interest rate and mortgage principal subsidies, and downpayment and closing cost assistance.

Community Housing. As defined under Chapter 44B, "community housing" includes housing affordable and available to (a) households with incomes at or below 80 percent AMI and (b) between 81 percent and 100 percent AMI.

Community Land Trust. Community land trusts are nonprofit, community-based organizations designed to ensure community stewardship of land. They are used primarily to ensure long-term housing affordability. To do so, the trust acquires land and maintains ownership of it permanently. With prospective homeowners, it enters

into a long-term, renewable lease instead of a traditional sale. When the homeowner sells, the family earns only a portion of the increased property value. The remainder is kept by the trust, preserving the affordability for future low- to moderate-income families.

Community Preservation Act. Chapter 44B. G.L. c. 44B (2000 Mass. Acts 267) allows communities to establish a Community Preservation Fund for open space, historic preservation, and community housing by imposing a surcharge of up to 3 percent on local property tax bills. The state provides matching funds (or a partial match) from the Community Preservation Trust Fund, generated from Registry of Deeds fees.

Comprehensive Permit. The unified permit authorized by Chapter 40B for affordable housing development.

Department of Housing and Community Development (DHCD). The state's lead housing agency, originally known as the Department of Community Affairs (DCA). DHCD oversees state-funded public housing and administers rental assistance programs, the state allocation of CDBG and HOME funds, various state-funded affordable housing development programs, and the Community Services Block Grant (CSBG) Program. DHCD also oversees the administration of Chapter 40B.

Disparate Impact. A legal doctrine under Fair Housing that states a policy may be seen as discriminatory if it has a disproportionately adverse effect on groups protected by the Act. The intent does not have to be discriminative; disparate impact looks at the *effect*.

Extremely Low-Income Household. A household income at or below 30 percent of AMI. (In some housing programs, a household with income at or below 30 percent of AMI is called very low income.)

Fair Housing Act (Federal). Established under Title VII of the 1968 Civil Rights Act, the federal Fair Housing Act prohibits discrimination in the sale, rental, and financing of dwellings, and in other housing-related transactions, based on race, color, national origin, religion, sex, familial status (including children under the age of 18 living with parents or legal custodians, pregnant women, and people securing custody of children under the age of 18), sexual orientation, gender identity, and disability.

Fair Housing Law, Massachusetts. G.L. c. 151B (1946), the state Fair Housing Act prohibits housing discrimination on the basis of race, color religious creed, national origin, sex, sexual orientation, age, children, ancestry, marital status, veteran history, public assistance reciprocity, or physical or mental disability.

Fair Market Rent (FMR). A mechanism used by HUD to control costs in the Section 8 rental assistance program. HUD sets FMRs annually for metropolitan and non-metropolitan housing market areas. The FMR is the 40th percentile of gross rents for typical, non-substandard rental units occupied by recent movers in a local housing market. (See 24 CFR 888.)

Family. Under the Federal Fair Housing Act (FFHA), family includes any of the following:

- (1) A single person, who may be an elderly person, displaced person, disabled person, near-elderly person, or any other single person; or
- (2) A group of persons residing together, and such group includes, but is not limited to:
 - (a) A family with or without children (a child who is temporarily away from the home because of placement in foster care is considered a member of the family);
 - (b) An elderly family;
 - (c) A near-elderly family;
 - (d) A disabled family;
 - (e) A displaced family; and
 - (f) The remaining members of a tenant family.

Gross Rent. Gross rent is the sum of the rent paid to the owner ("contract rent") plus any utility costs incurred by the tenant. Utilities include electricity, gas, water and sewer, and trash removal services but not telephone service. If the owner pays for all utilities, then gross rent equals the rent paid to the owner.

Group Home. A type of congregate housing for people with disabilities; usually a single-family home.

Household. One or more people forming a single housekeeping unit and occupying the same housing unit. (See definition of Family)

Housing Appeals Committee (HAC). A five-member body that adjudicates disputes under Chapter 40B. Three members are appointed by the Director of DHCD, one of whom must be a DHCD employee. The governor appoints the other two members, one of whom must be a city councilor and the other, a selectman.

Housing Authority. Authorized under G.L. 121B, a public agency that develops and operates rental housing for very-low and low-income households.

Housing Cost, Monthly. For homeowners, monthly housing cost is the sum of principal and interest payments, property taxes, and insurance, and where applicable, homeowners association or condominium fees. For renters, monthly housing cost includes rent and basic utilities (oil/gas, electricity).

HUD. See U.S. Department of Housing and Urban Development.

Inclusionary Zoning. A zoning ordinance or bylaw that encourages or requires developers to build affordable housing in their developments or provide a comparable public benefit, such as providing affordable units in other locations ("off-site units") or paying fees in lieu of units to an affordable housing trust fund.

- Infill Development.** Construction on vacant lots or underutilized land in established neighborhoods and commercial centers.
- Jobs-to-Housing Ratio.** An indicator of the adequacy of employment and housing in a given community or area.
- Labor Force.** The civilian non-institutionalized population 16 years and over, either employed or looking for work.
- Labor Force Participation Rate.** The percentage of the civilian non-institutionalized population 16 years and over that is in the labor force.
- Local Initiative Program (LIP).** A program administered by DHCD that encourages communities to create Chapter 40B-eligible housing without a comprehensive permit, e.g., through inclusionary zoning, purchase price buydowns, a Chapter 40R overlay district, and so forth. LIP grew out of recommendations from the Special Commission Relative to the Implementation of Low or Moderate Income Housing Provisions in 1989. The Commission prepared a comprehensive assessment of Chapter 40B and recommended new, more flexible ways to create affordable housing without dependence on financial subsidies.
- Low-Income Household.** As used in the terminology of Chapter 40B and DHCD's Chapter 40B Regulations, low income means a household income at or below 50 percent of AMI. It includes the HUD household income group known as very low income.
- Low or Moderate Income.** As used in Chapter 40B, low or moderate income is a household that meets the income test of a state or federal housing subsidy program. Massachusetts follows the same standard as the rest of the nation, which is that "subsidized" or low- or moderate-income housing means housing for people with incomes at or below 80 percent of the applicable AMI.
- Massachusetts Housing Partnership (MHP).** A public non-profit affordable housing organization established by the legislature in 1985. MHP provides technical assistance to cities and towns, permanent financing for rental housing, and mortgage assistance for first-time homebuyers.
- MassDevelopment.** A quasi-public state agency that provides financing for commercial, industrial, and multifamily rental developments and facilities owned by non-profit organizations.
- MassHousing.** A quasi-public state agency that provides financing for affordable housing.
- Mixed-Income Development.** A residential development that includes market-rate and affordable housing.
- Mixed-Use Development.** A development with more than one use on a single lot. The uses may be contained within a single building ("vertical mixed use") or divided among two or more buildings ("horizontal mixed use").

Moderate-Income Household. As used in the terminology of Chapter 40B and DHCD's Chapter 40B Regulations, moderate income means a household income between 51 and 80 percent of AMI. In some federal housing programs, a household with income between 51 and 80 percent of AMI is called low income.

Non-Family Household. A term the Census Bureau uses to describe households composed of single people living alone or multiple unrelated people sharing a housing unit.

Overlay District. A zoning district that covers all or portions of basic use districts and imposes additional (more restrictive) requirements or offers additional (less restrictive) opportunities for the use of land.

Regulatory Agreement. An affordable housing restriction, recorded with the Registry of Deeds or the Land Court, outlining the developer's responsibilities and rights

Section 8. A HUD-administered rental assistance program that subsidizes "mobile" certificates and vouchers to help very-low and low-income households pay for private housing. Tenants pay 30 percent (sometimes as high as 40 percent) of their income for rent and basic utilities, and the Section 8 subsidy pays the balance of the rent. Section 8 also can be used as a subsidy for eligible rental developments, known as Section 8 Project-Based Vouchers (PBV), which are not "mobile" because they are attached to specific units.

Shared Equity Homeownership. Owner-occupied affordable housing units that remain affordable over time due to a deed restriction that controls resale prices, thereby retaining the benefits of the initial subsidy for future moderate-income homebuyers.

Single Room Occupancy (SRO). A building that includes single rooms for occupancy by individuals and usually includes common cooking and bathroom facilities shared by the occupants.

Subsidized Housing Inventory (SHI). A list of housing units that "count" toward a community's 10 percent statutory minimum under Chapter 40B.

SHI-Eligible Unit. A housing unit that DHCD finds eligible for the Subsidized Housing Inventory because its affordability is secured by a long-term use restriction and the unit is made available to low- or moderate-income households through an approved affirmative marketing plan.

Subsidy. Financial or other assistance to make housing affordable to low- or moderate-income people.

Sustainability. To create and maintain conditions under which people and nature can exist in productive harmony while fulfilling the social, economic and other requirements of present and future generations. For housing, sustainability requires an equity framework that includes affirmative measures to provide greater energy-efficiency and healthy housing, to connect housing to jobs, to improve access to affordable transportation, and to enhance educational opportunity.

Typical, Non-substandard Rental Units. A term that defines the types of rental units that HUD includes and excludes in establishing the FMR for each housing market area. The term excludes: public housing units, rental units built in the last two years, rental units with housing quality problems, seasonal rentals, and rental units on ten or more acres.

U.S. Department of Housing and Urban Development (HUD). The lead federal agency for financing affordable housing development and administering the Fair Housing Act.

Very Low Income. See Extremely Low Income.

Workforce. People who work or who are available for work, either in a defined geographic area or a specific industry.

Workforce Housing. There is no single industry standard that defines “workforce housing.” HUD defines it as housing affordable to households earning between 80 and 120 percent of AMI. The Urban Land Institute has traditionally used the term “workforce housing” to describe units affordable to households with incomes between 60 and 100 percent AMI. By contrast, MassHousing defines “workforce housing” as housing affordable to individuals and families with incomes of 61% to 120% of AMI. In general, workforce housing is housing for people who work in a community and the pricing methodology should account for wages paid by local employers.

B. Resources for Affordable Housing Information, Education, and Community Engagement

Housing Toolbox for Massachusetts Communities
www.housingtoolbox.org/

Citizens Housing and Planning Association (CHAPA)
www.chapa.org

Local Initiatives Support Corporation (Boston Office)
www.lisc.org/boston/

Joint Center for Housing Studies at Harvard University
www.jchs.harvard.edu/

National Low-Income Housing Coalition
nlihc.org/

MassAccess Housing Registry
<http://www.massaccesshousingregistry.org/>

National Fair Housing Alliance
nationalfairhousing.org/

Housing Rights Center
www.hrc-la.org/

The Fair Housing Center of Greater Boston
<http://bostonfairhousing.org/>

Massachusetts Affordable Housing Alliance
mahahome.org/

National Community Land Trust Network
cltnetwork.org/

National Housing Trust
www.nationalhousingtrust.org/

C. Safe Harbor Status through Housing Plan Certification

In 2002, the Massachusetts Department of Housing and Community Development (DHCD) created an incentive for cities and towns to take an active role in increasing the supply of affordable housing. By developing a plan that met DHCD's requirements under the Planned Production program, communities could become eligible to deny a comprehensive permit for twelve (or possibly twenty-four) months if they implemented their housing plan by meeting a minimum annual low-income housing production target. The Planned Production program was overhauled in 2008, at which time the planning component became known as the Housing Production Plan.

To qualify for the flexibility that a DHCD-approved Housing Production Plan offers, Wellesley would need to create (through the issuance of permits and approvals) at least twenty-four new low- or moderate-income housing units (or an amount equal to or greater than the 0.50 percent production goal) in a given calendar year and obtain certification from DHCD that the Housing Production Plan standard had been met. Units eligible for the Subsidized Housing Inventory (SHI) will be counted for certification purposes in accordance with 760 CMR 56.03(2):

(2) Subsidized Housing Inventory.

- (a) The Department shall maintain the SHI to measure a municipality's stock of SHI Eligible Housing. The SHI is not limited to housing units developed through issuance of a Comprehensive Permit; it may also include SHI Eligible Housing units developed under G.L. Chapters 40A, 40R, and other statutes, regulations, and programs, so long as such units are subject to a Use Restriction and an Affirmative Fair Marketing Plan, and they satisfy the requirements of guidelines issued by the Department.
- (b) Units shall be eligible to be counted on the SHI *at the earliest* of the following:
 1. For units that require a Comprehensive Permit under M.G.L. c. 40B, § 20 through 23, or a zoning approval under M.G.L. c. 40A or completion of plan review under M.G.L. c. 40R, the date when:
 - a. the permit or approval is filed with the municipal clerk, notwithstanding any appeal by a party other than the Board, but subject to the time limit for counting such units set forth at 760 CMR 56.03(2)(c); or
 - b. on the date when the last appeal by the Board is fully resolved;
 2. When the building permit for the unit is issued;
 3. When the occupancy permit for the unit is issued; or
 4. When the unit is occupied by an Income Eligible Household and all the conditions of 760 CMR 56.03(2)(b) have been met (if no Comprehensive Permit, zoning approval, building permit, or occupancy permit is required.)

Requests for certification may be submitted at any time. DHCD will determine whether Wellesley complies within 30 days of receipt of the Town's request. If DHCD finds that Wellesley complies with the Housing Production Plan, the certification will be deemed

effective on the date upon which Wellesley created new units on the SHI under 760 CMR 56.03(2). The certification will remain in effect for one year from its effective date. If DHCD finds that Wellesley has increased its number of SHI Eligible Housing units in a calendar year by at least 1 percent of its total housing units (91 units), the certification will remain in effect for two years from its effective date.

The certification process would allow the Zoning Board of Appeals to deny a comprehensive permit for twelve months (or twenty-four months, as applicable), or continue to approve projects based on merit. However, if the Board decides to deny a comprehensive permit or impose conditions during the Housing Plan certification period, it must do so according to the following procedures. 760 CMR 56.05(3) and 56.03(8):

- Within fifteen days of opening the public hearing on a comprehensive permit application, the Board has to provide written notice to the applicant, with a copy to DHCD, that denying the permit or imposing conditions or requirements would be consistent with local needs, the grounds that it believes has been met (e.g., a Housing Plan certification is in effect), and the factual basis for that position, including supportive documentation.
- If the Applicant wishes to challenge the Board's assertion, it must do so by providing written notice to DHCD, with a copy to the Board, within fifteen days of receiving the Board's notice, and include supportive documentation.
- DHCD will review the materials provided by the Board and the applicant and issue a decision within thirty days. The Board has the burden of proving that a denial or approval with conditions would be consistent with local needs, but any failure of DHCD to issue a timely decision constitutes a determination in favor of the Town.
- While this process is underway, it tolls the requirement to complete the public hearing and final action within 180 days.

D. Amherst Special Legislation: Tax Incentives for Affordable Housing

Chapter 148 of the Acts of 2015

AN ACT PROVIDING AFFORDABLE HOUSING PROPERTY TAX INCENTIVES IN THE TOWN OF AMHERST.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same as follows:

SECTION 1. For the purposes of this act, "Low or moderate income housing", shall mean housing for individuals or families with incomes at or below 95 per cent of area median income. Area median income shall be calculated by the United States Department of Housing and Urban Development, or any successor agency, and shall be adjusted for family size.

SECTION 2. Notwithstanding any general or special law to the contrary, the select board of the town of Amherst may enter into agreements for special tax assessments for properties that include low or moderate income affordable housing consistent with the terms of this act.

SECTION 3. For a residential or mixed use development with 10 or more dwelling units in which at least 10 per cent of the units are low or moderate income housing and subject to an affordable housing restriction as defined in section 31 of chapter 184 of the General Laws, the increase in assessed value resulting from such development shall be phased in increments over a period of up to 10 years to the full assessed value of the property; provided, however, that the maximum property tax incentive shall be based on the difference in net operating income for such development with affordable units and the net operating income without such affordable units. Determination of eligibility shall be made as of July 1 of each year for the fiscal year beginning on July 1.

Approved, December 4, 2015.

**E. Wellesley Housing Development Corporation Special Act of the
Legislature**

Chapter 311. AN ACT ESTABLISHING THE WELLESLEY HOUSING DEVELOPMENT CORPORATION.

Be it enacted, etc., as follows:

SECTION 1. There is hereby established a nonprofit housing corporation to be known as the Wellesley Housing Development Corporation, which shall be subject to the supervision of the board of selectmen of the town of Wellesley. Said corporation shall be governed by a board of directors hereinafter referred to as the board. Said board, which is hereby established, shall consist of not less than five members who shall be residents of said town and who shall be appointed by the board of selectmen for staggered three year terms as designated by said board of selectmen. Such appointments shall be made on or before June 30. Members shall serve until their successors are appointed and qualified. Continuing members may act despite a vacancy in said board and, for this purpose, shall be deemed to constitute a full board. A vacancy in the board, however occurring, may be filled by said board of selectmen for the remainder of the unexpired portion of the term.

The board shall exercise its powers and perform its duties for the purpose of investigating and implementing alternatives for the provision of and providing affordable housing for persons of low, moderate and middle income and others whose needs may be identified from time to time in said town. The powers and duties of said board shall be alternative and supplemental to, and not in limitation of, the powers and duties of the Wellesley Housing Authority, established pursuant to chapter 121B of the General Laws. The liability of said board and its members shall be limited to the same extent as the liability of a public employer and public employees as provided in section 2 of chapter 258 of the General Laws.

SECTION 2. The board shall have the powers conferred by the provisions of paragraphs (a) to (i), inclusive, and paragraph (k) of section 9 of chapter 156B of the General Laws and the following powers; provided, however, that no such power shall be exercised either in a manner inconsistent with this act or any other general or special law or to carry on any activity which is not in furtherance of the purposes set forth herein:

(a) to adopt, amend and repeal corporate by-laws for the regulation and conduct of its business including, but not limited to, the call and conduct of its meetings, the number of members which shall constitute a quorum and the mode of voting by proxy;

(b) to elect a chairman and vice-chairman, each of whom shall be members of said board, and a secretary and a treasurer, who need not be members of said board and who may be the same person. The treasurer shall give bond for the faithful performance of his duties in a form and amount approved and affixed by the board of selectmen, the cost of which bond shall be paid from funds of said board. The chairman and, in his absence, the vice-chairman shall chair meetings of said board. The secretary shall be the custodian of all books, documents and papers filed with said board and of the minute book or journal of said board;

(c) with the approval of the board of selectmen, to make and execute all contracts and all other instruments necessary or convenient for the exercise of its power and functions, subject to approval of the town counsel as to form;

(d) with the approval of the board of selectmen, to acquire or lease, by purchase, gift or otherwise, and to own, hold and use, on such terms and conditions and in such manner as it may deem proper, and to exchange, grant options on, sell, transfer, convey, assign, lease, pledge, mortgage, encumber, grant liens on and security interests in, or to otherwise dispose of, on such terms and conditions as it may deem proper, real, personal or mixed real and personal property or any interest, easements or rights therein and assets or revenues of said board, as may be necessary or appropriate to carry out its purposes, it being understood that said board's right to acquire or sell town owned real estate shall be subject to town meeting vote authorizing the same;

(e) with the approval of the board of selectmen, to enter into agreements or other transactions with the commonwealth or a political subdivision or public instrumentality thereof, the United States government or a federal, state or other governmental agency;

(f) with the approval of the board of selectmen, to borrow money and to execute notes therefor which shall not be deemed to be debts or obligations of said town, to hold mortgages and to invest any funds not required for immediate disbursement in such investments as may be lawful for fiduciaries in the commonwealth; provided, however, that said board shall have no stock;

(g) with the approval of the board of selectmen, to enter into contracts or agreements with, and to employ from time to time, contractors, architects, engineers, consultants, attorneys, accountants, construction, financial and other experts, superintendents, managers and such other agents and employees as may be necessary in its judgment and to fix their compensation;

(h) with the approval of the board of selectmen, to receive and hold funds appropriated by the town and other funds, property, labor and other things of value from any source, public or private, by gift, grant, bequest, loan or otherwise, either absolutely or in trust, and to expend or utilize the same on behalf of said board for any of its purposes or to act as an agent or conduit in administering or disbursing funds or financial or other aid from any source; provided, however, that all revenues collected or received by said board in connection with its activities, investments or transactions shall be expended only with the approval of said board of selectmen;

(i) to appear in its own behalf before boards, commissions, departments or other agencies of government, municipal, state or federal;

(j) to procure insurance against any loss in connection with the property or activities of said board, in such amounts and from such insurers as it may deem necessary or desirable and, with the approval of the board of selectmen, to indemnify its members or agents if and to the extent specified from time to time in the by-laws of said board and subject to and in the manner provided in section 6 of chapter 180 of the General Laws;

(k) to formulate and, with the approval of the board of selectmen, carry out or monitor plans for projects involving the acquisition or operation of housing facilities of any kind or nature and to construct, reconstruct, renovate, expand, extend, improve, repair, remodel, equip, furnish, maintain, manage and operate such facilities;

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(l) with the approval of the board of selectmen, to fix and revise from time to time and to charge and collect rates, fees, rentals and other charges and sales prices for or in connection with the use, occupancy or other disposition of any housing facility or other property or portion thereof under its ownership or control;

(m) with the approval of the board of selectmen, to establish, impose, grant or amend, by deed, lease or other means or method, and to hold the benefit of, monitor, exercise and enforce lawful restrictions on the rental, sale, resale, use or occupancy of housing facilities or other property under its ownership or control or other facilities or property designated by said board of selectmen or restrictions with respect to the income of owners, tenants or occupants of such housing facilities or other property or options and rights of first refusal with respect to such facilities or property and to waive, release or discharge any such rights or restrictions; provided, however, that the foregoing shall not apply to any town owned real estate or facilities except upon the vote of the town meeting so voting;

(n) with the approval of the board of selectmen, to enter into, perform or monitor agreements or other transactions with contractors, developers, brokers or other real estate professionals or any other person relating to the providing of affordable housing for persons of low and moderate income in the town;

(o) to do any and all things necessary or convenient to carry out its purposes and exercise the powers conferred by this act.

Said board may delegate to any subcommittee or member of the committee any action which said board is authorized to do or make. Said board may be a partner in any business enterprise which it would have power to conduct by itself.

SECTION 3. Notwithstanding the provisions of any general or special law to the contrary, the income, assets and activities of the board shall be exempt from all taxes and assessments and said board shall not be subject to any of the provisions of chapter 63 of the General Laws or to any taxes based upon or measured by property or income imposed by the commonwealth or by any political subdivision thereof. Said board may enter into agreements with the assessor of the town of Wellesley, with the approval of the board of selectmen, wherein said board shall undertake to make to said town annual payments in lieu of taxes in connection with any real property acquired and owned by said board, the amounts of such payments to be reasonable sums stipulated in such agreement or agreements or determined in accordance with a reasonable formula so stipulated.

SECTION 4. Without limiting the powers of the board, said board may receive, expend and utilize for its purposes all interests in town owned real estate and proceeds of the sale by the town of Wellesley of certain lands, properties, and surplus buildings, as voted by said town but not otherwise. In addition, said town may appropriate other funds for the carrying out by said board of its purposes as set forth herein. Any appropriation therefor may be raised by said town by taxation. At least annually, said board shall cause independent audits to be made of its books and records of said board, which annual audits shall be filed with the board of selectmen.

SECTION 5. In the event that the board shall be dissolved in accordance with law

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at any time, all property and interests therein, assets and rights of said board existing at such time shall be transferred to the town of Wellesley and title to all such property and all such rights shall vest in said town automatically without the need for further action or instrument, and said town shall, to the maximum extent permitted by law and acting by and through its board of selectmen, assume, hold and exercise the powers and duties of said board set forth herein with respect to such property and rights so transferred to said town.

SECTION 6. This act shall take effect upon its passage.

Approved August 28, 1998.

**Chapter 312. AN ACT RELATIVE TO THE QUALIFICATIONS OF
COMMISSIONER OF CODE ENFORCEMENT IN THE CITY OF
SPRINGFIELD.**

Be it enacted, etc., as follows:

SECTION 1. Section 2 of chapter 194 of the acts of 1991 is hereby amended by striking out the first sentence and inserting in place thereof the following five sentences:- The commissioner shall be an architect, as defined in section 60A of chapter 112 of the General Laws or a professional engineer, as defined in section 81D of said chapter 112 or shall have had at least five years of experience in the supervision of building construction or design, or in the alternative, a four year undergraduate degree in a field related to building construction or design, or any combination of education and experience which would confer equivalent knowledge and ability, as determined by the state board of building regulations and standards. Said commissioner shall also have general knowledge of the accepted requirements for building construction, fire prevention, light, ventilation and safe egress, as well as a general knowledge of the other equipment and materials essential for safety, comfort, and convenience of the occupants of a building or structure. Said commissioner shall be certified by said state board of building regulations and standards in accordance with the provisions of section 3 of chapter 143 of the General Laws. The city of Springfield may require additional qualifications or experience as it deems necessary. Said commissioner shall be subject to the residency ordinance of said city.

SECTION 2. This act shall take effect upon its passage.

Approved August 28, 1998.

**Chapter 313. AN ACT PROVIDING FOR THE CONSTRUCTION OF CERTAIN
FACILITIES OF THE MASSACHUSETTS PORT AUTHORITY.**

Whereas, The deferred operation of this act would tend to defeat its purpose, which is forthwith to provide for the construction of certain facilities of the Massachusetts Port

1. Introduction

In 2016, Wellesley embarked on a unique and comprehensive community planning process to develop what is known as the Unified Plan. Serving both as an update of the 2007 Wellesley Comprehensive Plan and a strategic plan for the Town, the Unified Plan is a plan for Wellesley's physical evolution and economic well-being and a vision to cohere local government decision-making. The process to develop the Unified Plan came at the heels of a contentious, difficult, and polarizing process that called upon Wellesley voters to decide whether to change their form of government to a modern, more centralized town manager framework, an effort that was not successful. In many ways, residual tension from defeat of the town manager proposal persists today.

Against the backdrop of deep divisions about considerations related to how the Town would operate in the future, Wellesley suddenly found itself with plans for several Chapter 40B developments all within a matter of weeks. What would have been hard for a peaceful town to manage became very challenging for Wellesley officials, staff, and residents. Today, the Zoning Board of Appeals is considering five comprehensive permit applications with a combined total of 228 mixed-income housing units. There are more projects that have either received Project Eligibility (PE) determinations or are anticipated to receive them soon. While difficult, the town government process made it apparent that Wellesley residents prefer a form of government that approaches problems collaboratively, based on consensus. It is in this vein that the Board of Selectmen, Planning Board, and Housing Development Corporation set out to develop this Housing Production Plan with broad participation, input, and support.

~~In 2016, Wellesley embarked on a unique community planning process known as the Unified Plan. Serving both as an update of the 2007 Wellesley Comprehensive Plan and a strategic plan for the Town, the Unified Plan is a plan for Wellesley's physical evolution and economic well-being and a vision to cohere local government decision-making. The Unified Plan came at the heels of a contentious process that called upon Wellesley voters to decide whether to change their form of government to a modern town manager framework. In many ways, residual tension from defeat of the town manager proposal persists today. Against the backdrop of deep divisions about how the Town would operate in the future, Wellesley suddenly found itself with plans for several Chapter 40B developments all within a matter of weeks. What would have been hard for a peaceful town to manage became very challenging for Wellesley officials, staff, and residents. Today, the Zoning Board of Appeals is considering three comprehensive permit applications with a combined total of 189 mixed-income housing units, including 48 affordable units and 156 units eligible for the Chapter 40B Subsidized Housing Inventory (SHI).¹ Four more projects have either received Project Eligibility (PE) determinations or are anticipated to receive them soon.~~

¹-This includes 90 rental units proposed at Delanson Circle; 55 rental units at 148 Weston Road; and 44 homeownership units (11 affordable) at 135 Great Plain Avenue.

Housing in Wellesley is coveted real estate. The monthly rents for homes and apartments in Wellesley exceed what landlords charge in most of Greater Boston, except perhaps in Downtown Boston or the Seaport District. Norfolk County ranks forty-second out of the top 100 wealthy counties in the country, and Middlesex County is not far behind. Throughout the Boston Metro area, the housing wage necessary to afford a modest two-bedroom apartment is \$33.46 per hour.² That may seem manageable to many Wellesley residents, but it represents far more than the earnings of employees in Wellesley's retail, food service, or health care establishments. It is little wonder that 65 percent of the people who work in Wellesley each day commute from some other town.³

WHAT HAS WELLESLEY DONE TO CREATE MORE AFFORDABLE HOUSING?

Despite Wellesley's exceptionally high housing costs, the limited inventory of affordable units in Wellesley is not because the town has ignored its obligations to provide affordable housing. The opposite is true. Of the 575 units on the Chapter 40B Subsidized Housing Inventory (SHI) today, most have come about because of efforts by the Wellesley Housing Authority, Wellesley Housing Development Corporation (WHDC), Town boards and commissions, and Town staff. The WHDC's very existence owes to a home rule petition filed with the General Court in 1998.⁴ [Wellesley has taken many steps to address affordable housing, including the following:](#)

- 1998: The Town of Wellesley submitted a home rule petition to the General Court to establish the WHDC.
- 2004: The Community Preservation Committee provided \$65,000, in addition to HUD funds, to create a group home for people with disabilities at 4 Marshall Road.
- 2004: Town Meeting adopted an Inclusionary Zoning Bylaw (IZB), requiring residential projects in commercial districts to provide 20 percent affordable housing, and commercial projects over 10,000 square feet to provide 2 percent affordable housing (1 unit for every 50,000 square feet constructed).
- 2005: Town Meeting amended the IZB to apply to subdivisions with more than five new lots, thereby making new subdivisions include 20 percent affordable housing.
- 2007-2008: Permitting began for projects at 978 Washington Street and the former Wellesley Inn site at 576 Washington Street in Wellesley Square. Though delayed by the recession, these projects have been completed, resulting in seven SHI-eligible units at 978 Worcester and five SHI-eligible units at 576 Washington Street. Both projects were developed under the Town's IZB bylaw. The 978 Worcester St. project also provided a payment in-lieu for one unit.

² National Low-Income Housing Coalition, *Out of Reach 2018*, 119.

³ U.S. Census Bureau, *Commuting (Journey to Work), 2009-2013 5-Year American Community Survey Commuting Flows (2013)*.

⁴ Secretary of the Commonwealth, Acts and Resolves by the General Court. Chapter 311 of the Acts of 1998: An Act Establishing the Wellesley Housing Development Corporation.

- 2007: The Linden Square project was completed, including seven affordable housing units created under the IZB. (The Town recently discovered that these units are not listed on the SHI. They are being added at this time.)⁵
- 2007: Town Meeting amended the definition of Floor Area Ratio in the Zoning Bylaw to exempt affordable units created under the IZB from the maximum FAR. This change provides for the necessary increase in density to produce affordable housing in commercial districts.
- 2007: Wellesley adopted an award-winning Comprehensive Plan in 2007 with numerous recommended actions for affordable housing.
- 2009: Permitting for the CVS resulted in a payment of in-lieu under the IZB.
- 2011: The ZBA approved a comprehensive permit for Wellesley Commons at 65-71 Washington Street, resulting in one new SHI-eligible homeownership unit.
- 2012: The Town approved Waterstone at Wellesley, 27 Washington Street, under the Residential Incentive Overlay (RIO) district in Wellesley Lower Falls. This project created 82 independent living units for seniors, all listed on the SHI. It also includes seven affordable assisted living units not listed on the SHI because of DHCD policies, but they are permanently deed restricted to be affordable.
- 2012: The Wellesley Housing Development Corporation purchased and renovated a two-family dwelling at Peck Ave and a single-family dwelling at 6 Mellon Road, creating three affordable units. At the same time, the Town also purchased 9 Highland Road for affordable housing. It is omitted from the SHI because the deed restriction does not meet DHCD requirements. This problem will be cured when the unit is resold.
- 2013/2014: The ZBA approved a comprehensive permit for 139 Linden Street, which added two units to the SHI.
- 2013: Town Meeting amended the Wellesley Square Zoning District to create a special permit to provide for density. This action benefited and allowed the previously stalled Wellesley Inn project to proceed.
- 2016: The Planning Board approved a definitive subdivision plan for 135 Great Plain Ave. that included a payment in-lieu for 2.4 units. (This site is now the subject of a 44-unit comprehensive permit application.)
- 2016: The Town began work on the first Unified Plan in the Commonwealth. This planning process brings together the Town's strategic plan and comprehensive plan. The Board of Selectmen and Planning Board are expected to adopt the final plan in 2018. It includes a housing strategy with a variety of mechanisms to increase housing type and

⁵ Do you know the current SHI status of these units? The SHI we received from DHCD reports two units on Linden Street, not seven.

affordability. [Several of the strategies in the Unified Plan have been incorporated in Section 5 of this Housing Production Plan.](#)

■ 2018: Actions by the Town:

- March 2018: The Board of Selectmen released a Request for Proposals (RFP) to develop the Tailby and Railroad Parking Lots near the Wellesley Square MBTA station for affordable housing and parking.
- March 2018: The Planning Board sought FY19 funds to develop a sub-area study and plan to support the development of additional affordable housing. (CPA funds were also requested for this project.)
- April 2018: With the Community Preservation Committee's recommendation, Town Meeting approved \$200,000 to the Wellesley Housing Authority to study the redevelopment potential of the Barton Road public housing property.
- [May 2018: The Board of Selectmen and WHDC purchased two additional rental units at 978 Worcester Street, bringing the affordability percentage to 25 percent and adding the total 36-unit development to the Town's SHI, a net increase of 29 units.](#)
- June 2018, John Hancock announced plans to redevelop the Wellesley Office Park and wants to partner with the Town to construct 350 rental housing units.

~~Unfortunately, even with all of these initiatives~~ While Wellesley has taken steps to create affordable housing, the ~~the housing~~ needs, constraints, and challenges that existed when Wellesley completed the Comprehensive Plan in 2007 remain true today. The description of Wellesley in 2018 is not much different than it was eleven years ago.

WHAT CAN THIS PLAN DO FOR WELLESLEY?

The main purpose of this Housing Production Plan is to help Wellesley implement the new Unified Plan and make steady progress toward [meeting and exceeding](#) the 10 percent statutory minimum. In doing so, the HPP creates an opportunity to:

- Assess demographic and housing data;
- Identify local housing needs;
- Recognize a community's ongoing efforts;
- [Identify housing development barriers;](#)
- [Educate the public about Wellesley's need for more affordable housing and a wider variety of housing types;](#)
- Identify specific locations and sites that would be appropriate for affordable and mixed-income housing development; and

- ~~Potentially~~ Guide future mixed-income housing development to these optimal sites and locations.

With a DHCD approved HPP in place, Wellesley may be able to manage the flow of new Chapter 40B proposals. However, the HPP will be effective for this purpose *only* if the Town implements it. Implementation of this plan and the new Unified Plan will be critical for Wellesley if a comprehensive permit were denied based on conflicts with local plans. Two recent Housing Appeals Committee (HAC) cases lay out the issues and requirements associated with planning for affordable housing. Excerpts from these decisions, shown on the next page, could assist present and future readers to understand what the Town needs to do to help the Board of Appeals if an objectionable comprehensive permit is denied in the near future. These excerpts speak to the vital importance of *consistent* plan implementation. In short, ~~Having~~ having a plan is not enough; plan implementation is essential.

It is very unlikely that Wellesley's desire to protect the character of its single-family neighborhoods would rise to the level of a local planning concern that outweighs the regional need for affordable housing. If the Town wants to direct higher-density housing to locations other than established neighborhoods, it needs to carry out strategies that will be effective toward that end. It also needs to work on ways to introduce modestly scaled affordable units in the established neighborhoods. Doing so will create a track record that illustrates how Wellesley has both protected the single-family neighborhoods *and* provided affordable housing choices within them.

COMMUNITY ENGAGEMENT

As part of the HPP process, the Town sought public involvement to include a variety of opinions on the production and retention of affordable housing in Wellesley. Public workshops were designed to be interactive, encouraging residents to talk and collaborate in some "hands-on" activities and to help the consultants understand the ~~town~~ Town. Input provided by participants in these workshops has been used to direct the plan in several key ways. Wellesley's HPP has benefited from thoughtful input from the participants in three community workshops – April 7, May 3, and June 12, 2018 – and guidance from representatives of the Board of Selectmen, Planning Board, and Wellesley Housing Development Corporation. The consulting team also interviewed residents and others with knowledge of the housing situation in Wellesley.

COMMUNITY MEETING #1: APRIL 7, 2018

The first of three community-wide meetings for the Wellesley Housing Production Plan (HPP) took place on Saturday, April 7, at 9:30. Approximately 45 people attended, including two who did not sign the attendance sheet.

The meeting included informal small-group discussion time during registration, a presentation by the consultants, and an hour-long discussion period designed to ~~enlist~~ elicit ideas about two topics: the ideal vision of housing in Wellesley, and an assessment of

opportunities for and barriers to achieving the vision. Each table had a volunteer from the HPP working group whose job was to facilitate and record the group's discussion (about five to seven participants per table and a total of seven tables). At the end of the one-hour discussion period, each facilitator summarized what group members had said. The following summarizes key ideas and concerns that emerged during the first community meeting.

■ Housing Vision for Wellesley

- Protect the character of established neighborhoods
- Strategically locate affordable housing near public transportation, goods and services, and schools, and in walkable locations
- Site more densely developed housing in and near the business districts, e.g., mixed-use buildings or multifamily buildings adjacent to commercial buildings
- Geographically distribute affordable housing throughout the town so that no neighborhood is overburdened
- Allow more housing choices in established neighborhoods, such as the ability to convert existing single-family homes to two-family or small multi-family dwellings
- Develop Town-owned property, e.g., the North 40 parcel or the Tailby Lot as a preferred way to create more housing
- Provide for additional development, infill, or reuse of existing properties in office park settings, e.g., Harvard Pilgrim or Sun Life, or the public housing on Barton Road (Wellesley Housing Authority)
- Remove the value of land from the cost of housing; consider a community land trust approach

■ Housing Opportunities

- Pursue development of Town-owned property, e.g., North 40, Tailby Lot, Wellesley Middle School, Morton Circle
- Create more housing for employees at major institutions, e.g., Babson, Wellesley, Dana Hall, Tenacre
- Develop housing on surplus land at MassBay Community College or the Sisters of Charity/Seton Residence
- Allow accessory dwelling units and "age friendly" multifamily use of existing residences
- Identify redevelopment possibilities along Worcester Street/Route 9
- Zone for more diverse housing with overlay districts or reducing regulatory barriers, e.g., multifamily conversions

- Preserve existing small homes

■ Housing Barriers or Constraints

- Conservation restrictions limit the amount of Town-owned land that can be developed for housing
- Tension between the desire to avoid, isolated large developments, preserve the character of existing single-family neighborhoods, and accommodate 400+ additional Chapter 40B units into those neighborhoods without scale and density
- The Town's zoning substantially restricts what developers can do: use regulations, maximum density, maximum height, parking
- Wellesley's high income/high household wealth profile, prestige, very high land values, and the economics of teardowns contribute to loss of smaller, relatively affordable homes
- Lack of opportunities for seniors to downsize interferes with "natural" turnover in housing stock and forces them to sell to a developer or let the house fall into disrepair because they cannot maintain it
- Lack of funding for affordable housing
- Lack of public awareness or understanding of Chapter 40B and affordable housing needs
- Perceptions of affordable housing
- Lack of public consensus and public commitment to housing
- Traffic, parking, limited in-town public transportation all contribute to mobility constraints

COMMUNITY MEETING #2: MAY 3, 2018

The second of three community-wide meetings for the Wellesley Housing Production Plan (HPP) took place on Thursday, May 3, at 7 PM. Approximately 30 people attended the meeting, ~~including Planning Board members.~~

The purpose of the meeting was to get community feedback on a set of goals for the HPP. It included a presentation by the consultants, followed by an open house-style activity designed to inform participants of the purpose of each goal and gather public opinion on the importance of incorporating the goal into the HPP. The results from this exercise and additional feedback from participants are summarized below.

■ Main Conclusions

- Participants feel strongly that Wellesley should strive to reach the affordable housing goal of 10 percent to maintain local control.
- Many participants were in favor of at least slightly increased density, more housing choice, and increased racial and socio-economic diversity.
- The most major concerns were increased traffic with the increase in density, the lack of public transportation access that some new developments might face, and the potential change in the character of Wellesley with new housing development.
- Participants favored creating more housing through redevelopment of existing buildings, as long as those units allowed for residents to be a part of the community and have access to town services and resources.

■ Comments on Draft Housing goals

Goal 1: Create a variety of affordable and mixed-income housing that helps to make Wellesley a welcoming community for people with diverse socio-economic backgrounds.

Twenty-two participants marked this goal as “very important”, and three marked it as “somewhat important”. Many commenters saw the benefits of having a more diverse community, and some asked how to best educate the public on these benefits. Some suggested developing support systems for the socio-economically diverse population and to promote diverse businesses to help integrate the community. Several comments mentioned MassBay as an opportunity to meet this goal. Others expressed concerns about neighborhood resistance to any housing other than single-family and they worried about how to meet this goal.

Goal 2: Provide more housing options, including affordable and market-rate housing options, for low- and middle-income families, seniors, and individuals with disabilities, through a variety of mechanisms to increase housing choice.

Twenty-one people marked this goal “very important”, and four marked it “somewhat important”. Some strengths of this goal were that it would enable people who work in town (i.e. teachers, police officers) to live in town, it would diversify talents and skills sets in town, and it would offer more opportunities for intergenerational interaction by helping young families and elderly residents. Some participants noted opportunities, including promoting smaller projects in residential neighborhoods, creating higher density zoning on upper floors in commercial business districts, and creating cluster developments on larger parcels. Some concerns regarding this goal were that the increase in density would increase traffic and have the potential to change the character of the town, and that while the focus on low- and middle-income families is important, families with 80-120 percent AMI also need affordable housing in Wellesley.

Goal 3: Actively strive to incrementally achieve state’s MGL c.40B 10% goal for affordable housing by producing at least 45 units annually that count on the state’s subsidized housing inventory, through local actions and approval of private development, especially

development of rental housing units. Create at least 400 housing units that are permanently affordable to income-eligible households by 2028.

Twenty-three people marked this goal as “very important”, three people marked it as “somewhat important”, and one person marked it as “not important”. Most commenters emphasized the importance of Wellesley being able to control its own destiny by striving not just for safe harbor but for the full 10 percent. Some commenters felt that this goal could help to meet other goals, but others expressed concern that if meeting this goal is not done in a thoughtful way, other goals, such as housing choice and diversity, could be at risk.

Goal 4: Encourage new development and repurposing of existing buildings to create affordable and mixed income housing that:

Reinforces the development patterns of Wellesley’s residential neighborhoods and maintains a predominantly single-family character in established single-family neighborhoods

Strengthens the vitality of business districts and commercial corridors with diverse housing types

Promotes housing development in walkable areas with convenient access to shops, services, public transportation, parks, schools, and other neighborhood destinations

Every participant rated this goal as “very important” (25 people). Participants emphasized the repurposing of existing buildings to be an important aspect of the goal, and they ~~feel~~ stated that walkability and access to public transportation and town services is essential when considering placement of affordable housing. Some opportunities discussed were selling and developing St. Paul’s school building and the ex-Sisters of Charity property ~~or~~ or creating more mixed-use housing in Wellesley Square. ~~A couple of~~ Concerns residents had were the availability of parking and ~~the question on~~ whether development that ~~isn’t~~ is ~~not~~ necessarily walkable but has easy access to highways should also be prioritized. One comment suggested that this type of development might not be good for the community aspect of residents living there.

Goal 5: Promote the development of surplus institutional and town-owned land as well as the redevelopment of office parks and existing affordable housing complexes to create desirable mixed-income and mixed-use neighborhoods, where feasible.

Twenty-three participants rated this goal as “very important”, and two rated it as “somewhat important”. Commenters mostly wanted to focus on redevelopment rather than new development to preserve as much open space as possible. ~~They It was~~ emphasized that it was important for these developments, whether they were new or redevelopments, to be close to services and able to connect to town life. One concern was regarding the potential decrease in parking in town. Another commenter was enthusiastic about redevelopment but acknowledged that a large amount of development projects would have to take place to realistically maintain SHI growth.

■ Strategies

A final station asked participants what their ideas were for addressing housing needs in Wellesley, and what they think should be further explored in the planning process. Here are

some of the responses.

- Talk to people who live in affordable housing
- Share what other towns are doing across the country
- Improve access to public transportation
- More community education about the benefits ~~to children and families~~ of a diverse community to children and families
- More accessory apartments in limited areas
- Change zoning to create slightly denser development
- Engage the neighborhoods to consider how to integrate-welcome new residents before they come, to be welcoming and integrate into the community.
- Local incentives to support affordable housing
- Mixed-use properties in places such as Wellesley Square
- Mass Bay rental units to allow students to live nearby; could also support Mass Bay faculty and staff

COMMUNITY MEETING #3: JUNE 12, 2018

The final community meeting occurred on June 12, 2018. Approximately 40 people attended the meeting, including members of the Board of Selectmen, Planning Board, and WHDC members. The meeting's purpose was to solicit opinions from community members on transformation areas in Wellesley and what types of development would be suitable for the town. Consultants presented information about housing needs in Wellesley, participants gave comments and suggestions in an open house exercise, and a final group exercise allowed participants to discuss with one another and choose what types of housing would be suitable in which areas of town.

■ Main Conclusions

- Participants are open to increased density if it is done wisely and tastefully.
- A main priority of housing development is to meet the 10 percent goal for affordable housing, and community members want this to be the focus for any new development.
- Key transformation areas that participants were generally in favor of included Wellesley Square, North 40, and sites in the east part of town.

■ Open House Stations

Where are Wellesley's key transformation areas? Where is change most likely to occur in Wellesley? Where could change accommodate multifamily housing? Mixed-use developments?

The first station presented a map of Wellesley showing potential development sites and asked participants to leave comments answering the question above and responding to the suggested sites on the map. Participants left check marks by each development site, shown in the image below. The most popular sites were **North 40**, with ten check marks and two X marks, **Office Park** with 12 check marks, and **Wellesley Square & Neighborhoods**, with 14 check marks and one X mark. The area in the east part of town on the Newton line, which includes the office park, the **National Guard Site**, and **WHA Barton Rd**, received a good deal of support on the map, though one commenter noted that there are already many projects there that are affecting traffic, and suggested more projects in areas where there is less density.

Some key transformation areas that participants noted were Barton Road, Wellesley Square, North 40, and areas that had access to public transportation. These areas would be suitable for mixed-use or multifamily development. However, there were participants who disagreed that any of those would be good options, citing congestion and 40B projects that are already in the area. One area that a couple of commenters did not think was a good location for development was the Linden Street neighborhood, as there is already traffic congestion in the area and it is not ideal for access to public transportation.

What is the ONE most important step Wellesley should take to work toward or reach the 10 percent affordable housing goal under Chapter 40B?

~~Some ideas participants had to answer this question~~ Responses shared by participants included the following:

- Zoning for multifamily
- Make a dent in the SHI gap by approving development that will count completely towards the affordable housing goal
- Repurpose currently developed areas for more housing
- Pursue affordable elderly and disabled housing
- Create mixed-income housing areas
- Public housing in areas that are central to public transportation, have access to shopping areas, and encourage walkability
- Ensure that housing units complement rather than overwhelm the existing neighborhood (in terms of density and design)

GROUP EXERCISE

Following the open house, participants returned to their tables to partake in a group exercise. Each group had sets of Lego bricks in different sizes, where each size pertained to a different housing type: single-family, duplex, three- or four-unit building, larger multi-family, etc. The

consultants asked participants to use ~~all of~~ the Legos on a large map of Wellesley, placing them in areas where they believe development of that type of housing would be suitable.

As shown above on the left, Group A concentrated some larger developments (black and orange Legos) in the Barton Road area and the Office Park. There is also high density in the Wellesley Square area. They chose to scatter some smaller units (blue and yellow) across town. Group B (above right) chose similar areas for their large ~~developments,~~ ~~but developments but~~ added a large building near the Needham town line and another just north of Route 9, near the Hardy School.

Group C (above left) concentrated density (red, black, and orange blocks) in a few areas: on the Needham line near Babson College, in Wellesley Square, in the Lower Falls vicinity of Walnut Street, and in the east part of town where Barton Road and the office park are. They combined some of the smaller two- to four-family units to create multi-family, and they scattered single-family houses evenly across town. Group D (above right), while keeping density in Wellesley Square and the eastern part of town, scattered their two- to four-family units (red and orange blocks) along the main streets of town. One unique choice this group made was to add some single-family units on the western side of Lake Waban.

Group E (above left) stacked some of their larger development blocks (green, red, and black blocks) and clustered some of their smaller development blocks to create high density in less space. Many of their proposed developments are along main roads in Wellesley and include the Fells Road area, the Wellesley Hills T station area, and the eastern part of town. Lastly, Group F (above right) clustered their developments more so than any other group. They chose to stack multi-family blocks in the Wellesley Square area and added more units in the MassBay Community College/Sisters of Charity area than the other groups. The group clustered some smaller units in the North 40 area as well.

DATA SOURCES

Information for the Wellesley HPP comes from a variety of sources, including the Town, previous plans and studies, the Metropolitan Area Planning Council (MAPC), state agencies, proprietary data, the U.S. Department of Housing and Urban Development, and Bureau of the Census. The most frequently used sources of data are as follows:

- The **Census of Population and Housing** (decennial census): mainly Census 2010, though some tables from Census 2000 were relied upon as well.
- The **American Community Survey (ACS)**: The ACS provides demographic and housing estimates for large and small geographic areas every year. Although the estimates are based on a small population sample, a new survey is collected each month, and the results are aggregated to provide a similar, “rolling” dataset on a wide variety of topics. In most cases, data labeled “ACS” in this plan are taken from the most recent five-year tabulation: 2011-2016 inclusive. Note: population and household estimates from the ACS may not align as well as one would like with local census data collected by the Town. However, to

allow for a consistent basis of comparison between Wellesley and other communities, this HPP relies on ACS estimates.

- **HUD Consolidated Planning/Comprehensive Housing Affordability Strategy (CHAS) Data.** Created through a combined effort of the U.S. Department of Housing and Urban Development (HUD) and the Census Bureau, this dataset is a “special tabulation” of ACS. According to the HUD guidance, “these special tabulation data provide counts of the numbers of households that fit certain combinations of HUD-specified criteria such as housing needs, HUD-defined income limits (primarily 30, 50, and 80 percent of median income) and household types of particular interest to planners and policy-makers.” The most recent CHAS Data are based on the ACS 2008-2012 estimates.
- **Wellesley GIS:** The Town’s Geographic Information System (GIS) provided numerous GIS databases for use in this plan. The databases were used to map existing land uses, recent housing sales, recent single-family teardown/rebuild projects, zoning, infrastructure, natural resources, and other factors.
- **The Warren Group/Real Estate Records Search:** The consulting team tapped the Warren Group’s extensive real estate transaction databases to sample sales volume and sale prices in various parts of Wellesley.
- **UMass Amherst/Donohue Institute:** This source was relied upon for population projections and trends, and building permit trends.

Many other publications were also reviewed during the development of this plan as well. Extensive and invaluable guidance was received throughout from the Wellesley Planning Department.

2. Housing Needs Assessment

KEY FINDINGS

- Wellesley is a town of homeowners. Over 82 percent of Wellesley households own their residence.
- Out of 7,111 homeowners, 6,699 – or 94 percent – live in detached single-family dwellings.
- Wellesley has the third highest median household income in Massachusetts.
- Wellesley has very little racial, ethnic, or class diversity. Black or African Americans make up a much smaller percentage of the total population in Wellesley than in the Boston Metro area as a whole. Moreover, federal census data indicate that over half [of all the](#) blacks counted as part of Wellesley’s total population are students and faculty at Wellesley and Babson.
- In 2017, Wellesley ranked tenth in the Boston Metro area for total number of housing sales. Since 2010, some 2,600 homes have sold in Wellesley.
- According to the Town’s recently completed Unified Plan, the total number of housing units in Wellesley rose by just 218 units between 2000 and 2017. In 2017, the median single-family sale price in Wellesley was \$1.3 million.
- Wellesley is redeveloping. Most new housing construction in Wellesley occurs due to teardowns. Since 2009, the Wellesley building department has issued 575 residential demolition permits. Redevelopment of older housing stock brings higher asset value to the community, but in most cases, it does not produce a net increase in housing units.

POPULATION CHARACTERISTICS

Wellesley and the surrounding communities have absorbed modest population growth over the past few decades. Echoing Greater Boston trends, Wellesley’s population growth rate accelerated with the “Baby Boom,” only to reverse with a slight population decline from 1970-1990 as household sizes fell throughout the U.S. Since 1990, however, Wellesley has been gaining residents again, narrowly outpacing the rate of growth in Norfolk County. Today, the Census Bureau estimates Wellesley’s total population at 29,215.⁶ Citing projections from the Metropolitan Area Planning Council (MAPC) and the University of Massachusetts Donohue Institute, Wellesley’s *Unified Plan* anticipates another cycle of population decreases through 2035, yet at the same time, modest growth in total households.⁷ This is generally consistent

⁶ U.S. Census Bureau, American Community Survey (ACS) Five-Year Estimates, 2012-2016, B01003. “Total population” includes people in group quarters, e.g., college dormitories.

⁷ *Wellesley Unified Plan* (Draft), “Understanding Wellesley Today,” 8.

with conditions throughout Boston's west suburbs, where household formation rates continue to rise while household sizes drop.

POPULATION AGE

Wellesley's population age characteristics come as no surprise. Like virtually all communities in the Northeast, Wellesley has a "graying" population and a shrinking supply of younger adults. And, while available population projections point to a gradual decline in dependent children as well, Wellesley has a large share of people under 19 years compared with other Boston suburbs. Its prestigious school district has an undeniable impact on the homebuying choices made by wealthy families in the Greater Boston area. According to the Census Bureau, over half of all families in Wellesley (and 43 percent of all households) have children under 18.⁸ The size of the under-19 and over-65 population combined produces a staggering **age dependency ratio** of 0.93. These are not ordinary statistics.

RACE, ETHNICITY, CULTURE, AND GEOGRAPHIC MOBILITY

Wellesley has limited racial and ethnic diversity. Minorities comprise about 17 percent of the town's total population (see Table 2.1), with Asians making up a larger percentage than all other racial groups combined and half of all foreign-born residents as well. The Latino community, which is primarily white, represents less than 5 percent of the total population.⁹ By contrast, the black or African American population in Wellesley is quite small – under 3 percent of the total – a fact not lost on many of the town's affordable housing organizations and supporters. During an interview for this housing plan, one commenter said she often wonders what residents mean when they say they want to maintain Wellesley as a town that welcomes diversity. Faculty and students at Wellesley College and Babson College represent over 50 percent of the town's entire black population.¹⁰ The unusually small percentage of blacks in Wellesley matters because throughout the Boston Metro area and nationally, the largest racial and ethnic disparities in wealth occur among blacks born in the U.S. and Latino blacks.¹¹ Achieving housing equity for very low-income households can be very challenging in an affluent suburb because the gap between what they can afford and prevailing market values invariably requires deep subsidies.

EDUCATION

Wellesley residents are extraordinarily well educated, and so are their counterparts in the surrounding towns. Educational attainment is one of several measures that separates Greater Boston suburbs from the rest of the state and even more from the rest of the nation. Over 80 percent of Wellesley adults 25 years and over hold at least a bachelor's degree and over 50 percent hold a graduate or professional degree. Wellesley residents value and benefit from living in a region with many colleges and universities in addition to those within their own town.

⁸ ACS 2012-2016, B11003, and Barrett Planning Group.

⁹ ACS 2012-2016, B03002, and Barrett Planning Group.

¹⁰ ACS 2012-2016, B02001 (calculated by census block group), and Barrett Planning Group.

¹¹ Tatjana Meschede, et al. *Wealth Inequalities in Greater Boston: Do Race and Ethnicity Matter?* CDP 2016-02. (Federal Reserve Bank of Boston, 2016).

LABOR FORCE AND EMPLOYMENT

A community's **labor force** includes all civilian residents 16 years and over with a job or in the market for one. Wellesley's labor force includes approximately 13,000 people, 95 percent of whom are employed. The town is fortunate to have some large institutions and other private employers because they offer desirable employment for highly skilled and highly educated workers. As a result, Wellesley has a large percentage of residents 16 years and over working locally – about 35 percent (4,246 people) – and many residents who walk or bike to work – about 12 percent.¹² The town also has a sizeable group of telecommuters and self-employed people working at home, which is not uncommon in affluent communities.

Consistent with the town's educational profile, Wellesley residents tend to work in fields requiring advanced degrees and in high-wage occupations. Higher education, health care, science and technology, professional services, finance, and management dominate the list of industries that employ Wellesley residents.¹³ On average, Wellesley men with full-time employment earn \$153,836 per year, which is very high for the Greater Boston region overall but consistent with other west suburbs. Still, the gender pay gap persists in Wellesley and so many affluent towns, with men earning almost 1.7 times the annual salaries of women – a ratio dramatically higher than that of Greater Boston as a whole.¹⁴ Without substantial child support, a single woman with children and a full-time job would find it very difficult to live in Wellesley. As illustrated later in this chapter, it can even be harder for single women without children, especially older women.

THE JOBS-HOUSING (IM)BALANCE

The Executive Office of Labor and Workforce Development (EOLWD) reports that Wellesley has about 1,500 employer establishments with a combined total of 18,000 average monthly payroll jobs and an average weekly wage of \$1,576.¹⁵ The employment base (payroll jobs) is much larger than Wellesley's total housing inventory, currently estimated at 9,023 year-round units. The **sustainability** goal for a local economy is 1.0-1.5 jobs per housing unit: enough jobs to give residents meaningful opportunities to work locally and enough housing units to give local workers meaningful options to live in the town. The **jobs-to-housing ratio** in Wellesley is 1.99, which means there are nearly two jobs for every one housing unit, i.e., potential demand that substantially exceeds the supply.

The jobs-to-housing ratio in Wellesley may be skewed slightly by the presence of college campuses with some of their workforce housed on site. For example, Wellesley College owns approximately 60 homes that serve as faculty housing. However, even with a reasonable estimate of the on-campus live/work population, the difference is not large enough to have a material impact on the ratio. Most people working in Wellesley commute from other towns every day, and this can be seen in the estimated size of its "workplace" or daytime population: 23,220 workers, which includes 4,246 who live in Wellesley.¹⁶

¹² ACS 2012-2016, B08301, and Barrett Planning Group.

¹³ ACS 2011-2016, C24050, and Wellesley Unified Plan (Draft), Chapter 9 (2018), 3.

¹⁴ ACS 2011-2016, DP-03.

¹⁵ EOLWD, ES-202, Town of Wellesley, 2016 Annual Report, All NAISC Codes.

¹⁶ Census Bureau, Journey to Work Tables.

HOUSEHOLD CHARACTERISTICS

Housing is a product, and households can be thought of as consumers. The housing needs and preferences of households vary by age group, household size, commuting distances, access to goods and services, and clearly, what people can afford for rent or a mortgage payment. The size and composition of a community's households often indicate how well suited the existing housing inventory is to residents. In turn, the number and type of households and their spending power influence overall demand for housing.

HOUSEHOLDS AND FAMILIES

The Census Bureau divides households into two broad classes: families and non-families. A **family household** includes two or more related people living together in the same housing unit, and a **non-family household** can be a single person living alone or two or more unrelated people living together.¹⁷ Town-wide, non-families comprise about 23 percent of all households in Wellesley.¹⁸ Compared with surrounding cities and towns, Wellesley's family household rate of 77 percent is on the lower end, but much higher than the state average. As for family type, married couples make up an exceptionally high 91 percent of all families in Wellesley (and 70 percent of all households).¹⁹

HOUSEHOLD SIZE & COMPOSITION

Wellesley may not have the region's largest percentage of family households, but it ranks near the top of the Greater Boston area for family size. Over 34 percent of its households include four or more people, and since 1990 Wellesley's average family size has gradually increased even as household sizes overall have dipped. Today, the Census Bureau estimates that Wellesley's average household includes 2.84 people and the average family, 3.32. This seems consistent with findings in the Unified Plan that the primary group of households moving into Wellesley are "adults in the 35- to 44-year-old range in households with their children" while those moving out include young people leaving Wellesley to attend college or moving to job centers in other parts of the country and people in their seventies and older.²⁰

The fact that Wellesley has a large percentage of families with dependent children seems widely understood in the town, but the characteristics of other types of families and nonfamily households matter as well. Single people living alone comprise some 20 percent of all Wellesley households and 87 percent of all nonfamily households. An unusual feature of Wellesley's one-person households is that about 60 percent are senior citizens: low compared with many suburbs and small towns.

¹⁷ People not counted as members of a household are counted in the group quarters population, i.e., college students or nursing home residents. See also, Appendix A, Glossary. For zoning and federal Fair Housing Act purposes, the definition of "family" differs from that used by the Census Bureau.

¹⁸ ACS 2012-2016, B11001, "Household Type (Including Living Alone)," and Barrett Planning Group.

¹⁹ Ibid.

²⁰ Wellesley Unified Plan, (Draft, 2018), 7-5.

HOUSEHOLD WEALTH

Household income influences where people live, their health care and quality of life, and opportunities they offer their children. Wellesley's prestige is inextricably tied to wealth of its households, and has been true for a time. Table 2.2

Table 2.2. Household Income Summary			
Town	Median Household Income	Median Family Income	Median Nonfamily Income
Dover	\$189,265	\$205,139	Not Reported
Natick	\$104,372	\$135,824	\$51,932
Needham	\$139,477	\$166,931	\$54,919
Newton	\$127,402	\$170,639	\$56,907
Sherborn	\$158,250	\$168,036	\$63,125
Wayland	\$157,500	\$191,134	\$44,448
WELLESLEY	\$171,719	\$200,817	\$74,000
Weston	\$191,744	\$235,766	Not Reported
Greater Boston	\$77,809	\$98,431	\$45,866
Source: ACS 2011-2016.			

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offers a snapshot of three median income indicators – all households, family households, and non-family households – that have an important place in any conversation about housing affordability. As seen below, Wellesley is the third wealthiest town in the immediate area, behind Weston and Dover, in terms of median household and median family income. However, the nonfamily median income in Wellesley exceeds that of all the surrounding communities and ranks third for the state.²¹ This reflects, at least in part, the fact that Wellesley's one-person households include a broader mix of people than elderly seniors (75 years and over), whose incomes tend to be very low, especially among women. Single people living alone in Wellesley cover all age groups of owners and renters 24 years and over.

Median income statistics shed light on a community's relative economic position, but they also can mask extreme differences in household wealth. The chart above compares Wellesley and the Boston Metro area by the percentage of households in a range of incomes. The chart reinforces that Wellesley has a disproportionate concentration of households in the highest income band, i.e., there is greater income inequality in Wellesley than in surrounding region. As shown later in this section, statistics from the U.S. Department of Housing and Urban Development (HUD) show that 17 percent of Wellesley's households have incomes that fall within the meaning of **low or moderate income**, and about 72 percent of these households spend more of their monthly income on housing than is generally considered affordable. (See "Housing Cost Burden").

Comparing household incomes by household type or age offers another way to explore household income advantages and limitations. It is not uncommon for seniors to have lower incomes than young families, and this applies to Wellesley, too. However, Wellesley stands out for the degree of difference between the incomes of its young families (householders between 25 and 44 years) and their Boston Metro counterparts. In Wellesley, the median income for this group is \$217,222: 2.5 times more than the Boston Metro median income for

²¹ ACS 2012-2016, B19202.

the same group of householders, \$88,000. Furthermore, both regionally and nationally, the highest-income householders are between 45 and 64 years, but this is not the case in Wellesley, where their median income is 90 percent of the median for the younger cohort. And, the younger cohort represents most movers into Wellesley.²² Single women without children and single retirees (people 65 and over) have the lowest incomes in Wellesley, as depicted in the chart below.

HOUSING CHARACTERISTICS & TRENDS

WELLESLEY’S HOUSING SUPPLY

Wellesley has approximately 9,134 housing units. The overwhelming majority are detached single-family homes, and while many are older homes built before 1940, about 11 percent (over 1,000 units) have been constructed since 2000. Most of these did not add to the town’s housing supply. Instead, they replaced older homes that were torn down to make way for new, larger residences.

Since 2009, Wellesley’s building department has issued 575 residential demolition permits. Some of the town’s neighborhood streets have been virtually transformed by the prevalence of teardown activity, such as Westgate, Wynnewood Road, Patton Road, or Benvenue Street, and several interconnected streets north of Route 9, or Livingston Road and Ridge Hill Farm Road near the Dover/Needham line.²³ While words like “redevelopment” sometimes make people cringe, Wellesley is obviously redeveloping. The effects can be seen in just about every neighborhood in town. Nearly all the replacement housing consists of large single-family dwellings, though near Wellesley Square, two-unit residential condominiums have been built as well.²⁴

HOUSING TYPES AND SIZES

Wellesley’s homes are large, and the [redevelopment](#) process ~~of mansionization~~²⁵ has made them even larger. Assessor’s data reveal not only useful information about housing values and types, but also sizes – in residential floor area – and number of rooms, and a host of other information about style and structure trends, including housing age. Over time, the houses in Wellesley have increased in living area, or the floor area occupied as living space, as well as rooms, and most likely accessory features as well (such as garages, barns, and so on). While facts about the latter were not available for this housing plan, the amount of residential floor space, building age, and value statistics can be gleaned from the assessor’s database.

Table 2.3. Change in Size and Values in Wellesley’s Single-Family Home Inventory

²² ACS 2012-2016, B19049.
²³ Wellesley Planning Department, “SFR Demo Permits 1-1-2009 to 2-18-2018” (Excel).
²⁴ Wellesley Planning Department, “SFR New Permits 1-1-2009 to 2-18-2018” and “2-Family New Permits” (Excel).
²⁵ ~~Mansionization involves tearing down existing single-family homes and replacing them with larger residences.~~

Age of Dwelling (Year Built)	Average Lot (Sq. Ft.)	Average Residential Floor Area (Sq. Ft.)	Average No. Rooms	Land Value to Building Value Ratio
2000 to Present	21,418	4,651	10	0.578
1980-1999	21,166	3,715	9	0.927
1960-1979	22,126	2,654	8	1.465
1945-1960	16,900	2,275	8	2.618
1920-1944	15,871	2,475	8	2.387
1900-1919	16,061	2,681	8	2.772
1865-1899	17,579	2,789	8	2.746
Pre-1865	24,855	2,592	9	3.248
Source: Wellesley's Assessor's Parcel Database (2014) and Barrett Planning Group LLC.				

As shown in Table 2.3, suburban redevelopment has ushered into Wellesley a generation of larger, very valuable homes. Demolition and rebuild projects will continue in Wellesley in neighborhoods with homes approximately 50 years old and older because the land is worth more than the existing residences (expressed in this table as a **land-value ratio**).

HOUSING OCCUPANCY

The prevalence of single-family homes goes together with high homeownership rates in just about every town, and Wellesley is no exception. Over 82 percent of all units in Wellesley are owner-occupied, and census tract data indicate that some of the renter-occupied units are housing for employees of Wellesley College or Babson College, and to a more limited extent at Dana Hall. There are very few vacancies in Wellesley, where the homeownership vacancy rate hovers around 1 percent and the rental vacancy rate, 5 percent. Both statistics point to a tight housing market. For the past seven years, Wellesley has placed in the top 20 Greater Boston communities for number of single-family housing sales, ranking tenth for the entire region in 2017.²⁶

The competition for a home of one's own in Wellesley drives the value of land and the cost of housing. Moreover, the homeownership vacancy rate in all the towns around Wellesley is less than 3 percent, so there are remarkably few opportunities for young wage earners to choose one of these communities. Out of the 61,000 units in the inventory of owner-occupied and for-sale homes in Wellesley and the surrounding towns, only 450 are for sale and just over 700 have sold but have not yet closed. Vacant and available rental units are very hard to find, as indicated in the chart above. This has contributed to the uptick in applications to build rental housing in so many of Boston's west suburbs.

HOUSING SALE PRICES

Homes for sale in Wellesley cater to homebuyers with the means to "buy up" in Greater Boston and, quite often, homebuyers with children under 18. The chart below tracks median sale prices and sales volume statistics for Wellesley since 2008, covering the period of

²⁶ The Boston Foundation, *Greater Boston Housing Report Card 2017, Ideas from the Urban Core: Responsive Development as a Model for Regional Growth*, 21.

contraction and recovery in the region's residential real estate market. Current real estate sales data from *Banker & Tradesman* show that Wellesley's housing market remains highly competitive and its home sellers can command top dollar for a single-family residence. The median sale price for all of 2017 was \$1.3 million, but in 2018, the median sale price had already reached \$1.3 million by the end of January alone – at a time when sales volume tends to be at the lowest point of the year. None of these sales involved first-time homebuyers. The average mortgage loan for homes recently purchased in Wellesley is anywhere from 60 to 70 percent of the sale price.²⁷

Estimates published by the Census Bureau indicate that about 20 percent of Wellesley's homeowners moved into their present residence after 2009. This seems consistent with findings in the *Greater Boston Housing Report Card 2017*, which ranks Wellesley (and Newton) among the top Greater Boston communities for housing sales volume since 2011.²⁸

MARKET RENTS

Like home prices, market rents run very high in Wellesley, and there are only a few units available at any given time. An informal survey conducted for this plan produced a limited list of available properties, many of which are not apartments, as shown below. Wellesley is like many single-family suburbs where most of the rental supply consists of detached single-family homes and small attached or multi-unit buildings. In fact, 54 percent of Wellesley's renter-occupied housing units are one- to four-unit residences, many of which are condominiums not occupied by the owners. Excluding single-family homes, Wellesley's rental housing is dominated by small units. The multifamily apartment and condo-for-rent inventory consists almost entirely of 1- or 2-bedroom units designed for small households, yet the monthly rents clearly exceed what most single people can afford and, in many cases, they also exceed what a young employed couple could afford. In the table above, the rents would require an annual household income of anywhere from \$74,000 to \$144,000, not including the single-family houses.²⁹

Table 2.4. Rental Listings in Wellesley, February 2018 (Sample)

Location	Unit Size	Asking Rent
Hastings Village (Apartment)	2 BR	\$2,600
Worcester Street (House)	5 BR	\$4,750
Apartment (Location Undisclosed)	2 BR	\$3,600
Longfellow Road (House)	4 BR	\$3,950
Cedar Street (Condo)	3 BR	\$2,300
Cedar Street (Apartment)	2 BR	\$2,500
Lawrence Road (Condo)	3 BR	\$3,600
Washington Street (Apartment)	2 BR	\$1,850
Lathrop Road (House)	4 BR	\$5,000
Worcester Street (Apartment)	2 BR	\$2,900
Central Street (Apartment)	1 BR	\$1,800
Linden Street (Apartment)	2 BR	\$2,100
Westwood Road (House)	5 BR	\$7,400
Wareland Road	2 BR	\$2,590
Source: Trulia, Zillow, and Apartment Guide.		

²⁷ *Banker & Tradesman*, Real Estate Records (Online), YTD January 2018.

²⁸ ACS 2012-2016, B07001, B25038, and Barrett Planning Group.

²⁹ ACS 2012-2016, B25024, and Barrett Planning Group.

HOUSING AFFORDABILITY & HOUSING NEEDS

Under a 1969 Massachusetts law, all communities are supposed to have housing that is affordable to **low-income households** and remains affordable to them even when home values appreciate under robust market conditions. Another type of affordable housing - generally older, moderately priced dwellings without deed restrictions, and which lack the features and amenities of new, high-end homes - can help to meet housing needs, too, but only if the market allows. There are other differences, too. For example, any household - regardless of income - may purchase or rent an unrestricted affordable unit, but only a low- or moderate-income household qualifies to purchase or rent a deed restricted unit. Both types of affordable housing meet a variety of housing needs and both are important. The difference is that the market determines the price of unrestricted affordable units while a legally enforceable deed restriction determines the price of restricted units. Today, Wellesley has very few affordable units, unrestricted or deed restricted. Furthermore, unrestricted units that may have offered a pathway to owning a home in the past have been a key target of teardown/rebuild projects in Wellesley's older neighborhoods.

CHAPTER 40B SUBSIDIZED HOUSING INVENTORY

When people refer to "Chapter 40B," they usually mean the state law that provides for low- and moderate-income housing development by lifting local zoning restrictions. However, G.L. c. 40B - Chapter 40B proper - is actually the Commonwealth's regional planning law and the parent legislation for agencies like MAPC. The four short sections that make up the affordable housing provision were added in 1969, and they are called "Chapter 40B" in this plan to be consistent with affordable housing nomenclature in Massachusetts. Nevertheless, remembering the regional planning umbrella for affordable housing can help local officials and residents understand the premise of the law and reduce confusion and misinformation.

Chapter 40B's purpose is to provide for a regionally fair distribution of affordable housing for people with low or moderate incomes (see Table 2.7). Affordable units created under Chapter 40B remain affordable over time because a deed restriction limits resale prices and rents for many years, if not in perpetuity. The law establishes a statewide goal that at least 10 percent of the housing units in every city and town will be deed restricted affordable housing. This 10 percent minimum represents each community's "regional fair share" of low- or moderate-income housing. It is not a measure of housing needs.

Chapter 40B authorizes the Zoning Board of Appeals (ZBA) to grant a **comprehensive permit** to pre-qualified developers to build affordable housing. "Pre-qualified developer" means a developer that has a "Project Eligibility" letter from a state housing agency. A comprehensive permit covers all the approvals required under *local* bylaws and regulations. Under Chapter 40B, the ZBA can waive local requirements and approve, conditionally approve, or deny a comprehensive permit, but in communities that do not meet the 10 percent minimum, developers may appeal to the state Housing Appeals Committee (HAC). During its deliberations, the ZBA must balance the **regional need for affordable housing** against valid local concerns such as public health and safety, environmental resources, traffic, or design. In towns that fall below 10 percent, Chapter 40B tips the balance in favor of housing needs. In

addition, ZBAs cannot subject a comprehensive permit project to requirements that “by-right” developments do not have to meet, e.g., conventional subdivisions.

The 10 percent statutory minimum is based on the total number of year-round housing units in the most recent federal census. For Wellesley, the 10 percent minimum is currently 909 units. At 6.33 percent, Wellesley falls short of the 10 percent minimum by 334 units.

Table 2.5. Wellesley Subsidized Housing Inventory

Development	Location	Type	Units
Barton Road Development	190 Barton Rd.	Rental	90
Dean House/List House	41 River St./315 Weston Rd.	Rental	57
Kilmain House	505-513 Washington St.	Rental	40
Morton Circle Development	487-503 Washington Street	Rental	36
Linden Street Development	Waldo Ct./Linden	Rental	12
Ardemore at Wellesley	4 Cedar Street	Rental	36
Jubilee House	10 Cross St	Rental	4
Glen Grove	50 & 60 Grove Street	Rental	125
Townhouses at Edgemoor Circle	Edgemoor Ave and Overbrook Drive	Ownership	3
DDS Group Homes	Confidential	Rental	12
Walnut Street Fire Station	182 Walnut Street	Ownership	1
Hastings Village	54-66 Hastings St	Rental	52
Wellesley Manor	874-878 Worcester St	Ownership	7
Peck Avenue & Mellon Road	Peck Avenue & Mellon Road	Ownership	3
Waterstone at Wellesley	27 Washington St	Rental	82
Wellesley Commons	65 Washington Street	Ownership	1
The Belclare Condominium	580 Washington & 53 Grove	Ownership	5
Wellesley Place	978 Worcester Ave	Rental	7
Linden Street	Linden Street	Rental	2
		Total	575
		10% Minimum	909
		Shortfall	334

Source: Massachusetts Department of Housing and Community Development, 2018,

Note: The Town of Wellesley’s records differ slightly from DHCD’s. This plan reports the official SHI from DHCD, as of January 26, 2018.

Due to its prestige, extraordinarily high market prices, high land values, and zoning policies that are out of alignment with regional housing demand, Wellesley has become vulnerable to applications for comprehensive permits. What is happening in Wellesley now echoes conditions in Brookline, Newton, and Wayland, where the ZBAs have faced multiple comprehensive permits filed very close together. By contrast, Needham and Natick no longer face the threat of unwanted comprehensive permits because they meet the 10 percent minimum, at least until the Census Bureau publishes new housing statistics with Census 2020. At that time, the denominator (total year-round housing units) will change and some towns that currently exceed 10 percent could fall below the statutory minimum.

Table 2.6 shows that as of August 2018, the Wellesley ZBA has received five comprehensive permit applications, most of which involve developments that received Project Eligibility from MassHousing, the largest state subsidizing agency. [One other project is seeking a Project](#)

[Eligibility letter as well.](#) Although MassHousing originally denied Project Eligibility for two projects (680 Worcester Street and 16 Stearns Road), both were subsequently approved with only *de minimis* changes to the first set of plans. Even if ~~all of all~~ the proposed developments eventually received a comprehensive permit, the combined increase in the Subsidized Housing Inventory would be ~~185-249~~ units – still ~~149-85~~ short of the 10 percent minimum. With a DHCD-approved Housing Production Plan, however, either Delanson Circle or 148 Weston Road would make the Town eligible for a “safe harbor” one-year plan certification (see Section 1 and [the](#) Appendix). These properties, together with the Town’s existing affordable housing locations, are shown in Map 2.1.³⁰

Address	Type	Total Units	Units Eligible for SHI	Actually Affordable Units	Status
1-8 Delanson Circle	Rental	90	90	18	Comp. Permit Application
148 Weston Road	Rental	55	55	11	Comp. Permit Application
135 Great Plain Ave.	Owner	44	11	11	Comp. Permit Application
680 Worcester St.	Rental	20	20	5	Comp. Permit Application
16 Stearns Road	Owner	36	9	9	Comp. Permit Application
Total		245	185	54	

Source: Town of Wellesley “40B Development Projects” and Barrett Planning Group.

MEASURING HOUSING NEEDS

One measure of housing needs is the shortfall of Chapter 40B units. However, Chapter 40B developments usually respond to the strength of a regional housing market, so comprehensive permits do not always address the affordable housing needs of a community or region. Furthermore, low-and moderate-income households make up a significantly larger percentage of all households than 10 percent. This can be seen in Wellesley, where 17 percent of the town’s households have incomes that would qualify for a Chapter 40B unit. Understanding housing needs requires a more nuanced approach than can be gleaned from a community’s Chapter 40B “gap.” It involves an assessment of needs and barriers that exist within individual communities and the region of which they are part.

Housing needs are not limited to low- or moderate-income people, but often, other needs overlap with economic need. Accessible homes for people with disabilities, small housing units for older people who do not want the maintenance responsibilities of a single-family home, and a base of modestly priced apartments for young citizens entering the workforce are common needs throughout Massachusetts. About 10.5 percent of Wellesley’s population has a disability, but except for senior housing and a very small inventory of group home units, Wellesley has very little barrier-free housing. The same populations – seniors, young workers, and people with disabilities – have needs for housing near goods and services, yet there are not many affordably priced housing units near any of Wellesley’s village centers. Furthermore, while there are “over-55” age-restricted developments in and around Wellesley,

³⁰ ~~Maps will be inserted in the final draft report.~~

many of the units are expensive condominiums or townhouses. Meanwhile, housing that would meet the needs of lower-income seniors has become increasingly difficult to build due to a shortage of federal and state housing subsidies.

HOUSING COST BURDEN

A disparity between growth in housing prices and household incomes contributes to a housing affordability problem known as **housing cost burden**. The U.S. Department of Housing and Urban Development (HUD) defines housing cost burden as the condition in which low- or moderate-income households spend more than 30 percent of their monthly gross income on housing. When they spend more than half their income on housing, they are said to have a **severe housing cost burden**. Housing cost burden – not Chapter 40B – is the key indicator of affordable housing need in cities and towns. Table 2.7 reports HUD’s current housing program income limits by family size for the Boston Metro Area and the maximum housing payment that is affordable in each tier. “Low” and “moderate” incomes are based on percentages of the HUD Area Median Family Income (HAMFI), adjusted for household size. What low- and moderate-income households can afford is far less than prevailing market rents in Wellesley.

Table 2.7. Low & Moderate Income Limits and Affordable Housing Costs				
	Low Income		Moderate Income	
Household Size (# People)	HUD Income Limit	Maximum Affordable Housing Payment	HUD Income Limit	Maximum Affordable Housing Payment
1	\$37,750	\$944	\$56,800	\$1,420
2	\$43,150	\$1,079	\$64,900	\$1,623
3	\$48,550	\$1,214	\$73,000	\$1,825
4	\$53,900	\$1,348	\$81,100	\$2,028
5	\$58,250	\$1,456	\$87,600	\$2,190
6	\$62,550	\$1,564	\$94,100	\$2,353
Source: U.S. Department of Housing and Urban Development, FY 2018 Boston Metro Income Limits.				

In Wellesley, 1,055 low- or moderate-income households are housing cost burdened (71 percent) and 745 are severely cost burdened (51 percent).³¹ Table 2.8 reports the total number of low- or moderate-income households and the incidence of housing cost burden in Wellesley by tenure and income range. Low- or moderate-income households are eligible to purchase or rent Chapter 40B affordable units.

Table 2.8. Low- and Moderate-Income Households and Housing Cost Burden in Wellesley			
Household Income Group	Total	% Cost Burdened	% Severely Cost Burdened
Low-Income Households	1,060	75.5%	58.5%
Owners	550	91.8%	68.2%
Renters	510	56.9%	48.0%
Moderate-Income Households	410	62.2%	30.5%
Owners	310	61.3%	29.0%

³¹ CHAS 2010-2014.

Renters	100	70.0%	40.0%
Source: HUD, Comprehensive Housing Affordability Strategy (CHAS) Data. Low and moderate income limits are shown in Table 2.7.			

WELLESLEY'S HOUSING AFFORDABILITY GAP

There is an enormous **affordability gap** in Wellesley. In addition to market-rate rents that far exceed the maximum affordable housing payment for low- or moderate-income people, the for-sale market is out of reach for low- or moderate-income and middle-income homebuyers. For example, a three-bedroom condominium with an asking price of \$216,800 (rounded) would be affordable to a moderate-income purchaser, but in 2017, the median condominium sale price in Wellesley was \$715,000. Moreover, while a moderate-income homebuyer could afford to purchase a \$248,300 single-family home, last year's median sale price was \$1.3 million – that is, a price roughly 5.5 times greater than the maximum affordable purchase price for a Chapter 40B homeownership unit.³² The \$216,800 per-unit gap for a condominium and \$1+ million per unit gap for a single-family home far exceeds the maximum per-unit subsidies available from most state and federal housing programs, and this is a key reason for the very high density found in many Chapter 40B developments in Boston's west suburbs.

³² Maximum affordable purchase prices calculated with DHCD "Local Initiative Program" affordability assumptions: 30% FRM, interest rate @ 4.4 percent based on most recent Freddie Mac Mortgage Market Survey, 5% downpayment, and household income for pricing purposes at 70% of the Boston Metro HUD median income for a family of four. Wellesley FY 2018 tax rate of \$11.95 per thousand.

3. Potential Barriers to Affordable Housing Development

This section describes Wellesley's natural and built environment, focusing on conditions that limit housing growth in Wellesley. The information presented here is largely based on other planning documents, including the 2015 *Wellesley Open Space and Recreation Plan* and the Draft *Unified Plan*. Specific environmental elements that can affect housing development include land and water resources, wildlife habitat, scenic features, and contaminated sites. Local regulations also limit the amount of housing development and types of housing that can be built. In most cases, these local regulations form the basis for the waivers that comprehensive permit developers ask the ZBA to grant in order for them to build affordable housing.

KEY FINDINGS

- Wellesley relies on groundwater for much of its public water supply, and the town contains two major aquifers. Additional water is provided by the MWRA as needed.
- The vegetated wetlands in Wellesley are some of the most important natural resources in the Town because of the unique habitat they offer for endangered or threatened species.
- Wellesley has two areas designated as Priority Habitat: along the northern shore of the Charles River at Elm Bank and an area in the Cochituate Aqueduct. Priority Habitats are not protected by law, but the species that may use these habitats are protected.
- Wellesley has the basic municipal infrastructure and utilities required for land development: public water and sewer service, adequate roads, and some public transportation facilities. Its schools have entered a period of declining K-12 enrollment, ~~so there is some room to accommodate more students.~~
- Wellesley's zoning does little to encourage a range of housing types or the density required to support affordable housing development on privately owned land. Taken together, the zoning and non-zoning requirements Wellesley imposes on housing construction effectively encourage developers to pursue Chapter 40B comprehensive permits.
- The potential for conflicts exists between some of the housing and residential development goals in Wellesley's new *Unified Plan* and the realities of affordable and mixed-income housing development. The potential conflicts involve scale, density, housing types, and settings. As the *Unified Plan* makes clear, the Town will need to use strategic redevelopment to achieve multiple goals and identify development opportunities that solve more than one challenge at a time.

ENVIRONMENTAL LIMITATIONS

TOPOGRAPHY AND SOILS

Wellesley's rolling hills are the legacy of the continental glacier that once extended beyond Cape Cod. Maugus Hill is the largest of six drumlins in the Town. Kames ~~dot~~[can be found in](#) Wellesley College's Nehoiden and Wellesley Country Club golf courses, while eskers snake around Morses Pond, Longfellow Pond, and Town Forest along Rosemary Brook. Lake Waban and Morse's Pond are depressions left by melted blocks of ice as the land took on its present appearance. Glacial erratics are scattered throughout the town. These large boulders were transported by the glacier to their present sites. Boulder Brook Reservation is named for its collection of erratics, including one aptly named Elephant Rock. "Problem Rock" is found at Grove and Dover Streets. Isolated round ponds are kettle holes left when great blocks of ice melted.

Like Wellesley's topography, its soil patterns vary from north to south. On the north side of town, the soils are generally well suited for development. However, other conditions constrain development in this part of Wellesley, notably steep slopes near the Weston town line and wet soils associated with Bogle, Boulder and Cold Stream Brooks. In addition, a large area stretching from Rocky Ledges to Cliff Road consists of soils with severe development limitations because of shallow depth to bedrock. Even here, though, there are pockets of moderately deep, well-drained soils, that can accommodate development, and much of this area has been developed for lots close to the minimum allowed by zoning (20,000 sq. ft.).

South of the railroad line, there are several soil groupings that can support development and woodland production. The southernmost part of Wellesley contains large areas of soils that have severe restrictions for development because of either topography or wetness.

WATER RESOURCES (MAP 3.1)

Wellesley is in the middle of the Charles River Watershed, one of three watersheds to flow into Boston Harbor. Six stream systems flow through the Town to the main stream of the Charles River on the north and south borders. They include the Waban Brook, Fuller Brook, and Pollock Brook, which drain the westerly two-thirds of the Town, and four stream systems that drain the easterly third of Wellesley toward the Charles River, opposite Newton: Cold Stream Brook, Rosemary Brook, Academy Brook, and Hurd Brook.

Wellesley's ponds and lakes range from Morses Pond and Lake Waban to small ponds scattered throughout Town. Lake Waban ~~and Morses Pond are~~ ["Great Ponds"](#) is a ["Great Pond"](#) because ~~they it~~ [covers](#) ten or more acres, which makes ~~them it~~ subject to state environmental regulations. Many of Wellesley's ponds have algal blooms caused by fertilizer pollutants and high amounts of sedimentation. In 1998, Wellesley began implementing the Pond Restoration Master Plan, which set priorities for improving and restoring the town's smaller ponds. The plan has resulted in the dredging and restoration of Rockridge Pond through removal of 6,000 yards of sediment and replacement of the pond outlet structure and drain; restoration of Bezanson Pond and Reeds Pond; and a feasibility study of the Town Hall Duck Pond.

Because of the extensive urbanization, Wellesley's streams and ponds are susceptible to degradation of water quality. Morses Pond, on the Wellesley-Natick town line, serves multiple uses. Several areas along its shores are densely developed for housing. Wellesley has two public water supply wells and a swimming beach on the easterly side of the pond, and a major open space corridor (Cochituate Aqueduct) passes along the north and east sides. Morses Pond is also vulnerable to the pressures of urbanization, for Worcester Street (Route 9) crosses two of the pond's tributaries, and there is extensive commercial strip development both in Natick and Wellesley.

Wellesley obtains most of its public water from groundwater, which is drawn from municipal wells at five locations throughout the Town with a total yield of 3.0 million gallons per day (mgd). Additional water is provided by the Massachusetts Water Resources Authority (MWRA), which when needed delivers 3.5 mgd to the Town, for a total potential supply of 6.5 mgd. Since 1980, the Town has encouraged water conservation through increased rates during the summer season. In 2003, Town Meeting adopted a Restriction on the Use of Water Supply Bylaw that empowers the Town to restrict or ban outside watering.

Wellesley lies over two major aquifers, portions of which are protected by the Water Supply Protection District that Town Meeting instituted in 1987.

- The Waban Brook Alluvial Aquifer begins in Weston and Natick and extends to the Charles River through the westerly part of Wellesley. Natick and Wellesley have water supply wells in this aquifer adjacent to Morses Pond, and Wellesley College's wells are located on its campus on the easterly side of Lake Waban. Of all the Town wells, those at Morses Pond are known to be the most influenced by surface water quality. Approximately 35 percent of the Waban Brook basin lies within Wellesley. In 1987, Wellesley created a Water Supply Protection District and based the Waban Brook portion of the district on the basin boundary.
- The second major aquifer in Wellesley, the Rosemary Brook Valley Aquifer, extends from downtown Needham to the easterly part of Wellesley. Wellesley has four municipal wells in the Rosemary basin, and the Wellesley Country Club has two private wells that are used solely for irrigation of the golf course. As in the case of the Waban Brook aquifer and basin, the Rosemary Brook basin demarcation is used to denote the overall recharge area for this aquifer. About 40 percent of the Rosemary Brook basin, or 982 acres, is in Wellesley, with the remaining 60 percent (1450 acres) in Needham.

A significant potential water supply source is the Elm Bank area, located alongside the Charles River in Dover adjacent to Wellesley and Natick. The site is currently owned by the Commonwealth of Massachusetts, which allows three uses: a riverfront park, water supply for the Towns of Dover, Natick, Needham and Wellesley, and affordable housing.

FLOOD HAZARD AREAS

Floodplains are land areas that are likely to flood during a storm event and are classified according to the average frequency of flooding. For example, the "100- year floodplain" is

that area of land that will be flooded, on average, once in every 100 years. Floodplains are delineated by topographical, hydrological, and development characteristics of a particular area. In Wellesley's case, the Federal Emergency Management Agency (FEMA) last mapped the 100-year and 500-year floodplains in 2012. The FEMA study found that most of Wellesley's flooding problems stem from water backup caused by culverts, bridge crossings, and dams.

The widest floodplains occur on Fuller Brook near the Needham town line and the Town's Recycling and Disposal Facility, along Fuller and Caroline Brooks upstream of their confluence (including Wellesley High School and much of Smith Street), and on the Charles River near William Street. Smaller floodplains are located adjacent to Boulder Brook at Worcester Street (Route 9) and Lexington Road; in the Boulder Brook Reservation; on Fuller and Waban Brooks near the Charles River; on Rosemary Brook in the Town Forest upstream of the Oakland Street crossing; and on the Charles River near Livingston Road and Winding River Circle.

WETLANDS AND WILDLIFE HABITAT

The vegetated wetlands in Wellesley are some of the most important natural resources, offering unique habitat for locally threatened species of amphibians and the ecosystems in which they thrive. The west side of Sabrina Lake is held in trust by the Wellesley Conservation Council, Inc. as the Guernsey Sanctuary. Wetlands on private land are protected by the state's Wetlands Protection Act and local regulations.

Wellesley also has several certified vernal pools. Vernal pools are wet depressions in the land that flood only part of the year. Many rare and valuable species depend on them. The Natural Heritage and Endangered Species Program (NHESP) identifies twelve certified vernal pools within Wellesley which include the north shore of Sabrina Lake in the Guernsey Sanctuary, the northerly corner of the [Wellesley College](#) "North 40" on Weston Road, two in the Boulder Brook Reservation, Boulder Brook where it crosses Route 9, and near Cold Stream Brook in the Farms area. By analyzing aerial photographs, state environmental scientists have identified thirty-two additional potential vernal pools in Wellesley.

Wellesley has two small areas designated as Priority Habitat under the Massachusetts Endangered Species Act (MESA): along the northern shore of the Charles River at Elm Bank and a small area in the Cochituate Aqueduct between Forest Street and Laurel Avenue. Priority Habitat Areas indicate where the NHESP estimates the existence of habitat for state-listed rare species. These estimates are based on species population records, habitat requirement, and landscape information. Priority Habitats per se are not protected by law, but the rare species that may use these habitats are protected.

SCENIC ROADS

Wellesley's streets and parks have been planned and are maintained to high standards, allowing for many otherwise average suburban landscapes to be deemed "scenic." Wellesley has a variety of scenic roads – that is, roads the Town has designated as scenic under the Massachusetts Scenic Roads Act. These roads are protected by special regulations so that trees

and stone walls within the right-of-way will be protected and will not be altered except after a public hearing and after consideration of the work by the Planning Board and Natural Resources Commission. They include Benvenue Street, Brookside Road, Cartwright Road, Cheney Drive, Pond Road, Squirrel Road, and The Waterway/Brookway.

ENVIRONMENTAL HAZARDS

According to the Massachusetts Department of Environmental Protection (DEP), Wellesley has two “Tier I” hazardous waste sites: The old Paint Shop site adjacent to Paint Shop Pond and Alumnae Valley west of College Road. Paint Shop Pond had one of the most serious chemical contaminations in the state until it was remediated by Wellesley College in 2003-2004. Arsenic and chromium-laden waste was dumped from a large paint pigment factory that operated east of the pond from the 1880s to 1930s. The toxic waste had affected nearly 40 acres of former wildlife habitat, killed amphibians, and rendered soils too toxic for plant growth. This property is in a high-yield aquifer recharge area.

A Groundwater Protection Study prepared by MAPC in 1982 identified several sites in the Waban Brook and Rosemary Brook basins that had been used in the past to dump solid waste. They include:

- An area east of the Morses Pond pumping station was used for a brief period in 1980 to dump ballast from the railroad. Materials were removed within one month of disposal, and test results indicated no evidence of pollution of the Morses Pond wells.
- A portion of the “North 40” off Turner Road was used as a temporary dump-and-cover landfill for household wastes during the late 1950s and early 1960s.
- The old Paint Shop site described above.
- Ash was formerly dumped at Nehoiden Golf Course off Washington Street. Wellesley College has built an equipment shed on the site of the original incinerator. Studies have shown no leachate problems in the nearby Fuller Brook and Lower Waban Brook.
- Closed landfills are at the playing fields between the Middle School on Linden Street and the Sprague Elementary School, were remediated as required by the Mass DEP and now a fully functional playing field.

The Department of Public Works facility off Woodlawn Avenue is also a closed landfill.

PRESERVATION PRIORITIES

OPEN SPACE

Wellesley has identified about 30 properties as priority candidates for land conservation, many of which occur along Washington Street, Pond Street, and the Aqueduct. While some of these properties may be poor candidates for new housing development, others may have potential for [a mix of](#) open space [and](#)-residential development.

HISTORIC PRESERVATION

Wellesley has a rich inventory of historic resources and the character of many of its neighborhoods and commercial areas are defined by historic buildings, structures, landscapes, and objects. Over 1,100 buildings, one cemetery, and 125 objects and structures are listed on the Massachusetts Cultural Resources Information System (MACRIS). Among these historic resources are 63 properties in Wellesley's five districts listed on the National Register of Historic Places:

- Hunnewell Estates Historic District
- Cochituate Aqueduct Linear District
- Sudbury Aqueduct Linear District
- Elm Bank
- Fuller Brook Park

MACRIS also identifies 47 properties listed individually on the National Register of Historic Places. A National Register district does not restrict private use or changes to properties. However, it facilitates rehabilitation tax incentives for owners of income-producing properties and provides limited protection from adverse effects of federal and state projects.

INFRASTRUCTURE AND PUBLIC FACILITIES

INFRASTRUCTURE

Wastewater Capacity. The sewer system in Wellesley discharges to the Massachusetts Water Resources Authority (MWRA) Deer Island Sewer Treatment Plant, which serves 43 Greater Boston communities. While most properties in Wellesley are connected to the public sewer system, 203 properties still rely on septic systems for wastewater disposal. The Deer Island plant in Boston Harbor treats approximately 3.85 MGD (million gallons per day) of sewage per day from Wellesley and sends the treated effluent nine miles out into the Gulf of Maine. The Deer Island plant has a peak capacity of 1.2 billion gallons per day, with average flows of 380 million gallons per day.

Stormwater. Wellesley has begun to address discharges into stormwater drains by adopting Municipal Stormwater Drainage System Rules and Regulations in 2005. Through these rules, Wellesley complies with the Environmental Protection Agency's Phase II Stormwater Regulations.

Drinking Water. According to the Wellesley Department of Public Works (DPW), 61 percent of Wellesley's drinking water is from local well supplies and 39 percent from the MWRA. The MWRA transmits water to many Greater Boston cities and towns from the Quabbin and Wachusett Reservoirs and the Ware River and other surface water supplies in Central Massachusetts. Wellesley's local water supplies consist of ten wells located within the Town. Water pumped from the wells is treated at the DPW's three corrosion control and

iron/manganese removal facilities and distributed to customers through a 140-mile network of street mains. The distribution system also includes two large storage facilities with a combined capacity of nearly six million gallons.

TRANSPORTATION FACILITIES & SERVICES

Wellesley has three Massachusetts Bay Transit Authority (MBTA) commuter rail stations: Wellesley Square, Wellesley Hills, and Wellesley Farms on the Framingham/Worcester Line. The MetroWest Regional Transit Authority's #1 and #8 busses also serve Wellesley, making connections from Natick to Wellesley College, Wellesley Square, Wellesley Hills, MassBay Community College, Babson College, Lower Falls, and the Woodland MBTA Station. The colleges also provide shuttles for their students, staff and faculty.

Wellesley has one marked bicycle lane on a limited segment of Washington Street. The DPW is creating new bicycle markings on Cliff Road and Kingsbury Street.

SCHOOLS

Wellesley has 10 public schools (Preschool at Wellesley Schools, seven elementary schools, one middle school, and one high school) and enrolls approximately 5,000 students each year. In addition to the public schools, there are six private elementary, middle and/or high schools in Wellesley with a total enrollment of 1,166 students, the largest of which is Dana Hall School.

Enrollment in the Wellesley Public Schools increased from 2012 to 2016 but has decreased in the last two years. Per enrollment projections from FutureThink, K-12 enrollment in Wellesley is expected to decline about 7 percent from 2017 to 2027. In March 2017, the Wellesley School Committee considered a recommendation from the Hardy, Hunnewell, and Upham (HHU) Master Plan Committee to rebuild schools at all three HHU sites to meet better standards of education and to plan for elementary enrollment changes. The School Committee agreed to rebuild at least two schools with 19 classrooms in each, with the third under consideration based on enrollment.

REGULATORY FRAMEWORK

ZONING

Wellesley's Zoning Bylaw (ZBL) reflects practices and policies that have not kept pace with changes in modern land use regulation. Updated incrementally over time, the ZBL today contains 24 use districts and six overlay districts (Map 3.1), and some unusual project review requirements. It is a difficult bylaw to follow and understand, in part because it has so many districts and in part because it lacks the graphics, illustrations, and use of color that make contemporary bylaws and ordinances much easier to interpret. As Wellesley's *Unified Plan* notes, the town faces several significant land use and zoning challenges due in part to the following conditions:

- Wellesley's mostly built-out character;

- Wellesley has relatively few sites suitable for redevelopment or development;
- There are continuing “character” concerns about tear downs and replacement houses;
- There are concerns about traffic and other potential impacts of additional housing development;
- Wellesley lacks clear design standards and guidelines for impacts on the public realm of private development; and
- Wellesley does not have a consistent venue for boards, commissions, and departmental staff to collaborate about development and preservation issues.

These conditions, coupled with Wellesley’s hard-to-navigate zoning, very high land costs, and potential for highly profitable market-rate sales and rents, have contributed to the recent arrival of several Chapter 40B comprehensive permits.

The ZBL in Wellesley is what planners typically describe as “pyramid” or “cumulative” zoning, i.e., a framework that builds from a set of most restrictive districts to less restrictive districts with successively fewer requirements. In Wellesley, the single residence districts are the most restrictive areas and the foundation of the “pyramid.” As the permitted density or intensity of use increases in other residential zones and then as commercial and industrial uses are allowed in as well, the uses permitted in more restrictive districts are still allowed. However, single-family or two-family developments would create land use conflicts if they were constructed in the Industrial or Administrative and Professional Districts.

Wellesley has an **inclusionary zoning** provision that applies to developments requiring “Project of Significant Impact” (PSI) approval in the Business Districts, Business Districts A, Industrial Districts, Industrial Districts A, and Wellesley Square Commercial District, and to any single-family residential development with five or more units.³³ In a given development, the minimum affordable housing requirement is one affordable unit for every five residential units or, in a mixed-use project, one affordable unit per five units plus one per 50,000 sq. ft. of nonresidential floor space. There is no specific density incentive or other cost offset for providing affordable units. Wellesley allows “in-lieu” payments to the Wellesley Affordable Housing Corporation’s trust fund. The amount of the fee per unit approximates the affordability gap described in the previous section.

Wellesley has had a Large House Review (LHR) bylaw since 2008, ~~but~~ The ~~the~~ bylaw was recently updated and strengthened. LHR reflects the Town’s concerns about the impact of teardowns and “mansionization” on Wellesley neighborhoods, so the bylaw is triggered by size (floor area) increases. It applies to any proposed residence (new construction or alterations) that will exceed the floor area limit for the single-family district in which it is located, excluding changes to non-conforming properties (handled by the ZBA) or alterations that increase living space within an existing building without any exterior change to the

³³ A Project of Significant Impact (PSI) is any development of 10,000 or more sq. ft. or renovation of 15,000 or more sq. ft. in a building of at least 15,000 sq. ft. of existing space, if the proposed use will be different from the existing use. The PSI is a special permit review and approval process.

structure, e.g., converting an attic to living space. In Wellesley and most towns with this type of zoning, LHR is a design review process, not a prohibition against large houses. The purpose is to ensure design compatibility and mitigate impacts on neighboring properties. While the Planning Board has final approval powers, the first required step in the permitting process involves the Design Review Board.

Wellesley recently adopted a Natural Resource Protection Development (NRPD) bylaw, too. ~~Apparently—i~~ Inspired by the Natural Resource Protection Zoning (NRPZ) in the Commonwealth's Smart Growth Toolkit, Wellesley's NRPD applies to the development of any property that can be divided into five or more lots. It requires at least half the site to be set aside as open space, and through a complicated formula the allowable number of lots can be determined. Unlike most NRPZ bylaws, however, Wellesley sets a floor on the reduced lot size allowed in a covered project, and it does not provide flexibility to mix housing types. All units must be detached single-family residences. The bylaw allows the Planning Board to grant a special permit for relief from NRPD requirements, but only if a different approach to the site would provide as much natural resource protection as a conforming development.

LOCAL HISTORIC DISTRICTS

There are 67 properties in Wellesley's Local Historic District, The Cottage Street Historic District. This district contains multiple properties located on Cottage Street, Washington Street, Abbott Street, Waban Street, and Weston Road outside of Wellesley Square.

Four other historic districts are single properties. Wellesley created its first two single building historic districts in 2011: the Methodist Meeting House Historic District and the Tufts House Historic District. The 2014 Annual Town Meeting voted unanimously to approve the creation of two additional single building Historic Districts: the Sylvia Plath House Historic District and the Fiske House Historic District.

Towns may establish Local Historic Districts per G.L. c. 40C to protect historic resources. Property owners must submit any exterior changes that are visible from a public way, park, or body of water to a local district commission for approval. A variety of exterior features are often exempt such as air conditioning units, storm doors, storm windows, paint color, and temporary structures. The decision on which features are exempt from review depends on the specifics of the local bylaw. In Wellesley, the Town-appointed Historic District Commission (HDC) oversees the review process, which consists primarily of an application by the property owner, a public hearing, and a written decision by the HDC.

NEIGHBORHOOD CONSERVATION DISTRICTS

Wellesley has one Neighborhood Conservation District (NCD): the Denton Road NCD. NCDs were authorized by vote at Town Meeting in 2007 in response to the increasing pace of home demolitions starting in the early 2000s. An NCD is a legally designated area that can protect property owners in distinctive neighborhoods that may not be eligible for protection as Historic Districts. Unlike Historic Districts that focus on architectural details of individual buildings, an NCD addresses neighborhood characteristics. NCD bylaws set design guidelines that are tailored to the needs of the neighborhood and administered by each NCD's

own commission. The NCD commission encourages construction and alterations consistent with neighborhood character.

DEMOLITION DELAY REVIEW BYLAW

Adopted in August 2017, the Historic Preservation Demolition Review Bylaw applies to any building used as a dwelling (as defined in the State Building Code) that was built on or prior to December 31, 1949. Under the Bylaw, if an owner intends to demolish such a building, entirely or by removing or enveloping 50 percent or more of the existing exterior structure, then additional review by the Wellesley Historical Commission is required. The Historical Commission may determine if the dwelling should be “preferably preserved.” If so, a 12-month delay would be imposed on any permits by the Building Department to demolish the dwelling.

LOCAL WETLANDS BYLAW

Wellesley has a local wetlands protection bylaw that requires varying levels of permitting for activities the Wetlands Protection Committee deems to have an impact on wetland interests and values, including public or private water supply, groundwater, flood control, erosion and sedimentation control, storm damage prevention, water pollution prevention, fisheries, wildlife habitat, and recreation. The Massachusetts Wetlands Protection Act, G.L. c. 131, § 40, and the Wellesley Wetlands Protection Bylaw prohibit altering land, water, or vegetation in lakes, streams, wetlands, floodplains, or areas within 100 feet of wetlands and 200 feet of perennial streams without a permit from the Wellesley Wetlands Protection Committee. Some Bylaw Resource Areas are different from or are not identified in the state wetlands law. An applicant whose project triggers both the state act and local bylaw must comply with the bylaw’s more restrictive requirements.

4. Housing Goals

THE CHALLENGE

The 2018 Unified Plan describes the community's vision of Wellesley as a place that welcomes diversity, fosters a sense of community and community building, and preserves the character of the town's residential neighborhoods, commercial centers, and open spaces.

Yet, today Wellesley . . .

- Has little racial, ethnic, or class diversity
- Lacks adequate housing options to support a population with diverse housing needs, including single-person households, 60 percent of which are seniors living alone
- Has little housing that is affordable to households with low or moderate or middle incomes, despite an estimated 17 percent (about 1,445 households) of the town's total households having incomes in the low- or moderate-income range

By preparing this Housing Production Plan and increasing its supply of low- or moderate-income units, Wellesley could become eligible for a flexible approach to managing the comprehensive permit process. To qualify for the flexibility that a [Housing Production Plan offers when it is approved by the Department of Housing and Community Development \(DHCD\)](#) ~~DHCD-approved Housing Production Plan offers~~, Wellesley needs to meet an affordable housing production standard - a minimum numerical target - and obtain certification from DHCD that standard had been met. The minimum target is 0.5 percent of the Town's year-round housing inventory - 45 units - as reported in the most recent decennial census, and the target must be met within a single calendar year. If DHCD finds that Wellesley has met the annual standard, the one-year certification will take effect as of the date that Wellesley achieved the numerical target for that calendar year. If the Town's new affordable housing production is equal to or greater than the 1 percent of its year-round housing inventory (91 or more units), the certification will remain in effect for two years.

GOAL-SETTING PROCESS

To develop the goals of this Housing Production Plan, the Wellesley Planning Board, Board of Selectmen, and Wellesley Housing Development Corporation sponsored workshops-style public meetings on April 7, May 3, and June 12, 2018. The purpose of these workshops was to engage residents and community members in an interactive process that served to provide information about housing needs, solicit the participants' ideas, and obtain their feedback on draft goals.

Participants had to grapple with an important challenge: How can Wellesley provide for more housing options, including affordable housing to achieve the state's goal under Chapter 40B,

while preserving and enhancing the character of the town's residential neighborhoods, commercial centers, and open spaces? With this core challenge in view, Wellesley's HPP is guided by the following five goals.

GOAL 1: CREATE A VARIETY OF AFFORDABLE AND MIXED-INCOME HOUSING THAT HELPS TO MAKE WELLESLEY A WELCOMING COMMUNITY FOR PEOPLE WITH DIVERSE SOCIO-ECONOMIC BACKGROUNDS.

This goal recognizes that an adequate housing supply can help stabilize prices and enhance affordability. Wellesley can promote this goal by overcoming barriers to creating multi-family housing, rental housing, town homes, modest-sized single-family houses on small lots, and accessory dwelling units.

GOAL 2: PROVIDE MORE HOUSING OPTIONS, INCLUDING AFFORDABLE AND MARKET-RATE HOUSING OPTIONS, FOR LOW- AND MIDDLE-INCOME FAMILIES, SENIORS, AND INDIVIDUALS WITH DISABILITIES, THROUGH A VARIETY OF MECHANISMS TO INCREASE HOUSING CHOICE.

Similar to the first goal, this goal promotes creating more housing options, but for the purpose of creating more affordable and accessible options, including two-family housing, multi-family housing, conversion of single-family houses to multifamily, accessory apartments and detached accessory dwelling units, mixed-use housing, mansion-style condos, and the community land trust model.

GOAL 3: ACTIVELY STRIVE TO ACHIEVE STATE'S CHAPTER 40B 10 PERCENT MINIMUM FOR AFFORDABLE HOUSING BY ANNUALLY PRODUCING AT LEAST 45 UNITS THAT COUNT ON THE SUBSIDIZED HOUSING INVENTORY, THROUGH LOCAL ACTIONS AND APPROVAL OF PRIVATE DEVELOPMENT, ESPECIALLY DEVELOPMENT OF RENTAL HOUSING UNITS.

This goal aligns with a goal of the Unified [Housing](#) Plan to create at least 400 housing units that are permanently affordable to income-eligible households by 2028 and would enable to the town to achieve "safe harbor" through certification of this Housing Production Plan, once approved locally and by the state. Achieving safe harbor allows the Zoning Board of Appeals (ZBA) more flexibility to deny a Comprehensive Permit application. Per the Massachusetts Department of Housing and Community Development (DHCD) Comprehensive Permit Regulations (760 CMR 56), there are three conditions under which a denial of a Comprehensive Permit will be upheld:

1. The municipality achieves one or more of the Statutory Minima, e.g., the 10 percent minimum;
2. DHCD certifies the municipality's compliance with the goals of its approved Housing Production Plan; or
3. The municipality has made recent progress toward the Statutory Minima (i.e., large project or related application previously received). This goal can be accomplished by permitting one or more developments within one calendar year that increase the SHI by at least 45 units.

GOAL 4: ENCOURAGE NEW DEVELOPMENT AND REPURPOSING OF EXISTING BUILDINGS TO CREATE AFFORDABLE AND MIXED INCOME HOUSING THAT:

- Reinforces the development patterns of Wellesley's residential neighborhoods and maintains a predominantly single-family character in established single-family neighborhoods
- Strengthens the vitality of business districts and commercial corridors with diverse housing types
- Promotes housing development in walkable areas with convenient access to shops, services, public transportation, parks, schools, and other neighborhood destinations

Although many residents view Wellesley as largely built-out, there are opportunities to repurpose existing buildings, redevelop underutilized properties, and create infill development in existing residential neighborhoods. Workshop participants expressed the desire for smart, secondary growth that maintains the character of what people want in Wellesley while increasing the value and livability in the town. ~~They, and they~~ want to move forward in a planned, thoughtful way.

GOAL 5: PROMOTE THE DEVELOPMENT OF SURPLUS INSTITUTIONAL AND TOWN-OWNED LAND AS WELL AS THE REDEVELOPMENT OF OFFICE PARKS AND EXISTING AFFORDABLE HOUSING COMPLEXES TO CREATE DESIRABLE MIXED-INCOME AND MIXED-USE NEIGHBORHOODS, WHERE FEASIBLE.

Wellesley has a variety of key transformation areas that could be appropriate opportunities for redevelopment to create mixed-income, multi-family, and/or mixed-use residential developments including properties in commercial areas, office parks, municipal property, and institutional properties.

Wherever possible, it will be important for affordable units produced under this HPP to be eligible for listing in the Chapter 40B Subsidized Housing Inventory (SHI). For non-comprehensive permit units, this means making sure the units meet the requirements of DHCD's Local Initiative Program (LIP) by virtue of a qualifying local action, such as:

1. Zoning approval, such as "by right" or special permits for affordable housing;
2. Funding assistance, such as CPA;
3. Provision of land or buildings that are owned or acquired by the Town and conveyed at a price that is substantially below-market value.

~~In order to~~To be counted as part of the ~~Subsidized Housing Inventory~~SHI, the units must meet the following criteria:

1. A result of municipal action or approval;

2. Sold or rented based on procedures articulated in an affirmative fair marketing and lottery plan approved by DHCD;
3. Sales prices and rents must be affordable to households earning at or below 80 percent of area median income; and
4. Long-term affordability is enforced through affordability restrictions, approved by DHCD.
5. Additionally, ~~a the SHI Subsidized Housing Inventory~~ New Units Request Form must be submitted to DHCD.

5. Housing Development Strategies and Action Plan

OVERVIEW

DHCD encourages cities and towns to prepare, adopt, and implement a Housing Production Plan that demonstrates an annual increase in Chapter 40B units equal to or greater than 0.50 percent of the community's year-round housing units. By systematically increasing its low- and moderate-income housing inventory, Wellesley could gain more control over when, where, and how much affordable housing should be built and ~~to~~ encourage Chapter 40B comprehensive permits in the most appropriate locations.

As noted elsewhere in this plan, however, Wellesley's housing needs go beyond Chapter 40B. Just as the town has [housing diversity](#) needs, it also has many options available to address them. Implementing the Unified Plan, removing regulatory barriers to housing production, providing leadership from the Board of Selectmen, Planning Board, and others, making public land available for housing development, and informing the public about Wellesley's varied housing needs will be critical components of a successful housing program. The strategies outlined in this plan fall into four groups, and all the strategies relate in one or more ways to the types of actions this Housing Production Plan is required to address.

- **Regulatory Reform:** These strategies have significant potential in Wellesley and they could be coordinated with implementing the Unified Plan. [Within Wellesley's reach are](#) Policies and techniques to make permitting more efficient, allow more housing and more types of housing in Wellesley, and capitalize on existing assets are all within the Town's reach.
- **Assets:** The focus of these strategies is to protect and improve the quality of existing affordable housing, expand the Town's funding commitments to affordable housing development, and use Town-owned land to increase the affordable housing supply.
- **Leadership, Education, and Advocacy:** Wellesley can combine several approaches into an education program that reaches key decision makers, property owners, neighbors, and people most at risk from the effects of limited housing choices. There is a tendency in Wellesley to view affordable housing as primarily an urban problem more than a matter that affects affluent suburbs, yet this kind of thinking is exactly why Chapter 40B was enacted 49 years ago.
- **Planning and Public Policy:** The Town could become an effective partner with developers and other housing organizations and create a more welcoming environment for housing development. Strategies such as establishing guidelines for "friendly" comprehensive permits could help Wellesley communicate to developers what types of projects are most likely to address local concerns and move quickly through the permitting process. In addition, the Town should move forward with implementing the housing and land use

recommendations of the Unified Plan because they will help Wellesley expand affordable housing opportunities in a variety of settings.

REQUIRED ACTION PLAN ELEMENTS

760 CMR 56.03(d)(1) Identification of zoning districts or geographic areas in which the municipality proposes to modify current regulations for the purposes of creating SHI Eligible Housing developments to meet its housing production goal.

ZONING DISTRICTS

There are at least four zoning districts in Wellesley where the Town could encourage or require affordable units in new development, infill, or redevelopment. These exemplify opportunities for **regulatory reform**. (For district locations, see Map 3.1)

■ The **Administration/ and Professional (AP) District** covers land ~~in the vicinity of~~near Route 128/I-95 and Route 9. It includes the 2226-acre Wellesley Office Park, situated between Route 128 and the Charles River and owned by John Hancock Real Estate. Wellesley has been approached by representatives of the office park and a national multifamily developer with an interest in developing 300 or more apartments in this location. Currently multifamily housing is not allowed in the AP district, but the Town could consider strategies such as:

- Amending the AP use and dimensional regulations to pave the way for multifamily and mixed-use development, either by special permit or as-of-right, subject to the Project of Significant Impact (PSI) review process;
- Adding all or a portion of the AP district to the Residential Incentive Overlay (RIO) district, which provides for multifamily development in underlying nonresidential areas, also subject to the PSI review process; or
- Creating a **Chapter 40R** overlay district to accommodate multifamily development as-of-right in a specific portion of the AP district. This option can include special site plan review and design review procedures, but since Wellesley's PSI process requires a special permit, it could not apply to the Chapter 40R district. At least 20 percent of the units in Chapter 40R developments must be affordable to lower-income households, though many towns have ~~the~~ set the minimum affordability requirement at 25 percent (so that all rental units will count on the Subsidized Housing Inventory).

A potential advantage to allowing multifamily and mixed-use development in this location – at densities that can support mixed-income apartments with appropriate amenities– is that the office park can accommodate large buildings without creating an inherent use conflict with abutting single-family neighborhoods. Support for this concept can be found in Wellesley's new Unified Plan, too.

■ **Residential Incentive Overlay (RIO) District.** Wellesley created the RIO in 1998 following completion of the Wellesley Lower Falls planning and zoning study (Goody Clancy and Connery; 1997). It applies to portions of the Business, Industrial and AO districts north of

Washington Street in the Lower Falls area and allows multifamily development in what are otherwise non-residentially zoned locations. To date, only one developer has used it: National Development, for construction of the Waterstone at Wellesley senior residential community. In addition to considering other locations where the RIO could apply, the Town should evaluate the provisions of this district to determine whether it needs to be updated to make it a more usable tool.

- The **Wellesley Square Commercial (WSC) District** includes the compact commercial village around Central Street, Church Street, Grove Street, Linden Street, and Weston Road. It is a civic, social, and governmental center for the town. This district should be amended to ~~provide encourage for~~ upper-story dwelling units over storefronts. Similar amendments could be introduced in the **Linden Street Corridor (LSCO) District** as well.
- Wellesley's **General Residence (GR) District** needs to be overhauled. It includes neighborhoods around Wellesley Square and Linden Street, along Washington Street by Wellesley Avenue, and in the vicinity of the Wellesley Hills train station. Though zoned for townhouses, this district is governed by density parameters that are quite low for infill and reinvestment. The use regulations would need to be updated, too. The GR district is a classic example of a zone that could encourage so-called "**missing middle**" housing, but the zoning that makes "missing middle" feasible does not exist in Wellesley.

Years ago, the prevailing practice in Wellesley involved codifying development that already existed on the ground and creating new provisions in small, very precise physical units to accommodate proposed projects. The Zoning Map attests to this history. Innovations such as the Linden Street Corridor Overlay District (LSCOD) came later, but the Euclidean roots of Wellesley's zoning are unmistakable. This practice has led to a proliferation of small, finely tuned districts, a few of which are virtually identical. Moreover, split lots abound in Wellesley – a problem the town has addressed, incrementally, in overlay districts, but most of the town lies in districts with lots that are complicated by more than one set of rules.

AREAS

As Wellesley looks to implement both this [Housing Production Plan HPP](#) and the new Unified Plan, ~~it is an ideal time to consider consideration should be given to~~ new zoning innovations in the following areas. Under existing conditions, what the Town ~~actually wants~~wants to see in many areas will not be possible without updated zoning and a policy framework that welcomes town-developer partnerships.

- **Worcester Street (Route 9) and Cedar Street**, which currently consists of several zones, all in small doses: the Business District, Business A, Single Residence 10, AO, and GR.
- **Worcester Street/Route 128**, which includes not only the AO district, but also Single Residence 10 and Limited Business.
- Any of the following areas could be appropriate settings for some "missing middle" housing innovations: land along **Walnut Street in Wellesley Lower Falls**; the vicinity of the **Wellesley Hills train station**; **Worcester Street around Fells Road/Fells Circle/Weston Road** toward the west, or **Worcester and Overbrook** near the Natick town line. Currently, the

Worcester Street/Fells Road area includes a mix of Single Residence, Business, and Business A zoning, and Worcester/Overbrook contains some larger Business/Business A properties. [There are existing Chapter 40B developments in these locations as well.](#)

- The **neighborhoods adjacent to Wellesley Square**, which include – in addition to the GR district – the Limited Residence and Multifamily Residence districts. Multifamily Residence exists in only two locations in Wellesley: four small contiguous lots on Washington Street near Wellesley Square and a parcel that extends between Seaver and Park Streets.
- In any of the single-family neighborhoods, the potential may exist to create **small affordable units on nonconforming lots** that are otherwise unbuildable. The units will probably require some form of subsidy. Still, making additional land available could support production of scattered-site units by mission-based organizations like Wellesley Housing Development Corporation or Habitat for Humanity.

760 CMR 56.03(d)(2) Identification of specific sites for which the municipality will encourage the filing of Comprehensive Permit applications.³⁴

Wellesley has four opportunity areas where Chapter 40B comprehensive permits would be an appropriate vehicle for providing higher-density multifamily development. Any of these options will require the Town to embrace new ideas about housing **policy** and most likely a commitment of Town funding. Wellesley will need to work in partnership with developers and private property owners, and in some cases the Commonwealth of Massachusetts. Appropriate locations for comprehensive permit applications include the following. Municipally owned sites are discussed in a later section of this chapter.

- The **MassBay Community College** campus along Worcester Street and Oakland Street clearly has surplus land – that is, land the college does not use and is unlikely to ever need for educational purposes. The Town and Commonwealth should work collaboratively on a disposition plan for surplus property in this location. It is ideally located with direct access to a regional highway and close to the Wellesley Hills train station. Mixed-income housing here could provide options for students, faculty, and others seeking the opportunity to live and work in Wellesley.
- The **Sisters of Charity** property, also off Oakland Street, includes a retirement residence and a considerable amount of vacant land. This property is also close to a community park and single-family residential neighborhoods.
- The former **Army National Guard Reserve** property at the end of Minuteman Lane (off Worcester Street) is another opportunity site.
- The Wellesley Housing Authority's **Barton Road** public housing development needs reinvestment. This project is an older townhouse-style community with 90 family units. Separated from all its neighbors by woodlands and situated directly next to Route 128, the Barton Road housing development is all but segregated from the rest of Wellesley. It needs

³⁴ We will include map inserts for each of these areas in the public version of the draft plan.

to be redeveloped, but the capital cost is prohibitive without substantial subsidies and, most likely, relief from some of the requirements that apply to public construction projects under G.L. c. 149. In addition, the project would have to include funding for tenant relocation. According to the [Massachusetts Housing Partnership \(MHP\)](#), the feasibility of public housing redevelopment generally requires three market-rate units for each low-income replacement unit. [The Town has appropriated \\$200,000 to help the Housing Authority study the feasibility of redeveloping the Barton Road housing.](#)

760 CMR 56.03(d)(3). Characteristics of proposed residential or mixed-use developments that would be preferred by the municipality (examples might include cluster developments, adaptive re-use, transit-oriented housing, mixed-use development, inclusionary housing, etc.).

Wellesley has a long-standing policy of protecting established single-family neighborhoods from changes in use. This principle is reinforced by the Zoning Bylaw and articulated in the Unified Plan, its predecessor the Wellesley Comprehensive Plan, and the Affordable Housing Policy. While this policy matters to townspeople, it is critical for residents and town officials to understand that until Wellesley reaches the 10 percent minimum under Chapter 40B, the single-family neighborhoods *will* see more comprehensive permit activity. It will take well-informed leadership and flexible policies to accommodate some residential use changes, especially in older neighborhoods where so much of the demolition/rebuild activity has already taken place.

Residents who participated in the public meetings for this plan identified some preferences for the types of housing they would like to see in Wellesley. Below are some of the ideas people expressed, together with ways to make comprehensive permit developments as compatible as possible with nearby single-family residences.

- Well-designed **multifamily apartments** could be considered in numerous locations along Worcester Street/Route 9, within the AO district, and near the train stations. Context is everything, so a multi-story development that works well in an office park would not be appropriate along Route 9 on sites that directly abut single-family neighborhoods. Designing for transitions should be part of the plan in these settings, e.g., upper-story step backs, deeper yards with generous buffers, and lower-density housing closer to the neighborhood side of the property.
- Multifamily units can also be created through **single-family conversions**. This approach provides opportunities to preserve some existing older structures instead of losing them to the teardown/rebuild market. It also offers a seamless way to mix housing types in established single-family neighborhoods. This approach to creating more housing options gained many positive responses during the Unified Plan process.
- Clusters of **cottage-style homes** could provide desirable homeownership options both for downsizing seniors and young families. This method of creating housing choices in Wellesley may be hard for private developers because of the town's exceptionally high land values, but mixed-income cottages could be feasible on private land at a fairly high

density or municipally owned land because the town could choose to offer the land at below-market value.

■ **Accessory apartments** should be a relatively “barrier free” housing choice in Wellesley. In the past few years, numerous communities have adopted zoning that makes it easier for single-family homeowners to create accessory apartments. By complying with a set of basic requirements and design standards in the zoning bylaw, a homeowner with an eligible property can obtain approval to construct an accessory unit by applying for a building permit and filing a simple site plan. Most towns still require a special permit for free-standing accessory dwellings, e.g., back yard cottages, carriage houses, or units above a detached garage, but an accessory apartment inside a single-family home can be almost invisible to the neighborhood.

■ [Senior housing is a critical need in Wellesley with or without income restrictions. Many participants in the HPP process pointed that current zoning does not provide for “downsizing” opportunities that would help older residents choose to stay in town as their housing needs change. A well-thought-out senior housing bylaw needs to accommodate a variety of residential options, from detached cottages to independent living apartments, assisted living, and memory care, all with enough density to support the requisite residential amenities.](#)

760 CMR 56.03(d)(4). Municipally owned parcels for which the municipality commits to issue requests for proposals to develop SHI Eligible Housing; and/or participation in regional collaborations addressing housing development.

There are scores of examples of affordable housing on town-owned land in Massachusetts. It is probably one of the easiest strategies for increasing the supply of affordable units in any city or town. Wellesley has recently pursued a town-owned land development strategy through a Request for Proposals (RFP) process for the Tailby Parking Lot at Crest Road and Linden Street- [and the Railroad Parking Lot at Grove Street and Railroad Avenue](#)

■ As Wellesley’s Unified Plan points out, Wellesley purchased the **North 40** property from Wellesley College to control how the land is used in the future. This parcel is large enough to accommodate multiple uses and meet multiple needs. Representatives of conservation, housing, and other interests must work cooperatively on a disposition plan that can provide as many public benefits as possible, including affordable housing. A compact, dense, low-rise development in this location could create an attractive neighborhood, ~~and~~ give future residents of the project easy access to goods and services, and protect most of the land for conservation and open space purposes.

■ There could be opportunities to create some affordable or mixed-income housing in **Wellesley Hills** on property owned by the Wellesley Community Center, the Town of Wellesley (Public Works Department), and Wellesley Hills Congregational Church – that is, where Washington Street crosses Worcester Street. A small development in this location would require a partnership of the Town, the non-profit owners of the community center, and the church, but there is land here that is also close to some services and the commuter rail.

- Wellesley's most recent Open Space and Recreation Plan (OSRP) identifies about 30 properties as priorities for **open space** protection. It may be that all the parcels merit protection, but the Planning Department should initiate a process that includes open space, recreation, and housing experts to evaluate the conservation and development suitability of each site. As the town acquires more land for open space in the future, Wellesley could prioritize sites that also have housing potential as part of an ongoing effort to meet both types of needs. The same exorbitant land costs that make open space acquisition challenging in Wellesley also make it difficult to create more affordable housing.

Participation in regional collaborations addressing housing development.

There are two opportunities for Wellesley to explore regional initiatives for housing, and possibly more. The two most immediate possibilities are as follows.

- The **WestMETRO HOME Consortium** includes thirteen communities west of Boston, organized under leadership from the City of Newton. The federal Home Investment Partnership Program – HOME – is a block grant program launched by the U.S. Department of Housing and Urban Development (HUD) under the National Affordable Housing Act of 1990. Since the funds are only available on an “entitlement” basis to cities with very high need indicators, Newton worked early on with neighboring towns to form a consortium that would qualify for entitlement funding under a different set of eligibility criteria. A consortium must be comprised of contiguous cities and towns.

The WestMetro HOME Consortium uses HOME funds to make grants and loans to developers to subsidize deeply affordable housing. Wellesley could take advantage of this resource to assist with acquisition, development, or preservation of affordable units, working with the Wellesley Housing Development Corporation, other non-profits, or for-profit developers.

- The **Regional Housing Services Office (RHSO)**, currently based in Concord, is the brainchild of the Hanscom Area Towns (HATS) Committee and Metropolitan Area Planning Council (MAPC), which worked collaboratively on a study of options for regionalizing housing programs and services. Their efforts led to an interlocal agreement between Bedford, Lincoln, Concord, Lexington, Sudbury, and Weston to form the RHSO. Since its inception, the RHSO has grown to include Acton and Burlington. The RHSO has full-time staff available to help member communities with a wide range of housing services, from managing affordable housing lotteries and monitoring affordable housing restrictions to helping communities plan for affordable housing development.

IMPORTANT IMPLEMENTATION TOOLS

Wellesley needs to increase local capacity to plan for affordable housing, work with state subsidizing agencies, developers, and neighborhoods, and advise the planning department

and local officials about broad housing policy issues. Public education about affordable housing – policies, design, who benefits and how, positive and negative impacts – is important for neighbors, policy-makers and leaders, residents and landlords. People with the most accurate knowledge will become the best advocates for affordable housing.

ONE PLAN, ONE VOICE

The Town's new Unified Plan is the umbrella for this HPP, and it needs to be the principal guidance document for present and future endeavors to meet Wellesley's obligations for fair and affordable housing. The Town has been guided by an Affordable Housing Policy that Town Meeting originally adopted in the late 1980s, and to a point it has value. However, Wellesley has just completed a model planning process and has begun to implement it by undertaking this HPP. Focusing on Unified Plan implementation is the most important step Wellesley can take to create affordable housing *and* manage Chapter 40B. Coupled with details contained in this HPP, the Unified Plan – not the Affordable Housing Policy – should be the standard for evaluating future requests for comprehensive permits and future local initiative opportunities.

PROVIDE LEADERSHIP AT THE TOP

Chapter 40B was enacted in 1969 at a time when throughout the state, the Zoning Board of Appeals (ZBA) was only town board that could grant special permits and variances, so it made sense to give ZBAs authority for comprehensive permits as well. From a 1969 perspective, local regulations were the main barrier to constructing affordable housing, yet in 1969, both the federal and state governments were consistently subsidizing low-income housing development. At the time, no one could have anticipated the eventual abdication of federal responsibility for housing for the poor, or how the industry would change over the next two decades. The notion that municipalities might provide funding to create low- or moderate-income housing or work as partners with affordable housing developers was barely on the horizon at the end of the 1960s, ~~other than in a handful of progressive towns like Lincoln~~. The same can be said for comprehensive planning – almost non-existent in suburbs and small towns until the federal government provided Section 701 planning grants in the 1960s.

Since 1969, the roles and responsibilities of cities and towns have changed considerably. Many functions that seem ordinary or essential today did not exist in 1969, e.g., a Council on Aging, a Youth Commission, or a Human Services Department. Forty years ago, no community anticipated that it would ever play a significant, activist role in affordable housing. At best, communities knew in 1969 that the legislature had imposed more permitting responsibilities on them and in many cases, they resented their new-found powers.

By the mid-1980s, it had become clear that local governments had to mobilize for affordable housing development and not simply wait for the arrival of comprehensive permits. Over time, other municipal officials have taken on new duties and learned the value of collaboration for affordable housing. Working together, the Wellesley Board of Selectmen, ~~and Planning Board~~, and Wellesley Housing Development Corporation can help by providing leadership and support ~~for meeting~~. In 2016, Wellesley embarked on a unique

community comprehensive planning process to develop what is known as the Unified Plan. Serving both as an update of the 2007 Wellesley Comprehensive Plan and a strategic plan for the Town, the Unified Plan is a plan for Wellesley's physical evolution and economic well-being and a vision to cohere local government decision-making. The process to develop the Unified Plan came at the heels of a ~~contentious~~ difficult and polarizing process that called upon Wellesley voters to decide whether to change their form of government to a ~~modern~~ more centralized town manager framework, an effort that was not successful. ~~In many ways, residual tension from defeat of the town manager proposal persists today.~~ Against the backdrop of deep divisions about considerations related to how the Town would operate in the future, Wellesley suddenly found itself with plans for several Chapter 40B developments all within a matter of weeks. ~~What would have been hard for a peaceful town to manage became very challenging for Wellesley officials, staff, and residents.~~ Today, the Zoning Board of Appeals is considering three comprehensive permit applications with a combined total of 189 mixed-income housing units, including 48 affordable units and 156 units eligible for the Chapter 40B Subsidized Housing Inventory (SHI).¹ Four more projects have either received Project Eligibility (PE) determinations or are anticipated to receive them soon. While difficult, the town government process made it apparent that Wellesley's form works best when problems are approached collaboratively based on consensus. It is in this vein that the Board of Selectmen, Planning Board, and Housing Development Corporation set out to develop this Plan with broad participation, input, and support.

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the Town's housing needs. For example, representatives of both boards have participated in a working group to develop this Housing Production Plan. They could also play an instrumental part in building consensus among groups that need to work together to increase the supply of affordable housing in Wellesley. Two key policy-level boards working as partners to convey a unified message about affordable housing would be a significant step

forward in Wellesley. Most people do take it seriously when their elected officials lead by example.

On a going-forward basis, the Town should pursue affordable and fair housing training resources for the Board of Selectmen, Planning Board, and other policy-level bodies. Non-profit advocacy and education organizations that provide fair and affordable housing training and technical assistance are listed in the Appendix.

CREATE A HOUSING COORDINATOR POSITION

Positioning Wellesley to build its housing supply in the many ways described in this plan requires resources, including time and money. The Town has well-qualified staff and volunteers dedicated to community planning and housing, and partners who are committed to meeting housing needs. However, there needs to be a central “point person” with the time, authority, and resources to work on housing policy and housing strategies in Wellesley. Like other towns in Massachusetts that are trying to tackle complex housing policy concerns, Wellesley would benefit from having a housing professional on staff to coordinate affordable housing education and policy, work with developers and neighborhoods, serve as liaison with the subsidizing agencies, provide support to the Board of Appeals for comprehensive permits, monitor affordable housing restrictions, and advise Town boards about potential opportunities to increase the supply of affordable housing.

Funding for this position is an allowable use of Community Preservation Act (CPA) funds. An in-house Housing Coordinator or Housing Specialist, coupled with participating in the Regional Housing Services Office, would significantly help Wellesley move forward with implementing this plan and the housing recommendations of the Unified Plan.

REVISIT THE POWERS OF THE WELLESLEY HOUSING DEVELOPMENT CORPORATION

When the Town of Wellesley petitioned the General Court to establish the Wellesley Housing Development Corporation in 1997, the Municipal Housing Trust legislation (G.L. c. 44, §55C) was seven years in the future. Wellesley’s petition occurred at a time that many towns were taking similar steps, all for similar reasons: to have a local non-profit vehicle for affordable housing development. Some communities wanted an agent that could work their housing authority or redevelopment authority by acting as a non-profit development partner or pass-through for funding. Others wanted an entity that could become rental property managers for projects developed by other (usually for-profit) organizations. And, still others had access to funding sources like the federal HOME Program or mitigation payments from for-profit developers, and they wanted to establish a local agent to invest those dollars in creating and preserving affordable housing. For these and other reasons, the state legislature passed a flurry of similar home rule petitions between the mid-1990s and early 2000s, precisely as market was recovering from the deep recession a few years earlier.

However, the Department of Revenue (DOR) became concerned about the variety of special revenue accounts that would have to be tracked, many having unique local rules. This, coupled with passage of the Community Preservation Act (G.L. c. 44B) in 2000 and leadership

from the Citizens Housing and Planning Association (CHAPA), provided backdrop for passage of the Municipal Housing Trust bill in 2004.

On one hand, the WHDC's powers mirror those of other non-profit organizations; on the other hand, its ability to exercise those powers hinges almost entirely on approval by the Board of Selectmen.³⁵ This may work for Wellesley, but a non-profit or semi-public entity that has more autonomy – an organization closer to the concept of a Municipal Housing Trust – could give the Town an entity that has powers similar to the Wellesley Natural Resources Commission, also a product of home rule legislation but with substantially separate authority to carry out its responsibilities.³⁶ Instead of establishing a Municipal Housing Trust, Wellesley may have opportunities to revise and update the WHDC's status and allow it to work as a more independent agent of affordable housing development. Another model the WHDC may want to review is the **community land trust**, the most widely used vehicle for creating affordable housing in many parts of the United States.

ESTABLISH AND WORK WITH A COMMUNITY LAND TRUST

A community land trust (CLT) is a nonprofit organization that develops and protects affordable housing. It can also be used for other types of development, nationally the main purpose of the CLT is to have an agent that can develop affordable housing and keep it affordable over the long term. The CLT ensures affordability because it retains ownership of the land and controls the resale process of the buildings. The owner can retain some equity upon resale, but the sale price is restricted at prices affordable to eligible buyers and the land stays with the CLT. In the classic CLT model, membership includes residents of the leased housing, community residents, and representatives of town government, funding agencies, and non-profit organizations.

Massachusetts has several examples of CLT and CLT-like organizations:

- The Dudley Square Neighborhood Initiative, Boston
- The Rural Land Foundation, Lincoln, which developed, owns, and manages the South Lincoln commercial center by Lincoln Station.
- Amherst Community Land Trust, Amherst
- Bread and Roses Housing, Lawrence
- CLT of Cape Ann/Harborlight Community Partners, Beverly
- Island Housing Trust, Martha's Vineyard
- Worcester Common Ground, Worcester

³⁵³⁵ See Appendix for text of Chapter 311 of the Acts of 1998.

³⁶ Secretary of the Commonwealth, Acts and Resolves, Chapter 555, An Act Authorizing Certain Bylaws and Amending Certain Acts Relating to the Town of Wellesley.

CONNECTING HISTORIC PRESERVATION WITH HOUSING AFFORDABILITY

As a substantially built-out community, Wellesley will probably see much of its future affordable housing created from redevelopment and reuse of existing properties. The Town should explore options to engage in historic preservation projects that include creation of affordable housing. Pairing preservation with affordability can be encouraged both with Community Preservation Act (CPA) funds and regulatory changes, e.g., density and land use relief made available to owners of older buildings that may otherwise be demolished and replaced with large, expensive single-family homes. Moving a small older home to spare it from demolition and allowing it to be placed on another lot with an existing residence could be an appealing way to create detached accessory apartments.

PARTICIPATE IN CHAPA'S MUNICIPAL ENGAGEMENT PROGRAM

Wellesley should consult with the Citizens Housing and Planning Association (CHAPA) about participating in a new initiative, the Municipal Engagement Program. CHAPA has piloted the program this year in two communities (Acton and Medford) and it expects to work with five or six additional communities in 2018-2019. The program's focus is building a broader base of advocates for affordable housing, outside the local government "mainstream," to promote broader and deeper understanding about housing needs and opportunities to address them. The Cape Cod Commission, in partnership with the Housing Assistance Corporation of Cape Cod and the Community Development Partnership, recently conducted a similar program on Cape Cod and plans to offer it again this year.

STRENGTHEN PUBLIC INFORMATION AND EDUCATION EFFORTS

While many residents know first-hand about Wellesley's very high housing prices and some have encountered housing affordability problems, it seems clear that many residents still have negative ideas about what affordable housing is and what having more of it will do to detract from Wellesley's character and prestige. Beyond the three community meetings held for this HPP, Wellesley needs more opportunities to engage residents in conversations about affordable housing, to dispel myths, and to build local support to increase the supply of affordable units.

At minimum, the Town should add to its official website a page dedicated to affordable housing. The existing page about current Chapter 40B applications is helpful, but it focuses on the statute and the development applications currently before the ZBA. There is no information about local or regional housing needs, what "affordable housing" is and who is served by it, why the provision of affordable housing is a matter of basic social fairness, and how affordable housing at a variety of levels affects the Town's and region's economy. An early task for the new Housing Coordinator would be to develop content for a housing information web page. In addition, well-planned outreach to local groups needs to occur through speakers or information meetings. For example, Wellesley could invite representatives from other towns to speak about innovative housing strategies in their communities, or ask the Massachusetts Housing Partnership to make a presentation about local and regional housing needs at a televised meeting of the Board of Selectmen or Planning Board. Organizing panel presentations with Wellesley's faith-based communities, realtors,

Council on Aging, social services organizations, and others could help to build community awareness, improve communication, reduce misinformation, and enlist support.

The Housing Toolbox for Massachusetts Communities is a helpful resource for educating the community and gaining support for affordable housing. More information about this resource can be found in Appendix.

MAKE GOOD USE OF CHAPTER 40B AS A VEHICLE FOR CREATING AFFORDABLE HOUSING

Wellesley should actively pursue partnerships with non-profit and for-profit developers that have collaborated with cities and towns on so-called “friendly” Chapter 40B developments. ~~This could include providing land or financial support, for having a mortgage interest in projects gives the Town even more control than the comprehensive permit or deed restriction. Investing in well thought out rental projects should be a priority for the use of local funds. Local funds should be dedicated and prioritized for well-planned rental developments.~~

A well-known example of municipal funding that fundamentally changed the outcome for a comprehensive permit project is Easton’s Shovel Shop Village. There, the Town intervened to save a historic mill complex from demolition by a mixed-income housing developer. Easton partnered with another developer and invested \$7.5 million in Community Preservation Act (CPA) funds to save the buildings. The project was permitted under Chapter 40B, not through a zoning change.

EXPLORE LOCAL PROPERTY TAX INCENTIVES FOR AFFORDABLE HOUSING

Affordable housing production will not happen without predictable, adequate funding for acquisition, pre-development, development, management, and monitoring. There is growing interest in Massachusetts (and beyond) in using local government tax policy as a mechanism for creating affordable housing. While there are very few models available, a few cities have established tax incentive programs and recently, the Town of Amherst secured passage of a home rule petition with broad powers to allow special incentives and tax increment financing agreements (TIF) for production of affordable units (Appendix X). Wellesley could consider instituting a similar approach and target it to encourage sustainable projects that can be difficult to carry out, e.g., redevelopment/reuse projects or intensification of existing uses, or to encourage development of employer-assisted housing. Another option is to provide property tax exemptions to owners who rent units to low- or moderate-income households, similar to a program that has existed in Provincetown for several years.

6. Appendix

X. GLOSSARY

Affirmative Fair Housing Marketing Plan (AFHMP). A plan that meets the fair housing and non-discrimination requirements of the Department of Housing and Community Development (DHCD) for marketing affordable housing units. The plan typically provides for a lottery and outreach to populations protected under the federal Fair Housing Act of 1968, as amended. The plan must be designed to prevent housing discrimination on the basis of race, creed, color, national origin, sex, age, disability, familial status, sexual orientation, gender identity, or any other legally protected class under state or federal law.

Affordable Housing. As used in this report, "affordable housing" is synonymous with low- or moderate-income housing, i.e., housing available to households with income that does not exceed 80 percent of area median income and at a cost that does not exceed 30 percent of their monthly gross income.

Affordable Housing Restriction. A contract, mortgage agreement, deed restriction or other legal instrument, acceptable in form and substance to the Town, that effectively restricts occupancy of an affordable housing unit to a qualified purchaser or renter, and which provides for administration, monitoring, and enforcement of the restriction during the term of affordability. An affordable housing restriction runs with the land in perpetuity or for the maximum period allowed by law. It should be entered into and made enforceable under the provisions of G.L. c. 184, §§ 31-33 or other equivalent state law.

Affordable Housing Trust. The mechanism used to account for and report revenues and expenditures for affordable housing, including but not limited to Community Preservation Act (CPA) receipts and other affordable housing funding sources.

Age-Dependency Ratio. A measure defined by dividing the combined populations under 18 years and 65 years and over by the 18-64 years population and multiplying by 100.

Area Median Income (AMI). The median family income, adjusted for household size, within a given metropolitan or non-metropolitan area, updated annually by HUD and used to determine eligibility for most housing assistance programs. For Wellesley, AMI is based on the Boston-Cambridge-Newton Median Family Income.

Average-Income Household. Loosely defined term for households with incomes over the maximum for affordable housing but typically outpriced by housing costs in affluent suburbs. An income between 81 and 120 percent of AMI generally encompasses average-income households.

Chapter 40A. G.L. c. 40A, the state Zoning Act. The current version of the Zoning Act was adopted in 1975 (1975 Mass. Acts 808).

Chapter 40B. G.L. c. 40B, § 20-23 (1969 Mass. Acts 774), the state law administered locally by the Board of Appeals in order to create affordable housing. It provides eligible developers with a unified permitting process that subsumes all permits normally issued by multiple town boards. Chapter 40B establishes a basic presumption at least 10 percent of the housing in each city and town should be affordable to low- or moderate-income households. In communities below the 10 percent statutory minimum, affordable housing developers aggrieved by a decision of the Board of Appeals can appeal to the state Housing Appeals Committee, which in turn has authority to uphold or reverse the Board's decision.

Chapter 40R. G.L. c. 40R (2004 Mass. Acts 149, s. 92), a state law that provides for overlay districts with variable densities for residential development and multi-family housing by right (subject to site plan review). At least 20 percent of the units in a Chapter 40R district have to be affordable to low- or moderate-income people.

Chapter 44B. G.L. c. 44B (2000 Mass. Acts 267), the Community Preservation Act, allows communities to establish a Community Preservation Fund for open space, historic preservation, and community housing by imposing a surcharge of up to 3 percent on local property tax bills. The state provides matching funds (or a partial match) from the Community Preservation Trust Fund, generated from Registry of Deeds fees.

Comprehensive Permit. The unified permit authorized by Chapter 40B, §§ 20-23, for affordable housing development.

Community Development Block Grant (CDBG). Under the Housing and Community Development Act of 1974, as amended (42 U.S.C. 5300 et seq.), the U.S. Department of Housing and Urban Development (HUD) makes funds available each year for large cities ("entitlement communities") and each of the fifty states (the Small Cities or "non-entitlement" program). CDBG can be used to support a variety of housing and community development activities provided they meet one of three "national objectives" established by Congress. Housing activities are usually designed to meet the national objective of providing benefits to low- or moderate-income people. Funds may be used for housing rehabilitation, redevelopment of existing properties for residential purposes (in some cases), making site improvements to publicly owned land ~~in order to~~ support the construction of new housing, interest rate and mortgage principal subsidies, and downpayment and closing cost assistance.

Community Housing. As defined under Chapter 44B, "community housing" includes housing affordable and available to (a) households with incomes at or below 80 percent AMI and (b) between 81 percent and 100 percent AMI.

Community Land Trust. Community land trusts are nonprofit, community-based organizations designed to ensure community stewardship of land. They are used primarily to ensure long-term housing affordability. To do so, the trust acquires land and maintains ownership of it permanently. With prospective homeowners, it enters

into a long-term, renewable lease instead of a traditional sale. When the homeowner sells, the family earns only a portion of the increased property value. The remainder is kept by the trust, preserving the affordability for future low- to moderate-income families.

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Comprehensive Permit. The unified permit authorized by Chapter 40B for affordable housing development.

Department of Housing and Community Development (DHCD). The state's lead housing agency, originally known as the Department of Community Affairs (DCA). DHCD oversees state-funded public housing and administers rental assistance programs, the state allocation of CDBG and HOME funds, various state-funded affordable housing development programs, and the Community Services Block Grant (CSBG) Program. DHCD also oversees the administration of Chapter 40B.

Disparate Impact. A legal doctrine under Fair Housing that states a policy may be seen as discriminatory if it has a disproportionately adverse effect on groups protected by the Act. The intent does not have to be discriminative; disparate impact looks at the *effect*.

Extremely Low-Income Household. A household income at or below 30 percent of AMI. (In some housing programs, a household with income at or below 30 percent of AMI is called very low income.)

Fair Housing Act (Federal). Established under Title VII of the 1968 Civil Rights Act, the federal Fair Housing Act prohibits discrimination in the sale, rental, and financing of dwellings, and in other housing-related transactions, based on race, color, national origin, religion, sex, familial status (including children under the age of 18 living with parents or legal custodians, pregnant women, and people securing custody of children under the age of 18), sexual orientation, gender identity, and disability.

Fair Housing Law, Massachusetts. G.L. c. 151B (1946), the state Fair Housing Act prohibits housing discrimination on the basis of race, color religious creed, national origin, sex, sexual orientation, age, children, ancestry, marital status, veteran history, public assistance reciprocity, or physical or mental disability.

Fair Market Rent (FMR). A mechanism used by HUD to control costs in the Section 8 rental assistance program. HUD sets FMRs annually for metropolitan and non-metropolitan housing market areas. The FMR is the 40th percentile of gross rents for typical, non-substandard rental units occupied by recent movers in a local housing market. (See 24 CFR 888.)

Family. Under the Federal Fair Housing Act (FFHA), family includes any of the following:

- (1) A single person, who may be an elderly person, displaced person, disabled person, near-elderly person, or any other single person; or
- (2) A group of persons residing together, and such group includes, but is not limited to:
 - (a) A family with or without children (a child who is temporarily away from the home because of placement in foster care is considered a member of the family);
 - (b) An elderly family;
 - (c) A near-elderly family;
 - (d) A disabled family;
 - (e) A displaced family; and
 - (f) The remaining members of a tenant family.

Gross Rent. Gross rent is the sum of the rent paid to the owner ("contract rent") plus any utility costs incurred by the tenant. Utilities include electricity, gas, water and sewer, and trash removal services but not telephone service. If the owner pays for all utilities, then gross rent equals the rent paid to the owner.

Group Home. A type of congregate housing for people with disabilities; usually a single-family home.

Household. One or more people forming a single housekeeping unit and occupying the same housing unit. (See definition of Family)

Housing Appeals Committee (HAC). A five-member body that adjudicates disputes under Chapter 40B. Three members are appointed by the Director of DHCD, one of whom must be a DHCD employee. The governor appoints the other two members, one of whom must be a city councilor and the other, a selectman.

Housing Authority. Authorized under G.L. 121B, a public agency that develops and operates rental housing for very-low and low-income households.

Housing Cost, Monthly. For homeowners, monthly housing cost is the sum of principal and interest payments, property taxes, and insurance, and where applicable, homeowners association or condominium fees. For renters, monthly housing cost includes rent and basic utilities (oil/gas, electricity).

HUD. See U.S. Department of Housing and Urban Development.

Inclusionary Zoning. A zoning ordinance or bylaw that encourages or requires developers to build affordable housing in their developments or provide a comparable public benefit, such as providing affordable units in other locations ("off-site units") or paying fees in lieu of units to an affordable housing trust fund.

- Infill Development. Construction on vacant lots or underutilized land in established neighborhoods and commercial centers.
- Jobs-to-Housing Ratio. An indicator of the adequacy of employment and housing in a given community or area.
- Labor Force. The civilian non-institutionalized population 16 years and over, either employed or looking for work.
- Labor Force Participation Rate. The percentage of the civilian non-institutionalized population 16 years and over that is in the labor force.
- Local Initiative Program (LIP). A program administered by DHCD that encourages communities to create Chapter 40B-eligible housing without a comprehensive permit, e.g., through inclusionary zoning, purchase price buydowns, a Chapter 40R overlay district, and so forth. LIP grew out of recommendations from the Special Commission Relative to the Implementation of Low or Moderate Income Housing Provisions in 1989. The Commission prepared a comprehensive assessment of Chapter 40B and recommended new, more flexible ways to create affordable housing without dependence on financial subsidies.
- Low-Income Household. As used in the terminology of Chapter 40B and DHCD's Chapter 40B Regulations, low income means a household income at or below 50 percent of AMI. It includes the HUD household income group known as very low income.
- Low or Moderate Income. As used in Chapter 40B, low or moderate income is a household that meets the income test of a state or federal housing subsidy program. Massachusetts follows the same standard as the rest of the nation, which is that "subsidized" or low- or moderate-income housing means housing for people with incomes at or below 80 percent of the applicable AMI.
- Massachusetts Housing Partnership (MHP). A public non-profit affordable housing organization established by the legislature in 1985. MHP provides technical assistance to cities and towns, permanent financing for rental housing, and mortgage assistance for first-time homebuyers.
- MassDevelopment. A quasi-public state agency that provides financing for commercial, industrial, and multifamily rental developments and facilities owned by non-profit organizations.
- MassHousing. A quasi-public state agency that provides financing for affordable housing.
- Mixed-Income Development. A residential development that includes market-rate and affordable housing.
- Mixed-Use Development. A development with more than one use on a single lot. The uses may be contained within a single building ("vertical mixed use") or divided among two or more buildings ("horizontal mixed use").

Moderate-Income Household. As used in the terminology of Chapter 40B and DHCD's Chapter 40B Regulations, moderate income means a household income between 51 and 80 percent of AMI. In some federal housing programs, a household with income between 51 and 80 percent of AMI is called low income.

Non-Family Household. A term the Census Bureau uses to describe households composed of single people living alone or multiple unrelated people sharing a housing unit.

Overlay District. A zoning district that covers all or portions of basic use districts and imposes additional (more restrictive) requirements or offers additional (less restrictive) opportunities for the use of land.

Regulatory Agreement. An affordable housing restriction, recorded with the Registry of Deeds or the Land Court, outlining the developer's responsibilities and rights

Section 8. A HUD-administered rental assistance program that subsidizes "mobile" certificates and vouchers to help very-low and low-income households pay for private housing. Tenants pay 30 percent (sometimes as high as 40 percent) of their income for rent and basic utilities, and the Section 8 subsidy pays the balance of the rent. Section 8 also can be used as a subsidy for eligible rental developments, known as Section 8 Project-Based Vouchers (PBV), which are not "mobile" because they are attached to specific units.

Shared Equity Homeownership. Owner-occupied affordable housing units that remain affordable over time due to a deed restriction that controls resale prices, thereby retaining the benefits of the initial subsidy for future moderate-income homebuyers.

Single Room Occupancy (SRO). A building that includes single rooms for occupancy by individuals and usually includes common cooking and bathroom facilities shared by the occupants.

Subsidized Housing Inventory (SHI). A list of housing units that "count" toward a community's 10 percent statutory minimum under Chapter 40B.

SHI-Eligible Unit. A housing unit that DHCD finds eligible for the Subsidized Housing Inventory because its affordability is secured by a long-term use restriction and the unit is made available to low- or moderate-income households through an approved affirmative marketing plan.

Subsidy. Financial or other assistance to make housing affordable to low- or moderate-income people.

Sustainability. To create and maintain conditions under which people and nature can exist in productive harmony while fulfilling the social, economic and other requirements of present and future generations. For housing, sustainability requires an equity framework that includes affirmative measures to provide greater energy-efficiency and healthy housing, to connect housing to jobs, to improve access to affordable transportation, and to enhance educational opportunity.

Typical, Non-substandard Rental Units. A term that defines the types of rental units that HUD includes and excludes in establishing the FMR for each housing market area. The term excludes: public housing units, rental units built in the last two years, rental units with housing quality problems, seasonal rentals, and rental units on ten or more acres.

U.S. Department of Housing and Urban Development (HUD). The lead federal agency for financing affordable housing development and administering the Fair Housing Act.

Very Low Income. See Extremely Low Income.

Workforce. People who work or who are available for work, either in a defined geographic area or a specific industry.

Workforce Housing. There is no single industry standard that defines “workforce housing.” HUD defines it as housing affordable to households earning between 80 and 120 percent of AMI. The Urban Land Institute has traditionally used the term “workforce housing” to describe units affordable to households with incomes between 60 and 100 percent AMI. By contrast, MassHousing defines “workforce housing” as housing affordable to individuals and families with incomes of 61% to 120% of AMI. In general, workforce housing is housing for people who work in a community and the pricing methodology should account for wages paid by local employers.

X. RESOURCES FOR AFFORDABLE HOUSING INFORMATION, EDUCATION, AND COMMUNITY ENGAGEMENT

Housing Toolbox for Massachusetts Communities
www.housingtoolbox.org/

Citizens Housing and Planning Association (CHAPA)
www.chapa.org

Local Initiatives Support Corporation (Boston Office)
www.lisc.org/boston/

Joint Center for Housing Studies at Harvard University
www.jchs.harvard.edu/

National Low-Income Housing Coalition
nlihc.org/

MassAccess Housing Registry
<http://www.massaccesshousingregistry.org/>

National Fair Housing Alliance
nationalfairhousing.org/

Housing Rights Center
www.hrc-la.org/

The Fair Housing Center of Greater Boston
<http://bostonfairhousing.org/>

Massachusetts Affordable Housing Alliance
mahahome.org/

[National Community Land Trust Network
cltnetwork.org/](http://cltnetwork.org/)

[National Housing Trust
www.nationalhousingtrust.org/](http://www.nationalhousingtrust.org/)

X. SAFE HARBOR STATUS THROUGH HOUSING PLAN CERTIFICATION

In 2002, the Massachusetts Department of Housing and Community Development (DHCD) created an incentive for cities and towns to take an active role in increasing the supply of affordable housing. By developing a plan that met DHCD's requirements under the Planned Production program, communities could become eligible to deny a comprehensive permit for twelve (or possibly twenty-four) months if they implemented their housing plan by meeting a minimum annual low-income housing production target. The Planned Production program was overhauled in 2008, at which time the planning component became known as the Housing Production Plan.

To qualify for the flexibility that a DHCD-approved Housing Production Plan offers, Wellesley would need to create (through the issuance of permits and approvals) at least twenty-four new low- or moderate-income housing units (or an amount equal to or greater than the 0.50 percent production goal) in a given calendar year and obtain certification from DHCD that the Housing Production Plan standard had been met. Units eligible for the Subsidized Housing Inventory (SHI) will be counted for certification purposes in accordance with 760 CMR 56.03(2):

(2) Subsidized Housing Inventory.

- (a) The Department shall maintain the SHI to measure a municipality's stock of SHI Eligible Housing. The SHI is not limited to housing units developed through issuance of a Comprehensive Permit; it may also include SHI Eligible Housing units developed under G.L. Chapters 40A, 40R, and other statutes, regulations, and programs, so long as such units are subject to a Use Restriction and an Affirmative Fair Marketing Plan, and they satisfy the requirements of guidelines issued by the Department.
- (b) Units shall be eligible to be counted on the SHI *at the earliest* of the following:
 1. For units that require a Comprehensive Permit under M.G.L. c. 40B, § 20 through 23, or a zoning approval under M.G.L. c. 40A or completion of plan review under M.G.L. c. 40R, the date when:
 - a. the permit or approval is filed with the municipal clerk, notwithstanding any appeal by a party other than the Board, but subject to the time limit for counting such units set forth at 760 CMR 56.03(2)(c); or
 - b. on the date when the last appeal by the Board is fully resolved;
 2. When the building permit for the unit is issued;
 3. When the occupancy permit for the unit is issued; or
 4. When the unit is occupied by an Income Eligible Household and all the conditions of 760 CMR 56.03(2)(b) have been met (if no Comprehensive Permit, zoning approval, building permit, or occupancy permit is required.)

Requests for certification may be submitted at any time. DHCD will determine whether Wellesley complies within 30 days of receipt of the Town's request. If DHCD finds that Wellesley complies with the Housing Production Plan, the certification will be deemed

effective on the date upon which Wellesley created new units on the SHI under 760 CMR 56.03(2). The certification will remain in effect for one year from its effective date. If DHCD finds that Wellesley has increased its number of SHI Eligible Housing units in a calendar year by at least 1 percent of its total housing units (91 units), the certification will remain in effect for two years from its effective date.

The certification process would allow the Zoning Board of Appeals to deny a comprehensive permit for twelve months (or twenty-four months, as applicable), or continue to approve projects based on merit. However, if the Board decides to deny a comprehensive permit or impose conditions during the Housing Plan certification period, it must do so according to the following procedures. 760 CMR 56.05(3) and 56.03(8):

- Within fifteen days of opening the public hearing on a comprehensive permit application, the Board has to provide written notice to the applicant, with a copy to DHCD, that denying the permit or imposing conditions or requirements would be consistent with local needs, the grounds that it believes has been met (e.g., a Housing Plan certification is in effect), and the factual basis for that position, including supportive documentation.
- If the Applicant wishes to challenge the Board's assertion, it must do so by providing written notice to DHCD, with a copy to the Board, within fifteen days of receiving the Board's notice, and include supportive documentation.
- DHCD will review the materials provided by the Board and the applicant and issue a decision within thirty days. The Board has the burden of proving that a denial or approval with conditions would be consistent with local needs, but any failure of DHCD to issue a timely decision constitutes a determination in favor of the Town.
- While this process is underway, it tolls the requirement to complete the public hearing and final action within 180 days.

5. Joint Meeting with School Committee – Presentation of Middle School Study Results

The School Committee will be present to hear a presentation by Joe McDonough and the consultants for the Middle School Building Systems Study, Harriman Associates, to review the study results and recommendations. A copy of the report from Harriman is included in your packet. There will be a PowerPoint presentation for Monday night, but it will not be available until sometime on Monday, so copies will be provided.

As you may recall, the Middle School “bundle” included the exterior masonry, kitchen, classroom cabinetry and classroom doors in the 1966 wings/connectors, and some HVAC work (Gyms A & B, Kitchen, Auditorium). When first discussed these items in total were estimated to cost about \$9.4M dollars. These do not include the steam pipe project currently in design (currently estimated at \$4.2M), or the paving of the parking lot (estimated at \$1.5M). The estimated cost of the building systems work in the Harriman study is much more expensive than first thought, the budget proposed by the architects is now approaching \$15M. The need for a completely new kitchen versus replacement of appliances and equipment is one of the main reasons.

We have been modelling this building systems work as one project that would go to the voters as a debt exclusion due to the high cost of either of the estimates. Separately, the replacement of the steam pipes was planned to be handled inside the levy at the 2019 spring town meeting, and the parking lot in a similar manner perhaps after all other work was done. I bring these up as we may want to give some thought to a debt exclusion in the spring that would encompass all there of the projects (building systems, steam piping and paving). We will have bids in hand for the steam pipes, but the others still require design and bidding. Past practice is that PBC and Town Meeting prefer to have “bids in hand” when requesting construction funding for projects, so seeking funding for all three without these bids would be a change, but not unprecedented (new Wellesley High School). While there is risk to assigning a figure to work that has not been designed or bid, it might be worthwhile to approach the voters for approval of all of the work as one request at one time.

MOVE to convene a joint meeting with the School Committee

MOVE to elect Jack Morgan as chair of the joint meeting.

MOVE to elect Matt Kelley as Secretary of the joint meeting.

MOVE to dissolve the joint meeting

Wellesley Middle School Building Systems Study

September 21, 2018

170 Milk Street, Suite 5
Boston, MA 02109-3438

6 Harriman Drive
Auburn, ME 04210
207.784.5100

123 Middle Street
Portland, ME 04101
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Portsmouth, NH 03801
603.626.1242

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- Doors & Casework (c)
- Kitchen Equipment (d)
- Supplemental Scope (e)

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5 Project Schedule

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Executive Summary

1

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Executive Summary

Project Goals and Objectives

Harriman has been retained by the Town of Wellesley to conduct the Building Systems Study for Wellesley Middle School. The goal of this study is to investigate certain building systems requiring repair or replacement at a sufficient level to establish a scope of work and project cost estimates. The recommended scope of work is based on providing 25 year solutions. Where applicable, alternative scope options are outlined within each scope of work. The scope of work outlined in this study includes: Task 1A - the exterior brick masonry and limestone / precast trim facade; Task 1B - HVAC systems (Gym A, Gym B, Kitchen and Auditorium); Task 1C - selective interior door and cabinetry / casework replacement; Task 1D - kitchen equipment replacement, reconfiguration and related items. Related to these tasks Harriman has identified and recommended supplemental scope that was discovered during their existing systems inventory and supports a 25 year solution. For each of these tasks Harriman has developed a narrative and supporting documentation outlining the conceptual scope of work as well as estimates illustrating the construction cost and total project cost. It is assumed that the scope of work will occur over two summers and one school year. During the school year the school will be occupied. A construction start date of Spring 2020 has been assumed. The tasks and their associated costs are outlined below:

Task 1A - Facade

Section 3.1 - Base Scope:

• Estimated Construction Cost	• \$1,915,841
• Estimated Total Project Cost	• \$2,699,894

Section 3.2 - Facade Option 1: Additional brick masonry repointing / cleaning

• Estimated Construction Cost	• \$309,355
• Estimated Adjustment to Base Estimate	• \$309,355

Section 3.2 - Facade Option 2: Retaining wall w/ concrete cap

• Estimated Construction Cost	• \$483,408
• Estimated Adjustment to Base Estimate	• (\$83,106)

Section 3.2 - Facade Option 3: Replace missing bluestone caps on top of vault areas

• Estimated Construction Cost	• \$47,434
• Estimated Adjustment to Base Estimate	• \$47,434

Task 1B - HVAC replacement

HVAC systems in Gym A, Gym B and the Auditorium (Kitchen HVAC moved to Task 1D)

Base Scope: Gym A, Gym B and the Auditorium

- Estimated Construction Cost • \$1,279,236
- Estimated Total Project Cost • \$1,802,760

Option 1: Sustainable Consideration - Geothermal

- Estimated Construction Cost • \$1,043,183
- Estimated Adjustment to Base Estimate • \$140,992

Task 1C - Interior Doors and Cabinetry /Casework

Task 1C - Interior door and casework replacement

Base Scope (Recommendation) Itemized: Door and hardware replacement, option 1 classroom casework replacement and Art Room renovation

- Doors • \$601,425
- Casework • \$1,606,432
- Art Rooms • \$895,025

Base Scope (Recommendation) Total: Door and hardware replacement, classroom casework replacement and Art Room renovation

- Estimated Construction Cost • \$3,102,882
- Estimated Total Project Cost • \$4,372,728

Doors Option 1: School Guard (SG4) Glazing in lieu of 0.90 Laminated

- Estimated Construction Cost • \$713,788
- Estimated Adjustment to Base Construction Cost • \$112,363

Doors Option 2: Least costly

- Estimated Construction Cost • \$509,506
- Estimated Adjustment to Base Construction Cost • (\$91,919)

Casework Option 1 (Less costly): Casework layout option 1 for 1966 addition science and typical classrooms, and 1952 original building classrooms (excludes art rooms)

- Estimated Construction Cost • \$1,505,000
- Estimated Adjustment to Base Construction Estimate • (\$101,431)

Casework Option 2 (Least costly): Casework layout option 2 for 1966 addition science and typical classrooms, and 1952 original building classrooms (excludes art rooms)

- Estimated Construction Cost • \$1,452,439
- Estimated Adjustment to Base Estimate • (\$153,992)

Task 1D - Kitchen

Base Scope (Recommendation) Breakdown: Kitchen equipment replacement, Kitchen HVAC and work associated with modified layout

• Kitchen Renovation	• \$1,789,697
• Kitchen Equipment	• \$1,391,904

Base Scope (Recommendation) Total: Kitchen equipment replacement, Kitchen HVAC and work associated with modified layout

• Estimated Construction Cost	• \$3,181,601
• Estimated Total Project Cost	• \$4,483,663

Supplemental Scope for Consideration

Scope Breakdown: Fire alarm FACP replacement and correct system deficiencies, wiring upgrades and water heater replacement

• Fire Alarm FACP replacement and correct system deficiencies	• \$93,960
• Wiring upgrades	• \$528,768
• Water heater	• \$53,460

Base Scope Total: Fire alarm replacement with voice evacuation, wiring upgrades and water heater replacement

• Estimated Construction Cost	• \$676,188
• Estimated Total Project Cost	• \$952,916

The costs illustrated above are extracted from the Preferred Construction Management estimate dated September 21, 2018. The detailed estimate is included in Tab 6 Opinion of Probable Cost along with a summary of exclusions and assumptions. The cost estimate is based on the Schedule Option A - Traditional Schedule. Refer to Tab 5 Project Schedule for Schedule options. The cost estimate is also based on the scope of work being executed as one project and not broken into separate projects.

The total project cost includes the construction cost plus the soft cost. Soft cost include: custodial overtime charges; legal; Architect and other professional services; Owner Project Manager; commissioning; other general supplies; fire service and contingencies as outlined on the Feasibility Project Budget in Tab 6 Opinion of Probable Cost.

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- Facade (a)
- HVAC Replacement (b)
- Doors & Casework (c)
- Kitchen Equipment (d)
- Supplemental Scope (e)

Building Systems Analysis & Recommendations

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Task 1A - Facade

1. Scope of Work

Simpson Gumpertz & Heger Inc. (SGH) performed a condition assessment of the exterior building facade and retaining wall at the Wellesley Middle School for the purpose of evaluating its condition and repair needs and developing restoration/repair/alteration options to extend the building service life an additional 25 years. We understand that the assessment will inform the scope of a larger building rehabilitation that the Town is planning.

Our scope of work includes review of background documents, an existing conditions investigation by visual assessment and water testing, analysis and reporting, and attendance at various meetings. Our scope initially included infrared imaging to understand the building enclosure heat loss, and sealant material sampling and testing for hazardous materials, all of which was deleted from our scope. All sealant not installed during a 2016 window replacement project is assumed to be asbestos and polychlorinated biphenyl (PCB) containing material.

Scott A. Tomlinson of SGH visited the site on June 14, 2018 to perform an initial visual inspection of the facade. Makoto S. Weinstein and Susannah L. Davis of SGH visited the site on July 17, 18 and 19, 2018 to perform the following work (refer to Appendix (a) for the results):

- Visually inspected the building facade and retaining wall to document existing conditions to develop repair options, recommendations, and quantities. We made visual observations of the brick masonry, limestone masonry, windows, and sealants from the ground, adjacent roof surfaces, and extension ladder. We did not inspect the roofing.
- Water tested the base of the exterior wall and foundation at the Photography Room to reproduce previous interior water leakage and identify leakage pathways to the extent possible without making interior and exterior openings.
- Visually inspected the underside of the cupola for reported interior water leakage and identify the leakage pathways to the extent possible without making interior and exterior openings. We observed the reported interior water leakage the day after heavy rain and did not perform additional water testing.
- Collected two mortar samples for future laboratory analysis to determine the aggregate color and specification of the appropriate repointing/repair mix. We limited our sampling to existing areas of spalled mortar to avoid leaving additional unrepaired holes.

2. Existing Conditions and Assessment

The Wellesley Middle School is primarily a two-story building. The overall perimeter of the building has a rectangular footprint, with the long dimension oriented northwest-southeast (project east-west; all compass directions referenced herein are project). The building is confined by Kingsbury Street (north), D'Auria Drive (east), Donizetti Street (south), and Calvin Road (west). There are two main entrances to the school (non-employee): a first floor entrance

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Kingsbury Street

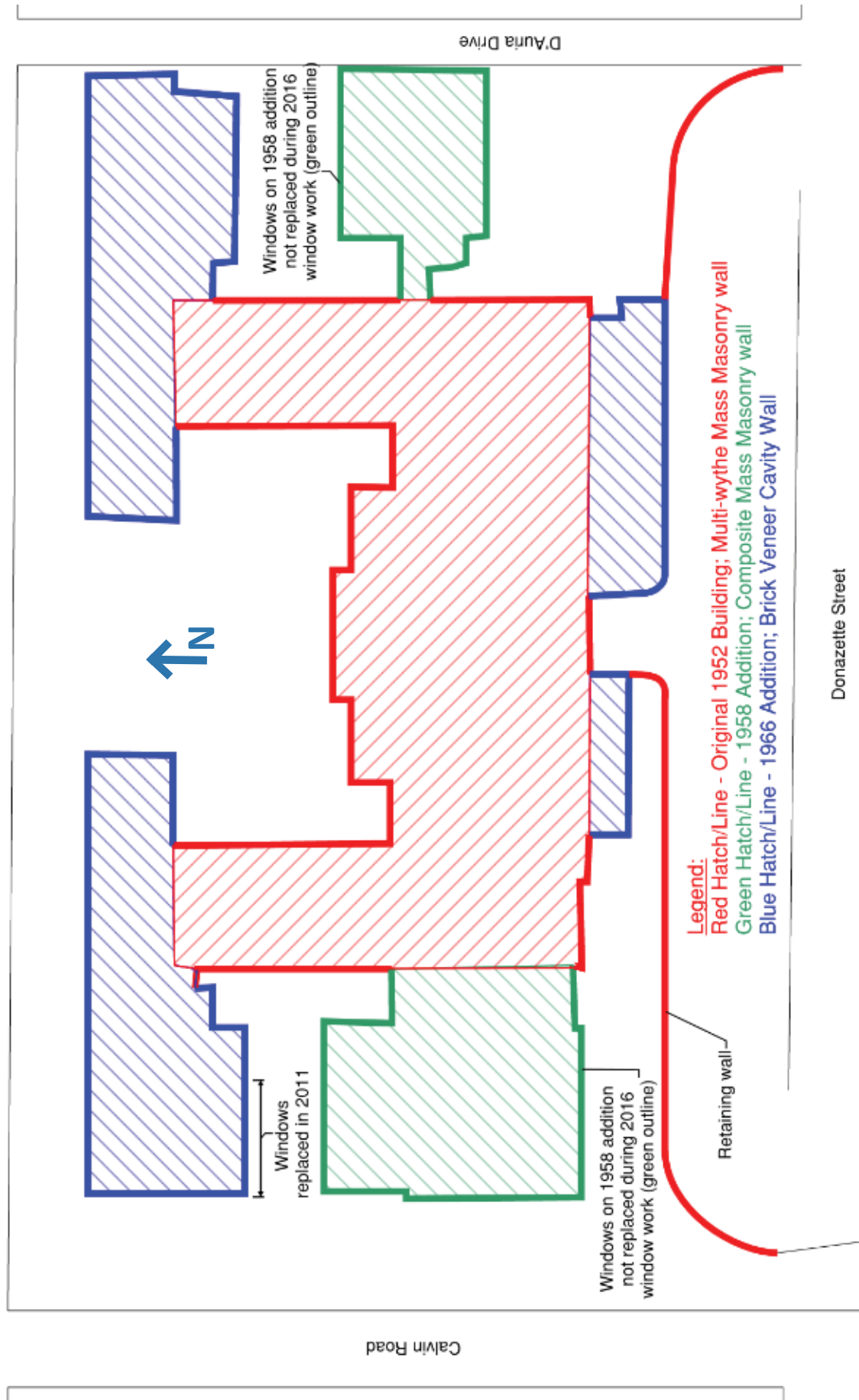


Fig. 1 – Plan of Building

2. Existing Conditions and Assessment (Continued)



Image 1 - Original 1952 North Entrance



Image 2 - Original 1952 North Courtyard



Image 3 – Original 1952 South Entrance

in a courtyard off Kingsbury Street (north entrance) and a second floor entrance off Donizetti Street (south [primary] entrance). A paved lot off Donizetti Street serves the primary entrance with a school bus drop-off and pickup area and limited parking. This paved lot is elevated and has a fence along its north edges, where an approximately 15 ft tall retaining wall separates the elevated paved lot and the building and property north of it.

We understand that the original Wellesley Middle School building opened in approximately 1952. Additions were constructed in 1958-1959 and 1966-1967. Refer to Fig. 1.

The exterior walls are clad with brick masonry with punched and ribbon windows, limestone elements, and discrete areas of limestone and granite masonry. The original 1952 building typically has punched windows and the additions typically have ribbon windows. The granite masonry is at the base of wall at the north entrance and door thresholds at the south (primary) entrance. Some vault areas around the 1966 Additions have bluestone caps.

The building has a low-slope roof (Versico EPDM roofing installed in 2007), and a gabled roof over the center of the original 1952 building that is covered with copper roofing. The section of building with the gabled copper roof rises approximately half a story above the low-slope roof. The gable ends are over the two main entrances.

2. Existing Conditions and Assessment (Continued)

Limestone is generally installed in the following locations:

- Original 1952 building: At all windows sills, roof cornices, the two main entrances, and around the walls that rise above the low-slope roof to the gabled roof (Image 1 to 3).
- 1958 additions: Similar to the original 1952 building, at all window sills, roof cornices, and below the second and third floor ribbon windows (Image 4 to 6).
- 1966 additions: At all window sills and below windows, at the base of walls except at the north elevation, first floor band course, vertical elements on the north elevations, and at the east and west entrances for both additions (Image 7 to 10).

We reviewed the original construction drawings for the original 1952 building, 1958 additions, and 1966 additions prepared by Kilham, Hopkins, Greely & Brodie Architects (KHGBA), dated February 16, 1950, October 1, 1958, and February 17, 1966, respectively. Our understanding of the wall construction is described below based on our visual observations (no openings) and the original construction drawings (refer to Figure 1).



Image 4 – 1958 West Addition



Image 5 – 1958 East Addition



Image 6 – 1958 East Addition

2. Existing Conditions and Assessment (Continued)



Image 7 – 1966 East Addition



Image 8 – 1966 West Addition



Image 9 – 1966 West Addition

1952 original construction (building):

- Observations: The brick masonry is common bond with a Flemish header course (alternating header and stretchers) every 7th course (Image 11). There are projected brick areas on the north entrance. Metal through-wall flashing drip edges are visible above painted steel lintels at the window heads and below the limestone sill pieces (Image 12).
- Drawings: The typical wall construction is multi-wythe brick mass masonry with varying thickness from 1 ft – 4 in. at the base to 1 ft at the top of the second story (Figure 2). Limestone elements replace the outer brick wythes and key into the backup wall at some locations. Through-wall flashings (material not identified) are shown over steel lintels at window heads, below window sills, and at the base of walls. The drawings show the through-wall flashing extending through the full thickness of the wall at the head of windows and base of walls. At window sills the through-wall flashing is shown turning-up behind the limestone sill and into the rough opening.

1952 original construction (retaining walls along the north edge of the paved south lot):

- Observations: The retaining walls are clad with running

2. Existing Conditions and Assessment (Continued)

bond brick masonry with full-height head joint weeps at approximately 32 in. o.c. along the base of the wall (Images 13 and 14). Concrete is exposed at the base of the walls and comprises the full height of the wall at the west and east ends where the wall heights taper to zero. We observed no expansion joints in the brick masonry. There is a concrete coping cap at the top of the walls with metal chain link fence posts set into the holes at approximately 10 ft on center on the straight portions of the wall and 5 ft on center on the curved portions of the wall. There are 76 abandoned existing fence posts that were cut flush with the coping and left with the hollow pipe open to the sky. The caps are 17 in. wide and have cracks at almost all the existing in-use and abandoned posts.

- Drawings: The drawings show 12 in. thick reinforced concrete walls with a 4-1/2 in. brick shelf at the base and the cap is part of the retaining wall stem (Figure 3). The drawings do not show expansion joints.

1958-1959 additions (building):

- Observation: The brick masonry is common bond with a Flemish header course (alternating header and stretchers) every 7th course (Image 11). The east addition ribbon windows have metal head and sill flashing (Image 6). Through-wall flashing drip edges are



Image 10 – 1966 West Addition

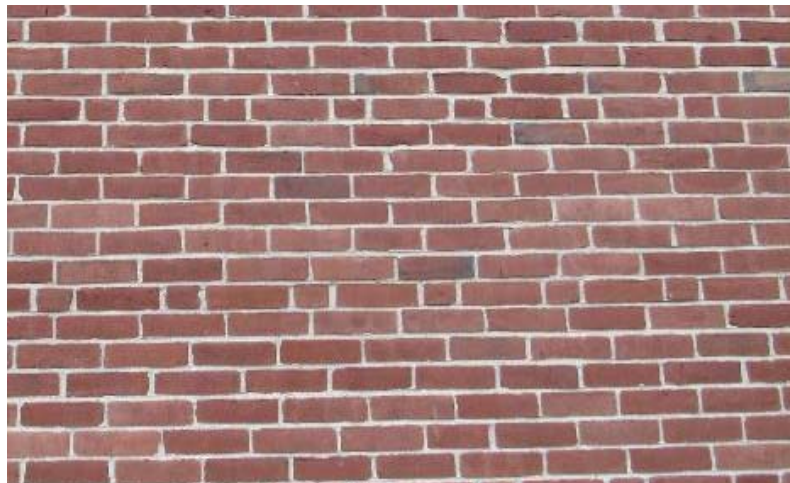


Image 11 – Common bond with a Flemish header course



Image 12 – Through-wall flashing at window heads and below limestone sill (arrows)

2. Existing Conditions and Assessment (Continued)

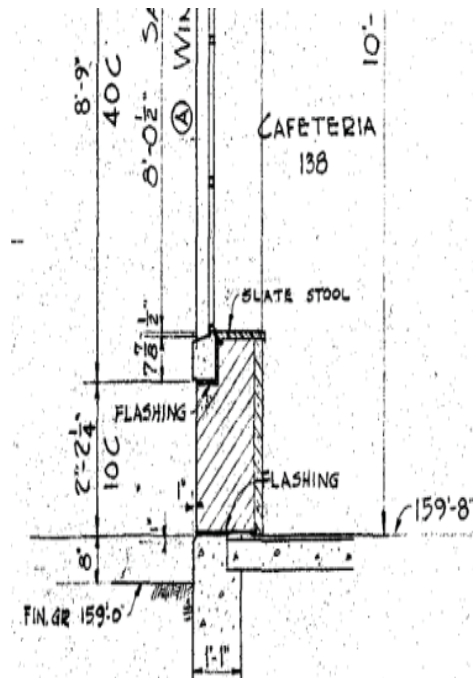


Fig. 2 – 1952 typical wall section;
KHGBA Section 11-11/Sheet 14

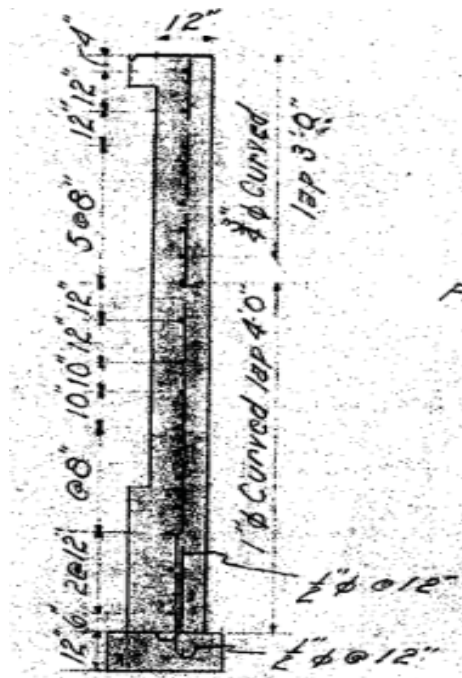


Fig. 3 – Typical retaining wall section;
KHGBA wall Section A A/
Sheet 28

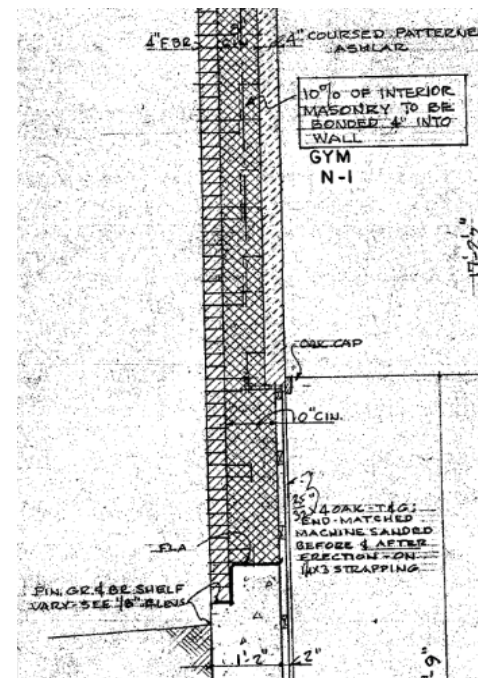


Fig. 4 – 1958 addition typical wall section;
KHGBA wall Section 1 1/
Sheet 10



Image 13 – West retaining wall



Image 14 – East retaining wall

2. Existing Conditions and Assessment (Continued)

visible above painted steel lintels at the window heads and below the limestone sill pieces (Image 12 similar).

- Drawings: The typical wall construction is a composite mass masonry wall with a single brick wythe (approximately 4 in.) and “cinder block” backup (assumed to be concrete masonry unit [CMU], approximately 10 in. block at the base and 8 in. block at the top of the second story) (Figure 4). Limestone elements replace the outer brick masonry wythe in some areas. The drawings show through-wall flashing extending through the thickness of the wall at the base of the wall.



Image 15 – Sealant between limestone and flashing

1966-1967 additions (building):

- Observations: The brick masonry is common bond with a Flemish header course (alternating header and stretchers) every 7th course (Image 11 similar). Metal through-wall flashings are installed below the limestone sill pieces (Image 12 similar). Joints between the limestone and the through-wall flashing are filled with sealant and have no weeps (Image 15). We noted in one elevation that there are apparent weeps at the base of the brick above the limestone elements on the first floor, spaced approximately 48 in. o.c.; the weeps are small openings less than 1 in. tall in the head joints (Image 16)
- Drawings: The typical wall construction is a brick veneer system, with a 1 in. cavity space, and “dampproofing” over 8 in. thick CMU back-up wall (Figure 5). Limestone elements replace the brick masonry in some areas. Through-wall flashing behind the brick and limestone veneer turns up onto the CMU into the cavity at the heads and sills of windows. The through-wall flashing extends through the thickness of the wall at the base of the wall.

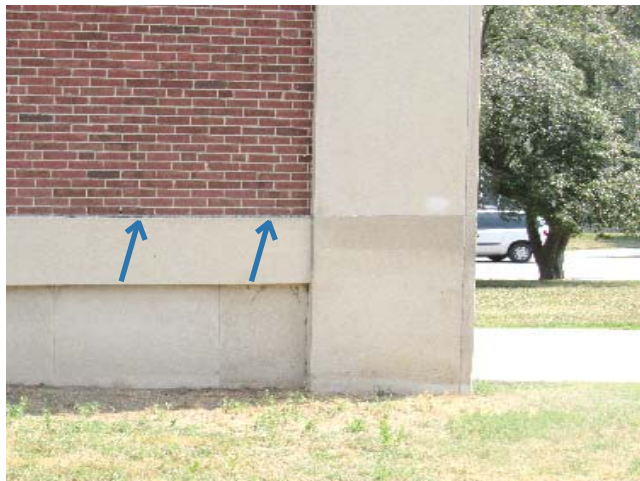


Image 16 – Apparent weeps (arrows)

2. Existing Conditions and Assessment (Continued)

We understand that all of the windows were replaced in 2016, except for the 1958 Additions and two window bays on the 1966 West Addition. The two window bays on the 1966 West Additions were replaced in 2011 according to Facilities Management Department (FMD) staff. The windows are a mixture of fixed, spandrel and project-out awning operable aluminum windows with 1 in. insulated glass units (IGU). We do not know when or if the windows on the 1958 Additions are original or were replaced prior to 2011.

We understand that the Town has no record of other maintenance work or repairs to exterior walls since the original construction of the buildings.

2.1 Building Facade Observations

We visually inspected the building facade and retaining wall and documented existing conditions and quantities, which are included in Table 1 and on the SGH marked-up elevations (refer to Appendix (a)). A summary of our general and specific observations of the existing conditions are included herein with references to the locations on the SGH marked-up elevations.

Brick Masonry and Concrete Foundation:

The total area of brick masonry is approximately 55,100 sf, including the retaining walls and excluding windows and limestone areas.

The brick masonry consists of red brick (approximately 7-5/8 in. long x 3-5/8 in. deep x 2-1/4 in. high) with approximately 3/8 in. wide mortar joints that appear to have an original “weathered” finish (i.e., top of the joint struck back from the brick face and the bottom is struck approximately flush to provide a sloped joint finish, Figure 6 and Image 17). It appears that the top of the mortar joint was originally struck back approximately 1/4 in. to 3/8 in. from the brick face.

The degree of mortar joint weathering varies. The mortar is typically hard to the touch with a finger. The exposed mortar paste is generally weathered sufficiently to increase the sand aggregate exposure at the surface to the point that some of the aggregate dislodges when the mortar is rubbed with a finger (Image 17).

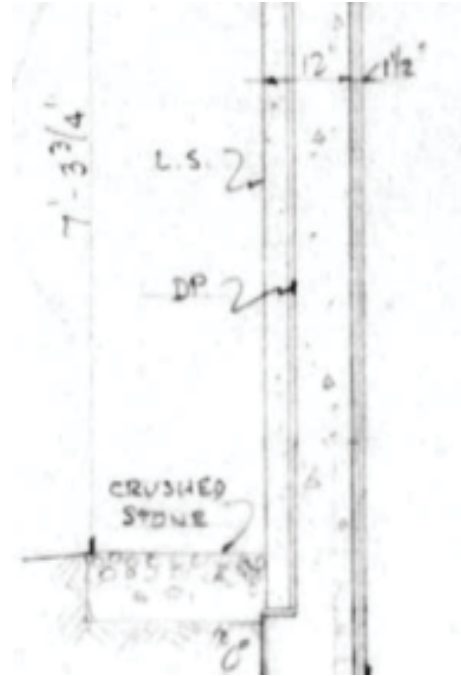


Fig. 5a – 1966 addition typical wall section; KHGBA wall Section C C/ Sheet 22

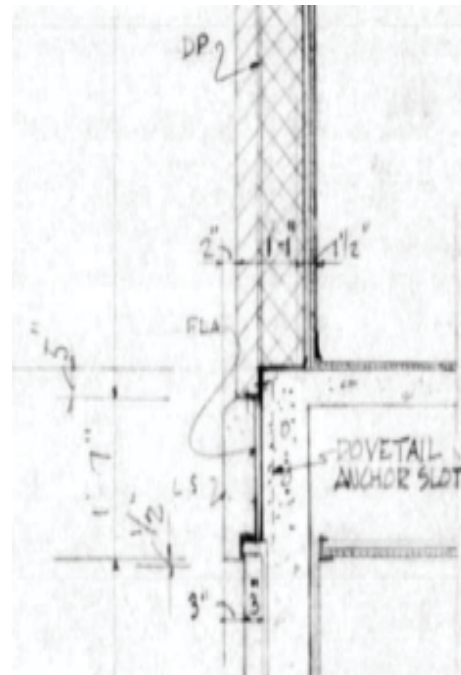


Fig. 5b – 1966 addition typical wall section; KHGBA wall Section C C/ Sheet 22

2. Existing Conditions and Assessment (Continued)

We grouped the degree of mortar joint weathering into the following categories:

- Typical weathering (46,800 sf, 85% of the brick masonry including retaining walls): The mortar is weathered approximately 3/8 in. or less from the brick face at the top and the sky-facing brick exposure at the bottom of the joint is less than 1/4 in., approximately (Fig. 7, Images 18 and 19).
- Weathering not affecting 25 year service life (5,200 sf, 9% of the brick masonry): The mortar is weathered 1/2 in. or less from the brick face and the sky-facing brick exposure at the bottom of the joint is less than 1/4 in. (Figure 8 and Images 20 and 21).
- Weathering affecting a 25 year service life (3,100 sf, 5% of the brick masonry): In mass masonry walls, where the mortar is weathered 1/2 in. or more from the face of the brick and the sky facing brick exposure is more than 1/4 in. at the bottom of the joint, and in brick veneer cavity walls, where the mortar is weathered 3/4 in. or more from the face of the brick regardless of the exposure at the bottom of the joint (Image 22). We observed a few areas where the mortar joint was white, soft and powdery to the touch, and we also classify this condition as affecting the 25 yr service life (Image 23, Elevation Sheet 8).

Reinforcing steel is exposed at cracks and spalls in the concrete foundation wall at the brick transition on the south elevation of the 1958 Additions (Image 24, Elevation Sheets 14, 17 and 24). There are two approximately 1/4 in. wide cracks at one location on the 1958 West Addition (Image 26, Elevation Sheet 9). We observed no dampproofing/waterproofing on the exposed concrete foundation walls.

We observed several brick spalls, some with missing brick material, throughout the building. Some spalls or holes extend into the mid-depth of the brick (Image 27, Elevation Sheet 14), but most are small in area and shallow and do not penetrate into the mid-depth of the brick (Image 28, Elevation Sheet 3). We limited our documentation to the larger/deeper spalls that penetrate into the mid-depth of the brick.



Fig. 6 –
Original profile



Fig. 7 – Typical
weathered
profile

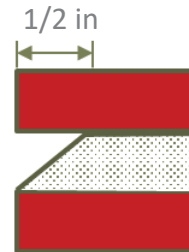


Fig. 8 –
Weathering
not affecting
25 yr. service
life



Fig. 9 –
Weathering
affecting 25 yr.
service life



Image 17 – Typical original profile

2. Existing Conditions and Assessment (Continued)



Image 18 – Typical weathering



Image 19 – Typical weathering



Image 20 – Weathering not affecting 25 yr. service life



Image 21 – Weathering not affecting 25 yr. service life



Image 22 – Weathering affecting a 25 yr service life



Image 23 – Mortar is white, soft, and powdery to the touch

2. Existing Conditions and Assessment (Continued)



Image 24 – Exposed reinforcing steel



Image 25 – Exposed reinforcing steel



Image 26 – 1/4 in. wide cracks



Image 27 – Spalls that extend into the mid-depth of the brick



Image 28 – Small shallow area and spall does not penetrate into the mid-depth of the brick



Image 29 – Crack that is approximately 6 ft long with the lower 3 ft covered with sealant, same location as Image 30

2. Existing Conditions and Assessment (Continued)

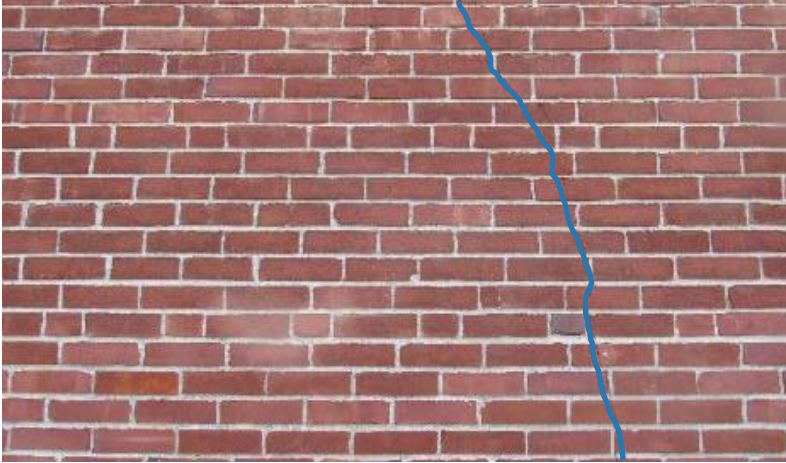


Image 30 – Crack that is approximately 6 ft long with the lower 3 ft covered with sealant (represented by blue line)



Image 31 – Crack that extends from the foundation to the edge of the roof on the 1958 Addition (represented by blue line)



Image 32 – Efflorescence

The length of brick cracks vary, but are generally longer near the inside and outside corners of the building. We observed one crack that is approximately 6 ft long with the lower 3 ft covered with sealant (Image 29 and 30, Elevation Sheet 12). There is a crack that extends from the foundation to the edge of the roof on the 1958 Addition (Image 31, Elevation Sheet 14).

There are eight locations with efflorescence (Image 32) and areas of efflorescence spots scattered throughout the brick masonry on all sides of the 1966 Additions (Image 33).

Limestone Masonry:

Most trim elements, such as window sills, panel accents, and band courses, are limestone. Limestone panels under windows and at the base of walls are 3 in. thick at the 1966 Additions and 2 in. thick at the 1958 Additions. The limestone panels directly below the windows in the 1966 Additions are finished with non-uniform vertical lines of varying depth; the finish is called “rough shot sawed” in the original construction drawings.

The limestone panels below windows at the 1966 Additions are generally in good condition. Some panels are weathered, which may accentuate the non-uniform vertical line depths (Image 34).

The limestone panels are weathered and deteriorated from road salt/sand and presumably plow impact near grade at the

2. Existing Conditions and Assessment (Continued)

1966 Addition near paved parking areas. The erosion of the stone panels typically extends up to about 1/2 in. deep (Images 35 and 36). We observed thirty locations where the limestone elements are damaged. The more severe locations we observed include:

- Weathered panel at paved grade with an exposed anchor at a missing spall (Image 37, Elevation Sheet 10).
- Partially missing spall that extends through the full panel depth at the top of a first floor column between two windows (Image 38, Elevation Sheet 8).
- Larger spall in a second floor panel below a window adjacent to the north elevation entrance (Image 39, Elevation Sheet 4).
- Partially missing spall/crack above the south entrance, directly above the doors (Image 40, Elevation Sheet 16).

We observed one location where two adjacent limestone band course panels are vertically offset approximately 1/4 in. at a vertical joint (Image 41, Elevation Sheet 2). There is a “rough shot sawed” limestone panel above one of the band course panels and brick masonry above the other, with the vertical transition joint between the two materials aligning with the band course joint at the offset. The bottom edge of the “rough shot sawn” limestone panel does not appear to be offset lower than the adjacent brick masonry. We observed no horizontal joint gaps

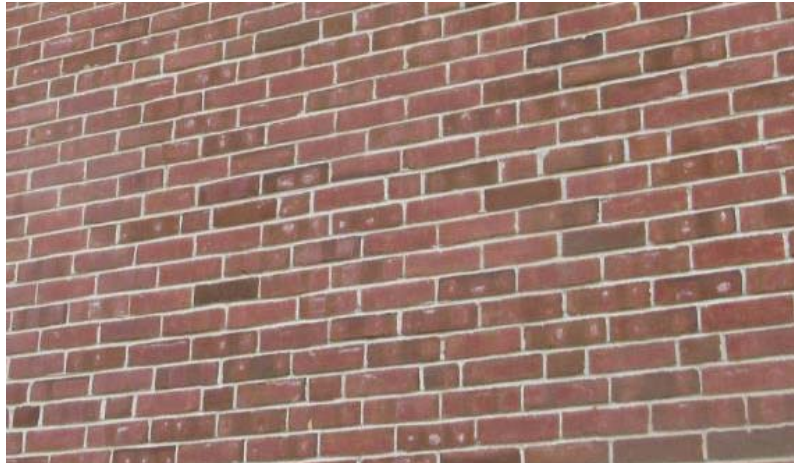


Image 33 – Efflorescence spots scattered throughout the brick masonry



Image 34 – Some panels are weathered.



Image 35 – Limestone erosion at grade near parking area at the 1966 Addition

2. Existing Conditions and Assessment (Continued)



Image 36 – Limestone erosion at grade near parking area at the 1966 Addition



Image 37 – Exposed anchor at spall



Image 38 – Full panel depth spall



Image 39 – Large spall at north entrance



Image 40 – Large spall at south entrance



Image 41 – Offset panel

2. Existing Conditions and Assessment (Continued)

or cracks in the masonry above or apparent shearing of the sealant (failed due to age) to indicate post-construction movement. We observed approximately 34 cracks in the limestone band course and sill elements (Images 42 and 43, Elevation Sheet 4), including two areas of concern on the 1966 East Addition (we recommended that FMD promptly block-off below these locations and implement temporary or permanent repairs). At the two areas of concern, the attachment of the limestone to the building structure is unknown.

- Location one: The limestone appears to have shifted and is currently deflected 1/4 in. outward. There is a crack in the brick masonry above and cracks in the limestone panels below. The cracks in the panels below appear to be from impact damage (Image 44 to 46, Elevation Sheet 2).
- Location two: The limestone at the corner appears to have a crack through the full depth of the panel (Image 47, Elevation Sheet 22).

Approximately 193 ft. of limestone mortar joints near the roof line are deteriorated or cracked (Image 48).



Image 42 – Crack in limestone band course



Image 43 – Crack in limestone sill



Image 44 – Location one: Limestone crack

2. Existing Conditions and Assessment (Continued)



Image 45 – Location one: Limestone crack



Image 46 – Location one: Limestone crack



Image 47 – Location two: Limestone crack

All sealant joints we observed at limestone and brick transitions are cracked and have failed (Image 49), including joints at brick masonry inside corners and joints between the main building and the additions. The only sealant we observed to be in serviceable condition is the sealant installed in 2016 as part of the window replacement project. We estimate approximately 8,262 ft. of deteriorated sealant.

Openings and Penetrations:

At most of the louver vent openings, the perimeter joint between the brick masonry and the louver frame is filled with mortar. There is generally a gap between the mortar and the vent frame (Image 50).

At most painted steel window lintels in brick masonry, there is some surface rust where the coating has failed (Image 51). We observed no areas with visible section loss due to corrosion or brick masonry spalls at the ends of the lintels. Most penetrations through the brick masonry are not sealed. In addition, there are some empty holes in the brick masonry that are not sealed (Images 52 and 53). We estimate approximately 37 unsealed penetrations and holes through the brick and limestone masonry.

The 1958 East Addition typically has failed sealant joints around the windows (Images 54 and 55). The sill flashing segments below the windows typically have butt joints with sealant covering the joints,

2. Existing Conditions and Assessment (Continued)



Image 48 – Deteriorated limestone mortar joints



Image 49 – Deteriorated sealant joints



Image 50 – Gap between the mortar and vent frame



Image 51 – Some surface rust where the coating has failed



Image 52 – Empty holes in the brick masonry



Image 53 – Empty holes in the brick masonry

2. Existing Conditions and Assessment (Continued)



Image 54 – 1958 Addition failed sealant joints



Image 55 – 1958 Addition failed sealant joints



Image 56 – 1958 Addition failed sealant joints

but the sealant joints are typically failed (Image 56). We observed one butt joint where the sill flashing is deformed, the deformation has caused the sealant between the flashing and window sill to fail, and there is no sealant over the butt joint (Image 57, Elevation Sheet 18). Some window perimeter sealant joints on the south elevation of the 1966 West Addition have failed. This area was not in the scope for the 2016 window project, and this sealant was installed in 2011. It appears that the sealant was thinly installed over the backer rod (Image 58).

Retaining Wall:

Joseph McDonough with the FMD told us that the Town repaired the fence posts on top of the retaining wall because the fence posts were unstable. Additionally, he told us that the school is planning to repave this area and may consider coating the top of the retaining wall.

There are abandoned existing fence posts embedded in the retaining wall that are unsealed and typically have cracks originating from them coping (Image 59). There are also typically cracks at post holes. Our visual observation of the wall was limited in the areas with ivy. However, from what we could observe by moving some ivy, the mortar joint deterioration in the wall areas covered by ivy is typically less than 3/8 in. deep.

In the retaining wall areas that are not concealed by ivy, the mortar weathered 3/4 in. or more from the face of the brick at approximately 25% of the west retaining wall and approximately 11% at the east retaining wall.

The east retaining wall has spalled concrete and exposed rebar on the curved portion of the wall (Images 60 and 61).

We observed 13 cracks in the retaining walls. One crack was 1-1/2 in. wide (Image 62 and 63, Elevation Sheet 23). We observed a tree growing out of one crack. We observed no leaning or bulging of the retaining wall.

There are weeps along the base of the retaining walls. We generally observed no blocked weeps.

2. Existing Conditions and Assessment (Continued)



Image 57 – Deformed window sill flashing



Image 58 – 1966 addition failed sealant joints



Image 59 – Abandoned existing fence posts embedded in the retaining wall



Image 60 – East retaining wall concrete spall



Image 61 – East retaining wall exposed rebar



Image 62 – One crack was 1-1/2 in. wide

2. Existing Conditions and Assessment (Continued)



Image 63 – Same crack shown in Image 62 at foundation



Image 64 – Temporarily weatherproofed with tape



Image 65 – Cracks through the stucco soffit



Image 66 – Cracked or missing the 2 in. bluestone caps



Image 67 – Cracked bluestone at stairs



Image 68 – Spalled limestone panels, cracked bituminous asphalt pavement, and deteriorated limestone panel sealant joints

2. Existing Conditions and Assessment (Continued)

Miscellaneous Observations

An opening on the 1958 Addition appears to be temporarily weatherproofed with tape (Image 64, Elevation Sheet 13). We observed some cracks through the stucco soffit on the 1966 Additions (Image 65).

The tops of some concrete areaway vaults around the 1966 Additions and all building entrance stairs are cracked or missing the 2 in. bluestone caps (Images 66, Elevation Sheet 9 and Image 67, Elevation Sheet 16).

2.2 Water Leakage Testing and Observations

Photography Dark Room

We understand from Mr. McDonough (FMD) that water previously leaked into the photography dark room and damaged interior finishes. FMD staff reported that the leakage occurred for a while, but was not noticed. The interior finishes were repaired in November 2017. Mr. McDonough told us that the Town is planning to repave this area and adjust the grading to drain water away from the building to the extent reasonable.

The dark room is on the first floor and its floor elevation is approximately 6 ft below grade. We observed spalled limestone panels, cracked bituminous asphalt pavement, and deteriorated limestone panel sealant joints near grade in the approximate area of the suspected origin of the water



Image 69 – Foundation wall above ceiling tiles

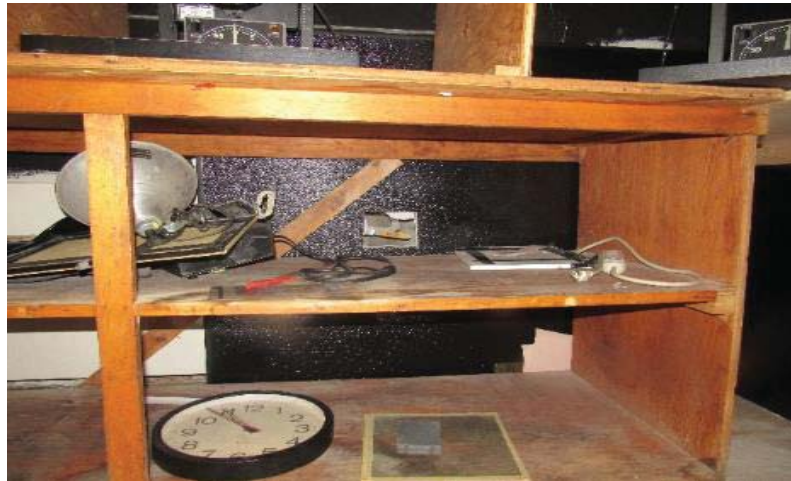


Image 70 – Existing hole in the interior finish



Image 71 – Applied water to base of wall

2. Existing Conditions and Assessment (Continued)



Image 72 – Wetting of the concrete during water test (Image 71, Elevation Sheet 10).

leakage (Image 68). The pavement slopes towards the building.

We removed ceiling tiles in the dark room to observe the interior side of the foundation wall (Image 69). There was also an existing hole (valve access) in the gypsum board interior finish wall that allowed us to observe the foundation wall (Image 70). The gypsum board is installed over vertical wood furring strips with no insulation between the furring.

We applied water to the pavement and bottom portion of the limestone panels at the base of the wall at the photography dark room for 3-1/2 hrs. Water pooled in front of the limestone panels



Image 73 – Wetting of the concrete during water test

We observed interior leakage at 2-1/2 hrs into the water test. We observed water wetting the concrete foundation wall at an existing wood furring strip embedded in the concrete (Images 72 and 73). This location is to the right of the existing hole in the gypsum board finish for the valve. The location of the observed leakage is where the damage appeared to originate in a photo provided by FMD (Image 74). The wetted area on the concrete foundation wall continued to grow during the 1 hr of testing after we observed the water, but water did not flow to the floor. We observed that the concrete wall had dried by the following day.

Cupola

We understand from Mr. McDonough (FMD) that this area actively leaks during moderate rainstorms. We observed water stains on the underside of wood planks for the low-slope roofing in the cupola. On July 18, 2018, (after a heavy rain on July 17, 2018) we observed water dripping from the drain bowl penetration in the low-slope cupola roof decking and running down the drain pipe (Image 75). We accessed the cupola low-slope roof through a roof hatch (Image 76). We were not able to observe the upper cupola roof. We observed that the low-slope cupola roof is covered with locked and soldered copper panels that appear to slope toward a drain near the middle of the roof. We visually inspected the panels and seams and observed no obvious holes or defects through which water could leak. Water was ponded around the drain bowl from the rain the day and night before. It appeared that there was ponded water on the upper cupola roof because we observed light reflections on the weathervane globe. We observed water dripping onto the low-slope cupola roof from the upper cupola roof soffit (Image 77). We did not perform additional water testing.



Image 74 – Area during repair (arrow showing location of wetting, Image provided by FMD)

2. Existing Conditions and Assessment (Continued)

2.3 Assessment

The scope of our field work was limited to visual observations from the ground and ladders, and water testing. We made no sample openings. Therefore, our assessment is based on our visual observations and our experience with similar buildings. Some of our assumptions require verification during the design and construction phases as discussed below.

The building facade is in fair-to-good condition, meaning that it is in working condition but requires a combination of immediate and short-term repair work to provide an additional 25 yrs of service. We were not told of any interior water leakage through the walls and windows, which informs us about the ability of the walls to accommodate exterior moisture, the extent of necessary repair work, and the risk of water leakage associated with the repairs. After completing the necessary repair work, the building will still require typical inspection and maintenance over the next 25 yrs, which includes, in part, painting, sealant repair and possible replacement, cracks and spall monitoring and possible repair, etc.

Brick Masonry and Concrete Walls

The school building incorporates three brick masonry wall construction details at the exterior walls: multi-wythe brick mass masonry (all brick), composite mass masonry (brick over CMU with no air space), and brick veneer cavity wall (brick over backup wall with an air space). The mass masonry walls perform similar structurally and the way in which they manage exterior moisture. The structural and moisture management performance of a veneer wall is fundamentally different than mass masonry.

Mass masonry walls are typically comprised of multiple vertical sections (layers such as brick wythes, natural stone masonry, or a combination of the two) of masonry that are tied together with mortar and brick headers, metal ties, or similar to allow the layers to perform as one composite structure. A mass masonry wall manages exterior moisture by absorbing moisture during precipitation events and drying between events. Flashing is required at critical details. There are two general leakage mechanisms: extended precipitation events that exceed the absorptive



Image 75 – Water dripping from drain (arrows)



Image 76 – The cupola low-slope roof is accessed through a roof hatch



Image 77 – Water dripping from soffit (arrows)

2. Existing Conditions and Assessment (Continued)

storage capacity of the wall, and water that flows through cracks, holes, penetrations, etc.

Brick veneer cavity walls are typically comprised of a single wythe of brick, an air space, air/water-resistive barrier, and backup wall to which the brick is attached with brick ties. The backup wall provides structural support for the brick against out-of-plane loads. A brick veneer cavity wall manages water by draining water that penetrates the single brick wythe out of the air space through weep holes at through-wall flashings. The air/water-resistive barrier on the backup wall and the flashing are intended to prevent water in the air space from leaking to the interior.

The brick masonry walls have weathered mortar joints, but the joints are in generally good condition. Most of the mortar joint weathering has no practical impact on its performance over the next 25 yrs. The mortar is typically not deteriorated (e.g., soft). The joints are weathered sufficiently to increase the sand aggregate exposure, but this is expected of a building of this age. In some locations, the weathering is sufficient to increase mortar recess and exposure of the top of the brick at the bottom of each joint, which increases water penetration into the wall. The consequence of increased water penetration is different for mass and veneer walls. Due to the way in which mass masonry walls manage water, the increased water penetration increases the risk of interior water leakage and freeze/thaw damage to the masonry. Therefore, the acceptable depth of mortar joint weathering is less for mass masonry walls than veneer walls. There is no industry guidance to inform us of what is an acceptable depth of mortar joint weathering or the risk of water leakage for various depths for various assemblies. We developed the recommendations herein based on experience and judgement. Mass masonry walls where the mortar at the bottom of the joint is weathered back approximately 1/4 in. or more from the exterior face of the brick should be repointed. Since brick veneer cavity walls are more tolerant of water penetrating the brick masonry, repointing is not necessary until the bottom of the joint is weathered back approximately 3/4 in. to 1 in. These repointing criteria are based on providing an additional 25 yrs of service based on our experience at similar buildings and the apparent lack of current water leakage. We do not expect that repointing joints where the mortar has a shallower recess is not necessary to achieve an additional 25 yrs of service life, but it may provide some reduction in the risk of water leakage and may improve the appearance.

Most of the brick spalls are shallow and have no practical impact on the waterproofing or structural performance of the brick masonry for the next 25 yrs. Generally, spalls are a durability issue that is related to individual bricks. Spalls that extend approximately 3/4 in. to 1 in. or more from the exterior face of the brick should be repaired to limit water penetration and freeze/thaw damage similar to mortar joints. We do not expect that repairing shallower spalls is not necessary to achieve an additional 25 yrs of service life, but it may provide some reduction in the risk of water leakage and will likely improve the appearance.

We observed some efflorescence, but it is not excessive. The presence of modest efflorescence has no practical impact on the structural or waterproofing performance of the brick masonry for the next 25 yrs. The only reason to clean efflorescence on this building is to improve the appearance.

Cracks in the brick masonry indicate restrained movement of the masonry. Some of the cracks are typical of cracks caused by thermal/moisture-related expansion and contraction, and some are typical of structural movement. Thermal/moisture-related cracks will continue to open/close with temperature/moisture cycling even if the cracks are repaired, unless properly located expansion joints are installed. Structural movement cracks could have occurred early in the life of the masonry wall or at a later time due to deterioration or other movement. If the source of the movement has stabilized, the crack movement should be reduced to

2. Existing Conditions and Assessment (Continued)

thermal/moisture-related movement. Based on discussion with the FMD staff, there are only a few locations at which we recommend expansion joints, which are practical to install in veneer walls only: one on the building and four on the retaining wall. We assume that the retaining wall is a brick veneer cavity wall based on our visual observations and the construction drawings, however, additional investigation is required to verify the assembly and existing conditions. At other locations, it is prudent to repair the cracks with backer rod and sealant. These repairs should be inspected periodically to determine if there is crack growth from apparent continued structural movement and because sealant repair of the cracks is less reliable. Narrow cracks confined to only mortar joints can be repointed.

Cracks in the portion of the concrete foundation walls that is exposed above grade provide a direct path for water leakage through the walls, which can cause interior damage where there is below-grade interior space, and corrode reinforcing steel. Cracks in foundation walls at below-grade interior space should be repaired to reduce the risk of water leakage in the next 25 yrs. The risk of damage caused by corroded reinforcing steel in the next 25 yrs is low if the cracks are narrow. Wide cracks that expose the reinforcing steel should be repaired. Wide cracks may indicate that the reinforcing bars are yielded or there is insufficient reinforcing. We observed no movement or other signs of distress, and the cracks are generally vertical, so we do not anticipate a structural issue. However, a structural engineer should confirm that the foundation walls are sound at these locations during the design phase.

Spalls shallower than approximately 1/2 in. deep into the surface of the concrete foundation walls and that do not expose reinforcing steel should have no impact on the performance of the foundation for the next 25 yrs. Deeper spalls that could significantly reduce reinforcing cover or spalls that exposed reinforcing steel should be repaired.

We were asked whether or not applying a sealer to the building has benefit. The benefit to this building is minimal to provide an additional 25 yrs of service life, in part because there are no reported interior water leaks through the masonry. Siloxane sealers are commonly used to seal masonry building materials to limit water absorption by “repelling” water. Sealers improve water resistance but will not stop water penetration through cracks or holes, including “hairline” cracks, and are ineffective at preventing leakage through cracks and joints larger than about 10 mils (0.01 in.). Sealers require reapplication approximately every 10 yrs. After multiple applications, we expect reduced permeability of the brick masonry and increased risk of freeze/thaw brick deterioration. Sealers have little aesthetic impact. The substrate can darken slightly after application and appear shiny when wet because water beads on the surface.

Limestone Masonry

The limestone masonry is deteriorated in some locations, particularly where it is close to grade and exposed to road salt/sand and snow removal equipment impact. In some locations the deterioration is up to approximately 1/2 in. deep. This damage is not sufficient to structurally compromise the panels because the panels are 2 in. to 3 in. thick. The limestone will continue to deteriorate from continued exposure to road salt/sand and snow removal equipment, but we expect the rate of deterioration to be similar to the historical rate of deterioration, which means that the panels should provide satisfactory performance for the next 25 yrs. These panels should

2. Existing Conditions and Assessment (Continued)

be inspected periodically to identify if conditions change and repair becomes necessary. Locations where the deterioration has exposed anchors should be repaired.

Some of the spalls in the limestone have no impact on the performance of the limestone over the next 25 yrs. However, some spalls extending greater than approximately 1 in. from the exterior face into the limestone, spalls at anchors, sky-facing spalls, and spalls above the north and south entrances should be repaired. The spalls at the entrances are larger and are at risk of falling on people or property below. These two spalls should be removed or the areas below the spalls should be blocked-off.

Cracks in the limestone panels can be filled with backer rod and sealant that is designed to blend with the limestone, but in addition to these aesthetic measures, some of the panels and their attachment to the building require repairs. We observed two limestone band course panels, one lower wall panel, and two limestone panels above both entrances that require repair or replacement; replacement is the only practical option for a few of the locations. The two cracked limestone band course panels on the 1966 East Addition are an immediate safety risk, so we recommended that FMD promptly block-off below these locations and implement temporary or permanent repairs. The attachment of the limestone at these two locations is unknown, and it appears that one of the stones is displaced. There may be concealed conditions that caused or contributed to the cracking and displacement that will need investigation when the panels are repaired.

The limestone mortar joints are in good condition with limited repair in some locations, generally along the roof edge. Joints requiring repair should be repointed.

Openings and Penetrations

The existing masonry-to-masonry sealant joints and sealant joints at windows that were not part of the 2016 window replacement project are in poor condition and well past their useful life. Sealant joints that are in poor condition should be replaced. Based on when the sealants were installed and discussions with the FMD, we recommend treating the sealants as asbestos and PCB-containing materials absent of testing to demonstrate otherwise.

Most of the penetrations and wall vents lack sealant where they penetrate the masonry. At some penetrations (e.g., vents), mortar fills the gap between the opening in the masonry and the penetration, but the mortar is typically cracked and does not provide an adequate seal to limit water penetration. Penetrations provide a direct path for water leakage into the masonry and building interior. Sealant and backer rod should be installed where missing to reduce the risk of water leakage and damage over the next 25 yrs.

High quality sealants that are properly designed and installed can have a service life in the 20-25 yr range. Many sealant joints in wall assemblies similar to the school have failures well in advance of that time (i.e. after 10 yrs), and the sealant is often in poor condition by 25 yrs. Based on the condition of the existing sealant joints, it appears that the risk of water leakage due to sealant failures is low, but time may change that assessment. Even though it is possible that the new sealant joints could perform for 25 yrs, it is unlikely. We recommend periodic inspection and repair of the sealant, such as every 10 yrs for the first inspection and every 5 yrs thereafter.

At most painted steel window lintels in brick masonry, there is surface rust where the coating has failed. The lintels have minimal section loss where we looked, but the coating should be repaired to reduce the risk of

2. Existing Conditions and Assessment (Continued)

corrosion-related problems within the next 25 yrs.

Retaining Wall

The retaining wall is in poor to fair condition. We observed several cracks in the brick masonry cladding of the retaining wall, including four full wall height or nearly full wall height cracks in the wall. We expect that the full wall height or nearly full wall height cracks are due, in part, to restrained thermal/moisture expansion and contraction of the brick masonry, causing it to form cracks. Brick veneer masonry typically incorporates expansion joints to avoid such cracks. One of the full wall height cracks is 1-1/2 in. wide and extends through the concrete cap at the top of the wall and through the concrete brick shelf at the bottom of the wall. Another crack extends through the concrete brick shelf only. The cracking of the concrete brick shelf and/or cap suggests that the crack likely extends through the concrete wall stem behind the brick. One crack has a tree growing from it. We observed no leaning or bulging to suggest that the wall is currently structurally unstable, but additional investigation is required to understand the cracking and develop a remedial repair scope.

The brick masonry is deteriorated from freeze/thaw and road salt damage, presumably from the paved lot above. Deteriorated mortar should be repointed and spalled brick should be repaired similar to the building brick veneer cavity wall repair.

The exposed concrete brick shelf is deteriorated at the east end of the wall, near D'Auria Drive, where it is exposed to road salt/sand and snow removal equipment impact. The outer surface of the concrete is almost completely spalled and reinforcing steel is exposed. Additional investigation is required to understand the extent of this damage and necessary repair work, but we anticipate the need to partial depth concrete repair with some reinforcing repair work. The concrete cap at the top of the wall has several cracks that typically align with existing fence posts that are embedded in the concrete and exposed to the sky. The cracks are likely from water accumulating in the abandoned post embedded in the concrete and freezing. Some of the cracks are also likely due to a lack of control or expansion joints. The caps require substantial repair work, but repairs will not be as durable and may not perform for an additional 25 yrs. The installation of a waterproof coating would help protect the concrete, but any coating will require yearly maintenance to repair snow removal damage, would look bad for periods of time between maintenance cycles, and will likely require at least two or three reapplications in the next 25 yrs. Replacing the caps will provide a more durable repair that can perform for an additional 25 yrs. Additionally, modification of the guard rail will be needed to accommodate waterproofing and structural requirements. Base on additional investigation during the design phase, additional structural engineering design may be required so that the guard rails meet the code required loads.

Photography Dark Room

We applied water to the pavement and bottom portion of the limestone panels at the base of the wall at the photography dark room, and it wetted an area on the interior side of the concrete foundation wall in an area where the damage appeared to originate in a photo provided by FMD. The water did not flow to the floor during our 3-1/2 hrs of testing, but that

2. Existing Conditions and Assessment (Continued)

is not surprising. The test demonstrates that the water is leaking through the foundation wall. Mr. McDonough told us that the Town is planning to repave this area and adjust the grading to drain water away from the building to the extent reasonable, but repair of the foundation wall waterproofing is also required to prevent future water leakage. It is not apparent whether or not the limestone panels at the base of the wall must also be removed, but we expect that it is not required.

Cupola

We observed water dripping from the drain bowl penetration in the low-slope cupola roof decking and running down the drain pipe. We visually inspected the panels and seams and observed no obvious holes or defects through which water could leak, but we were unable to perform water testing to identify the leakage source. The leakage source could be through the drain bowl seal to the low-slope roofing in the cupola, the low-slope roofing in the cupola perimeter, access hatch curb flashing, or the upper cupola roofing that is running down the columns and underneath the low-slope roofing in the cupola. Additional investigation is required to determine the leak source and necessary repair.

3. Recommendation

3.1 Repair Recommendations for 25 Years of Additional Service - Base Scope

We recommend the below-listed conceptual repairs to meet the goal of extending the building service life an additional 25 years. The quantities listed below are included in Table 1 and identified on the SGH marked-up building elevations, both in Appendix (a).

Brick Masonry and Concrete Foundation

Brick Masonry Mortar Joints:

- Mass masonry walls (multi-wythe and composite): Repoint joints where the mortar at the bottom of the joint is weathered back approximately 1/4 in. or more from the exterior face of the brick and exposes the top of the brick below.

Brick veneer cavity Walls:

- Repoint joints where the mortar at the bottom of the joint is weathered back approximately 3/4 in. to 1 in. or more from the exterior face of the brick and exposes the top of the brick below.
- Assume a total of 3,100 sf of masonry repointing (includes retaining wall).

Brick Masonry Cracks:

- Route the full length of cracks through both brick and mortar, provide release tape at the back of the routed joint and seal with silicone sealant. Embed finely crushed mortar and brick material into the surface of the sealant installed in respective mortar and brick locations to blend the sealant with the brick masonry. Assume 134 ft. (any width) of brick masonry crack repair. Any cracks confined to mortar joints will be repointed and are included in that quantity estimate. The intent is to fix all cracks through the brick where the cracks extend through more than one brick course and through brick and/or mortar joints. Cracks with this characteristic are typically caused by thermal/moisture-related expansion and contraction and/or structural movement. Incidental cracks on the brick face were not accounted for. These cracks may

3. Recommendation (Continued)

just be a defect in the brick manufacturing.

- Install vertical expansion joints for the full height of the walls at five existing crack locations: One building brick veneer cavity wall location (Elevation Sheet 8) and four retaining wall locations. Assume removal and disposal of the existing masonry in an approximate 12 in. to 18 in. wide vertical strip to repair cracked brick masonry and install additional wall ties. Provide new brick masonry with a 3/4 in. wide joint with backer rod and silicone sealant. Assume the joint is 20 ft. long.

Brick Masonry Spalls:

- Replace brick with spalls that extend approximately 3/4 in. to 1 in. or more from the exterior face of the brick. Assume 13 brick masonry, size to match existing, for spalled brick repair.

Concrete Foundation Cracks:

- Repair cracks in the concrete foundation at below-grade interior space. Prepare the above-grade portion of the crack on the exterior and entire length of the crack on the interior, and inject the cracks with polyurethane grout. Assume 14 individual cracks with a total length of 18 ft. Assume interior finish removal and replacement at all locations.

Concrete Foundation Spalls:

- Repair spalls in the exposed concrete foundation that expose reinforcing steel. Sawcut to create square edges at the perimeter of each spall, increase the depth of the spall to clean and coat all sides of the steel, and repair the locations with repair mortar. Assume three locations/areas with an average size of 1 cu. ft. and one location on the retaining wall with an approximate size of 4 cu. ft.

Limestone Masonry

Limestone Spalls:

- Repair spalls extending greater than approximately 1 in. from the exterior face into the limestone, spalls at anchors, sky-facing spalls, and spalls above the north and south entrances. Saw cut to create square edges at the perimeter of each spall, install stainless steel screws as anchors, and repair the locations with restoration repair mortar (the actual repair at some locations may include salvaging and anchoring spalled stone pieces). Assume 30 locations/areas with an average size of 49 cu. in.

Broken Limestone Panels:

- Remove and replace in kind two limestone band course panels, one lower wall panel and two limestone panels above both entrances (See Elevation Sheets 3, 4, and 16). Assume the dimensions of each band course panel are 92 in. x 19 in. x 2.75 in. and the dimensions of the lower wall panel is 29 in. x 86 in. x 3 in. Assume the dimensions of the entrance

3. Recommendation (Continued)

panels are 11 ft. x 3 ft. each.

Limestone Masonry Mortar:

- Repoint weathered/cracked limestone masonry joints along the roof edge. Assume 193 ft of joint repointing.

Limestone Cracks:

- Route the full length of cracks in limestone panels, provide release tape at the back of the routed joint and silicone sealant. Assume approximately 50 ft. of limestone crack repair.

Openings and Penetrations

Sealant Replacement:

- Remove and replace all existing masonry-to-masonry sealant joints and sealant joints at windows that were not part of the 2016 window replacement project. Prepare the substrates, prime, and provide backer rod and sealant. Assume the existing sealants contain asbestos and PCB. Assume approximately 8,262 ft of sealant replacement.

Penetrations:

- Provide backer rod and sealant around all currently unsealed penetrations. Prepare the substrates, prime, and provide backer rod and sealant. Assume approximately 40 unsealed penetrations and holes through the brick and limestone masonry. This includes an abandoned opening at a 1956 Addition.

Vents:

- Remove existing mortar at the perimeter of all louver vents in the brick masonry. Prepare the substrates, prime, and provide backer rod and sealant. Assume 32 vents with an average of 10 ft. of sealant joint at each.

Window Lintels:

- Remove loose paint and rust from steel lintels exposed at window heads, prime and paint. Assume the existing paint contains hazardous material. Assume 1,100 ft of exposed lintels (212 locations with an average length of 5 ft).

Retaining Wall

- Perform additional investigation at the retaining wall to better understand the condition of the brick masonry cracks, concrete wall behind the brick masonry, and the construction of the retaining wall cap. Assume this investigation will occur during the start of the schematic design phase. Provide a \$50,000 budget for investigation and \$100,000 budget for undefined concrete repair work.
- Repointing, crack and spall repair recommendations are the same as for the brick masonry and are included in brick masonry above. Include removing the tree growing from one of the cracks.
- Remove the existing chain link fence and concrete cap at the top of the wall. The cap is approximately 9 in. x 17 in. x 450 ft (includes both retaining walls) and the existing chain link

3. Recommendation (Continued)

fence is 42 in. tall with posts at 10 ft o.c. in the straight portions and 5 ft o.c. at the curved portions. Assume the cap is anchored to the concealed concrete retaining wall stem. Provide new granite cap pieces that are anchored to the concrete stem with stainless steel dowels at 12 in. on center. Provide a Hot dip galvanized steel guardrail (42 in. high), coated with Colorgalv by Duncan galvanizing, and mounted to the brick-side vertical face of the granite caps. Assume 450 ft of cap and guard. Refer to Appendix (a) for guardrail images.

Miscellaneous

- Coordinate with the planned repaving project to provide a below-grade waterproofing repair at the photography dark room. Assume excavation of 20 ft of foundation to a depth of 8 ft, shot-blasting the existing waterproofing off the concrete foundation wall, installation of GCP Bituthene membrane with termination bars along all edges and GCP Liquid Membrane over all seams and termination bars, installation of protection board, and backfilling. Include removal and replacement of the bituminous asphalt paving even though the Town intends to repave the area. Assume no interior repair work is part of this project. Extend the new waterproofing membrane system above grade and cover with a metal protection plate.
- Perform additional investigation at the leaking cupola roofing to determine the scope of work that could include repairing the cupola columns, cupola roof, and/or the flat-seam copper roofing on the cupola floor, and performing concomitant structural repairs to concealed framing components. Assume this investigation will occur during the design process. Provide a \$25,000 budget for investigation \$75,000 budget undefined repair work.

3.2 Repairs Not Necessary for 25 Years of Additional Service - Optional Scope

- The following repairs are not necessary to meet the goal of providing an additional 25 years of service but will improve performance and/or aesthetics. The quantities listed below are included in Table 1 and identified on the SGH marked-up building elevations, both in Appendix (a).

Brick Masonry and Concrete Foundation

Option 1 - Repoint brick masonry joints where the mortar is visually weathered from our understanding of its original profile. Assume 5,200 sf. of mass brick masonry repointing.

- Clean efflorescence from the brick masonry. Assume 8 locations with an average size of 30 sf. (Included in Option 1 Scope)

Retaining Wall

- Additional repointing and cleaning of efflorescence as described for the brick masonry (included in Option 1 Scope).

Option 2 - Provide precast concrete cap in lieu of granite. Assume the use of stainless steel

3. Recommendation (Continued)

reinforcing and a freeze/thaw resistant mix design.

Miscellaneous

Option 3 - Replace missing bluestone caps on top of the vault areas in the 1966 Additions and stair entrances. Assume six locations requiring approximately thirty 3 ft x 10 in. stone pieces total.

4. Sustainable Considerations

Not applicable

5. Estimated Cost

Section 3.1 - Base Scope:

• Estimated Construction Cost	• \$1,915,841
• Estimated Total Project Cost	• \$2,699,894

Section 3.2 - Facade Option 1: Additional brick masonry repointing / cleaning

• Estimated Construction Cost	• \$309,355
• Estimated Adjustment to Base Estimate	• \$309,355

Section 3.2 - Facade Option 2: Retaining wall w/ concrete cap

• Estimated Construction Cost	• \$483,408
• Estimated Adjustment to Base Estimate	• (\$83,106)

Section 3.2 - Facade Option 3: Replace missing bluestone caps on top of vault areas

• Estimated Construction Cost	• \$47,434
• Estimated Adjustment to Base Estimate	• \$47,434

Task 1B - HVAC Replacement

1. Scope of Work

During the 2006-2008 Wellesley Middle School Renovations the HVAC systems in the gyms (Gym A & Gym B), auditorium and kitchen were not upgraded for budget reasons. This project is to look at these areas and bring them up to present day performance standards. This will involve replacing the air handling units [seven] in both gyms as well as the auditorium and adding air conditioning to the auditorium as part of that upgrade. Working with the Food Service Designer we will upgrade/replace the H&V system for the kitchen to align with the total kitchen renovation (For H&V system for the Kitchen refer to Kitchen Equipment Section).

2. Existing Conditions and Assessment

Gym A

This Gym is heated and ventilated by two original (1952) equipment air handlers.

The units are ceiling hung, horizontal, steam-fired with a single belt-driven centrifugal fan. Each H&V unit is sized for 5000 CFM giving the Gym just less than 4 ACH [Air Changes per Hour]. Each unit supplies air to the gym via ducts above the suspended ceiling through 24" x 24" 4-way lay-in ceiling diffusers [24 total] that were installed in 2005.

The return for each unit is comprised of one return grille per unit mounted in the wall of the gym down low near the floor. The existing grilles are flat pieces of steel with square holes stamped out for airflow. These have been damaged and are bent and loose.

Each unit has an associated exhaust fan to relieve air during the admission of outside air for ventilation. These fans were replaced during the 2005



Image 1 - Air handler in east mechanical room - Gym A

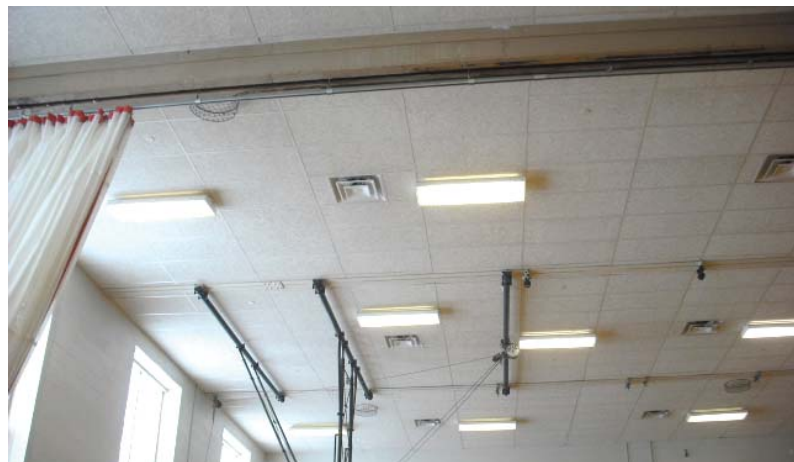


Image 2 - Diffusers in west half of Gym A.

2. Existing Conditions and Assessment (Continued)



Image 3 – Damaged return grille - west side Gym A



Image 4 – West air handler for Gym B



Image 5 – Ceiling diffusers in Gym B

renovations. The observed ductwork is somewhat dirty and should be cleaned during any future renovations. The ductwork is generously sized and the airflow supplied by each air handler could be increased. The controls for each unit were upgraded during the 2005 project and appear to be in good condition. The units are operating, clean and quiet. The units will be up-sized to give better air circulation and CO2 controls will be added to economize on the outside air introduction thereby saving considerable heating costs.

Gym B

This Gym is heated and ventilated by two original air handlers located on a mezzanine (1958) just north of the gym. The units adjacent to are ceiling hung, horizontal, steam-fired with a single belt-driven centrifugal fan.

Each H&V unit is sized for 4,500 CFM giving the gym a high level of 7 ACH [Air Changes per Hour]. But the diffusers (6) are selected for 600 CFM each for a total of 3,600 CFM, so the new air handlers will be selected at 3,600 each for an ACH of 5.6 which is generous for a heating and ventilation system in a gym. Each unit supplies air to the gym via ducts above the suspended ceiling through 24" x 24" 4-way lay-in ceiling diffusers [12 total] that were installed in 2005. Two additional H&V units collocated on the same mezzanine (1958) were replaced in the 2006-2008 renovation with unit ventilators in the two classrooms that were served by

2. Existing Conditions and Assessment (Continued)

these air handlers. As part of this work those two air handlers and their associated ductwork will be removed.

The return for each unit is comprised of a return/exhaust grille mounted in the wall of the gym down low near the floor. The existing grilles were replaced in 2005 but are not robust and have been damaged.

Each unit has an associated exhaust fan to relieve air during the admission of outside air for ventilation. The observed ductwork and associated diffusers are somewhat dirty and should be cleaned during any future renovations. The airflow supplied by the two air handlers as noted is 7 ACH which is adequate for a gym of this size. The controls for each unit were upgraded during the 2005 project and appear to be in good condition. These will be augmented to add CO2 DCV [Demand Control Ventilation] controls for energy savings. The units are operating properly, clean and quiet.



Image 4 – West air handler for Gym B

2. Existing Conditions and Assessment (Continued)



Image 7 – Auditorium air handler



Image 8 – Auditorium air handler with duct-mounted filters



Image 9 – Dirty auditorium ductwork

Auditorium

The Auditorium is presently heated and ventilated by two air handlers located in mechanical spaces high above either side of the stage. Each air handler consists of a steam coil and a draw-thru fan.

The filters are duct-mounted external to the air handler and any dampers, exhaust ducts, outside air dampers or fresh air ducts are also external to these two units. Each air handler is horizontal, belt-driven, centrifugal, steam fired and original to the building [1952].

The controls were recently upgraded and at the same time the roof-mounted exhaust fans were replaced [2005]. The spaces these units occupy are difficult to access and small. In the south mechanical space the two ducts for the kitchen cooking hood and the kitchen dishwasher hood intrude into the space and make movement in this space difficult and somewhat hazardous.

In general the ductwork associated with the Auditorium is adequately sized but it is not insulated [Required for AC.] and that which we could observe is dirty and in need of cleaning. The diffusers [24 total.] are dirty and also require cleaning. A relief fan on the roof [Rear of Auditorium.] is unnecessary and will be removed.

Supply ducts may have to be resized and perhaps relocated. The present airflow from these two units is supposed to be about 12,000 CFM each. This equates to

2. Existing Conditions and Assessment (Continued)

about 5.7 ACH which is proper for a system employing air conditioning.

It was discovered while perusing the original (1952) and RDK (2005) drawings that the design for the original/new diffusers installed in the auditorium are rated for 500 CFM each. With 24 total in the auditorium this only allows for 12,000 CFM. The present air handlers are trying to supply 24,000 CFM. This accounts for the noise now present in the auditorium.



Image 10 – Uninsulated auditorium supply ductwork



Image 11 – Kitchen cooking hood exhaust duct in auditorium mechanical room

3. Recommendations

Gym A

1. Clean all ductwork associated with the air handlers for Gym “A”.
2. Replace the existing air handlers with new ones sized for 7,200 CFM each. The ducts are sized for well over 7,200 CFM and the new air handlers will be selected to run quietly. Each air handler will incorporate a dual steam/hot water coil to quickly and economically allow for future transition to hot water from the present steam. See Appendix b.
3. All controls are to be replaced and expanded to include CO2 DCV.
4. Replace damaged return grilles and relief exhaust fans on the roof.
5. Test & Balance airflows associated with the two air handlers.
6. Add CO2 DCV controls.

Gym B

1. Replace both air handlers with 3,600 CFM units to match the diffusers. See Appendix b.
2. Clean all ductwork associated with the Gym “B” systems.
3. All controls are to be replaced and expanded to include CO2 DCV..
4. Test & Balance the airflows for the two systems.
5. Replace the damaged return grilles with more robust ones that will last.
6. Remove unused air handlers and associated ductwork, piping and controls.

Auditorium

1. Remove the present air handlers and replace with new ones in refurbished mechanical spaces. These spaces will need upgraded lights, new wall coverings and a wider [4 FT] access door for the new equipment required in these spaces. See Appendix b.
2. The roof will be checked and reinforced if necessary to support the weight of a single 60 Ton condensing unit on the roof just east of the stage for DX air conditioning of the auditorium. See Appendix b.
3. Install return fans for each air handler to remove the present exhaust fans from the roof.
4. Remove and replace all ductwork presently serving the auditorium. Insulate and acoustically line the new ductwork.
5. Reroute the exhaust ducts from the kitchen to run outside the auditorium, see the attached sketches (Appendix d).
6. Ensure that all controls for the auditorium are replaced and upgraded to cover the operation of the air conditioning and return fans plus outside air control.
7. Test & Balance both air handlers/return fans to ensure the whole system is working properly.
8. Install linear diffusion grilles in the ceiling of the auditorium to give better air dispersion throughout the auditorium without any drafts.

3. Recommendations (continued)

Electrical Recommendations - Replaced Mechanical Units

1. Provide fire alarm duct smoke detectors as required.
2. Provide new homerun from newer panelboard (new from the 2005 renovation) to the new piece of equipment via VFD or other type starter.
3. Distribution: To accommodate the additional load, avoid disturbing original panelboards with cloth covered wiring and avoid filling the available “space” in the existing 480V switchboard we propose providing a new 480V distribution panelboard fed directly from the existing 480V switchboard. The new distribution board will serve the replaced Kitchen AHU, Auditorium AHU’s, Larger Gymnasium AHU’s and the new Auditorium Condensing Units. The replaced Small Gymnasium AHU’s will continue to be fed from existing 2005 vintage panelboard PF that is located on the same mezzanine as the AHU’s.

4. Sustainable Considerations

As a sustainability option Harriman was asked to evaluate the possible use of geothermal a system to provide heating and cooling to air condition the auditorium. This was done and the results are as follows:

1. To use conventional methods with an air-cooled condensing unit [60 Tons] will cost approximately \$50,946 just for the air conditioning portion of the equipment and its installation.
2. To use geothermal heating and cooling will require the drilling of approximate 24 wells, the piping and pumping of those wells to two 30 Ton geothermal heat pumps and the connection of these heat pumps to the air handlers for the auditorium. The cost for that has been estimated at \$542,690. While the utilization of geothermal heating and cooling will save some amount of electricity, with the anticipated use of the auditorium during the summer cooling months the payback period will most certainly exceed the life expectancy of the facility.

5. Estimated Cost

HVAC systems in Gym A, Gym B and the Auditorium (Kitchen HVAC moved to Task 1D)

Base Scope: Gym A, Gym B and the Auditorium

• Estimated Construction Cost	• \$1,279,236
• Estimated Total Project Cost	• \$1,802,760

HVAC Option 1: Sustainable Consideration - Geothermal

• Estimated Construction Cost	• \$1,043,183
• Estimated Adjustment to Base Estimate	• \$140,992

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Task 1C - Interior Doors

1. Scope of Work

In keeping with the project goals identifying priority building improvements intended to create a safe, secure and healthy learning environment for a 25-year school, classroom doors were inventoried for condition, code compliance, hardware function, and security features. This included doors from the classroom to the corridor, doors between classrooms, and doors from auxiliary spaces within the classroom wings. The scope of the evaluation included approximately 180 doors on three levels in the 1952 and the 1966 north and south classroom wings. In addition to the classroom doors, doors from within the classroom corridors (cross corridor) and doors in to stairs at the classroom wings were also examined.

2. Existing Conditions and Assessment

Classroom doors have not been updated and contain original door slabs and frames from their date of construction. Door hardware has been replaced with classroom door locksets. There are primarily eight door styles within the area of study.

1952 Classroom to Corridor Doors

These solid core wood doors have a light oak wood veneer, 3 wire-glass lights that when combined have approximately 300 square inches, 4" steel hinges, set in hollow metal frames. Locksets are newer style cylindrical (bored) classroom security functions requiring a key on the interior to lock the classroom from corridor access (Image 1). These doors are in fair to poor condition. The veneer is damaged and distressed with several chips on the strike and bottom edges.

1966 Classroom to Corridor Doors

The 1966 wing doors are solid wood doors with a dark brown stain, single wire-glass light of approximately 144 square inches, 4 1/2" steel hinges, set in hollow metal frames. Locksets are the newer cylindrical classroom security locksets requiring a key from inside and outside (Image 2). These doors range in condition but are mostly fair to poor. The veneer is also damaged and distressed with several chips on the strike and bottom edges.



Image 1 – 1952 Classroom to Corridor Door

1966 Classroom to Classroom Doors

Similar to the 1966 classroom to corridor doors, the classroom to classroom doors are flush, wood veneer, solid core doors set in hollow metal frames. There are no vision panels in the doors. These doors are equipped with cylindrical passage latchsets only and do not lock between classrooms (Image 3). The condition of these doors is good to fair as they see much less use than the other doors.

1966 Classroom to Auxiliary Room Doors

A small number of classrooms have auxiliary rooms accessed from the classroom. These doors are also flush doors with no vision panel. The cylindrical locksets have an office function allowing for the door to maintain a locked or unlocked position (Image 4). These doors are also in good to fair condition as they are not in high impact areas.

1966 Classroom to Stair Doors

A small number of classrooms at the ends of the 1966 wings are accessed directly from within the egress stair enclosures. Because of the life safety nature of the stairs, these doors are to be equipped with closers, smoke seals on the frames, and also maintain a 90-minute fire rating. The door styles are the same as the 1966 classroom to corridor doors. The classroom function locksets are mortise style (Image 5). Due to the required door closer, the doors that are accessed from the stairs are in the worst shape of the classroom doors. In one instance, the door core was damaged to the point where the bottom of the slab was no longer rigid.

Cross-Corridor Doors

The 1952 classroom wings have a number of cross-corridor doors originally intended to compartmentalize the floors. The doors have been replaced in the recent past and have wire-glass lights on the top and bottom (approximately 1,000 square inches per leaf), exit devices with surface mounted rods, closers, and a fire rating of 60 minutes that is no longer required. Several pair have magnetic hold-opens tied to the fire alarm. The doors are set in rated frames with wire-glass transom and side lights (Image 6). The cross-corridor doors are problematic in that the exit device rods often don't retract fully and drag across the floor, the doors without magnetic hold-opens are prone to impact abuse of the glass panels, and the locations often interfere with adjacent lockers.



Image 2 - 1966 Classroom Door



Image 3 - 1966 Classroom to Classroom Door

Corridor To Stair Doors

Most stair doors have been replaced in the recent past with natural finished slabs and new hardware. Hardware and features are similar to the cross-corridor doors with closers, exit-devices with surface rods, large wire-glass lights, fire-ratings, and magnetic hold-opens. Many are also subject to the same level of abuse as the cross-corridor doors (Image 7). Most of the stair doors are in fair to poor condition and subject to abuse to both the door and glass lights. The doors have exhibited racking and, in some locations, do not close completely.

Corridor Bathroom Doors

The 1966 classroom wing multi-user bathrooms have been recently renovated. The solid-core door panels are flush with either a wood or metal louver. Hardware consists of a door pull/push plate, dead bolt, mop plate, and closer. The bathroom doors are in good shape with the exception of the louver. Most of the louvers (wood and metal) had been damaged presumably by kicking.



Image 4 - 1966 Classroom Door



Image 5 - 1966 Classroom to Stair Door



Image 6 - Cross-Corridor Doors



Image 7 - Corridor to Stairs Doors

3. Recommendations

With little exception, the doors within the scope of the study merit replacement due to age, condition, and safety. The recommended upgrades for the doors are the following:

Base Scope: Recommendation

1. Solid-core wood veneer doors with natural finish to match newer contemporary finishes elsewhere in the building (refer to Floor Plans in Appendix (f) for location and Door Schedule in Appendix (c) for size and quantity).
2. Mortise classroom security lockset with lock indicator on the interior side. School department preference is for thumb turn locking from inside the classroom.
3. Narrow vision light with 0.090 laminated glass.
4. Balance of hardware functions to match existing. Undercut bathroom doors in lieu of louvers.
5. Continuous hinge at high abuse doors and glass light at top of door only.
6. Magnetic hold-opens at doors with closers (except bathroom doors).
7. Remove cross-corridor doors as they are not necessary for life-safety since the building is sprinkled.

Option 1: “School Guard” security glass

1. Wood veneer doors with dark stain to match 1966 style that currently exists in the building.
2. Mortise classroom security lockset with lock indicator on the interior side. School department preference is for thumb turn locking from inside the classroom.
3. Larger vision light and “School Guard” security glass.

Option 2: Least Costly

1. Painted hollow metal doors.
2. Standard classroom security function with no indicator.
3. Standard tempered glass in vision lights.

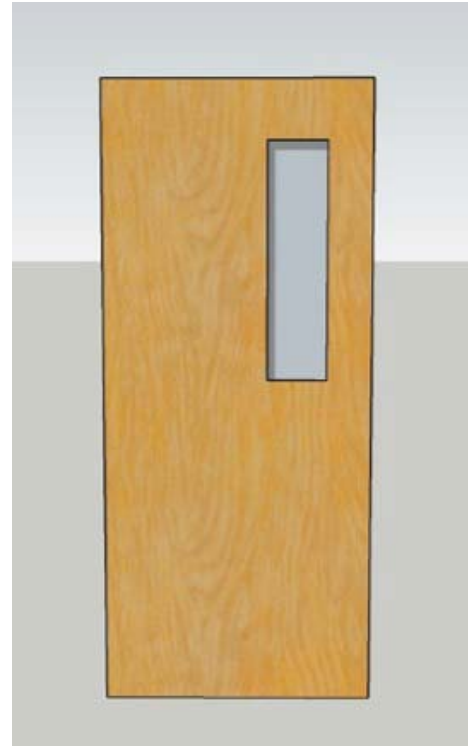


Image 8 - Recommended door finish



Thumbturn

Image 9 - Classroom security lockset with indicator

4. Sustainable Considerations

1. Consider specifying doors with recycled content for the door core. Percentages can range from 3 to 40 percent total pre-consumer recycled content.
2. Reduce the use and depletion of finite raw materials and long-cycle renewable materials by replacing them with rapidly renewable materials such as Agrifiber door cores.
3. Choose wood doors that use environmentally responsible harvested wood by specifying products certified by the Forest Stewardship Council (FSC).
4. Promote better indoor air quality through the use of No Added Urea Formaldehyde (NAUF) resins.
5. Specify durable materials that don't require a more frequent replacement cycle.

5. Estimated Cost - Interior Doors

Interior Doors and Casework are listed together as Task 1C. Refer to the Estimated Cost section under Casework for the value of Task 1C.

Task 1C - Casework

1. Scope of Work

The casework scope of work includes replacement of built-in cabinetry / casework on one side of each classroom in the 1966 addition wings and the 1952 original building “connector” wings. Classroom casework replacement is only planned for one side of each classroom based on need and budgetary limitations; however, replacement of all casework in the three Art Rooms is assumed.

2. Existing Conditions and Assessment

Harriman has inventoried and evaluated the existing casework and adjacent finishes in the four areas outlined below as 2.1 through 2.4. In general the casework is showing visual wear and functional deterioration. The observed use also indicates that it is pragmatically deficient.

2.1 - 1966 Addition Science Casework:

The wall opposite the window wall in (11) science classrooms on the first floor of the 1966 addition were not replaced in the science casework upgrade project. They consist of original bookcases (Image 2) and tall cabinets (Image 1) with varying configurations of open shelves and glass doors. The casework condition varies but in general is showing it's age after 50 years of use.

2.2 - 1966 Addition Typical Classroom Casework:

In (33) classrooms in the 1966 addition the wall opposite the window wall typically consists of



Image 1 – Tall cabinets in existing science room 113



Image 2 – Recessed bookshelves in existing science room 109

2. Existing Conditions and Assessment (Continued)



Image 3 – Recessed bookshelves in Existing Typical Classroom, in 1966 wing, Room 222



Image 4 – Base cabinets and counter in Existing Typical Classroom, in 1966 wing, Room 222

two types of casework. There are varying numbers of base cabinets with a counter. Over the counter is a wall to wall framed tack surface. Adjacent to the base cabinets are one to two recessed bookcases. Most of the recessed bookcases have a mechanical shaft behind them and a mechanical louver on the wall below them. The casework in these rooms is tired and showing its age after 50 years of use.

2.3 - 1952 Original Building “Connector Wing” Typical Classroom Casework:

In (15) classrooms in the 1952 “Connector Wing” the wall opposite the window wall typically consists of wall to wall casework with a wood panel soffit above. The casework is a mix of full height cabinets, open shelving, upper cabinets, base cabinets and tack surfaces. The casework condition varies but in general is showing its age after 65 years of use.

2.4 - Existing Art Rooms (Room 304A, 304B and 306)

The existing third floor art rooms have varying layouts and types of casework. The casework appears to have been added onto over time, resulting in different conditions of casework. Each art room has two to three sinks and two of the art rooms have kilns. However, the kilns are in the teaching space and not in a separate room. Several pieces of casework are missing hardware, doors or parts. The casework is tired and showing its age.



Image 5 – Base and upper cabinets in 1952 Connector Wing, Room 207

2. Existing Conditions and Assessment (Continued)



Image 6 – Wood casework and soffit in 1952 Connector Wing, Room 207



Image 7 – Recessed casework, Art Room 304A



Image 8 – Recessed chalkboard and base cabinets, Art Room 304A



Image 9 – 2D project storage, Art Room 304A



Image 10 – Base cabinets and counter, Art Room 304A



Image 11 – Sinks and base cabinets, Art Room 304A

2. Existing Conditions and Assessment (Continued)



Image 12 – Art Room 304B



Image 13 - Art Room 304B



Image 14 - Art Room 304B



Image 15 - Art Room 304B



Image 16 – Art Room 304B



Image 17 - Art Room 304B

2. Existing Conditions and Assessment (Continued)



Image 18 - Art Room 306



Image 19 - Art Room 306



Image 20 - Art Room 306



Image 21 - Art Room 306



Image 22 - Art Room 306



Image 23 - Art Room 306

3. Recommendations

3.1 Casework 1966 Addition - Science Classrooms

The casework replacement impacts the majority of the wall opposite the window wall (refer to Floor Plans in Appendix (f) for location). The recommended scope of work calls to replace adjacent finishes as well so all the finishes on that wall are of the same vintage and on a similar repair and / or replacement schedule. The subsequent options 1 and 2 are offered as cost reduction options.

Base Scope: Recommendation

(see Appendix (c) for casework schedule and drawings):

1. (4) Tall Cabinets with glass doors.
2. Replace (2) recessed bookshelves with (2) tall cabinets with tackable surface.
3. Enclose void with gypsum board. Provide access panels as needed.
4. Replace tile with abuse resistant gypsum board.
5. Replace wood surround with stainless steel corner guards.
6. Paint entire wall and soffits.

Option 1: Less Costly

1. (4) Tall Cabinets with tackable surface.
2. Replace (2) recessed bookshelves with (2) tall cabinets with tackable surface.
3. Replace tile with abuse resistant gypsum board.
4. Replace wood surround with stainless steel corner guards.
5. Paint entire wall and soffits.

Option 2: Least Costly

1. (4) Tall Cabinets with tackable surface.
2. Replace (2) recessed bookshelves with (2) tall cabinets with tackable surface.
3. Refinish wood surround .
4. Paint entire wall and soffits.

3. Recommendations (continued)

3.2 Casework 1966 Addition - Typical Classrooms

The casework replacement impacts the majority of the wall opposite the window wall (refer to Floor Plans in Appendix (f) for location). The recommended scope of work calls to replace adjacent finishes as well so all the finishes on that wall are of the same vintage and on a similar repair and / or replacement schedule. The subsequent options 1 and 2 are offered as cost reduction options.

Base Scope: Recommendation

(see Appendix (c) for casework schedule and drawings):

1. (5) Tall Cabinets with tackable surface.
2. Replace (1) recessed bookshelves with (1) tall cabinets with tackable surface.
3. Replace tile with abuse resistant gypsum board.
4. Replace wood surround with stainless steel corner guards.
5. Paint entire wall and soffits.

Option 1: Less Costly

1. (5) base cabinets with countertop and tackable surface above.
2. Replace (1) recessed bookshelves with (1) tall cabinets with tackable surface.
3. Replace tile with abuse resistant gypsum board.
4. Replace wood surround with stainless steel corner guards.
5. Paint entire wall and soffits.

Option 2: Least Costly

1. (5) Tall Cabinets with tackable surface.
2. Replace (1) recessed bookshelves with (1) tall cabinets with tackable surface.
3. Refinish wood surround.
4. Paint entire wall and soffits.

3. Recommendations

3.3 Casework 1952 Original Building - Typical Classroom

The casework replacement impacts the majority of the wall opposite the window wall (refer to Floor Plans in Appendix (f) for location). The recommended scope of work calls to replace adjacent finishes as well so all the finishes on that wall are of the same vintage and on a similar repair and / or replacement schedule. The subsequent options 1 and 2 are offered as cost reduction options.

Base Scope: Recommendation

(see Appendix (c) for casework schedule and drawings):

1. (5) Tall cabinets with tackable surface and one upper cabinet with a lower mechanical louver.
2. (1) data station with upper cabinets.
3. Replace tile with abuse resistant gypsum board.
4. Replace wood surround with stainless steel corner guards.
5. Replace wood paneling with gypsum board soffit.
6. Paint entire wall and soffits.

Option 1: Less Costly

1. (6) Tall cabinets with tackable surface and one upper cabinet with a lower mechanical louver.
2. Replace tile with abuse resistant gypsum board.
3. Replace wood surround with stainless steel corner guards.
4. Replace wood paneling with gypsum board soffit.
5. Paint entire wall and soffits.

Option 2: Least Costly

1. (6) Tall cabinets with tackable surface and one upper cabinet with a lower mechanical louver.
2. Refinish wood surround.
3. Paint entire wall and soffits.



Image 24 – Match Finish and Hardware of Recent Casework in Classroom 338



Image 25 - Casework Door with Tackable Surface

3. Recommendations (continued)

3.4 Casework Art Room Recommendation

Given the extent of casework replacement and it's impact on other finishes as well as the age of finishes and systems the recommendation is to completely renovate the art rooms to improve functionality and storage. Refer to the Floor Plans in Appendix (f) for location of Art rooms within the school. For safety purposes, it is recommended that the kilns be moved out of the teaching space and into a properly ventilated space.

Recommendation - based on Room 306

(see Appendix (c) for art room casework schedule, drawings and detailed scope for each art room):

1. Approximately (6) Tall cabinets with tackable surface
2. Approximately (12) Base cabinets
3. Approximately (6) Upper cabinets
4. Approximately (6) Open flat file storage cabinets
5. Min (3) Sinks including one utility sink
6. Gypsum board soffit
7. Paint entire room
8. New Ceiling – Acoustic Ceiling Tile
9. New flooring – Rubber Flooring Tile
10. New Lighting – Dimmable LED
11. Modifications to existing fire sprinklers
12. New teaching wall – (2) 4'x8' White boards
13. New tackable wall surface – between existing windows
14. HVAC
 - Ensure proper heat and ventilation.
 - Test & Balance any air moving / heating equipment to ensure proper air and water flows.
 - Provide any special exhaust systems required for kilns, soldering or other processes.
15. Plumbing: Sinks, solid waste interceptors and one floor drain per art room.
16. Electrical: Provide lighting, power for kiln and additional outlets.

Note:

1. Kiln option illustrated on floor plan
2. Report assumes electric soldering for jewelry making room and not acetylene which is used at the High School. Mechanical, Electrical and Plumbing requirements increase significantly with gas use.
3. Casework finishes are to match existing finish and hardware of recent Wellesley Middle School casework improvements. Face of cabinet doors to be tackable surface when indicated. Typical for all casework recommendations. Refer to image 24 and 25.

4. Sustainable Considerations

1. Consider specifying casework and counter tops with recycled content for the core.
2. Reduce the use and depletion of finite raw materials and long-cycle renewable materials by replacing them with rapidly renewable materials such as Agrifiber
3. Choose wood casework that use environmentally responsible harvested wood by specifying products certified by the Forest Stewardship Council (FSC).
4. Promote better indoor air quality through the use of No Added Urea Formaldehyde (NAUF) resins.
5. Specify durable materials that don't require a more frequent replacement cycle.

5. Estimated Cost

Task 1C - Interior door and casework replacement

Base Scope (Recommendation) Itemized: Door and hardware replacement, option 1 classroom casework replacement and Art Room renovation

• Doors	• \$601,425
• Casework	• \$1,606,432
• Art Rooms	• \$895,025

Base Scope (Recommendation) Total: Door and hardware replacement, classroom casework replacement and Art Room renovation

• Estimated Construction Cost	• \$3,102,882
• Estimated Total Project Cost	• \$4,372,728

Doors Option 1: School Guard (SG4) Glazing in lieu of 0.90 Laminated

• Estimated Construction Cost	• \$713,788
• Estimated Adjustment to Base Construction Cost	• \$112,363

Doors Option 2: Least costly

• Estimated Construction Cost	• \$509,506
• Estimated Adjustment to Base Construction Cost	• (\$91,919)

Casework Option 1 (Less costly): Casework layout option 1 for 1966 addition science and typical classrooms, and 1952 original building classrooms (excludes art rooms)

• Estimated Construction Cost	• \$1,505,000
• Estimated Adjustment to Base Construction Estimate	• (\$101,431)

Casework Option 2 (Least costly): Casework layout option 2 for 1966 addition science and typical classrooms, and 1952 original building classrooms (excludes art rooms)

• Estimated Construction Cost	• \$1,452,439
• Estimated Adjustment to Base Estimate	• (\$153,992)

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Kitchen Equipment

1. Scope of Work

Crabtree McGrath Associates, Inc., a consulting group specializing in foodservice facilities kitchen planning and design, has been retained by Harriman Architects to provide an analysis of the existing condition of the kitchen and serving facilities.

This section of the report will focus on the following:

- Back of house kitchen space, finishes and existing conditions.
- Serving area existing conditions.
- Foodservice storage.

The following observations will reference codes and standards. For the purposes of this report when we reference the health code we will be citing the Federal Food Code 2017 edition published by the FDA as well as the Merged Massachusetts Food Code 2011 edition. Additionally, the National Sanitation Foundation (NSF) is an independent governing body that develops standards for foodservice equipment design. All equipment, in a commercial kitchen, must follow NSF standards.

It should be noted that Crabtree McGrath Associates, Inc. met with Welleseley Schools Administration, Whitsons and the Town Health Department to obtain initial input and concerns regarding the kitchen scope of work. Their input and concerns have been addressed in the recommendations put forth in this report.

2. Existing Conditions and Assessment

The Wellesley Middle School kitchen serves high quality meals with a variety of options available each day. Additionally, the Middle School kitchen is the primary food hub for the elementary schools meaning it is used to prepare and ship food to each of the elementary schools.

The following are typical meal counts per day:

- Bates Elementary – 130 meals per day
- Fisk Elementary – 130 meals per day
- Hardy Elementary – 100 meals per day
- Hunnewell Elementary – 100 meals per day
- Schofield Elementary – 120 meals per day
- Sprague Elementary – 80 meals per day
- Upham Elementary – 80 meals per day
- Middle School – 500 meals per day

Total Meal Count – 1,240 meals per day

2. Existing Conditions and Assessment (Continued)

Existing Equipment Inventory

Description - Faculty Serving Area	Utility	Status			Notes
		Poor	Fair	Replace	
Coffee brewer	1.8 KW - 120/1 - C&P; .25" CW		x		Vendor supplied (Bloomfield 1082)
Display refrigerator	3.0A - 120/1 - C&P		x		Vendor supplied (QBD - DC12HB)
Coffee urn	1.0 KW - 120/1 - C&P		x		
Insulated coffe pots (3)					
Utility cart		x			Plastic cart
Serving counter with hot wells		x		x	Wells have failed
Microwave oven	20A - 120/1 - C&P				

2. Existing Conditions and Assessment (Continued)

Existing Equipment Inventory (continued)

Description - Kitchen Area	Utility	Poor	Fair	Replace	Notes
Work table (30" x 60" w/ ss drawer, legs, and full undershelf)			x		
36" Char broiler with stand	3/4" gas	x			
36" Heavy duty griddle with oven	3/4" gas	x		x	
36" Heavy duty range with oven	3/4" gas	x		x	
Exhaust hoods		x		x	Poor lighting levels, inadequate overhang
(4) Convection ovens (Single deck)	1/2" gas		x	x	
Steamer (Cleavland 24CGA10)	2.0A - 120/1, 1/2" gas		x	x	
Food preparation counter (painted legs)	1/2" H&CW; 1-1/2" W	x			
Cabinet base counter on curb	1/2" H&CW; 1-1/2" W	x			
Atlatl brand serving counter (30" x 48")		x			Used for display racks
Mobile work table with overhead rack (30" x 72")		x			Two draws
18" x 36" wire storage racks (2)					
Hoshizaki two door refrigerator (RH-2-SSA)	8.0A - 120/1 - C&P	x			
(2) #10 can rack (fifo)					On casters
Atlatl brand serving counter (30" x 48")		x			Used for display racks
(6) Mobile work table with overhead rack (30" x 72")			x		On casters
Delfield three door freezer	20A - 120/1 - C&P	x			Failed gaskets
(7) Cambro transport carts (CMBPH)			x		On casters
(1) Cres Core portable refrigerator	20A - 120/1 - C&P		x		On casters
Steam jacketed kettle (Groen AHS-40)	1.0A - 120/1, 1/2" gas	x			
Wire storage rack (2101 x 48" x 4 tier)			x		
Pot and pan washer (Hobart UW50)	90A - 208/3, 1/2" HW; 2" W				
Three bay stainless steel sink	1/2" H&CW; (3) 1-1/2" W	x			
Hand sinks (3)	1/2" H&CW; 1-1/2" W		x		
Ice maker with bin (IY0524A-161 w/ B420 bin)	14.4A - 120/1; 1/2" CW, 3/4" W		x		Includes water filter
Two compartment prep sink	1/2" H&CW; 1-1/2" W		x		
Victory two door roll-in refrigerator					
Food slicer	8.0A - 120/1 - C&P	x			
20 quart mixer (Hobart A-200T)	1/2 HP - 120/1 - C&P	x			
Vollrath induction unit	1.8KW - 120/1 - C&P		x		
Carter Hoffman hot food holding cabinet (PH1830)	13.7A - 120/1 - C&P		x		
Cres Core hot food holding cabinet (HBA-J237992)	1.5KW - 120/1 C&P		x		

2. Existing Conditions and Assessment (Continued)

2.1 Kitchen Observations:

The health code mandates all surfaces be smooth, easy to clean and durable. Deep cleaning around all the conduits and exposed piping shown here in Image 1 and 2 is difficult if not impossible. It is best practice to avoid conditions as seen here. Avoiding this can be achieved with proper equipment choice and modern design practices.

Equipment that is present is worn. Seen in Image 3 the equipment is failing. Cover plates are missing, exposing the internal components of the range.

The lighting levels under the hood canopy do not meet the minimum standards of 30-foot candles at a point 30 inches above the finished floor. The hood does not have adequate overhang coverage above the cooking equipment. This is contrary to NFPA 96 standards for exhaust hoods and best practices.

The walls in the main kitchen area are constructed of the appropriate materials and have held up well. The floor is a quarry tile typically found in kitchen environments. Some tiles do have chips and cracks but are limited in scope. The grout lines appear to be in distress but are in very good condition. No wash out or missing grout was observed.

The ceilings in the cooking and preparation space are a high quality lay in ceiling tile rated for use in a kitchen environment. The food assembly space where food is packaged for delivery to the lower schools is finished with similar material and in good working order. However, some ceiling tiles are missing thus exposing piping and other utilities above the ceiling to food zones below. These tiles must be replaced to conceal and seal off the piping above.

The main concern with the kitchen is the need for separation of functions. Consider the kitchen as an assembly line. Food is received and processed. The food needs to progress through the process in a logical manner so that food is protected and kept safe and clean at all times. There are steps in all food preparation where during certain points cross contamination can occur. Good design eliminates many of these cross-contamination points. Unfortunately, these hazard points do exist in the current kitchen. For example, the pot and pan washing area is mixed in among the food preparation and cooking area. The kitchen staff manages these critical points quite well but the current outdated design places an undue burden on staff. This difficult working environment can be eliminated with a complete renovation of the kitchen.



Image 1 - Excessive Piping



Image 2 - Excessive Conduit



Image 3 -Distressed Equipment

2. Existing Conditions and Assessment (Continued)

2.2 Serving Area Observations:

The serving counter bases are original to the 1950's. It appears the tops of the counters have been updated at some point. The front faces of the counter bases are concrete block. The issue with this is that the counters are not easily modified. As seen in Image 4, the air vent shown in the base of the counter was needed when a cold food pan was used. The built-in pan has long failed and a counter top ice cooled pan and portable sneeze guard has been placed above it. Ice cooling is allowed but not the best method for cooling food.

The sneeze shield seen in Image 4 is not compliant with current NSF standards. In this particular image salad is served at this station. The clearance and glass coverages of the food below is not adequate.

The backside of the serving is not supported by appropriate equipment that is compatible to what is being served. Based on the current kitchen design the food preparation area is supporting the serving line. This is not the correct support for serving. The tables in Image 5 are painted leg base units and offer no flexibility for changing work needs.

The wood window trim shown in Image 5 is a code violation. Wood surfaces in a modern kitchen are restricted to tabletops that are part of baking, cutting boards, or serving bowls. With that, wood needs frequent oiling and vigilant monitoring. Best practice is that all material in a kitchen be durable, non-absorbent, and easy to clean.

Image 6 is an example of a non-foodservice table being used for foodservice related purpose. There are other tables within the kitchen used in this manner. The health code requires that equipment and food contact surfaces be NSF compliant. Equipment must also bear the NSF marking.



Image 4 - Serving Counters



Image 5 - Serving Line Support



Image 6 -Non-NSF Table

2. Existing Conditions and Assessment (Continued)

2.3 Storage Area Observations:

The storage room is undersized and lacks an adequate finished ceiling. The lighting levels are not adequate and well below code minimums. The walls are unsealed and do not consist of an appropriate material. The floor is unfinished concrete. The areas where walls and floors meet lacks proper coving. The area above the walk-in refrigerators and freezer as seen in Images 7 and 8 is not finished. The area above the dry storage shelving is also open to the utility infrastructure above. The Food Code requires that hoods, walk-in rooms, and storage areas not be exposed to overhead piping. The minimum requirement is that the food zone be sealed off to the equipment above and around them. The ceiling in a kitchen, including the storage area, must be finished with a lay in ceiling tile that is rated for a kitchen environment.

The lighting levels within both walk-in compartments are not adequate. The storage volume for both the walk-in cooler and freezer are undersized for the population being served. The walk-in cooler is in good condition and can be expanded to increase storage capacity.

The walk-in freezer is much older than the cooler compartment. Many of the gaskets between panels are failing which allows warm moist air to infiltrate the compartments. There is also corrosion visible on the freezer panels indicating a failure in the integrity of the panel structure. The existing freezer is subject to more dramatic temperature fluctuations and warm air infiltration which contributes to excessive frost buildup. Lastly, the walk-in freezer is undersized.

The condensing units for both refrigerated walk-in rooms are located indoors resulting in noise and heat being rejected into the indoor space. These unit must be moved outdoors with the benefits being more efficient operation and an improvement to the indoor environment.

The existing mixer lacks the safety guard needed for OSHA compliance. These older mixers are built tough and very durable. It functions as well as it did when it was new, but unfortunately the unit has outlasted modern safety features that have become standard equipment on newer mixers.

The reach-in freezer gaskets are worn allowing warm air to infiltrate the freezer cavity. As seen in Image 9 the moisture builds up and become an issue and limits storage capacity.

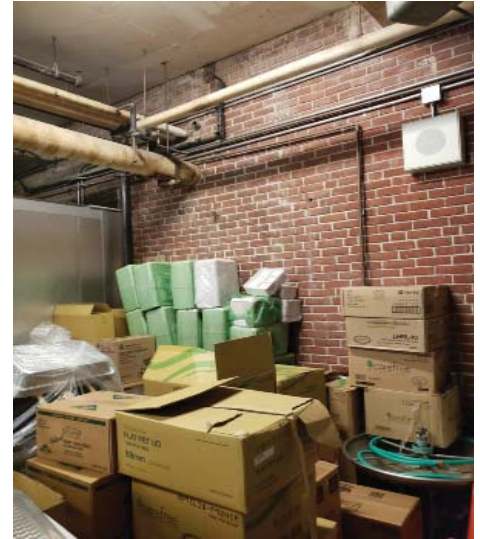


Image 7 - Storage Room



Image 8 - Storage Room



Image 9 -Reach in Freezer

2. Existing Conditions and Assessment (Continued)

2.4 Make Up Air Handler observations:

The present air handler is located in Kitchen Storage – B134, suspended from the ceiling in the southeast corner of the room. It is original to the building [1952], steam-fired, centrifugal, has belt driven fans with a mixing box and filters.

The outside air inlet is connected to a 10 ft x 5 ft louver in the east wall of the space. This unit is 100% outside air for make-up to the kitchen cooking hood and the dishwasher hood. The capacity of this unit is 15,400 CFM on high speed and 10,200 CFM on low speed. Based upon the design for the upgrade of the kitchen, this unit shall have to be downsized. At present the exhausts from the cooking hood and the dishwasher hood rise through the Auditorium to the south of the stage and then pass over the stage to rise through the roof to their respective exhaust fans. The cooking hood exhaust fan was replaced in 2005 and the dishwasher hood exhaust fan is even newer. The existing ductwork serving the kitchen from this air handler runs west across the ceiling of the Kitchen Storage room and then turns north and runs the entire length of the kitchen feeding six (6) ceiling diffusers in the suspended ceiling of the kitchen.

2.5 Electrical Observations:

Refer to appendix (e)



Image 10 – Make-up air handler



Image 11 - Diffusers in ceiling

2. Existing Conditions and Assessment (Continued)

2.6 Plumbing Observations:

Refer to appendix (e)

2.4 Assessment:

It's apparent that certain aspects of the facility have not been updated in a very long time. This is having a direct impact on the foodservice program's ability to prepare meals, serve, and operate safely and efficiently. The kitchen staff has to work harder to manage the existing conditions in order to achieve acceptable consistent results.

A reorganization of the kitchen is warranted in order to create appropriate spaces for specific foodservice functions that are consistent with best practices and modern food code standards. A renovation will make for a safer kitchen and the upgrade will improve workflow and kitchen staff morale. Lastly, new equipment will be the latest in energy efficiency resulting in savings to the district.

This facility is a critical cog in the districts foodservice program. All of the Elementary Schools depend on this facility for its daily needs and its future must be addressed.

3. Recommendations

Kitchen renovation and equipment

Based upon our review of the existing conditions and the available space provided in the footprint it is our recommendation that the kitchen layout must be significantly modified. New more efficient equipment should be installed to meet the current foodservice program needs, as well as current codes and best health practices. Refer to Appendix (d) for the recommended layout.

1. The serving line is outdated and must be upgraded.
2. Separation of functions is required. Pot washing, cooking, and preparation need clear delineation and spaces where they can exist and safely function without the potential for cross contamination during food processing.
3. The storage area must be organized to increase storage density and expand refrigerated storage capacity. Finishes within this area must be brought into compliance with modern code standards.
4. Modern equipment will be significantly more efficient than what is presently on site.
5. Eliminate all wood surfaces. Replace them with proper materials that are compliant with the current health code standards.
6. Add appropriate mobile worktables and fixed food preparation stations to make additional work surfaces available in locations where they are needed.
7. Replace the antiquated exhaust hoods with a larger hood system that is equipped with energy efficient features. New hood will supply proper lighting and exhaust coverage above the cooking equipment.
8. A new walk-in freezer and an expanded cooler are needed. Modern refrigeration systems

3. Recommendations (Continued)

will be much more energy efficient than what is currently in place.

9. Replace existing acoustical ceiling tile system.
10. Replace existing quarry tile flooring with new quarry tile floor due to required extensive rerouting of floor drains and other associated plumbing work.

Kitchen HVAC

1. Working with the kitchen consultant new cooking hoods and a dishwasher hood have been selected. The exhaust for these items will be rerouted away from the stage and up to new exhaust fans on the roof. The make-up air unit will also be gas-fired and roof-mounted. The kitchen hoods and exhaust fans will be interconnected to be controlled at just enough airflow for the level of cooking. This system has been proven to be more comfortable for the occupants and a considerable energy savings.
2. Examine all air handling systems presently serving the Cafeteria and Kitchen to ensure that the airflows are proper.
3. Test & Balance all system airflows.

Kitchen electrical (Refer to Electrical Report in Appendix (e) existing conditions and assessments)

1. Completely remove existing panelboards serving the existing kitchen space back to source. Refer to report for original panelboard (pre-2005 vintage) condition. Provide new to serve kitchen.
2. New dishwasher and booster heater wire back to new 480V distribution panelboard.
3. Completely remove all branch circuits and provide new to serve new equipment and layout, including lighting.
4. Remove lighting in Kitchen and Kitchen Storage and provide new to accommodate new equipment (Kitchen and Mechanical).
5. Provide necessary fire alarm connections to the new hood and underwood equipment for shutdown.

Kitchen plumbing (Refer to Electrical Report in Appendix (e) existing conditions and assessments)

1. Consider replacing the gas fired water heater with a high efficiency unit.
2. Replace all floor drains in the kitchen.
3. Clean and inspect all kitchen drainage piping.
4. Replace the grease interceptor in the mechanical room.
5. Connect plumbing and gas piping to all kitchen sinks with indirect floor drains at prep sinks.
6. Connect plumbing and gas piping to UDS wall behind cooking line-up.
7. Modify existing fire sprinkler to accommodate revised layout and new ceilings.

4. Sustainable Considerations

1. Open burner ranges – These units have a minimum of five standing pilot lights. These pilots continue to consume energy even when the units are not in use. We recommend a brand that offers an electronic pilot igniter. The igniter makes it easy to light pilots and encourages staff to totally shut the unit down at the end of the day in an effort to conserve natural gas.
 - For example a four-burner unit consumes on average 4,000 to 6,000 btu's per hour, that's more than 21 million btu's per year at an idle operating cost of \$325. The upgrade to the ignition system has a pay-back period of approximately 15 months. The environmental impact is significant with a reduction of fossil fuel consumption and waste.
2. Walk -in refrigerated rooms - The mechanical refrigeration systems for these rooms are controlled with simple time clock defrosts at the freezer coils. It works well but it is not an intelligent system. We recommend utilizing a Smart Defrost system that is designed to defrost the refrigerated room only when needed. Typical time clock controlled electric defrost systems have four defrosts per day. Using a Smart Defrost system can reduce the number of defrosts from four to two per day. This system represents an average savings of 75% in electrical consumption during defrost. In addition to the smart defrost we recommend the use of PSC or ECM motors in all refrigeration room blower coils and remote condensers. These motors last longer, represent a 72% energy consumption reduction, and run quieter than traditional motors.
3. For the exhaust hoods we recommend Demand Control Ventilation (DCV). These systems are part of Energy Management Systems or EMS. What EMS controls do is modulate the speed of the exhaust and MAU fan motors with variable frequency drives (VFD's). In simple terms the control system senses heat at the exhaust duct and increases or decreases the amount of exhaust rate based on actual demand rather than running at 100% capacity, 100% of the time. EMS systems have been shown to significantly reduce the energy consumption and electrical demands associated with operating the hood systems. On average this represents a 62% reduction in electrical demand.
4. In addition to electrical energy savings there would be an energy savings gained from the reduced heating load at the make up air units. Typically the average fan speed associated airflow of the MAU will drop 30% resulting in a significant amount of air that does not need to be heated. The average pay back for these systems is less than one year.
5. Hood End Panels - Adding end skirts to the end of each hood allow for a reduction to the overall exhaust air volume. It is also a way to improve capture and containment. Another benefit of end panels is to mitigate the negative effect that cross drafts can have on hood performance. Less exhausted air means less make up air and a reduction in reheating that air in the winter.
6. Hood Lights - By replacing the incandescent light bulbs with LED in exhaust hoods significant reductions in energy usage can be realized. Incandescent bulbs transform about 85% of energy they use into heat. The life spans of these lights are approximately 750 to 1000 hours. Consider the constant vibration at the hood and this is reduced even further. The initial cost of a 60-watt incandescent bulb is about 50 cents each and assuming the typical hood has eight lights in it we can calculate that these eight bulbs will cost about \$525 dollars per year to operate.
7. Low-Flow Pre-Rinse Spray Valves - A low-flow pre-rinse spray valve is one of the easiest and most cost effective energy saving devices available to the foodservice. Hand sinks will also be fitted with aerators to further reduce water consumption.
8. Energy Star rated equipment will be used where available and will always be the first choice. In addition to lower operating cost Energy Star rated units are eligible for rebates from the gas utility. We estimate this project will be eligible for \$8,000 in gas rebates.
9. Maintain ongoing food recovery program.

5. Estimated Cost

Base Scope (Recommendation) Breakdown: Kitchen equipment replacement, Kitchen HVAC and work associated with modified layout

• Kitchen Renovation	• \$1,789,697
• Kitchen Equipment	• \$1,391,904

Base Scope (Recommendation) Total: Kitchen equipment replacement, Kitchen HVAC and work associated with modified layout

• Estimated Construction Cost	• \$3,181,601
• Estimated Total Project Cost	• \$4,483,663

There are certain pieces of equipment that may be able to be reused. The approximate value of this equipment is \$55,000. Should this equipment be reused a deduct of \$55,000 can be taken.

Please note that the original scope was to replace the kitchen equipment one for one for a value of \$500,000. The original value is not adequate to replace the equipment in today’s dollars. As outlined in our recommendation, based on our review of the space, program and meeting with the Board of Health we have determined that the layout of the kitchen also needs to be addressed. The revised layout as illustrated in Appendix (d) will result in a clean, healthy, safe and most efficient production kitchen.

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Supplemental Scope

1. Scope of Work

The following items were not identified in Harriman's original contractual scope of work. Our team has identified them as supplemental scope as they are impacted by the original scope of work:

- Fire alarm upgrade
- Cloth covered wiring / Branch circuit replacement
- Water heater replacement

2. Existing Conditions and Assessment

Fire Alarm Upgrade

- The existing fire alarm system control panel is a Simplex 4100U.
- The panel is still serviceable however looking toward a 25 year solution replacement with a more current model will ensure the availability of parts for the foreseeable future.

Cloth wiring / branch circuits

There are a number of older existing (original to building construction) panelboards located throughout the building.

- These panelboards do not provide gutter space that is required in today's code.
- Have cloth covered (insulated) wiring feeding them and branch circuits fed by the panelboard.
- Are of an age that is beyond the equipment's serviceable life.

The cloth covered (insulated) wiring is not only located in the original panelboards, it is also located in panelboards that were replaced in the 2005 addition. The concerns are:

- Wiring - The covering on the cloth covered (insulated) wiring becomes brittle with age and can delaminate from the wiring if disturbed.
- Panelboards - Circuit breakers become or are unavailable.

Water Heater

An A.O. Smith model BTN-400A-108, 85 gallon gas fired water heater is located in the Mechanical Room/Boiler Room below the Kitchen. The water heater was constructed and installed in 2007 making it 11 years old in 2018. The water heater has an approximate life expectancy of 15 years. The heater has an input rating of 390,000 btuh. The heater can produce a recovery of 378 gallons per hour at 100°F temperature rise. The capacity of the water heater is suited to the demand of the Kitchen. The flue extends to the chimney. The unit has an efficiency rating of 80%. Combustion air is supplied through a louver within the Boiler Room.

Refer to Plumbing and Electrical Reports in Appendix (e) for additional information.

3. Recommendations

Fire Alarm Upgrade

- 1. The existing systems will be 14 years old in 2020. They are approaching the end of there service life. Due to the age of the system the recommendation is to replace the existing 4100U Control Panel with a 4100ES Control Panel and address any system deficiencies.

Cloth wiring / branch circuits

- 1. Due to the cloth covered wiring becoming brittle with age the recommendation is to replace the cloth covered (insulated) wiring with new.
- 2. Replace the original panelboards with new.
- 3. Replace receptacles affected with tamper resistant receptacles.
 - NEC 2017 requires receptacles in primary and elementary education facilities be “tamper resistant”. NEC 406.12.

Water Heater

- 1. Due to the water heater being at the end of it’s life expectancy we recommend replacing the gas fired water heater with a high efficiency unit.

4. Sustainable Considerations

- 1. To reduce energy consumption select a high efficiency water heater. The unit will heat the water in less time and therefore consume less energy.

5. Cost Estimate

Scope Breakdown: Fire alarm FACP replacement and correct system deficiencies, wiring upgrades and water heater replacement

• Fire Alarm FACP replacement and correct system deficiencies	• \$93,960
• Wiring upgrades	• \$528,768
• Water heater	• \$53,460

Base Scope Total: Fire alarm FACP replacement and correct system deficiencies, wiring upgrades and water heater replacement

• Estimated Construction Cost	• \$676,188
• Estimated Total Project Cost	• \$952,916

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Code Analysis 3

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Code Executive Summary

Wellesley Middle School Project 780 CMR Chapter 34 Compliance

The Wellesley Middle School was originally constructed in 1952. In the years after the erection of the original building, multiple expansions were constructed. Two additions containing a gymnasium, labs and classrooms were built on the north- and south-sides of the original building in 1958. The east-side of the original building then saw the addition of two new wings of classrooms in 1966. Currently, the building is three stories with a basement consisting of science labs, storage and mechanical space. The second level is made up of classrooms, the cafeteria, kitchen, meeting rooms, a gymnasium and wood/robotic shops. Though predominantly classrooms, a gymnasium, auditorium and library are also located on the third floor. The two main entrances to the building are on the east-side of the second floor and west-side of the third floor. Additionally, the existing building has both an automatic fire alarm system and an automatic sprinkler system.

A project is proposed that includes Facade repairs, HVAC upgrades, Kitchen/Storage renovations, Art room renovations, and replacement/removal of existing doors. The various scopes associated with the project are being pursued under the work area compliance method of 780 CMR c. 34; each scope is classified as indicated in the following table.

Description of Work	Classification of Work	Creation of Work Area?
Façade and site work: - Repairs of building façade including limestone repairs and cupola repairs. - Repairs of brick masonry-faced retaining wall.	Repairs & Level 1 Alteration (780 CMR 34-IEBC §502 and §503)	No
Upgrade of existing HVAC systems for the two gymnasiums, the Auditorium, and the Kitchen: - New cooling system in the Auditorium. - Upgrade controls for the impacted areas.	Level 1 & Level 2 Alteration (780 CMR 34-IEBC §503 & §504)	No
Elimination of approximately 181 classroom-corridor fire rated doors and approximately 21 sets of cross-corridor fire rated doors.	Level 2 Alteration (780 CMR 34-IEBC §504)	No
Repair and/or replacement of existing stair enclosure fire rated doors.	Repairs & Level 1 Alteration (780 CMR 34-IEBC §502 and §503)	No
Renovations of existing Art Rooms. - Repositioning of equipment. - Repair and replacement of existing finishes.	Level 1 Alteration (780 CMR 34-IEBC §503)	No
Upgrade of existing Kitchen/Storage space. - Construction of a new layout for the Kitchen. - Upgrade kitchen equipment, HVAC systems, electrical systems, and plumbing systems serving the Kitchen.	Level 2 Alteration (780 CMR 34-IEBC §504)	Yes

Considering the only anticipated work area for the project is the Kitchen, the total Work Areas in the existing building does not exceed 50% of the aggregate area, therefore the project does not involve Level 3 Alterations (780 CMR 34-IEBC §505). The Project does not involve a Change of Occupancy (780 CMR 34-IEBC §506), additions to the existing building (780 CMR 34-IEBC §507), and the building is not considered historic.

Executive Summary (continued)

As a result of compliance with 780 CMR c. 34, the following should be considered as part of this project:

Facade and site work

- For alterations and renovations of existing buildings, the energy efficiency requirements of 780 CMR 13 (IECC) apply (780 CMR Appendix AA §104). The IECC requires the altered work to comply with the code for new construction (IECC C503.1). Existing conditions not being altered are permitted to remain as-is unless specifically noted by the IECC (IECC C501.2). The insulation of the existing exterior walls is required to comply with the code for new construction if the wall cavity is exposed (IECC §503.1). Existing ceiling, wall or floor cavities exposed during construction are permitted to remain as-is provided that they are filled with insulation (IECC C503.1 Exception 3).

Upgrade of existing HVAC systems

- Existing mechanical systems undergoing repair shall not make the building any less conforming than it was before the repair was undertaken (780 CMR 34-IEBC §608.1).
- In mechanically ventilated spaces, existing mechanical ventilation systems that are altered, reconfigured, or extended must provide not less than 5-cfm/person of outdoor air and not less than 15-cfm/person of ventilation air; or not less than the amount of ventilation air determined by the Indoor Air Quality Procedure of ASHRAE 62 (780 CMR 34-IEBC §809.2.).

Elimination/Replacement of Existing Corridor Doors

- As a result of ongoing door hardware issues and reoccurring corrective maintenance associated with the cross-corridor fire rated doors, it is desirable to eliminate these doors from the building. Pursuant to 780 CMR Chapter 34 §801.3, JENSEN HUGHES proposes to eliminate all existing fire rated doors located along the existing corridors (cross-corridor doors and classroom doors) of the school on the basis that corridors in newly constructed Group E occupancies fully protected by an automatic sprinkler system require no fire resistance rating. Refer to 780 CMR Table 1020.1 excerpt below. Although originally constructed in the 1950's, the Middle School was fully retrofitted with automatic sprinkler protection during a phased construction plan completed in 2008. Considering the installation of that sprinkler system, the design team wishes to abandon existing rated corridor doors that are no longer required to be rated in fully sprinklered new construction. Rated door assemblies will either be replaced with non-rated assemblies or doors will be abandoned entirely depending on the location. It is JENSEN HUGHES' interpretation that this alteration complies with 780 CMR Chapter 34 §801.3 and 780 CMR Table 1020.1 as referenced by 780 CMR Chapter 34 §801.3.

Executive Summary (continued)

TABLE 1020.1
CORRIDOR FIRE-RESISTANCE RATING

OCCUPANCY	OCCUPANT LOAD SERVED BY CORRIDOR	REQUIRED FIRE-RESISTANCE RATING (hours)	
		Without sprinkler system	With sprinkler system ^c
H-1, H-2, H-3	All	Not Permitted	1
H-4, H-5	Greater than 30	Not Permitted	1
A, B, E, F, M, S, U	Greater than 30	1	0
R	Greater than 10	Not Permitted	0.5
I-2 ^a , I-4	All	Not Permitted	0
I-1, I-3	All	Not Permitted	1 ^b

Repair/Replacement of Existing Stair Enclosure Doors

- In support of the corridor door removal/replacement scope, door leaves and door hardware in existing exit stairways not included in the project work area should be repaired or modified to ensure that existing vertical openings remain enclosed. Where doors are desired to be held open, compliant fire alarm door hold-open devices may be installed.

Renovation of existing Art Rooms

- The existing buildings or portions thereof must not be altered such that the building becomes less safe than its existing condition, unless permitted in 780 CMR for new construction (780 CMR 34-IEBC §701.2). Alterations in historic buildings must comply with 780 CMR 34-IEBC Chapter 7 requirements except as modified by 780 CMR 34-IEBC Chapter 12.
- All newly installed interior finishes and trim as well as the materials and methods must comply with the applicable requirements of 780 CMR for new construction (780 CMR 34-IEBC §702.0).
- Alterations must be done in a manner that maintains the level of fire protection provided. (780 CMR 34-IEBC §703.1).
- Alterations must be done in a manner that maintains the level of protection provided for the means of egress. (780 CMR 34-IEBC §704.1).

Executive Summary (continued)

Renovations of existing Kitchen/Storage area

- All new construction elements, components, systems, and spaces (including the means of egress and fire protection systems) must comply with the requirements of 780 CMR.
- The existing buildings or portions thereof must not be altered such that the building becomes less safe than its existing condition, unless permitted in 780 CMR for new construction (780 CMR 34-IEBC §701.2). Alterations in historic buildings must comply with 780 CMR 34-IEBC Chapter 7 requirements except as modified by 780 CMR 34-IEBC Chapter 12.
- All newly installed interior finishes and trim as well as the materials and methods must comply with the applicable requirements of 780 CMR for new construction (780 CMR 34-IEBC §702.0). The interior finish of walls and ceilings in exits and corridors in any work area must comply with 780 CMR. Existing interior finish materials that do not comply with the provisions of 780 CMR are permitted to be treated with an approved fire retardant coating in accordance with the manufacturer's instructions to achieve the required rating (780 CMR 34-IEBC §803.4).
- Alterations must be done in a manner that maintains the level of fire resistance ratings currently provided for the building (780 CMR 34-IEBC §803.6).
- Alterations must be done in a manner that maintains the level of fire protection provided (780 CMR 34-IEBC §703.1). The sprinkler system should be modified so that it complies with NFPA 13 as a result of the reconfiguration of space in the Kitchen/Storage Area.
- All new electrical work done as part of a Level 2 Alteration must be in compliance with 527 CMR §12.00.
- All reconfigured or converted spaces intended for occupancy and all spaces converted to habitable or occupiable space in any work area must be provided with natural or mechanical ventilation in accordance with the International Mechanical Code (IMC) (780 CMR 34-IEBC §809.1). In mechanically ventilated spaces, existing mechanical ventilation systems that are altered, reconfigured, or extended must provide not less than 5-cfm/person of outdoor air and not less than 15-cfm/person of ventilation air; or not less than the amount of ventilation air determined by the Indoor Air Quality Procedure of ASHRAE 62 (780 CMR 34-IEBC §809.2.).

If you have any questions with respect to the above information, please do not hesitate to contact me via phone at (508) 620-8900 x 11014 or via email at nkozlowski@jensenhughes.com.

Sincerely,
JENSEN HUGHES

Nick Kozlowski, P.E.
Supervisor, Fire Protection Engineer

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WELLESLEY MIDDLE SCHOOL CONSTRUCTION RENOVATIONS WELLESLEY, MASSACHUSETTS

CODE COMPLIANCE APPROACH REPORT SCHEMATIC DESIGN PHASE

Prepared For:

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170 Milk Street, Suite 5
Boston, MA 02109

August 31, 2018

Project #: 1NKO00065

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1.0 INTRODUCTION

This report presents the building code (pertaining to fire protection and life safety) and accessibility code compliance requirements for the proposed renovations of the Wellesley Middle School building that is located at 50 Kingsbury Street in Wellesley, Massachusetts. This report is intended to serve as a reference for the design team to understand the major building code and accessibility code implications presented by the various scopes of the proposed renovations. The information in this report is based on the following:

- A visual walk-thru survey of selected portions of the existing building on July 17, 2018;
- Schematic level scoping documents provided by Harriman; and
- Various project-related discussions with the design team.

The format of this report is such that the code requirements are detailed in Section 2.0, alternative methods of compliance are detailed in Section 3.0, and then our proposed design approach to comply with the Section 2.0 requirements is detailed in Section 4.0.

1.1 Existing Building Description

The Wellesley Middle School was originally constructed in 1952. In the years after the erection of the original building, multiple expansions were constructed. Two additions containing a gymnasium, labs and classrooms were built on the north- and south-sides of the original building in 1958. The east-side of the original building then saw the addition of two new wings of classrooms in 1966. Currently, the building is three stories with a basement consisting of science labs, storage and mechanical space. The second level is made up of classrooms, the cafeteria, kitchen, meeting rooms, a gymnasium and wood/robotic shops. Though predominantly classrooms, a gymnasium, auditorium and library are also located on the third floor. The two main entrances to the building are on the east-side of the second floor and west-side of the third floor. Additionally, the existing building has both an automatic fire alarm system and an automatic sprinkler system.

1.2 Project Description

The renovation project (The Project) involves the following scope items:

- Façade and site work:
 - Repairs of building façade including limestone repair and cupola repair.
 - Repairs of brick masonry-faced retaining wall.
- Upgrade of existing HVAC systems for the two gymnasiums, the Auditorium, and the Kitchen:
 - New cooling system to the Auditorium.
 - Upgrade controls for the impacted areas.
- Replacement, repair and elimination of existing fire rated doors.
 - Elimination of approximately 181 classroom-corridor fire rated doors and approximately 21 sets of cross-corridor fire rated doors.
 - Repair and replacement of existing stair enclosure fire rated doors.
- Upgrades of existing Art Rooms.
 - Installation of new equipment.

- Repair and replacement of existing finishes.
- Upgrade of existing Kitchen/Cafeteria and Storage space.
 - Construction of a new layout for the Kitchen.
 - Upgrade kitchen equipment, HVAC systems, electrical systems, and plumbing systems serving the Kitchen.

1.3 Applicable Codes

The following codes are applicable to the Project:

- **Accessibility** – Massachusetts Architectural Access Board Regulations (521 CMR) and the Americans with Disabilities Act (ADA) 2010 Standards for Accessible Design.
- **Building** – *Massachusetts State Building Code* (780 CMR) 9th Edition (amended version of the 2015 *International Building Code* (IBC)). References to 780 CMR Chapter 34, Existing Structures (amended 2015 *International Existing Building Code* (IEBC)) are designated as the Massachusetts Existing Building Code (780 CMR 34-IEBC).
- **Electrical** - *Massachusetts Electrical Code*, 527 CMR 12.00 (amended version of the 2017 *National Electrical Code* (NFPA 70) effective January 1, 2017).
- **Elevators** - *Massachusetts Elevator Regulations*, 524 CMR (amended version of the 2013 Edition of ASME A17.1, *Safety Code for Elevators and Escalators*).
- **Fire Prevention** - *Massachusetts Comprehensive Fire Safety Code*, 527 CMR 1.00 (based on the 2015 Edition of NFPA 1, *Fire Code*).
- **Mechanical** – *International Mechanical Code*, 2015, as adopted and amended by 780 CMR (IMC).
- **Plumbing** - *Massachusetts Fuel Gas and Plumbing Codes*, 248 CMR.
- **Energy** - 2015 *International Energy Conservation Code* (IECC) and ASHRAE 90.1-2013 as amended by 780 CMR 13 including Appendix AA – Stretch Energy Code. Stretch Energy Code §AA104 states that for alterations, renovations, additions, or repairs of existing buildings in Wellesley, the energy efficiency requirements of 780 CMR §13...shall be used as applicable based on the use and occupancy of the building.
- **Other** - Selected National Fire Protection Association (NFPA) Standards as referenced by 780 CMR and 521 CMR, including but not limited to:
 - NFPA 13, 2013 Edition, Standard for the Installation of Sprinkler Systems.
 - NFPA 14, 2013 Edition, Standard for the Installation of Standpipe and Hose Systems.
 - NFPA 72, 2013 Edition, National Fire Alarm Code.
 - NFPA 80, 2013 Edition, Standard for Fire Doors and Other Opening Protectives.

This report focuses on the key issues relative to compliance with 780 CMR and 521 CMR. Provisions of the remaining applicable codes are noted where pertinent to the issues at hand.

2.0 CODE COMPLIANCE APPROACH

2.1 General Requirements

The provisions of 780 CMR 34.00¹ apply to the repair, alteration, change of occupancy, addition and relocation of all existing buildings, regardless of occupancy, as outlined in the below criteria (780 CMR §101.2, 34-IEBC §101.2). The purpose of the code is to establish the minimum requirements to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment, and to provide safety to fire fighters and emergency responders during emergency operations (780 CMR §101.3).

- **Buildings Previously Occupied** – The legal occupancy of any structure existing on the date of adoption of the code (780 CMR) shall be permitted to continue, without change, except as is specifically covered in 780 CMR 34.00 or as is deemed necessary by the *Building Official* for the general safety and welfare of the occupants and the public (780 CMR §102.6).
- **Laws in Effect** – Unless specifically provided otherwise in this code (780 CMR), and narrow to the provisions of 780 CMR, any existing building or structure shall meet and shall be presumed to meet the provisions of the applicable laws, codes, rules or regulations, bylaws or ordinances in effect at the time such building or structure was constructed or altered and shall be allowed to continue to be occupied pursuant to its use and occupancy, provided that the building or structure shall be maintained by the Owner in accordance with 780 CMR (780 CMR §102.6.2).
- **Less Stringent** – In cases where the provisions of this code (780 CMR) are less stringent than the applicable codes, rules or regulations, bylaws or ordinances at the time of such construction or substantial alteration, the applicable provisions of 780 CMR shall apply, providing such application can be reasonably demonstrated to not result in danger to the public, as determined by the *Building Official* (780 CMR §102.6.3).
- **Owner Responsibility** – The *Owner* shall be responsible for compliance with the provisions of this Code (780 CMR).

2.2 Investigation and Evaluation

For any proposed work regulated by this code (780 CMR including 780 CMR 34-IEBC) and subject to 780 CMR §107, as a condition of issuance of a building permit the *Building Owner* shall cause the existing building (or portion thereof) to be investigated and evaluated in accordance with the provisions of 780 CMR (780 CMR 34-IEBC §104.2.2.1).

The investigation and evaluation shall be in sufficient detail to ascertain the effects of the proposed work (if any) on at least these systems: structural, means of egress, fire protection, energy conservation, lighting, hazardous materials, accessibility, and ventilation for the space under consideration and, where necessary, the entire building or structure and its foundation if impacted by the proposed work. The results of the investigation and evaluation, along with any proposed *compliance alternatives*, shall be submitted to the Building Official in written report form.

This report serves as the investigation and evaluation report for the existing Wellesley Middle School building.

¹ 780 CMR-9th §34.00 adopts and amends the 2015 International Existing Building Code (IEBC).

2.2.1 Existing Means of Egress, Lighting and Ventilation

Means of egress in existing buildings, whether or not undergoing repairs, alterations, changes of occupancy, are subject to the provisions of 780 CMR §102.6.4. When applicable, the following conditions of (780 CMR §102.6.4) must be corrected in all existing buildings.

“The *Building Official* may cite the following condition in writing as a violation and order the abatement within a time frame deemed necessary by the *Building Official* to make the building environment safe, healthy or otherwise comply with this code (780 CMR) (780 CMR §102.6.4):

- Inadequate number of means of egress;
- Egress components with insufficient width or so arranged to be inadequate, including signage and lighting;
- Inadequate lighting and ventilation.

Where full compliance for means of egress, lighting and ventilation are not practical, the *Building Official* may accept compliance alternatives, engineering, or other evaluations that adequately address the deficiency.”

JENSEN HUGHES is not aware of any outstanding Abatement Orders or Notices of Violation issued against the building therefore the existing conditions are assumed to have been acceptable to the Building Official upon their last inspection.

2.2.2 Maintenance of Existing Buildings and Structures

All buildings and structures and all parts thereof, both existing and new, and all systems and equipment therein which are regulated by this code (780 CMR) shall be maintained in a safe, operable and sanitary condition. All service equipment, means of egress, devices and safeguards which are required in a building or structure, or which were required by a previous statute in a building or structure, when erected, altered or repaired, shall be maintained in good working order (780 CMR §102.8).

The working condition of existing life safety systems including all means of egress components and fire-rated compartmentalization were surveyed by JENSEN HUGHES. Proper maintenance of ventilation, lighting systems, and other service equipment should be verified by others.

The following deficiencies were noted during the survey performed by JENSEN HUGHES and should be repaired as part of this project:

- Broken door hardware in multiple locations.
- Non-compliant door-hold devices.
- Broken door leaves or glazing in door leaves.
- Doors that do not close.

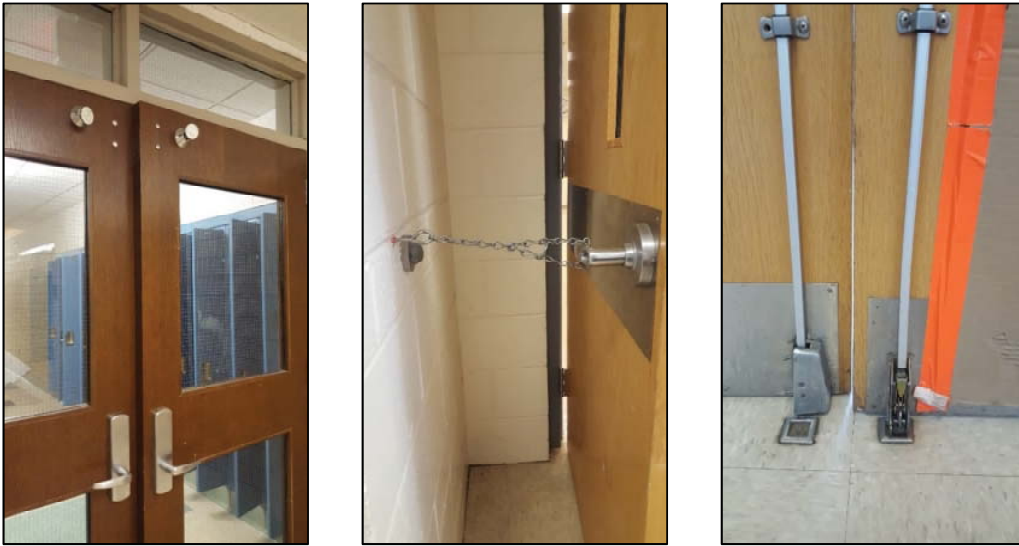


Figure 1 - Examples of existing door issues

As a result of the hardware issues and maintenance work originating from the cross-corridor fire rated doors, it is desirable to eliminate these doors from the building. JENSEN HUGHES proposes to eliminate all fire rated doors from the corridors on the basis that the fire-resistance rating of corridors for newly constructed Group E occupancies fully protected by an automatic sprinkler system is 0 hours per 780 CMR Table 1020.1. Although originally constructed in the 1950's, the Middle School was fully retrofitted with automatic sprinkler protection during a phased construction plan completed in 2008. Considering the installation of that sprinkler system, the design team proposes to abandon existing rated corridor doors that are no longer required to be rated in fully sprinklered new construction.

2.3 Compliance Methods

The repair, alteration, change of occupancy, addition or relocation of all existing buildings shall comply with **one (1)** of the following methods (as selected by the applicant) and shall not be applied in combination with each other (780 CMR 34-IEBC §301.1):

- **Prescriptive Compliance Method** in accordance with 780 CMR 34-IEBC §301.1.1 as follows:

Repairs, alterations, additions, and changes of occupancy complying with Chapter 4 of this code (780 CMR 34-IEBC) in buildings complying with the International Fire Code (IFC).

- **Work Area Compliance Method** in accordance with 780 CMR 34-IEBC §301.1.2 as follows:

Repairs, alterations, additions, changes in occupancy, and relocated buildings complying with the applicable requirements of Chapters 5 through 13 of this code (780 CMR 34-IEBC).

- **Performance Compliance Method** in accordance with 780 CMR 34-IEBC §301.1.3 as follows:

Repairs, alterations, additions, changes in occupancy, and relocated buildings complying with Chapter 14 of this code (780 CMR 34-IEBC).

- **Compliance Alternative Method** in accordance with 780 CMR 34-IEBC §104.11 as follows:

Where compliance with the provisions of 780 CMR for new construction (when required by 780 CMR 34-IEBC) is impractical because of construction difficulties or regulatory conflicts, compliance alternatives may be accepted by the *Building Official*. The *Building Official* may accept these compliance alternatives, archaic

materials and assemblies in Resource A of this code, or other alternatives proposed. If the compliance alternative involves fire protection systems, the *Building Official* shall consult with the Fire Official.

Compliance alternatives, if any are proposed, shall be included with the application for a permit and shall identify all items of non- or partial compliance with the requirements of this code, for approval by the *Building Official*. The *Building Official* shall respond to the acceptability of any proposed compliance alternatives within 30 days of the filing of the permit application. Where proposed compliance alternatives are, in the opinion of the *Building Official*, unacceptable, or where the issues of non-compliance remain, the permit applicant shall have the remedies prescribed by 780 CMR §113.

The Work Area Compliance Method has been selected for this Project.

2.4 Key Definitions

Repairs – Repair is defined as the reconstruction or renewal of any part of an existing building for the purpose of its maintenance or to correct damage (780 CMR 34-IEBC §202).

- Repairs include the patching or restoration or replacement of damaged materials, elements, equipment, or fixtures for the purpose of maintaining such components in good or sound condition with respect to existing loads or performance requirements. Repairs must comply with the provisions of 780 CMR-IEBC §5.0 (780 CMR 34-IEBC §502.0).

Addition – Addition is defined as an extension or increase in floor area, number of stories, or height of a building or structure (IEBC §202). Additions must comply with the provisions of 780 CMR 34-IEBC §11.0 (780 CMR 34-IEBC §507.0).

Alterations – Alteration is defined as any construction or renovation to an existing structure other than a repair or an addition. Alterations are classified as Level 1, Level 2 and Level 3 as follows (780 CMR 34-IEBC §202). The definitions of Level 1, 2 and 3 Alterations are as follows (also see definition of Work Area):

- **Level 1** – Level 1 alterations include the removal and replacement or covering of existing materials, elements, equipment, or fixtures using new materials, elements, equipment or fixtures that serve the same purpose. Level 1 alterations must comply with the provisions of 780 CMR 34-IEBC §7.0 (780 CMR 34-IEBC §503.0).
- **Level 2** – Level 2 alterations include the reconfiguration of space, the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment. Level 2 alterations must comply with the provisions of 780 CMR 34-IEBC §7.0 for Level 1 alterations and additionally 780 CMR 34-IEBC §8.0 (780 CMR 34-IEBC §504.0).
- **Level 3** – The requirements for Level 3 alterations apply where the work area consisting of reconfigured space(s) exceeds 50% of the aggregate area of the building and/or where required by a change of occupancy classification in accordance with 780 CMR 34-IEBC §1012.1.1. Level 3 alterations must comply with the provisions of 780 CMR 34-IEBC §7.0 and §8.0 for Level 1 and 2 alterations and additionally 780 CMR 34-IEBC §9.0 (780 CMR 34-IEBC §505.0).

Work Area – The portion or portions of a building consisting of all reconfigured spaces as indicated on the construction documents. Work area excludes other portions of the building where incidental work entailed by the intended work must be performed and portions of the building where work not initially intended by the owner is specifically required by this code (780 CMR 34-IEBC §202).

(NOTE: *Not all work includes reconfiguration of space. For example, the addition or elimination of any door or window, the reconfiguration or extension of any system, or the installation of any additional equipment does not in and of itself include a Work Area.*)

Change of Occupancy – A change in the use of a building or a portion of a building. A change of occupancy shall include of the following (780 CMR 34-IEBC §202):

- Change of occupancy classification;
- Change from one group to another group within an occupancy classification;
- Change in use within a group for a specific occupancy classification.

Changes of occupancy must comply with the provisions of 780 CMR 34-IEBC §10.0 (780 CMR 34-IEBC §506.).

Compliance Alternative – An alternative life-safety construction feature which meets or exceeds the requirements or intent of a specific provision of 780 CMR. The *Building Official* is authorized to approve or disapprove compliance alternatives. *Compliance Alternatives* are allowed only for existing buildings (780 CMR 34-IEBC §202).

2.5 Classification of Work

Based on our understanding of the goals of the project, the Project involves (may involve) the following work which has been classified by type according to the Work Area Compliance Method of 780 CMR 34-IEBC Chapter 5. Based on the definition of “work area” (as stated in Section 2.4 of this report), the table below also identifies whether or not that work item creates a “work area”. The work area becomes relevant in Section 2.6 of this report which discusses when and where the code requirements are applicable with regards to the defined work area.

Table 1. Classification of Work

Description of Work	Classification of Work	Creation of Work Area?
Façade and site work: ▪ Repairs of building façade including window and exterior door replacement. ▪ Repairs of brick masonry-faced retaining wall.	Repairs & Level 1 Alteration (780 CMR 34-IEBC §502 and §503)	No
Upgrade of existing HVAC systems for the two gymnasiums, the Auditorium, and the Kitchen: ▪ New cooling system in the Auditorium. ▪ Upgrade controls for the impacted areas. ▪ Software update for the overall building HVAC systems.	Level 1 & Level 2 Alteration (780 CMR 34-IEBC §503 & §504)	No
Elimination of approximately 181 classroom-corridor fire rated doors and approximately 21 sets of cross-corridor fire rated doors.	Level 2 Alteration (780 CMR 34-IEBC §504)	No
Repair and/or replacement of existing stair enclosure fire rated doors.	Repairs & Level 1 Alteration (780 CMR 34-IEBC §502 and §503)	No
Upgrades of existing Art Rooms. • Repositioning of equipment. • Repair and replacement of existing finishes.	Level 1 Alteration (780 CMR 34-IEBC §503)	No
Upgrade of existing Kitchen/Cafeteria space. ▪ Construction of a new layout for the Kitchen. ▪ Upgrade kitchen equipment, HVAC systems, electrical systems, and plumbing systems serving the Kitchen.	Level 2 Alteration (780 CMR 34-IEBC §504)	Yes

Additional notes regarding scoping of the project include:

- The Project does not involve Level 3 Alterations (780 CMR 34-IEBC §505). The only anticipated work area for the project is the Kitchen, where the existing layout is being reconfigured. Therefore, the total Work Areas consisting of reconfigured space(s) in the existing building does not exceed 50% of the aggregate area of the building.

- The Project does not involve a Change of Occupancy (780 CMR 34-IEBC §506).

(NOTE: *The Group E Educational occupancy classification of the existing building remains unchanged.*)

- The Project does not involve construction of any additions to the existing building (780 CMR 34-IEBC §507).
- The building is not a listed historic building.

2.6 Prescriptive Code Requirements

The following sections outline the key code requirements for repairs, Level 1 alterations, and Level 2 alterations respectively. Since this project includes all 3 of these types of work classification within the project, the appropriate subsection and requirements should be applied to each individual area of work.

2.6.1 Repairs

The following “Repair” code requirements are applicable to project areas where repairs are being made as identified in Section 2.2. In general, the work shall not make the building any less conforming than it was before the repair was undertaken. Repairs for historic buildings only need to comply with the 780 CMR 34-IEBC Chapter 12 requirements.

2.6.1.1 Flood Hazard Areas

In flood hazard areas, repairs that constitute a “substantial improvement” require the building to comply with 780 CMR §1612 (780 CMR 34-IEBC §601.3).

2.6.1.2 Building Elements and Materials

Buildings undergoing repairs are permitted to continue use of materials already in use in buildings that are in conformance with requirements or approvals in effect at the time of their erection or installation unless the Building Official determines that such repairs would render the building or structure unsafe or dangerous (780 CMR 34-IEBC §602.1). Except as otherwise required or permitted, materials permitted by 780 CMR for new construction must be used for new and replacement materials. Hazardous materials, such as asbestos and lead-based paint, must not be used where the code for new construction would not permit their use in buildings of similar occupancy, purpose and location (780 CMR 34-IEBC §602.2).

Replacement glazing in hazardous locations must comply with the safety glazing requirements of 780 CMR, except for glass block walls, louvered windows and jalousies repaired with like materials (780 CMR 34-IEBC §602.3).

2.6.1.3 Fire Protection

Repairs must be done in a manner that maintains the level of fire protection provided (780 CMR 34-IEBC §603.1). Consideration of the requirements of MGL c. 148 §26G is required to determine if the installation of automatic sprinklers throughout the existing building is required (780 CMR 34-IEBC §102.2).

2.6.1.4 Means of Egress

Repairs must be done in a manner that maintains the level of protection provided for the means of egress (780 CMR 34-IEBC §604.1).

2.6.1.5 Structural

Regardless of the extent of structural or nonstructural damage, dangerous conditions (as determined by the building and fire code officials) must be corrected as part of the project. Any new structural members and connections used for repair or rehabilitation must comply with the current requirements for new buildings (780 CMR 34-IEBC §606.1). Any damage categorized as substantial structural damage must comply with 780 CMR

34-IEBC 606.2.

2.6.1.6 Electrical

Electrical repairs must comply with the provisions of 527 CMR §12.00 (780 CMR 34-IEBC §101.4.10).

2.6.1.7 Mechanical

Existing mechanical systems undergoing repair shall not make the building any less conforming than it was before the repair was undertaken (780 CMR 34-IEBC §608.1).

2.6.1.8 Plumbing

Plumbing repairs must comply with the provisions of 248 CMR (780 CMR 34-IEBC §101.4.3). Water closet replacement must comply with the maximum water consumption flow rates of 1.6 gallons per flush cycle (780 CMR 34-IEBC §609.2).

2.6.2 Alterations – Level 1

The following “Level 1 Alteration” code requirements are applicable to the renovation and restoration of the Middle School to the original building design including:

- Façade and site work
- Door replacement
- Art Room upgrades

2.6.2.1 Flood Hazard Areas

In flood hazard areas, alterations that constitute a “substantial improvement” require the building to comply with 780 CMR §1612 (780 CMR 34-IEBC §601.3).

This project would not be considered a “substantial improvement”. Compliance with 780 CMR §1612 is not required.

2.6.2.2 General

The existing buildings or portions thereof must not be altered such that the building becomes less safe than its existing condition, unless permitted in 780 CMR for new construction (780 CMR 34-IEBC §701.2). Alterations in historic buildings must comply with 780 CMR 34-IEBC Chapter 7 requirements except as modified by 780 CMR 34-IEBC Chapter 12.

2.6.2.3 Building Elements and Materials

All newly installed interior finishes and trim as well as the materials and methods must comply with the applicable requirements of 780 CMR for new construction (780 CMR 34-IEBC §702.0).

Refer to section 4.5 of this report for project approach for interior finish.

2.6.2.4 Fire Protection

Alterations must be done in a manner that maintains the level of fire protection provided. (780 CMR 34-IEBC §703.1).

Refer to section 4.6 of this report for project approach for fire protection systems.

2.6.2.5 Means of Egress

Alterations must be done in a manner that maintains the level of protection provided for the means of egress. (780 CMR 34-IEBC §704.1).

Means of egress must be maintained in all areas undergoing Level 1 alterations. Refer to section 4.7 of this report for means of egress requirements.

2.6.2.6 Reroofing

The methods and materials used for any re-roofing work done for the project must comply with 780 CMR 34-IEBC §706 and 780 CMR Chapter 15.

2.6.2.7 Structural

Where addition or replacement of roofing/equipment results in additional dead loads greater than 5% of the current loading, the structural components supporting these new loads must be evaluated to comply with the current 780 CMR requirements (780 CMR 34-IEBC §707.2).

Additional dead loads are not anticipated for this project. Refer to section 4.9 of this report for additional information.

2.6.2.8 Energy Conservation

Level 1 alterations to existing buildings are permitted without requiring the entire building or structure to comply with the energy requirements of 780 CMR §13.00. The alterations must conform to the energy requirements of the 780 CMR §13.00 as they relate to new construction in the existing building only (780 CMR 34-IEBC §708.1).

Refer to section 4.11 of this report for additional information.

2.6.3 Alterations – Level 2

In addition to the “Level 1 Alteration” code requirements, the following “Level 2 Alteration” requirements are applicable (780 CMR §34-IEBC §801.2) in the following areas: *(Note that for the replacement of systems and the accessibility upgrades, there is no work area.)*

- Reconfiguration of space in the Kitchen.
- Replacement of the following existing building systems:
 - Existing HVAC systems in the two gymnasiums, Auditorium and Kitchen.
 - Existing controls for the two gymnasiums, Auditorium and Kitchen.
 - Existing kitchen HVAC system.
 - Existing kitchen electrical systems.
 - Existing kitchen plumbing systems.

2.6.3.1 General

All new construction elements, components, systems, and spaces must comply with the requirements of 780 CMR, except as follows (780 CMR §34-IEBC §801.3):

- Windows may be added without requiring compliance with the light and ventilation requirements of 780 CMR;

- Newly installed electrical equipment must comply with the requirements of 780 CMR 34-IEBC §808 and 527 CMR §12.0 (NFPA 70);
- The length of dead-end corridors in newly constructed spaces need only comply with the provisions of 780 CMR 34-IEBC §805.6.
- The minimum ceiling height in newly created habitable spaces and corridors must be 7-feet.

2.6.3.2 Vertical Openings & Shafts

Existing vertical openings within Level 2 work areas that connect two (2) or more floors must be enclosed with approved assemblies having a minimum 1-hour fire resistance rating with approved opening protectives, except where a vertical opening enclosure is not required by the new construction provisions of 780 CMR (780 CMR 34-IEBC §803.2.1).

NOTE: Refer to 780 CMR 34-IEBC §803.2.1 for certain exceptions and allowances.

Where the work area on any floor exceeds 50% of that floor area, the following requirements apply:

- The enclosure requirements of 780 CMR 34-IEBC §803.2 apply to vertical openings (other than stairways) throughout the floor (780 CMR 34-IEBC §803.2.2).
- Stairways that are part of the means of egress serving the work area must, at a minimum, be enclosed with smoke-tight construction on the highest work area floor and all floors below, except when a stairway enclosure is not required by 780 CMR (780 CMR 34-IEBC §803.2.3).

2.6.3.3 Interior Finish

The interior finish of walls and ceilings in exits and corridors in any work area must comply with 780 CMR. Existing interior finish materials that do not comply with the provisions of 780 CMR are permitted to be treated with an approved fire retardant coating in accordance with the manufacturer's instructions to achieve the required rating (780 CMR 34-IEBC §803.4).

Where the work area on any floor exceeds 50% of the floor area 780 CMR 34-IEBC §803.4 must also apply to the interior finish in exits and corridors serving the work area throughout the floor, except for interior finish within tenant spaces that are entirely outside the work area (780 CMR 34-IEBC §803.4.1).

Refer to section 4.5 of this report for project interior finish requirements.

2.6.3.4 Guardrails

Every portion of a floor, such as a stair, landing, balcony, or a loading dock, that is more than 30-inches above the floor or grade below and is not provided with guards, or those in which existing guards are judged to be in danger of collapsing, must be provided with guards in accordance with 780 CMR (780 CMR 34-IEBC §803.5). This applies to guards within the work area floor and along the egress route and exit discharge from the work area (780 CMR 34-IEBC §805.11).

There are no vertical drops greater than 30 inches within the Level 2 work areas for the project. It is anticipated that these code sections will not be applicable to the project.

2.6.3.5 Fire Resistance Ratings

Alterations must be done in a manner that maintains the level of fire resistance ratings currently provided for the building (780 CMR 34-IEBC §803.6).

Refer to section 4.3 of this report for additional information pertaining to project specific fire resistance ratings.

2.6.3.6 Automatic Sprinklers

In buildings with occupancies in Groups A, B, and S-2, work areas that have exits or corridors serving an occupant load greater than 30 shall be provided with automatic sprinkler protection where all of the following conditions occur (780 CMR 34-IEBC §804.2.2):

1. The work area is required to be provided with automatic sprinkler protection in accordance with 780 CMR (or M.G.L. c. 148, §26G) as applicable to new construction; and
2. The work area exceeds 50% of the floor area.

Exception: If the building does not have sufficient water supply for design of a fire sprinkler system available to the floor without installation of a new fire pump, work areas shall be protected by an automatic smoke detection system throughout all occupiable spaces other than sleeping units or individual dwelling units that activates the occupant notification system in accordance with Sections 907.4, 907.5 and 907.6 of the 780 CMR.

If a fire sprinkler system is provided for the facility, the fire sprinkler system must be supervised by one of the following methods (780 CMR 34-IEBC §804.2.5):

1. Approved central station system in accordance with NFPA 72;
2. Approved proprietary system in accordance with NFPA 72;
3. Approved remote station system of the jurisdiction in accordance with NFPA 72; or
4. When approved by the code official, approved local alarm service that will cause the sounding of an alarm in accordance with NFPA 72.

The building is fully sprinklered as of 2008.

2.6.3.7 Standpipe

Where the work area includes exits or corridors shared by more than one tenant and is located more than 50 feet above or below the lowest level of fire department access, a standpipe system shall be provided. (780 CMR 34-IEBC §804.3).

2.6.3.8 Fire Alarm and Detection

A fire alarm system is required to be installed in work areas where the building is Group E, I, or R occupancies per 780 CMR 34-IEBC §804.4.1. Where the work area on any floor exceeds 50% of the total floor area, the fire alarm system required by 780 CMR 34-IEBC §804.4.1 must be provided throughout the entire floor (780 CMR 34-IEBC §804.4.2). Also, 521 CMR §40.00 requires that the existing fire alarm system provide all areas of the building with both audible and visual alarms.

Since the building is a Group E occupancy and the work areas are less than 50% of the total floor area, the requirements of 780 CMR 34-IEBC §804.4.1 are applicable for the work area only. Refer to Section 4.6 of this report for additional information.

2.6.3.9 Means of Egress

780 CMR 34-IEBC §805.1 requires that where work areas contain exits and corridors that are shared by more than one tenant, these common areas be upgraded to comply with the requirements of 780 CMR 34-IEBC §805.

For Level 2 alterations, every required exit stairway within the work area that is part of the means of egress and that has three (3) or more risers and is not provided with at least one (1) handrail, or in which the existing handrails are judged to be in danger of collapsing, must be provided with handrails for the full length of the run of

steps on at least one (1) side. All exit stairways with a required width of more than 66-inches must be provided with handrails on both sides (780 CMR 34-IEBC §805.9.1). Guards compliant with 780 CMR 1015 are only required in Level 2 work areas and any new open sided walking surfaces (within 36 inches horizontally to the edge) that are located more than 30 inches above the floor below.

Since the Middle School only has a single tenant, the means of egress throughout the building are not required to be re-evaluated as a direct result of the alterations (780 CMR 34-IEBC §805.1). However, the existing means of egress is required by 780 CMR §102.8 to be maintained in all existing buildings regardless of if the building is being altered. Additionally, any new stair or ramp must comply with the requirements for new construction and the means of egress in the work area created by the Kitchen must be upgraded to comply with the requirements of 780 CMR 34-IEBC §805. See Sections 2.2.1 and 4.8 of this report for additional information regarding the means of egress requirements.

2.6.3.10 Structural

All new structural elements (including connections and anchorage must comply with the requirements for new construction. The minimum design loads for existing elements whose loads are not being altered can remain as designed at the time of construction (780 CMR 34-IEBC §807.2, §807.3).

Where addition or replacement of roofing/equipment results in additional dead loads greater than 5% of the current loading, the structural components supporting these new loads must be evaluated to confirm compliance with the current 780 CMR requirements for new construction (780 CMR 34-IEBC §807.4).

The structure of the altered building shall be shown to meet the wind and seismic provisions of current 780 CMR requirements for new buildings when any of the following conditions occur (780 CMR 34-IEBC §807.5):

- Where the demand-capacity ratio on an existing lateral load-carrying structural element is increased more than 10%, or
- Where the alteration results in prohibited structural irregularity as defined in ASCE 7, or
- Where the alteration decreases the capacity of any existing lateral load-carrying structural element.

Proposed design in Section 4.9 of this report intends on maintaining the structural capacity within the building and increasing/justifying as necessary for new equipment loads.

2.6.3.11 Electrical

All new electrical work done as part of a Level 2 Alteration must be in compliance with 527 CMR §12.00.

Proposed design intends on maintaining the electrical system's code compliance within the building in all areas other than the Kitchen. The electrical work completed in the Kitchen work area must comply with 527 CMR §12.00.

2.6.3.12 Mechanical

All reconfigured or converted spaces intended for occupancy and all spaces converted to habitable or occupiable space in any work area must be provided with natural or mechanical ventilation in accordance with the *International Mechanical Code* (IMC) (780 CMR 34-IEBC §809.1).

In mechanically ventilated spaces, existing mechanical ventilation systems that are altered, reconfigured, or extended must provide not less than 5-cfm/person of outdoor air and not less than 15-cfm/person of ventilation air; or not less than the amount of ventilation air determined by the Indoor Air Quality Procedure of ASHRAE 62 (780 CMR 34-IEBC §809.2.).

Proposed design intends on improving the overall mechanical system's code compliance within the building.

2.6.3.13 Plumbing

New plumbing work done as part of a Level 2 Alteration must be in compliance with 248 CMR (780 CMR 34-IEBC §101.4.3). Where the occupant load of the story is increased by more than 20%, plumbing fixtures for the story shall be provided in quantities specified in the International Plumbing Code based on the increased occupant load (780 CMR 34-IEBC §810.1).

Where the existing toilet rooms are being replaced with new, the plumbing fixture capacity should be reasonably reconciled with the program occupancy for the assembly spaces based on the place of assembly permits / certificates of occupancy. Modest deviation between fixture capacity and occupancy is permitted to remain, provided the existing fixture counts are maintained and the occupant load is not being increased by more than 20%.

New plumbing work performed in the Kitchen must comply with 248 CMR (780 CMR 34-IEBC §101.4.3).

2.6.3.14 Energy Conservation

Level 2 Alterations to existing buildings or structures are permitted without requiring the entire building or structure to comply with the new construction energy requirements of 780 CMR §13.00. The alterations must conform to 780 CMR §13.00 as they relate to new construction only (780 CMR §34-IEBC §811.1).

2.6.4 Alterations – Level 3

There are no Level 3 Alterations proposed under this project.

2.6.5 Change of Occupancy

There is no Change of Occupancy proposed under this project.

2.7 521 CMR (Massachusetts Architectural Access Board)

In order to determine the MAAB accessibility compliance obligations caused by the proposed project work, the full and fair cash value of the existing building (building value only, exclusive of land value), must be established. According to 521 CMR, the full and fair cash value of a building is defined as:

“The assessed valuation of a building (not including the land) as recorded in the Assessor’s Office of the municipality at the time the building permit is issued equalized at 100% valuation. The 100% equalized assessed valuation shall be based upon Massachusetts Department of Revenue’s determination of the particular city’s or town’s assessment ratio.”

If the work being performed amounts to less than 30% of the full and fair cash value of the buildings and if the work costs \$100,000 or more, then the work being performed is required to comply with 521 CMR. In addition, an accessible public entrance and an accessible toilet room, telephone, drinking fountain (if toilets, telephones and drinking fountains are provided) are required to be provided in compliance with 521 CMR (521 CMR §3.3.1).

If the construction cost of the project work in the existing buildings amounts to 30% or more of the full and fair cash value of the existing building, the entire building, exclusive of employee only work areas, is required to comply fully with the new construction accessibility requirements of 521 CMR (521 CMR §3.3.2).

The assessed building only value is determined to be approximately \$58,190,000. The equalized valuation factor for the city of Wellesley is 0.93. The full and fair cash value of the building is then determined to be \$62,569,892. All work completed in a 36-month period before and after the permitting of the project should be added to determine if full 521 CMR compliance is stipulated as a result of construction cost (30% of full fair cash value = 30% x \$62.5M = \$18.7M). Generally speaking, the building is equipped with features of accessibility. If the cost of construction is projected to exceed \$18.7M (approximately), a survey to identify existing noncompliant features of accessibility is recommended.

3.0 ASSUMPTIONS, INTERPRETATIONS, COMPLIANCE ALTERNATIVES & VARIANCES

The code compliance approach developed for the Project considers that the following interpretations will be acceptable to the *Building Official* or where noted, proposed Compliance Alternative(s) will be approved according to 780 CMR 34-IEBC §104.11 (see further above).

Additionally, it should be noted that 780 CMR §104.10 also allows for “code modifications” according to the following:

Wherever there are practical difficulties involved in carrying out the provisions of this code the Building Official shall have the authority to grant modifications for individual cases, upon application of the owner or owner's representative, provided the Building Official shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and that such modification does not lessen health, accessibility, life and safety, or structural requirements. The details of action granting modifications shall be recorded and entered in the files of the department of building safety.

3.1 Code Interpretations

- As a result of ongoing door hardware issues and reoccurring corrective maintenance associated with the cross-corridor fire rated doors, it is desirable to eliminate these doors from the building. Pursuant to 780 CMR Chapter 34 §801.3, JENSEN HUGHES proposes to eliminate all existing fire rated doors located along the existing corridors (cross-corridor doors and classroom doors) of the school on the basis that corridors in newly constructed Group E occupancies fully protected by an automatic sprinkler system require no fire resistance rating. Refer to 780 CMR Table 1020.1 excerpt below.

TABLE 1020.1
CORRIDOR FIRE-RESISTANCE RATING

OCCUPANCY	OCCUPANT LOAD SERVED BY CORRIDOR	REQUIRED FIRE-RESISTANCE RATING (hours)	
		Without sprinkler system	With sprinkler system ^c
H-1, H-2, H-3	All	Not Permitted	1
H-4, H-5	Greater than 30	Not Permitted	1
A, B, E, F, M, S, U	Greater than 30	1	0
R	Greater than 10	Not Permitted	0.5
I-2 ^a , I-4	All	Not Permitted	0
I-1, I-3	All	Not Permitted	1 ^b

Although originally constructed in the 1950's, the Middle School was fully retrofitted with automatic sprinkler protection during a phased construction plan completed in 2008. Considering the installation of that sprinkler system, the design team wishes to abandon existing rated corridor doors that are no longer required to be rated in fully sprinklered new construction. Rated door assemblies will either be replaced with non-rated assemblies or doors will be abandoned entirely depending on the location. It is JENSEN HUGHES' interpretation that this alteration complies with 780 CMR Chapter 34 §801.3 and 780 CMR Table 1020.1 as referenced by 780 CMR Chapter 34 §801.3.



Figure 2 - Classroom and cross-corridor doors to be replaced/eliminated

In support of this alteration, the project also includes repairs and replacement of existing doors serving enclosed stairs and the installation of permanent compliant door-hold-open devices interfaced with the building's fire alarm system. This work will help ensure that required rated door assemblies are installed in a compliant and working fashion.

3.2 Alternatives or Variances

At this time, no compliance alternatives or variances are anticipated for the project.

4.0 PROPOSED DESIGN

This section outlines the specific methodology for code compliancy related to various existing or proposed construction features.

4.1 Building Construction Classification

The construction type of a building is regulated by 780 CMR based upon its occupancy classification, building height, and area with consideration given to the buildings open exterior perimeter and automatic fire suppression systems (780 CMR §503.0, §504.0, §506.0).

The Middle School was originally constructed around the year 1952 with additions completed in following years. The structure of the building is primarily comprised of concrete, masonry and unprotected steel consistent with Type IIA or IIB construction. The exact construction type of the Middle School is unknown; however, the construction type of the building is not required to be reviewed as the scope of work does not include a Change of Use or Addition.

4.2 Occupancy Classification

The current uses of each building include those shown in the Table below. No change of use is expected as part of the project.

Table 2. Building Occupancy Classification

Occupancy Classification	Uses
Group A-2, A-3 & A-4, Assembly	Kitchen, Cafeteria, Auditorium, Gymnasiums
Group B, Business	Offices/Administration, Kitchen
Group E, Educational	Classrooms, Lab Spaces, Shops
Group S-2, Storage	General Storage Rooms, MEP Rooms

Note: See 780 CMR §303.1.3 – “A room or space used for assembly purposes that is associated with a Group E occupancy is not considered a separate occupancy.”

4.3 Fire Rated Enclosures and Separations

4.3.1 Vertical Openings

Door leaves and door hardware in existing exit stairways not included in the project work area should be repaired or modified to ensure that existing vertical openings remain enclosed. Where doors are desired to be held open, compliant fire alarm door hold-open devices may be installed.

4.3.1 Rated Corridor System

All existing fire rated doors located along the existing corridors (cross-corridor doors and classroom doors) of the school will be permanently removed or replaced with non-rated door assemblies on the basis that corridors in newly constructed Group E occupancies fully protected by an automatic sprinkler system require no fire resistance rating. Refer to Section 3.1 of this report for additional information.

4.4 Exterior Wall Fire Resistance Ratings & Openings

Renovations to the exterior wall beyond minor repairs are not anticipated for this project. The exterior walls of the existing building are permitted to remain as is.

4.5 Interior Finish

All new interior floor/wall ceiling finishes and the existing interior finish of walls and ceilings in exits and corridors in any “work area” must comply with 780 CMR as outlined in the Table below, based on occupancy. Existing interior finish materials that do not comply with the provisions of 780 CMR are permitted to be treated with an approved fire retardant coating in accordance with the manufacturer’s instructions to achieve the required rating (780 CMR 34-IEBC §803.4).

Table 3 – New Interior Finish Requirements for Buildings Fully Sprinklered

Group	Exit Enclosures and Exit Passageways ²	Corridors	Rooms and Enclosed Spaces
A-2	Class A or B	Class B or C	Class A, B or C
A-3 & A-4	Class A or B	Class B or C	Class A, B or C
B	Class A or B	Class A, B or C	Class A, B or C
E	Class A or B	Class A, B or C	Class A, B or C
S	Class A, B or C	Class A, B or C	Class A, B or C

4.6 Fire Protection Systems

4.6.1 Fire Alarm System

The building is currently equipped with an existing Simplex 4100U series fire alarm control unit located in the basement custodial office room in the South West corner of the building. There are no troubles on the fire alarm panel and the system overall appears to be in functional order. The system is equipped with initiating devices (pull stations, smoke detection, sprinkler waterflow, tamper, etc) and notification appliances (combination audible / visible notification appliances, stand-alone audible appliances and stand-alone visible appliances) throughout the building.

A fire alarm system is required to be installed in all work areas for existing Group E buildings. All existing alarm-notification appliances are required to be automatically activated throughout the building (780 CMR 34-IEBC §804.4.1). As a result of the proposed renovations, all work areas will be equipped with fire alarm initiating devices and notification appliances.

4.6.3 Automatic Sprinkler System

During the survey, it was identified that the building is equipped with automatic sprinkler protection. Although originally constructed in the 1950’s, the Middle School was fully retrofitted with automatic sprinkler protection during a phased construction plan completed in 2008. Documentation suggests that the building is fully sprinklered compliant with NFPA 13 at the time of construction.

4.6.4 Standpipe System

During the survey, it was noted that 2-1/2” standpipe hose connections were located in each stair shaft and intermittently throughout corridors in the building. Per 780 CMR §102.8, any existing standpipe hose connections

² In fully sprinklered Group E occupancies less than three stories above grade plane, Class C materials are permitted for exit enclosures and exit passageways.

and hose lines should be inspected and tested regularly. Additional hose connections or a modified system is not required as a result of the proposed project work.

4.6.5 Fire Extinguishers

The existing building is equipped with fire extinguishers throughout. The fire extinguisher location, signage, and maintenance must comply with NFPA 10, Standard for the Installation of Portable Fire Extinguishers. As part of the renovations to the kitchen, the type and location of fire extinguishers must comply with 780 CMR, 527 CMR, and NFPA 10 requirements.

4.7 Means of Egress

To date, JENSEN HUGHES is not aware of any active citations or abatement orders that have been issued for the Middle School. As a result, continued use of the facility is permitted so long as the means of egress, lighting and ventilation systems are maintained appropriately throughout the building per 780 CMR §102.6.4. The following key requirements are provided as a reference to ensure the building's means of egress are maintained properly.

4.7.1 Number of Exits

Alterations should be done in a manner that maintains the level of protection provided for the existing means of egress (780 CMR 34-IEBC §704.1). The number of means of egress serving every space and/or story must meet the requirements of 780 CMR Chapter 10. Unless otherwise permitted, 780 CMR Table 1006.3.1 requires that the following number of exits be provided per floor based on the occupant load:

Table 4 – Minimum Number of Exits

Occupant Load (persons)	Minimum Number of Exits
1-500	2
501-1,000	3
More than 1,000	4

The occupant load for the space should be determined using the factors prescribed by 780 CMR Table 1004.1.2, summarized in the table below (780 CMR §1004.1):

Table 5 – Occupant Load Factor

Function of Space	Occupant Load Factor (ft ² /occ.)
Assembly, Fixed Seating (Bench)	18 inches width per person or seat count
Assembly, Standing Space	5 net
Assembly, Chairs Only (not fixed)	7 net
Assembly, Tables and Chairs	15 net
Business Area	100 gross
Classroom Area	20 net
Shops and other vocational room areas	50 net
Storage / Mechanical Areas	300 gross

4.7.2 Means of Egress Doorways

All new egress doors serving an occupant load greater than 50-people must swing in the direction of travel (780 CMR §1010.1.2.1). All new doors opening into an exit stairway shall be self-closing or automatic-closing by listed closing devices.

4.7.3 Travel Distance Requirements

Existing exit access and the associated travel distances are permitted to remain as-is. Newly configured means of egress are required to comply with the criteria outlined in the Table below (780 CMR Table 1017.2, Table 1006.2.1, §1020.4 Exception 2).

Table 6 - Travel Distance Requirements (Fully Sprinklered Building)

Occupancy	Travel Distance to Exit	Common Path of Travel Distance	Dead End Corridor Length
Assembly (Seating areas)	250 feet	75 feet	50 feet
Educational	250 feet	75 feet	50 feet
Storage	400 feet	100 feet	50 feet

4.7.4 Egress Capacity

The total width of means of egress for a building that is protected throughout with automatic fire sprinklers and an emergency voice/alarm communication system shall not be less than the total occupant load served by the means of egress multiplied by 0.2 inch per occupant for stairways and by 0.15 inch per occupant for other means of egress (780 CMR §1005.3).

Based on the construction drawings sent to JENSEN HUGHES dated 4/12/2011, the following tables outlines the approximate calculated occupant load and egress capacity for the existing building:

Table 7 – Occupant Load

Floor	Room/Use	Area (sq. ft.)	OLF (sq. ft./Persons)	OL (Persons)
Level 1	Classrooms	738	20	37
	Shops/Labs	14,391	50	288
	Offices/Administration	6,546	100	66
	Conference	395	15	27
	Mechanical/Storage	10,121	300	34
	Total OL for Floor =			452
Level 2	Classrooms	22,606	20	1,131
	Shops/Labs	8,852	50	178
	Offices/Administration	8,700	100	87
	Faculty Meeting/Dining	2,442	15	163
	Cafeteria	7,677	15	512
	Kitchen	4,499	200	23
	Gym	4,767	15	318
	Fitness Center & Locker Rooms	6,058	50	122
	Total OL for Floor =			2,534
Level 3	Classrooms	28,181	20	1,410
	Shops/Labs	3,702	50	75
	Offices/Administration	4,879	100	49
	Gym	6,962	15	465
	Physical Therapy	337	50	7
	Reading Room	1,820	50	37
	Library Stack Area	805	100	9
	Auditorium	1,828	15	122
	Stage	2,005	15	134
	Total OL for Floor =			2,308

The following table outlines the preliminary egress capacity provided from the building. For consistency, the exit naming convention follows the exit labels shown on the drawings.

As shown below, the building is provided with a sufficient quantity of exits and capacity of exits to egress the expected maximum occupant load on all floors.

Table 8 – Egress Capacity³

Floor	Exit	Stair Width (inches)	Door/Ramp Width (inches)	Stair Capacity	Door/Ramp Capacity	Exit Capacity (people)	Actual Use (people)
Level 1	Stair B1	70	34	350	226	226	75
	Stair B2	48	69	240	460	240	24
	Stair B13	132	40	660	266	266	5
	Stair C1	64	69	320	460	320	66
	Stair C2	68	72	340	480	340	67
	Stair D1	68	68	340	453	340	65
	Stair D2	57	59	285	393	285	64
	Stair D3	57	58	285	386	285	60
	Exit D4	N/A	30	N/A	200	200	4
	Exit D5	N/A	56	N/A	373	373	22
	Total =					2875	452
Level 2	Ramp A1	N/A	60	N/A	400	400	134
	Ramp A3	N/A	69	N/A	460	460	60
	Stair A5	137	102	685	680	680	60
	Stair A8	48	40	240	266	240	160
	Stair A9	48	40	240	266	240	160
	Corridor A148	N/A	56	N/A	373	373	26
	Corridor A193	N/A	57	N/A	380	380	380
	Exit K1	44	38	220	253	220	20
	Stair B1	61	69	305	460	305	175
	Stair B2	124	69	620	460	460	2
	Stair B3	88	56	440	373	373	260
	Stair B5	66	34	330	226	226	97
	Stair C1	66	69	330	460	330	175
	Stair C2	67	69	335	460	335	175
	Stair C3	51	34	255	226	226	200
	Stair D1	67	69	335	460	335	175
	Stair D3	68	69	340	460	340	175
	Exit L1	N/A	57	N/A	380	380	50
	Exit L2	N/A	57	N/A	380	380	50
	Total =					6683	2534
Level 3	Entry A229	N/A	219	N/A	1460	1460	1460
	Stair A4	60	57	300	380	300	150
	Stair B1	61	69	305	460	305	88
	Stair B2	61	68	305	453	305	20
	Stair B11	57	34	285	226	226	32
	Stair B12	90	60	450	400	400	100
	Stair C1	66	69	330	460	330	76

³ All clear widths were calculated using the provided construction drawings dated 4/12/2011.

	Stair C2	66	69	330	460	330	76
	Stair C3	59	69	295	460	295	77
	Stair D1	66	69	330	460	330	76
	Stair D2	59	69	295	460	295	76
	Stair D3	65	69	325	460	325	77
	Total =					4901	2308

4.7.5 Egress Lighting and Exit Signs

Regardless of the proposed work, means of egress must be provided with both normal and emergency artificial lighting in accordance with 780 CMR 34-IEBC §1008. Means of egress must be provided with illuminated exit signs in accordance with 780 CMR 34-IEBC §1013.

During the survey, egress lighting and exit signs were identified regularly in the field, consistent with the requirements of 780 CMR.

4.7.6 Handrails & Guards

There are no existing handrails and guards in the work area(s). During the survey, existing handrails and guards were identified at stairs and ramps in the building. Existing handrails and guards are permitted to remain as is.

4.8 Accessibility

The Kitchen work area, exclusive of employee only work areas, is required to comply fully with the new construction accessibility requirements of 521 CMR (521 CMR §3.3.2).

The Americans with Disabilities Act (ADA) 2010 Standards for Accessible Design is also applicable for this project, including employee only areas. As such, the alterations to the Kitchen should be made so as to ensure that, to the maximum extent feasible, the path of travel to the altered area and the rest rooms, telephones, and drinking fountains serving the altered area, are readily accessible to and usable by individuals with disabilities, unless such alterations are disproportionate in terms of cost and scope as determined under criteria established by the Attorney General.

4.9 Structural

All new structural elements (including connections and anchorage must comply with the requirements for new construction. The minimum design loads for existing elements whose loads are not being altered can remain as designed at the time of construction (780 CMR 34-IEBC §807.2, §807.3).

Where addition or replacement of roofing/equipment results in additional dead loads greater than 5% of the current loading, the structural components supporting these new loads must be evaluated to confirm compliance with the current 780 CMR requirements for new construction (780 CMR 34-IEBC §807.4).

The structure of the altered building shall be shown to meet the wind and seismic provisions of current 780 CMR requirements for new buildings when any of the following conditions occur (780 CMR 34-IEBC §807.5):

- Where the demand-capacity ratio on an existing lateral load-carrying structural element is increase more than 10%, or
- Where the alteration results in prohibited structural irregularity as defined in ASCE 7, or
- Where the alteration decreases the capacity of any existing lateral load-carrying structural element.

The proposed design intends on maintaining the structural capacity within the building and increasing/justifying as necessary for new equipment loads.

4.10 Energy Conservation

For alterations and renovations of existing buildings, the energy efficiency requirements of 780 CMR 13 (IECC) apply (780 CMR Appendix AA §104). The IECC requires the altered work to comply with the code for new construction (IECC C503.1). Existing conditions not being altered are permitted to remain as-is unless specifically noted by the IECC (IECC C501.2). The insulation of the existing exterior walls is required to comply with the code for new construction if the wall cavity is exposed (IECC §503.1). Existing ceiling, wall or floor cavities exposed during construction are permitted to remain as-is provided that they are filled with insulation (IECC C503.1 Exception 3).

**** End of Report ****

If you have any questions with respect to the above information, please do not hesitate to contact me via phone at (518) 620-8900 or via email at nkozlowski@jensenhughes.com.

Sincerely,

JENSEN HUGHES



Nick Kozlowski, P.E.
Supervisor, Fire Protection Engineer

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Sustainability Summary

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Sustainability Summary

High performing, energy-efficient schools provide opportunities to demonstrate a community's culture of stewardship and respect for the environment. The Wellesley Public School's commitment to sustainability reinforces its value to provide places that are healthy to learn, work and play in – that are also healthy for the environment. In the United States, buildings account for 30 percent of total energy consumption and up to 60 percent of electricity use.

Although the Wellesley Middle School Building Systems Study is limited in scope when compared with a new school or major renovation, the project team looked for opportunities to increase sustainability measures by selecting products that require less energy to manufacture, result in less energy consumption, and are made from healthier materials.

Sustainable Considerations - HVAC

HVAC systems account for the largest energy consumption in schools. The WMS's mechanical system already has a number of features that allow it to operate efficiently. The use of the building's Energy Management System (EMS) allows the district to monitor and control equipment resulting in lower energy consumption. All of the new units being planned as part of the renovation will be connected to the EMS. Additionally, the new air handling units specified for the gymnasiums and the auditorium will incorporate Demand Control Ventilation (DCV) - modulating ventilation rates based on occupancy of the spaces and saving energy when there are fewer people or lower activity levels.

Geothermal System

Air conditioning (cooling) is being added to the auditorium to improve the indoor environment quality and allow for expanded use in warmer weather. The design calls for an air-cooled direct expansion (DX) condensing unit as the basis of design. Cooling tied to a geothermal system was evaluated to determine feasibility and cost effectiveness. For the size of this system, approximately 24 wells would be connected to two 30-ton heat pumps. The initial costs for this would be on the order of ten times that of the conventional base design. While the geothermal option would save electricity, the payback period would exceed the life expectancy of the facility.

The current domestic water heater is a gas-fired appliance that operates at 80% efficiency. We recommend that the unit be replaced with a new high-efficiency model with the



Sustainable Considerations - Kitchen

ability to heat the water more quickly and reduce energy.

Proposed alterations to the kitchen are the largest impacted area of the Middle School as part of the renovation. The operational savings are significant given the Middle School prepares all of the meals for the town's elementary schools. The design calls for nearly all building systems to be replaced in the kitchen, server and storage room. In addition to energy savings considerations, the renovation allows for expanded food recovery to reduce the amount of food waste. Specific opportunities being considered include the following.

Open Burner Ranges

These units have a minimum of five standing pilot lights. These pilots continue to consume energy even when the units are not in use. We recommend a brand that offers an electronic pilot igniter. The igniter makes it easy to light pilots and encourages staff to totally shut the unit down at the end of the day in an effort to conserve natural gas. A typical four-burner unit consumes on average 4,000 to 6,000 BTU's per hour, that's more than 21 million BTU's per year at an idle operating cost of \$325. The upgrade to the ignition system has a pay-back period of approximately 15 months. The environmental impact is significant with a reduction of fossil fuel consumption and waste.

Walk -in Refrigerated Rooms

The mechanical refrigeration systems for these rooms are controlled with simple time clock defrosts at the freezer coils. We recommend utilizing a Smart Defrost system that is designed to defrost the refrigerated room only when needed. Typical time clock controlled electric defrost systems have four defrosts per day. Using a Smart Defrost system can reduce the number of defrosts from four to two per day. This system represents an average savings of 75% in electrical consumption during defrost. In addition to the smart defrost we recommend the use of PSC or ECM motors in all refrigeration room blower coils and remote condensers. These motors last longer, represent a 72% energy consumption reduction, and run quieter than traditional motors.

Kitchen Exhaust Hood

For the exhaust hoods we recommend Demand Control Ventilation (DCV). These systems are part of Energy Management Systems or EMS. What EMS controls do is modulate the speed of the exhaust and Make Air Unit (MAU) fan motors with variable frequency drives (VFD's). The control system senses heat at the exhaust duct and increases or decreases the amount of exhaust rate based on actual demand rather than running at 100% capacity, 100% of the time. EMS systems have been shown to significantly reduce the energy consumption and electrical demands associated with operating the hood systems. On average this represents a 62% reduction in electrical demand. In addition to electrical energy savings there would be an energy savings gained from the reduced heating load at the MAU. Typically, the average fan speed associated airflow of the MAU will drop 30% resulting in a significant amount of air that does not need to be heated. The average pay back for these systems is less than one year.

Adding end skirts to the end of each hood allows for a reduction to the overall exhaust air volume. It is also a way to improve capture and containment. Another benefit of end panels is to mitigate the negative effect that cross drafts can have on hood performance. Less exhausted air means less make up air and a reduction in reheating the air in the winter.

By replacing the incandescent light bulbs with LED in exhaust hoods significant reductions in energy usage can be realized. Incandescent bulbs transform about 85% of energy they use into heat. The life spans of these lights are approximately 750 to 1000 hours. When considering the constant vibration at the hood this is reduced even further. The initial cost of a 60-watt incandescent bulb is about 50 cents. Assuming the typical hood has eight lights, these eight bulbs will cost about \$525 dollars per year to operate.

Low-Flow Pre-Rinse Spray Valves

A low-flow pre-rinse spray valve is one of the easiest and most cost-effective energy saving devices available to foodservice. Hand sinks will also be fitted with aerators to further reduce water consumption.

Energy Star Appliances

Energy Star rated equipment will be used where available and will always be the first choice. In addition to lower operating cost Energy Star rated units are eligible for rebates from the gas utility. We estimate this project will be eligible for \$8,000 in gas rebates.

Food Recovery Program

The inclusion of equipment such as a blast chiller will allow the food service program to expand its ability to participate in food recovery by storing pre-consumer food wastes, diverting from landfills and possibly use in animal feed, compost, or energy generation.

Sustainable Considerations - Interior Doors and Casework

Replacement of the classroom doors and casework with wood-based products provides the opportunity to utilize renewable and sustainably harvested products. We recommend the following considerations as part of this scope of the project.

Consider specifying doors with recycled content for the door core. Percentages can range from 3 to 40 percent total pre-consumer recycled content.

Consider countertop materials made from recycled products such as “Richlite” counters made from recycled paper.

Reduce the use and depletion of finite raw materials and long-cycle renewable materials by using rapidly renewable materials such as Agrifiber door cores and cabinet panels.

Choose wood that is environmentally responsibly harvested wood by specifying products certified by the Forest Stewardship Council (FSC).

Promote better indoor air quality through the use of No Added UreaFormaldehyde (NAUF) resins in doors and casework.

Specify durable materials that don’t require a more frequent replacement cycle.

5 Project Schedule

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1. Summary

The scope of work for the WMD project involves areas of the building that are sensitive to occupancy. The majority of the HVAC, classroom casework, and kitchen renovations will be disruptive to school operations and therefore should occur during the scheduled summer break. The design team in concert with the Wellesley Facilities Maintenance Department has explored a number of alternatives to address the scheduling challenges.

Option A Traditional Schedule

Design: 7 months (June 2019 – December 2019)

Bidding: January 2020

Funding Approval: Annual Town Meeting (May 2020)

Construction: 15 months (June 2020 – August 2021)

Construction Scheduling Complexity: Average

Cost Considerations: The Cost estimate dated September 21, 2018 assumes the project will utilize this schedule.

Option A follows the typical town fiscal timeline. Awarding the construction contract in June does not allow adequate time to prepare for equipment and materials that have lead times of 4-8 weeks. The majority of the work would occur the following summer of 2021.

Option B Accelerated Design / Extended Construction

Design: 5 months (June 2019 – October 2019)

Bidding: November 2019

Funding Approval: Special Town Meeting (December 2019)

Construction: 20 months (January 2020 – August 2021)

Construction Scheduling Complexity: Average

Cost Considerations: \$294,000 is the estimated adjustment to the base construction cost.

Option B compresses the design schedule and moves the bidding phase up to allow adequate lead time for the contractor to begin the work in the first summer outage. Work that cannot be done during the first summer can be carried forward the following school year or the next summer. This would require a special town meeting in Fall 2019 to approve Construction funds earlier than usual.

Option C Extended Design / Accelerated Construction

Design: 15 months (June 2019 – August 2020)

Bidding: September 2020

Funding Approval: Special Town Meeting (October 2020)

Construction: 10 months (June 2020 – August 2021)

Construction Scheduling Complexity: Advanced

Cost Considerations: \$1,140,396 is the estimated adjustment to the base construction cost.

Option C allows for a greater period of time for the design phase. The later bid date assumes the majority of the work will be done during the summer of 2021. Award of the Construction Contract in November of 2020 is beneficial in that it provides time for the contractor to plan

work for the following year and also requires a special town meeting.

Option D Accelerated Design / Accelerated Construction

Design: 5 months (June 2019 – October 2019)

Bidding: November 2019

Funding Approval: Special Town Meeting (December 2019)

Construction: 8 months (January 2020 – August 2020)

Construction Scheduling Complexity: Advanced

Cost Considerations: \$596,048 is the estimated adjustment to the base construction cost.

Option D compresses the design schedule and moves the bidding phase up to allow adequate lead time for the contractor to begin the work in the summer school recess. This option assumes all of the work will be done one summer. This would require a special town meeting in the Fall 2019 to approve Construction funds earlier than usual.

2. Recommendations

Assuming a Fall 2019 special town meeting is possible and a CM is brought on board the recommended schedule is option D. This schedule maintains a 2019 bid period reducing escalation when compared to a 2020 bid period. It also reduces the construction time period thus reducing general conditions and provides approximately six months for procurement prior to the summer school recess.

Construction Schedule Options

TASK			2019							2020												2021								COMMENTS
			Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
Option A	Traditional Schedule	ATM 5/2020																												Construction award Jun 2020; limited summer 2020 work, full summer 2021 work
Option B	Accelerated Design / Extended Construction	STM 12/2019																												Construction award Jan 2020; full summer 2020, 2021 work
Option C	Extended Design / Accelerated Construction	STM 10/2020																												Construction award Jan 2021; full summer 2021 work
Option D	Accelerated Design / Accelerated Construction	STM 12/2019																												Construction award Jan 2020; full summer 2020 work

Design Phase

Bidding Phase

Construction Phase

Opinion of Probable Cost

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1.Executive Summary



WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS STUDY ESTIMATE

PROJECT SUMMARY:

The estimate is compiled and organized by Task. Within each Task there are multiple scopes of work (i.e. casework replacement) broken down by trade/division. Each scope of work category is subtotaled with addons costs calculated and then a total Task cost is totaled in each section. There are three Summaries that pull from the Detailed Cost Estimate; Trade/Divisional Summary, Filed Sub Bid Summary, and Project Task Summary. Following the Project Task Summary and Detailed Estimate are the Options to the estimate. All scopes of work, including Options, include the following percentage Addons: General Conditions/Requirements (15%), Overhead & Profit (8%), Design Contingency (20%), Bond/Insurance (2%), Escalation (12%), CM at Risk Factor (5%).

ASSUMPTIONS:

1. A multi-phased project approach with second shift, overtime and accelerated schedule is assumed in pricing.
2. Pricing does not include breaking up the scope of work into several small projects. It is assumed the majority of the work will be performed under one contract.
3. Line item pricing is based on today's dollars. An Escalation factor of 12% is included in the Addons to account for potential escalation over the next year and half to two years.
4. Exterior façade repairs are assumed to be performed during Spring, Summer and Fall months. Winter conditions including tenting and heating is excluded.
5. Quantities for exterior façade repairs provided by SGH.
6. Repointing, crack and spall repairs for the retaining wall are included with "Brick Veneer & Concrete Foundation". An allowance is included for concrete repairs at the retaining wall within the "Retaining Wall" section.
7. A landscaping allowance is included for repairs and restoration around the building after the exterior façade work is completed.
8. All façade work is assumed to be completed by lifts. Staging/scaffolding the building is not included.
9. A topping slab is included at a portion of the slab as it is assumed when the flooring is demolished there will be significant damage to the slab.
10. All work associated with the HVAC repairs/replacement work is included within the "HVAC Upgrades" section in their respective areas. (I.e. Cutting and patching at the Auditorium ceiling for new diffusers is carried in the "Auditorium" area.)
11. Kitchen HVAC replacements and repairs are included in the "Kitchen Upgrades" section.
12. Temporary protection and barriers are included within the 15% General Conditions/Requirements percentage.
13. Options are priced as complete scopes of work. There are "Adjustment" line items to show the added or deducted cost to the base number if selected.

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14. There is line item pricing throughout the estimate that was provided by others (SGH, Harriman, Crabtree McGrath) and is noted within those individual line items in the estimate.
15. The Filed-Sub Bid Summary is used to show the potential costs that will fall under FSB trades. These costs reflect the base estimate. If certain options are selected, some costs may increase or decrease depending on the selections.

EXCLUSIONS:

1. Winter conditions
2. Sitework except scope associated with façade repairs.
3. Temporary kitchen setup/build out
4. Temporary trailers for classrooms or kitchen (if required)
5. Temporary kitchen equipment
6. Window replacement (only caulking/sealant replacement included)
7. Roof replacement (only patching / repairs related to mechanical scope of work)
8. Escalation passed Fall 2020
9. Soft costs including but not limited to FF&E, Design Fees, Owner Contingencies, etc.
10. Hazardous material testing
11. Mock ups
12. Staging/scaffolding
13. Utility work outside of the building
14. Moisture mitigation at slabs receiving new flooring
15. Duct cleaning outside of kitchen, gyms, and auditorium
16. Commissioning

Feasibility Project Budget	MS Building Systems Project		
	Budget Appropriation		
<u>Construction</u>	Design	Construction	Total
Primary Contractor	\$ -	\$ 10,155,748.00	\$ 10,155,748.00
Potential CM Preconstruction	\$ 200,000.00		\$ 200,000.00
Total Construction	\$ 200,000.00	\$ 10,155,748.00	\$ 10,355,748.00
<u>Custodial OT Charges</u>	\$ -	\$ 30,000.00	\$ 30,000.00
<u>Legal</u>	\$ 2,000.00	\$ 2,000.00	\$ 4,000.00
<u>Architect & Other Prof Services</u>			
Architects and Engineers	\$ 725,000.00	\$ 435,000.00	\$ 1,160,000.00
Schematic Design Investigation (Cupola & Retaining Wall)	\$ 75,000.00		\$ 75,000.00
Presentations	\$ 6,000.00		\$ 6,000.00
Cost Estimates	\$ 30,000.00	\$ -	\$ 30,000.00
Reimbursables	\$ 10,000.00	\$ 10,000.00	\$ 20,000.00
Total Architectural & Engineering	\$ 846,000.00	\$ 445,000.00	\$ 1,291,000.00
<u>Owner's Project Manager</u>			
Owner's Project Manager	\$ 130,000.00	\$ 260,000.00	\$ 390,000.00
Clerk of the Works	\$ -	\$ 304,000.00	\$ 304,000.00
Total OPM Services	\$ 130,000.00	\$ 564,000.00	\$ 694,000.00
<u>Commissioning</u>	\$ 10,000.00	\$ 20,000.00	\$ 30,000.00
<u>Other General Supplies</u>			
Printing	\$ 1,000.00		\$ 1,000.00
Bid Docs Online	\$ 5,000.00	\$ -	\$ 5,000.00
PBC Expense	\$ 1,000.00	\$ 1,000.00	\$ 2,000.00
Builder's Risk	\$ -	\$ 60,000.00	\$ 60,000.00
Submittal Exchange	\$ 4,000.00	\$ 6,000.00	\$ 10,000.00
Total Other General Supplies	\$ 11,000.00	\$ 67,000.00	\$ 78,000.00
<u>Fire Services</u>	\$ 1,500.00	\$ 1,500.00	\$ 3,000.00
<u>Contingencies</u>			
Hard Cost Contingency (15% of construction costs)	\$ -	\$ 1,523,362.20	\$ 1,523,362.20
Soft Cost Contingency (15% of Arch & OPM)	\$ 148,200.00	\$ 154,650.00	\$ 302,850.00
Total Contingencies	\$ 148,200.00	\$ 1,678,012.20	\$ 1,826,212.20
Total Budget	\$ 1,348,700.00	\$ 12,963,260.20	\$ 14,311,960.20

WELLESLEY MIDDLE SCHOOL**BUILDING SYSTEMS COST STUDY ESTIMATE**

September 21, 2018

SUMMARY**PREFERRED CONSTRUCTION
MANAGEMENT**

SCOPE/TRADE		TOTALS
2	DEMOLITION	\$650,036
3	CONCRETE	\$205,060
4	MASONRY	\$273,791
5	METALS	\$128,000
6	WOODS & PLASTICS	\$0
7	THERMAL & MOISTURE PROTECTION	\$242,261
8	OPENINGS	\$299,055
9	FINISHES	\$639,278
10	SPECIALTIES	\$31,850
11	EQUIPMENT	\$739,000
12	FURNISHINGS	\$937,690
21	SPRINKLER	\$59,605
22	PLUMBING	\$404,480
23	HVAC	\$941,748
26	ELECTRICAL	\$680,876
31	EARTHWORK	\$36,250
SUBTOTAL		\$6,268,980
ADDONS	GENERAL CONDITIONS (15%), OH&P (8%), CONTINGENCY (20%), BOND/INSURANCE (2%), ESCALATION (12%), CM@RISK FACTOR (5%)	\$3,886,768
TOTAL CONSTRUCTION COST*		\$10,155,747

*Construction cost based on Option A schedule

OPTION B SCHEDULE - ADD TO BASE COST ABOVE	\$294,000
OPTION C SCHEDULE - ADD TO BASE COST ABOVE	\$1,140,396
OPTION D SCHEDULE - ADD TO BASE COST ABOVE	\$596,048

WELLESLEY MIDDLE SCHOOL**BUILDING SYSTEMS COST STUDY ESTIMATE**

September 21, 2018

SUMMARY**PREFERRED CONSTRUCTION
MANAGEMENT****FILED SUB BID SUMMARY**

SCOPE/TRADE		TOTALS*
4	MASONRY	\$273,791
5	MISC METALS	\$128,000
7	ROOFING & FLASHING	\$99,200
7	WATERPROOFING & CAULKING**	\$457,017
8	GLASS & GLAZING	\$32,640
9	LATHING & PLASTERING	\$19,200
9	ACOUSTICAL CEILINGS	\$69,902
9	TILE	\$152,958
9	RESILIENT FLOORS	\$54,513
9	PAINTING	\$126,170
21	SPRINKLER	\$59,605
22	PLUMBING	\$404,480
23	HVAC	\$941,748
26	ELECTRICAL	\$680,876
SUBTOTAL		\$3,500,099
ADDONS GENERAL CONDITIONS (15%), OH&P (8%), CONTINGENCY (20%), BOND/INSURANCE (2%), ESCALATION (12%), CM@RISK FACTOR (5%)		\$2,170,061
TOTAL CONSTRUCTION COST		\$5,670,160

*COSTS BELOW \$25,000 ARE NOT REQUIRED TO BE BID AS FSB AND ARE TOTALED HERE TO ILLUSTRATE POTENTIAL FSB TRADES

**INCLUDES REMOVAL & ABATEMENT OF SEALANTS, THIS WORK MAY BE PERFORMED BY ABATEMENT SUBCONTRACTOR &
THEREFORE WOULD NOT FALL UNDER FSB

WELLESLEY MIDDLE SCHOOL
BUILDING SYSTEMS COST STUDY ESTIMATE

September 21, 2018


**PREFERRED CONSTRUCTION
MANAGEMENT**
PROJECT TASK SUMMARY

SCOPE/TRADE	TRADE SUBTOTALS	NOTES
TASK 1C: INTERIOR ARCHITECTURAL		
DOORS & HARDWARE	<u>\$601,425</u>	
CASEWORK	<u>\$1,606,432</u>	
ART ROOMS	<u>\$895,025</u>	
TOTAL TASK 1C: INTERIOR ARCHITECTURAL	\$3,102,882	
TASK 1A: FAÇADE REPAIRS		
BRICK MASONRY & CONCRETE FOUNDATION	<u>\$260,046</u>	
LIMESTONE MASONRY	<u>\$77,240</u>	
OPENINGS & PENETRATIONS	<u>\$837,487</u>	
RETAINING WALL	<u>\$566,514</u>	Repointing, Crack & Spall Repairs included Above
MISCELLANEOUS	<u>\$174,555</u>	
TOTAL TASK 1A: FAÇADE REPAIRS	\$1,915,841	
TASK 1B: HVAC UPGRADES		
AUDITORIUM	<u>\$902,191</u>	
GYM A	<u>\$193,235</u>	
GYM B	<u>\$183,810</u>	
TOTAL TASK 1B: HVAC UPGRADES	\$1,279,236	
TASK 1D: KITCHEN UPGRADES		
RENOVATIONS	<u>\$1,789,697</u>	
KITCHEN EQUIPMENT	<u>\$1,391,904</u>	
TOTAL TASK 1D: KITCHEN UPGRADES	\$3,181,601	
SUPPLEMENTAL SCOPE FOR CONSIDERATION		
FIRE ALARM	<u>\$93,960</u>	
WIRING UPGRADES	<u>\$528,768</u>	
WATER HEATER	<u>\$53,460</u>	
TOTAL SUPPLEMENTAL SCOPE FOR CONSIDERATION	\$676,188	
TOTAL PROJECT COSTS	\$10,155,747	

WELLESLEY MIDDLE SCHOOL
BUILDING SYSTEMS COST STUDY ESTIMATE

September 21, 2018


**PREFERRED CONSTRUCTION
MANAGEMENT**
PROJECT TASK SUMMARY

SCOPE/TRADE	TRADE SUBTOTALS	NOTES
OPTIONS		
DOORS OPTION 1: "SCHOOL GUARD" SECURITY GLASS	<u>\$713,788</u>	Refer to page 59 for scope of work
ADJUSTMENT TO BASE ESTIMATE	<u>\$112,363</u>	
DOORS OPTION 2: LEAST COSTLY	<u>\$509,506</u>	Refer to page 59 for scope of work
ADJUSTMENT TO BASE ESTIMATE	<u>(\$91,919)</u>	
CASEWORK OPTION 1: LESS COSTLY	<u>\$1,505,000</u>	Refer to pages 66-68 for scope of work
ADJUSTMENT TO BASE ESTIMATE	<u>(\$101,431)</u>	
CASEWORK OPTION 2: LEAST COSTLY	<u>\$1,452,439</u>	Refer to pages 66-68 for scope of work
ADJUSTMENT TO BASE ESTIMATE	<u>(\$153,992)</u>	
FAÇADE OPTION 1: ADDITIONAL BRICK MASONRY REPOINTING/CLEANING	<u>\$309,355</u>	Refer to pages 45 & 46 for scope of work
ADJUSTMENT TO BASE ESTIMATE	<u>\$309,355</u>	
FAÇADE OPTION 2: RETAINING WALL W/ CONCRETE CAP	<u>\$483,408</u>	Refer to pages 45 & 46 for scope of work
ADJUSTMENT TO BASE ESTIMATE	<u>(\$83,106)</u>	
FACADE OPTION 3: REPLACE MISSING BLUESTONE CAPS ON TOP OF VAULT	<u>\$47,434</u>	Refer to pages 45 & 46 for scope of work
ADJUSTMENT TO BASE ESTIMATE	<u>\$47,434</u>	
HVAC OPTION 1: SUSTAINABLE CONSIDERATION GEOTHERMAL	<u>\$1,043,183</u>	Refer to page 53 for scope of work
ADJUSTMENT TO BASE ESTIMATE	<u>\$140,992</u>	

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WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS COST STUDY ESTIMATE September 21, 2018					
PROJECT TASK SUMMARY					
SCOPE/TRADE	QUANTITY	COST/UNIT	TOTAL	TRADE SUBTOTALS	NOTES
TASK 1C: INTERIOR ARCHITECTURAL					
DOORS & HARDWARE				<u>\$601,425</u>	
DEMOLITION					
Remove Doors & Hardware - Single (EA)	172	\$190.00	\$32,680		
Remove Doors & Hardware - Double (EA)	16	\$285.00	\$4,560		
Remove Doors, Frames & Hardware - Double (EA)	8	\$380.00	\$3,040		
Remove Walls (LF)	64	\$45.00	\$2,880		
Abate Sealant at Doors 203 & 207 (EA)	2	\$350.00	\$700		
OPENINGS					
New Doors & Hardware at Room Entries & Corridors - Single (EA)	123	\$1,355.00	\$166,665		
New Doors & Hardware at Room Entries & Corridors - Double (EA)	16	\$2,170.00	\$34,720		
New Doors & Hardware between Classrooms - Single (EA)	49	\$1,205.00	\$59,045		
Glazing at Doors - 5/16", 0.090 Laminated (EA)	204	\$160.00	\$32,640		
FINISHES					
Patching at Removed Double Doors in Corridor (LOC)	8	\$1,440.00	\$11,520		Assume 12 hours / loc
Paint Touchup as Required (MHR)	240	\$95.00	\$22,800		Assume 40 hours / wing
GC's, Fee, Addons	62	%	\$230,175		
CASEWORK				<u>\$1,606,432</u>	
DEMOLITION					
Remove Open Shelf Casework (LF)	44	\$25.00	\$1,100		
Remove Tall Storage (EA)	33	\$285.00	\$9,405		
Remove Casework (LF)	822	\$25.00	\$20,550		
Remove Recessed Casework (EA)	55	\$190.00	\$10,450		
Remove Portion of Wall for New Casework (LOC)	55	\$190.00	\$10,450		
Remove Wall Tile (SF)	3,735	\$2.50	\$9,338		
Remove Wood Trim (LF)	1,250	\$3.25	\$4,063		
Remove Wood Paneling (SF)	1,125	\$1.75	\$1,969		
Remove Tackable Surface (SF)	1,848	\$1.75	\$3,234		

WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS COST STUDY ESTIMATE September 21, 2018					
 PREFERRED CONSTRUCTION MANAGEMENT					
PROJECT TASK SUMMARY					
SCOPE/TRADE	QUANTITY	COST/UNIT	TOTAL	TRADE SUBTOTALS	NOTES
FINISHES					
Abatement Allowance for Potential Hazmat at Wood Paneling & Tackable Surfaces (ALL W)	1	\$35,000.00	\$35,000		
New GWB at Removed Tile (SF)	3,735	\$4.25	\$15,874		
New Wall Infill (SF)	396	\$12.00	\$4,752		
Patch GWB at New Recessed Tall Cabinets (LOC)	55	\$240.00	\$13,200		
New GWB Soffit (SF)	1,125	\$9.00	\$10,125		
Paint Wall/Soffits (SF)	13,544	\$1.50	\$20,316		
SPECIALTIES					
Corner Guards - 6" high (EA)	118	\$150.00	\$17,700		
Tackboard - 4'x4' (EA)	15	\$200.00	\$3,000		
CASEWORK					
Tall Storage w/ Glass Doors (EA)	44	\$3,200.00	\$140,800		
Tall Storage Recessed w/ Tackable Surface - 32"x12"x86" (EA)	30	\$1,100.00	\$33,000		
Tall Storage Recessed w/ Tackable Surface - 32"x24"x86" (EA)	15	\$2,200.00	\$33,000		
Tall Storage Recessed w/ Tackable Surface - 33"x24"x86" (EA)	165	\$2,200.00	\$363,000		
Tall Storage Recessed w/ Tackable Surface - 36"x12"x86" (EA)	22	\$1,500.00	\$33,000		
Tall Storage Recessed w/ Tackable Surface - 43"x12"x86" (EA)	78	\$1,800.00	\$140,400		
Miscellaneous Fillers & Trim (LS)	1	\$15,000.00	\$15,000		
MECHANICAL					
Cut & Rework Existing Exhaust Duct (EA)	30	\$1,080.00	\$32,400		
Vent/Grille for Exhaust Duct (EA)	30	\$350.00	\$10,500		
	62	%	\$614,807		
ART ROOMS				\$895,025	
DEMOLITION					
Remove Doors & Hardware - Single (EA)	7	\$190.00	\$1,330		
Remove Flooring (SF)	3,115	\$2.00	\$6,230		
Abate Floor Leveler (SF)	3,115	\$12.00	\$37,380		
Remove Ceiling (SF)	3,115	\$1.50	\$4,673		

WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS COST STUDY ESTIMATE September 21, 2018					 PREFERRED CONSTRUCTION MANAGEMENT
PROJECT TASK SUMMARY					
SCOPE/TRADE	QUANTITY	COST/UNIT	TOTAL	TRADE SUBTOTALS	NOTES
Abate Sealant at Doors & Sinks (EA)	15	\$350.00	\$5,250		
Remove Open Shelf Casework (LF)	16	\$25.00	\$400		
Remove Tall Storage (EA)	27	\$285.00	\$7,695		
Remove Casework (LF)	71	\$25.00	\$1,775		
Remove Counter (LF)	10	\$25.00	\$250		
Remove Recessed Casework (EA)	10	\$190.00	\$1,900		
Remove Wall Tile (SF)	40	\$2.50	\$100		
Remove Wood Trim (LF)	43	\$3.25	\$140		
Remove Klin (EA)	2	\$1,140.00	\$2,280		
Remove Sinks (EA)	8	\$95.00	\$760		
Remove & Reinstall Ceilings Below for Plumbing Work (SF)	3,000	\$3.25	\$9,750		
FINISHES					
New GWB at Removed Tile (SF)	40	\$4.25	\$170		
New Wall (SF)	320	\$12.00	\$3,840		
Misc Cutting & Patching (MHR)	60	\$135.00	\$8,100		
GWB Ceilings & Soffits (SF)	279	\$12.00	\$3,348		
ACT Ceilings (SF)	2,836	\$6.50	\$18,434		
Floor Prep (SF)	3,115	\$4.00	\$12,460		
Rubber Tile Floor w/ Base (SF)	3,115	\$13.50	\$42,053		
Paint Walls (SF)	4,836	\$1.50	\$7,255		
Paint Ceilings/Soffits (SF)	309	\$5.50	\$1,700		
SPECIALTIES					
Whiteboard - 4'x8' (EA)	6	\$600.00	\$3,600		
Tackable Surface (SF)	755	\$10.00	\$7,550		
EQUIPMENT					
Kilns (EA)	2	\$15,000.00	\$30,000		
CASEWORK					
Tall Storage Cabinet w/ Tackable Surface - 48"x24"x86" (EA)	1	\$3,300.00	\$3,300		

WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS COST STUDY ESTIMATE September 21, 2018					 PREFERRED CONSTRUCTION MANAGEMENT
PROJECT TASK SUMMARY					
SCOPE/TRADE	QUANTITY	COST/UNIT	TOTAL	TRADE SUBTOTALS	NOTES
Tall Storage Recessed w/ Tackable Surface - 60"x24"x86" (EA)	10	\$4,200.00	\$42,000		
Tall Storage Recessed w/ Tackable Surface - 36"x24"x86" (EA)	1	\$2,650.00	\$2,650		
P-Lam Base Cabinets (LF)	138	\$520.00	\$71,760		
P-Lam Wall Cabinets (LF)	75	\$410.00	\$30,750		
P-Lam Counter (LF)	138	\$185.00	\$25,530		
Miscellaneous Fillers & Trim (LS)	1	\$3,500.00	\$3,500		
SPRINKLER					
Sprinkler Modifications as Req'd (SF)	3,115	\$6.50	\$20,248		
PLUMBING					
Sinks (EA)	7	\$5,000.00	\$35,000		
Utility Sink (EA)	3	\$6,500.00	\$19,500		
Floor Drain (EA)	4	\$3,200.00	\$12,800		
Solids Inceptors (EA)	3	\$6,500.00	\$19,500		
MECHANICAL					
Fume Hood for Kilns (EA)	1	\$7,500.00	\$7,500		
ELECTRICAL					
Light Fixtures - Strip Light - 6' (EA)	10	\$605.00	\$6,050		
Light Fixtures - Strip Light - 12' (EA)	12	\$875.00	\$10,500		
Light Fixtures - Downlight (EA)	6	\$620.00	\$3,720		
Light Fixtures - Track Light (EA)	8	\$620.00	\$4,960		
Power Devices (SF)	3,115	\$4.75	\$14,796		
<i>GC's, Fee, Addons</i>	62	%	\$342,540.41		
TOTAL TASK 1C: INTERIOR ARCHITECTURAL				\$3,102,882	
TASK 1A: FAÇADE REPAIRS					
BRICK MASONRY & CONCRETE FOUNDATION				\$260,046	
CONCRETE					
Crack Repair at Concrete Foundation (LOC)	14	\$520.00	\$7,280		

PROJECT TASK SUMMARY

SCOPE/TRADE	QUANTITY	COST/UNIT	TOTAL	TRADE SUBTOTALS	NOTES
Sawcut Concrete at Spall Locations (LOC)	4	\$520.00	\$2,080		
Patch Concrete Foundation at Spall Locations - Building (LOC)	3	\$260.00	\$780		
Patch Concrete Foundation at Spall Locations - Retaining Wall (LOC)	1	\$520.00	\$520		
MASONRY					
Brick Repointing (SF)	3,100	\$34.00	\$105,400		Includes Retaining Wall quantities
Brick Crack Repair (LF)	134	\$48.00	\$6,432		Includes Retaining Wall quantities
Remove Brick at New Vertical Expansion Joints (LF)	100	\$14.50	\$1,450		
New Brick with Backer Rod & Sealant at New Vertical Exp Joints (LF)	100	\$125.00	\$12,500		
Remove & Replace Spalled Brick (EA)	13	\$160.00	\$2,080		
Equipment (WK)	6	\$2,500.00	\$15,000		
FINISHES					
Interior Finish Removal & Replacement at Foundation Repairs (LOC)	14	\$500.00	\$7,000		
GC's, Fee, Addons	62	%	\$99,523.64	\$77,240	
LIMESTONE MASONRY					
MASONRY					
Limestone Spall Repair (LOC)	30	\$540.00	\$16,200		
Remove Broken Limestone Panels (EA)	5	\$405.00	\$2,025		
New Limestone Panels at Band Course - 92"x19"x2.75" (EA)	2	\$1,200.00	\$2,400		
New Limestone Panels at Lower Wall - 29"x86"x3" (EA)	1	\$1,500.00	\$1,500		
New Limestone Panels at Entrance Panels - 11'x3' (EA)	2	\$3,200.00	\$6,400		
Limestone Repointing (LF)	193	\$28.00	\$5,404		
Limestone Crack Repair (LF)	50	\$135.00	\$6,750		
Equipment (WK)	2	\$3,500.00	\$7,000		
GC's, Fee, Addons	62	%	\$29,560.98	\$837,487	
OPENINGS & PENETRATIONS					
DEMOLITION/ABATEMENT					
Removal of Sealants at Windows & Masonry to Masonry Locations (LF)	8,262	\$38.00	\$313,956		Includes proper containment & disposal of PCB/Asbestos containing sealants
Scrape Loose Paint & Rust from Steel Lintels (LF)	1,100	\$18.50	\$20,350		

PROJECT TASK SUMMARY

SCOPE/TRADE	QUANTITY	COST/UNIT	TOTAL	TRADE SUBTOTALS	NOTES
Proper Containment & Disposal of Hazmat Paint Material (LS)	1	\$15,000.00	\$15,000		
THERMAL & MOISTURE PROTECTION					
New Sealant at Windows & Masonry to Masonry Locations (LF)	8,262	\$15.50	\$128,061		Includes access/lift
Provide Backer Rod & Sealant at Penetrations (LOC)	40	\$135.00	\$5,400		
Provide Backer Rod & Sealant at Vents (LOC)	32	\$175.00	\$5,600		
FINISHES					
Prep & Paint Exposed Lintels (LF)	1,100	\$26.00	\$28,600		
RETAINING WALL					
GC's, Fee, Addons	62	%	\$320,520	\$566,514	Repointing, Crack & Spall Repairs included Above
DEMOLITION					
Remove Chain Link Fence (LF)	450	\$15.00	\$6,750		
Remove Concrete Cap (LF)	450	\$26.00	\$11,700		
CONCRETE					
Allowance for Repair Work (LS)	1	\$140,000.00	\$140,000		
MASONRY					
New Granite Cap (LF)	450	\$185.00	\$83,250		
STEEL					
New Galvalume Steel Guardrail (LF)	450	\$240.00	\$108,000		
MISCELLANEOUS					
GC's, Fee, Addons	62	%	\$216,814	\$174,555	
THERMAL & MOISTURE PROTECTION					
Waterproofing in Front of Photography Room (SF)	160	\$25.00	\$4,000		
Allowance to Repair Cupola as Req'd (ALLW)	1	\$75,000.00	\$75,000		
EARTHWORK					
Remove Pavement (SF)	200	\$3.00	\$600		
Excavate & Backfill for Waterproofing (CY)	50	\$75.00	\$3,750		
Patch Pavement (SY)	22	\$200.00	\$4,400		
Landscape Repairs Allowance (ALLW)	1	\$20,000.00	\$20,000		

PROJECT TASK SUMMARY

SCOPE/TRADE	QUANTITY	COST/UNIT	TOTAL	TRADE SUBTOTALS	NOTES
<i>GC's, Fee, Addons</i>	62	%	\$66,805		
TOTAL TASK 1A: FAÇADE REPAIRS				\$1,915,841	
TASK 1B: HVAC UPGRADES					
AUDITORIUM				\$902,191	
DEMOLITION					
Remove Doors & Hardware - Single (EA)	2	\$190.00	\$380		
Remove Walls (LF)	20	\$45.00	\$900		
Cut Openings in Existing Plaster/GWB Ceiling for New Linear Diffusers (EA)	64	\$95.00	\$6,080		
STEEL					
Structural Supports for the Condensing Unit (LS)	1	\$20,000.00	\$20,000		
THERMAL & MOISTURE PROTECTION					
Cutting & Patching at New Units on Roof (LOC)	2	\$2,200.00	\$4,400		
OPENINGS					
New Doors, Frames, & Hardware - Single (EA)	2	\$1,995.00	\$3,990		
FINISHES					
Patch Plaster/GWB Ceiling at Removed Diffusers (EA)	20	\$960.00	\$19,200		
Paint Ceiling in Auditorium (SF)	7,600	\$3.75	\$28,500		
Paint Walls in AHU Rooms (SF)	1,200	\$1.50	\$1,800		
MECHANICAL					
Demo AHU'S & Ductwork (MHR)	80	\$135.00	\$10,800		
Demo Exhaust Fan (MHR)	12	\$135.00	\$1,620		
Misc Demo (LS)	1	\$2,500.00	\$2,500		
New Ductwork (LBS) - Acoustically Lined	6,500	\$21.50	\$139,750		
New Linear Diffusers/Registers (EA)	64	\$450.00	\$28,800		
AHU's - 12,000 CFM (EA)	2	\$58,065.00	\$116,130		
Condensing Unit - 60 ton (EA)	1	\$38,900.00	\$38,900		
Return Fan - 12,000 CFM (EA)	1	\$9,000.00	\$9,000		

WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS COST STUDY ESTIMATE September 21, 2018  PREFERRED CONSTRUCTION MANAGEMENT				
PROJECT TASK SUMMARY				
SCOPE/TRADE	QUANTITY	COST/UNIT	TOTAL	TRADE SUBTOTALS
Piping & Accessories (LS)	1	\$15,000.00	\$15,000	
Clean Exhaust Fan ETR Ductwork (LS)	1	\$5,000.00	\$5,000	
Clean Return ETR Ductwork (LS)	1	\$7,500.00	\$7,500	
Test & Balance (SF)	2	%	\$7,202	
Controls (LS)	20	%	\$73,456	
ELECTRICAL				
Power to New HVAC Units (EA)	4	\$4,000.00	\$16,000	
<i>GC's, Fee, Addons</i>	62	%	\$345,283	\$193,235
GYM A				
THERMAL & MOISTURE PROTECTION				
Cutting & Patching at New Exhaust Fans on Roof (LOC)	2	\$2,200.00	\$4,400	
FINISHES				
Cutting & Patching for New Return Grilles (LOC)	2	\$1,440.00	\$2,880	
Misc Cutting & Patching (MHR)	20	\$135.00	\$2,700	
Paint Touchup (LS)	1	\$2,500.00	\$2,500	
MECHANICAL				
Demo AHU'S (MHR)	40	\$135.00	\$5,400	
Demo Return Grilles (EA)	2	\$540.00	\$1,080	
Demo Exhaust Fans (MHR)	24	\$135.00	\$3,240	
Misc Demo (LS)	1	\$2,500.00	\$2,500	
New Return Grilles (EA)	2	\$1,500.00	\$3,000	
AHU's - 7,500 CFM (EA)	2	\$18,100.00	\$36,200	
Exhaust Fans (EA)	2	\$5,000.00	\$10,000	
Clean ETR Ductwork (LS)	1	\$15,000.00	\$15,000	
Test & Balance (SF)	2	%	\$1,284	
Controls (LS)	20	%	\$13,097	
ELECTRICAL				
Power to New HVAC Units (EA)	4	\$4,000.00	\$16,000	

WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS COST STUDY ESTIMATE September 21, 2018						 PREFERRED CONSTRUCTION MANAGEMENT
PROJECT TASK SUMMARY						
SCOPE/TRADE		QUANTITY	COST/UNIT	TOTAL	TRADE SUBTOTALS	NOTES
GYM B	<i>GC's, Fee, Addons</i>	62	%	\$73,954.10	\$183.810	
THERMAL & MOISTURE PROTECTION						
Cutting & Patching at New Exhaust Fans on Roof (LOC)		2	\$2,200.00	\$4,400		
FINISHES						
Cutting & Patching for New Return Grilles (LOC)		2	\$1,440.00	\$2,880		
Misc Cutting & Patching (MHR)		20	\$135.00	\$2,700		
Paint Touchup (LS)		1	\$2,500.00	\$2,500		
MECHANICAL						
Demo AHU'S & Associated Ductwork (MHR)		64	\$135.00	\$8,640		
Demo Return Grilles (EA)		2	\$540.00	\$1,080		
Demo Exhaust Fans (MHR)		24	\$135.00	\$3,240		
Misc Demo (LS)		1	\$2,500.00	\$2,500		
New Return Grilles (EA)		2	\$1,500.00	\$3,000		
AHU's - 3,600 CFM (EA)		2	\$14,400.00	\$28,800		
Exhaust Fans (EA)		2	\$5,000.00	\$10,000		
Clean ETR Ductwork (LS)		1	\$15,000.00	\$15,000		
Test & Balance (SF)		2	%	\$1,136		
Controls (LS)		20	%	\$11,587		
ELECTRICAL						
Power to New HVAC Units (EA)		4	\$4,000.00	\$16,000		
<i>GC's, Fee, Addons</i>		62	%	\$70,347		
TOTAL TASK 1B: HVAC UPGRADES					\$1,279,236	
TASK 1D: KITCHEN UPGRADES						
RENOVATIONS						
DEMOLITION					\$1,789,697	
Remove Doors & Hardware - Single (EA)		1	\$190.00	\$190		

WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS COST STUDY ESTIMATE September 21, 2018					 PREFERRED CONSTRUCTION MANAGEMENT
PROJECT TASK SUMMARY					
SCOPE/TRADE	QUANTITY	COST/UNIT	TOTAL	TRADE SUBTOTALS	NOTES
Remove Flooring (SF)	6,055	\$2.00	\$12,110		
Remove Ceiling (SF)	6,055	\$1.50	\$9,083		
Remove Wall & Glazed Block for Electrical Panel Replacement (SF)	70	\$8.50	\$595		
Remove Wood Trim (LF)	250	\$3.25	\$813		
Remove All Kitchen Equipment (MHR)	160	\$95.00	\$15,200		
Sawcut SOG for UG Plumbing (LF)	80	\$95.00	\$7,600		
CONCRETE					
Core & Patch Floors for Plumbing (LS)	1	\$10,000.00	\$10,000		
Patch Floors at Underslab Plumbing (LF)	80	\$55.00	\$4,400		
Remove 1" of Slab & Replace with Topping Slab (SF)	4,000	\$10.00	\$40,000		Qty provided by school
THERMAL & MOISTURE PROTECTION					
Cutting & Patching at New Units on Roof (LOC)	5	\$2,200.00	\$11,000		
OPENINGS					
New Doors, Frames, & Hardware - Single (EA)	1	\$1,995.00	\$1,995		
FINISHES					
New GWB at Removed Wall & Tile (SF)	70	\$4.25	\$298		
New Wall (SF)	900	\$12.00	\$10,800		
Misc Cutting & Patching (MHR)	120	\$135.00	\$16,200		
GWB Returns/Trim/Patch at Removed Wood Trim (LF)	250	\$55.00	\$13,750		
ACT Ceilings (SF)	6,055	\$8.50	\$51,468		
Floor Prep/Leveling (SF)	2,055	\$5.00	\$10,275		Included as slab not receiving topping slab
Glazed Tile (SF)	2,040	\$18.00	\$36,720		
Quarry Tile Floor w/ Base (SF)	6,055	\$17.50	\$105,963		
Paint Walls (SF)	5,100	\$2.00	\$10,200		
SPRINKLER					
Sprinkler Modifications as Req'd (SF)	6,055	\$6.50	\$39,358		
PLUMBING					
Demo Existing Grease Interceptor and Associated (MHR)	48	\$135.00	\$6,480		

WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS COST STUDY ESTIMATE September 21, 2018					 PREFERRED CONSTRUCTION MANAGEMENT
PROJECT TASK SUMMARY					
SCOPE/TRADE	QUANTITY	COST/UNIT	TOTAL	TRADE SUBTOTALS	NOTES
Hand Sinks (EA)	4	\$5,000.00	\$20,000		
Floor Drain (EA)	20	\$4,500.00	\$90,000		
Exterior Burried Grease Interceptor - 1500 GAL (EA)	1	\$18,000.00	\$18,000		
New Piping Assocaite w/ Grease Interceptor (LF)	200	\$125.00	\$25,000		
Rough Plumbing Misc (LS)	1	\$10,000.00	\$10,000		
MECHANICAL					
Demo AHU & Ductwork (MHR)	40	\$135.00	\$5,400		
Demo Kitchen Hood & Ductwork (MHR)	32	\$135.00	\$4,320		
Misc Demo (LS)	1	\$3,500.00	\$3,500		
New Ductwork (LBS) - Stainless Steel	4,271	\$26.00	\$111,041		
New Diffusers/Registers (EA)	5	\$400.00	\$2,000		
Exhaust Fans for Cooking Hoods - 4680 CFM & 5872 CFM (EA)	2	\$12,000.00	\$24,000		
Exhaust Fan for Dishwashing Hood - 450 CFM (EA)	1	\$4,000.00	\$4,000		
Exhaust Fan for Condensate Exhaust Hood - 1440 CFM (EA)	1	\$5,500.00	\$5,500		
Gas Fired Make-up Air Unit - 7000 CFM (EA)	1	\$35,000.00	\$35,000		
Gas Piping for MAU (LS)	1	\$5,000.00	\$5,000		
Clean ETR Ductwork (LS)	1	\$15,000.00	\$15,000		
Test & Balance (SF)	2	%	\$4,031		
Controls (LS)	20	%	\$41,114		
ELECTRICAL					
Remove All Branch Circuits for Replacement (SF)	4,255	\$3.00	\$12,765		
Remove Transformer (MHR)	64	\$135.00	\$8,640		
New Transformer - 750 KVA (EA)	1	\$60,000.00	\$60,000		Place on existing pad
New Panelboards, Feeders & Associated Switchboard Work (LS)	1	\$46,000.00	\$46,000		Pricing provided by Harriman
New Light Fixtures (EA)	90	\$635.00	\$57,150		Including wire & conduit
New Branch Circuits for all Devices & Lighting (SF)	4,255	\$5.00	\$21,275		Equipment branch circuits carried below
New Power & Lighting Devices (SF)	4,255	\$4.00	\$17,020		
Branch Circuit for New Dishwasher & Booster Heater (LF)	200	\$35.00	\$7,000		

PROJECT TASK SUMMARY

SCOPE/TRADE	QUANTITY	COST/UNIT	TOTAL	TRADE SUBTOTALS	NOTES
Power to New HVAC Units (EA)	5	\$4,000.00	\$20,000		
Fire Alarm Requirements for New Hood & Equipment (LS)	1	\$10,000.00	\$10,000		
EARTHWORK					
Excavate & Backfill for New Grease Interceptor & Piping (LS)	1	\$7,500.00	\$7,500		
GC's, Fee, Addons	62	%	\$684,946	\$1,391,904	
KITCHEN EQUIPMENT					
EQUIPMENT					
Serving Lines, Equipment & Sneeze Guards (LS)	1	\$175,000.00	\$175,000		Pricing provided by Crabtree McGrath Associates
Hoods, Cooking Equipment & Prep Counters & Sinks (LS)	1	\$375,000.00	\$375,000		Pricing provided by Crabtree McGrath Associates
Walk-in Cooler Modifications, Walk-in Freezer, Mech Equip (LS)	1	\$51,000.00	\$51,000		Pricing provided by Crabtree McGrath Associates
Install Kitchen Equipment (MHR) - Assume Crew of 5 for 4 Weeks	800	\$135.00	\$108,000		
PLUMBING					
Plumbing Connections for Equipment (Excluding Hand Sinks) (LS)	36	\$3,200.00	\$115,200		
ELECTRICAL					
Electrical Connections for Equipment (LS)	1	\$35,000.00	\$35,000		
GC's, Fee, Addons	62	%	\$532,704	\$3,181,601	
TOTAL TASK 1D: KITCHEN UPGRADES					
SUPPLEMENTAL SCOPE FOR CONSIDERATION					
FIRE ALARM				\$93,960	
ELECTRICAL					
Replace FACP & Correct System Deficiencies (LS)	1	\$58,000.00	\$58,000		Pricing provided by Harriman
GC's, Fee, Addons	62	%	\$35,960	\$528,768	
WIRING UPGRADES					
FINISHES					
Misc Cutting & Patching as Req'd (MHR)	640	\$135.00	\$86,400		Assumed crew of 2 for 8 weeks
ELECTRICAL					
Replace Cloth Covered Wiring in Building (LS)	1	\$240,000.00	\$240,000		Pricing provided by Harriman

WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS COST STUDY ESTIMATE September 21, 2018					CM PM PREFERRED CONSTRUCTION MANAGEMENT	
PROJECT TASK SUMMARY						
SCOPE/TRADE		QUANTITY	COST/UNIT	TOTAL	TRADE SUBTOTALS	NOTES
WATER HEATER PLUMBING	GC's, Fee, Addons	62	%	\$202,368	<u>\$53,460</u>	
	Replace Gas Fired Water Heater (EA)	1	\$28,000.00	\$28,000		Assume in-kind replacement; 85 gal, 390,000 btuh
	Replace Associated Circulating Pump (EA)	1	\$5,000.00	\$5,000		Assume in-kind replacement
	GC's, Fee, Addons	62	%	\$20,460		
TOTAL SUPPLEMENTAL SCOPE FOR CONSIDERATION					\$676,188	
TOTAL PROJECT COSTS					\$10,155,747	

WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS COST STUDY ESTIMATE September 21, 2018				 PREFERRED CONSTRUCTION MANAGEMENT	
PROJECT TASK SUMMARY					
SCOPE/TRADE	QUANTITY	COST/UNIT	TOTAL	TRADE SUBTOTALS	NOTES
OPTIONS					
DOORS OPTION 1: "SCHOOL GUARD" SECURITY GLASS					
DEMOLITION				\$713,788	Refer to page 59 for scope of work
Remove Doors & Hardware - Single (EA)	172	\$190.00	\$32,680		
Remove Doors & Hardware - Double (EA)	16	\$285.00	\$4,560		
Remove Doors, Frames & Hardware - Double (EA)	8	\$380.00	\$3,040		
Remove Walls (LF)	64	\$45.00	\$2,880		
Abate Sealant at Doors 203 & 207 (EA)	2	\$350.00	\$700		
OPENINGS					
New Doors & Hardware at Room Entries & Corridors - Single (EA)	123	\$1,355.00	\$166,665		
New Doors & Hardware at Room Entries & Corridors - Double (EA)	16	\$2,170.00	\$34,720		
New Doors & Hardware between Classrooms - Single (EA)	49	\$1,205.00	\$59,045		
Glazing at Doors - School Guard SG4 (EA)	204	\$500.00	\$102,000		Larger vision light
FINISHES					
Patching at Removed Double Doors in Corridor (LOC)	8	\$1,440.00	\$11,520		Assume 12 hours / loc
Paint Touchup as Required (MHR)	240	\$95.00	\$22,800		Assume 40 hours / wing
GC's, Fee, Addons	62	%	\$273,178		
ADJUSTMENT TO BASE ESTIMATE				\$112,363	
DOORS OPTION 2: LEAST COSTLY				\$509,506	Refer to page 59 for scope of work
DEMOLITION					
Remove Doors & Hardware - Single (EA)	172	\$190.00	\$32,680		
Remove Doors & Hardware - Double (EA)	16	\$285.00	\$4,560		
Remove Doors, Frames & Hardware - Double (EA)	8	\$380.00	\$3,040		
Remove Walls (LF)	64	\$45.00	\$2,880		
Abate Sealant at Doors 203 & 207 (EA)	2	\$350.00	\$700		
OPENINGS					
New Doors & Hardware at Room Entries & Corridors - Single (EA)	123	\$1,105.00	\$135,915		HM Doors
New Doors & Hardware at Room Entries & Corridors - Double (EA)	16	\$1,770.00	\$28,320		HM Doors

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PROJECT TASK SUMMARY

SCOPE/TRADE	QUANTITY	COST/UNIT	TOTAL	TRADE SUBTOTALS	NOTES
New Doors & Hardware between Classrooms - Single (EA)	49	\$1,055.00	\$51,695		HM Doors
Glazing at Doors - Tempered Glass (EA)	204	\$100.00	\$20,400		
FINISHES					
Patching at Removed Double Doors in Corridor (LOC)	8	\$1,440.00	\$11,520		Assume 12 hours / loc
Paint Touchup as Required (MHR)	240	\$95.00	\$22,800		Assume 40 hours / wing
GC's, Fee, Addons	62	%	\$194,996		
ADJUSTMENT TO BASE ESTIMATE				(\$91,919)	
CASEWORK OPTION 1: LESS COSTLY				\$1,505,000	Refer to pages 66-68 for scope of work
DEMOLITION					
Remove Open Shelf Casework (LF)	44	\$25.00	\$1,100		
Remove Tall Storage (EA)	33	\$285.00	\$9,405		
Remove Casework (LF)	822	\$25.00	\$20,550		
Remove Recessed Casework (EA)	55	\$190.00	\$10,450		
Remove Portion of Wall for New Casework (LOC)	55	\$190.00	\$10,450		
Remove Wall Tile (SF)	3,735	\$2.50	\$9,338		
Remove Wood Trim (LF)	1,250	\$3.25	\$4,063		
Remove Wood Paneling (SF)	1,125	\$1.75	\$1,969		
Remove Tackable Surface (SF)	1,848	\$1.75	\$3,234		
Abatement Allowance for Potential Hazmat at Wood Paneling & Tackable Surfaces (ALLW)	1	\$35,000.00	\$35,000		
FINISHES					
New GWB at Removed Tile (SF)	3,735	\$4.25	\$15,874		
Patch GWB at New Recessed Tall Cabinets (LOC)	55	\$240.00	\$13,200		
New GWB Soffit (SF)	1,125	\$9.00	\$10,125		
Paint Wall/Soffits (SF)	13,544	\$1.50	\$20,316		
SPECIALTIES					
Corner Guards - 6' high (EA)	118	\$150.00	\$17,700		
Tackboard - 4'x4' (EA)	15	\$200.00	\$3,000		
Tackable Surface (SF)	1,848	\$10.00	\$18,480		

WELLESLEY MIDDLE SCHOOL
BUILDING SYSTEMS COST STUDY ESTIMATE

September 21, 2018


 PREFERRED CONSTRUCTION
MANAGEMENT

PROJECT TASK SUMMARY

SCOPE/TRADE	QUANTITY	COST/UNIT	TOTAL	TRADE SUBTOTALS	NOTES
CASEWORK					
Tall Storage Recessed w/ Tackable Surface - 32"x12"x86" (EA)	30	\$1,100.00	\$33,000		
Tall Storage Recessed w/ Tackable Surface - 32"x24"x86" (EA)	15	\$2,200.00	\$33,000		
Tall Storage Recessed w/ Tackable Surface - 36"x12"x86" (EA)	22	\$1,500.00	\$33,000		
Tall Storage Recessed w/ Tackable Surface - 41"x24"x86" (EA)	44	\$2,800.00	\$123,200		
Tall Storage Recessed w/ Tackable Surface - 43"x12"x86" (EA)	78	\$1,800.00	\$140,400		
P-Lam Base Cabinets (LF)	462	\$520.00	\$240,240		
P-Lam Counter (LF)	462	\$185.00	\$85,470		
Miscellaneous Fillers & Trim (LS)	1	\$15,000.00	\$15,000		
MECHANICAL					
Cut & Rework Existing Exhaust Duct (EA)	15	\$1,080.00	\$16,200		
Vent/Grille for Exhaust Duct (EA)	15	\$350.00	\$5,250		
GC's, Fee, Addons	62	%	\$575,988	(\$101,431)	
ADJUSTMENT TO BASE ESTIMATE				\$1,452,439	Refer to pages 66-68 for scope of work
CASEWORK OPTION 2: LEAST COSTLY					
DEMOLITION					
Remove Open Shelf Casework (LF)	44	\$25.00	\$1,100		
Remove Tall Storage (EA)	33	\$285.00	\$9,405		
Remove Casework (LF)	822	\$25.00	\$20,550		
Remove Recessed Casework (EA)	55	\$190.00	\$10,450		
Remove Portion of Wall for New Casework (LOC)	55	\$190.00	\$10,450		
Remove Tackable Surface (SF)	1,848	\$1.75	\$3,234		
Abatement Allowance for Potential Hazmat at Wood Paneling & Tackable Surfaces (ALLW)	1	\$35,000.00	\$35,000		
FINISHES					
Patch GWB at New Recessed Tall Cabinets (LOC)	55	\$240.00	\$13,200		
Refinish Wood Trim (LF)	1,250	\$6.25	\$7,813		
Paint Wall/Soffits (SF)	13,544	\$1.50	\$20,316		
SPECIALTIES					

WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS COST STUDY ESTIMATE September 21, 2018					
P M C PREFERRED CONSTRUCTION MANAGEMENT					
PROJECT TASK SUMMARY					
SCOPE/TRADE	QUANTITY	COST/UNIT	TOTAL	TRADE SUBTOTALS	NOTES
CASEWORK					
Tackboard - 4"x4' (EA)	15	\$200.00	\$3,000		
Tall Storage Recessed w/ Tackable Surface - 32"x12"x86" (EA)	30	\$1,100.00	\$33,000		
Tall Storage Recessed w/ Tackable Surface - 32"x24"x86" (EA)	15	\$2,200.00	\$33,000		
Tall Storage Recessed w/ Tackable Surface - 33"x24"x86" (EA)	165	\$2,200.00	\$363,000		
Tall Storage Recessed w/ Tackable Surface - 36"x12"x86" (EA)	22	\$1,500.00	\$33,000		
Tall Storage Recessed w/ Tackable Surface - 41"x24"x86" (EA)	44	\$2,800.00	\$123,200		
Tall Storage Recessed w/ Tackable Surface - 43"x12"x86" (EA)	78	\$1,800.00	\$140,400		
Miscellaneous Fillers & Trim (LS)	1	\$15,000.00	\$15,000		
MECHANICAL					
Cut & Rework Existing Exhaust Duct (EA)	15	\$1,080.00	\$16,200		
Vent/Grille for Exhaust Duct (EA)	15	\$350.00	\$5,250		
GC's, Fee, Addons	62	%	\$555,872	<u>(\$153,992)</u>	Refer to pages 45 & 46 for scope of work
ADJUSTMENT TO BASE ESTIMATE					
FAÇADE OPTION 1: ADDITIONAL BRICK MASONRY REPOINTING/CLEANING					
MASONRY					
Brick Repointing (SF)	5,200	\$34.00	\$176,800		Quantity includes repointing at the retaining wall
Clean Efflorescence (LOC)	8	\$520.00	\$4,160		
Equipment (WK)	4	\$2,500.00	\$10,000		
GC's, Fee, Addons	62	%	\$118,395	<u>\$309,355</u>	
ADJUSTMENT TO BASE ESTIMATE					
FAÇADE OPTION 2: RETAINING WALL W/ CONCRETE CAP					
DEMOLITION					
Remove Chain Link Fence (LF)	450	\$15.00	\$6,750		
Remove Concrete Cap (LF)	450	\$22.00	\$9,900		
CONCRETE					
Allowance for Repair Work (LS)	1	\$140,000.00	\$140,000		Refer to pages 45 & 46 for scope of work
New Concrete Cap (LF)	450	\$75.00	\$33,750		
				<u>\$483,408</u>	

WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS COST STUDY ESTIMATE September 21, 2018					
PROJECT TASK SUMMARY					
SCOPE/TRADE	QUANTITY	COST/UNIT	TOTAL	TRADE SUBTOTALS	NOTES
STEEL					
New Galvalume Steel Guardrail (LF)	450	\$240.00	\$108,000		
GC's, Fee, Addons	62	%	\$185,008		
ADJUSTMENT TO BASE ESTIMATE				<u>(\$83,106)</u>	
FAÇADE OPTION 3: REPLACE MISSING BLUESTONE CAPS ON TOP OF VAULT AREAS				<u>\$47,434</u>	Refer to pages 45 & 46 for scope of work
MASONRY					
Prep Areas with Missing Bluestone Caps (LOC)	6	\$2,080.00	\$12,480		
Replace Bluestone Caps - 3'x10" (EA)	30	\$560.00	\$16,800		
GC's, Fee, Addons	62	%	\$18,154		
ADJUSTMENT TO BASE ESTIMATE				<u>\$47,434</u>	
HVAC OPTION 1: SUSTAINABLE CONSIDERATION GEOTHERMAL				<u>\$1,043,183</u>	Refer to page 53 for scope of work
SUPPORT WORK					
Work to Support Install of New Geothermal System (LS)	1	\$85,250.00	\$85,250		
HVAC					
Geothermal System (LS)	1	\$542,690.00	\$542,690		Pricing provided by Harriman
ELECTRICAL					
Electrical Requirements (LS)	1	\$16,000.00	\$16,000		
GC's, Fee, Addons	62	%	\$399,243		
ADJUSTMENT TO BASE ESTIMATE				<u>\$140,992</u>	

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Facade (a)

Repair Quantity Table
Elevations
Guardrail at Retaining Wall

HVAC (b)

Gym A - Air Handling Unit
Gym B - Blower Coil
Auditorium - Air Handling Unit
Condensing Unit

Interior Doors & Casework (c)

Door Schedule
Hardware cutsheet
Glazing cutsheet
Existing and Proposed Demo 1966 Science Lab Casework Wall / Drawings / Existing Photos
Proposed 1966 Science Lab Casework Wall - Option 1 / Drawings / Schedule
Existing and Proposed Demo 1952 Classroom Casework Wall / Drawings / Existing Photos
Proposed 1952 Classroom Casework Wall - Option 1 / Drawings / Schedule
Existing and Proposed Demo 1966 Classroom Casework Wall / Drawings / Existing Photos
Proposed 1966 Classroom Casework Wall - Option 1 / Drawings / Schedule
Existing and Proposed Demo Art Room 304A / Drawings / Existing Photos
Existing and Proposed Demo Art Room 304A / Drawings / Existing Photos
Proposed Art Room 304A / Drawings
Proposed Art Room 304A / Drawings / Schedule
Existing and Proposed Demo Art Room 304B / Drawings / Existing Photos
Existing and Proposed Demo Art Room 304B / Drawings / Existing Photos
Proposed Art Room 304B / Drawings / Schedule
Proposed Art Room 304B / Drawings
Existing and Proposed Demo Art Room 306 / Drawings / Existing Photos
Existing and Proposed Demo Art Room 306 / Drawings / Existing Photos
Proposed Art Room 306 / Drawings / Existing Photos
Proposed Art Room 306 / Drawings / Schedule

Kitchen (d)

Kitchen plan
M80.1 - Kitchen Ductwork - Level 2
M80.2 - Kitchen Ductwork - Level 3
M80.3 - Kitchen Ductwork - Level 4 - Roof

Supporting Building System Reports (e)

Electrical Existing Conditions Assessment
Plumbing Existing Conditions Assessment
Proposed Grease Interceptor Trap

Floor Plans (f)

First Floor
Second Floor
Third Floor

Meeting Minutes (g)

07.02.18 Kick-off Meeting
07.10.18 Owner / Progress Meeting No.1
07.25.18 Owner / Progress Meeting No.2
08.07.18 Owner / Progress Meeting No.3
08.21.18 Owner / Progress Meeting No.4
09.04.18 Owner / Progress Meeting No.5
09.18.18 Owner / Progress Meeting No.6

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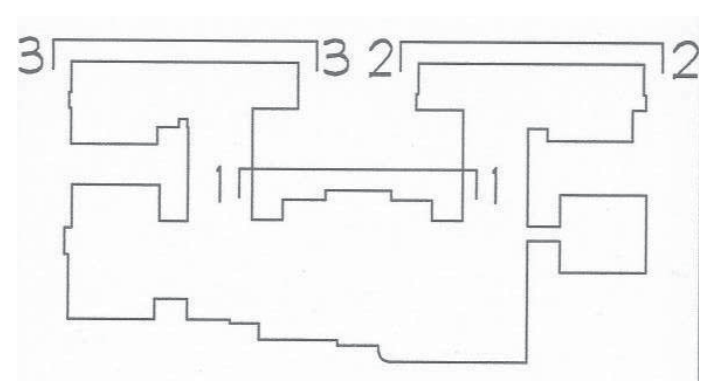
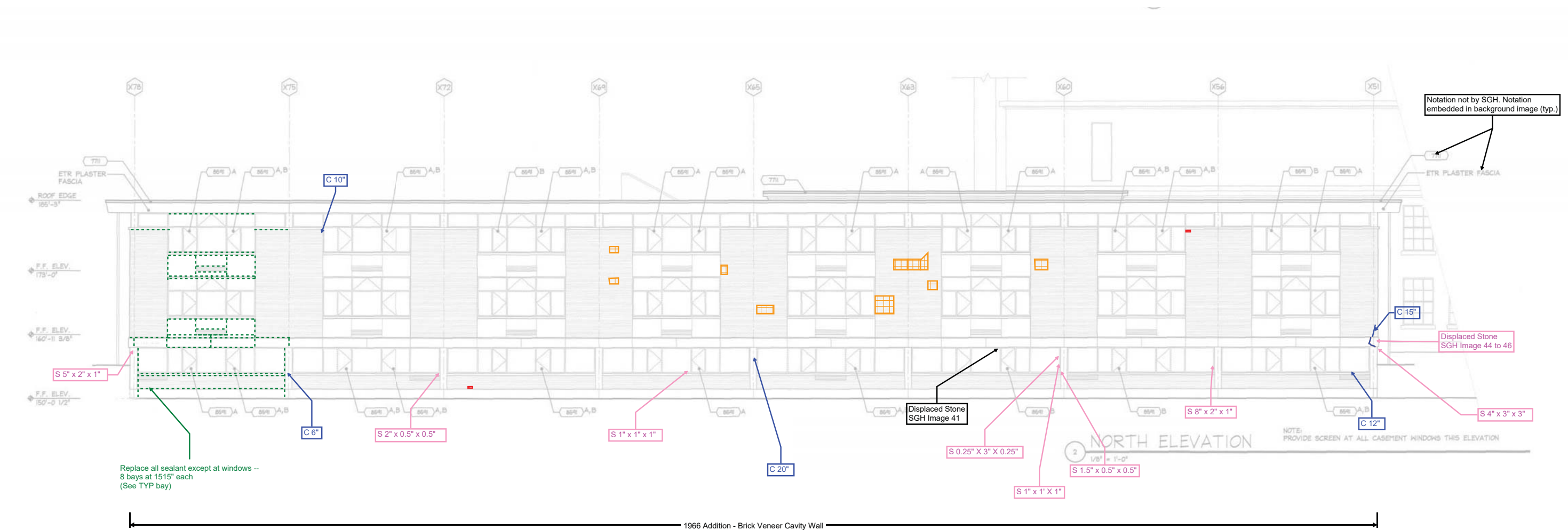
Table 1

Sheet #	Elevation	Total Failed Masonry Sealant (LF)	New Sealant at Vents (LF)	Total Failed Window Perimeter Sealant (LF)	Total Failed Limestone Mortar (LF)	Brick Cracks Aff. 25-yr SL (LF)	Limestone Cracks aff. 25- yr SL (LF)	Foundation Cracks aff. 25- yr SL (LF)	Brick Spalls aff. 25-yr SL (# of bricks)	Limestone Spalls aff. 25- yr SL (CUIN)	Concrete Spalls aff. 25- yr SL (CUFT)	Higher Risk Mortar Weathering (SF)	Lower Risk Mortar Weathering (SF)	Rusted Steel Lintels (LF)	Unsealed Penetrations
2	2 North Elevation	1,010	-	-	-	-	5	-	-	76	-	0	37	-	-
3	4 Courtyard West Elevation	428	57	-	-	1	1	-	2	14	-	143	73	129	3
4	1 Courtyard North Elevation	304	57	-	10	-	1	-	-	720	-	224	2,228	231	3
5	1 East Elevation	89	-	-	5	-	2	-	-	-	-	-	39	21	2
6	1 West Elevation	89	-	-	6	-	1	-	-	-	-	-	33	21	2
7	4 Courtyard East Elevation	420	57	-	-	-	-	-	1	-	-	6	40	129	-
8	3 North Elevation	1,010	-	-	-	6	2	-	-	298	-	6	17	-	-
9	3 West Elevation	520	-	-	4	-	3	4	1	-	-	64	48	-	1
10	1 South Elevation 1966 Addition North Wing	536	-	10	-	1	4	-	-	46	-	-	8	-	-
11	2 East Elevation 1958 Addition North	119	-	-	25	1	-	-	-	8	-	-	-	-	-
12	2 West Elevation Interior	85	48	-	3	6	2	-	-	-	-	22	744	181	4
13	3 North Elevation 1958 Addition North	105	8	-	30	-	-	-	-	-	-	4	16	-	2
14	1 South Elevation	13	-	-	48	44	2	2	3	-	1	213	427	98	-
15	2 West Elevation at Music Room	56	-	-	-	-	-	-	-	-	-	-	5	-	-
16	2 South Elevation Continued	22	11	-	27	3	5	3	-	216	-	101	834	31	-
17	2 East Elevation	73	66	-	-	15	21	9	4	-	1	427	270	251	8
18	5 South Elevation 1958 Addition	129	-	900	23	-	-	-	-	-	-	2	5	-	-
19	2 West Elevation 1958 Addition South	100	-	-	5	1	-	-	-	15	-	3	73	-	6
20	3 East Elevation	502	-	-	6	1	-	-	-	6	1	1	151	-	2
21	3 North Elevation 1958 Addition	112	-	994	-	7	-	-	-	-	-	22	-	-	1
22	1 South Elevation 1966 Addition South Wing	637	-	-	-	-	3	-	-	78	-	56	87	-	3
23	Retaining Wall	-	-	-	-	50	-	-	2	-	4	1,718	-	-	-
	TOTALS	6,358	304	1,904	193	134	50	18	13	1,477	7	3,012	5,134	1,092	37

Notes:

1) Elevation names are the detail number on on the drawing sheet and the detail title.

2) aff. 25-yr SL = affecting 25 year service life

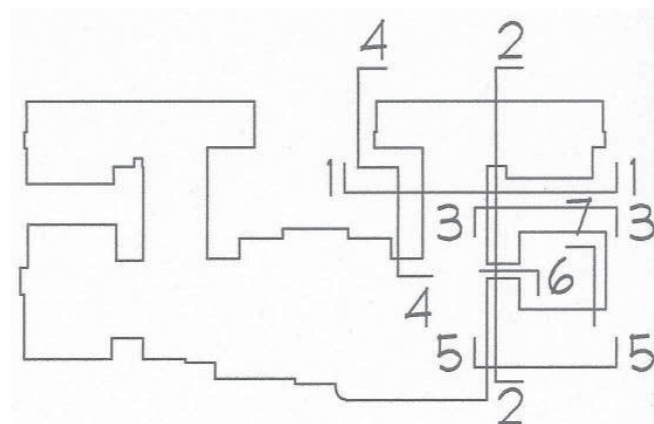
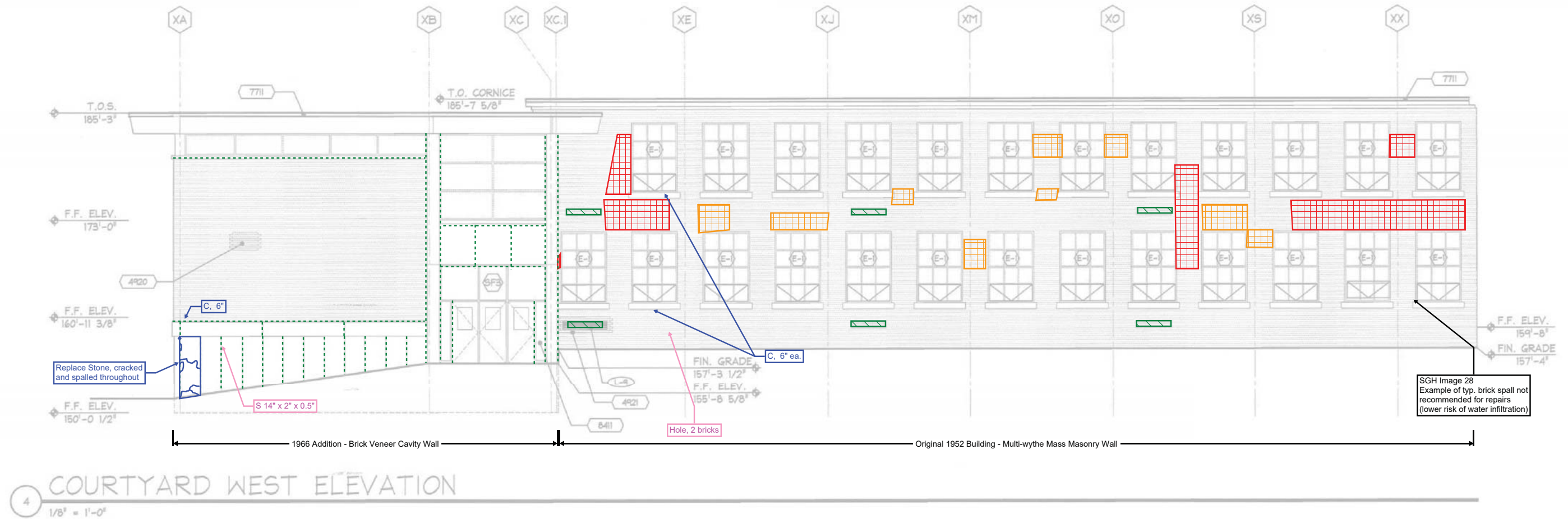


CLIENT Harriman
SUBJECT Appendix a - Elevation Mark-ups

SHEET NO. 2 of 23
PROJECT NO. 181041.00 - FWMS
DATE 21 September 2018
BY SLD
CHECKED BY MSW/SAT

Legend
Red (hatched) - Brick mortar joint deterioration recommended repair
Orange (hatched) - Brick mortar joint deterioration optional repair
Green (dashed) - Deteriorated sealant joints
Green (boxed hatch) - Remove existing mortar joint and provide sealant around vents
Blue (boxed)- Crack locations
Pink (boxed) - Spalls or holes affecting 25 yr service life
Purple (solid) - Limestone mortar joint deterioration
Black - Observation notes. See report.

Image Note
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SUBJECT Appendix a - Elevation Mark-ups

SHEET NO. 3 23

PROJECT NO. 181041.00 - FWMS

DATE 21 September 2018

BY SLD

CHECKED BY MSW/SAT

Legend

Red (hatched) - Brick mortar joint deterioration recommended repair

Orange (hatched) - Brick mortar joint deterioration optional repair

Green (dashed) - Deteriorated sealant joints

Green (boxed hatch) - Remove existing mortar joint and provide sealant around vents

Blue (boxed) - Crack locations

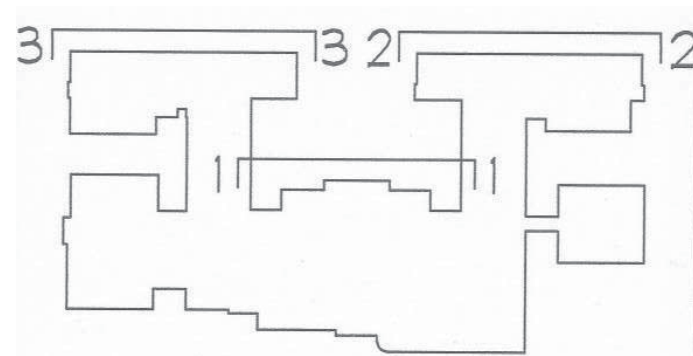
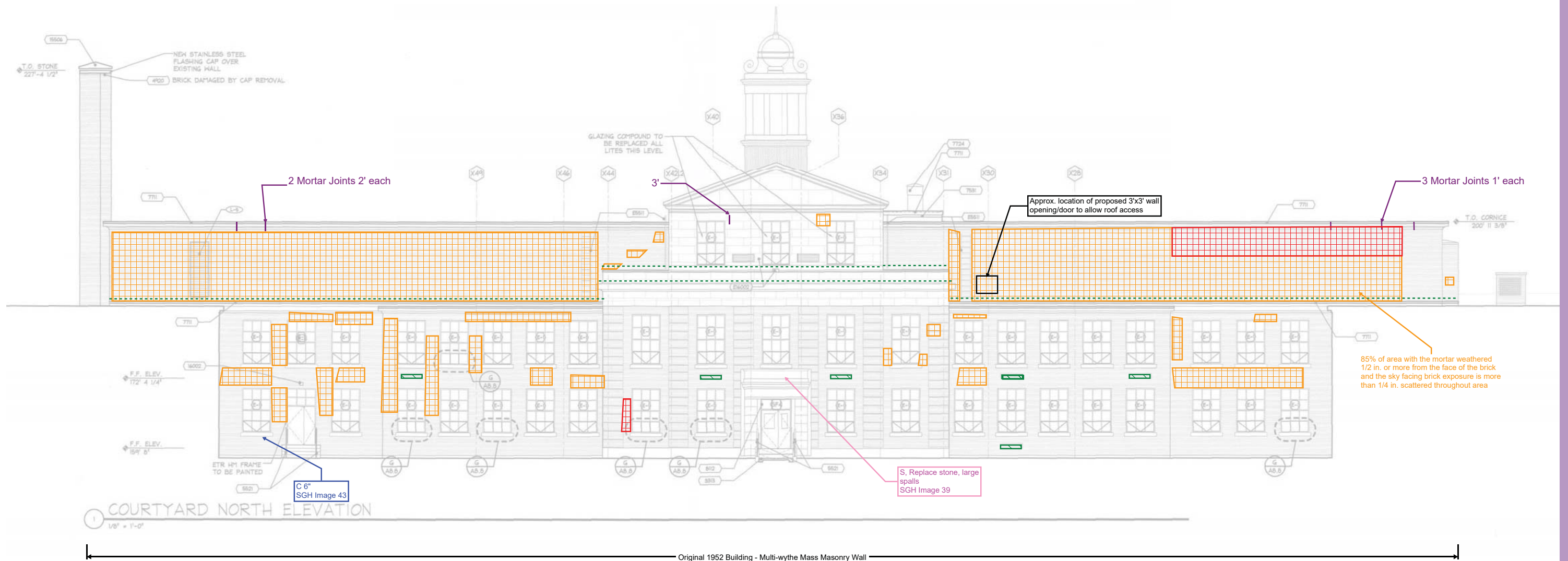
Pink (boxed) - Spalls or holes affecting 25 yr service life

Purple (solid) - Limestone mortar joint deterioration

Black - Observation notes. See report.

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SUBJECT Appendix a - Elevation Mark-ups

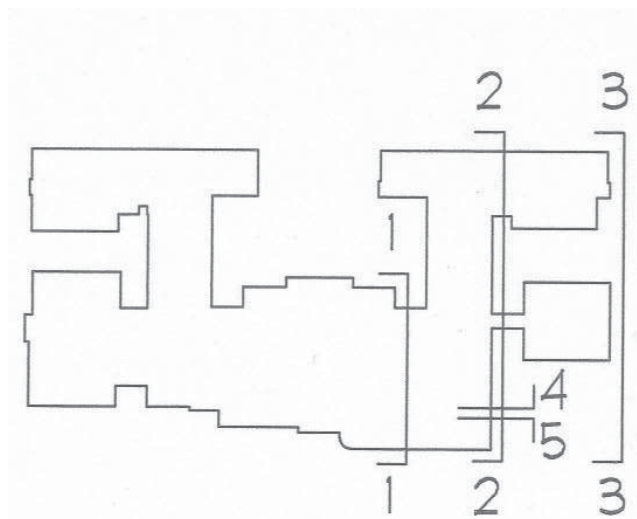
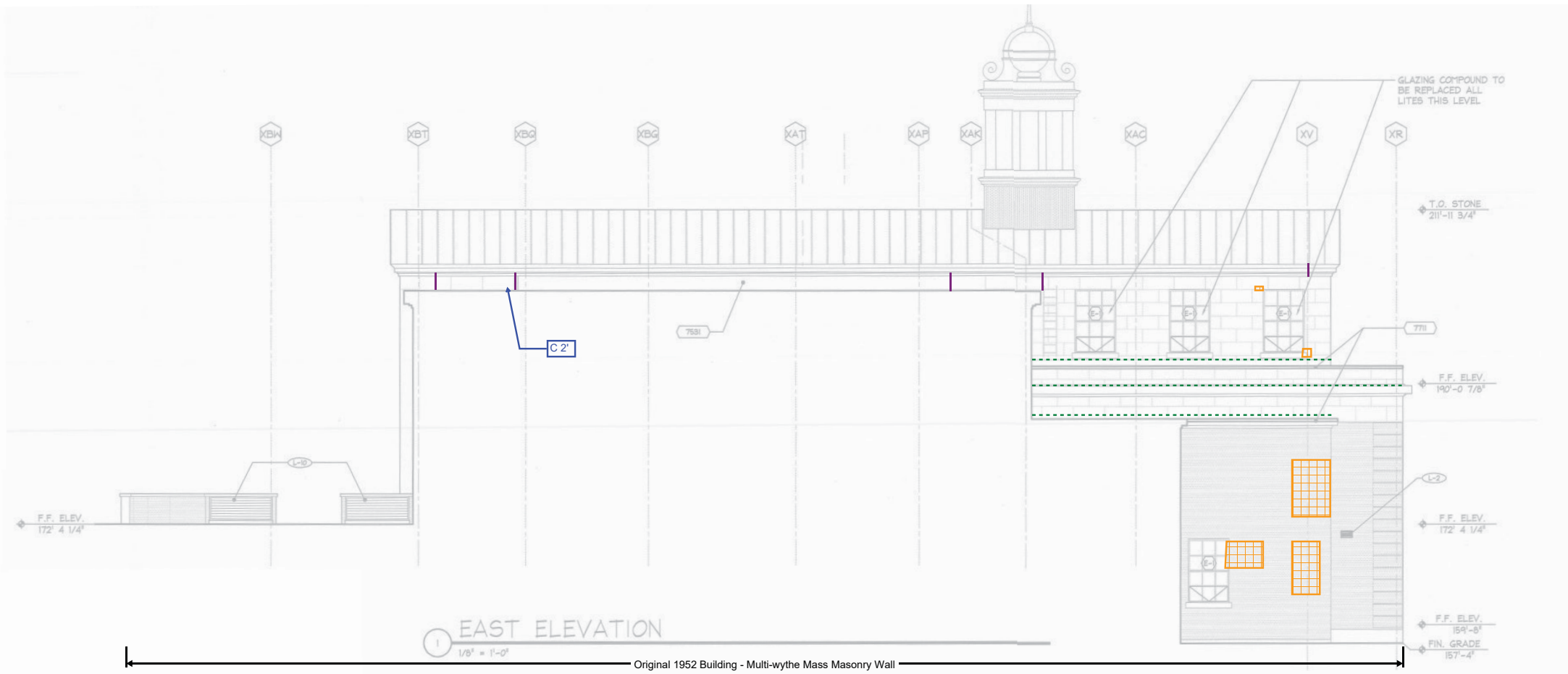
SHEET NO. 4 of 23
PROJECT NO. 181041.00 - FWMS
DATE 21 September 2018
BY SLD
CHECKED BY MSW/SAT

Legend

- Red (hatched) - Brick mortar joint deterioration recommended repair
- Orange (hatched) - Brick mortar joint deterioration optional repair
- Green (dashed) - Deteriorated sealant joints
- Green (boxed hatch) - Remove existing mortar joint and provide sealant around vents
- Blue (boxed) - Crack locations
- Pink (boxed) - Spalls or holes affecting 25 yr service life
- Purple (solid) - Limestone mortar joint deterioration
- Black - Observation notes. See report.

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SUBJECT Appendix a - Elevation Mark-ups

SHEET NO. 5 23

PROJECT NO. 181041.00 - FWMS

DATE 21 September 2018

BY SLD

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Legend

Red (hatched) - Brick mortar joint deterioration recommended repair

Orange (hatched) - Brick mortar joint deterioration optional repair

Green (dashed) - Deteriorated sealant joints

Green (boxed hatch) - Remove existing mortar joint and provide sealant around vents

Blue (boxed) - Crack locations

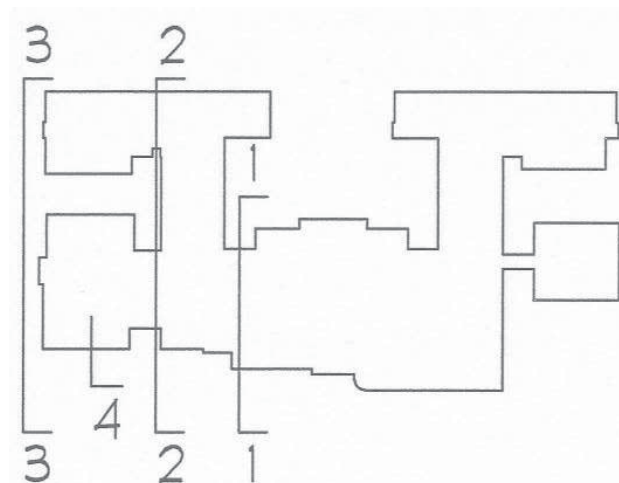
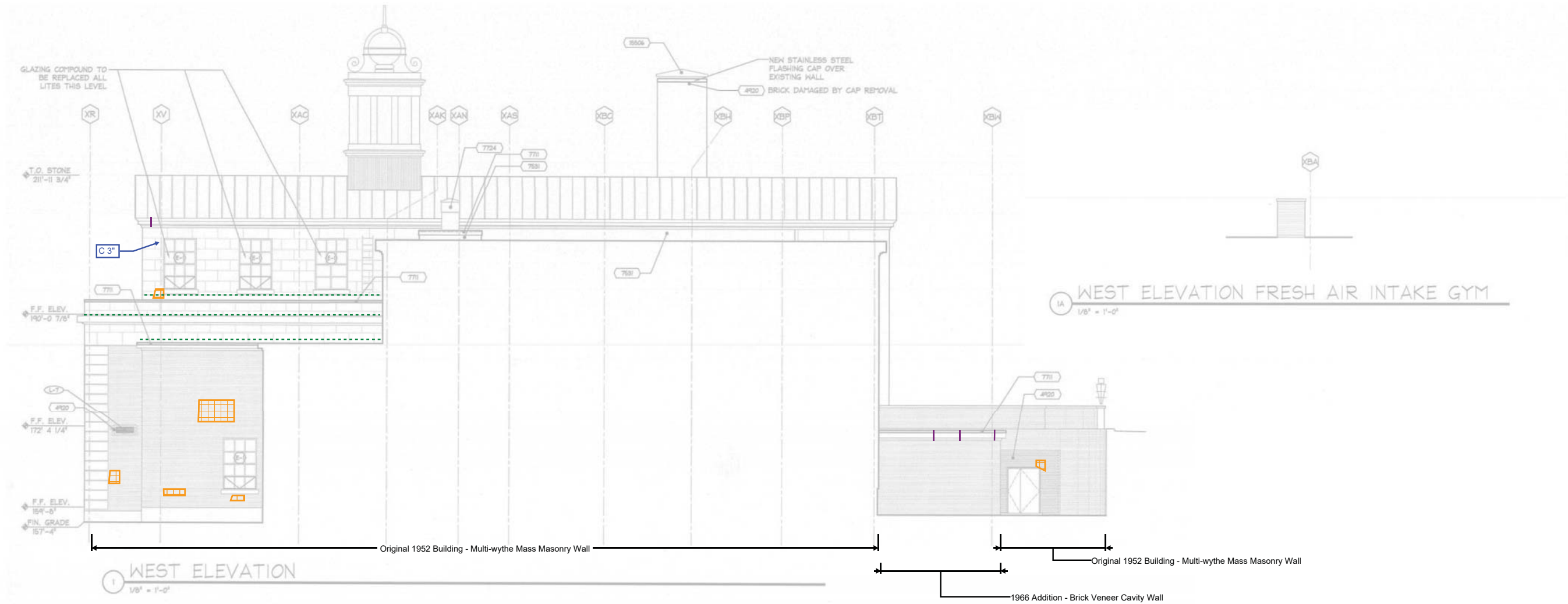
Pink (boxed) - Spalls or holes affecting 25 yr service life

Purple (solid) - Limestone mortar joint deterioration

Black - Observation notes. See report.

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SUBJECT Appendix a - Elevation Mark-ups

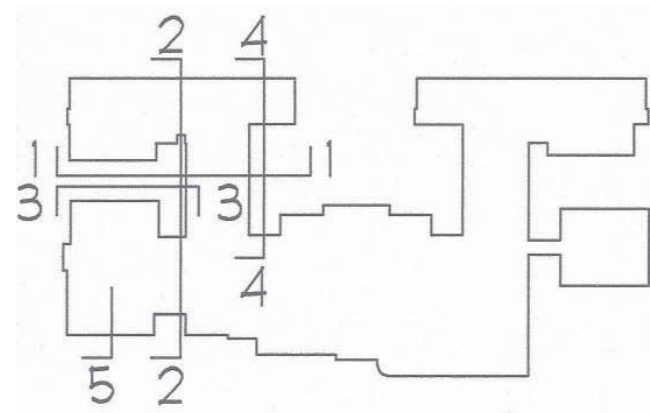
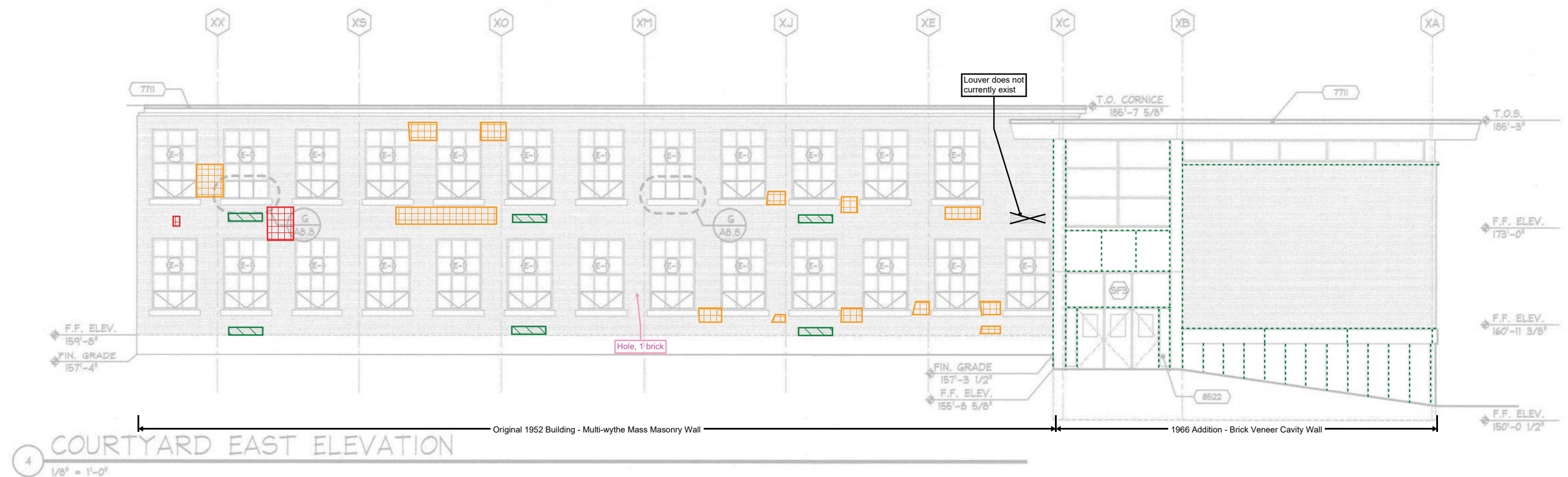
SHEET NO. 6 of 23
PROJECT NO. 181041.00 - FWMS
DATE 21 September 2018
BY SLD
CHECKED BY MSW/SAT

Legend

- Red (hatched) - Brick mortar joint deterioration recommended repair
- Orange (hatched) - Brick mortar joint deterioration optional repair
- Green (dashed) - Deteriorated sealant joints
- Green (boxed hatch) - Remove existing mortar joint and provide sealant around vents
- Blue (boxed) - Crack locations
- Pink (boxed) - Spalls or holes affecting 25 yr service life
- Purple (solid) - Limestone mortar joint deterioration
- Black - Observation notes. See report.

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SUBJECT Appendix a - Elevation Mark-ups

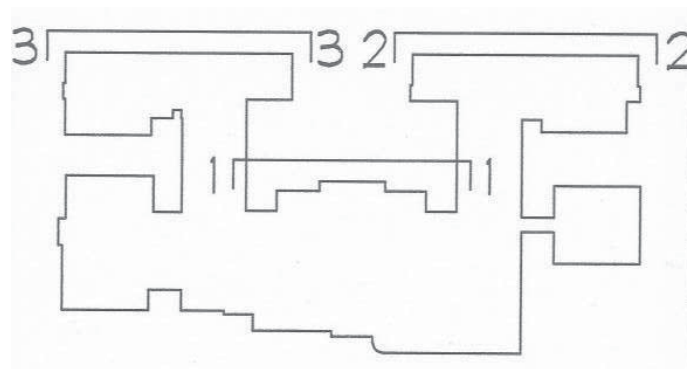
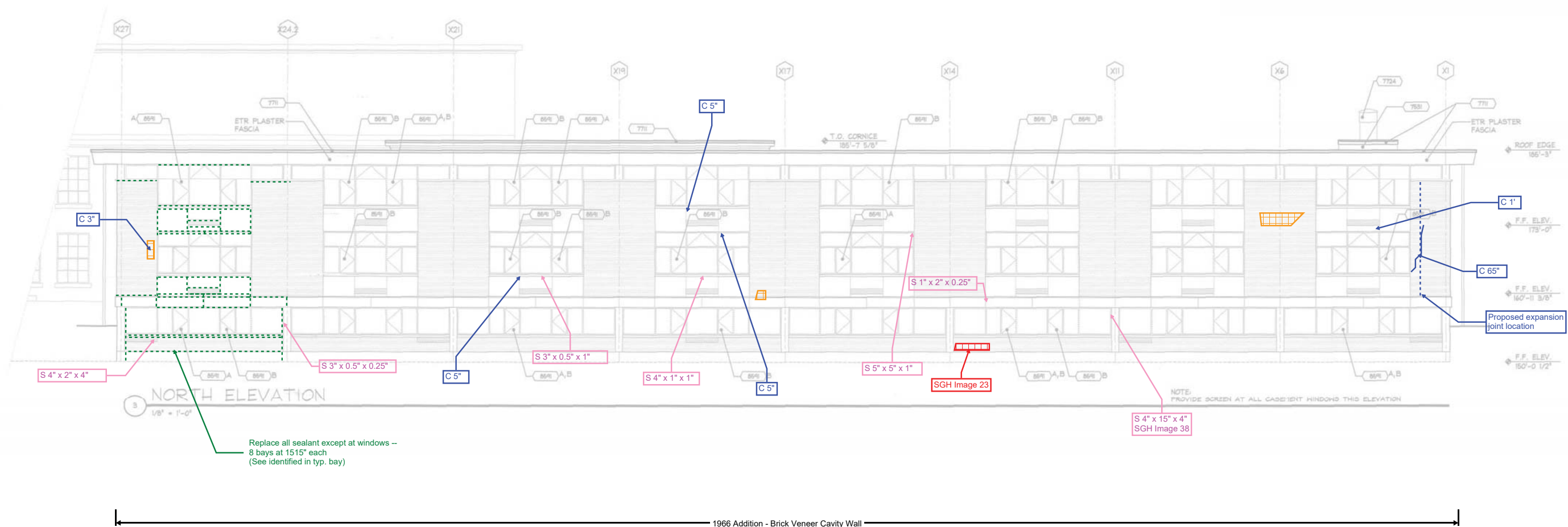
SHEET NO. 7 of 23
PROJECT NO. 181041.00 - FWMS
DATE 21 September 2018
BY SLD
CHECKED BY MSW/SAT

Legend

- Red (hatched) - Brick mortar joint deterioration recommended repair
- Orange (hatched) - Brick mortar joint deterioration optional repair
- Green (dashed) - Deteriorated sealant joints
- Green (boxed hatch) - Remove existing mortar joint and provide sealant around vents
- Blue (boxed) - Crack locations
- Pink (boxed) - Spalls or holes affecting 25 yr service life
- Purple (solid) - Limestone mortar joint deterioration
- Black - Observation notes. See report.

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SUBJECT Appendix a - Elevation Mark-ups

SHEET NO. 8 23

PROJECT NO. 181041.00 - FWMS

DATE 21 September 2018

BY SLD

CHECKED BY MSW/SAT

Legend

Red (hatched) - Brick mortar joint deterioration recommended repair

Orange (hatched) - Brick mortar joint deterioration optional repair

Green (dashed) - Deteriorated sealant joints

Green (boxed hatch) - Remove existing mortar joint and provide sealant around vents

Blue (boxed) - Crack locations

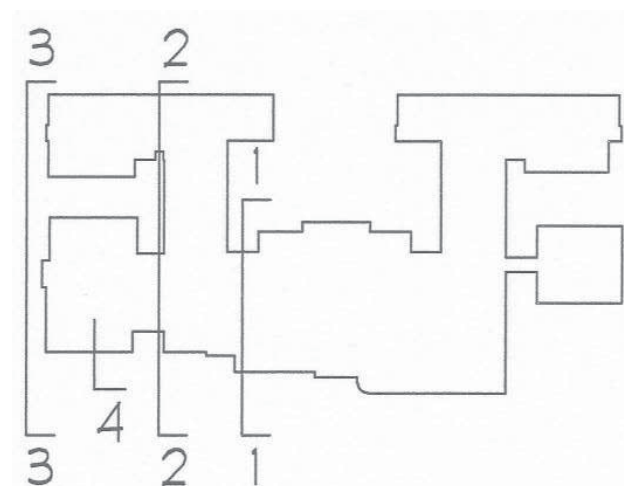
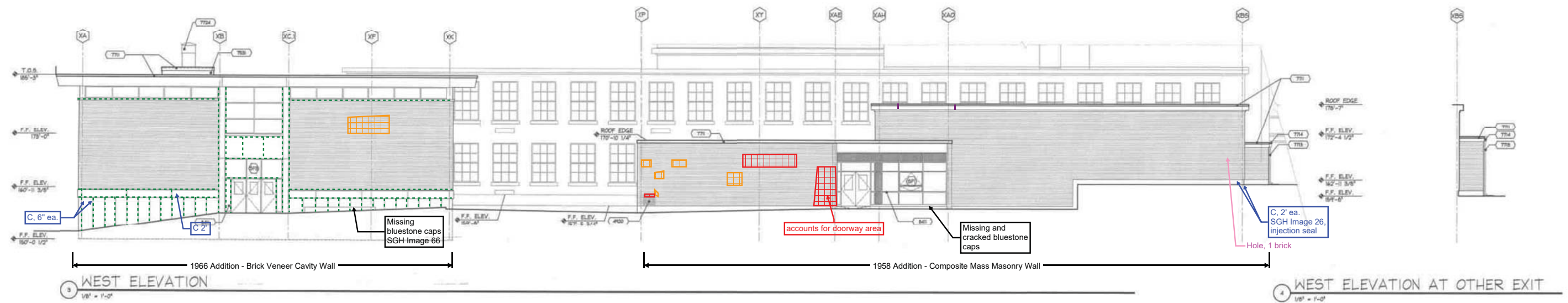
Pink (boxed) - Spalls or holes affecting 25 yr service life

Purple (solid) - Limestone mortar joint deterioration

Black - Observation notes. See report.

Image Note

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SUBJECT Appendix a - Elevation Mark-ups

SHEET NO. 9 of 23

PROJECT NO. 181041.00 - FWMS

DATE 21 September 2018

BY SLD

CHECKED BY MSW/SAT

Legend

Red (hatched) - Brick mortar joint deterioration recommended repair

Orange (hatched) - Brick mortar joint deterioration optional repair

Green (dashed) - Deteriorated sealant joints

Green (boxed hatch) - Remove existing mortar joint and provide sealant around vents

Blue (boxed) - Crack locations

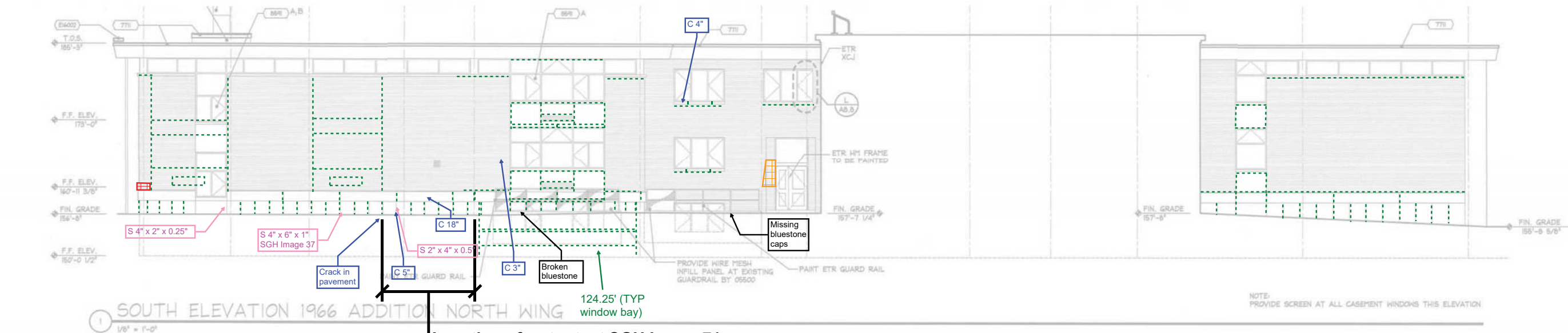
Pink (boxed) - Spalls or holes affecting 25 yr service life

Purple (solid) - Limestone mortar joint deterioration

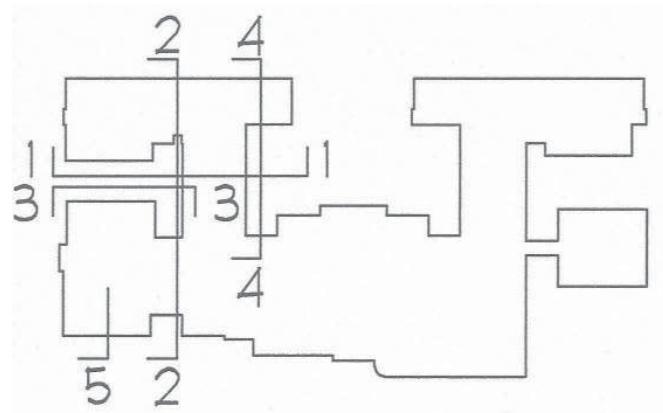
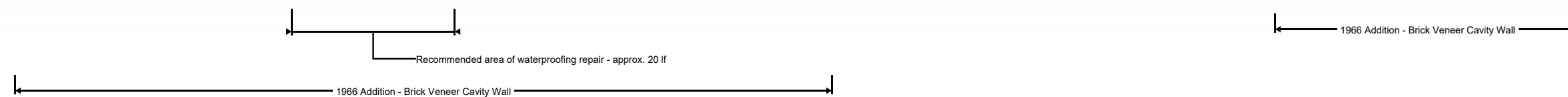
Black - Observation notes. See report.

Image Note

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Location of water test SGH Image 71



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DATE 21 September 2018

BY SLD

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Legend

Red (hatched) - Brick mortar joint deterioration
recommended repair

Orange (hatched) - Brick mortar joint deterioration
optional repair

Green (dashed) - Deteriorated sealant joints

Green (boxed hatch) - Remove existing mortar joint
and provide sealant around vents

Blue (boxed)- Crack locations

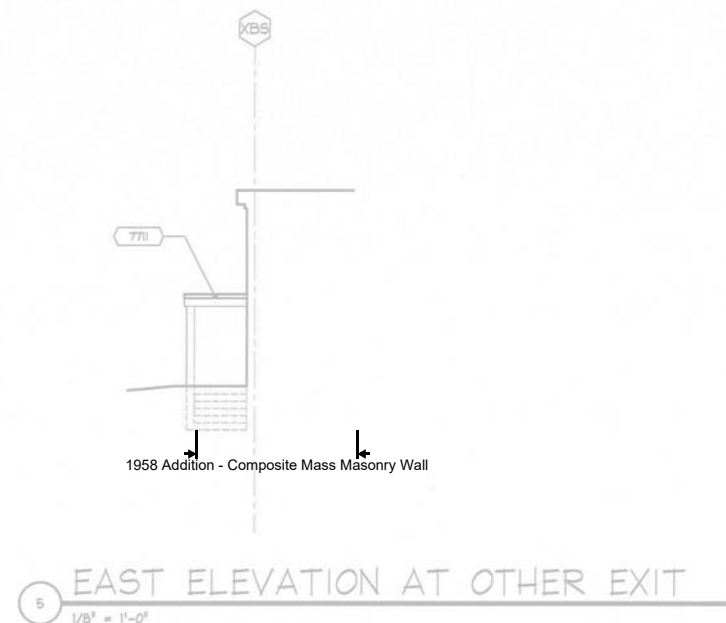
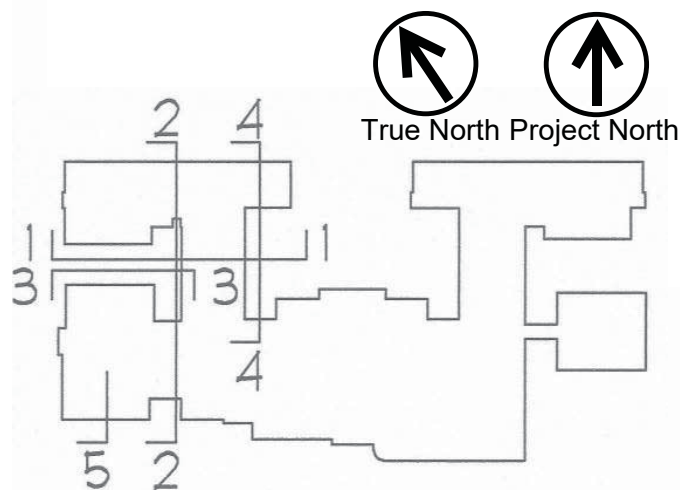
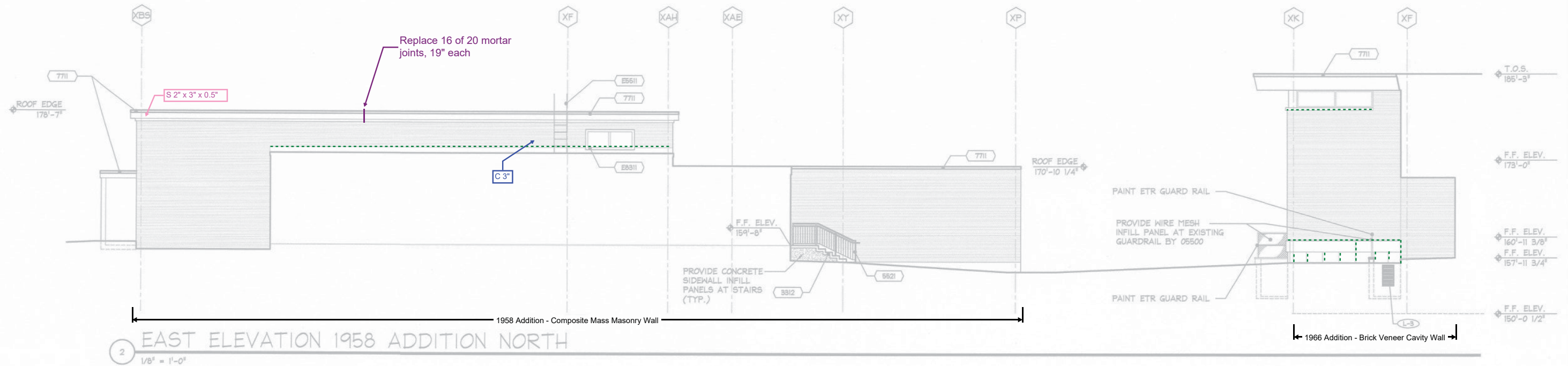
Pink (boxed) - Spalls or holes affecting 25 yr service life

Purple (solid) - Limestone mortar joint deterioration

Black - Observation notes. See report.

Image Note

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SUBJECT Appendix a - Elevation Mark-ups

SHEET NO. 11 23

PROJECT NO. 181041.00 - FWMS

DATE 21 September 2018

BY SLD

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Legend

Red (hatched) - Brick mortar joint deterioration recommended repair

Orange (hatched) - Brick mortar joint deterioration optional repair

Green (dashed) - Deteriorated sealant joints

Green (boxed hatch) - Remove existing mortar joint and provide sealant around vents

Blue (boxed) - Crack locations

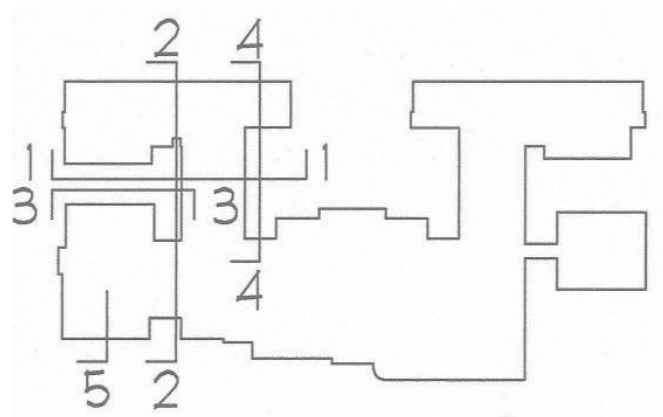
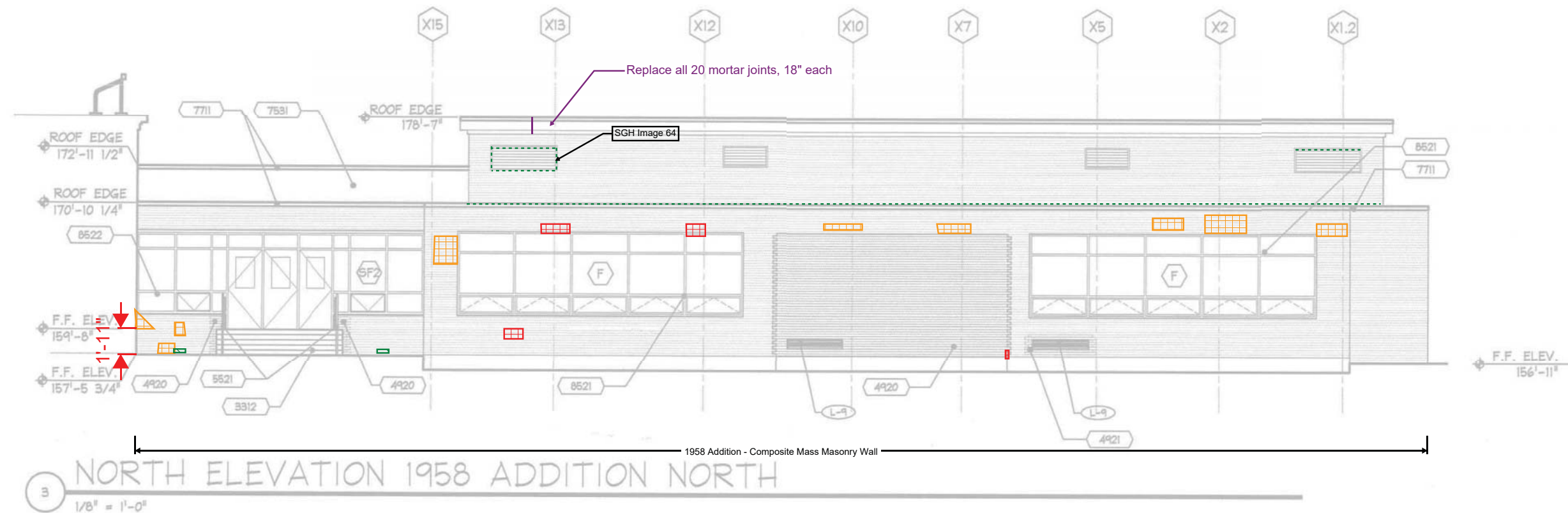
Pink (boxed) - Spalls or holes affecting 25 yr service life

Purple (solid) - Limestone mortar joint deterioration

Black - Observation notes. See report.

Image Note

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SUBJECT Appendix a - Elevation Mark-ups

SHEET NO. 13 of 23

PROJECT NO. 181041.00 - FWMS

DATE 21 September 2018

BY SLD

CHECKED BY MSW/SAT

Legend

Red (hatched) - Brick mortar joint deterioration

recommended repair

Orange (hatched) - Brick mortar joint deterioration
optional repair

Green (dashed) - Deteriorated sealant joints

Green (boxed hatch) - Remove existing mortar joint
and provide sealant around vents

Blue (boxed)- Crack locations

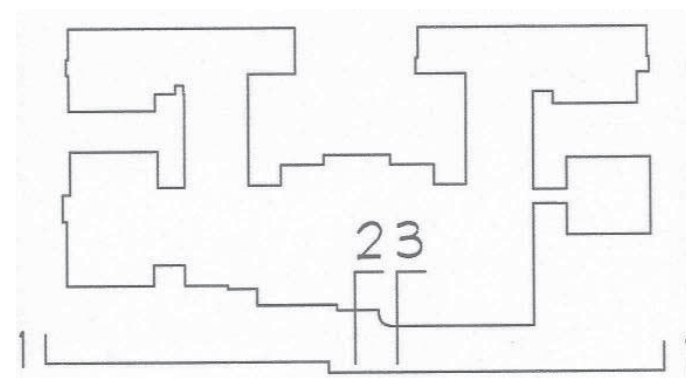
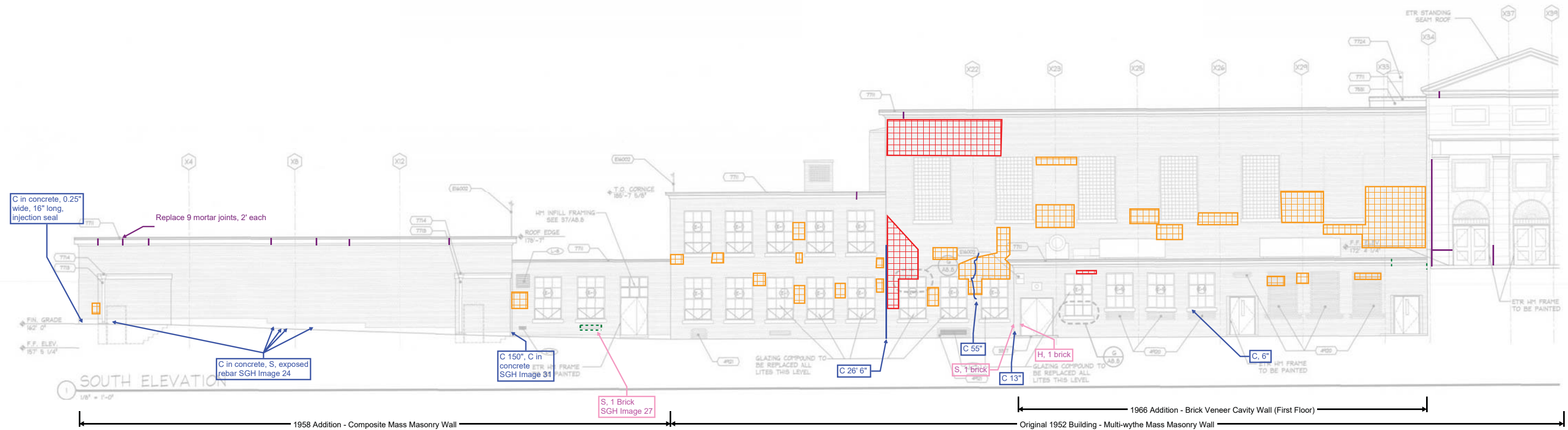
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Purple (solid) - Limestone mortar joint deterioration

Black - Observation notes. See report.

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SUBJECT Appendix a - Elevation Mark-ups

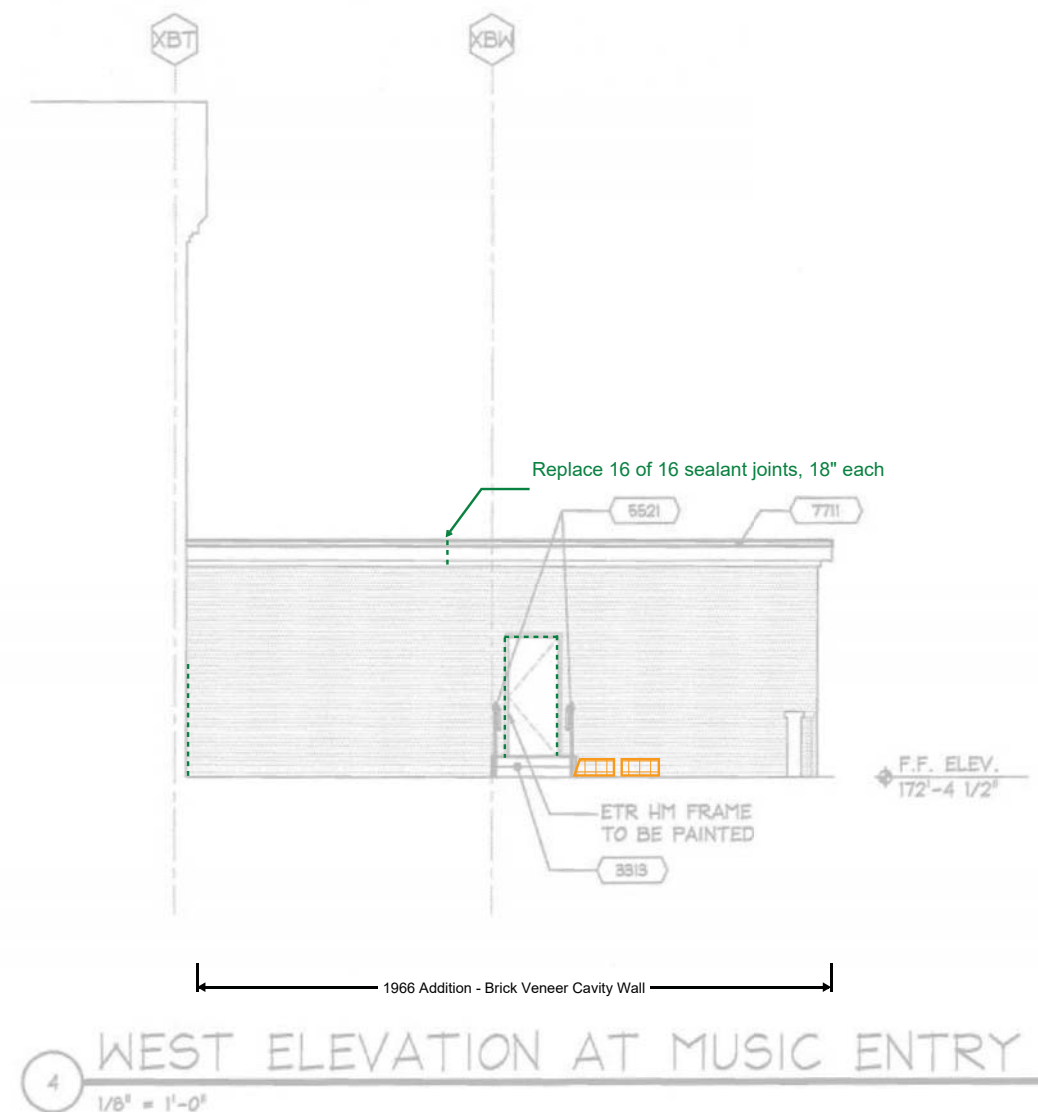
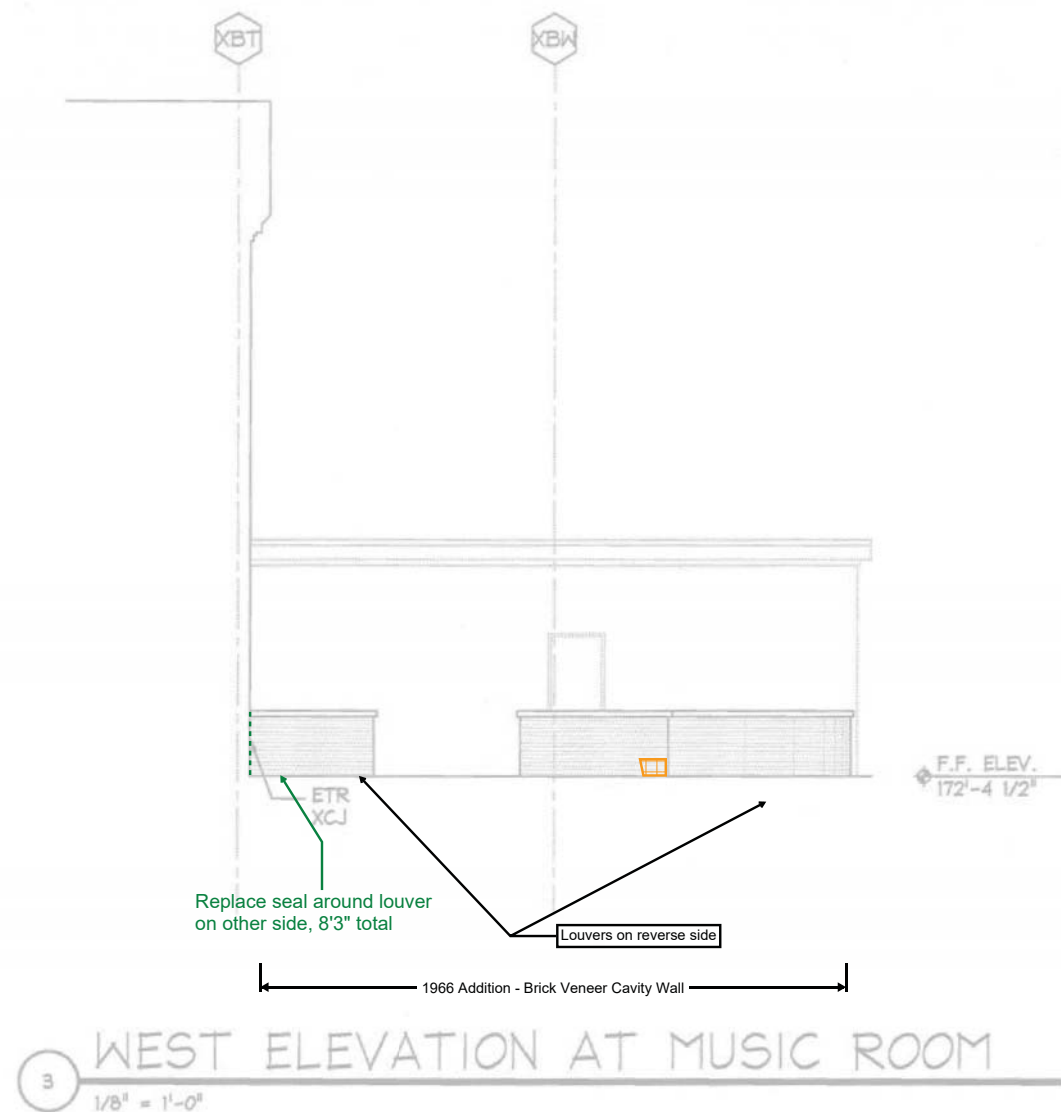
SHEET NO. 14 of 23
PROJECT NO. 181041.00 - FWMS
DATE 21 September 2018
BY SLD
CHECKED BY MSW/SAT

Legend

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Image Note

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Legend

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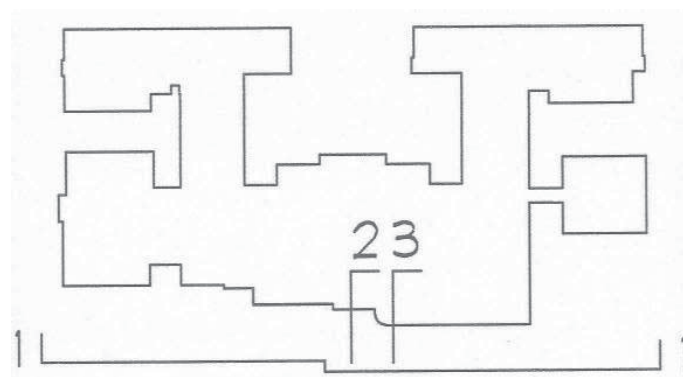
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Purple (solid) - Limestone mortar joint deterioration

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SUBJECT Appendix a - Elevation Mark-ups

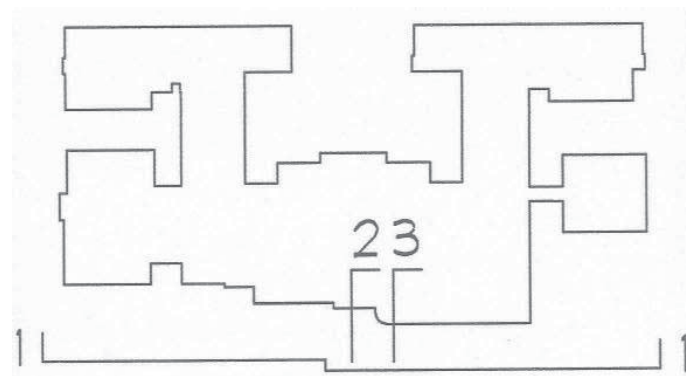
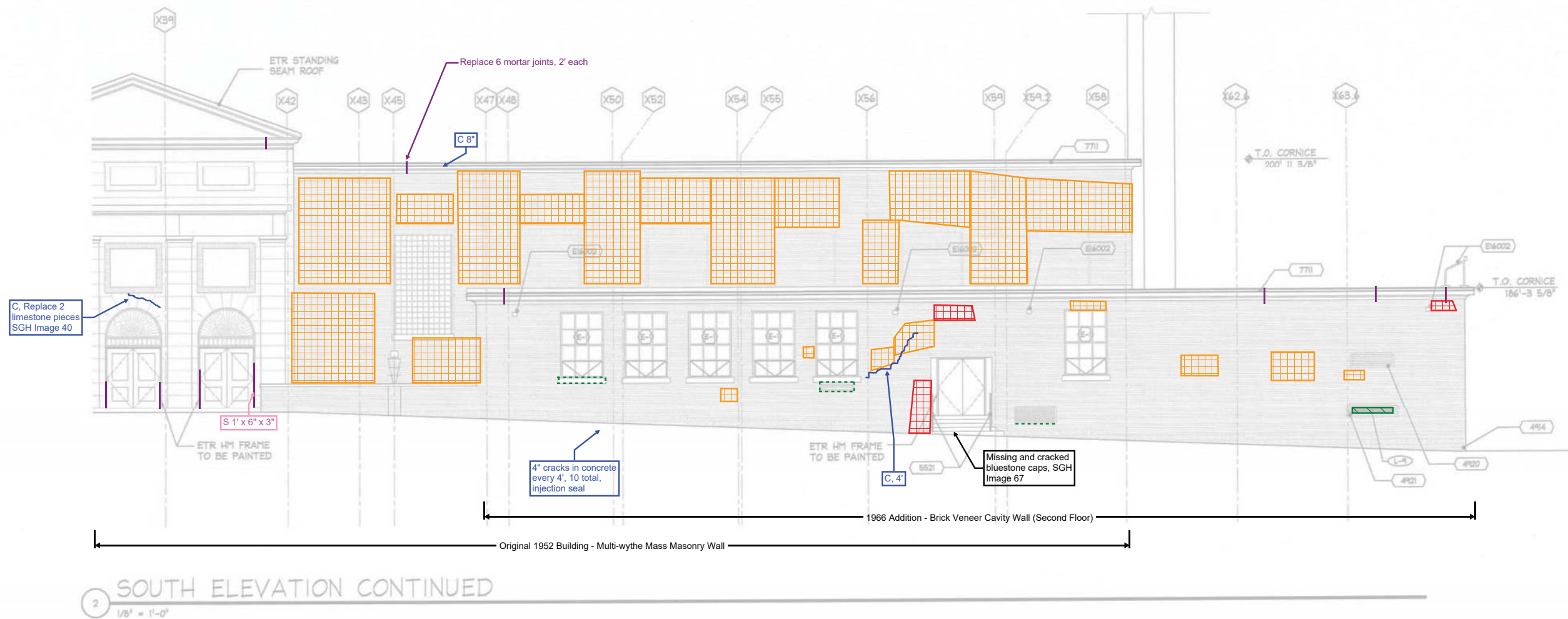
SHEET NO. 15 23

PROJECT NO. 181041.00 - FWMS

DATE 21 September 2018

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SUBJECT Appendix a - Elevation Mark-ups

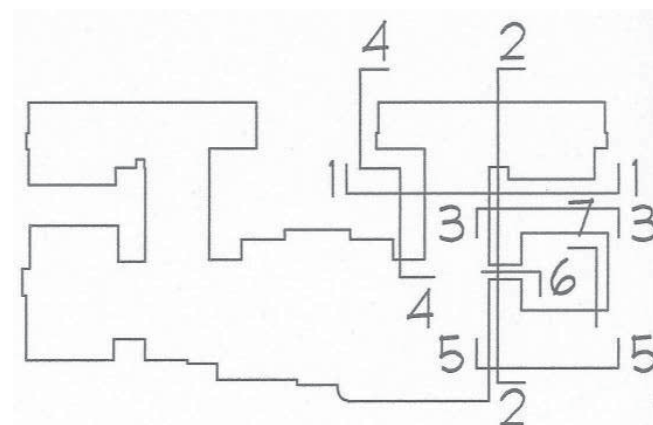
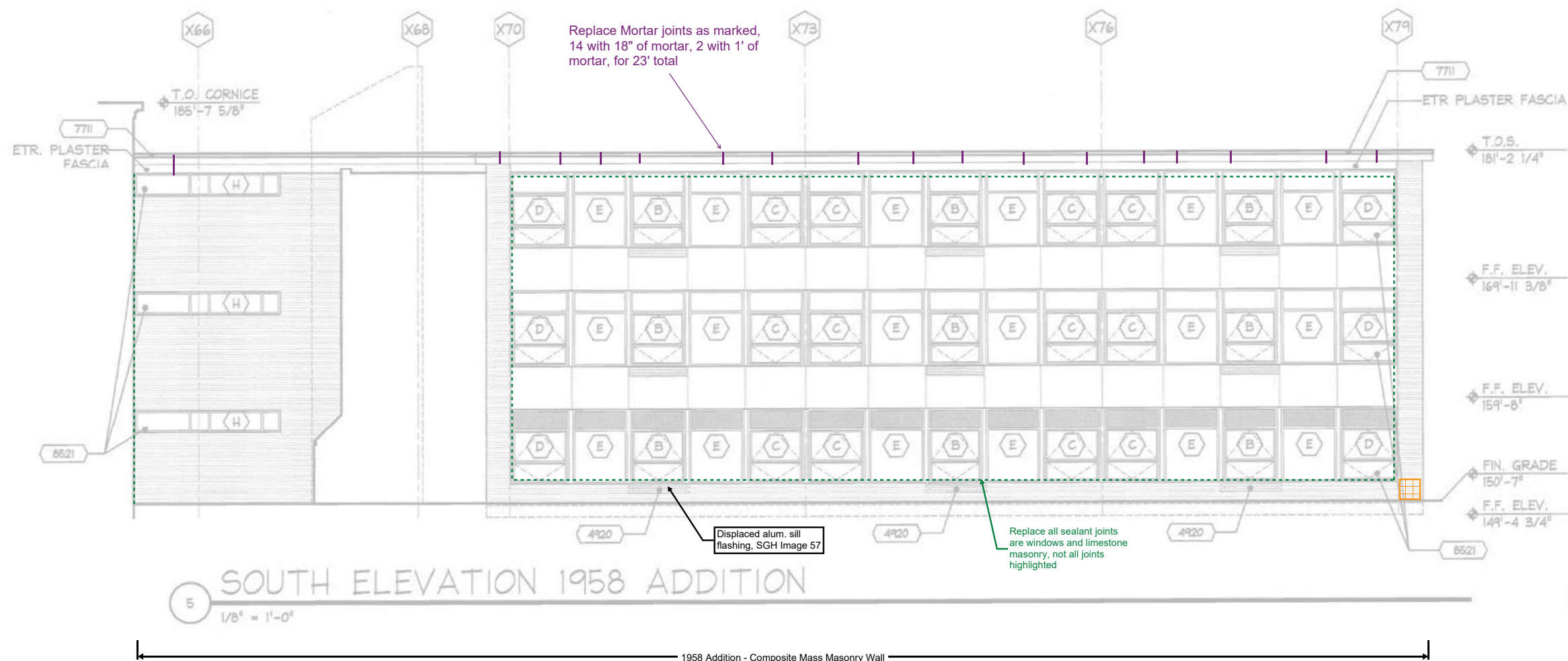
SHEET NO. 16 23
PROJECT NO. 181041.00 - FWMS
DATE 21 September 2018
BY SLD
CHECKED BY MSW/SAT

Legend

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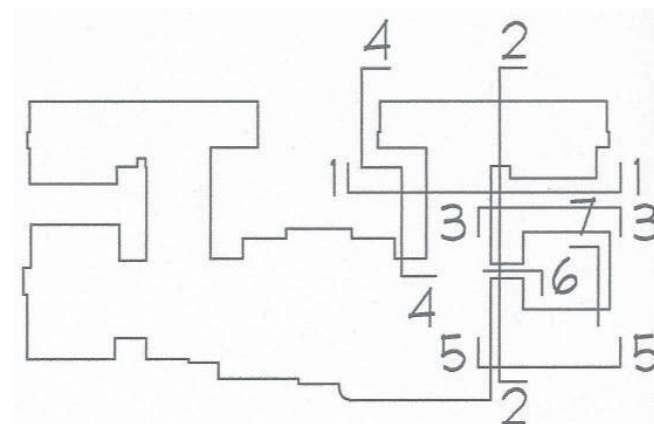
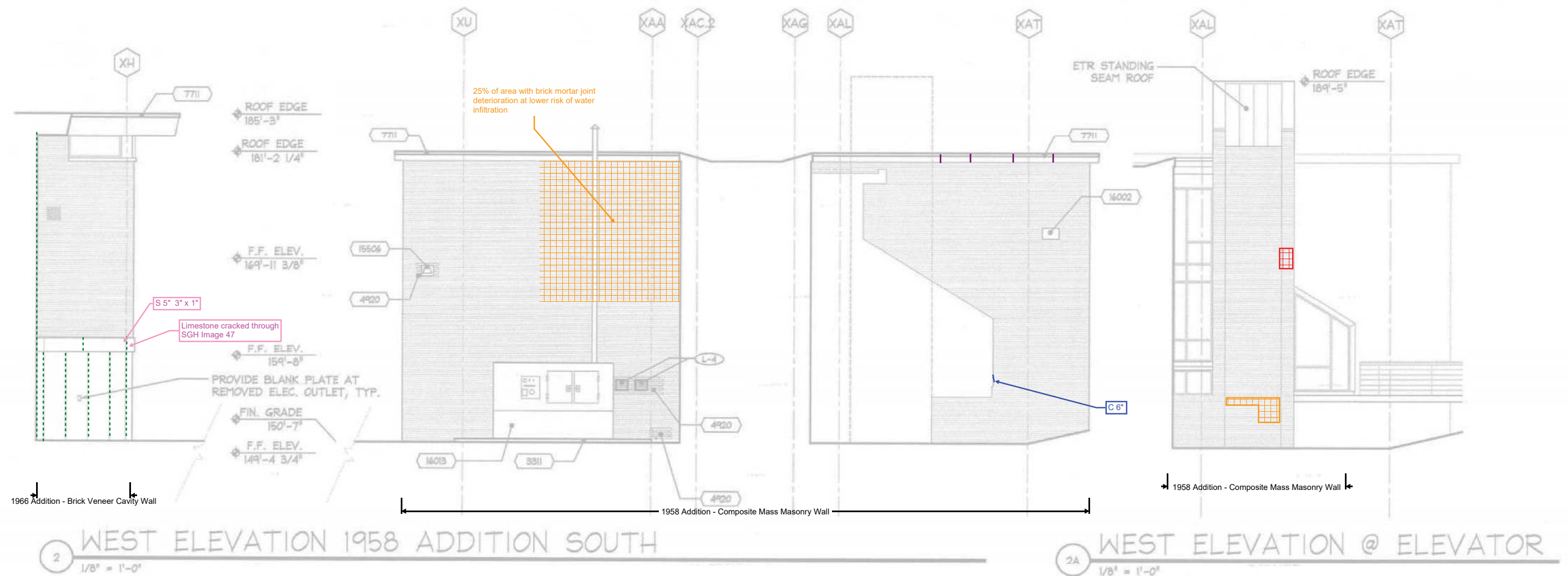
SHEET NO. 18 of 23
PROJECT NO. 181041.00 - FWMS
DATE 21 September 2018
BY SLD
CHECKED BY MSW/SAT

Legend

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- Black - Observation notes. See report.

Image Note

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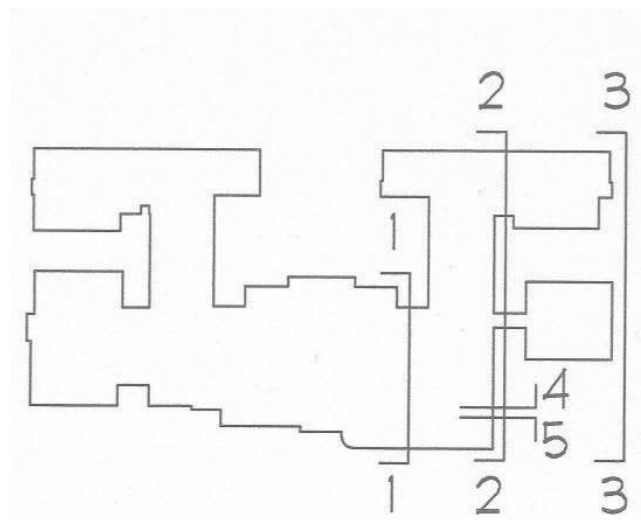
SHEET NO. 19 23
PROJECT NO. 181041.00 - FWMS
DATE 21 September 2018
BY SLD
CHECKED BY MSW/SAT

Legend

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PROJECT NO. 181041.00 - FWMS

DATE 21 September 2018

BY SLD

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Legend

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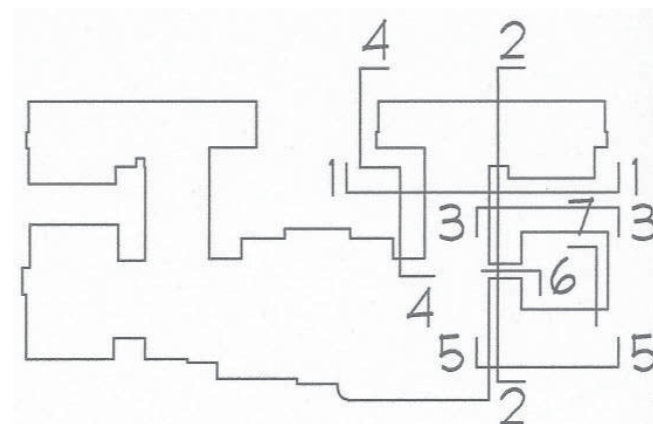
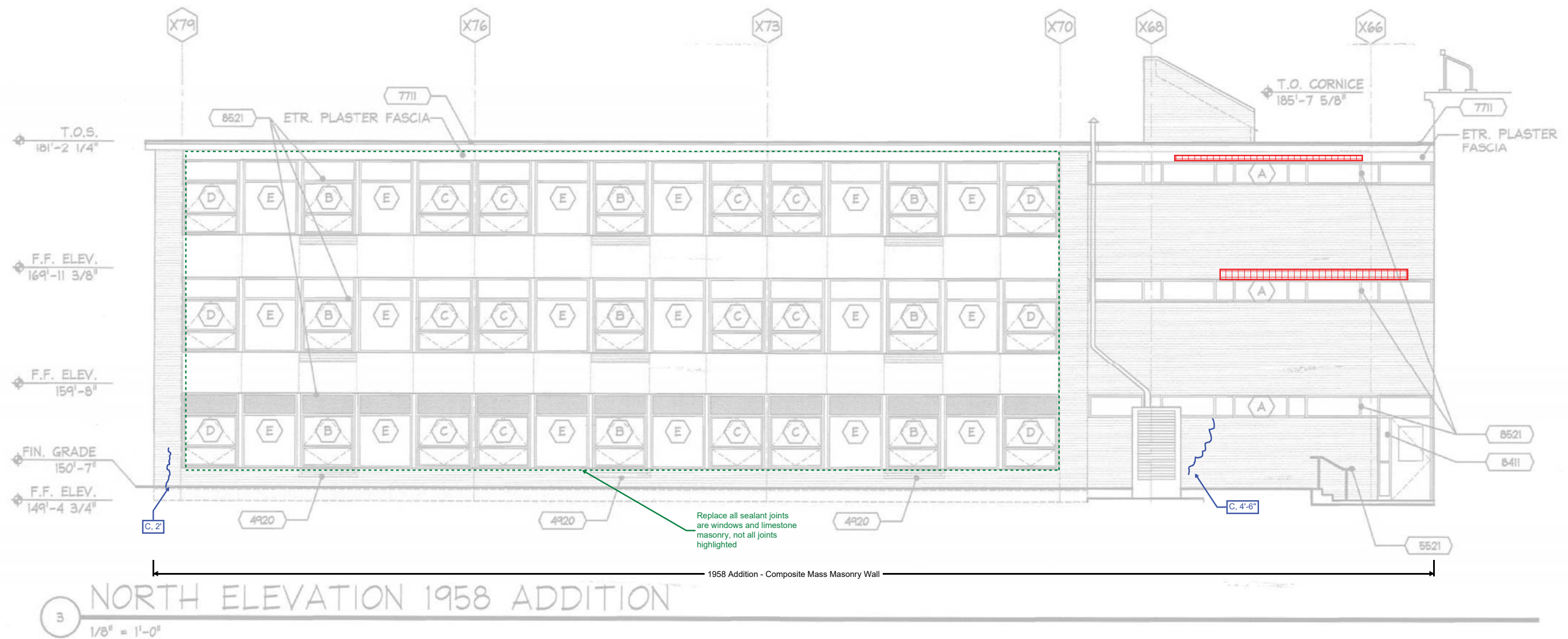
Pink (boxed) - Spalls or holes affecting 25 yr service life

Purple (solid) - Limestone mortar joint deterioration

Black - Observation notes. See report.

Image Note

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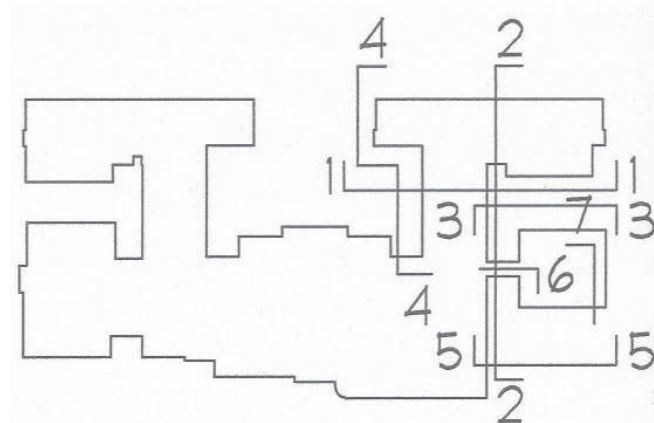
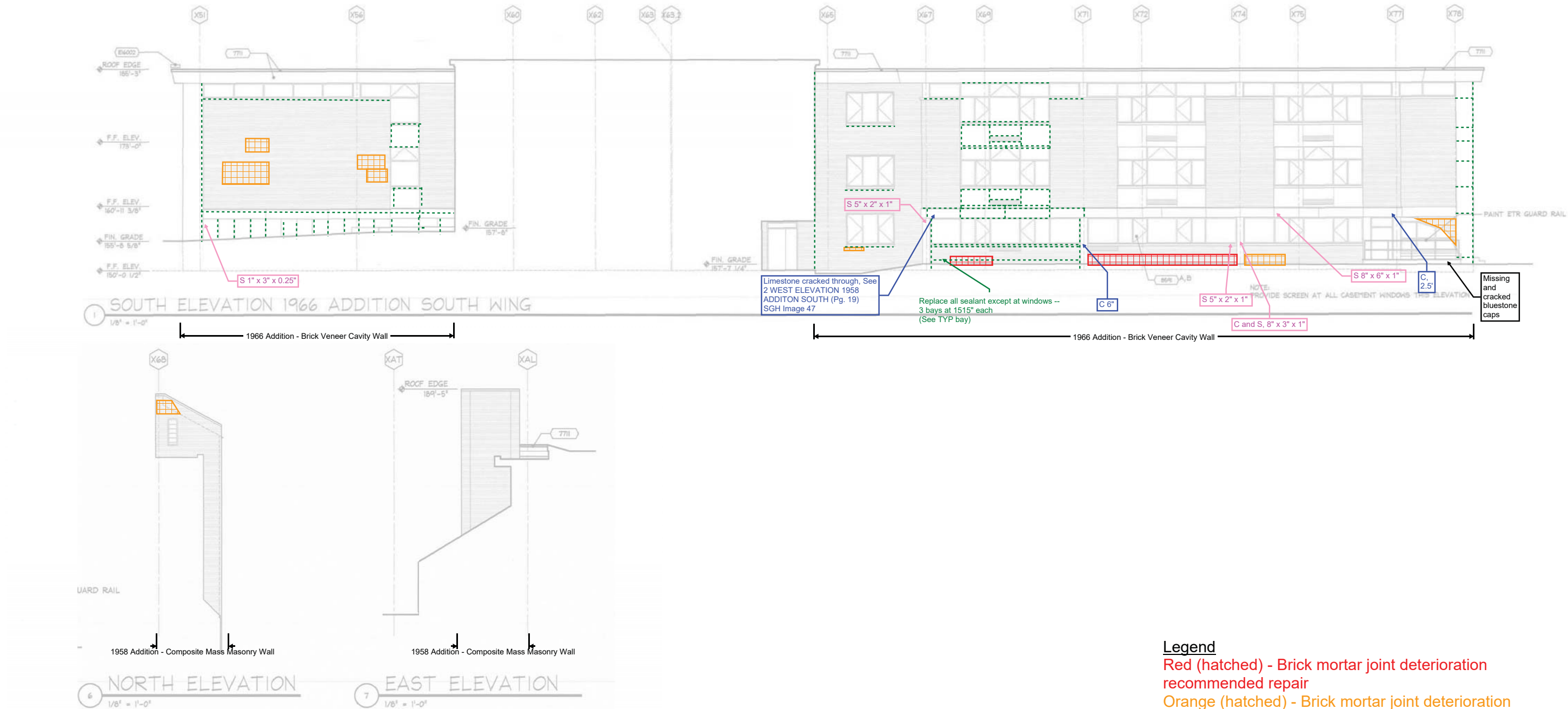
SHEET NO. 21 23
PROJECT NO. 181041.00 - FWMS
DATE 21 September 2018
BY SLD
CHECKED BY MSW/SAT

Legend

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SUBJECT Appendix a - Elevation Mark-ups

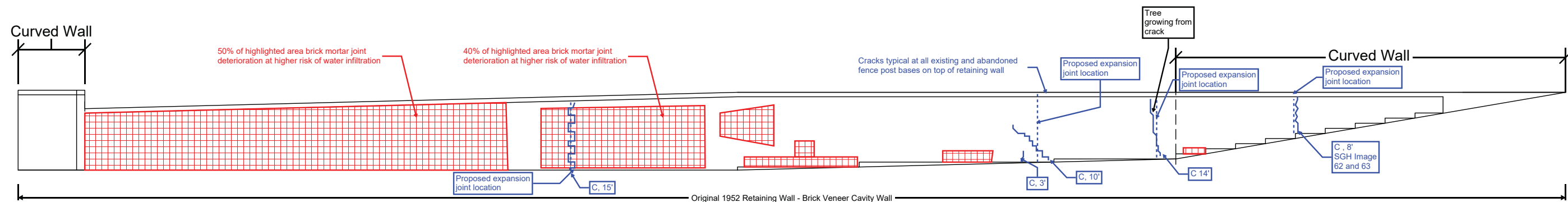
SHEET NO. 22 23
PROJECT NO. 181041.00 - FWMS
DATE 21 September 2018
BY SLD
CHECKED BY MSW/SAT

Legend

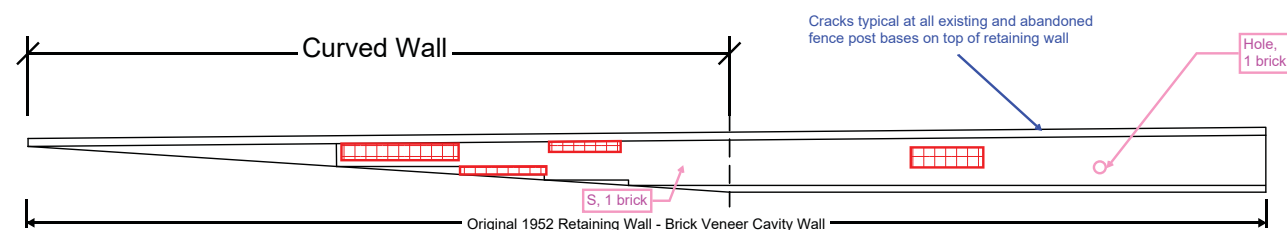
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Image Note

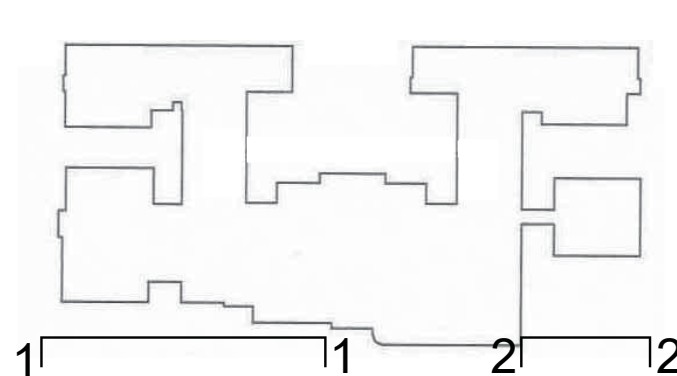
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1 West Retaining Wall North Elevation



2 East Retaining Wall North Elevation



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Engineering of Structures
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SUBJECT Appendix a - Elevation Mark-ups

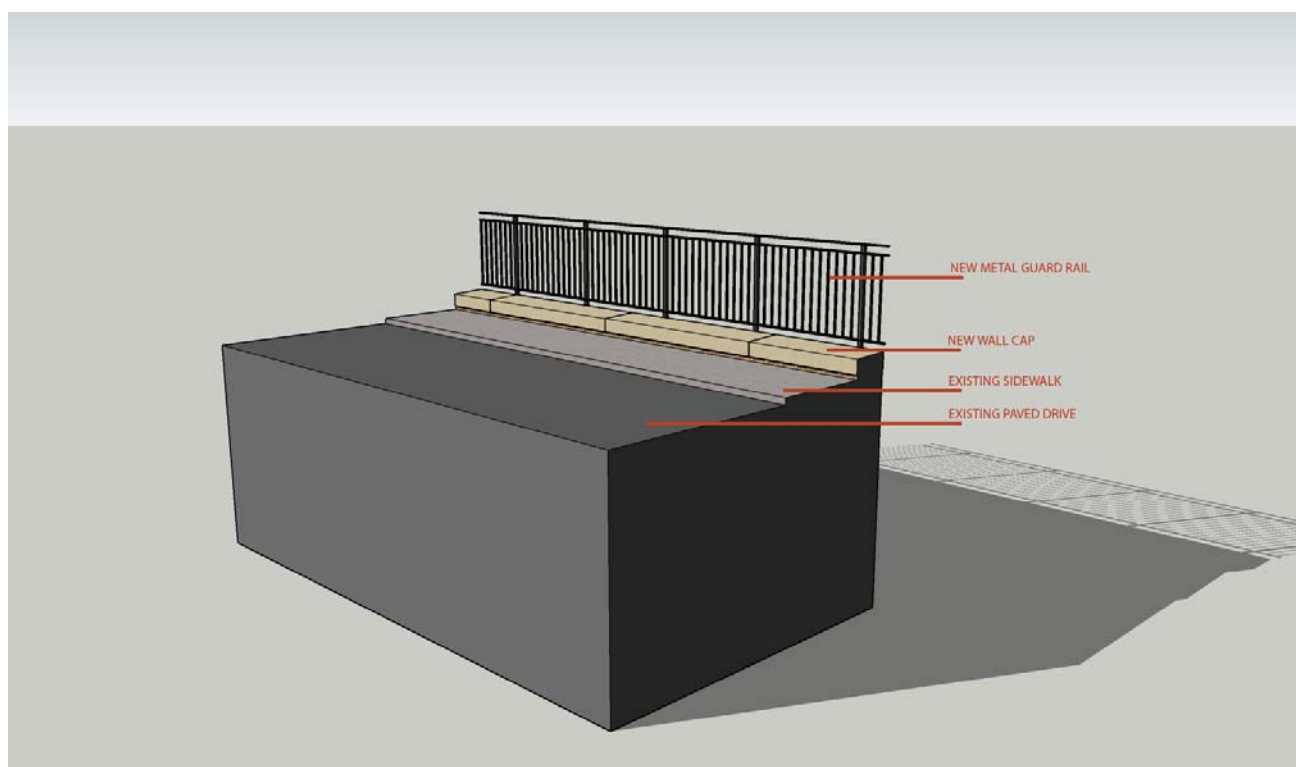
SHEET NO. 23 23
PROJECT NO. 181041.00 - FWMS
DATE 21 September 2018
BY MSW
CHECKED BY MSW/SAT

Legend

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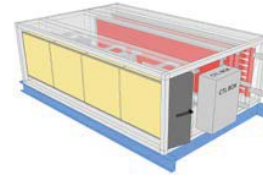
Guardrail - Retaining wall side



Guardrail - Sidewalk side

Proposed Guardrail

Job Information		Technical Data Sheet
Job Name	Wellesely School - Study	
Date	August 27 2018	
Submitted By	AJ	
Software Version	11.62	
Unit Tag	Gym A	



Unit Overview						
Model Number	Supply					
	Air Volume cfm	Static Pressure		External Dimensions		
		External inWc	Total inWc	Height in	Width in	Length in
CAH016GHCM	7200	0.50	1.36	34*	100*	66

*Not including base rails, coil connectors, drain connectors and control boxes.

Unit			
Model Number:	CAH016GHCM		
Approval:	ETL Listed / ETL Listed to Canadian Safety Standards (ETL Label / ETLc Label)		
Outer Panel:	Standard G90 Galvanized Steel (unpainted)		
Liner:	Galvanized Steel (unless noted per section)		
Insulation:	R-13 Injected Foam		
Sound Baffles:	Included in Fan, Plenum, Access and Manual section (unless noted per section)		
Unit Configuration:	Inline horizontal	Drive (Handling) Location:	Right
Base:	6" formed channel	Wall Thickness:	2 in
Altitude:	0 ft	Parts Warranty:	Standard One Year

Panel Filter		Component: 1		Length: 14 in		Shipping Section: 1	
Type	Efficiency	Face Velocity		Face Area	Air Volume		Filter Loading
Pleated	MERV 8	474 ft/min		15.2 ft²	7200 cfm		Side
Air Pressure Drop			Number of Filters	Height	Width	Depth	
Clean Air	Mean Air	Dirty Air					
0.25 inWc	0.62 inWc	1.00 inWc	4	24 in	24 in	4 in	
Door							
Location		Width			Opening		
Drive side		10 in			Outward		

Gym A

Vision® Air Handling Unit



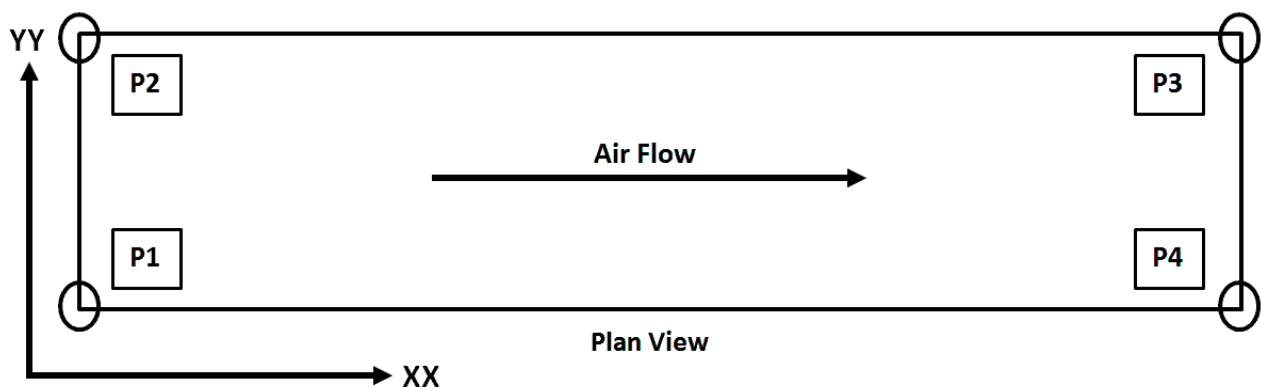
Supply Fan Array		Component: 2		Length: 28 in		Shipping Section: 1		
Fan Performance								
Air Volume*	Static Pressure			Brake Horsepower*	Speed		Fan Circuit	
	External	Total	Cabinet		Operating	Maximum	MOP	MCA
2400 cfm	0.50 inWc	1.36 inWc	0.00 inWc	0.83 BHP	2165 rpm	3230 rpm	15.0 A	13.3 A
Fan Data								
Fan Type	Blade Type / Class	Quantity of Fans	Wheel Diameter	Number of Blades	Discharge	Motor Location		
ECM / 1x3 : 3	Airfoil / N/A	3	13.98 in	5	Axial	Behind Fan		
Motor Data								
Power	Electrical Supply	Speed	Control Signal	Supplier	Lock Rotor Current*	Full Load Current*		
3.3 HP	460/60/3 V/Hz/Phase	3230 rpm	0-10V	EBM-Papst	4.1 A	4.1 A		
Fan Options								
Isolator Type:		Rigid						
VFD/Starter/Disconnect Data								
Selection Type:		Integrated Drive		Vendor:		Daikin Applied		
Auxiliary Control:		Disconnect w/ motor starter		Voltage:		460 v		
Disconnect Type:		Fused		Height x Width x Depth:		23.60 in x 15.75 in x 7.96 in		
Mounting:		Drive Side		Enclosure:		NEMA 3R		
Panel								
Location		Width			Opening			
Removable panels		- in			Outward			
Notes								
* after a unit label denotes the data for an individual fan.								

Steam Coil		Component: 3		Length: 12 in		Shipping Section: 1	
Coil Model	Total Capacity	Number of Coils	Number of Rows	Fins per Inch	Tube Diameter	Tube Spacing (Face x Row)	
5JA0601B	295869 Btu/hr	1	1	6	0.625 in	1.50 in x 1.299 in	
Air Volume	Air Temperature		Coil Air Pressure Drop	Finned Height	Finned Length	Face Area	Face Velocity
	Entering	Leaving					
	Dry Bulb	Dry Bulb					
7200 cfm	40.0 °F	77.6 °F	0.07 inWc	24 in	84 in	14.00 ft²	514 ft/min
Fluid					Max. Superheat Temp. in Steam Coil Inlet		
Steam Pressure		Condensate Load			30.0 °F		
2.00 psi		306.00 lb/hr					
Connection [Data Per Coil]					Min. Fin Surface Temp.	Min. Tube Wall Surface Temp.	
Type	Size	Location	Material				
Threaded	2.000 in	Drive side	Carbon steel		32.0 °F	32.0 °F	
Material							
Fin		Tube		Header		Case	
Aluminum .0075 in		Copper .020 in		Copper		Galvanized track	
AHRI 410 Certification							
 AHRI CERTIFIED www.ahridirectory.org Air-Cooling and Air-Heating Coils 410 Standard 410 Certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org							

Hot Water Coil		Component: 4		Length: 12 in		Shipping Section: 1	
Coil Model	Total Capacity	Number of Coils	Number of Rows	Fins per Inch	Tube Diameter	Tube Spacing (Face x Row)	
5WH0802B	392477 Btu/hr	1	2	8	0.625 in	1.50 in x 1.299	
Air Volume	Air Temperature		Coil Air Pressure Drop	Finned Height	Finned Length	Face Area	Face Velocity
	Entering	Leaving					
	Dry Bulb	Dry Bulb					
7200 cfm	40.0 °F	89.8 °F	0.17 inWc	24 in	84 in	14.00 ft²	514 ft/min
Water		Flow Rate	Pressure Drop	Velocity	Volume	Weight	
Entering	Leaving						
180.0 °F	140.1 °F	19.70 gpm	3.00 ftHd	2.60 ft/s	4.0 gal	39.00 lb	
Connection [Data Per Coil]				Min. Fin Surface Temp.	Min. Tube Wall Surface Temp.	Fouling Factor	
Type	Size	Location	Material				
Threaded	2.50 in	Drive side	Carbon steel	140.1 °F	140.1 °F	0.000	
Material							
Fin		Tube		Header		Case	
Aluminum .0075 in		Copper .020 in		Copper		Galv. steel	
AHRI 410 Certification							
Certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org							

Unit Sound Power (dB)								
Type	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
Radiated:	64	65	66	54	53	49	46	51
Unit Discharge:	68	73	82	73	73	75	73	65
Unit Return:	68	71	81	73	68	73	70	63

Shipping Section Details									
Section	Length in	Weight lb	Corner Weights (lb)				Center of Gravity (in)		
			P1	P2	P3	P4	XX	YY	ZZ
1	66	1413	354	330	353	376	34	48	19
Entire Unit	66	1413	0	0	0	0	34	48	19



NOTE: Special components aren't included in the corner weights and center of gravity data.



AHRI Certification

The air-handler is selected outside of the scope of AHRI 430

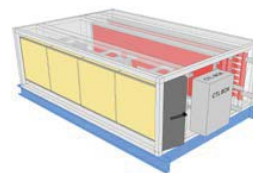
Notes

Standard
1. As a standalone component, unit meets or exceeds requirements of ASHRAE 90.1 - 2007. The approving authority is responsible for compliance of multi - component building systems.

Vision® Air Handling Unit



Job Information		Technical Data Sheet
Job Name	Wellesely School - Study	
Date	August 27 2018	
Submitted By	AJ	
Software Version	11.62	
Unit Tag	Gym A	



Unit Overview						
Model Number	Air Volume cfm	Supply				
		Static Pressure		External Dimensions		
		External inWc	Total inWc	Height in	Width in	Length in
CAH016GHCM	7200	0.50	1.36	34*	100*	66

*Not including base rails, coil connectors, drain connectors and control boxes.

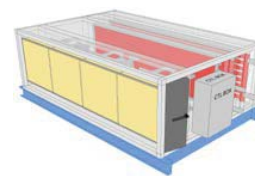
Unit			
Model Number:	CAH016GHCM		
Approval:	ETL Listed / ETL Listed to Canadian Safety Standards (ETL Label / ETLc Label)		
Outer Panel:	Standard G90 Galvanized Steel (unpainted)		
Liner:	Galvanized Steel (unless noted per section)		
Insulation:	R-13 Injected Foam		
Sound Baffles:	Included in Fan, Plenum, Access and Manual section (unless noted per section)		
Unit Configuration:	Inline horizontal	Drive (Handling) Location:	Right
Base:	6" formed channel	Wall Thickness:	2 in
Altitude:	0 ft	Parts Warranty:	Standard One Year

Gym A

Vision® Air Handling Unit



Job Information		Technical Data Sheet
Job Name	Wellesely School - Study	
Date	August 27 2018	
Submitted By	AJ	
Software Version	11.62	
Unit Tag	Gym A	



Unit Overview						
Model Number	Supply					
	Air Volume cfm	Static Pressure		External Dimensions		
		External inWc	Total inWc	Height in	Width in	Length in
CAH016GHCM	7200	0.50	1.36	34*	100*	66

*Not including base rails, coil connectors, drain connectors and control boxes.

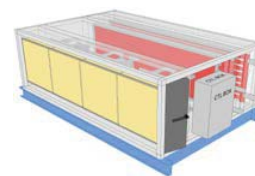
Unit			
Model Number:	CAH016GHCM		
Approval:	ETL Listed / ETL Listed to Canadian Safety Standards (ETL Label / ETLc Label)		
Outer Panel:	Standard G90 Galvanized Steel (unpainted)		
Liner:	Galvanized Steel (unless noted per section)		
Insulation:	R-13 Injected Foam		
Sound Baffles:	Included in Fan, Plenum, Access and Manual section (unless noted per section)		
Unit Configuration:	Inline horizontal	Drive (Handling) Location:	Right
Base:	6" formed channel	Wall Thickness:	2 in
Altitude:	0 ft	Parts Warranty:	Standard One Year

Gym A

Vision® Air Handling Unit



Job Information		Technical Data Sheet
Job Name	Wellesely School - Study	
Date	August 27 2018	
Submitted By	AJ	
Software Version	11.62	
Unit Tag	Gym A	



Unit Overview						
Model Number	Supply					
	Air Volume cfm	Static Pressure		External Dimensions		
		External inWc	Total inWc	Height in	Width in	Length in
CAH016GHCM	7200	0.50	1.36	34*	100*	66

*Not including base rails, coil connectors, drain connectors and control boxes.

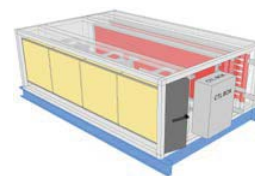
Unit			
Model Number:	CAH016GHCM		
Approval:	ETL Listed / ETL Listed to Canadian Safety Standards (ETL Label / ETLc Label)		
Outer Panel:	Standard G90 Galvanized Steel (unpainted)		
Liner:	Galvanized Steel (unless noted per section)		
Insulation:	R-13 Injected Foam		
Sound Baffles:	Included in Fan, Plenum, Access and Manual section (unless noted per section)		
Unit Configuration:	Inline horizontal	Drive (Handling) Location:	Right
Base:	6" formed channel	Wall Thickness:	2 in
Altitude:	0 ft	Parts Warranty:	Standard One Year

Gym A

Vision® Air Handling Unit



Job Information		Technical Data Sheet
Job Name	Wellesely School - Study	
Date	August 27 2018	
Submitted By	AJ	
Software Version	11.62	
Unit Tag	Gym A	



Unit Overview						
Model Number	Supply					
	Air Volume cfm	Static Pressure		External Dimensions		
		External inWc	Total inWc	Height in	Width in	Length in
CAH016GHCM	7200	0.50	1.36	34*	100*	66

**Not including base rails, coil connectors, drain connectors and control boxes.*

Unit			
Model Number:	CAH016GHCM		
Approval:	ETL Listed / ETL Listed to Canadian Safety Standards (ETL Label / ETLc Label)		
Outer Panel:	Standard G90 Galvanized Steel (unpainted)		
Liner:	Galvanized Steel (unless noted per section)		
Insulation:	R-13 Injected Foam		
Sound Baffles:	Included in Fan, Plenum, Access and Manual section (unless noted per section)		
Unit Configuration:	Inline horizontal	Drive (Handling) Location:	Right
Base:	6" formed channel	Wall Thickness:	2 in
Altitude:	0 ft	Parts Warranty:	Standard One Year

Gym A

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Blower Coil



Job Information		Technical Data Sheet
Job Name	Wellesely School - Study	
Date	8/27/2018	
Submitted By	Ann Marie Juliano	
Software Version	01.70	
Unit Tag	Gym B	



Unit Overview				
Model Number	Voltage V/Hz/Phase	Airflow CFM	External Static Pressure inH ₂ O	Design Cooling Capacity Btu/hr
BCHD0401	460/60/3	3600	0.50	72020

Unit	
Model Number:	BCHD0401
Unit Arrangement:	Horizontal
Altitude:	0 ft

Physical			
Dimensions and Weight			
Length	Height	Width	Weight
41.0 in	30.0 in	54.0 in	793 lb
Construction			
Insulation and Liners:	1" Injected Foam, R-6, Galvanized Steel Liner		

Electrical			
Field Connection	MCA	MROPD	SCCR
Toggle Disconnect Switch	7.8	15	5 kA

Filter			
Filter Access	Filter Depth	MERV Rating	(Quantity) Height x Width x Depth
Side	2 in	MERV 8	(2) 29.75 x 24.5

Primary Hydronic Coil					
Physical					
Fins per Inch	Rows	Casing Material	Face Area ft²	Face Velocity ft/min	
12	2	Galvanized Steel	8.0	448.1	
Connection					
Size		Type	Location		
1.12		Sweat	Right Hand		
Drain Pan					
Material			Connection		
Primary Drain Pan		Secondary Drain Pan			
Stainless Steel		Stainless Steel		0.75 in	
Performance					
Capacity		Air Temperature			
Total Btu/hr	Sensible Btu/hr	Entering		Leaving	
		Dry Bulb °F	Wet Bulb °F	Dry Bulb °F	Wet Bulb °F
72020	65754	80.0	67.0	63.3	60.9
Fluid					
Type	Entering Temperature °F	Leaving Temperature °F	Flow Rate gpm	Pressure Drop ft H ₂ O	
Water	45.0	55.0	14.4	4.50	

Secondary Hydronic Coil				
Physical				
Fins per Inch	Rows	Casing Material	Face Area ft²	Face Velocity ft/min
12	1	Galvanized Steel	8.0	448.1
Connection				
Size		Type	Location	
0.62			Right Hand	
Performance				
Total Btu/hr		Air Temperature		
		Dry Bulb °F		Dry Bulb °F
155257		55.0		94.4
Fluid				
Type	Entering Temperature °F	Leaving Temperature °F	Flow Rate gpm	Pressure Drop ft H₂O
Water	180.0	140.0	8.0	5.79

Fan Section					
Performance					
Airflow	Total Static Pressure	Fan Speed	Controller Input Signal	Brake Horsepower	Altitude
3600 CFM	1.40 inH ₂ O	1048 rpm	5.8 VDC	1.59 HP	0 ft
Motor					
Type	Horsepower	Motor Control		FLA	
Premium Efficiency	5 hp	0-10V Modulating		6.2 A	

Unit Discharge Conditions

AirTemperature			
Motor Heat Btu/hr	Unit Leaving Dry Bulb °F	Unit Leaving Wet Bulb °F	Unit Leaving Dewpoint °F
5329	64.7	61.3	59.4

Internal Pressure Drop Calculation

External Static Pressure:	0.50 inH ₂ O
Filter:	0.16 inH ₂ O
Second Filter:	0.33 inH ₂ O
Chilled Water Coil:	0.20 inH ₂ O
Hot Water Heat:	0.10 inH ₂ O
Discharge Plenum:	0.11 inH ₂ O
Total Static Pressure:	1.40 inH ₂ O

Sound Power

Sound Power (db)								
Frequency	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Inlet	82	83	73	72	72	67	65	54
Discharge	89	87	76	75	68	67	61	52
Radiated	70	70	58	55	57	58	42	30

Options

Controls	
Freezestat:	Factory mounted Freezestat

Warranty

Parts:	Standard warranty

AHRI Certification



All equipment is rated and certified in accordance with AHRI 430.

Notes

Blower Coil



Job Information		Technical Data Sheet
Job Name	Wellesely School - Study	
Date	8/27/2018	
Submitted By	Ann Marie Juliano	
Software Version	01.70	
Unit Tag	Gym B	



Unit Overview				
Model Number	Voltage V/Hz/Phase	Airflow CFM	External Static Pressure inH ₂ O	Design Cooling Capacity Btu/hr
BCHD0401	460/60/3	3600	0.50	72020

Unit	
Model Number:	BCHD0401
Unit Arrangement:	Horizontal
Altitude:	0 ft

Physical			
Dimensions and Weight			
Length	Height	Width	Weight
41.0 in	30.0 in	54.0 in	793 lb
Construction			
Insulation and Liners:	1" Injected Foam, R-6, Galvanized Steel Liner		

Electrical			
Field Connection	MCA	MROPD	SCCR
Toggle Disconnect Switch	7.8	15	5 kA

Filter			
Filter Access	Filter Depth	MERV Rating	(Quantity) Height x Width x Depth
Side	2 in	MERV 8	(2) 29.75 x 24.5

Gym B

Blower Coil



Job Information		Technical Data Sheet
Job Name	Wellesely School - Study	
Date	8/27/2018	
Submitted By	Ann Marie Juliano	
Software Version	01.70	
Unit Tag	Gym B	



Unit Overview				
Model Number	Voltage V/Hz/Phase	Airflow CFM	External Static Pressure inH ₂ O	Design Cooling Capacity Btu/hr
BCHD0401	460/60/3	3600	0.50	72020

Unit	
Model Number:	BCHD0401
Unit Arrangement:	Horizontal
Altitude:	0 ft

Physical			
Dimensions and Weight			
Length	Height	Width	Weight
41.0 in	30.0 in	54.0 in	793 lb
Construction			
Insulation and Liners:	1" Injected Foam, R-6, Galvanized Steel Liner		

Electrical			
Field Connection	MCA	MROPD	SCCR
Toggle Disconnect Switch	7.8	15	5 kA

Filter			
Filter Access	Filter Depth	MERV Rating	(Quantity) Height x Width x Depth
Side	2 in	MERV 8	(2) 29.75 x 24.5

Blower Coil



Job Information		Technical Data Sheet
Job Name	Wellesely School - Study	
Date	8/27/2018	
Submitted By	Ann Marie Juliano	
Software Version	01.70	
Unit Tag	Gym B	



Unit Overview				
Model Number	Voltage V/Hz/Phase	Airflow CFM	External Static Pressure inH ₂ O	Design Cooling Capacity Btu/hr
BCHD0401	460/60/3	3600	0.50	72020

Unit	
Model Number:	BCHD0401
Unit Arrangement:	Horizontal
Altitude:	0 ft

Physical			
Dimensions and Weight			
Length	Height	Width	Weight
41.0 in	30.0 in	54.0 in	793 lb
Construction			
Insulation and Liners:	1" Injected Foam, R-6, Galvanized Steel Liner		

Electrical			
Field Connection	MCA	MROPD	SCCR

Gym B

Blower Coil



Job Information		Technical Data Sheet
Job Name	Wellesely School - Study	
Date	8/27/2018	
Submitted By	Ann Marie Juliano	
Software Version	01.70	
Unit Tag	Gym B	



Unit Overview				
Model Number	Voltage V/Hz/Phase	Airflow CFM	External Static Pressure inH ₂ O	Design Cooling Capacity Btu/hr
BCHD0401	460/60/3	3600	0.50	72020

Unit	
Model Number:	BCHD0401
Unit Arrangement:	Horizontal
Altitude:	0 ft

Physical			
Dimensions and Weight			
Length	Height	Width	Weight
41.0 in	30.0 in	54.0 in	793 lb
Construction			
Insulation and Liners:	1" Injected Foam, R-6, Galvanized Steel Liner		

Electrical			
Field Connection	MCA	MROPD	SCCR
Toggle Disconnect Switch	7.8	15	5 kA

Filter			
Filter Access	Filter Depth	MERV Rating	(Quantity) Height x Width x Depth
Side	2 in	MERV 8	(2) 29.75 x 24.5

Blower Coil



Job Information		Technical Data Sheet
Job Name	Wellesely School - Study	
Date	8/27/2018	
Submitted By	Ann Marie Juliano	
Software Version	01.70	
Unit Tag	Gym B	



Unit Overview				
Model Number	Voltage V/Hz/Phase	Airflow CFM	External Static Pressure inH ₂ O	Design Cooling Capacity Btu/hr
BCHD0401	460/60/3	3600	0.50	72020

Unit	
Model Number:	BCHD0401
Unit Arrangement:	Horizontal
Altitude:	0 ft

Physical			
Dimensions and Weight			
Length	Height	Width	Weight
41.0 in	30.0 in	54.0 in	793 lb
Construction			
Insulation and Liners:	1" Injected Foam, R-6, Galvanized Steel Liner		

Electrical			
Field Connection	MCA	MROPD	SCCR

Gym B

Blower Coil



Job Information		Technical Data Sheet
Job Name	Wellesely School - Study	
Date	8/27/2018	
Submitted By	Ann Marie Juliano	
Software Version	01.70	
Unit Tag	Gym B	



Unit Overview				
Model Number	Voltage V/Hz/Phase	Airflow CFM	External Static Pressure inH ₂ O	Design Cooling Capacity Btu/hr
BCHD0401	460/60/3	3600	0.50	72020

Unit	
Model Number:	BCHD0401
Unit Arrangement:	Horizontal
Altitude:	0 ft

Physical			
Dimensions and Weight			
Length	Height	Width	Weight
41.0 in	30.0 in	54.0 in	793 lb
Construction			
Insulation and Liners:	1" Injected Foam, R-6, Galvanized Steel Liner		

Electrical			
Field Connection	MCA	MROPD	SCCR
Toggle Disconnect Switch	7.8	15	5 kA

Filter			
Filter Access	Filter Depth	MERV Rating	(Quantity) Height x Width x Depth
Side	2 in	MERV 8	(2) 29.75 x 24.5

Blower Coil



Job Information		Technical Data Sheet
Job Name	Wellesely School - Study	
Date	8/27/2018	
Submitted By	Ann Marie Juliano	
Software Version	01.70	
Unit Tag	Gym B	



Unit Overview				
Model Number	Voltage V/Hz/Phase	Airflow CFM	External Static Pressure inH ₂ O	Design Cooling Capacity Btu/hr
BCHD0401	460/60/3	3600	0.50	72020

Unit	
Model Number:	BCHD0401
Unit Arrangement:	Horizontal
Altitude:	0 ft

Physical			
Dimensions and Weight			
Length	Height	Width	Weight
41.0 in	30.0 in	54.0 in	793 lb
Construction			
Insulation and Liners:	1" Injected Foam, R-6, Galvanized Steel Liner		

Electrical			
Field Connection	MCA	MROPD	SCCR

Gym B

Blower Coil



Job Information		Technical Data Sheet
Job Name	Wellesely School - Study	
Date	8/27/2018	
Submitted By	Ann Marie Juliano	
Software Version	01.70	
Unit Tag	Gym B	

Unit Overview				
Model Number	Voltage V/Hz/Phase	Airflow CFM	External Static Pressure inH ₂ O	Design Cooling Capacity Btu/hr
BCHD0401	460/60/3	3600	0.50	72020

Unit	
Model Number:	BCHD0401
Unit Arrangement:	Horizontal
Altitude:	0 ft

Physical			
Dimensions and Weight			
Length	Height	Width	Weight
41.0 in	30.0 in	54.0 in	793 lb
Construction			
Insulation and Liners:	1" Injected Foam, R-6, Galvanized Steel Liner		

Electrical			
Field Connection	MCA	MROPD	SCCR
Toggle Disconnect Switch	7.8	15	5 kA

Filter			
Filter Access	Filter Depth	MERV Rating	(Quantity) Height x Width x Depth
Side	2 in	MERV 8	(2) 29.75 x 24.5

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Job Information Technical Data Sheet

Job Name	Wellesley MS
Date	September 10 2018
Submitted By	AMJ
Software Version	11.62
Unit Tag	Aud

Unit Overview

Model Number	Air Volume cfm	Supply				
		Static Pressure		External Dimensions		
		External inWc	Total inWc	Height in	Width in	Length in
CAH028GDGM	12000	1.50	4.75	68*	80*	84**

*Not including base rails, coil connectors, drain connectors and control boxes.

** Total lower deck length

Unit

Model Number:	CAH028GBAM					
Approval:	ETL Listed / ETL Listed to Canadian Safety Standards (ETL Label / ETLc Label)					
Outer Panel:	Standard G90 Galvanized Steel (unpainted)					
Liner:	Galvanized Steel (unless noted per section)					
Insulation:	R-13 Injected Foam					
Unit Configuration:	Stacked/ vertical	Drive (Handling) Location:		Right		
Base:	6" formed channel	Wall Thickness:		2 in		
Altitude:	0 ft	Parts Warranty:		Standard One Year		

Mixing Box	Component: 1	Length: 42 in	Shipping Section: 1

Air Pressure Drop

0.30 inWc

Custom Openings

Custom Opening	Location	Width	Height	Rainhood w/ Screen
1	Bottom	76 in	38 in	None
Custom Damper	Damper			
	Damper Type	Location	Size (Width x Height)	Material
			Overall Opening	
1	Ultra Low Leak	Top	76in x 26 in 66in x 22in	Glav Steel Parallel None
2	Ultra Low Leak	End	76in x 26 in 66in x 22in	Glav Steel Parallel None

Combination Filter	Component: 2	Shipping Section: 1

Access	Face Velocity	Face Area	Air Volume
Side	500 ft/min	24.0 ft²	12000 cfm

Portion	Type	Efficiency	Air Pressure Drop			Number of Filters	Height	Width	Depth
			Clean Air	Mean Air	Dirty Air				
Pre-Filter	Pre Pleat	MERV 13	0.14 inWc	0.57 inWc	1.00 inWc	6	24 in	24 in	2 in
Filter	Pre Pleat	MERV 13	0.14 inWc	0.57 inWc	1.00 inWc	6	24 in	24 in	4 in

Door

Location	Width	Opening
Drive side	12 in	Outward

Supply Fans	Component: 4	Length: 42 in	Shipping Section:2

Fan Performance								
Air Volume*	Static Pressure			Total Brake Horsepower*	Speed		Fan Circuit	
	External	Total			Operating	Maximum	MOP	MCA
12000cfm	1.50 inWc	4.75 inWc		15.1 BHP	2199 rpm	2460 rpm	30.0 A	26.4 A

Fan Data								
Fan Type	Blade Type / Class	Quantity of Fans	Wheel Diameter		Number of Blades	Discharge	Motor Location	
ECM	Airfoil	3	450 mm		7	Axial	Direct Drive	

Motor Data									
Power	Electrical Supply	Max Current	Motor	Supplier	Speed Control Signal	Aux Control	Disconnect	Starter	
5.2 kW 7.0 HP	460/60/3 V/Hz/Phase	8.1 Amps Ea	EC Type	Generic	0-1 VDC	Alarm Relay	Non-Fused Thru Door	Integral to Motor	

Door			
Location	Width	Door Height	Opening
Drive side	30 in	Full	Outward

Direct Expansion Coil	Component: 3	Length: 42 in	Shipping Section: 3

Coil Model	Total Capacity	Sensible Capacity	Number of Coils	Number of Rows	Fins per Inch	Tube Diameter	Tube Spacing (Face x Row)
5EJ1006B	502527 Btu/hr	331111 Btu/hr	2	6	10	0.625 in	1.50 in x 1.299 in

Air Volume	Air Temperature				Coil Air Pressure Drop	Finned Height	Finned Length	Face Area	Face Velocity
	Entering		Leaving						
	Dry Bulb	Wet Bulb	Dry Bulb	Wet Bulb					
12000 cfm	80.0 °F	67.0 °F	54.8 °F	53.3 °F	0.78 insWg	27 in	67 in	25.13 ft²	478 ft/min

Fluid		Sub-Cooled Refrigerant Liquid Temp.	Suction Vapor Superheat Temp. at Coil Outlet	Design Saturated Condensing Temp.	Total Refrigerant Weight
Suction Temp.	Refrigerant				
44.0 °F	R410a	110.0 °F	8.0 °F	110.0 °F	78.0 lb

Connection [Data Per Coil]					Min. Fin Surface Temp.	Min. Tube Wall Surface Temp.
Type	Liquid [Qty - Size]	Suction [Qty - Size]	Location	Material		
OD Sweat	2-1.13 in	2-1.63 in	Drive side	Copper tube	32.0 °F	32.0 °F

Material				Drain Pan	Drain Side
Fin	Tube	Header	Case		
Aluminum .0075 in	Copper .020 in	Copper	Galv. steel	Stainless steel	Drive side

AHRI 410 Certification		
Coil is NOT certified by AHRI		
Location	Door	Opening
Drive Side	Width	
	20 in	
		Outward

Hot Water Coil		Component: 6		Length: 14 in		Shipping Section: 4	
Coil Model	Total Capacity	Number of Coils	Number of Rows	Fins per Inch	Tube Diameter	Tube Spacing (Face x Row)	
5WL00804B	1285363 Btu/hr	1	4	8	0.625 in	1.50 in x 1.299 in	
Air Volume	Air Temperature		Coil Air Pressure Drop	Finned Height	Finned Length	Face Area	Face Velocity
	Entering	Leaving					
	Dry Bulb	Dry Bulb					
12000 cfm	-5.0 °F	93.0 °F	0.74 inWc	33 in	64.50 in	14.78	661 ft/min
Water		Flow Rate	Pressure Drop	Velocity	Volume	Weight	
Entering	Leaving						
180.0 °F	140.0 °F	64.30 gpm	5.6 ftHd	5.30 ft/s	8.0 gal	71.00 lb	
Connection [Data Per Coil]				Min. Fin Surface Temp.	Min. Tube Wall Surface Temp.	Fouling Factor	
Type	Size	Location	Material				
Threaded	2.50 in	Drive side	Carbon steel	141.3 °F	141.3 °F	0.000	
Material							
Fin		Tube		Header		Case	
Aluminum .0075 in		Copper .020 in		Copper		Galv. steel	

Steam Coil		Component: 7			Shipping Section: 4		
Coil Model	Total Capacity	Number of Coils	Number of Rows	Fins per Inch	Tube Diameter	Tube Spacing (Face x Row)	
5SA0902C	1313951	1	1	9	0.625 in	1.50 in x 1.299 in	
Air Volume	Air Temperature		Coil Air Pressure Drop	Finned Height	Finned Length	Face Area	Face Velocity
	Entering	Leaving					
	Dry Bulb	Dry Bulb					
12000 cfm	-5.0 °F	95.1 °F	0.68 inWc	33 in	64.50 in	14.8 ft²	811.8 ft/min
Fluid					Max. Superheat Temp. in Steam Coil Inlet		
Steam Pressure		Condensate Load					
2.00 psi		1359.00 lb/hr			30.0 °F		
Connection [Data Per Coil]					Min. Fin Surface Temp.	Min. Tube Wall Surface Temp.	
Type	Size	Location	Material				
Threaded	2.500 in	Drive side	Carbon steel	32.0 °F	32.0 °F		
Material							
Fin	Tube		Header		Case		
Aluminum .0075 in	Copper .020 in		Copper		Galvanized track		
AHRI 410 Certification							
 Certified in accordance with the AHRI Forced-Circulation Air-Cooling and Air-Heating Coils Certification Program which is based on AHRI Standard 410 within the Range of Standard Rating Conditions listed in Table 1 of the Standard. Certified units may be found in the AHRI Directory at www.ahridirectory.org							

Unit Overview						
Model Number	Supply					
	Air Volume cfm	Static Pressure		External Dimensions		
		External inWc	Total inWc	Height in	Width in	Length in
CAH028GDGM	12000	1.50	4.75	68*	80*	84**
*Not including base rails, coil connectors, drain connectors and control boxes.						
** Total lower deck length						

Mixing Box	Component: 1	Length: 42 in	Shipping Section: 1				
Air Pressure Drop							
0.30 inWc							
Custom Openings							
Custom Opening	Location	Width	Height	Rainhood w/ Screen			
1	Bottom	76 in	38 in	None			
Custom Damper	Damper		Material	Blade Action	Rainhood w/ Screen		
	Damper Type	Location				Size (Width x Height)	
						Overall	Opening
1	Ultra Low Leak	Top	76in x 26 in	66in x 22in	Glav Steel	Parallel	None
2	Ultra Low Leak	End	76in x 26 in	66in x 22in	Glav Steel	Parallel	None

www.DaikinApplied.com

Job Information		Technical Data Sheet
Job Name	Wellesley MS	
Date	September 10 2018	
Submitted By	AMJ	
Software Version	11.62	
Unit Tag	Aud	

Unit Overview						
Model Number	Supply					
	Air Volume cfm	Static Pressure		External Dimensions		
		External inWc	Total inWc	Height in	Width in	Length in
CAH028GDGM	12000	1.50	4.75	68*	80*	84**

*Not including base rails, coil connectors, drain connectors and control boxes.

** Total lower deck length

Unit			
Model Number:	CAH028GBAM		
Approval:	ETL Listed / ETL Listed to Canadian Safety Standards (ETL Label / ETLc Label)		
Outer Panel:	Standard G90 Galvanized Steel (unpainted)		
Liner:	Galvanized Steel (unless noted per section)		
Insulation:	R-13 Injected Foam		
Unit Configuration:	Stacked/ vertical	Drive (Handling) Location:	Right
Base:	6" formed channel	Wall Thickness:	2 in
Altitude:	0 ft	Parts Warranty:	Standard One Year

Mixing Box	Component: 1	Length: 42 in	Shipping Section: 1

Air Pressure Drop							
0.30 inWc							
Custom Openings							
Custom Opening		Location		Width	Height	Rainhood w/ Screen	
1		Bottom		76 in	38 in	None	
Custom Damper	Damper				Material	Blade Action	Rainhood w/ Screen
	Damper Type	Location	Size (Width x Height)				
			Overall	Opening			
1	Ultra Low Leak	Top	76in x 26 in	66in x 22in	Galv Steel	Parallel	None
2	Ultra Low Leak	End	76in x 26 in	66in x 22in	Galv Steel	Parallel	None

Combination Filter			Component: 2					Shipping Section: 1	
Access			Face Velocity			Face Area		Air Volume	
Side			500 ft/min			24.0 ft²		12000 cfm	
Portion	Type	Efficiency	Air Pressure Drop			Number of Filters	Height	Width	Depth
			Clean Air	Mean Air	Dirty Air				
Pre-Filter	Pre Pleat	MERV 13	0.14 inWc	0.57 inWc	1.00 inWc	6	24 in	24 in	2 in
Filter	Pre Pleat	MERV 13	0.14 inWc	0.57 inWc	1.00 inWc	6	24 in	24 in	4 in
Door									
Location			Width			Opening			
Drive side			12 in			Outward			

Auditorium

Job Information		Technical Data Sheet
Job Name	Wellesley MS	
Date	September 10 2018	
Submitted By	AMJ	
Software Version	11.62	
Unit Tag	Aud	

Unit Overview						
Model Number	Air Volume cfm	Supply				
		Static Pressure		External Dimensions		
		External inWc	Total inWc	Height in	Width in	Length in
CAH028GDGM	12000	1.50	4.75	68*	80*	84**
*Not including base rails, coil connectors, drain connectors and control boxes.						
** Total lower deck length						

Unit			
Model Number:	CAH028GBAM		
Approval:	ETL Listed / ETL Listed to Canadian Safety Standards (ETL Label / ETLc Label)		
Outer Panel:	Standard G90 Galvanized Steel (unpainted)		
Liner:	Galvanized Steel (unless noted per section)		
Insulation:	R-13 Injected Foam		
Unit Configuration:	Stacked/ vertical	Drive (Handling) Location:	Right
Base:	6" formed channel	Wall Thickness:	2 in
Altitude:	0 ft	Parts Warranty:	Standard One Year

Mixing Box		Component: 1		Length: 42 in		Shipping Section: 1			
Air Pressure Drop									
0.30 inWc									
Custom Openings									
Custom Opening		Location		Width		Height		Rainhood w/ Screen	
1		Bottom		76 in		38 in		None	
Custom Damper	Damper				Material	Blade Action	Rainhood w/ Screen		
	Damper Type	Location	Size (Width x Height)						
			Overall	Opening					
1	Ultra Low Leak	Top	76in x 26 in	66in x 22in	Glav Steel	Parallel	None		
2	Ultra Low Leak	End	76in x 26 in	66in x 22in	Glav Steel	Parallel	None		

Combination Filter			Component: 2					Shipping Section: 1	
Access			Face Velocity		Face Area			Air Volume	
Side			500 ft/min		24.0 ft²			12000 cfm	
Portion	Type	Efficiency	Air Pressure Drop			Number of Filters	Height	Width	Depth
			Clean Air	Mean Air	Dirty Air				
Pre-Filter	Pre Pleat	MERV 13	0.14 inWc	0.57 inWc	1.00 inWc	6	24 in	24 in	2 in
Filter	Pre Pleat	MERV 13	0.14 inWc	0.57 inWc	1.00 inWc	6	24 in	24 in	4 in
Door									
Location			Width			Opening			
Drive side			12 in			Outward			

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Job Information

Job Name	Wellesley Middle School
Date	8/16/2018
Submitted By	Bruce Briggs
Software Version	06.10
Unit Tag	RCS 001


Unit Overview

Model Number	Voltage V/Hz/Phase	Total Refrigeration Effect Btu/hr	Total Unit Power kW	EER AHRI Conditions	IEER AHRI Conditions	ASHRAE 90.1
RCS062D	460/60/3	646426	59.2	10.8	14.1	2013 Compliant

Unit

Model Number:	RCS062D		
Type:	Applied		
Approval:	ETL - USA		
Refrigerant Type:	No. of Refrigerant Circuits	Refrigerant Weight	
R410A	2	24.4 lb	

Condensing Section

Temperature		Altitude	Refrigeration Effect	Power
Suction	Ambient			
45.0 °F	95.0 °F	0 ft	646426 Btu/hr	59.2 kW

Compressor			
Quantity	Type	Capacity Control	Compressor Isolation
4	Scroll	4 steps	Resilient
Full Load Current:			
Compressor 1	23.1 A		
Compressor 2	23.1 A		
Compressor 3	23.1 A		
Compressor 4	23.1 A		

Condenser					
Type	Coil		Fans	Fan Motors	
	Number of Rows	Fins per Inch	Condenser Fan Type	Quantity	Full Load Current
Aluminum tube micro channel	1	18	Standard	6	2.10 A

Sound

Casing Radiated Sound Power (db)							
63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
0	100	95	93	92	89	85	81

Physical			
Dimensions and Weight			
Length	Height	Width	Operating Weight
80.0 in	73.0 in	99.0 in	2578 lb
Connections			
Connection	Connection Sizes		
Suction Line Circuit	(2) 1.62 in.		
Liquid Line Circuit	(2) 0.88 in.		
Hot Gas Bypass Circuit	(2) 0.88 in.		

Electrical					
Voltage	MROPD	Field Power Connection	MCA	SCCR	Field Outlet Connection
460/60/3 V/Hz/Phase	125 A	Thru-the-door disconnect switch	112.0 A	10 kAIC	115V, 20 amp service
Note:	Use only copper supply wires with ampacity based on 75° C conductor rating. Connections to terminals must be made with copper lugs and copper wire.				

Options	
Unit	
Isolation Valves Per Circuit:	Refrigeration Service Valves
Hot Gas Bypass:	HGBP Tee (See Accessory Tab)
Condenser Coil Options:	Condenser with built in hail protection, vandal grd
Electrical	
Electrical Options:	Phase failure
Field Connection	Thru-the-door disconnect switch
Wiring Options	Sealtite conduit
GFI Receptacle	Field powered
Unit Control	
Temperature Controls:	No temp control, 24 V transformer
Low Ambient Control:	Fantrol, Low ambient control to 45 degrees

Warranty	
Parts:	Standard one year parts
Compressor:	Extended four year compressor, five year total

Accessories	
Optional	
Part Number	Description
193330711	Liquid line kit, replace core filter drier



Job Information	Technical Data Sheet

Job Name	Wellesley Middle School
Date	8/16/2018
Submitted By	Bruce Briggs
Software Version	06.10
Unit Tag	RCS 001

Unit Overview

Model Number	Voltage V/Hz/Phase	Total Refrigeration Effect Btu/hr	Total Unit Power kW	EER AHRI Conditions	IEER AHRI Conditions	ASHRAE 90.1
RCS062D	460/60/3	646426	59.2	10.8	14.1	2013 Compliant

Unit

Model Number:	RCS062D		
Type:	Applied		
Approval:	ETL - USA		
Refrigerant Type:	No. of Refrigerant Circuits	Refrigerant Weight	
R410A	2	24.4 lb	

Condensing Section

Temperature		Altitude	Refrigeration Effect	Power
Suction	Ambient			
45.0 °F	95.0 °F	0 ft	646426 Btu/hr	59.2 kW

Compressor			
Quantity	Type	Capacity Control	Compressor Isolation
4	Scroll	4 steps	Resilient

Full Load Current:	
Compressor 1	23.1 A
Compressor 2	23.1 A
Compressor 3	23.1 A
Compressor 4	23.1 A

Condenser					
Type	Coil		Fans Condenser Fan Type	Fan Motors	
	Number of Rows	Fins per Inch		Quantity	Full Load Current
Aluminum tube micro channel	1	18	Standard	6	2.10 A

Sound

Casing Radiated Sound Power (db)							
63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
0	100	95	93	92	89	85	81

RCS™ Condensing Unit



Job Information		Technical Data Sheet
Job Name	Wellesley Middle School	
Date	8/16/2018	
Submitted By	Bruce Briggs	
Software Version	06.10	
Unit Tag	RCS 001	

Unit Overview						
Model Number	Voltage V/Hz/Phase	Total Refrigeration Effect Btu/hr	Total Unit Power kW	EER AHRI Conditions	IEER AHRI Conditions	ASHRAE 90.1
RCS062D	460/60/3	646426	59.2	10.8	14.1	2013 Compliant

Unit		
Model Number:	RCS062D	
Type:	Applied	
Approval:	ETL - USA	
Refrigerant Type:	No. of Refrigerant Circuits	Refrigerant Weight
R410A	2	24.4 lb

Condensing Section

Temperature		Altitude	Refrigeration Effect	Power
Suction	Ambient			
45.0 °F	95.0 °F	0 ft	646426 Btu/hr	59.2 kW

Compressor			
Quantity	Type	Capacity Control	Compressor Isolation
4	Scroll	4 steps	Resilient
Full Load Current:			
Compressor 1	23.1 A		
Compressor 2	23.1 A		
Compressor 3	23.1 A		
Compressor 4	23.1 A		

Condenser					
Type	Coil		Fans	Fan Motors	
	Number of Rows	Fins per Inch	Condenser Fan Type	Quantity	Full Load Current
Aluminum tube micro channel	1	18	Standard	6	2.10 A

Sound							
Casing Radiated Sound Power (db)							
63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
0	100	95	93	92	89	85	81

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Door Number	Frame Material	Frame Type	Leaf Number	Width	Height	Material	Type	Fire Rating	Lockset
313C	HM	Standard							
			1	2'-6"	7'-0"	WD	F		Storeroom
313B	HM	Double Egress							
			1	3'-0"	6'-8"	WD	F		Passage
315A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
315B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
315C	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
317A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
317B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
317C	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
319A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
319B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
321A	HM	Standard							
			1	3'-0"	7'-0"		N		Classroom
321B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
325A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
325B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Office
327A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
327B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Office
327C	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Office
327D	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
331A	HM	Standard							
			1	3'-0"	7'-0"	WD	N	60 Min	Classroom
329A	HM	Standard							
			1	3'-0"	7'-0"	WD	N	60 Min	Classroom
329C	HM	Standard							
			1	2'-6"	7'-0"	WD	F		Storeroom
329B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
329-2A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Classroom
329-2B	HM	Standard							

Door Schedule

Door Number	Frame Material	Frame Type	Leaf Number	Width	Height	Material	Type	Fire Rating	Lockset
313C	HM	Standard							
			1	2'-6"	7'-0"	WD	F		Storeroom
313B	HM	Double Egress							
			1	3'-0"	6'-8"	WD	F		Passage
315A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
315B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
315C	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
317A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
317B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
317C	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
319A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
319B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
321A	HM	Standard							
			1	3'-0"	7'-0"		N		Classroom
321B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
325A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
325B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Office
327A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
327B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Office
327C	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Office
327D	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
331A	HM	Standard							
			1	3'-0"	7'-0"	WD	N	60 Min	Classroom
329A	HM	Standard							
			1	3'-0"	7'-0"	WD	N	60 Min	Classroom
329C	HM	Standard							
			1	2'-6"	7'-0"	WD	F		Storeroom
329B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
329-2A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Classroom
329-2B	HM	Standard							

Door Schedule

Door Number	Frame Material	Frame Type	Leaf Number	Width	Height	Material	Type	Fire Rating	Lockset
			1	3'-0"	7'-0"	WD	F		Passage
329-1A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Classroom
329-1B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
323A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
333A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Storeroom
397A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Keyed
399A	HM	Standard							
			1	3'-0"	7'-0"	HM	F		Keyed
ST33A	HM	Standard							
			1	3'-0"	7'-0"	WD	FG2	60 Min	Other
			2	3'-0"	7'-0"	WD	FG2	60 Min	N/A
ST13A	WD	Standard							
			1	3'-0"	7'-0"	WD	FG2	60 Min	Other
			2	3'-0"	7'-0"	WD	FG2	60 Min	Other
311A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
ST53A	HM	Standard							
			1	3'-0"	7'-0"	WD	FG2	60 Min	Other
			2	3'-0"	7'-0"	HM	FG2	60 Min	Other
307A	HM	Standard							
			1	3'-0"	7'-0"	WD	G		Classroom
309A	HM	Standard							
			1	3'-0"	7'-0"	WD	G		Classroom
303A	HM	Standard							
			1	3'-0"	7'-0"	WD	G		Classroom
305A	HM	Standard							
			1	3'-0"	7'-0"	WD	G		Classroom
301A	HM	Standard							
			1	3'-0"	7'-0"	WD	G		Classroom
336A	HM	Standard							
			1	2'-6"	7'-0"	WD	F		Storeroom
395A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Other
300A	HM	Standard							
			1	3'-0"	7'-0"	WD	FG2	45 Min	Other
303B	WD	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
300B	HM	Standard							
			1	3'-0"	7'-0"	WD	FG2	45 Min	Other
			2	3'-0"	7'-0"	WD	FG2	45 Min	Other
308A	HM	Standard							
			1	3'-0"	7'-0"	WD	G		Classroom

Door Schedule

Door Number	Frame Material	Frame Type	Leaf Number	Width	Height	Material	Type	Fire Rating	Lockset
310A	HM	Standard							
			1	3'-0"	7'-0"	WD	G		Classroom
312A	HM	Standard							
			1	3'-0"	7'-0"		G		Classroom
312B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Privacy
314A	HM	Standard							
			1	3'-0"	7'-0"	WD	G		Classroom
316A	HM	Standard							
			1	3'-0"	7'-0"	WD	G		Classroom
322A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
322C	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Office
322B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
320A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
320C	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Office
320D	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Office
320B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
318A	HM	Standard							
			1	3'-0"	7'-0"	WD	N	60 Min	Classroom
324A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
324B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
326A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
326B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
328A	HM	Standard							
			1	3'-0"	7'-0"		N		Classroom
328B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
332A	HM	Standard							
			1	3'-0"	7'-0"		N		Classroom
338A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
SP336A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
336-1A	HM	Standard							
			1	3'-0"	7'-0"	WD	N	60 Min	Passage
334A	HM	Standard							

Door Schedule

Door Number	Frame Material	Frame Type	Leaf Number	Width	Height	Material	Type	Fire Rating	Lockset
			1	3'-0"	7'-0"	WD	N		Classroom
330A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
396A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Other
398A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Privacy
394A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Other
340A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Storeroom
342A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Office
ST2-3A	HM	Standard							
			1	3'-0"	7'-0"	WD	FG2	60 Min	Other
			2	3'-0"	7'-0"	WD	FG2	60 Min	Other
ST4-3A	HM	Standard							
			1	3'-0"	7'-0"	WD	FG2	60 Min	Other
			2	3'-0"	7'-0"	WD	FG2	60 Min	Other
ST6-3A	HM	Standard							
			1	3'-0"	7'-0"	WD	N	60 Min	Other
			2	3'-0"	7'-0"	WD	N	60 Min	Other
302A	HM	Standard							
			1	3'-0"	7'-0"	WD	FG2	45 Min	Other
			2	3'-0"	7'-0"	WD	FG2	45 Min	Other
302B	HM	Standard							
			1	3'-0"	7'-0"	WD	FG2	45 Min	Other
105A	HM	Standard							
			1	3'-0"	7'-0"	WD	N	60 Min	Classroom
103B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Office
101A	HM	Standard							
			1	3'-0"	7'-0"	WD	N	60 Min	Classroom
101B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
103A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
103C	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
105B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
109A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
109B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Office
113A	HM	Standard							
			1	3'-0"	7'-0"	WD	N	60 Min	Classroom

Door Schedule

Door Number	Frame Material	Frame Type	Leaf Number	Width	Height	Material	Type	Fire Rating	Lockset
113B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
111A	HM	Standard							
			1	3'-0"	7'-0"	HM	N		Classroom
107A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
115A	HM	Standard							
			1	3'-0"	7'-0"	WD	N	60 Min	Classroom
115B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
ST3-1A	HM	Standard							
			1	3'-0"	7'-0"	WD	FG2	60 Min	Passage
			2	3'-0"	7'-0"	WD	FG2	60 Min	Passage
119A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		
123A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Storeroom
121A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		
ST1-1A	HM	Standard							
			1	3'-0"	7'-0"	WD	FG2	60 Min	Latchset
			2	3'-0"	7'-0"	WD	FG2	60 Min	Latchset
C101A	HM	Standard							
			1	3'-0"	7'-0"	WD	N	45 Min	Keyed
			2	2'-0"	7'-0"	WD	F	45 Min	Latchset
C101B	HM	Standard							
			1	3'-0"	7'-0"	WD	N	45 Min	Keyed
			2	2'-0"	7'-0"	WD	F	45 Min	Latchset
ST5-1A	HM	Standard							
			1	3'-0"	7'-0"	WD	N	60 Min	Latchset
			2	2'-0"	7'-0"	WD	F	60 Min	Latchset
C103A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Latchset
			2	3'-0"	7'-0"	WD	N		Latchset
116A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
116B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
118A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
118C	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
120A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
124A	HM	Standard							
			1	3'-0"	7'-0"		N		Classroom
124B	HM	Standard							

Door Schedule

Door Number	Frame Material	Frame Type	Leaf Number	Width	Height	Material	Type	Fire Rating	Lockset
			1	3'-0"	7'-0"	WD	F		Passage
120B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
104A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Other
136A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Storeroom
106A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Other
ST4-1A	HM	Standard							
			1	3'-0"	7'-0"	WD	FG2	60 Min	Latchset
			2	3'-0"	7'-0"	WD	FG2	60 Min	Latchset
ST2-1A	HM	Standard							
			1	3'-0"	7'-0"	WD	FG2	60 Min	Latchset
			2	3'-0"	7'-0"	WD	FG2	60 Min	Latchset
228A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
230A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
230B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
226A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
226B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
224A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
224B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
222A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
222B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
220A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
220B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
218A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
218B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Office
218C	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
216A	HM	Standard							
			1	3'-0"	7'-0"	WD	N	60 Min	Classroom
216B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Office

Door Schedule

Door Number	Frame Material	Frame Type	Leaf Number	Width	Height	Material	Type	Fire Rating	Lockset
234A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
296A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Other
292A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Other
294A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Storeroom
236A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Privacy
ST2-2A	HM	Standard							
			1	3'-0"	7'-0"	WD	FG2	60 Min	Latchset
			2	3'-0"	7'-0"	WD	FG2	60 Min	Latchset
232A	HM	Standard							
			1	3'-0"	7'-0"	WD	N	60 Min	Passage
232B	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
ST4-2A	HM	Standard							
			1	3'-0"	7'-0"	WD	FG2	60 Min	Latchset
			2	3'-0"	7'-0"	WD	FG2	60 Min	Latchset
ST6-2A	HM	Standard							
			1	3'-0"	7'-0"	WD	N	60 Min	Latchset
212A	HM	Standard							
			1	3'-0"	7'-0"	WD	G		Classroom
208AA	HM	Standard							
			1	3'-0"	7'-0"	WD	G		Classroom
208-3A	WD	Standard							
			1	3'-0"	7'-0"	WD	F		Office
208-2A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Passage
210A	HM	Standard							
			1	3'-0"	7'-0"	WD	G		Classroom
210B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Office
214A	HM	Standard							
			1	3'-0"	7'-0"	WD	G		Classroom
206A	HM	Standard							
			1	3'-0"	7'-0"	WD	G		Classroom
208BA	HM	Standard							
			1	3'-0"	7'-0"	WD	G		Classroom
C200A	HM	Standard							
			1	3'-0"	7'-0"	WD	FG2	45 Min	Latchset
			2	3'-0"	7'-0"	WD	FG2	45 Min	Latchset
C200B	HM	Standard							
			1	3'-0"	7'-0"	WD	FG2	45 Min	Latchset
			2	3'-0"	7'-0"	WD	FG2	45 Min	Latchset
231A	HM	Standard							

Door Schedule

Door Number	Frame Material	Frame Type	Leaf Number	Width	Height	Material	Type	Fire Rating	Lockset
			1	3'-0"	7'-0"	WD	N	60 Min	Classroom
231B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
229A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
229B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
227A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
227B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
225	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
225B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
223A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Classroom
223B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
223C	HM	Standard							
			1	2'-6"	7'-0"				Storeroom
221A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Classroom
221B	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Passage
217A	HM	Standard							
			1	3'-0"	7'-0"	WD	N	60 Min	Classroom
213A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Classroom
213B	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Office
219A	HM	Standard							
			1	3'-0"	7'-0"	WD	N	60 Min	Classroom
219B	HM	Standard							
			1	2'-6"	7'-0"	WD	F		Storeroom
215A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
299A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Other
233A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Storeroom
297A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Other
211A	HM	Standard							
			1	3'-0"	7'-0"	WD	N		Classroom
203A	HM	Standard							
			1	3'-0"	7'-0"	WD	G		Classroom

Door Schedule

Door Number	Frame Material	Frame Type	Leaf Number	Width	Height	Material	Type	Fire Rating	Lockset
207A	HM	Standard							
			1	3'-0"	7'-0"	WD	G		Classroom
ST5-2A	HM	Standard							
			1	3'-0"	7'-0"	WD	N	60 Min	Latchset
C201A	HM	Standard							
			1	3'-0"	7'-0"	WD	FG2	45 Min	Latchset
			2	3'-0"	7'-0"	WD	FG2	45 Min	Latchset
C201B	HM	Standard							
			1	3'-0"	7'-0"	WD	FG2	45 Min	Latchset
			2	3'-0"	7'-0"	WD	FG2	45 Min	Latchset
295A	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Other
306A	HM	Standard							
			1	3'-0"	7'-0"	WD	G		Classroom
306B	HM	Standard							
			1	3'-0"	7'-0"	WD	G		Classroom
306C	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Office
306D	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Storeroom
304AA	HM	Standard							
			1	3'-0"	7'-0"	WD	G		Classroom
304AB	WD	Standard							
			1	3'-0"	7'-0"	WD	N	45 Min	Classroom
304AC	HM	Standard							
			1	3'-0"	7'-0"	WD	F		Storeroom
304AD	HM	Standard							
			1	3'-0"	7'-0"	AL	F		Office
313A	HM	Standard							
			1	3'-0"	7'-0"	WD	N	60 Min	Classroom

Door Schedule



L Series mortise indicators

Overview

The 180 degree visibility indicator for the Schlage L Series mortise lock offers unparalleled visibility and flexibility. The unique features of the indicator make it ideally suited for classroom security applications as well as traditional occupied/vacant applications.

The L Series indicator features:

- 2" x 1/2" display for easy viewing at a distance
- 180° windows for visibility at any angle
- High-mount placement for quick assessment during emergency lockdown
- High contrast colors (white/red, black/white) for ease of reading
- Choice of four text and/or symbol messages
- Available for over 30 functions, for inside or outside of door
- Available in Sectional trim or N Escutcheon trim

Note: Indicators used on cylinder functions will require an additional door preparation hole.
Sectional trim requires two mounting screws into door. Please reference product templates for details.

Sectional trim



N escutcheon trim



N escutcheon indicators



Cylinder

Thumbturn

Cointurn

Emergency key

Sectional indicators



Cylinder

Thumbturn

Cointurn

Emergency key

Available messages and option codes

 LOCKED	 OCCUPIED	DO NOT DISTURB	
 UNLOCKED	 VACANT		

Inside trim	L283-711	L283-712	L283-713	L283-714
Outside trim	L283-721	L283-722	L283-723	L283-724

Note: indicators available for inside or outside only; not possible to have an indicator on both inside and outside trim

Ordering instructions

To order an indicator as part of a new lock, specify the option code corresponding to the desired message (locked/unlocked, occupied/vacant, etc) and desired trim placement (inside or outside) at the end of the lock order. Order from Schlage using the standard order form as shown below. Please see pricebook for "retrofit kits" that allow indicator upgrades to installed Schlage L Series mortise locks.

L Series mortise indicators				
Function + cylinder	Trim	Finish	Handing	Option code
L9050P	06A	626	RH	L283-721
Lock specifications				
Function	Available with inside indicator: L/LV9040, 9044, 9050, 9056, 9060, 9071, 9440, 9444, 9456, 9457, 9458, 9460, 9462, 9463, 9466, 9473, 9480, 9485, 9350, 9371, 460, 462, 463, 480 Available with outside indicator: L/LV9040, 9044, 9050, 9056, 9060, 9070, 9071, 9440, 9444, 9456, 9457, 9458, 9460, 9462, 9463, 9464, 9465, 9466, 9473, 9480, 9485, 9350, 9370, 9371, 460, 462, 463, 464			
Cylinder	P (Everest 29 standard cylinder) L (Less cylinder)		R (Everest 29 FSIC) J (Less FSIC) T (Construction FSIC)	GD (Everest 29 SFIC) BD (Less SFIC) BDC (Disposable SFIC) HD (Construction SFIC)
	Leave cylinder code blank if cylinder not applicable			
Trim	Standard levers: 01, 02, 03, 05, 06, 07, 12, 17, 18, ACC, AST, LAT, LON, MER, OME Decorative levers: M51, M52, M53, M54, M55, M56, M57, M61, M62, M63, M81, M82, M83, M84, M85 A, B, or C Sectional (Rose) design or N Escutcheon, AVA (AST lever only) and MER (MER lever only) also available.			
Finish	605 Bright brass 606 Satin brass 609 Satin brass, blackened		619 Satin nickel 625 Bright chrome 626 Satin chrome	626AM Satin chrome anti-microbial 629 Bright stainless steel 630 Satin stainless steel 630AM Satin stainless steel anti-microbial 643e Aged bronze
Handing	LH (Left Hand) LR (Left Hand Reverse)		RH (Right Hand) RR (Right Hand Reverse)	
Option	Specify indicator option code from table at top of page for desired message and placement Note: Can only specify an indicator for inside or outside trim; not possible to have indicators on both sides			
Ordering examples	L9050P 03N 626 RH L283-711		Office function w/Escutcheon locked/unlocked indicator on inside (thumbturn side) of door	
	L9050P 06A 626 RH L283-721		Office function w/Sectional locked/unlocked indicator on outside (cylinder side) of door	

About Allegion

Allegion (NYSE: ALLE) is a global pioneer in safety and security, with leading brands like CISA®, Interflex®, LCN®, Schlage® and Von Duprin®. Focusing on security around the door and adjacent areas, Allegion produces a range of solutions for homes, businesses, schools and other institutions. Allegion is a \$2 billion company, with products sold in almost 130 countries. For more, visit www.allegion.com.

aptiQ ■ LCN ■ SCHLAGE ■ STEELCRAFT ■ VON DUPRIN



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www.allegion.com/us



School Guard Glass' products are
manufactured by:
LTI Smart Glass, Inc.
14 Federico Drive / Pittsfield, MA 01201 /



PRODUCT NAME:	SG4™ (PATENT PENDING)
PRODUCT DESCRIPTION:	SG4™ is a laminated glass product consisting of outer layers of glass with a custom security strengthened substrate core. It is specifically designed to slow down intruders but is not bullet resistant to certain ballistic threats. When shot, it will not shatter like ordinary tempered glass and is far stronger than laminated glass or glass reinforced with security film. SG4™ remains in the frame blocking the intruder from entry.
CONSTRUCTION:	Proprietary
STANDARD DIMENSIONS:	Up to 60" x 96"
MAXIMUM DIMENSIONS:	72" x 144" (Up to 50 sq. ft.)
NOMINAL THICKNESS:	Designed to replace tempered and laminated glass with thicknesses ranging from ¼" to ¾".
WEIGHT (SQ/FT):	4.1 lbs.
WARRANTY:	10 Years against delamination. Please refer to the warranty information sheet.
INSTALLATION INSTRUCTIONS:	Notify a School Guard Glass representative and request installation instructions pertaining to the glazing system(s) being used.
COMPLIANCE:	• ASTM C1036 - Standard Specification-Flat Glass • ASTM C1172 - Standard Specification for Laminated Architectural Flat Glass • ANSI Z97.1 Safety Materials Used in Buildings • CPSC 16 CFR 1201
RATINGS:	UL 972 5-aa1 rated for 6 minutes.

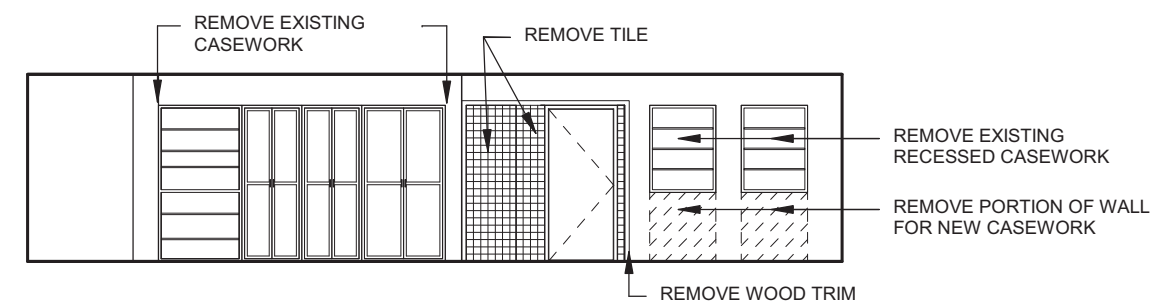
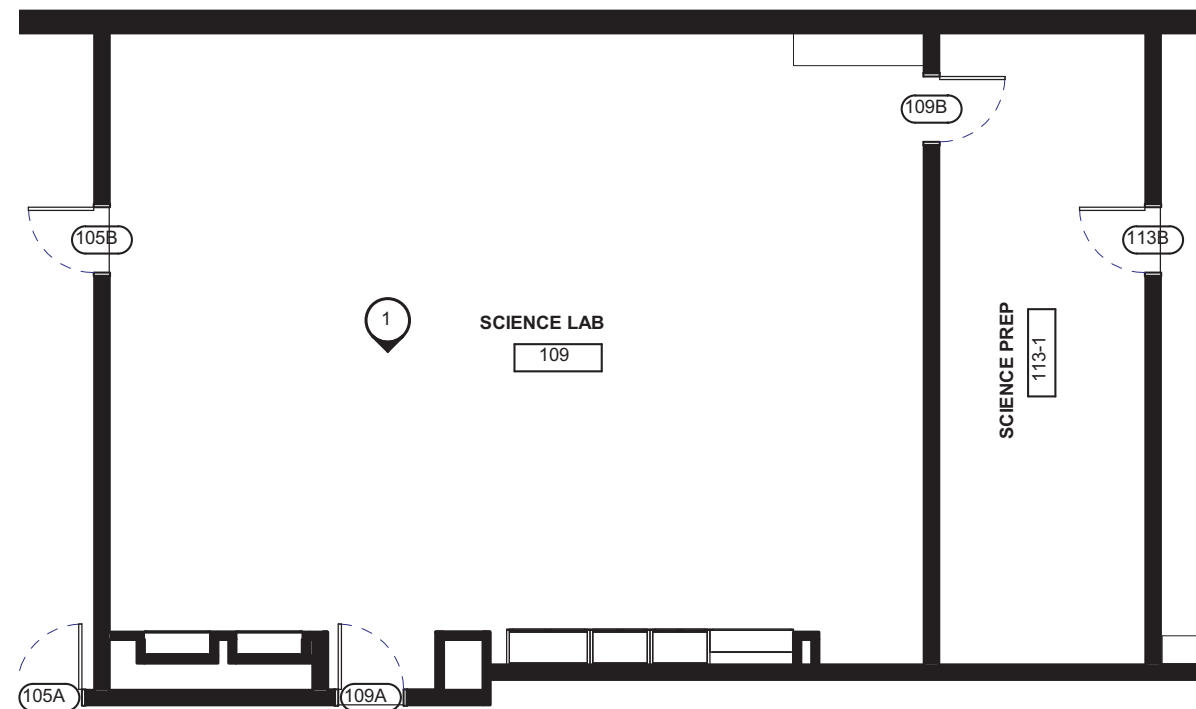
	Ballistic Impact	Concentrated Assault		Forced Entry (sequentially tested)			
Product	5 shots with a .762 round	Brick	Steel Toed Boots	Tools ¹ 2 min. test	3lb. Hammer & Bat 3½ min. test	Sledge hammer 6 min. test	Total Time to Failure
1/4" Tempered	Fail - 1 shot	Fail	Fail	Fail	Fail	Fail	0 seconds
1/4" Tempered w/12 mil. Blast Film	Pass ²	Fail - 4 impacts	Pass	Fail - 8 seconds	Fail - 2 impacts/2 seconds	N/A	4 seconds
5/16" Annealed Laminated Glass w/ 0.060 SGP® Interlayer by DuPont®	Pass ²	Fail - 20 impacts	Fail	Fail	Fail	N/A	16 seconds
5/16" Annealed Laminated Glass w/ 0.090 PVB Interlayer	Pass ²	Pass	Pass	Fail - 40 seconds	Fail	N/A	40 seconds
3/8" Glass Clad Polycarbonate	Pass ²	Pass	Pass	Fail - 1 min. 12 sec.	Fail	N/A	1 min. 12 sec.
SG4™	Pass ²	Pass	Pass	Pass	Pass	N/A	6 mins. 10 sec.
Test failure occurs when a 4" object can pass through the glass or frame material.							
¹ See testing methods for tools list. ² Bullets penetrate but glass stays in place.							

Independent Testing Completed by H.P. White Laboratory, Inc. 3114 Scarboro Road, Street, MD 21154-1822

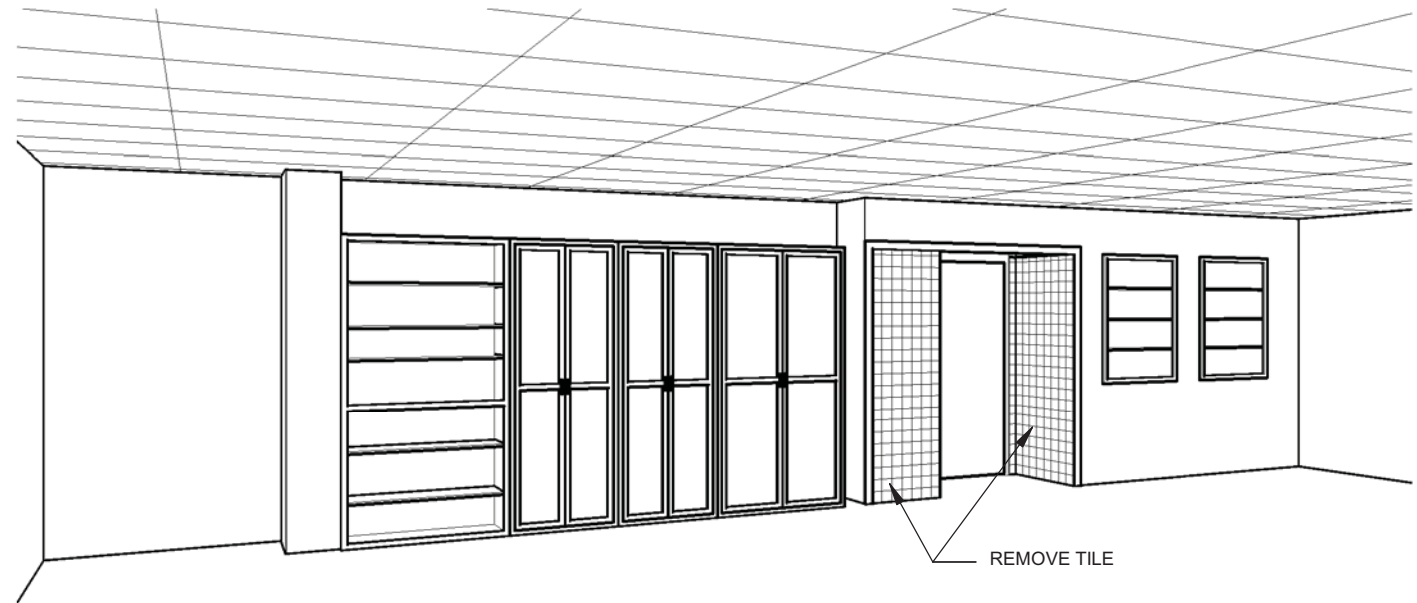
SG4™ is a Registered Trademark of School Guard Glass.

Door Glazing - Option 1 Cut Sheet

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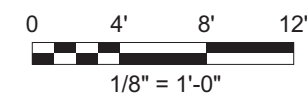


1 - TYPICAL ELEVATION

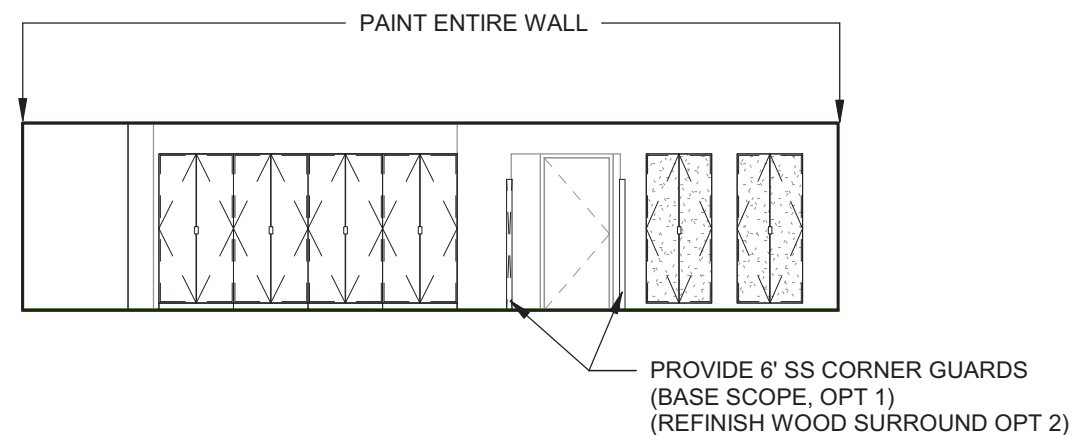
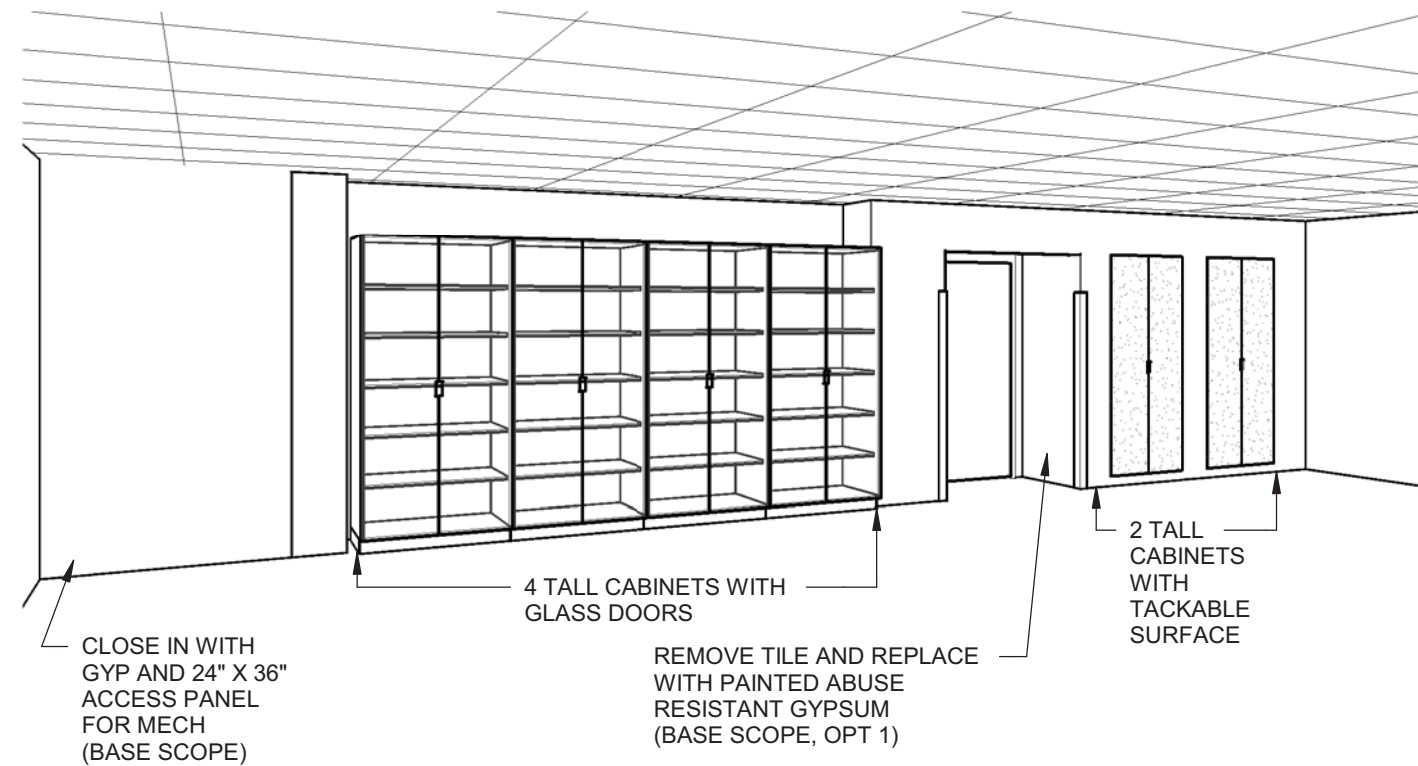
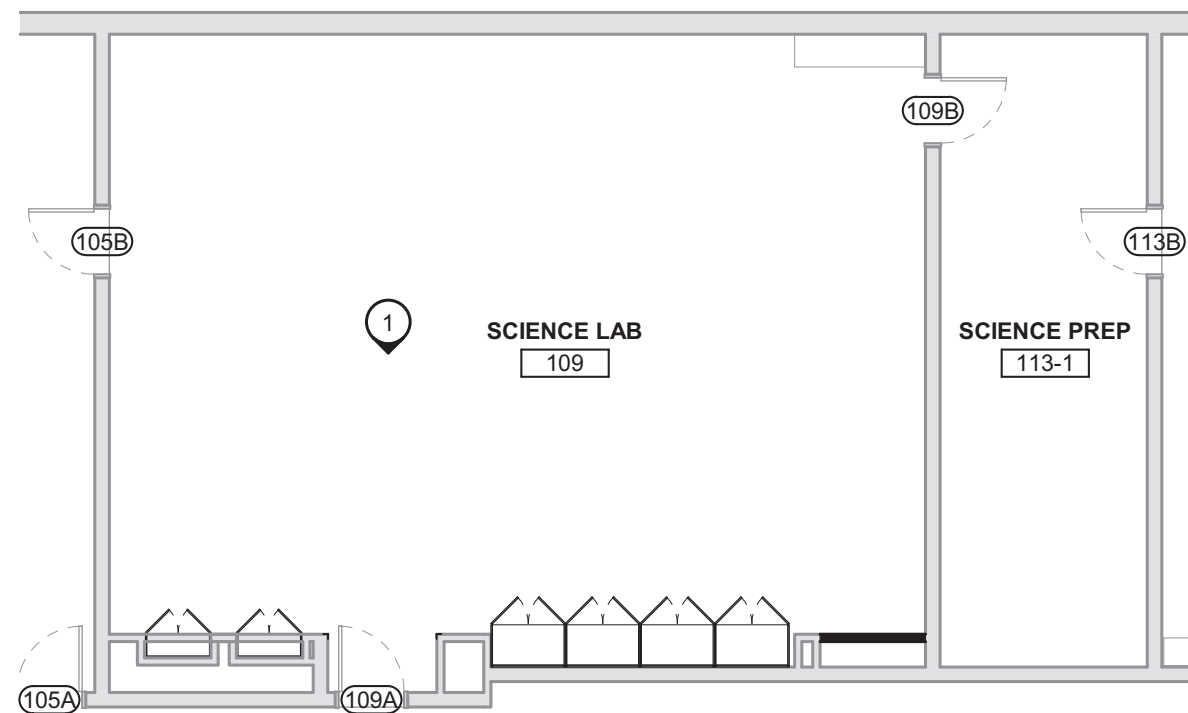


WELLESLEY MIDDLE SCHOOL

EXISTING AND PROPOSED DEMO 1966
SCIENCE LAB CASEWORK WALL



08/16/18



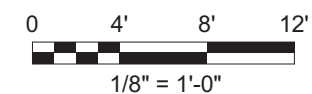
1 - TYPICAL ELEVATION

ROOMS	QUANTITY	DIMENSION	DESCRIPTION
101, 103, 105, 109, 113, 111, 107, 124, 120, 118, 116	BASE SCOPE - ILLUSTRATED		
	4	41" W x 24" D x 86" H	TALL CABINET WITH GLASS DOORS.
	2	36" W x 12" D x 86" H	TALL CABINET WITH DOORS. TACKABLE SURFACE
	OPTION 1 - NOT ILLUSTRATED		
	4	41" W x 24" D x 86" H	TALL CABINET WITH GLASS DOORS.
	2	36" W x 12" D x 86" H	TALL CABINET WITH DOORS. TACKABLE SURFACE
	OPTION 2 - NOT ILLUSTRATED		
	4	41" W x 24" D x 86" H	TALL CABINET WITH GLASS DOORS.
	2	36" W x 12" D x 86" H	TALL CABINET WITH DOORS. TACKABLE SURFACE

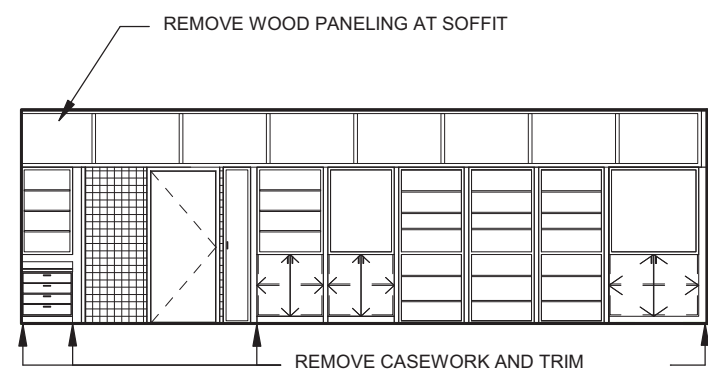
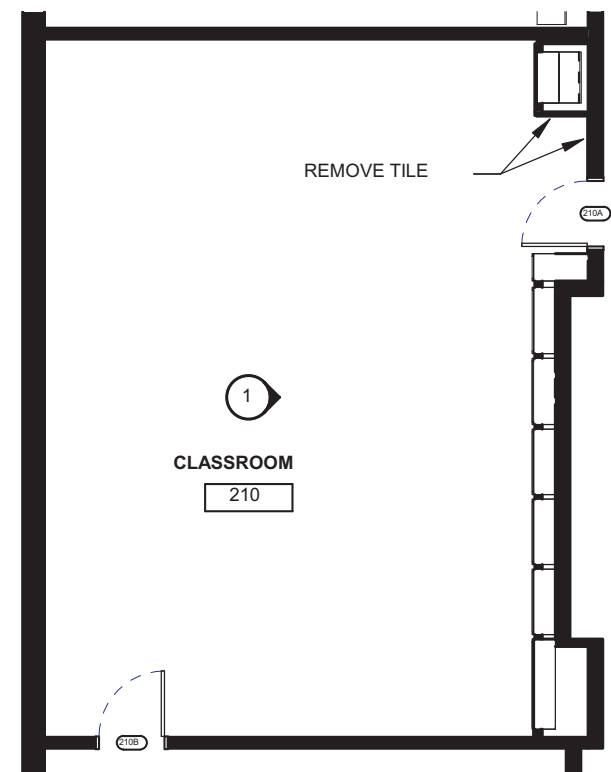


WELLESLEY MIDDLE SCHOOL

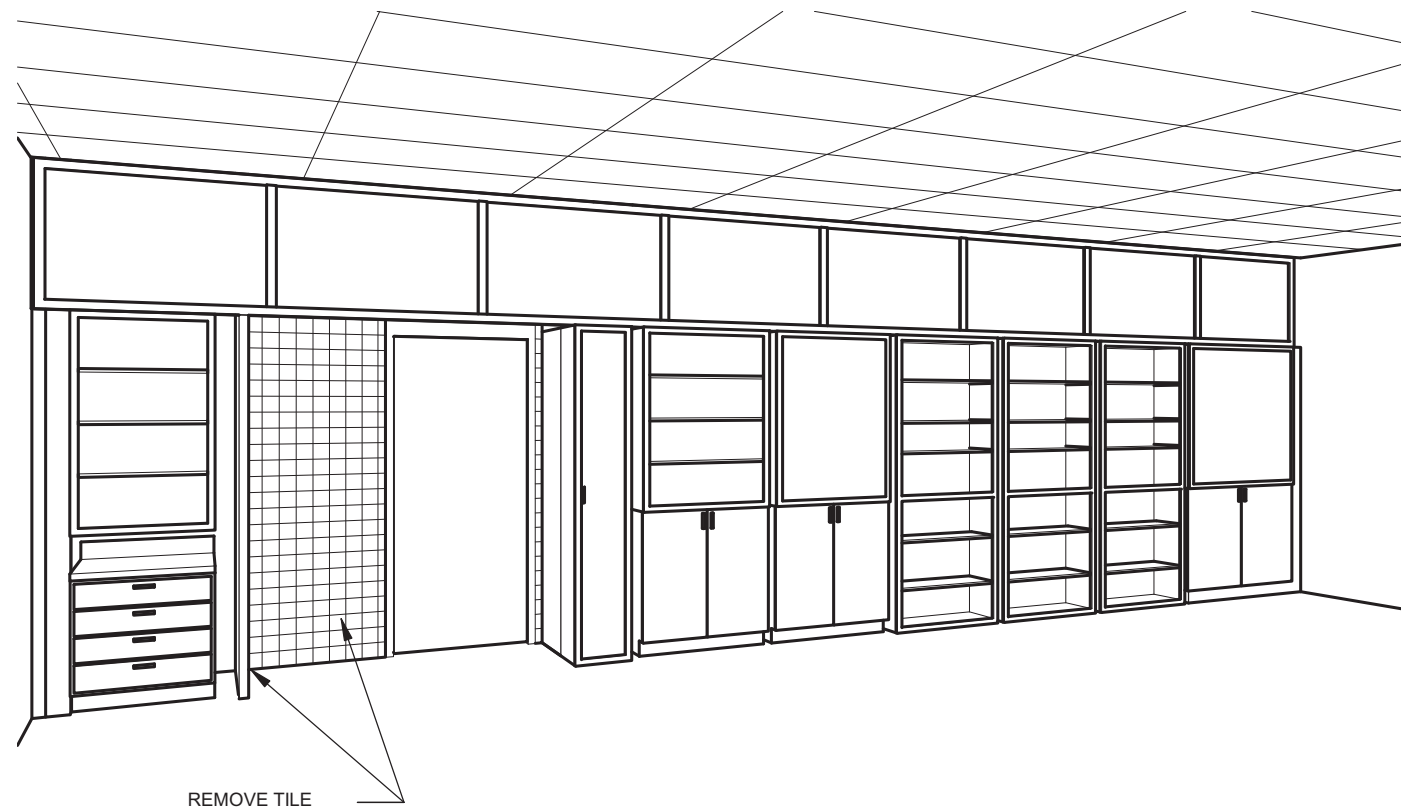
PROPOSED 1966 SCIENCE LAB CASEWORK
WALL - BASE SCOPE



08/16/18



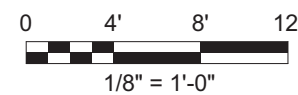
1 - TYPICAL 1952 CONNECTOR CLASSROOM



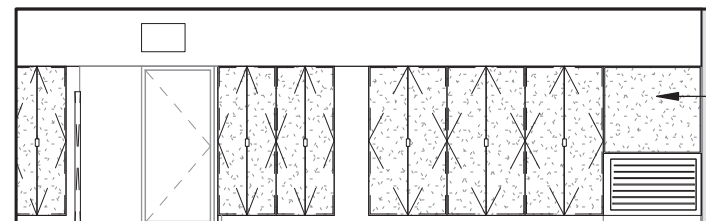
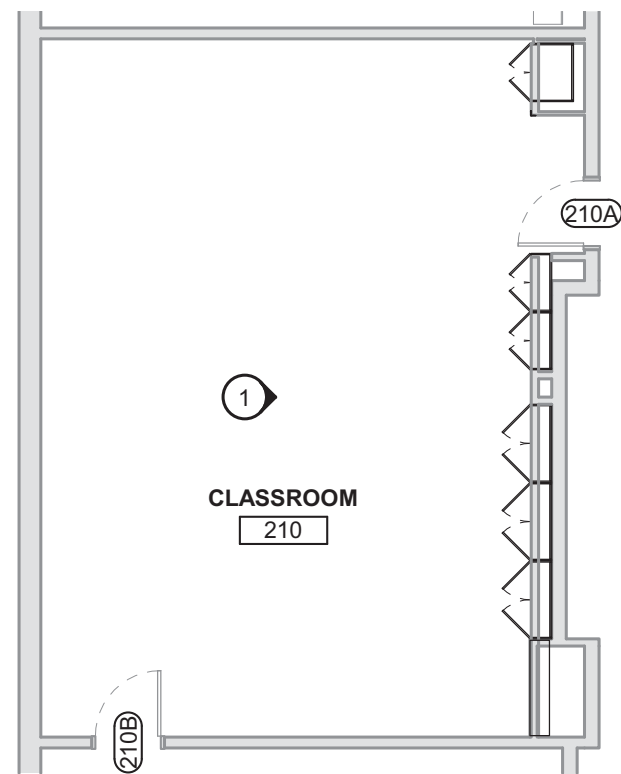
EXISTING AND PROPOSED DEMO 1952 CLASSROOM CASEWORK WALL



WELLESLEY MIDDLE SCHOOL

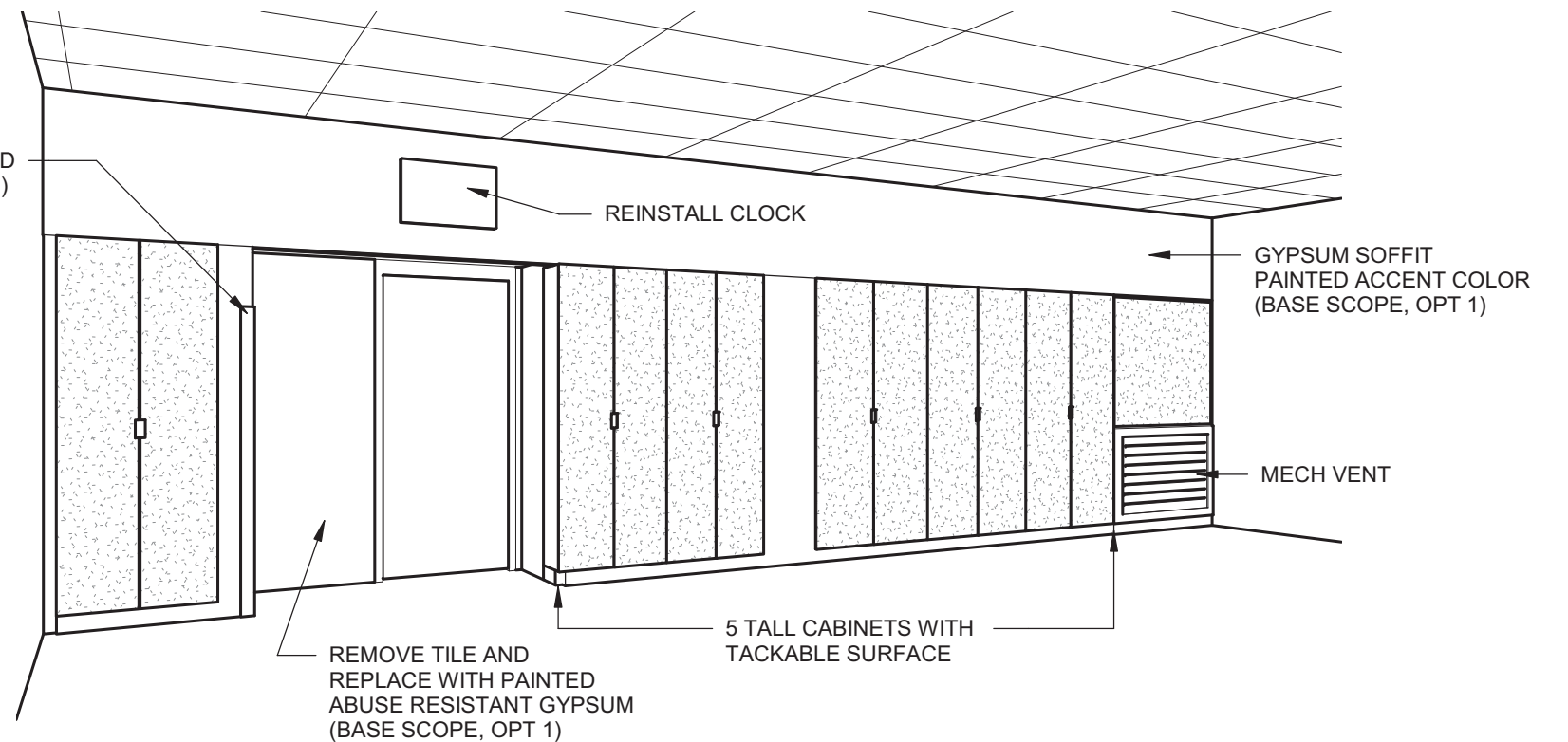


08/16/18



1 - TYPICAL ELEVATION

6" SS CORNER GUARD
(BASE SCOPE, OPT 1)
(REFINISH WOOD
SURROUND OPT 2)



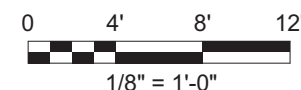
CASEWORK SCHEDULE

ROOMS	QUANTITY	DIMENSION	DESCRIPTION
212, 208, 206, 210, 214, 211, 207, 203, 308, 311, 307, 303, 309A, 305, 301	BASE SCOPE - ILLUSTRATED		
	1	32" W x 24" D x 86" H	TALL CABINET WITH DOORS. TACKABLE SURFACE
	2	32" W x 12" D x 86" H	TALL CABINET WITH DOORS. TACKABLE SURFACE
	3	43" W x 12" D x 86" H	TALL CABINET WITH DOORS. TACKABLE SURFACE
	OPTION 1 - NOT ILLUSTRATED		
	1	32" W x 24" D x 86" H	TALL CABINET WITH DOORS. TACKABLE SURFACE
	2	32" W x 12" D x 86" H	TALL CABINET WITH DOORS. TACKABLE SURFACE
	3	43" W x 12" D x 86" H	TALL CABINET WITH DOORS. TACKABLE SURFACE
	OPTION 2 - NOT ILLUSTRATED		
	1	32" W x 24" D x 86" H	TALL CABINET WITH DOORS. TACKABLE SURFACE
	2	32" W x 12" D x 86" H	TALL CABINET WITH DOORS. TACKABLE SURFACE
	3	43" W x 12" D x 86" H	TALL CABINET WITH DOORS. TACKABLE SURFACE

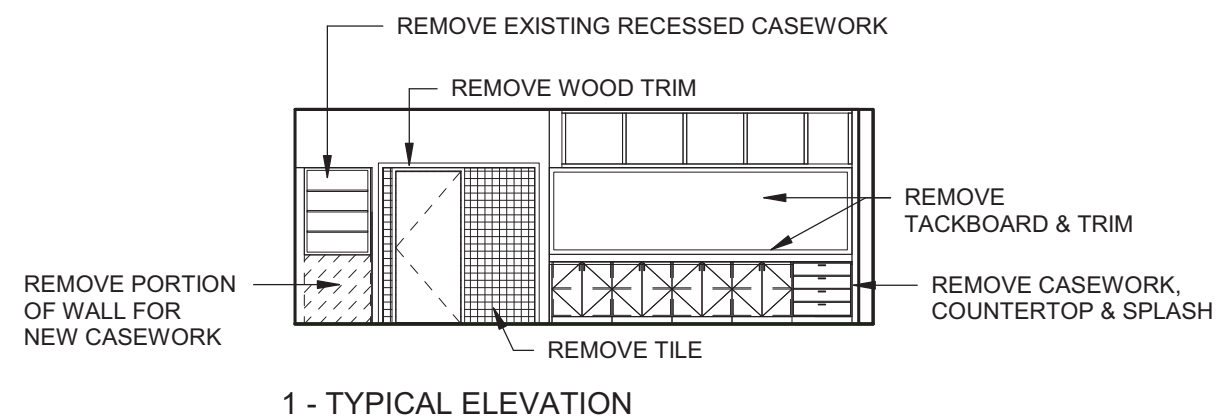
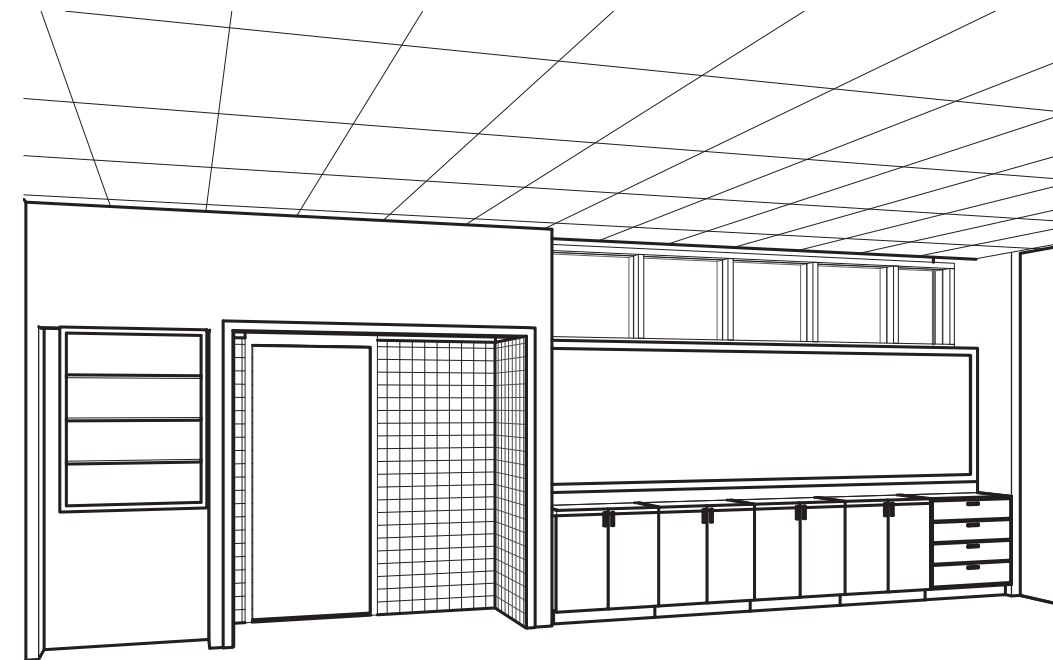
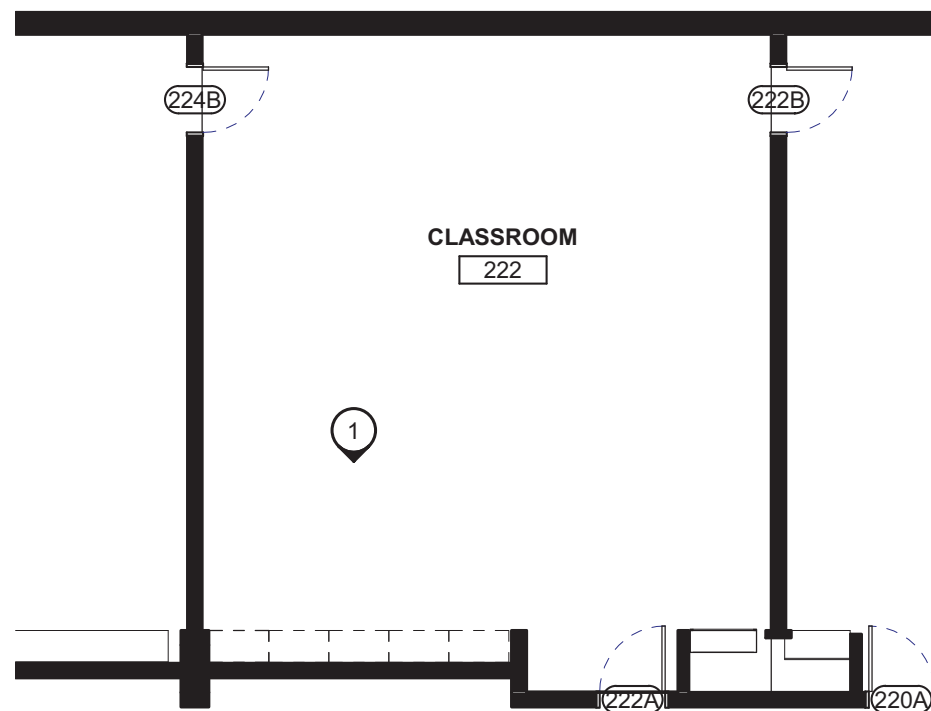


WELLESLEY MIDDLE SCHOOL

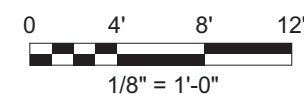
PROPOSED 1952 CLASSROOM CASEWORK WALL - BASE SCOPE



08/16/18

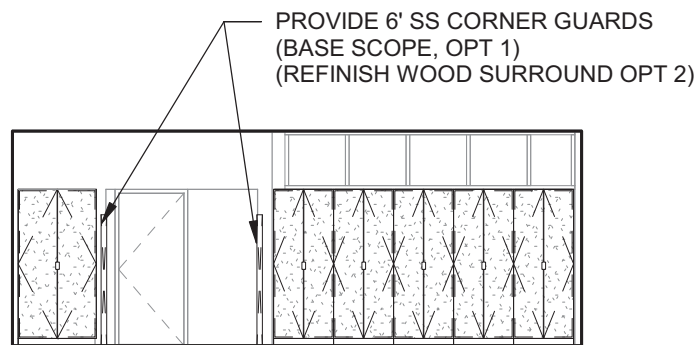
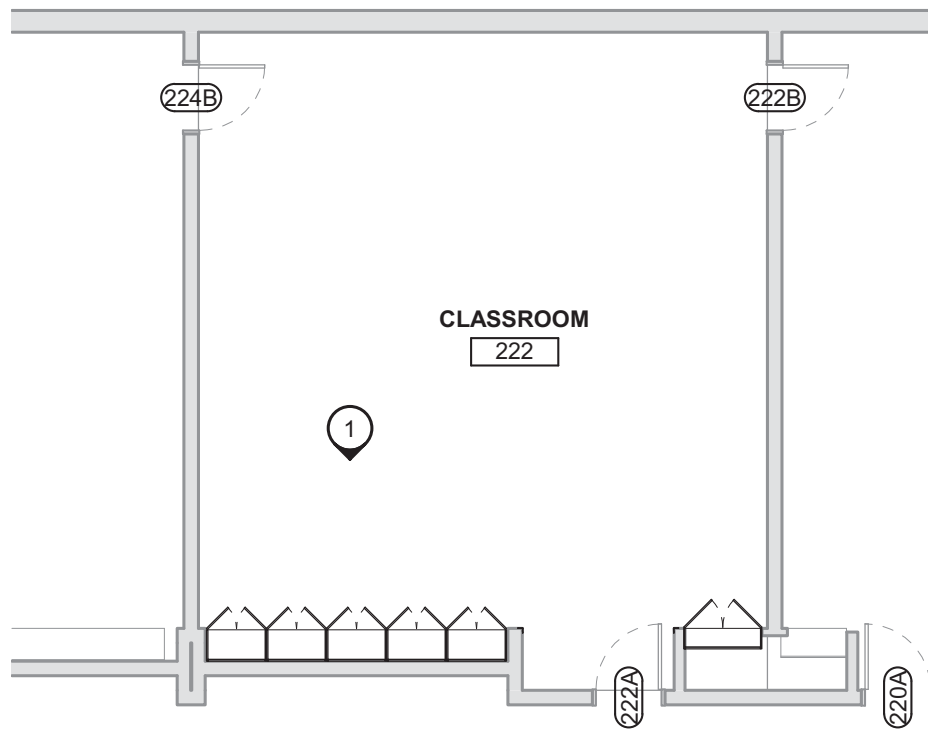


WELLESLEY MIDDLE SCHOOL

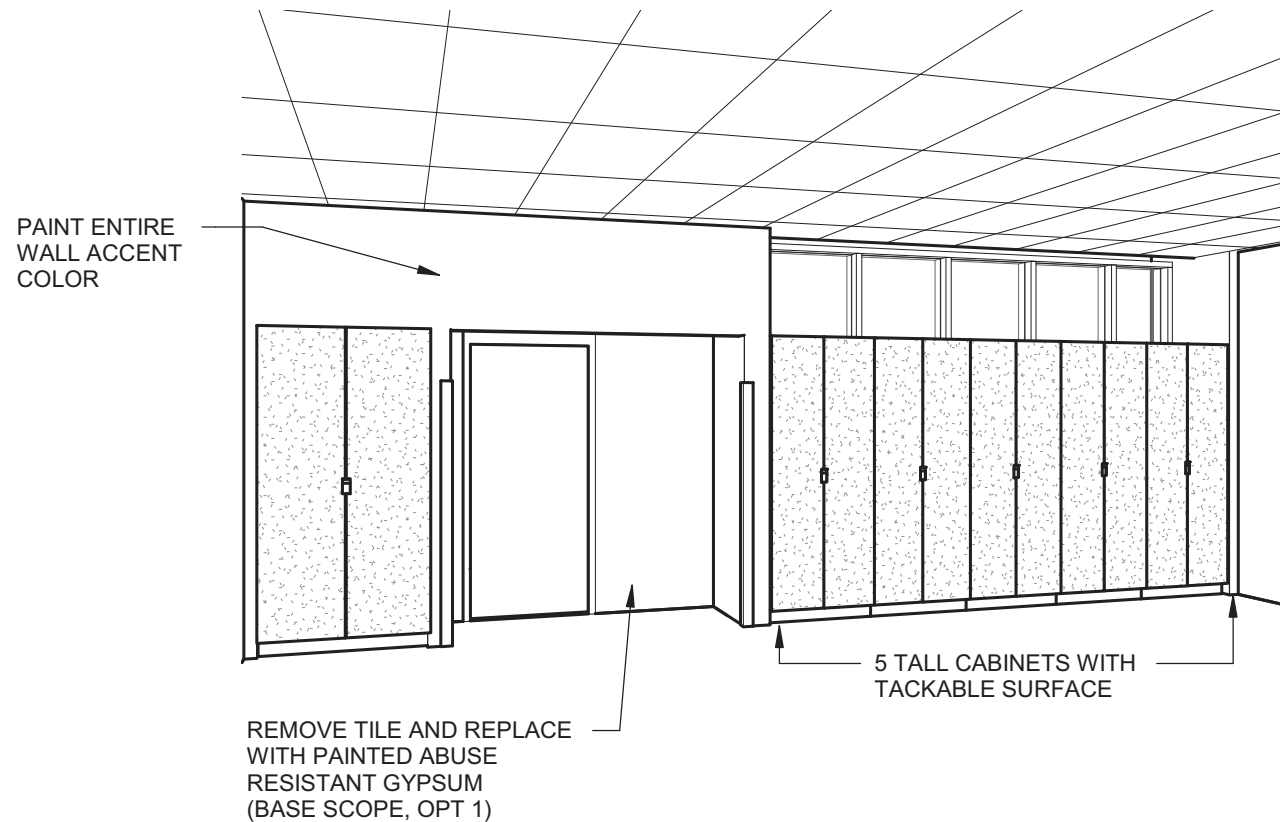


EXISTING AND PROPOSED DEMO 1966
CLASSROOM CASEWORK WALL

08/16/18



1 - TYPICAL ELEVATION



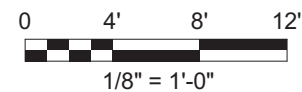
CASEWORK SCHEDULE

ROOMS	QUANTITY	DIMENSION	DESCRIPTION
216, 218, 220, 222, 224, 226, 230, 234, 231, 229, 227, 225, 223, 221, 215, 219, 332, 328, 326, 324, 322, 320, 318, 330, 331, 315, 317, 319, 321, 325, 327, 331, 323, 329	BASE SCOPE - ILLUSTRATED		
	5	33" W x 24" D x 86" H	TALL CABINET WITH DOORS. TACKABLE SURFACE
	1	43" W x 12" D x 86" H	TALL CABINET WITH DOORS. TACKABLE SURFACE
	OPTION 1 - NOT ILLUSTRATED		
	5	33" W x 24" D x 34" H	BASE CABINET WITH 2 DOORS 2 DRAWERS.
	1	43" W x 12" D x 86" H	TALL CABINET WITH DOORS. TACKABLE SURFACE
	OPTION 2 - NOT ILLUSTRATED		
	5	33" W x 24" D x 86" H	TALL CABINET WITH DOORS. TACKABLE SURFACE
	1	43" W x 12" D x 86" H	TALL CABINET WITH DOORS. TACKABLE SURFACE

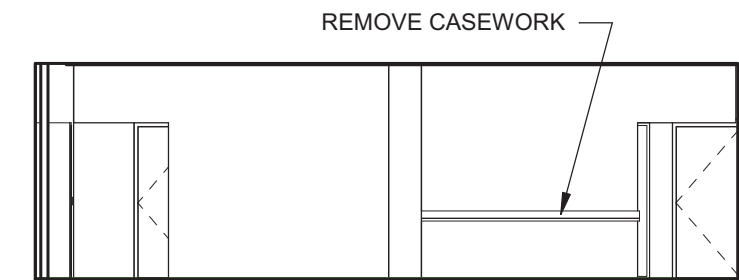
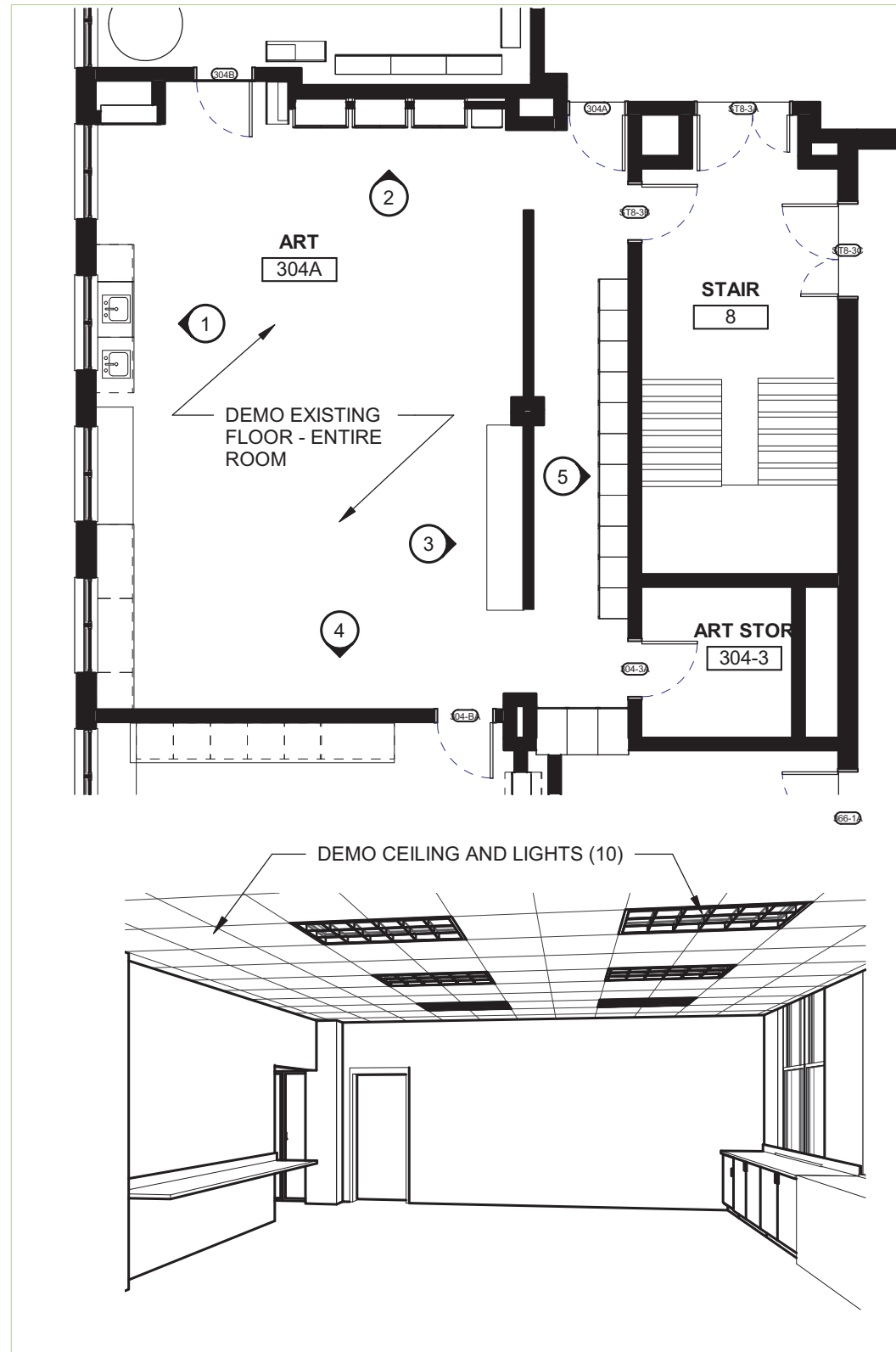


WELLESLEY MIDDLE SCHOOL

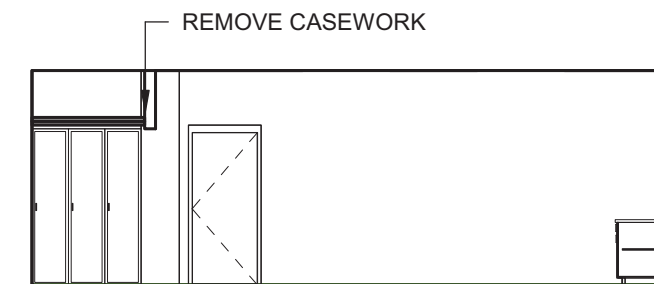
PROPOSED 1966 CLASSROOM CASEWORK WALL - BASE SCOPE



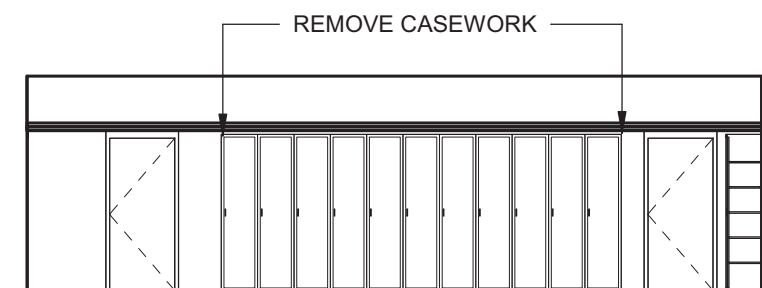
08/16/18



3 - ART ROOM 304A



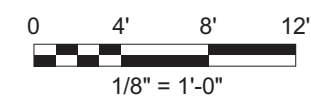
4 - ART ROOM 304A



5 - ART ROOM 304A

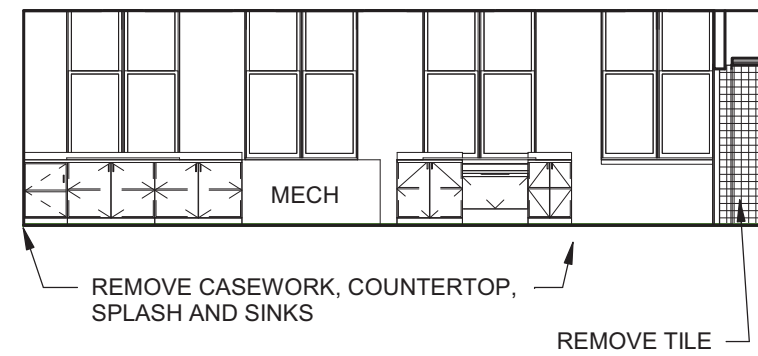
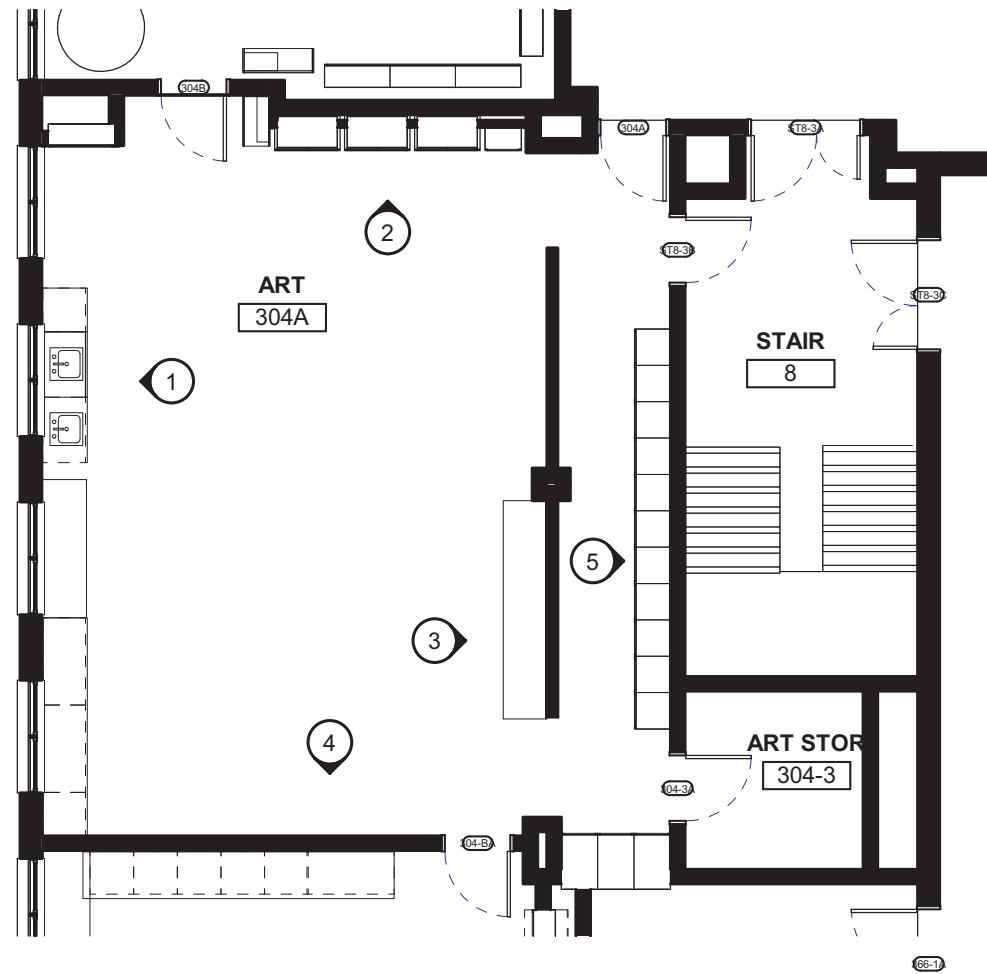


WELLESLEY MIDDLE SCHOOL

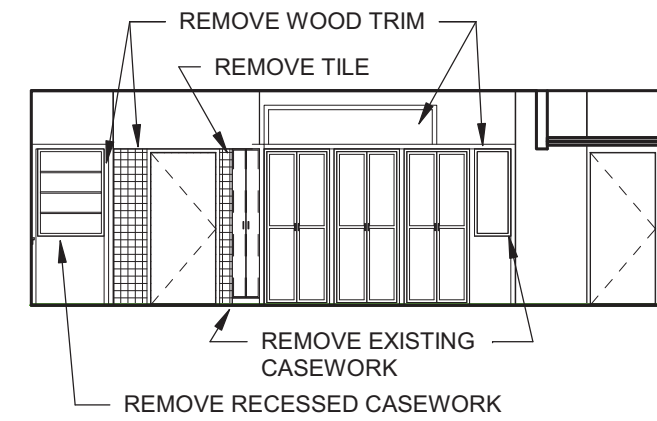


EXISTING AND PROPOSED DEMO ART ROOM
304A

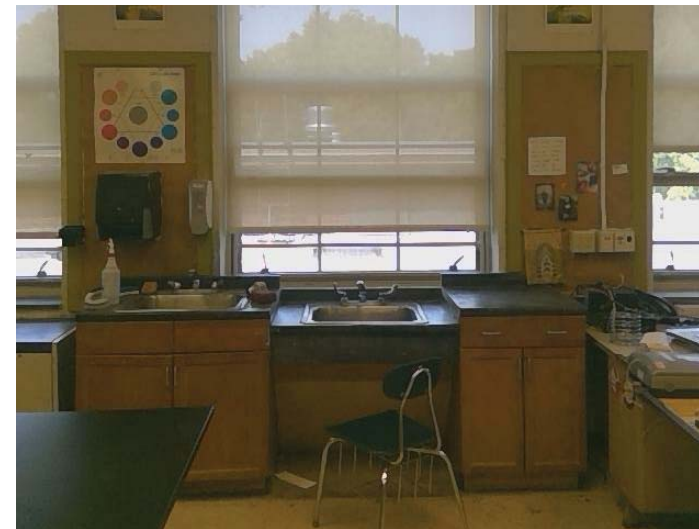
08/16/18



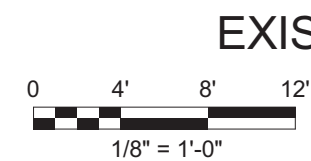
1 - ART ROOM 304A



2 - ART ROOM 304A

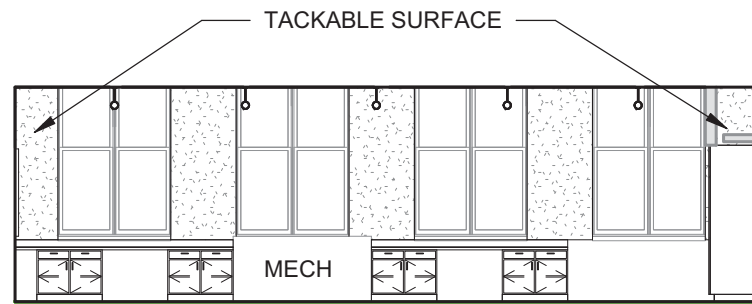
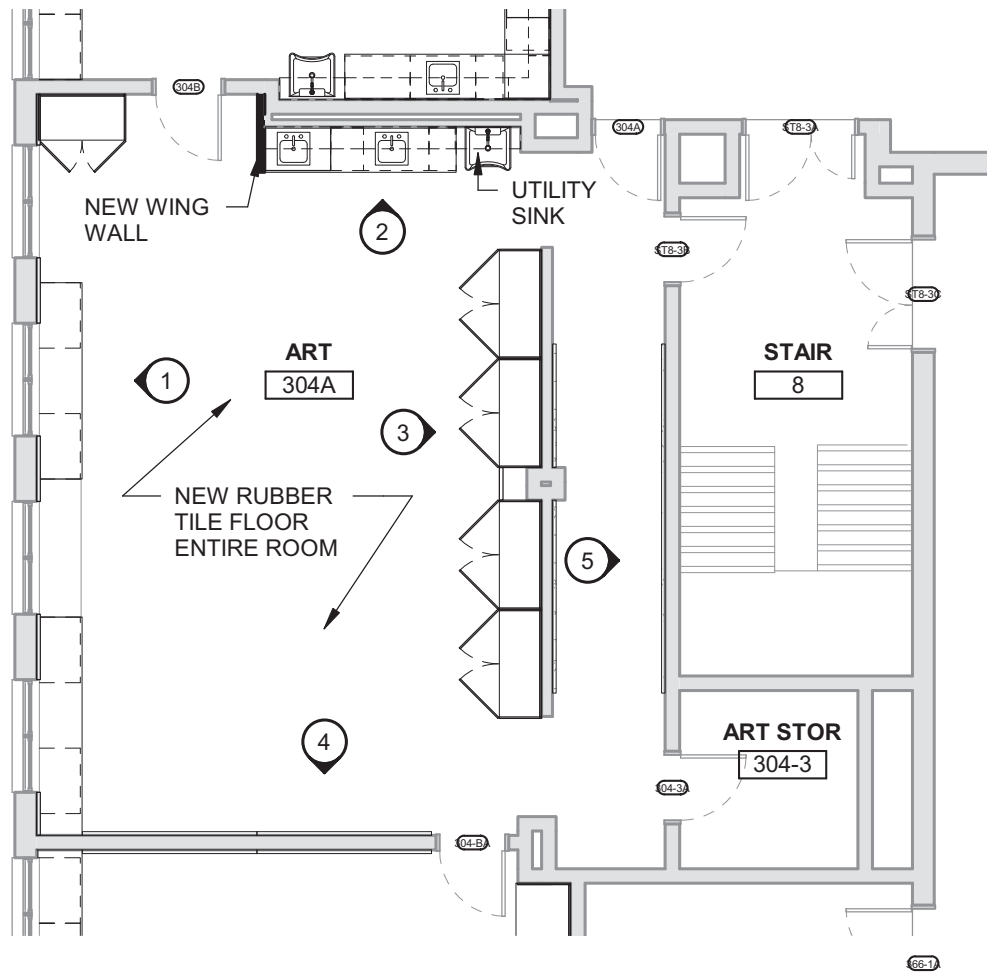


WELLESLEY MIDDLE SCHOOL

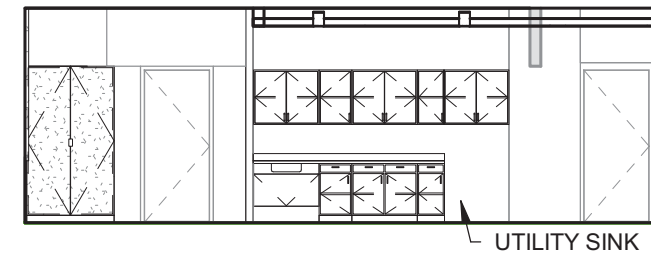


EXISTING AND PROPOSED DEMO ART ROOM
304A

08/16/18



1 - ART ROOM 304A



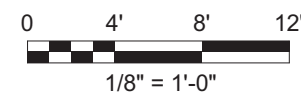
2 - ART ROOM 304A

CASEWORK SCHEDULE

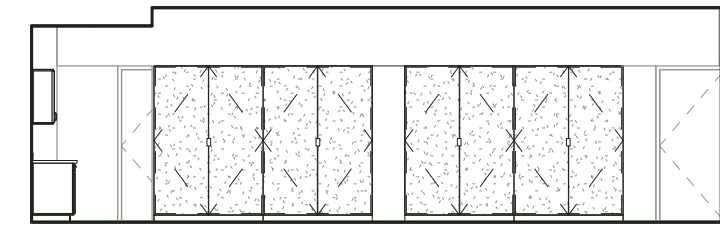
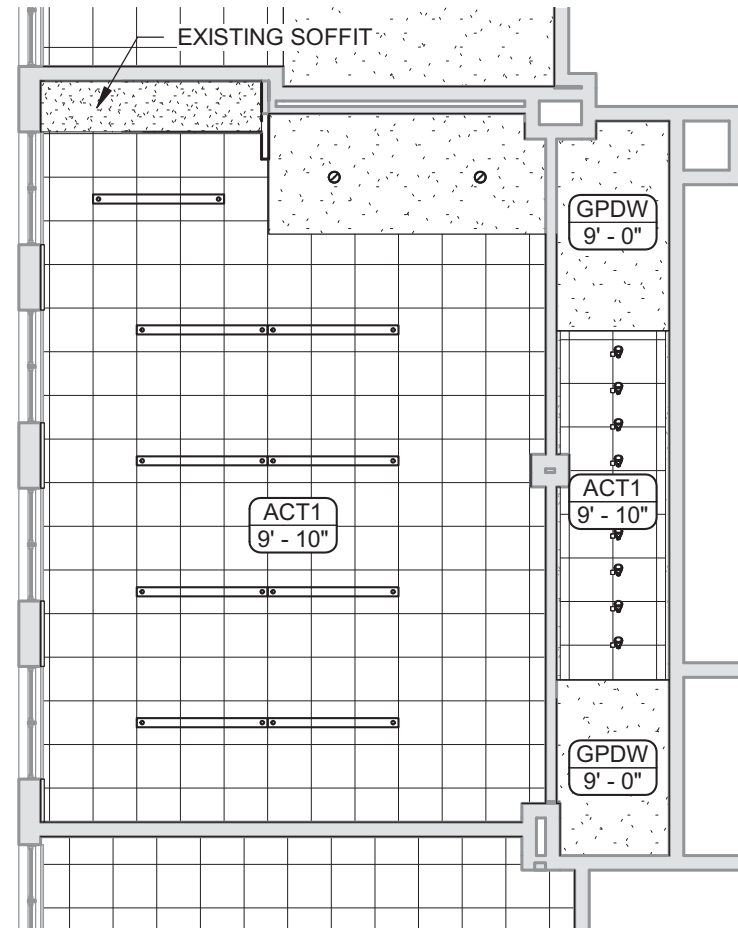
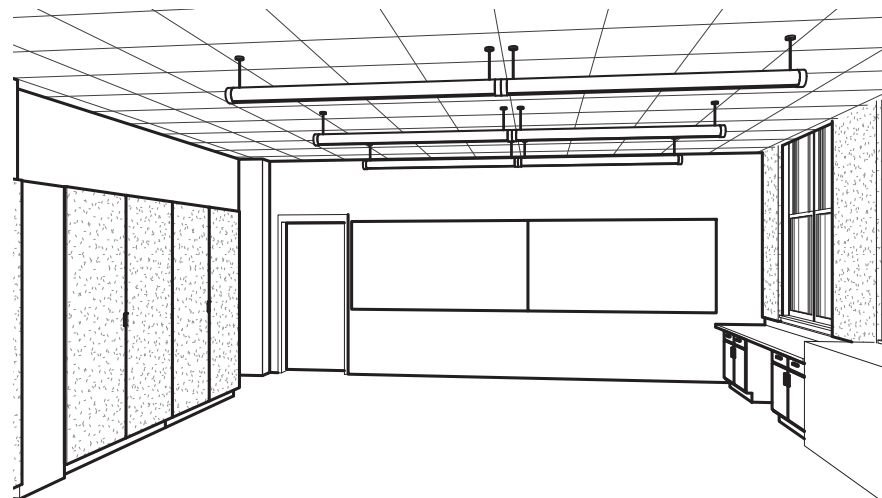
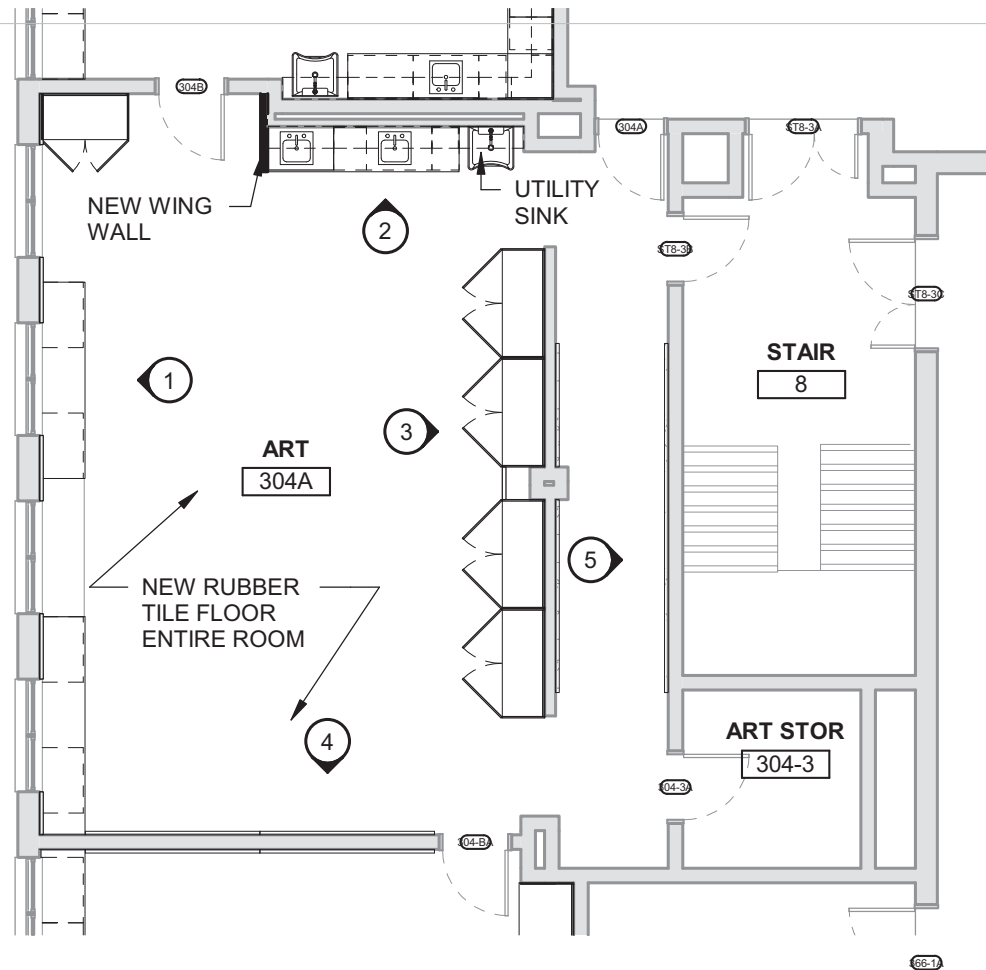
ROOMS	QUANTITY	DIMENSION	DESCRIPTION
304A	BASE SCOPE - ILLUSTRATED		
	4	60" W x 24" D x 86" H	TALL CABINET WITH DOORS. TACKABLE SURFACE
	1	48" W x 24" D x 86" H	TALL CABINET WITH DOORS. TACKABLE SURFACE
	4	36" W x 24" D x 30" H	BASE CABINET WITH 2 DOORS, 2 DRAWERS
	2	36" W x 24" D x 34" H	BASE CABINET WITH 2 DOORS
	2	18" W x 24" D x 34" H	BASE CABINET WITH 2 DOORS, 2 DRAWERS
	3	36" W x 12" D x 30" H	UPPER CABINET WITH 2 DOORS
	2	18" W x 12" D x 30" H	UPPER CABINET WITH 1 DOORS
	1	36" W x 24" D x 34" H	ADA SINK BASE



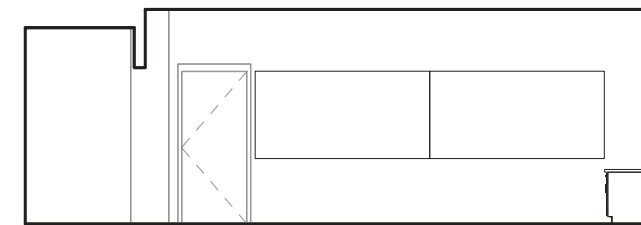
WELLESLEY MIDDLE SCHOOL



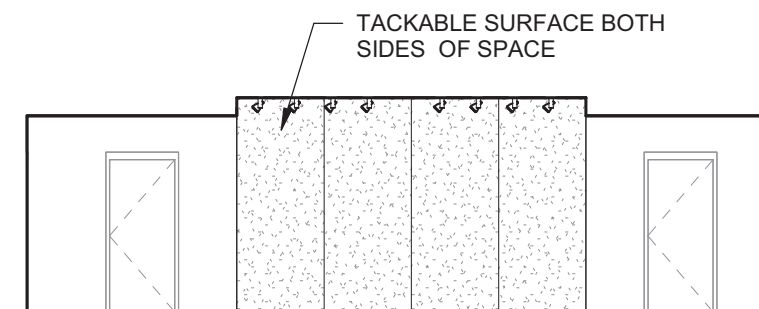
PROPOSED ART ROOM 304A
JEWELRY MAKING 08/16/18



3 - ART ROOM 304A



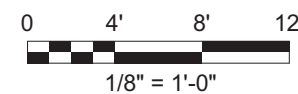
4 - ART ROOM 304A



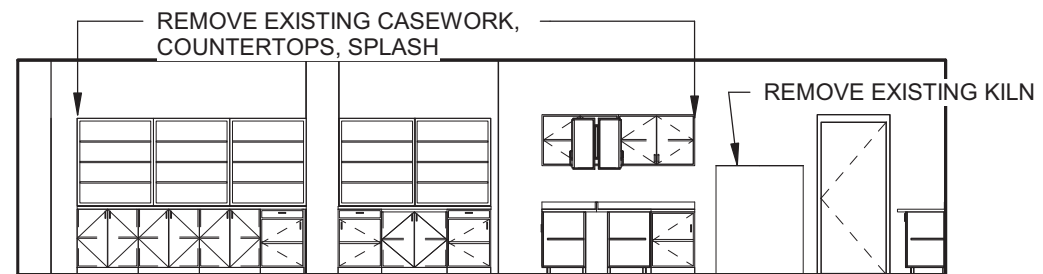
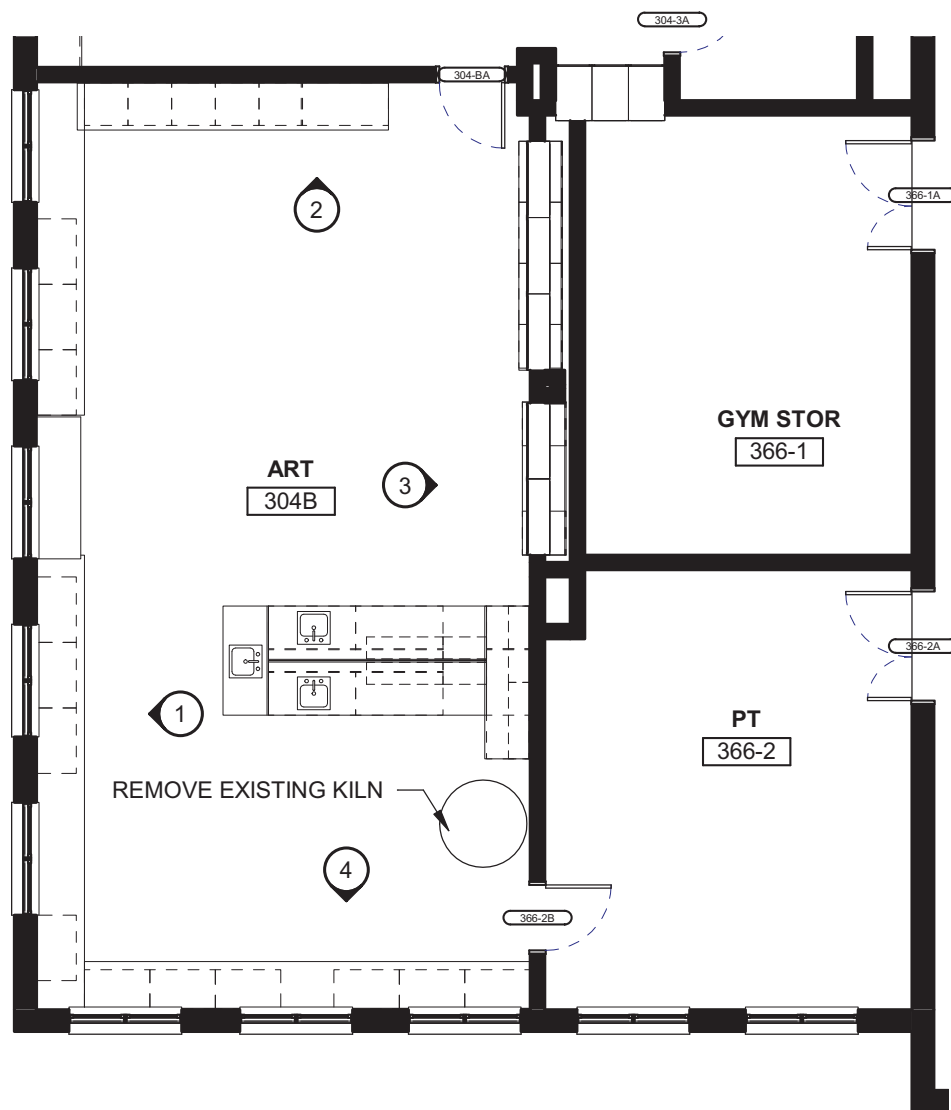
5 - ART ROOM 304A



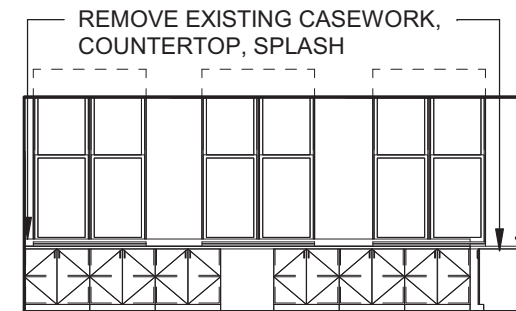
WELLESLEY MIDDLE SCHOOL



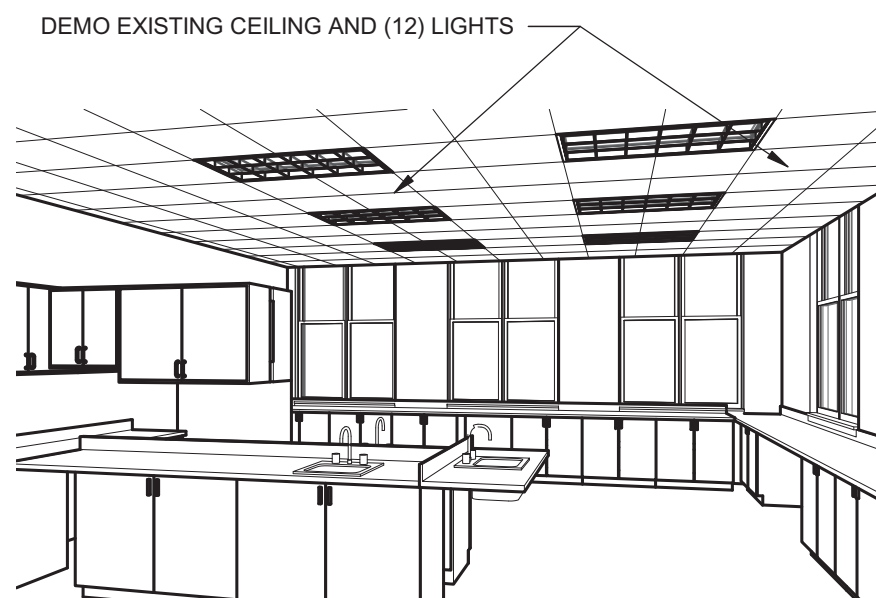
PROPOSED ART ROOM 304A
JEWELRY MAKING 08/16/18



3 - ART 304B



4 - ART 304B

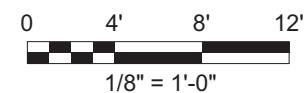


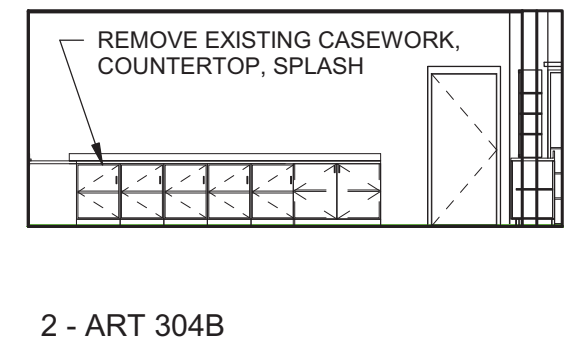
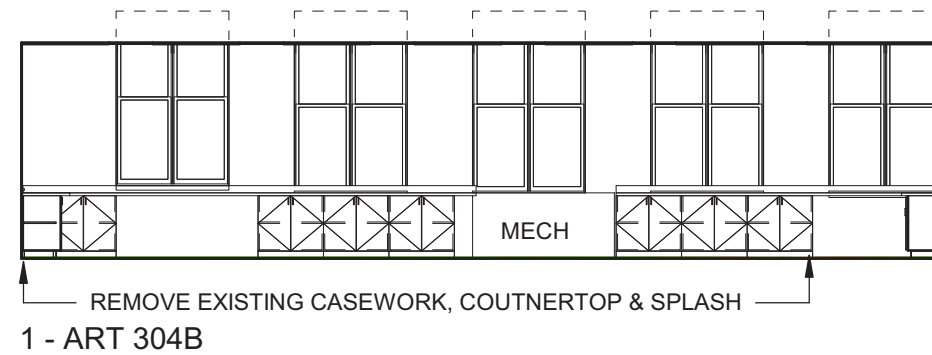
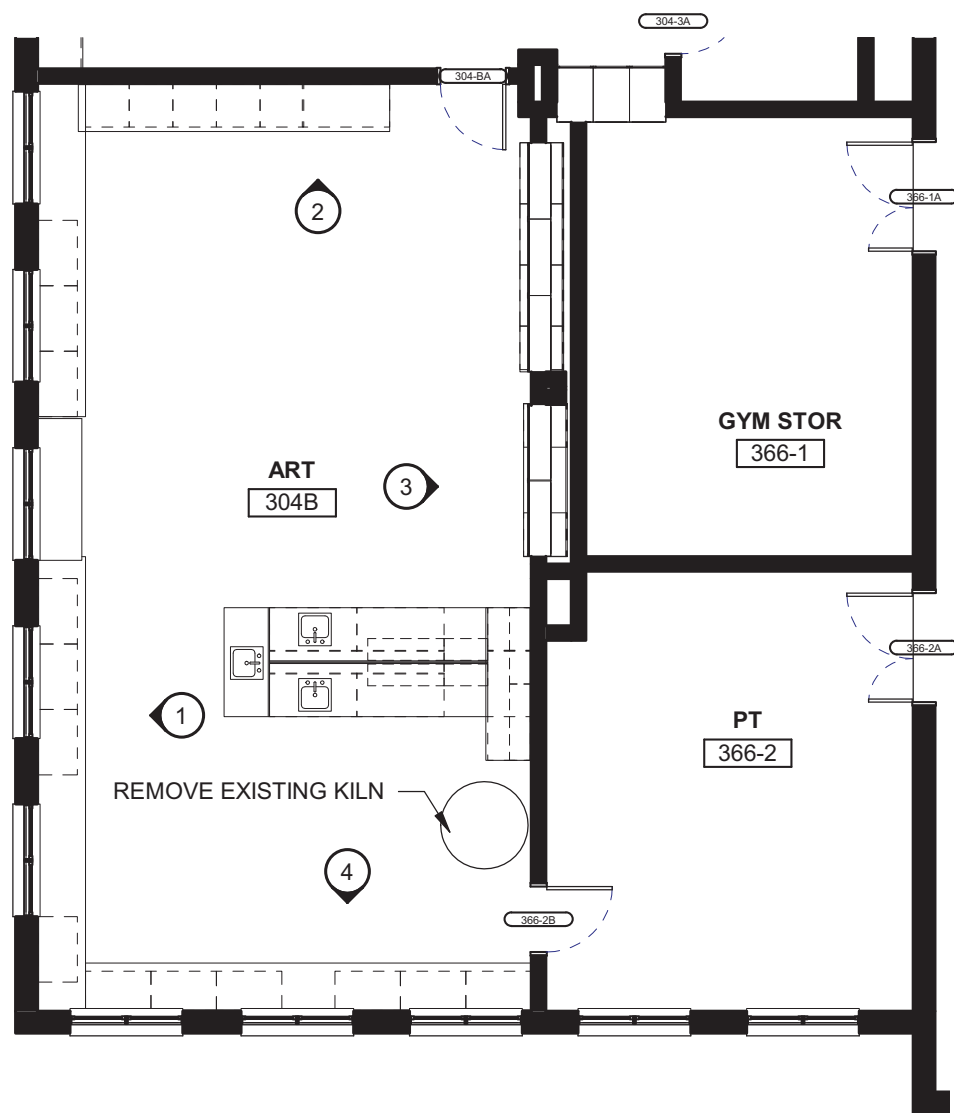
WELLESLEY MIDDLE SCHOOL

EXISTING AND PROPOSED DEMO ART ROOM

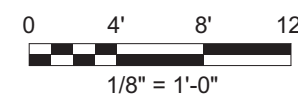
304B

08/16/18





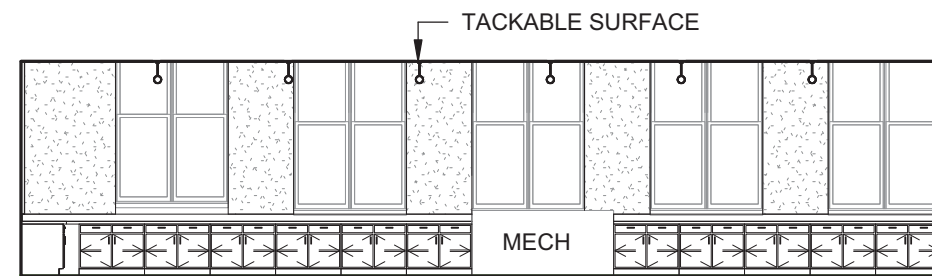
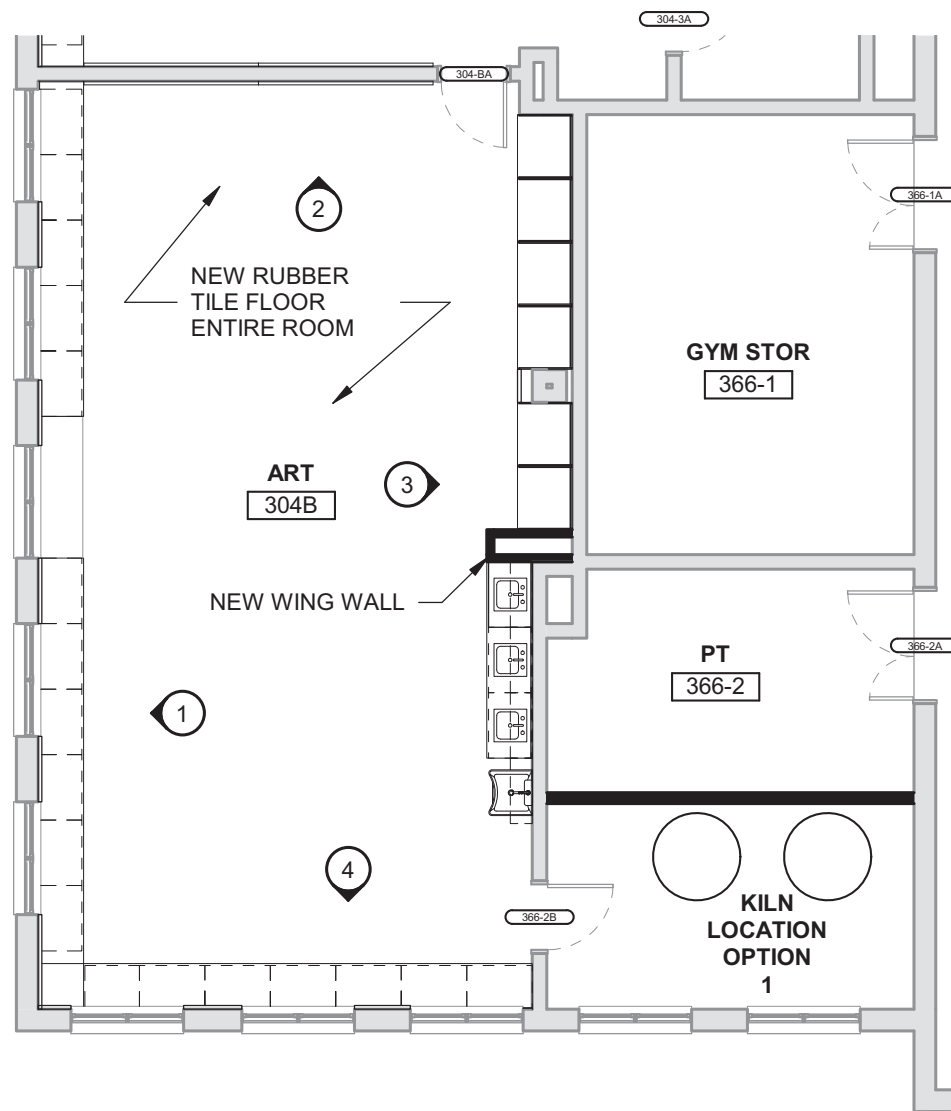
WELLESLEY MIDDLE SCHOOL



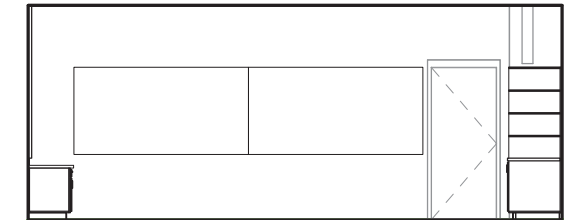
EXISTING AND PROPOSED DEMO ART ROOM

304B

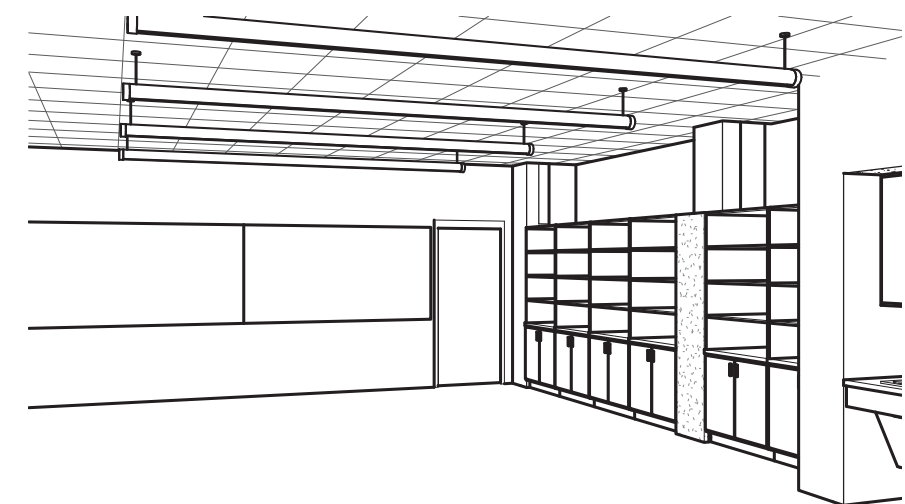
08/16/18



1 - ART 304B



2 - ART 304B

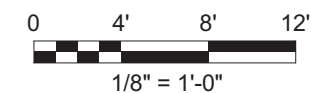


CASEWORK SCHEDULE

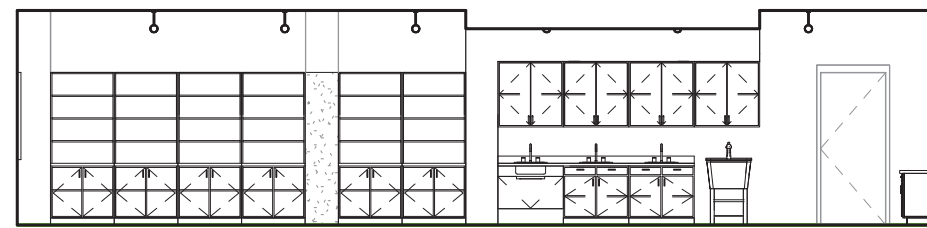
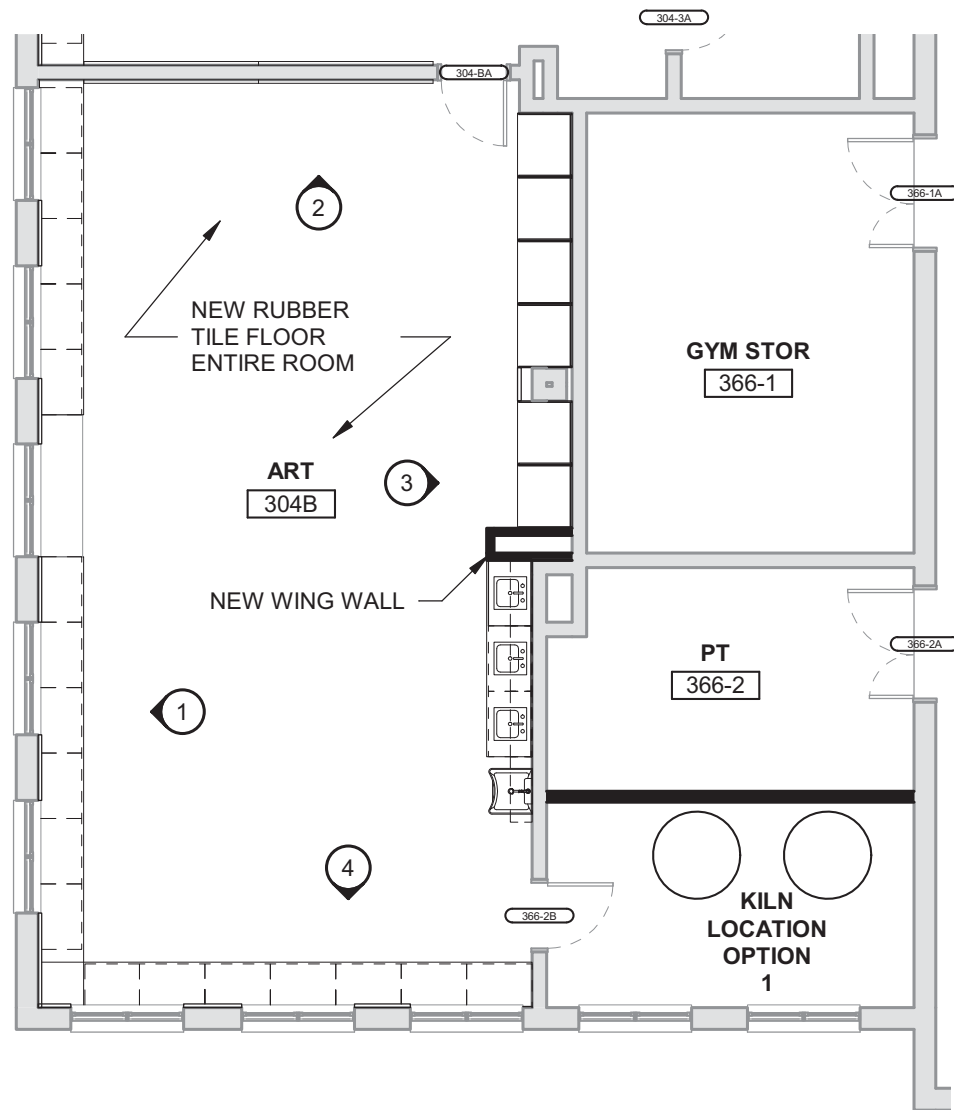
QUANTITY	DIMENSION	DESCRIPTION
BASE SCOPE - ILLUSTRATED		
18	36" W x 24" D x 30" H	BASE CABINET WITH 2 DOORS, 2 DRAWERS
4	36" W x 12" D x 30" H	UPPER CABINET WITH 2 DOORS
6	36" W x 30" D x 34" H	BASE CABINET WITH 2 DOORS
6	36" W x 30" D x 50" H	OPEN STORAGE WITH SHELVES
2	36" W x 24" D x 34" H	ADA SINK BASE



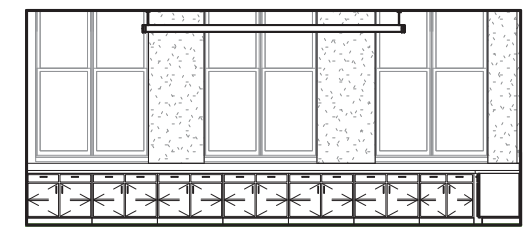
WELLESLEY MIDDLE SCHOOL



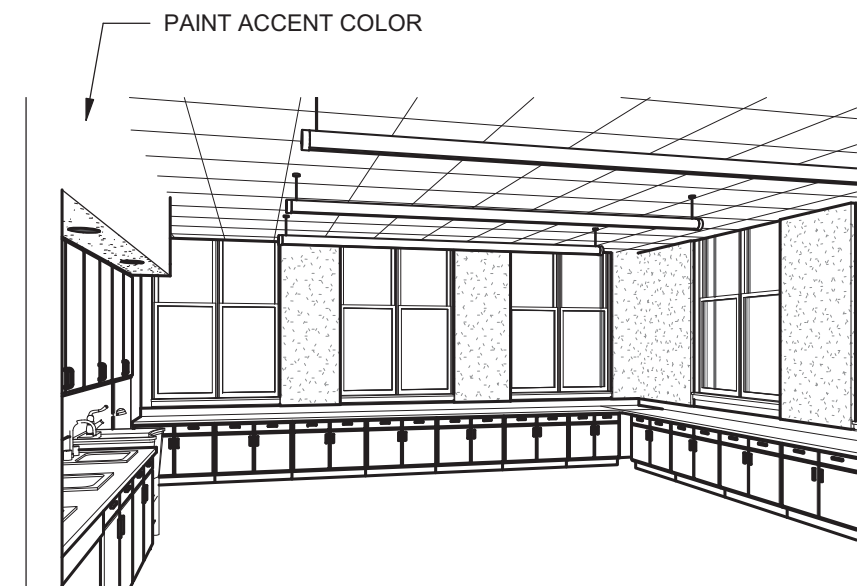
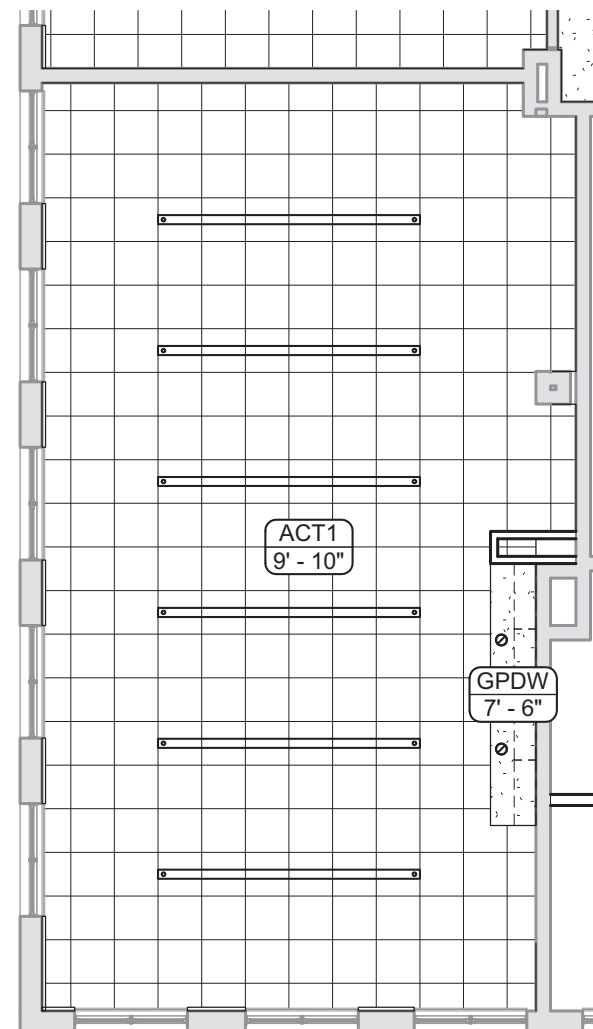
PROPOSED ART ROOM 304B
3D WORK
08/16/18



3 - ART 304B



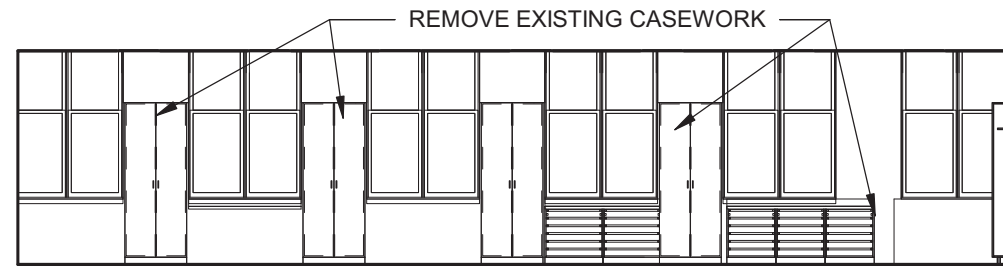
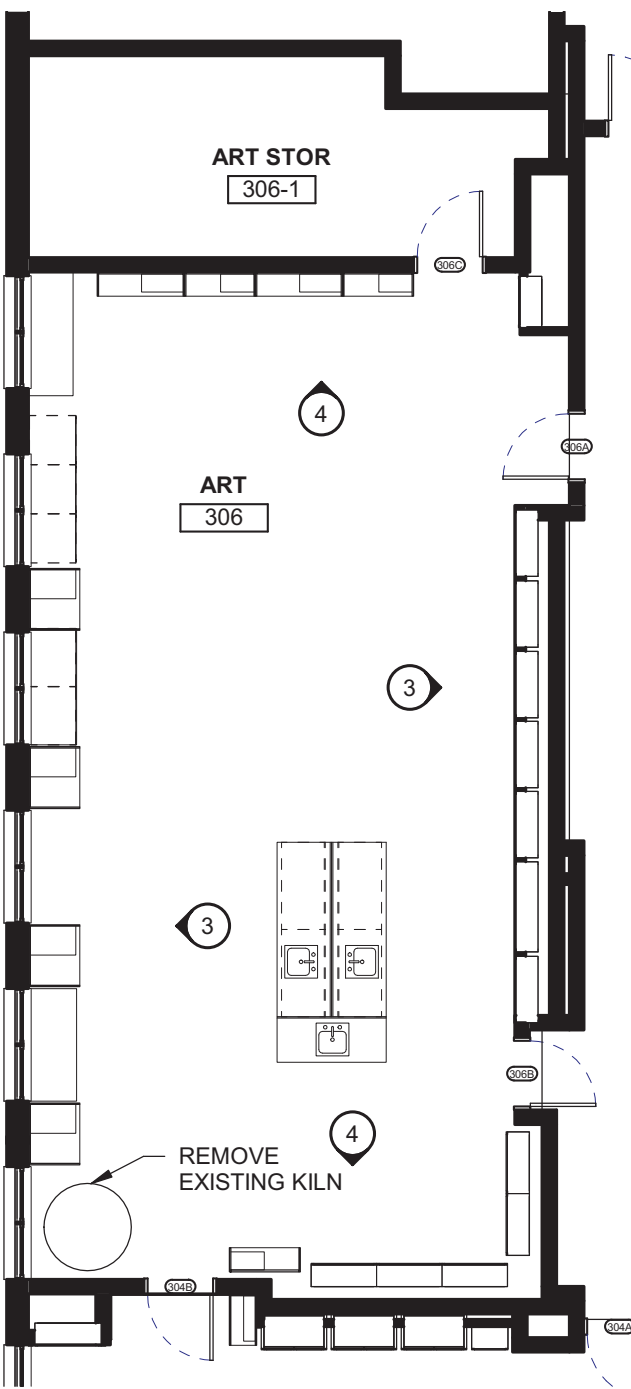
4 - ART 304B



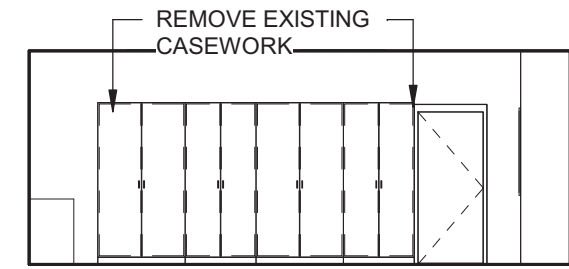
WELLESLEY MIDDLE SCHOOL

PROPOSED ART ROOM 304B

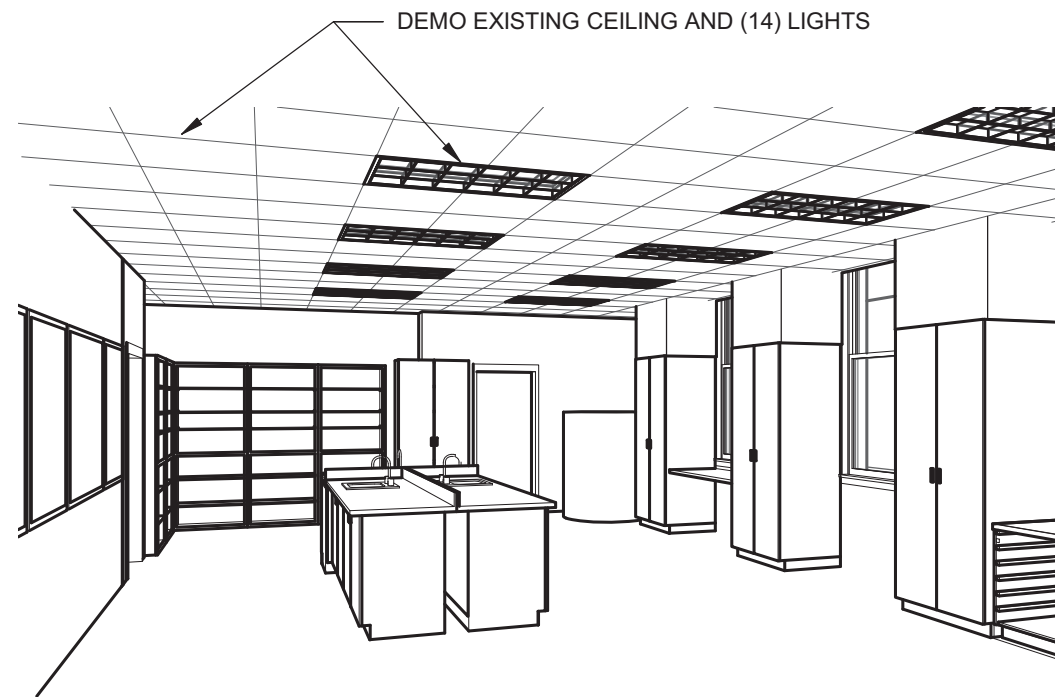
08/16/18



1 - ART ROOM 306



2 - ART ROOM 306

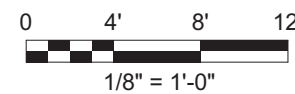


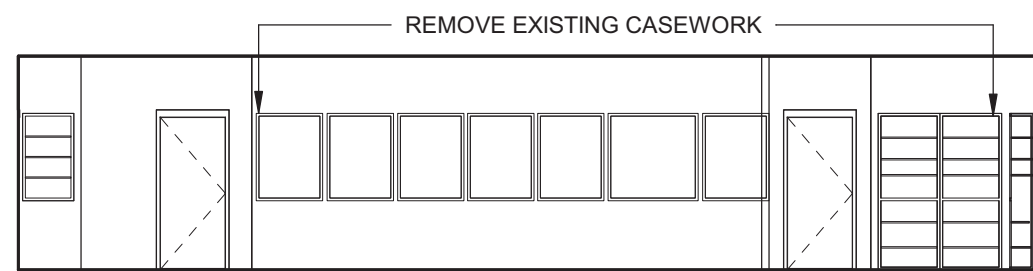
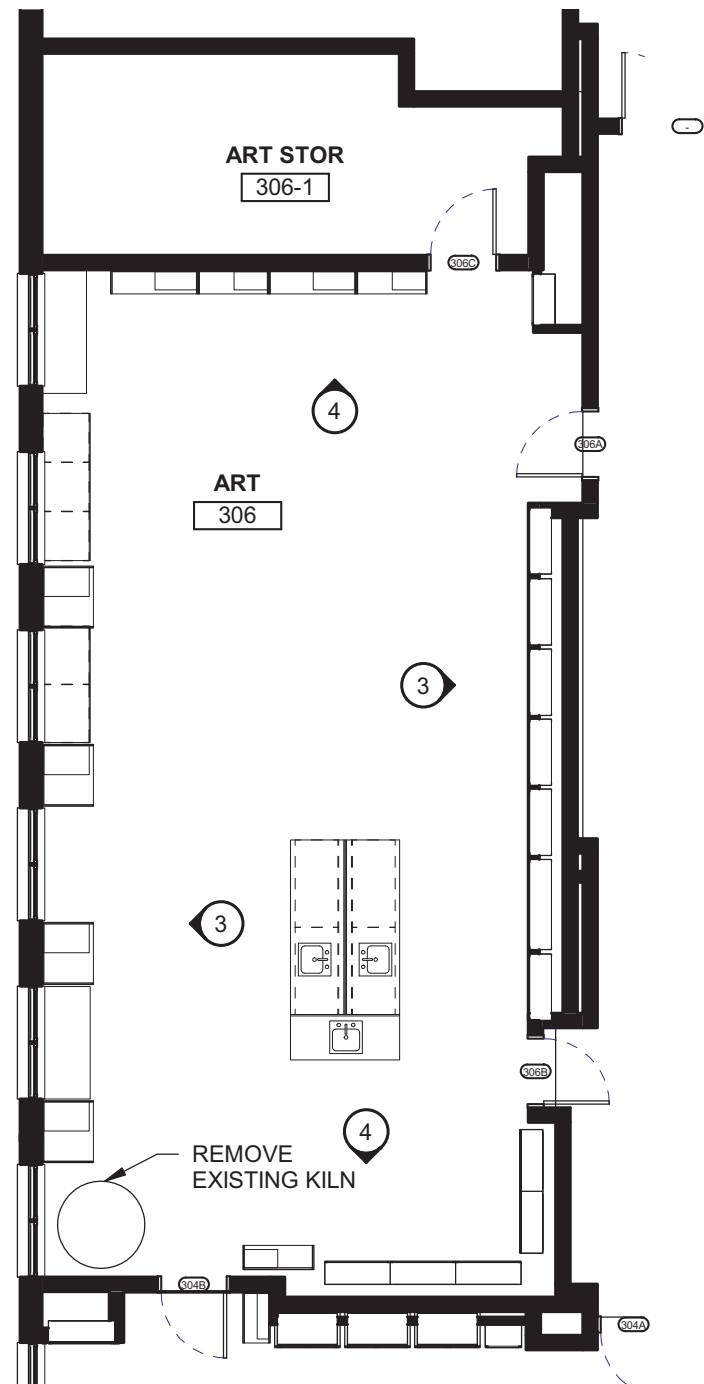
WELLESLEY MIDDLE SCHOOL

EXISTING AND PROPOSED DEMO ART ROOM

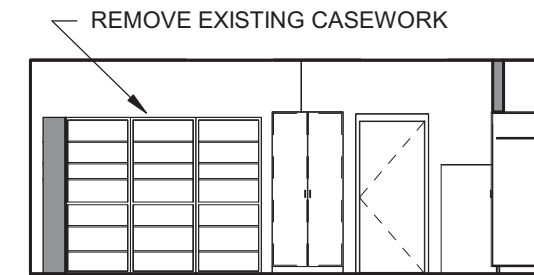
306

08/16/18





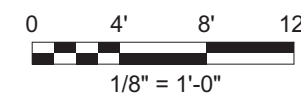
3 - ART ROOM 306



4 - ART ROOM 306



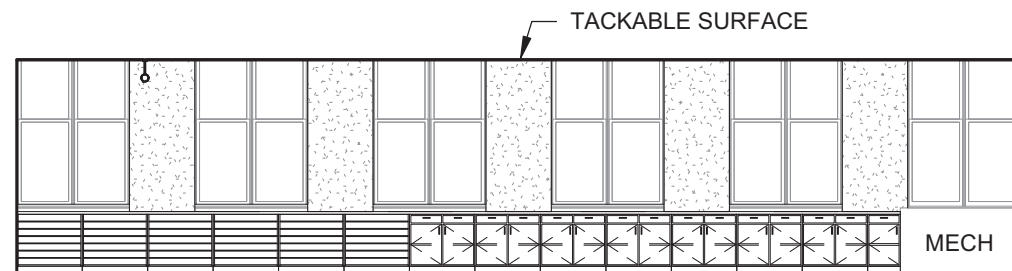
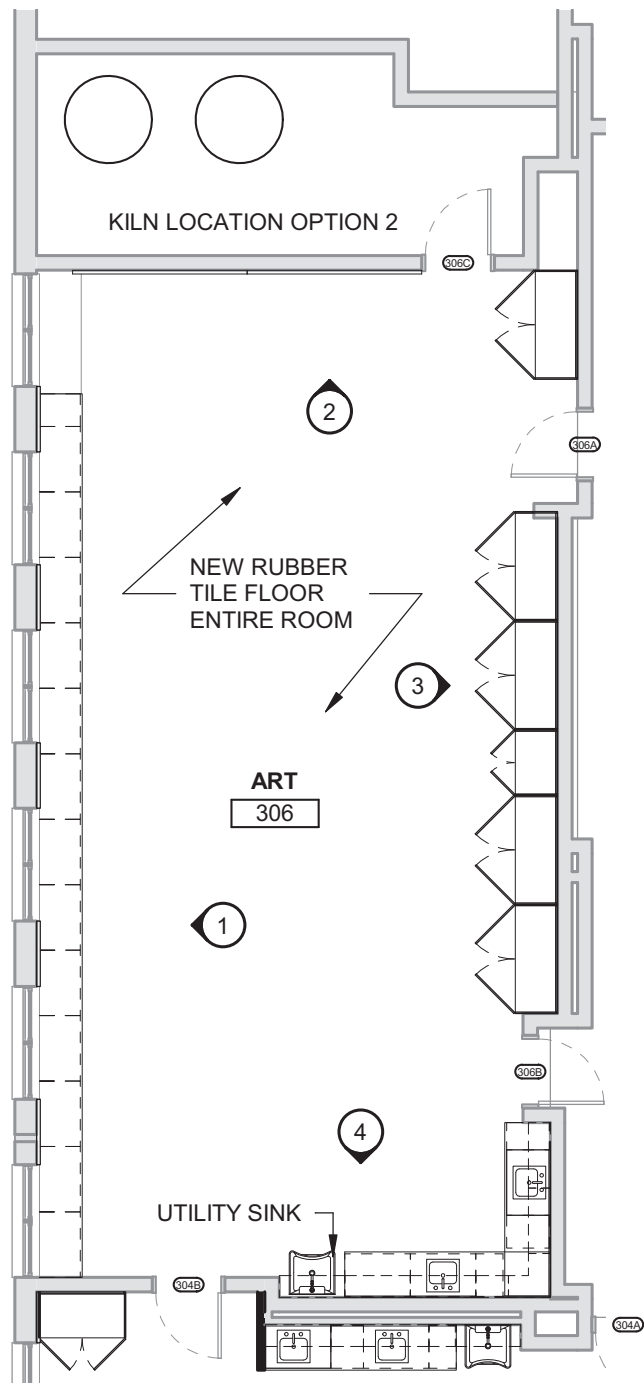
WELLESLEY MIDDLE SCHOOL



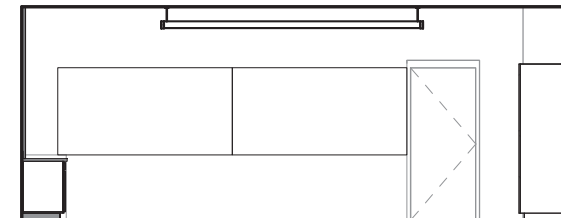
EXISTING AND PROPOSED DEMO ART ROOM

306

08/16/18



1 - ART ROOM 306



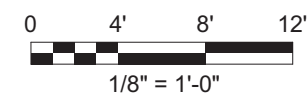
2 - ART ROOM 306

CASEWORK SCHEDULE

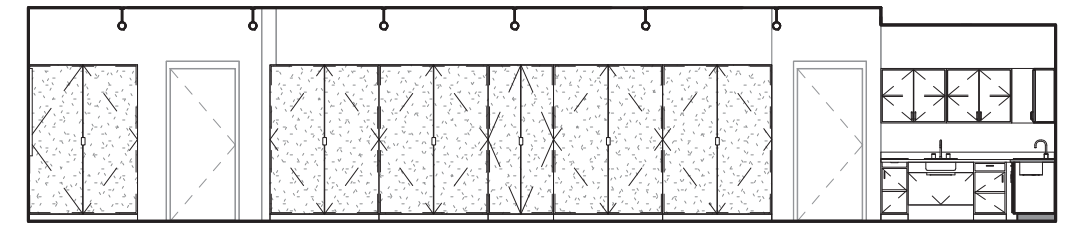
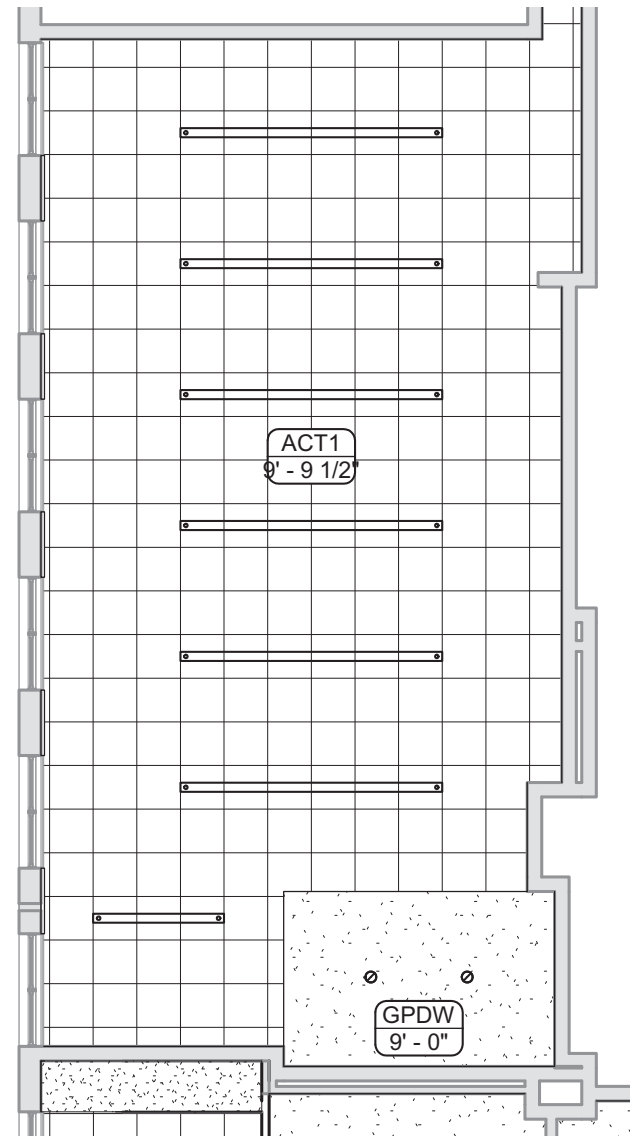
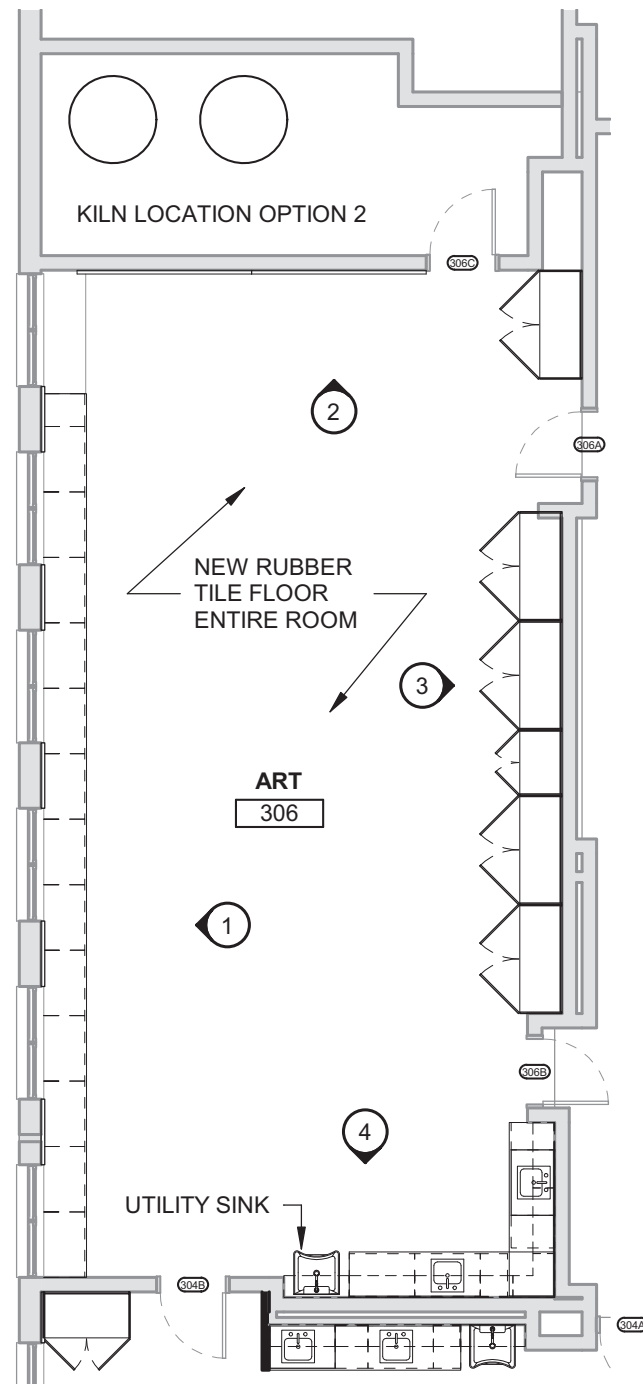
QUANTITY	DIMENSION	DESCRIPTION
BASE SCOPE - ILLUSTRATED		
9	36" W x 24" D x 30" H	BASE CABINET WITH 2 DOORS, 2 DRAWERS
5	36" W x 12" D x 30" H	UPPER CABINET WITH 2 DOORS
6	36" W x 24" D x 34" H	BASE CABINET WITH 7 EQ SHELVES
6	60" W x 24" D x 86" H	TALL CABINET WITH DOORS. TACKABLE SURFACE
1	36" W x 24" D x 86" H	TALL CABINET WITH DOORS. TACKABLE SURFACE
1	36" W x 24" D x 34" H	ADA SINK BASE



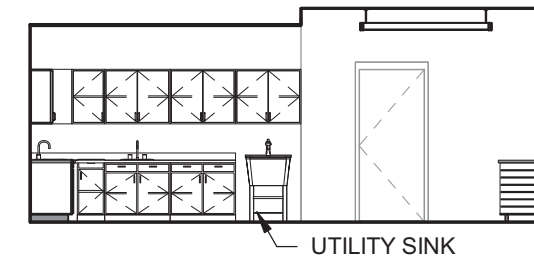
WELLESLEY MIDDLE SCHOOL



PROPOSED ART ROOM 306
2D WORK 08/16/18



3 - ART ROOM 306



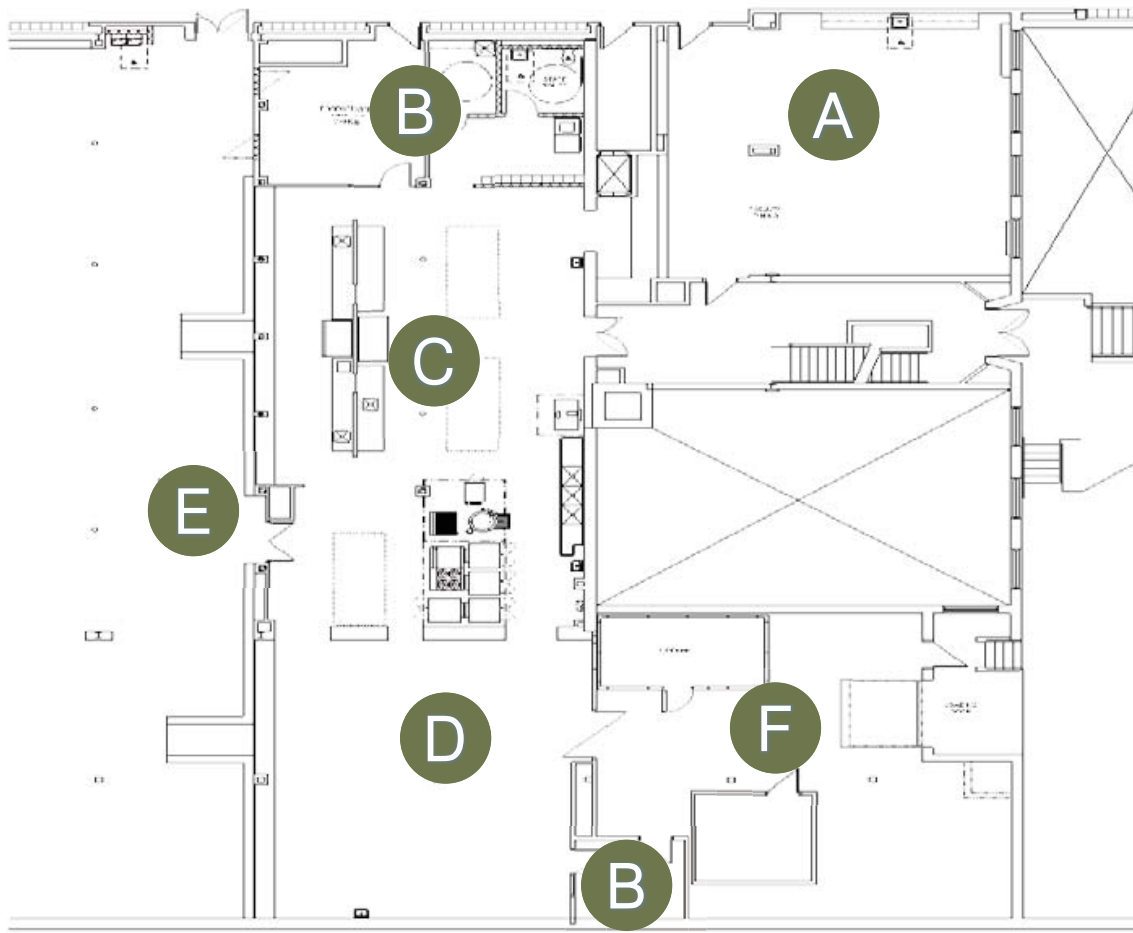
4 - ART ROOM 306



WELLESLEY MIDDLE SCHOOL

PROPOSED ART ROOM 306

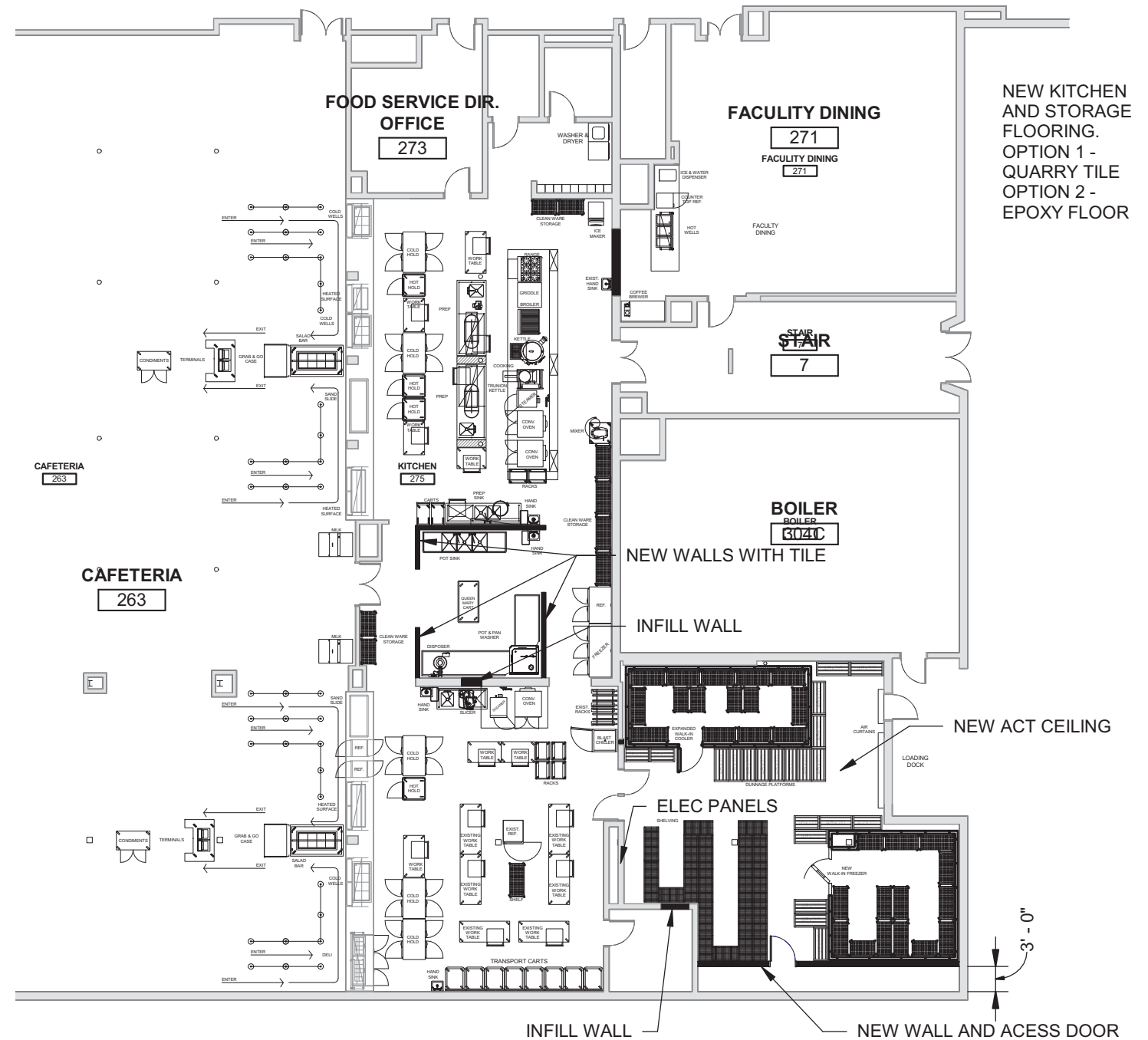
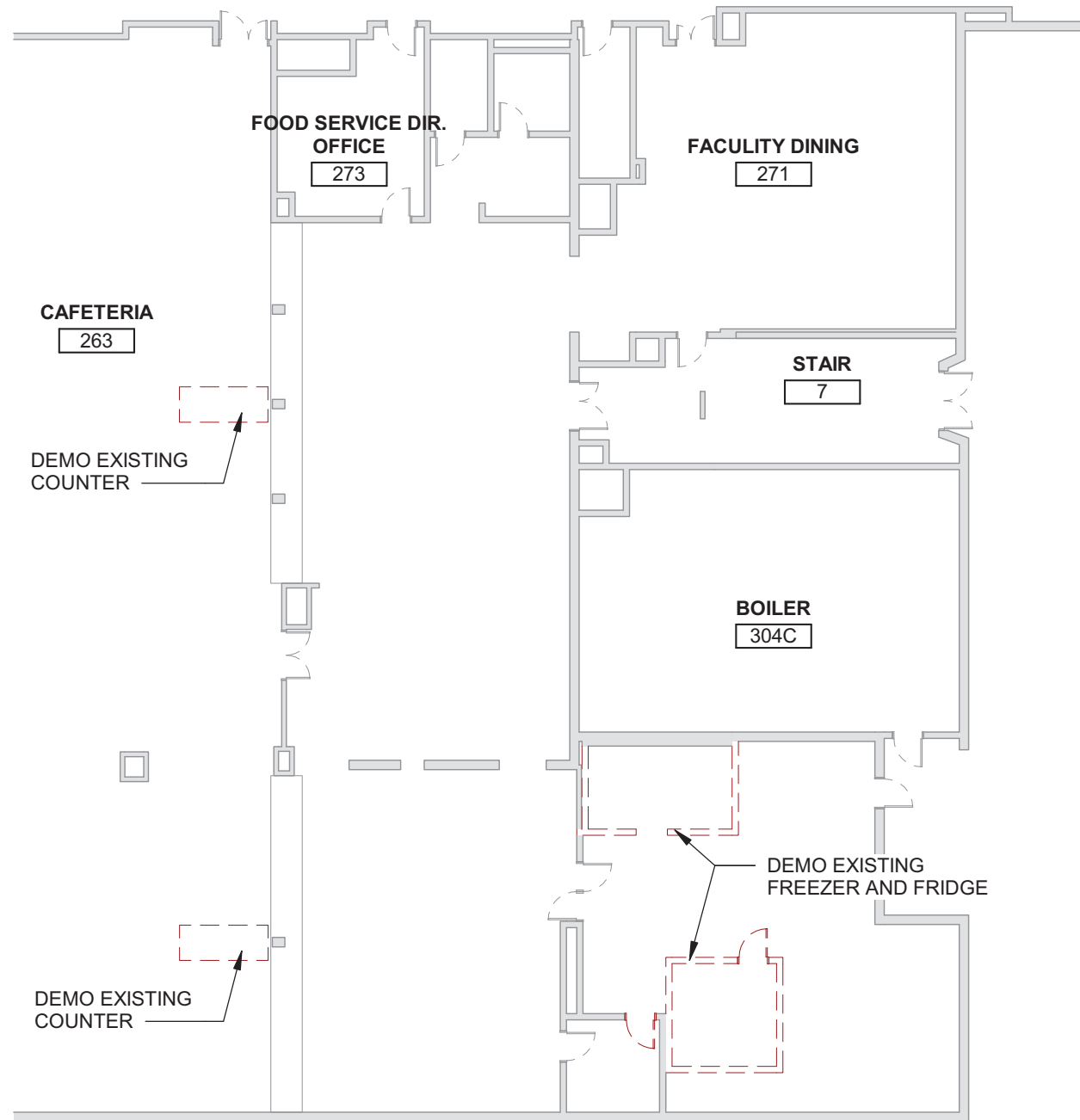
08/16/18



Existing Kitchen Plan

- A** Faculty Dining
- B** Office & Staff Support
- C** Kitchen
- D** Catering for Lower Schools
- E** Serving
- F** Loading Dock & Storage

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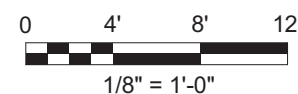


A EXISTING KITCHEN PLAN
SCALE: 1/16" = 1'-0"

B PROPOSED KITCHEN PLAN
SCALE: 1/16" = 1'-0"

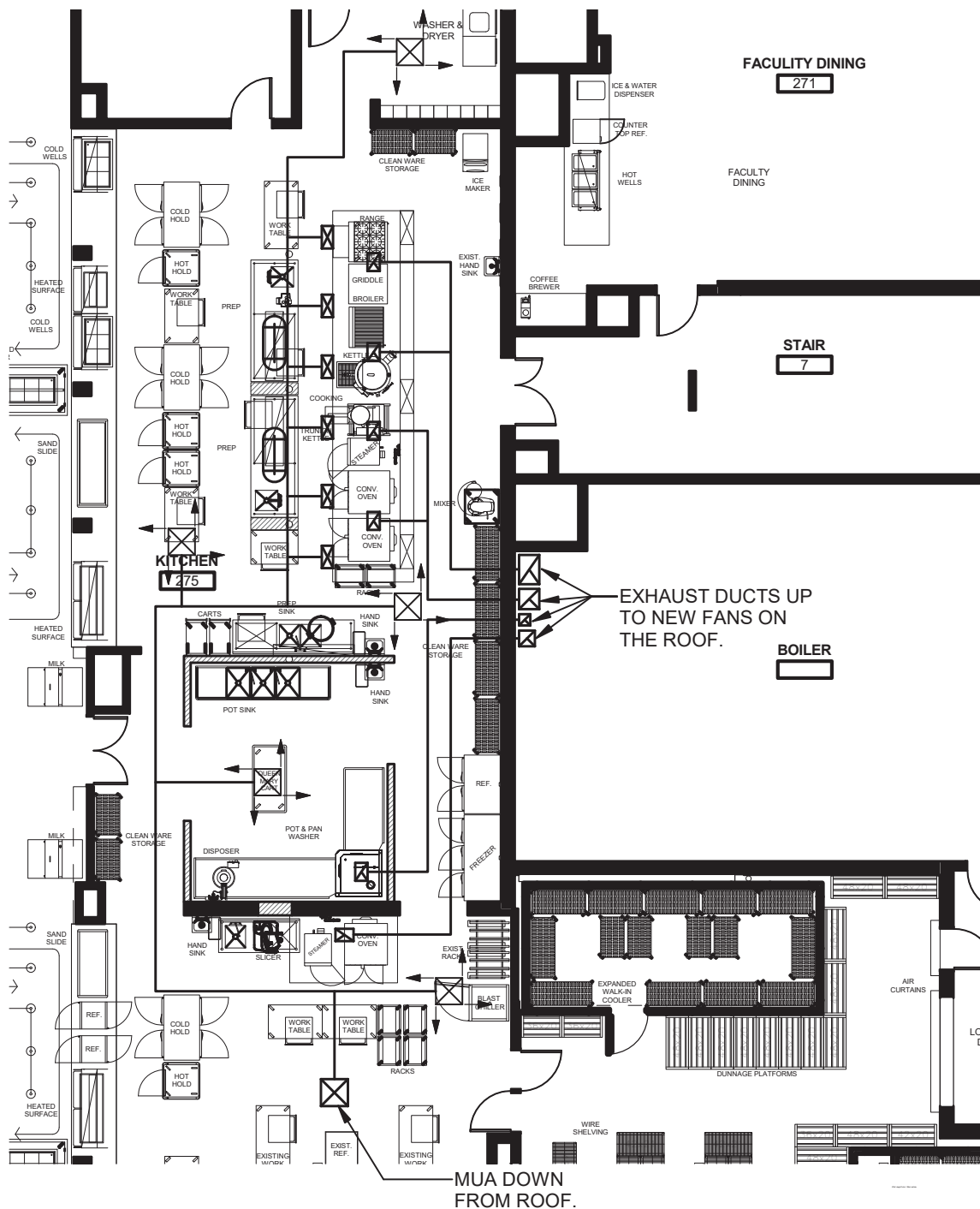


WELLESLEY MIDDLE SCHOOL



PROPOSED KITCHEN PLAN

08/28/18



KITCHEN DUCTWORK - LEVEL 2

Scale 3/32" = 1'-0"



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Auburn, ME
207.784.5100
Portland, ME
207.775.0053
Portsmouth, NH
603.626.1242
Boston, MA
617.426.5050

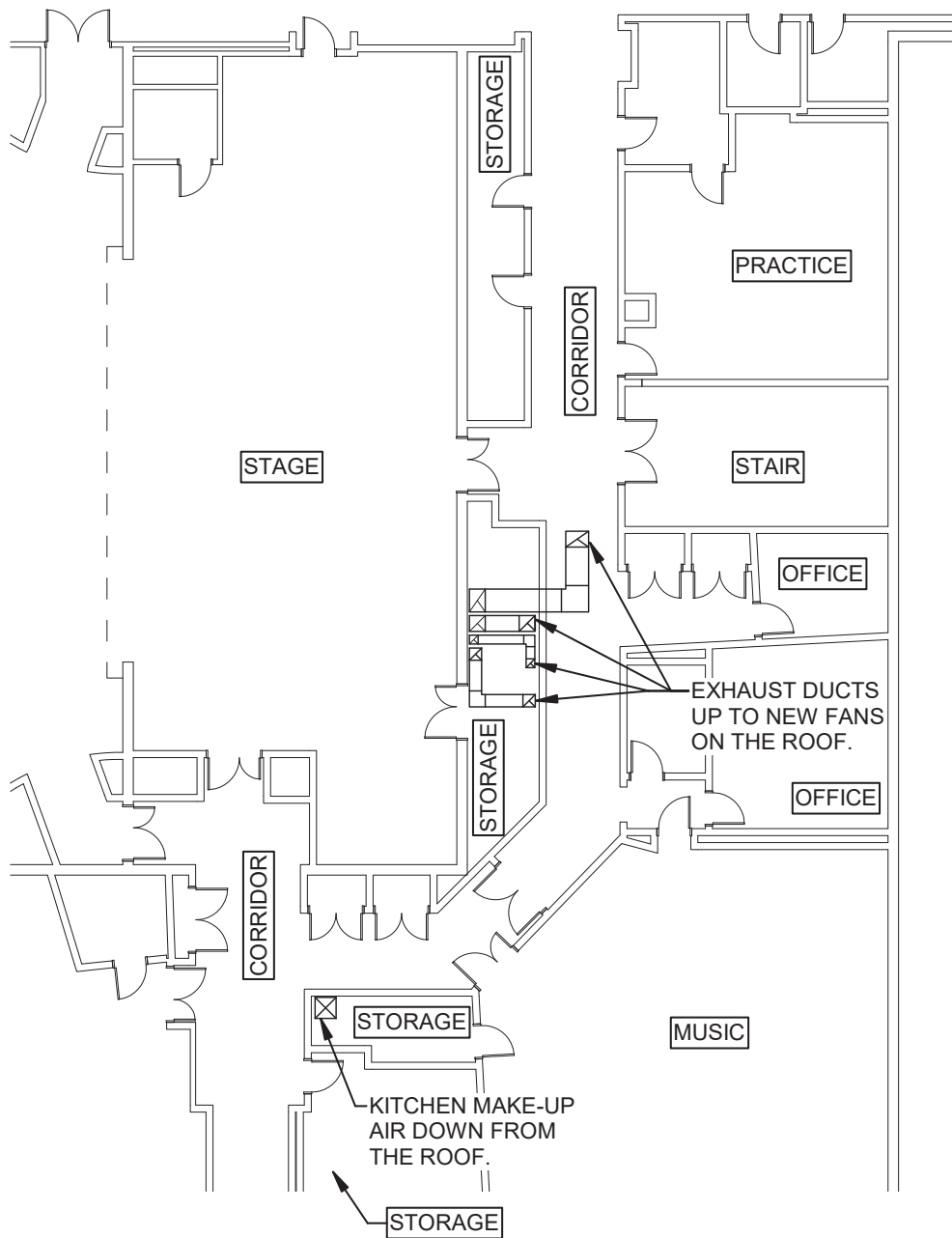
WELLESLEY MIDDLE SCHOOL HVAC RENOVATIONS

WELLESLEY, MA

M80.1

HA Project No.	18479	© 2018 Harriman Associates	Date	08/30/18

Kitchen (d)



KITCHEN DUCTWORK - LEVEL 3

Scale

1/16" = 1'-0"



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Portland, ME
207.775.0053
Portsmouth, NH
603.626.1242
Boston, MA
617.426.5050

WELLESLEY MIDDLE SCHOOL HVAC RENOVATIONS

WELLESLEY, MA

M80.2

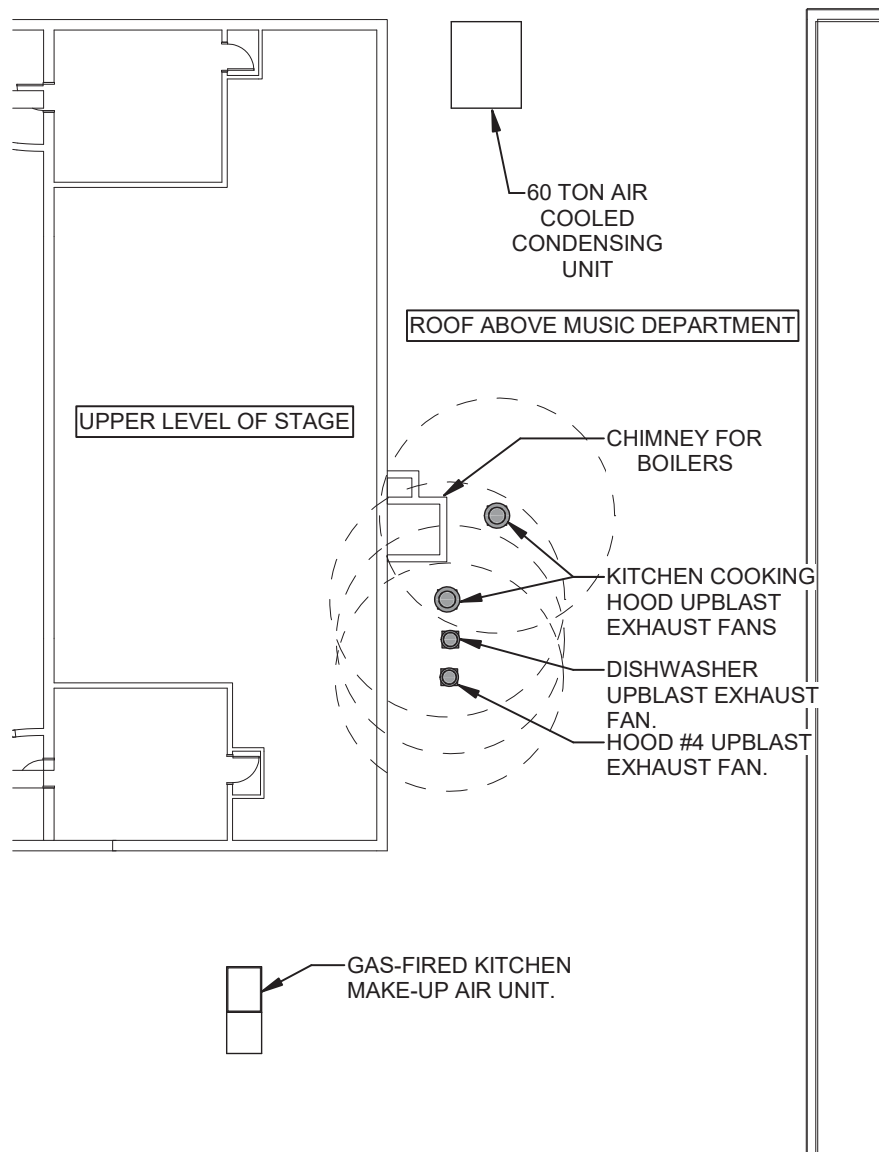
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18479

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KITCHEN DUCTWORK - LEVEL 4 - ROOF

Scale

1/16" = 1'-0"



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Portland, ME
207.775.0053
Portsmouth, NH
603.626.1242
Boston, MA
617.426.5050

WELLESLEY MIDDLE SCHOOL HVAC RENOVATIONS WELLESLEY, MA

HA Project No.

18479

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Date

08/30/18

M80.3

Kitchen (d)

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WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS STUDY

ELECTRICAL ASSESSMENT

HVAC - Electrical Scope of Work

Existing Conditions

Power Equipment:

- Mechanical Equipment is primarily fed from three different panelboards located in two locations.
 - Panelboard PB1, P2GH and P2GI with motor controls are located in a Mechanical Room on the lower level adjacent to the Boiler Room.
 - Panelboard PF with motor controls is located on the Gym B Mechanical Mezzanine.
- Panelboard PB1:
 - Served from 208V switchboard MD2GA.
 - Panelboard and feeder are original to the buildings construction.
 - The feeder is existing and likely has cloth covered insulation as it is original to the building construction.
 - This panelboard serves mechanical equipment with motor controller located adjacent to the panelboard.
 - Surface mounted on block wall.
 - 42 circuit tub.
 - All of the loads appear to be mechanical.
 - All of the branch circuits appear to be original to the buildings construction as the wire insulation is of the cloth covered type.
- Panelboard P2GH and P2GI:
 - Served from newer (new from the 2005 renovations) 208V switchboard MD2GB.
 - These panelboards serve mechanical equipment with motor controllers located adjacent to the panelboard.
 - P2GH: 60 circuit tub, P2GI: 42 circuit tub.
 - Both panelboards and feeder were provided as part of the 2005 renovations.
 - All of the loads appear to be mechanical.
 - Many of the branch circuits appear to be original to the buildings construction as the wire insulation is of the cloth covered type.

Service Entrance:

- The existing Utility Co. pad mounted transformer is 500kVA. The maximum recorded demand on the service is 518.4kVA, this load was recorded on 02-03-2010.
- The existing electrical service entrance has a 1,600Amp rating and is capable of delivering approximately twice the capacity of the Utility Co. transformer, just over 1,000kVA.



WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS STUDY

Lighting:

- Lighting in some areas will be required to be taken down to accommodate the replacement of the AHU, and other spaces are not well illuminated.
- All lighting is Fluorescent.
- With the exception of units that are suspended in Storage Rooms all lighting controls are local "ON" / "OFF" toggle switch. Where located in a Storage Room lighting controls are occupancy sensor with local override "OFF" switch.

Fire Alarm System:

- The fire alarm system control panel is a Simplex 4100U. These panels are in current production, the availability of parts and service is not an issue.
- Duct smoke detectors will be located at each replaced AHU.

Recommendations:

Power Equipment (Distribution Equipment):

- Provide new 480V distribution panelboard to serve new mechanical equipment serving the Kitchen, Auditorium and Gymnasium A. Gymnasium B will be fed from an existing 208V panelboard located on the same mezzanine as the equipment.
 - The new distribution panelboard will be fed directly from the existing service entrance switchboard. The existing switchboard has adequate spare space and capacity to accommodate the additional circuit breaker.
 - The new kitchen dishwasher and booster heater will be fed from this distribution panelboard.
- This approach will avoid disturbing panelboards that contain circuits using the cloth insulation covering, provide smaller feeders to each unit and will only require the purchase of one expensive switchboard circuit breaker.

Service Entrance:

- Coordinate with the Utility Co. to replace the existing 500kVA pad mounted transformer for a unit that will accommodate the additional cooling load.

Lighting:

- Lighting will be replaced / upgraded as necessary to accommodate the new equipment.
- Any new lighting will be LED.

Fire Alarm System:

- Adjustments to the location of the duct smoke detectors will be made as necessary to accommodate the reconfiguration of ductwork.
- The duct smoke detectors will force the shutdown of fans as required by NFPA.



WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS STUDY

Doors and Door Hardware - Electrical Scope of Work

Existing Conditions:

Power Equipment:

- Through spot checking, most panelboards have a number of “spare” circuit breakers.

Fire Alarm System:

- The fire alarm system control panel is a Simplex 4100U. These panels are in current production, the availability of parts and service is not an issue.
- Corridors have full smoke detector coverage so it will not be required to add detectors at each set of doors where hold opens are added.

Recommendations:

Power Equipment:

- Provide / extend circuits as necessary to accommodate the addition of door hold opens.

Fire Alarm System:

- Provide relays and addressable output modules as necessary to hold opens to allow the holding / release of doors as necessary.

Casework (Art Rooms) – Electrical Scope of Work

Existing Conditions:

Power - Receptacles:

- There does not appear to be an adequate number of receptacles throughout each of the rooms. Extension cords are in use.
- There are two Kilns, each located in a different Art Room.
- The rooms were not designed to be Art Rooms.

Communications:

- Communications outlets are limited to the teaching wall.
- Each room utilizes interactive projectors / boards.

Lighting:

- Lighting is provided with recessed three lamp fluorescent troffers.
 - o Lamps are all T8.
- Lighting is controlled via ceiling mounted occupancy sensor with local override switches that provide two levels of light by switching alternating lighting fixtures.
- Two classrooms are served with “normal” power and one (center classrooms) is served with “emergency” power due to being an egress path for one of the art classrooms.



WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS STUDY

Fire Alarm System:

- The fire alarm system control panel is a Simplex 4100U. These panels are in current production, the availability of parts and service is not an issue.

Public Address and Clock System:

- There is a wall mounted public address system speaker and central clock located under a common plate in each of the rooms.

Recommendations:

Power – Receptacles:

- Add receptacles to accommodate use of each Art Room.

Communications:

- Add communications outlets as / if needed to accommodate use of each Art Room.

Lighting:

- Replace lighting with LED.
- Provide occupancy sensor controls with dimming user controls.

Fire Alarm System:

- Relocate devices and appliances as necessary to accommodate renovation of each Art Room.

Public Address and Clock System:

- Relocate devices and appliances as necessary to accommodate renovation of each Art Room.

Kitchen – Electrical Scope of Work

Existing Conditions:

Power Equipment (Distribution Equipment):

- There is one “new” panelboard with new feeder (new from the 2005 renovation) located in Kitchen Storage. Panelboard K21A.
 - Served from 208V switchboard MD2GB located in the Main Electrical Room.
 - Panelboard has a 125A main circuit breaker.
 - 42 circuit tub.
 - Per the 2005 renovation documents is fed by a 225A circuit breaker and 4/0 feeder (feeder size will need to be verified if reused).
 - Panelboard appears to serve only the Kitchen.
 - Surface mounted panelboard.
- There is one replaced panelboard with existing feeder (panelboard new from the 2005 renovation) located in the Kitchen. Panelboard HK.
 - Served from 208V switchboard MD2GA located in Main Electrical Room.
 - 42 circuit tub.



WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS STUDY

- The feeder is existing and likely has cloth covered insulation as it is original to the building construction.
 - Panelboard appears to serve only the Kitchen.
 - Flush mounted panelboard in glazed block wall.
- Remaining panelboards and their feeders are original to the building construction.
 - Panelboard PKE located in the Kitchen:
 - It is not known at this time where panelboard PKE is fed from.
 - The feeder is existing and likely has cloth covered insulation as it is original to the building construction.
 - Panelboard appears to serve only the Kitchen.
 - Flush mounted panelboard in glazed block wall.
 - 12 circuit tub.
 - Panelboard PK2 located in the Kitchen:
 - Served from 208V switchboard MD2GA located in Main Electrical Room. Not an “Emergency” feed.
 - The feeder is existing and likely has cloth covered insulation as it is original to the buildings construction.
 - Panelboard appears to serve three lighting circuits outside of the Kitchen area. Boys Lockers, Girls Lockers and Band/Choral.
 - Flush mounted panelboard in glazed block wall.
 - 12 circuit tub.
 - Panelboard PK3 located in the Kitchen:
 - Served from 208V switchboard MD2GA located in the Main Electrical Room.
 - The feeder is existing and likely has cloth covered insulation as it is original to the buildings construction.
 - Panelboard appears to serve only the Kitchen.
 - Flush mounted panelboard in glazed block wall.
 - 42 circuit tub.
 - Panelboard PK4 located in Kitchen Storage:
 - It is not known at this time where panelboard PK4 is fed from.
 - The feeder is existing and likely has cloth covered insulation as it is original to the buildings construction.
 - Panelboard appears to serve only the Kitchen.
 - Flush mounted panelboard in block wall.
 - 42 circuit tub.
 - Panelboard PK5 located in Kitchen Storage:
 - It is not known at this time where panelboard PK5 is fed from.
 - The feeder is existing and likely has cloth covered insulation as it is original to the buildings construction.
 - Panelboard appears to serve only the Kitchen.
 - Flush mounted panelboard in block wall.
 - 12 circuit tub.
- There is an additional original panelboard located in Kitchen Storage that appear to now be a junction box located to the left of panelboard PK5.
- Automatic shut-off controls for the Kitchen Hood are located in Kitchen Storage, surface



WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS STUDY

mounted on the block wall above the panelboards.

Lighting and Lighting Controls:

- Lighting is provided with recessed three lamp fluorescent troffers in the Kitchen with surface (ceiling and wall) mount two lamp lensed industrial fixtures in Kitchen Storage.
 - Lamps are all T8.
- Lighting is controlled via a low voltage lighting control system (both normal and emergency lighting).
- Normal lighting is fed from panelboard L4GA that is located in the Main Electrical Room on the level below (per 2005 renovation documents, this will have to be verified) and controlled via an adjacent low voltage lighting control system cabinet ELCGA.
- Emergency lighting is fed from panelboard E4GA that is located in an Emergency Electrical Room on the level below (per 2005 renovation documents, this will have to be verified) and controlled via an adjacent low voltage lighting control system cabinet LCGA.
- Exit signs (along with other area lighting) are fed from panelboard E41A that is located in an Emergency Electrical Room on the same level (per 2005 renovation documents, this will have to be verified).

Fire Alarm System:

- The fire alarm system control panel is a Simplex 4100U. These panels are in current production, the availability of parts and service is not an issue.
- There is currently two Audio / Visual stations covering the Kitchen and one covering Kitchen Storage.
- There is one ceiling mounted smoke detector serving Kitchen Storage.
- Fire Alarm System also monitors the Kitchen Hood.

Public Address and Clock System:

- There are two clocks serving the Kitchen.
- There are four Public Address system ceiling mounted speakers serving the Kitchen with one wall mounted speaker serving the Kitchen Storage.

Recommendations:

Power Equipment (Distribution Equipment):

- Completely remove existing and provide new equipment to serve the renovated Kitchen. This will eliminate wiring with the cloth covering.
- New dishwasher and booster heater will be wired to a new 480V distribution panelboard.
- All power wiring serving kitchen equipment will be replaced.

Lighting and Lighting Controls:

- Lighting in both the Kitchen and Kitchen Storage will be replaced / upgrades with LED.
- Lighting controls will be maintained. New lighting will be controlled via the existing lighting controls.



WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS STUDY

Fire Alarm System:

- Adjustments to the location of initiation and notification devices and appliances will be made as necessary to accommodate the renovated Kitchen and Kitchen Storage.
- New connections will be made to the new hood system to monitor Ansul and provide removal of power / gas from the under hood heat producing appliances.

Public Address and Clock System:

- Adjustments to the location of the appliances will be made as necessary to accommodate the renovated Kitchen and Kitchen Storage.

Supplemental Scope - Fire Alarm System

Existing Conditions:

- The existing fire alarm system control panel is a Simplex 4100U.
- The panel is still serviceable however looking toward a 25 year solution replacement with a more current model will ensure the availability of parts for the foreseeable future.

Recommendations:

- Replace the existing 4100U Control Panel with a 4100ES Control Panel and any system deficiencies:

Supplemental Scope - Original Panelboards / Cloth Covered (Insulated Wiring)

Existing Conditions:

- There are a number of older existing (original to building construction) panelboards located throughout the building.
 - These panelboards do not provide gutter space that is required in today's code.
 - Have cloth covered (insulated) wiring feeding them and branch circuits fed by the panelboard.
 - Are of an age that is beyond the equipment's serviceable life.
- The cloth covered (insulated) wiring is not only located in the original panelboards, it is also located in panelboards that were replaced in the 2005 addition.
- Concerns are:
 - Wiring: The covering on the cloth covered (insulated) wiring becomes brittle with age and can delaminate from the wiring if disturbed.
 - Panelboards: Circuit breakers become or are unavailable.



WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS STUDY

Recommendations:

- Replace the cloth covered (insulated) wiring with new.
- Replace the original panelboards with new.
- Replace receptacles affected with tamper resistant receptacles.
 - o NEC 2017 requires receptacles in primary and elementary education facilities be “tamper resistant”. NEC 406.12.



WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS STUDY

PLUMBING ASSESSMENT

General

The plumbing systems related to servicing the Kitchen and Arts Rooms are included in this assessment report. The report does not include restrooms and other areas of the building.

Services

Water Service:

The water service enters the building in the Kitchen Storage Room behind the Walk-In Freezer. The water service consists of a 3" Water Meter with iron shut-off valve upstream and downstream. There is not a backflow preventer on the water service downstream of the meter protecting the building from the municipal water supply. Wellesley Public Works was contacted regarding cross-connection safety. A backflow preventer is not required to be installed on the water service.



Water Meter Serving the Building



Water Meter Serving the Building



WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS STUDY

Water Heating:

An A.O. Smith model BTN-400A-108, 85 gallon gas fired water heater is located in the Mechanical Room/Boiler Room below the Kitchen. The water was constructed and installed in 2007 making it 11 years old in 2018. The heater has an input rating of 390,000 btuh. The heater can produce a recovery of 378 gallons per hour at 100°F temperature rise. The capacity of the water heater is suited to the demand of the Kitchen. The flue extends to the chimney. The unit has an efficiency rating of 80%. Combustion air is supplied through a louver within the Boiler Room.

A Grundfos bronze circulating pump maintains temperature for the hot water piping to the Kitchen. The pump is model UPS 26-99 BFC, three speed, 115 volt with a capacity up to 8 gpm at 24 feet of head. The age of the pump is unknown but appears to be in good operating condition. The position of the aquastat (set to highest temp on dial) indicates that the pump runs 24/7.



Gas Fired Water Heater

		AUTOMATIC CIRCULATING TANK OR AUTOMATIC INSTANTANEOUS WATER HEATER 21DF					
LISTED							
ANSI Z21.10.3 - CSA 4.3 - 2004				ANSI/NSF 5 - 2000E			
MODEL NUMBER		CAPACITY		GAS TYPE		ITEM ID	
BTN 400A 108		85.0		NATURAL		9280828012	
INPUT BTU/HR		RECOVERY GAL/HR		SERIAL NUMBER		CITY OF NEW YORK DEPT OF BUILDINGS MEA	
390000		378.18		D07M008629		128 - 02 - E	
GAS PRESSURE IN W.C.							
MANIFOLD		MAX INLET		MAX WORKING PRESSURE P.S.I.		ELECTRICAL RATINGS	
3.50		14.00		160		VOLTS HZ AMPS	
		5				BUILD DATE	
						04/25/2007	
A.O. SMITH WATER PRODUCTS CO. MCBEE, SC. USA							

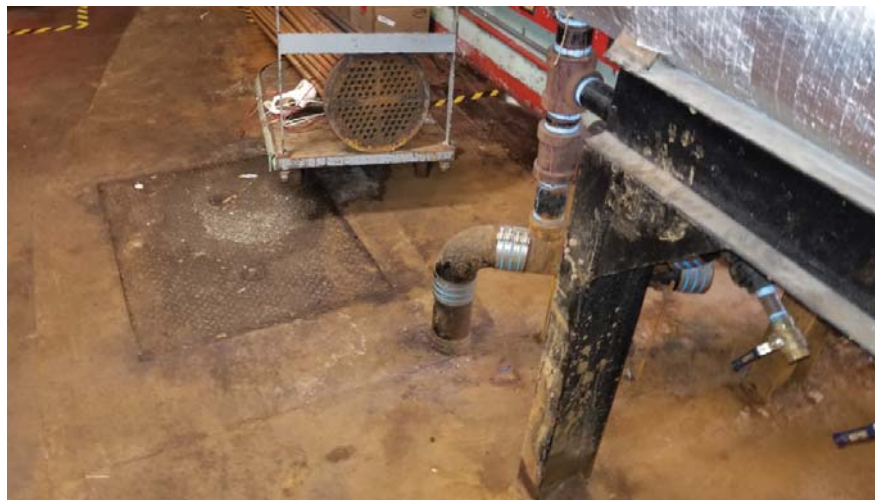
Water Heater Nameplate



WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS STUDY

Grease Waste Piping:

An internal grease inceptor is cast into the floor of the Mechanical Room located below the Kitchen. The size, manufacturer and age of the grease interceptor is not confirmed. Based on the physical size, the interceptor is believed to have a capacity of 50 gallons per minute and 100 pounds of grease holding. The interceptor appears to collect greasy waste from the three bay sink and the trough drain at the tilting kettle. George Saraceno at the Wellesley Public Works was contacted regarding grease waste collection and disposal.



Grease Interceptor in Mechanical Room below Kitchen

Sanitary Piping:

The sanitary piping system consists of a mix of cast iron with hub and spigot and four band no-hub joints and fittings with DWV copper tubing at fixture connections. Floor drains within the kitchen floor surface are nickel bronze finish with round grates. Some drains have a funnel to receive indirect drainage from the fixtures they serve. Not all prep sinks are currently drained through an indirect waste air gap with funnel floor drain.



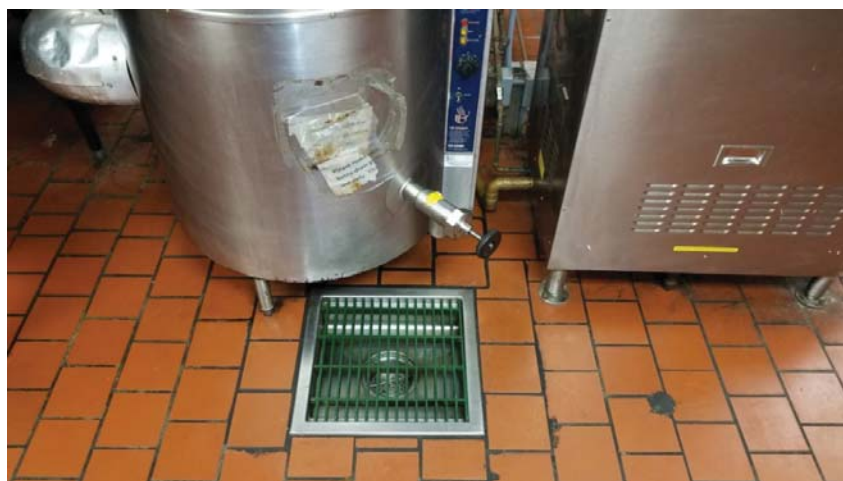
WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS STUDY



Typical Kitchen Floor Drain



Floor Drain with Funnel below prep sink



Trough Drain at Kettle



WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS STUDY

Natural Gas Service:

The building natural gas service includes two meters served by National Grid. One meter serves the boilers and the other serves the Kitchen, gas fired water heater and the remainder of the building. The Kitchen gas meter is a Roots Model 3M175 (N.G. Meter No. 001360020) has a capacity of 3,000 cubic feet per hour or 3 million btuh. Gas pressure into the building is assumed at 7" water column. A three inch welded steel pipe enters the corner of Kitchen Storage and runs through the Storage Room to the Boiler Room. The meter for the boilers is a Rockwell Model T-18 Turbo Meter-G with a capacity of 18,000 cubic feet per hour or 18 million btuh.



3 Million BTUH Natural Gas Pressure Regulator and Meter



18 Million BTUH Boiler Plant Natural Gas Meter

Kitchen Plumbing

Gas at cooking island:

The 3" gas line stubs up through the floor and serves all of the gas fired equipment. A mechanical link gas shut-down valve is located about a foot above the floor on the 3" line. The valve is connected to the hood extinguishing system.



WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS STUDY

Water Piping:

All domestic water piping is copper tube with soldered joints and fittings.

Exposed Drainage Piping Under Sinks and at equipment drains:

Copper DWV with soldered joints and fittings, cast iron with 4 band no-hub joints and fittings.



Sink Drain



Sink Drain



Floor Drain and Dishwasher Drain



Hood Gas Shut-Down Valve



Exposed Gas and Water Supply Piping



Drainage Piping Below 3-Bay Sink



WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS STUDY

Art Rooms

The three existing art rooms have a mix of stainless steel bowls and epoxy resin bowls. The drainage piping consists of copper under sink with cast iron drains and venting in walls and down. All sinks are vented through the roof. One sink has a solids interceptor which is in room 304A.



Stainless Steel Art Room Sinks in 304B



Piping Below Sink in Art Room 304B



WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS STUDY



Stainless Steel Art Room Sinks in 304A



Solids Interceptor in Cabinet of Sink in 304A



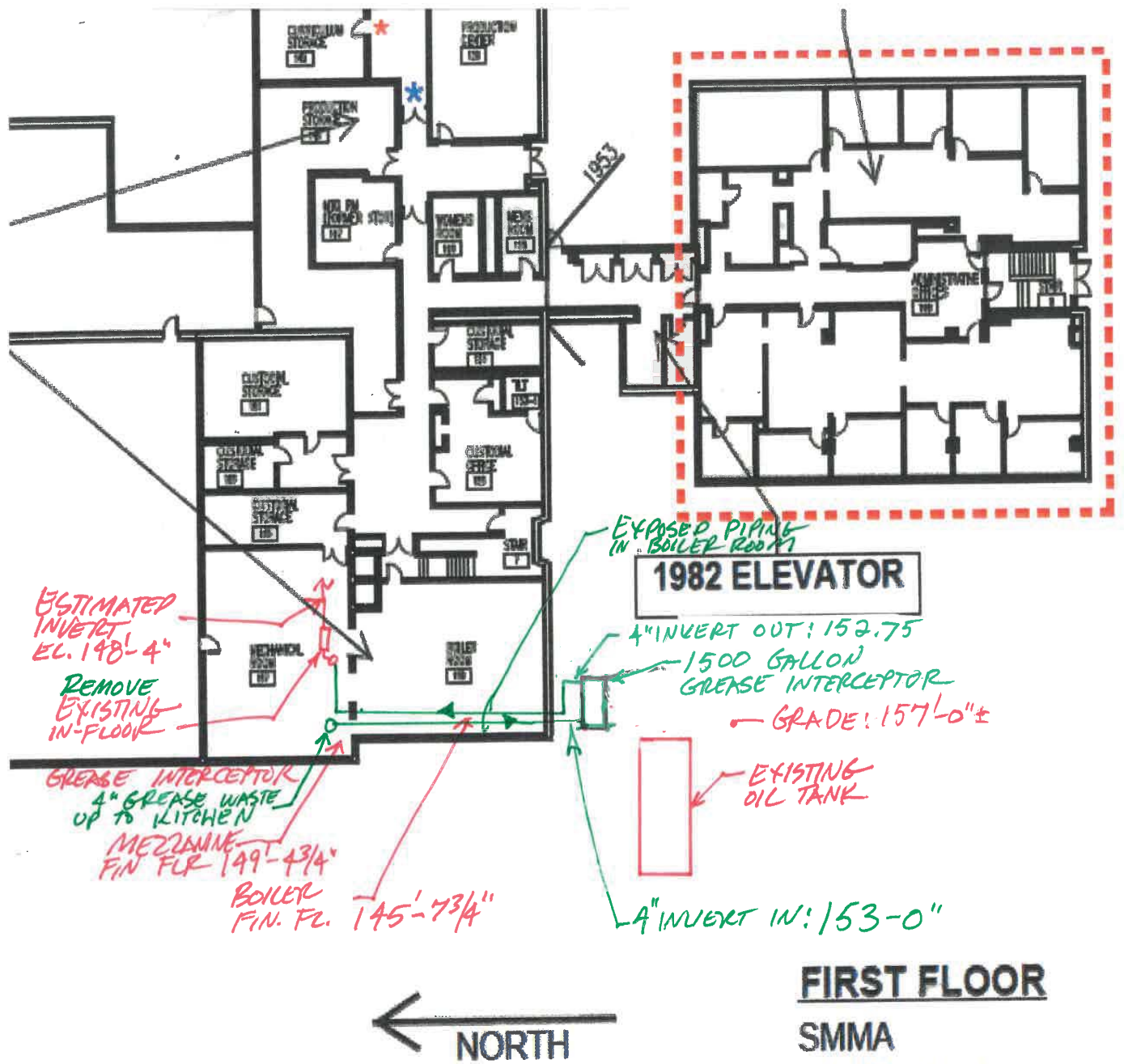
Epoxy Art Room Sinks in 305



WELLESLEY MIDDLE SCHOOL BUILDING SYSTEMS STUDY

Recommendations

- Consider replacing the gas fired water heater with a high efficiency unit.
- Replace all floor drains in the kitchen.
- Clean and inspect all kitchen drainage piping.
- Remove the grease interceptor in the Mechanical Room.
- Install a 1,500 gallon exterior grease interceptor outside the Boiler Room.
- Connect plumbing and gas piping to all kitchen sinks with indirect floor drains at prep sinks.
- Connect plumbing and gas piping to UDS wall behind cooking line-up.
- Provide sinks at revised Art Rooms.
- Provide a floor drain in each Art Room.



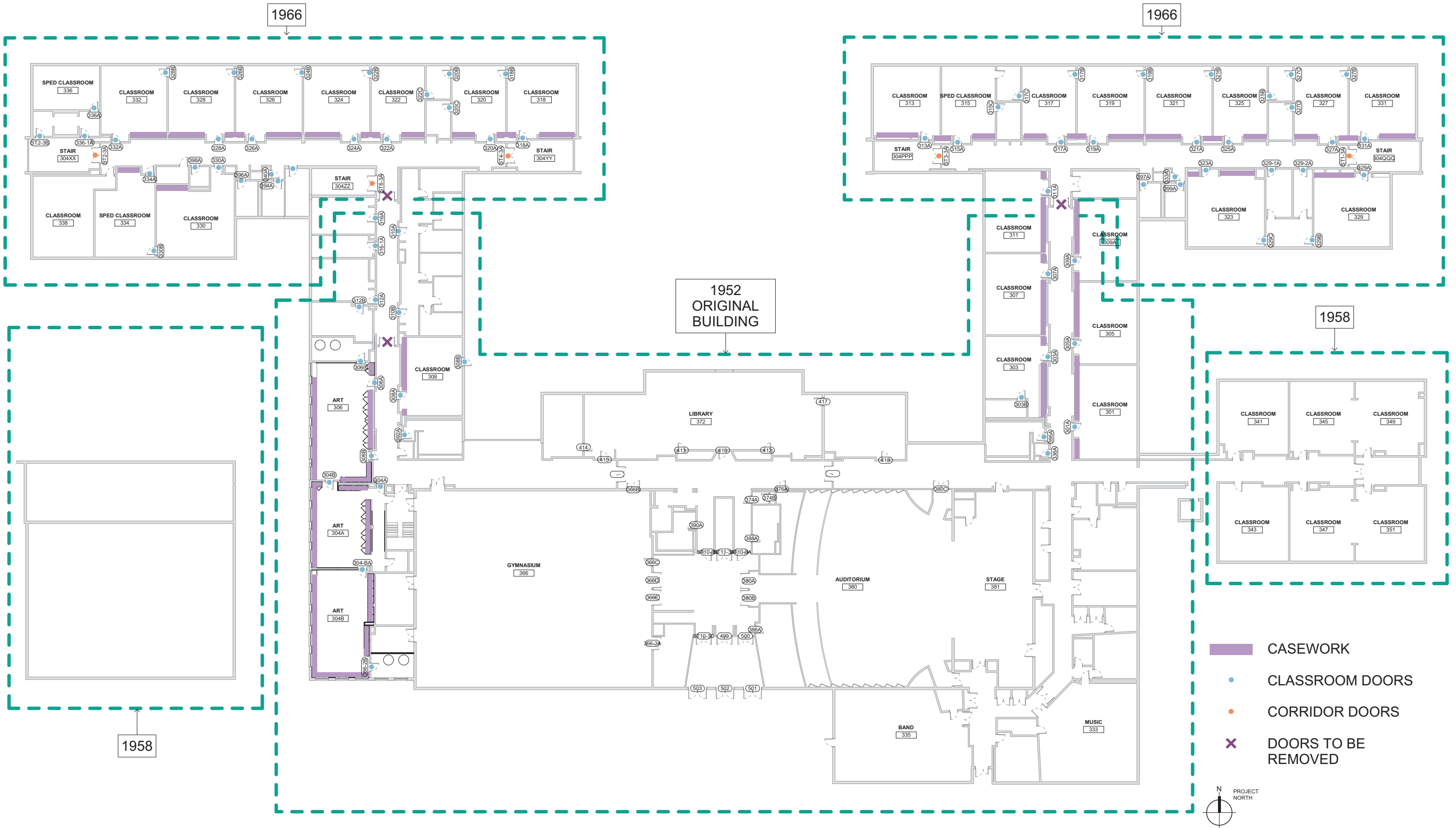
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MEETING NOTES

To
Joe McDonough

From
Lisa Sawin

Date
July 2, 2018

Project
Middle School Building Systems Study
Wellesley, MA
No. 18479

Subject
Kick-off Meeting Minutes

Attendees

Joe McDonough, Facilities Maintenance Department (FMD) – Facilities Director
Kevin Kennedy, FMD
Steve Gagosian, FMD
Matthew Delaney, FMD
Mark Barisano, FMD, Building Manager
David Lussier
Allen Hebert, FMD, Operations Manager
Dave Watkins, FMD
Joe Morin, FMD
Mark Lee, Harriman, PIC
Lisa Sawin, Harriman, PM
Ben Hackett, Harriman, Mechanical Designer
Richard Marchessault, Harriman, Plumbing Designer
Jeremie Briggs, Harriman, Electrical Engineer
John Sousa, Crabtree, Kitchen Designer
Makoto (Mak) Weinstein, Simpson Gumpertz and Heger, Building Envelope

Intent: The intent of this meeting was to introduce the Project team, review communication protocol, review the schedule, review the scope of work and identify any questions, information and resources the project team should be aware of. The meeting covered the following items:

- 1.1 **Project Team**
 - 1.1.1 Project Directory distributed by Harriman
- 1.2 **Communication Protocol**



- 1.2.1 The main point of contact for the Design Team is Harriman's PM, Lisa Sawin. The main point of contact for Wellesley is the FMD director and PM for this project Joe McDonough. Lisa Sawin shall be copied on all Design Team correspondence.

1.3 Scope Overview

- 1.3.1 Approximately a \$10M project.
- 1.3.2 Overall scope: includes building envelope; 100% renovation of kitchen; Classroom door and corridor door replacement; all locksets on doors; replace millwork on one wall and 100% millwork replacement in the art rooms. The findings and recommendations shall be summarized in a report that clearly identifies the scope and cost.
- 1.3.3 Building Envelope:
 - 1.3.3.1 Building envelope work the key issue is protecting the tree roots when using an aerial lift or any machinery to access or repair the envelope. Makoto Weinstein (Mak) indicated we will be using extension ladders for our investigation.
 - 1.3.3.2 IR scans were identified in the RFP. Joe indicated that this service will not be required. Mak is to modify his scope of work accordingly.
 - 1.3.3.3 Cupola: the cupola is leaking. Joe request that Mak look at the cupola in lieu of the infrared scan.
 - 1.3.3.4 Roof: FMD informed the team that the single ply roof is under warranty for 7 years.
 - 1.3.3.5 Large brick retaining wall is where most of the work will be. There is spalling on the top cap with the fence. Repoint and caulking needed. Use same spec as window project to address asbestos and PCB. Replace 100% of the caulking and repoint as needed and replace the limestone through injection or other. Most repointing is in the site retaining wall. DPW did some re-stabilizing of fence post atop the wall. If not setting up staging cleaning doesn't make sense.
 - 1.3.3.6 Joe informed us of a leak that occurred last fall in the Photo Lab of 1966 North Wing. This is an active leak. They believe the slab/foundation failed joints or failed dampproofing. Outside the foundation wall is a paved area. School is going to regrade so water is away from building. Joe provided a diagram of where the leak occurred to Harriman and Mak.
- 1.3.4 Kitchen Equipment:
 - 1.3.4.1 John is concerned about achieving a full kitchen renovation in one summer season. Dave Watkins, FMD Electrician, to provide as much info as possible and identify any work ahead that can help with schedule.



- 1.3.4.2 Kitchen design, Assistant Superintendent of Finance, Cindy Mahr, and Business Manager, Wen Cobb, from admin want to be involved in kitchen layout with Matt Delaney from Whitsons.

1.3.5 Doors:

- 1.3.5.1 Investigate installing magnetic hold opens on all corridors. Doors in open position block some lockers. All lockers are utilized. Harriman to inventory lockers to be relocated and recommend areas to relocate the impacted lockers.
- 1.3.5.2 Design team is to Investigate whether we can eliminate some of the cross-corridor doors since building is now sprinklered.
- 1.3.5.3 Security and door hardware - Issue with connecting doors between classrooms. Design team to facilitate a conversation on code requirements and best practices with locking connector doors.

1.3.6 Casework:

- 1.3.6.1 Replace one wall of Classroom casework and all casework in the Art Rooms. New casework in the science labs on the first floor were done in 2006 or 2008.

1.3.7 HVAC:

- 1.3.7.1 Adding A/C to the auditorium.
- 1.3.7.2 GYM A&B replacement of the unit.
- 1.3.7.3 Installing 2 new boilers at the location of the heat exchangers for the RDK project.
- 1.3.7.4 Connect the MAU with the hoods. Possibly replace hood as it appears not to be big enough. Kitchen hood replaced in 2008.
- 1.3.7.5 Location of the units is in the mezzanine areas for gyms and auditorium.
- 1.3.7.6 Could be a new RTU for the Auditorium as suggested by SMMA in their 2014 report.

1.4 **Milestone Schedule**

- 1.4.1 Project is being driven by schedule.
- 1.4.2 Progress Meetings will be bi-weekly
- 1.4.3 There will be limited response from teachers for the cabinet survey over the summer.
- 1.4.4 Joe to confirm dates for Sept 24 and 27 meetings.
- 1.4.5 Joe requested that we move the July 24 meeting to July 23rd or 25th.
- 1.4.6 Lisa and Joe to Coordinate attendees at each meeting.

1.5 **Discussion / Misc.**

- 1.5.1 Steve was the OPM on the security project.
- 1.5.2 The mechanical unit at the rear of building at the new plaza project pulls in light snow and it sits in the duct and melts (intake by other entry).



1.5.3 The grease trap is in basement

Next Meeting: Tuesday, July 10, 2018

If written notice is not received within two weeks of receipt, the above meeting notes represent an accurate summary of the meeting and its conclusions.

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1.5.3 The grease trap is in basement

Next Meeting: Tuesday, July 10, 2018

If written notice is not received within two weeks of receipt, the above meeting notes represent an accurate summary of the meeting and its conclusions.



MEETING NOTES

To	Joe McDonough, P.E.
From	Lisa Sawin, AIA, Project Manager
Meeting Date	Tuesday, July 10, 2018
Project	Wellesley Middle School Building System Study Wellesley, MA Project No. 18479
Subject	Owner / Progress Meeting No. 1
Attendees	Joe McDonough, Facilities Maintenance Department (FMD) - Facilities Director Steve Gagosian, FMD Mark Lee, AIA – Harriman, Principal in Charge Lisa Sawin, AIA – Harriman, Project Manager David Reinheimer – Harriman, Mechanical Engineer

Intent: Harriman met with FMD to review their progress on the HVAC, Door and Casework Inventory. The following items were discussed:

2.1. Code:

- 2.1.1. Chapter 34 report is a MA requirement.
- 2.1.2. Local Code Enforcement interprets whole building volume, not simply area of renovation.
- 2.1.3. At the next phase of the project the following needs to be submitted for permit:

- Chapter 34 Report
- 2 sets of wet sealed drawings
- Construction Control Affidavit.

2.1.4. Building Inspector is Michael Grant.

- Any interpretation of the code should be run by the building inspector, Michael Grant. Joe and Steve should be present at these meetings.
- Involve Michael in the process in lieu of dropping off drawings when permit is needed.
- Michael is by the book and his focus will be on doors and kitchen egress and safety, HVAC and Electrical.

2.1.5. Kitchen

- 2.1.5.1. Action: John Sousa to review kitchen scheme with Lenny Icco, Health Department Head.

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2.2. HVAC

2.2.1. Gym A:

- 2.2.1.1. Dual Coil: Dave Reinheimer recommends the dual coil in the AHU (allows for steam now and conversion to hot water in the future). The dual coil premium is 10-15% of coil cost which is an approximate upcharge of hundreds of dollars.
Action: Joe informed Harriman to proceed with the coil due to minimal mark up.
- 2.2.1.2 Sustainability: look at high end efficiency and illustrate through life cycle cost in the report.
Action: Dave Reinheimer to illustrate life cycle cost of systems evaluated and ultimately arrived at.
- 2.2.1.3 Controls: Dave Reinheimer to speak with Steve Hoffman about new systems and controls
Action: Harriman to set up conference call with Joe, Steve, Lisa and Dave.
- 2.2.1.4 Exhaust fans:
Action: Joe informed Harriman to replace exhaust fans
- 2.2.1.5 Space:
Gym A limited area to relocate AHU.

2.2.1 Gym B:

- Flooring, wall pads and backboards have been replaced in 2011.
- Sprinkler added 2005 or 2008.
- Space: Think about serviceability in locating the replacement AHU, avoid sprinkler heads and other items. Gym B has whole storage room.
- Reconnect and upgrade controls.
- Steam traps replaced in 2011. Steam supply is in good condition.
- Provide heavy duty grills in gyms.
- Acoustic are a high priority and closely monitored by neighbors.

2.2.2 Kitchen:

- MAU/Exhaust Fan connect used at High School (milink), use if possible as it is highly efficient.
- Complete replacement of Hood, MUA and Ductwork.
- Kitchen quarry tile replaced in 2006-will need to be repaired with kitchen renovation. Some damage occurring at the floor joint between slab on grade and crawl space.
- Space: Kitchen requires relocating food storage

2.2.3 Auditorium:

- All new HVAC system for the Auditorium (AHU, ductwork, controls and diffusers).
- Setting up staging in Auditorium for installing and modifying ductwork will be challenging.
- Asbestos identified at catwalk in AHERA report. Harriman to discuss extent and location with Joe Murray - FMD AHERRA. Joe is to have ceiling double checked for asbestos. (Post Meeting: Harriman met with Joe Murray. Joe indicated there is

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asbestos in the catwalk planks and transit panels in the auditorium. Joe was to follow up on what the planks are in the catwalk).

- Harriman to address recommendation for replacing the square registers in the report even if AC is not installed for better air distribution and acoustics.

2.2.4 Sustainability:

- High end of efficiency, speak to Steve Hoffman (FMD), JCI Metasys.
- Geothermal summary of the option and ROI.
Action: Harriman to include in report.
Action: Harriman to contact Alan Hebert for requested electrical information.

2.2.5 Schedule:

- Consider lead time for equipment (2 summers and a school year for the overall project).
- Sign construction contract in May 2020. The first summer of work will be driven by lead times.

2.2.6 Duct Detectors:

- Harriman did not observe duct smoke detectors. Still reviewing if needed. Consult with Allen Hebert (FMD electrical engineer) and Dave Watkins of FMD.

2.3 Electrical:

- 2.3.1 Harriman informed FMD that we will want to look carefully at some of the existing sub panels due to their age.

2.3.2 Fire Alarm:

Action: Harriman to set up conference call with Dave Watkins and Alan Hebert.

2.4 Doors:

- 2.4.1 Security: Report should outline security strategy options for the school department regarding doors and hardware.

2.4.2 Vision Panel between Classrooms

Action: Harriman to discuss with David Lussier

2.4.3 Lockable hardware

- Between shared spaces
Action: Harriman to discuss with David Lussier
Action: Harriman is not to lock bathrooms.

2.4.4 Hinges:

- Action: high use areas use continuous hinges

2.4.5 Wood Finish

- Action: Harriman to match natural wood finish established in 2006 renovation.

2.4.6 Cross Corridor Doors:

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- Action: Harriman to determine if we can eliminate cross corridor doors and if we replace the door is the transom required to be replaced to achieve a rated assembly.
- Action: Harriman to confirm whether any new or existing cross corridor doors block cameras.
- Action: Harriman to review plan illustrating existing lockers blocked by cross corridor doors and proposed location of relocated lockers with Mark Ito.

2.5 Casework:

2.5.1 Casework recommendation:

- Action: Harriman to come up with 4 to 5 typical areas and review with Mark Ito and David Lussier. Harriman to carry higher cost in estimate and the report will reflect the recommendation.

2.5.2 Carry the higher cost of the options for the estimated costs until scope can be further defined.

2.5.3 Art rooms:

- Action: Harriman to meet with Thom Carter Fine Arts director to define art casework in priorities and how each art room is being used.
- Action: Joe confirmed that lighting replacement for Art rooms will be moved to this project.
- Overall art room scope: Flooring replacement, plumbing, gas jets for jewelry, kilns in enclosed spaces, casework replacement and lighting replacement.
- Action: Harriman to model finishes after the high school.

2.6 Next Meeting:

- Date: Wednesday, July 25, 2018 at 7 am.
- Agenda:
 - Kitchen Investigation.
 - Building Envelope Investigation
 - Code Investigation

If written notice is not received within two weeks of receipt, the above meeting notes represent an accurate summary of the meeting and its conclusions.



MEETING NOTES

To
Joe McDonough, P.E.

From
Lisa Sawin, AIA, Project Manager

Meeting Date
Tuesday, July 25, 2018

Project
Wellesley Middle School Building System Study
Wellesley, MA
Project No. 18479

Subject
Owner / Progress Meeting No. 2

Attendees

Joe McDonough, Facilities Maintenance Department (FMD) - Facilities Director
Steve Gagosian, FMD
Mark Lee, AIA – Harriman, Principal in Charge
Lisa Sawin, AIA – Harriman, Project Manager
Scott Tomlinson – Simpson Gumpertz & Heger, Building Envelope Specialist
John Sousa – Crabtree McGrath Associates, Inc., Kitchen Designer
Nick Kozlowski – Jensen Hughes, Code Consultant

Intent: Harriman met with FMD to review their progress on the Code investigation, Kitchen inventory and building envelope inventory. The following items were discussed:

2.1. Code:

2.1.1. Overview:

- Nick reviewed the applicable codes.
- Joe mentioned that Wellesley adopted the Stretch energy code.
- 521 CMR (MAAB) and ADA 2010
- MSBC 780 CMR CHP 34 Existing Structures

2.1.2. 521 CMR (MAAB) and ADA 2010 Approach:

- Joe informed the team that the 2008 project did a full ADA upgrade.
- Nick indicated that based on the \$58.19M assessed value the maximum 30% threshold is \$18.77M. Projects within 36 months must be included in this number. If we exceed this value we trigger compliance for the full building.
- The RDK condensate return piping project at a value of \$4.2M will come into play.
- The window project will not.
- Joe indicated this project must stay under 14.5M to avoid full building compliance.
- Joe reminded the team ADA is enforced federally. He also informed the team that Joe Murray is the town ADA coordinator.

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- RPTW – designed the parking lot improvement project. This project looked at MAAB accessible route, number of parking spaces. Joe informed the team we do not need to look at parking and accessible routes in our project.

2.1.3. 780 CMR CHP 34 Approach

- Kitchen
 - o level 1 and level2 work areas.
 - o Once we move the kitchen we must be chapter 10 compliant with egress. With level 2 there is a structural study required. Joe informed the team that a seismic study was done in 2006.
 - o Scott informed the team that as long we are not adding load bearing walls we will not trigger the study.
 - o Joe indicated that if we are adding structural supports we will need to know about.
 - o Level 2 alternation creating a work area. Need compliant means of egress. Egressing through the stairwell.
 - o Part of project identify and create a space for storing the trash barrels. Joe indicated we should be sensitive about how you present it.
 - o Stairwell: Need to do enclosure down below due to door removal and lack of landing.
 - o Need to look at existing separations in kitchen (rolling overhead door not a fusible link) Food service opening to students. Need to better understand if the service door to cafeteria needs to be rated.
 - o Installation of new ceiling in storage area will trigger sprinklers or modifications. Need to look at combustibles about the ceiling.
- Facade:
 - o Level 1 alternations
- Door
 - o Level 1 alterations
 - o Doors: (4 types)
 - Cross corridor
 - Classroom doors
 - Classroom to classroom
 - Stair enclosure doors
- HVAC
 - o level 1 and 2 alterations
- Other:
 - o Full Sprinklered Building Relief:
 - Review with the code official Mike Grant. Present floor plan and show doors want to be removed based on our interpretation. Mike Grant likes when consultants talk to him first.
 - Action: Set this meeting with him. Only show damaged hardware. Show where losing lockers. With plans with big red circles and leave a plan with him for record.
 - Scott recommend in writing that Nick state we are not reducing the life safety.
 - Not recommending anything less than what we would in a new school. And safety issue with glass replacing.
 - Maurice Pilette is their consultant for Fire Life Safety review.



- Nick indicated we need to prove fully sprinklered: It generally appears the building is fully sprinklered.
- Steve indicated fully sprinklered should show in 2006 drawings.

2.2 Envelope

2.2.1 Photography Room:

- Tested for 3.5hrs and water started coming through. That indicates there is a direct pathway for water intrusion.
- Joe informed the team that the repaving project is to repave the whole site. In that project they are trying to shed water away from the building.

Action: Joe would like SGH to incorporate excavating and water proofing the wall as part of our project. The team needs to determine how far and how deep do we need to excavate.

2.3.2. Cupola:

- Rained during visit and leaked. Hole at decking around roof drain bowl is leaking.
- Joe to have roofer test copper roof and coordinate with Mak to get a better look at the roof.

Action: Joe requested that for the report SGH identify the options and their order of magnitude:

- Option 1- Rebuild Cupola
- Option 2 - Testing and strategic repairs.

2.2.3. Brick and Repointing

- Majority of it is in good shape.
- 10-15% need repointing
- Some of the new perimeter sealant has failed.
- Mortar: 3 levels in report brick images to have location of photo indicated
 - No repointing needed
 - May consider within 25 year
 - Repointing needed
- Retaining wall
 - Steve indicated we should replace the cap and pull fence in board.
 - Imbedded fence is causing the cracks.
 - Adjacent sidewalk is part of the paving project.
 - Joe doesn't think we need to take cap off. Cap inject and pull off fence. He recommended that we take fence post out and put back in with base plate.
 - Joe indicated we should Assume repointing retaining wall. In schematic recommend opening up the wall for localized repairs.
 - Joe recommended the following example language. Throughout the report, this is condition however this may exist and will be investigated in schematic design.

2.2.4 Weathered stone Panels

- Aesthetic issue, no pair recommended.
- In report, give recommendations. Example: Here are the options and this is what we recommend. If aesthetics you can do this. If not the concern you can do this or leave as is.
- Joe interested photo of top of corner stone detail to determine if flashing needed.

2.3 Kitchen:

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2.3.1 Overview done by John

- Hot wells in the faculty lounge they would like to put back in.
- Coffee brewer next to faculty lounge
- Serving is masonry walls, custom SS counters and louvers built into drop in cold pans. (8) distinct serving counters
- North walk in is in decent shape but needs to be expanded.
- Walk in “F” wants to increase to the right. Will need to be new walk in.
- Have dry storage
- Looking at portable salad bars at failed louver area.
- Sneeze guards are not code compliant.
- Exposed piping over head is non-code compliant. They want to see stain on ceiling tile to determine if there is an issue.
- Wall tile in great shape. Quarry tile in great shape.
- Surfaces need to be easily cleanable and non-absorbent. Which materials in existing dry storage are not. Can’t have excessive exposed conduit. Get ceiling in there and possible cover walls with epoxy paint.
- Possibly seal off door between office and dry storage.
- Joe indicated area E serving lines might have hazmat in the hot wells In schematic get a number for abatement in hot wells (cold not an issue). “C” is a crawl space and grade beams. “D” is slab on grade.
- Portable units (salad bars) need power.
- Steve recommended that to get AHU out of area look at putting over the service yard entrance.
- Lenny Izzo (head of health department) – John to introduce himself.
- Nick to document which parts do not meet current code in report. Clearly ID Code issues. New code issues vs grandfathered issues.
- Enclose pipes in the hood system. Behind a panel so easily serviceable.
- Prep sinks are hard piped they are supposed to be air gapped.
- Flooring materials – evaluate whether work will require replacement. Open to recommendations on material.
- Sustainability: paragraph about delta on energy consumption / savings in kitchen (elec). John to highlight energy star equipment.
- John indicated that Matt wants them to be able to get a meal from the staff dining area. Joe indicated that layout t option to keep same amenities and here is an option for utilizing the same line as students. Steve thinks get rid of overhead door between kitchen and staff room.

2.4 Other:

- John to meet with Cindy, Wen and Matt all together.
- Abatement in crawlspace (drilled panels / debris needs to be cleaned up)
- Art: it’s about the casework but jewelry room drove a lots of Mechanical and Electrical

2.5 Next Meeting:

2.5.1 Date: Wednesday, August 7, 2018 at 7 am.

- Agenda:
 - o Summary of Findings Draft update.
 - o Door Recommendations
 - o Casework Recommendations



- o HVAC Recommendations
- o Preliminary Kitchen layout

If written notice is not received within two weeks of receipt, the above meeting notes represent an accurate summary of the meeting and its conclusions.

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MEETING NOTES

To

Joe McDonough, P.E.

From

Lisa Sawin, AIA, Project Manager

Meeting Date

Tuesday, August 7, 2018

Project

Wellesley Middle School Building System Study
Wellesley, MA
Project No. 18479

Subject

Owner / Progress Meeting No. 3

Attendees

Joe McDonough, Facilities Maintenance Department (FMD) - Facilities Director
Mark Lee, AIA – Harriman, Principal in Charge
Lisa Sawin, AIA – Harriman, Project Manager
Dave Reinheimer – Harriman, Mechanical Engineer
Jeremie Briggs – Harriman, Electrical Engineer
Richard Marchessault – Harriman, Plumbing Engineer

Intent: Harriman met with FMD to review their progress on the overall report, door/hardware, casework, HVAC, Electrical and Plumbing recommendations as well as building envelope inventory information. Harriman is looking for Owner feedback on the recommendations so they can provide direction to their cost estimator. The following items were discussed:

3.1 Draft Report

3.1.1 Presentation content and examples

- Joe indicated he will present the introduction and summary at the School Committee and Selectman meeting and Harriman will present the Recommendations, Costs and Next Steps.
 - o Action: Joe to send examples of School Committee and Selectmen presentations to Harriman.
- Joe indicated the Permanent Building Committee will be overseeing the design and will be interested in schedule and scope of work and that the cost estimate addresses what it will really cost to execute the work.
 - o Action: Joe to send examples of Permanent Building Committee presentations to Harriman.

3.1.2 Report

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- Harriman gave an overview of the contents of the study report with Joe which is outlined in the 08.07.18 presentation. Joe had no objection to the contents of the report.
- o Action: Harriman to provide sample of report at 8.21.18 Meeting

3.1.3 Cost Estimate

- Joe indicated the soft costs are about 40% of the construction cost. Joe indicated some of the costs are due to Hazmat, additional investigation during design and OPM Costs. The total project cost will be presented at Town Meeting.
- o Action: Joe to send an example of the FMD total project cost template to Harriman.

3.2 Door /Hardware

3.2.1 Door types

- Harriman presented classroom door type options.
- o Action: Joe indicated Harriman should proceed with Option 2A: Natural, 'N'. Which is a door with a natural finish and vision glazing panel.

3.2.2 Door Glazing

- Harriman presented glazing options.
- Joe would like to discuss the glazing options with Steve. Initial preference is for Option 2: 5/16" laminated glass for use in classroom-corridor doors. Other options are still open for consideration.
- o Action: Joe informed Harriman to price both options in the report and carry Option 2 and indicate the next level is Option 3 and list the cost plus soft costs.

3.2.3 Door Hardware

- Harriman presented the Schlage L Series mortise lockset with lock status indicator and discussed white papers that support reasons to use a keyed classroom lock in lieu of a thumb turn lock.
- o Action: Harriman to summarize white paper in an email and send to Joe.
- o Action: Harriman to make clear in report what the white paper indicates.
- Joe indicated that previous discussions with school administrators indicated a preference for a classroom security lock with with an interior thumb-turn locking mechanism.
- Joe likes the indicator hardware for new doors but wants to review it with Steve.

3.3 Casework:

3.3.1 Recommendations

- Harriman reviewed casework recommendations for the 1966 science classrooms, 1966 addition typical classrooms, 1952 original classrooms and the three art rooms. Refer to August 7, 2018 presentation.
- o Action: Harriman to price all three options for each type of classroom space and carry the most comprehensive option which is Option 1.
- During Schematic Design the team will engage the teachers to assist in determining casework selection and configuration.



- Joe indicated that we may need to coordinate the reinstallation of the clock in the 1952 wing due to removing the wood paneling above the casework. Harriman will look to see if the clock system is still functional.
 - o Action: Harriman to treat the 4th art room labeled as Art 216 as a classroom but carry the cost of art room casework.
- Harriman assumed that each art room had a different use. The assumptions are that one is 3D work, 2D work and jewelry making. The team will further the design of each room during Schematic Design.
- Harriman reviewed art room renovation recommendations including rubber flooring tiles (refer to 08.07.18 Presentation). Joe recommended that Harriman look at the Nora rubber flooring that was used in the Cafeteria.
- Joe indicated that the Middle School will use electric soldering and not acetylene.
 - o Action: Harriman to assume electric soldering and dedicated exhaust at each jewelry making station in Art Room. Harriman is currently showing two stations.
 - o Action: Harriman to add a utility sink to each art room in addition to the sinks currently shown in the design. Harriman to price stainless steel deep sinks except at the ADA compliant sinks where the regulations restrict the depth of the sink. Include solids interceptors at each art room sink.
 - o Action: Harriman to investigate if floor drains can be added to the art rooms. At a minimum Joe wants a floor drain in the 3D (ceramics) art room.
- Harriman presented two options for a kiln room. One is the in the room labeled Art Storage 306-1 and the other is created by utilizing one half of the PT Room 366-2. Joe indicated they typically have a 6x6 room for one kiln.
 - o Action: Harriman to inquire on use of PT room and whether a portion of it could be sectioned off as a kiln room.
 - o Action: Harriman to contact Tony Nardelli for cost and scope of Kiln purchase and installation. Thom Carter works directly with Tony for kiln installation. Harriman to provide power.
 - o Action: Harriman to look at required make-up air for kiln room and determine if it can be satisfied with door louvers or undercuts.
- Joe indicated there is a lack of outlets in the art rooms.
 - o Action: Harriman to review quantity and location of outlets.
- Harriman indicated they will model the casework finishes from the recent casework project and include casework with tackable surfaces.
 - o Action: Harriman to model finishes of casework on HMFH casework done in 2010.

3.3.2 Presentations / Report

- Action: Harriman to include the existing and proposed classroom casework recommendations in the report as 11x17 fold outs.
- Action: Harriman to show one example of the classroom casework modifications and one example of the art room modifications in the School Committee presentation. Show existing photo and proposed rendering of what it will look like.

3.4 HVAC:

3.4.1 Recommendations

- Harriman reviewed the HVAC recommendations for Gym A, Gym B, Kitchen and the Auditorium which are outlined in the August 8, 2017 presentation.

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- Kitchen: Harriman recommends removing the unit from the storage room and placing it on the roof. Placing it above the loading dock would require running duct work across the kitchen storage. Also pulling in fumes and serviceability is a concern. Harriman is exploring a gas fired MUA on the roof above the music room that is above the kitchen. Harriman indicated it is a very quiet unit.
- Auditorium: Harriman's structural engineers are investigating whether the existing flat roof adjacent to the auditorium mechanical spaces can support the condensing units.
- Joe indicated we need to make access to these units safe.
 - o Action: Harriman to make access doors to auditorium mechanical rooms larger and insulate the room if air conditioned.
- Joe indicated there currently is no roof access. Joe has a location for a roof access ladder in mind. Joe requested that Harriman make the roof access part of their project.
 - o Action: Joe to inform Harriman of desired location. Harriman to review location and identify related scope for the cost estimator.
 - o Action: Harriman to provide a roof plan showing location of proposed units and access ladder.
- Sustainability: Harriman is selecting efficient units and using VFDs as well as upgrading the filtration systems
 - o Action: Harriman to summarize in HVAC report and sustainability summary in overall report.
- Geothermal: Auditorium requires a geothermal system for 60 tons of cooling. The cost is thought to be roughly ten times that of DX. Geothermal is approximately \$500-\$600k vs DX at \$50-60k.
 - o Action: Harriman to summarize in HVAC recommendations and sustainability summary in the overall report.

3.5 Electrical

3.5.1 Recommendations

- Harriman reviewed the electrical recommendations which are outlined in the August 8, 2017 presentation.
- Harriman is not adding any loads to panels with cloth wiring. Harriman will include a new panel board for new connections.
 - o Action: Harriman to indicate location of panels with cloth wiring that are not already replaced with our scope and indicate magnitude of cost for replacement.
- Joe requested that Harriman consider replacing the fire alarm control panel for this project.
 - o Action: Harriman to determine if life expectancy of panel would trigger replacement in a 25-year design solution.
- Kitchen electrical scope to include new lighting and support for mechanical and kitchen equipment. Electrical distribution in kitchen is no longer serviceable therefore Harriman is looking at refeeding it all together.

3.6 Plumbing

3.6.1 Recommendations

- Harriman reviewed the plumbing recommendations which are outlined in the August 8, 2017 presentation.



- Harriman recommended replacing the water heater with a high efficiency unit. Joe agreed that the report should account for replacing it.
 - o Action: Harriman to account for replacing water heater in the report and cost estimate.
- Harriman has left messages for Sewer Department to see if grease interceptor can stay inside the building. Harriman assumed it is about 100lb retention and 50 gpm.
 - o Action: Joe to contact the sewer superintendent George Saraceno.
- Joe informed Harriman we should account for replacing the kitchen floor due to the amount of utility rework that will occur under the slab.
 - o Action: Harriman to propose a new flooring material and account for cost in the estimate.

3.7 Kitchen Plan

3.7.1 Harriman presented the proposed kitchen plan provided by John Sousa and the challenges we are facing with storage. Joe recommended that Harriman look at moving the wall at the loading dock to allow for more room in dry storage.

- Action: Harriman and John to look at relocating wall of loading dock and the implications that has.

3.8 Retaining Wall

3.8.1 Harriman reviewed their recommendations to replace the cap and fence on the retaining wall. Harriman indicated additional catch basins might help to collect water at wall due to existing grades sloping towards wall.

- Action: Joe to ask RDK to revisit the number of catch basins
- Action: Harriman to provide a detail in the report illustrating pre-cast cap with caulked joints, ¾" isolation joint and a side mounted fence. Fence to be an aesthetically pleasing guardrail.

3.9 Building Envelope

3.9.1 SGH provided additional information on limestone panels that are of concern.

- Action: SGH to provide a stabilization detail that will hold until construction and provide a permanent solution and cost in the report.

3.10 Sustainability

3.10.1 Joe requested that Harriman state why LEED was not pursued on this project.

- Action: Harriman to include statement in sustainability section of the study report indicating the importance of sustainability and will look for ways to incorporate sustainable and energy efficient measures where feasible but the limited scope of work does not lend itself to being a LEED project and therefore this project is not pursuing LEED certification.

3.11 Next Meeting:

3.11.1 Date: Tuesday, August 21, 2018 at 7 am.

- Agenda:
 - o Summary of Findings Draft update.
 - o Kitchen Recommendations
 - o Building Envelope Recommendations

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6. Vote on STM Motion.

While the School Committee is present, both the Board of Selectmen and School Committee could vote to approve the motion language for the STM. This has been included in your packet. The School Committee has this on their agenda for Tuesday night, so the BOS can vote individually as a Board as well.

MOVE to approve Article 2, Motion 1 for the Special Town Meeting.

ARTICLE: 2

MOTION: 1

That the Town vote to appropriate the sum of \$2,500,000 (TWO MILLION FIVE HUNDRED THOUSAND DOLLARS) to be expended under the direction of the School Building Committee and the Permanent Building Committee for a feasibility study, including the payment of all costs incidental or related thereto, to be used to determine the preferred solution to address the physical and educational deficiencies of the Ernest F. Upham School located at 35 Wynnewood Road, Wellesley, MA, which solution may include, but not be limited to, renovation or rebuilding of the Ernest F. Upham School or the John D. Hardy School, or construction of a new school at another site, and schematic design of the selected solution, for which the Town may be eligible for a grant from the Massachusetts School Building Authority (MSBA). The MSBA's grant program is a non-entitlement, discretionary program based on need, as determined by the MSBA, and any costs the Town incurs in connection with the feasibility study and schematic design in excess of any grant approved by and received from the MSBA shall be the sole responsibility of the Town; and, for the purpose of meeting such appropriation, to authorize the Town Treasurer, with the approval of the Board of Selectmen, to borrow said sum in accordance with Chapter 44, Section 7(1) of the Massachusetts General Laws, or any other enabling authority and to issue bonds or notes of the Town therefor, and that any premium received by the Town upon the sale of any bonds or notes approved by this vote, less any such premium applied to the payment of the costs of the issuance of such bonds or notes, may be applied to payment of costs approved by this vote in accordance with Chapter 44, Section 20 of the Massachusetts General Laws, thereby reducing the amount to be borrowed to pay such cost by a like amount, and that the amount of borrowing authorized pursuant to this vote shall be reduced by any grant amount set forth in the Feasibility Study Agreement that may be executed between the Town and the MSBA.

7. Discuss FY20 Operating Budget Guidelines

Sheryl Strother, Finance Director will be joining the Board again this week to participate in a discussion to set the operating guideline for the FY20 budget. Included in your packet is a copy of the budget guideline model that you reviewed last week.

MOVE to adopt an operating budget guideline for FY20 as follows:

- School budget 3.0%
- All other Town Departments 2.5%

Guideline Scenarios

				TWFP					
				Scenario 1		Scenario 2		Scenario 3	
				Growth	Alt FY20	Growth	Alt FY20	Growth	Growth

8. Discuss Capital Planning Next Steps

We have scheduled a meeting for Wednesday October 10th at 4:00 PM in the Juliani Room to meet with Board chairs, department heads and Advisory Committee members to continue the discussion on the Town's capital planning process. As we prepare for that meeting, included in your packet is the memo you reviewed last week with some edits based upon the conversation. We would like to discuss these at the meeting on Monday night and further the board's thinking on these points in preparation for the October meeting.

NO MOTION

TOWN OF WELLESLEY



MASSACHUSETTS

BOARD OF SELECTMEN

TOWN HALL • 525 WASHINGTON STREET • WELLESLEY, MA 02482-5992

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BLYTHE C. ROBINSON
EXECUTIVE DIRECTOR OF GENERAL GOVERNMENT

MEMORANDUM

DATE: September 20, 2018
TO: Board of Selectmen
FROM: Blythe C. Robinson, Executive Director
SUBJECT: Capital Planning – Next Steps

Since the Board began discussion on a capital policy in mid-July, there have been a number of meetings and thoughtful input on what strategy and model would work best for the Town. In preparation for a meeting on Wednesday, October 10th with board chairs, department heads and Advisory Committee members, below is a bulleted list of discussion points. We would like to review these at our meeting on Monday, September 17th so that the list can be refined and focused for the larger group on October 10th.

Those points include:

- ❖ The focus for the upcoming budget process should be all five years of the FY 20-24 capital cycle and making minor changes to the process itself. Input, discussion and refinement of the elements of a plan over the ensuing months will yield a greater outcome than trying to rush a new methodology. This is an evolutionary process to bring clarity to what will eventually become a part of the budget manual.
- ❖ The general feedback has been that a “Capital Committee” is not the best model for Wellesley. Rather, adjustments and clarification of the process that has been used over the years is a better approach.
- ❖ Work plans – each board holds an annual retreat and in doing so develops a work plan for the year. Submission or sharing of each plan with capital budget requests will be requested to assist in the evaluation of upcoming priorities and needs across the organization.

- ❖ Comparing work plans adopted by boards will lead to a conversation at the department head level of how the priorities of the work plans can be coordinated. For example, we understand that the DPW plans to request funds for Walnut Street as its next major project, and that the Planning Board is also considering a study of the area. Coordination and timing of these two requests so that Town funds are expended in a logical sequence makes sense.
- ❖ Coaching and supporting all departments and boards to begin identifying capital projects and needs as far in advance as is practicable. No major project should be proposed for the early years of the town's capital plan other than unfunded mandates, emergencies, and other unforeseen circumstances. By identifying and coordinating in advance, we increase the likelihood that all projects are financed in the timeframe they are needed or desired. Submitting projects without such process will have unintended impact on other projects on the horizon.
- ❖ Articulation of criteria – the list of 10 criteria in the initial draft of the policy¹ was written in broad terms so that Boards would utilize them to substantiate why they had proposed a project in a particular timeframe. The boards can best provide the detail and context as to why they have made such a request. The criteria help to establish common language for evaluating the merits of a particular project. It would be helpful at the meeting on October 10th to review these with the boards and

-
1. ¹ Meets a requirement of State or Federal Law/Regulation
Projects such as fuel tank replacement or asbestos removal in which a replacement date has been mandated, or a law/regulation has been newly implemented which affects the asset.
 2. Systematic replacement of capital assets
 3. Projects that would replace or upgrade a facility or piece of equipment as part of a systematic replacement program.
 4. Improves the operating efficiency of a department
Projects that substantially and significantly improve the operating efficiency of a department, or an expenditure that has a very favorable return on investment with a promise of reducing existing or projected future increases in operating expenses. Presents an opportunity for a town-wide initiative that may reduce the overall budget.
 5. Improves Services or operations
Acquisition or replacement of the capital asset improves services to the community or operations of a department(s).
 6. Addresses a deteriorated facility
Projects that reconstruct or rehabilitate a facility to avoid or postpone replacing it with a new, costlier facility or piece of equipment.
 7. Coordination – required as part of another CIP Project
Projects that are necessary to ensure coordination with another CIP project (such as scheduling a sewer project to coincide with a street reconstruction project so that the street is not dug up a year or two after it is completed). A project may be necessary to comply with requirements imposed by others. Quantifiable and verifiable savings must be demonstrated. The magnitude of the savings may impact the rating.
 8. Contributes to achieving the values outlined in the Unified Plan Either enables a department to implement its internal strategic plan or contributes to the vision and values contained in the plan.
 9. Sustainability - protects and/or improves Town resources – natural or built
Makes progress towards the requirements of the Green Community Program and/or meets a standard of sustainability such as LEED. Improves or protects a natural resource of the Town.
 10. Impact to Learning or Work Environment
Repair or replacement of the asset will contribute to the educational environment. Impact to the work environment may create a more effective or efficient environment.

determine whether some of these criteria (such as #4 & 5) could be consolidated into a more concise list. One of the important criteria is how planned projects tie back to and advance the goals of the Unified Plan.

- ❖ Making a transition from lower cost items that have found their way into the capital budgets back into operating budgets. A budget adjustment above guideline this year might be a good opportunity to ensure that there is sufficient funding in a department or board's budget for the annual costs of carrying out their mission.

The Board will also need to consider the overall first year FY20 budget parameters and how to approach the amount allocated for capital (cash and debt-funded). I would suggest that the Board utilize the debt policy range set last winter to achieve this. The primary reason for this recommendation, is that it sets an overall amount, and gives the most flexibility across the organization to react to the needs of all boards and departments. An alternative would be to simply to set a percentage guideline for cash capital. However, doing so would not take into account the needs that were deferred in FY19 that are still present, any new priorities identified, or things already scheduled for the upcoming year. Furthermore, any new board/department request would not necessarily have a place in the budget. Because debt- funded projects have a one-year lag between approval and due date of first year principal/interest payments, we can be somewhat assured that the approximately \$4 million already planned will be largely the same. Sheryl and I can model various scenarios of the 6.2% - 6.8% range to give you a better understanding of what the expenditures would look like. This might be very helpful to the boards as they consider what they deferred from last year and what they anticipate forthcoming.

We look forward to discussing this with the Board Monday night.

9. Discuss and Approve Tolles Parson Center Holiday Hours and Staffing

There will be no discussion on this topic.

10. Execute November Election Warrant

Included in your packet is the warrant for the election to be held on November 6th for various county, state and federal positions, as well as several ballot questions. The Town Clerk has asked that you execute this at the meeting so it can be posted well in advance by the Constable. Please be reminded that early voting will be made available for this election, and a copy of the Clerk's early voting FAQ worksheet is included for your information.

MOVE that the Board execute the warrant for the November 6, 2018 State election.

**COMMONWEALTH OF MASSACHUSETTS
WILLIAM FRANCIS GALVIN
SECRETARY OF THE COMMONWEALTH**

WARRANT FOR 2018 STATE ELECTION

Norfolk County SS.

To Philip Juliani, Constable for the Town of Wellesley

GREETINGS:

In the name of the Commonwealth, you are hereby required to notify and warn the inhabitants of said city or town who are qualified to vote in the State Election to vote at:

- The Voters of Precinct A, in Katherine Lee Bates School at 116 Elmwood Road.
- The Voters of Precinct B, in Isaac Sprague School at 401 School Street.
- The Voters of Precinct C, in Ernest F. Upham School at 35 Wynnewood Road.
- The Voters of Precinct D, in Otho L. Schofield School at 27 Cedar Street.
- The Voters of Precinct E, in Joseph E. Fiske School at 45 Hastings Street.
- The Voters of Precinct F, in Dana Hall School – Shipley Center, 142 Grove Street
- The Voters of Precinct G, in Wellesley Free Library, 530 Washington Street
- The Voters of Precinct H, in Tolles Parsons Center at 500 Washington Street.

on **TUESDAY, THE SIXTH DAY OF NOVEMBER, 2018**, from 7:00 A.M. to 8:00 P.M. for the following purpose:

To cast their votes in the State Election for the candidates of political parties for the following offices and questions:

SENATOR IN CONGRESS	FOR THIS COMMONWEALTH
GOVERNOR and LIEUTENANT GOVERNOR	FOR THIS COMMONWEALTH
ATTORNEY GENERAL	FOR THIS COMMONWEALTH
SECRETARY OF STATE	FOR THIS COMMONWEALTH
TREASURER AND RECEIVER GENERAL	FOR THIS COMMONWEALTH
AUDITOR	FOR THIS COMMONWEALTH
REPRESENTATIVE IN CONGRESS	4 th Congressional District
COUNCILLOR	
• Precincts A, C, D, E, H	3 rd COUNCILLOR DISTRICT
• Precincts B, F, G	2 nd COUNCILLOR DISTRICT
SENATOR IN GENERAL COURT	
• Precincts A, C, D, E, H	1 st MIDDLESEX AND NORFOLK DISTRICT
• Precinct B, F, G	NORFOLK, BRISTOL AND MIDDLESEX DISTRICT
REPRESENTATIVE IN GENERAL COURT	14 th NORFOLK DISTRICT
COUNTY COMMISSIONERS	NORFOLK COUNTY
DISTRICT ATTORNEY	NORFOLK DISTRICT
CLERK OF COURTS	NORFOLK COUNTY
REGISTER OF DEEDS	NORFOLK DISTRICT
COUNTY TREASURER (to fill vacancy)	NORFOLK COUNTY

In addition, Early Voting will be available for all voters of Wellesley on Monday October 22, 2018 through November 2, 2018 in:

- Annie F. Warren Building (Wellesley Recreation Center), 90 Washington Street.
- Monday through Friday 8:00 AM to 5:00 PM.
- Extended hours on Thursdays from 5:00 PM – 8 :00 PM.
- Special Saturday hours from 8 AM – 2 PM.
- Additional hours at Elizbeth Seton Residence 125 Oakland St., October 28, 2018 at 2:00-4:00 PM.
- Additional hours at Waterstone 27 Washington St., October 29, 2018 at 5:30-8:00 PM.

QUESTION 1: LAW PROPOSED BY INITIATIVE PETITION

Do you approve of a law summarized below, on which no vote was taken by the Senate or the House of Representatives on or before May 2, 2018?

SUMMARY

This proposed law would limit how many patients could be assigned to each registered nurse in Massachusetts hospitals and certain other health care facilities. The maximum number of patients per registered nurse would vary by type of unit and level of care, as follows:

- In units with step-down/intermediate care patients: 3 patients per nurse;
- In units with post-anesthesia care or operating room patients: 1 patient under anesthesia per nurse; 2 patients post-anesthesia per nurse;
- In the emergency services department: 1 critical or intensive care patient per nurse (or 2 if the nurse has assessed each patient's condition as stable); 2 urgent non-stable patients per nurse; 3 urgent stable patients per nurse; or 5 non-urgent stable patients per nurse;
- In units with maternity patients: (a) active labor patients: 1 patient per nurse; (b) during birth and for up to two hours immediately postpartum: 1 mother per nurse and 1 baby per nurse; (c) when the condition of the mother and baby are determined to be stable: 1 mother and her baby or babies per nurse; (d) postpartum: 6 patients per nurse; (e) intermediate care or continuing care babies: 2 babies per nurse; (f) well-babies: 6 babies per nurse;
- In units with pediatric, medical, surgical, telemetry, or observational/outpatient treatment patients, or any other unit: 4 patients per nurse; and
- In units with psychiatric or rehabilitation patients: 5 patients per nurse.

The proposed law would require a covered facility to comply with the patient assignment limits without reducing its level of nursing, service, maintenance, clerical, professional, and other staff.

The proposed law would also require every covered facility to develop a written patient acuity tool for each unit to evaluate the condition of each patient. This tool would be used by nurses in deciding whether patient limits should be lower than the limits of the proposed law at any given time.

The proposed law would not override any contract in effect on January 1, 2019 that set higher patient limits. The proposed law's limits would take effect after any such contract expired.

The state Health Policy Commission would be required to promulgate regulations to implement the proposed law. The Commission could conduct inspections to ensure compliance with the law. Any facility receiving written notice from the Commission of a complaint or a violation would be required to submit a written compliance plan to the Commission. The Commission could report violations to the state Attorney General, who could file suit to obtain a civil penalty of up to \$25,000 per violation as well as up to \$25,000 for each day a violation continued after the Commission notified the covered facility of the violation. The Health Policy Commission would be required to establish a toll-free

telephone number for complaints and a website where complaints, compliance plans, and violations would appear.

The proposed law would prohibit discipline or retaliation against any employee for complying with the patient assignment limits of the law. The proposed law would require every covered facility to post within each unit, patient room, and waiting area a notice explaining the patient limits and how to report violations. Each day of a facility's non-compliance with the posting requirement would be punishable by a civil penalty between \$250 and \$2,500.

The proposed law's requirements would be suspended during a state or nationally declared public health emergency.

The proposed law states that, if any of its parts were declared invalid, the other parts would stay in effect. The proposed law would take effect on January 1, 2019.

A YES VOTE would limit the number of patients that could be assigned to one registered nurse in hospitals and certain other health care facilities.

A NO VOTE would make no change in current laws relative to patient-to-nurse limits.

QUESTION 2: LAW PROPOSED BY INITIATIVE PETITION

Do you approve of a law summarized below, on which no vote was taken by the Senate or the House of Representatives on or before May 2, 2018?

SUMMARY

This proposed law would create a citizens commission to consider and recommend potential amendments to the United States Constitution to establish that corporations do not have the same Constitutional rights as human beings and that campaign contributions and expenditures may be regulated.

Any resident of Massachusetts who is a United States citizen would be able to apply for appointment to the 15-member commission, and members would serve without compensation. The Governor, the Secretary of the Commonwealth, the state Attorney General, the Speaker of the state House of Representatives, and the President of the state Senate would each appoint three members of the commission and, in making these appointments, would seek to ensure that the commission reflects a range of geographic, political, and demographic backgrounds.

The commission would be required to research and take testimony, and then issue a report regarding (1) the impact of political spending in Massachusetts; (2) any limitations on the state's ability to regulate corporations and other entities in light of Supreme Court decisions that allow corporations to assert certain constitutional rights; (3) recommendations for constitutional amendments; (4) an analysis of constitutional amendments introduced to Congress; and (5) recommendations for advancing proposed amendments to the United States Constitution.

The commission would be subject to the state Open Meeting Law and Public Records Law. The commission's first report would be due December 31, 2019, and the Secretary of the Commonwealth would be required to deliver the commission's report to the state Legislature, the United States Congress, and the President of the United States.

The proposed law states that, if any of its parts were declared invalid, the other parts would stay in effect. The proposed law would take effect on January 1, 2019.

A YES VOTE would create a citizens commission to advance an amendment to the United States Constitution to limit the influence of money in elections and establish that corporations do not have the same rights as human beings.

A NO VOTE would not create this commission.

QUESTION 3: REFERENDUM ON AN EXISTING LAW

Do you approve of a law summarized below, which was approved by the House of Representatives and the Senate on July 7, 2016?

SUMMARY

This law adds gender identity to the list of prohibited grounds for discrimination in places of public accommodation, resort, or amusement. Such grounds also include race, color, religious creed, national origin, sex, disability, and ancestry. A "place of public accommodation, resort or amusement" is defined in existing law as any place that is open to and accepts or solicits the patronage of the general public, such as hotels, stores, restaurants, theaters, sports facilities, and hospitals. "Gender identity" is defined as a person's sincerely held gender-related identity, appearance, or behavior, whether or not it is different from that traditionally associated with the person's physiology or assigned sex at birth.

This law prohibits discrimination based on gender identity in a person's admission to or treatment in any place of public accommodation. The law requires any such place that has separate areas for males and females (such as restrooms) to allow access to and full use of those areas consistent with a person's gender identity. The law also prohibits the owner or manager of a place of public accommodation from using advertising or signage that discriminates on the basis of gender identity.

This law directs the state Commission Against Discrimination to adopt rules or policies and make recommendations to carry out this law. The law also directs the state Attorney General to issue regulations or guidance on referring for legal action any person who asserts gender identity for an improper purpose.

The provisions of this law governing access to places of public accommodation are effective as of October 1, 2016. The remaining provisions are effective as of July 8, 2016.

A YES VOTE would keep in place the current law, which prohibits discrimination on the basis of gender identity in places of public accommodation.

A NO VOTE would repeal this provision of the public accommodation law.

Hereof fail not and make return of this warrant with your doings thereon at the time and place of said voting.

Given under our hands this _____ day of _____, 2018.
(month)

Selectmen of Wellesley

County of Norfolk ss:
Commonwealth of Massachusetts, Wellesley:

I have this day caused the within Warrant to be posted in two public places, Wellesley Square and Wellesley Town Hall. In addition it is posted on the Town of Wellesley website at www.wellesleyma.gov.

Philip Juliani, Constable

Date: _____, 2018

Warrant must be posted by October **30, 2018**, at least *seven days prior* to the
November 6, 2018 State Election.

TOWN OF WELLESLEY

EARLY VOTING FAQS (9/20/2018)

Early Voting was offered for the first time for the Presidential Election in 2016. In Wellesley, 6,659 (45%) of all voters, voted early. In 2016, total voter turn-out was 14,749 (86%) of all registered voters. Presidential elections typically have a higher turn-out than non-presidential elections. However, given the higher than typical turn-out at the September Primary, we expect to have significant turn-out.

What is early voting?

Any registered voter can vote prior to a scheduled election by vote of the State Legislature. Voters can vote early or in-person or by mail and the ballot will be cast on Election Day.

Why is early voting being offered?

To encourage voters to VOTE!

When will the early voting period begin and end?

Monday, October 22th until Friday, November 2nd.

Where will early voting be offered?

Early voting will be at the Warren Recreation Building at 90 Washington Street. Due to a lack of parking at Town Hall, Town Hall will not be an official early voting location.

Who is eligible to vote early?

All residents who are registered voters on or before the deadline (October 15, 2018) to register to vote for the November 6, 2018, State/Presidential Election. No reason required. Voters may vote only at locations within the municipality where the voter is registered.

Where do I vote early?

All eligible voters may vote in-person at Warren Recreation Building 90 Washington St.

What time is early voting available?

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
OCT 24 8am-5pm	OCT 25 8am-5pm	OCT 26 8am-5pm	OCT 27 8am-5pm 5pm-8pm	OCT 28 8am-5pm	OCT 29 8am-2pm
OCT 31 8am-5pm	NOV 1 8am-5pm	NOV 2 8am-5pm	NOV 3 8am-5pm 5pm-8pm	NOV 4 8am-5pm	

- Sisters of Charity at 125 Oakland Street on Sunday October 28 from 2:00 pm – 4:00 pm.
- Waterstone at 27 Washington Street on Monday October 29 from 5:30 pm – 8:00 pm.

How do I get an early voting ballot?

You can get an early voting ballot in person or by mail.

IN PERSON-

Voters voting in person do not need to complete an application, but will fill out an information envelope as part of the early voting process. A voter may request a ballot at any early voting location by providing their address and name. Early voting ballots cannot be removed from an early voting location.

BY MAIL

Voters voting by mail must complete an application or provide a request in writing. Early ballots will not be mailed until October 24.

How do I return my early voting ballot?

If voting in person the voter will return the sealed affidavit envelope containing his/her early voting ballot to the election official.

If voting by mail the voter may return it by mail to the Town Clerk in the envelope provided by the Town Clerk or the voter may deliver the ballot in person to the Town Clerk. A family member is NOT authorized to deliver any early voting ballots.

Can I pick up an early voting ballot for a family member or friend?

No. The Early Voting does not provide for the application or delivery of ballots by anyone other than the voter personally.

I requested an early voting ballot but did not receive it, what should I do?

If you requested an early voting ballot but did not receive it, please call Town Clerk at 781-431-1091 ext 2258 (Diane)

If I vote early can I also vote at the polls on Election Day?

No. Your ballot will be considered cast and you will not be eligible to vote by mail, in person or at the polls on Election Day. Early Voters may NOT retrieve a cast ballot if the voter changes their mind.

Is absentee voting still available?

Yes. If you are qualified to vote by absentee ballot you may still do so. To apply for an absentee ballot you must be:

A registered voter who will be unable to vote at the polls on Election Day due to:

- absence from the Town of Wellesley during normal polling hours; or
- physical disability preventing you from going to the polling place; or
- religious beliefs

Applications for absentee ballot must be in writing with a signature. The voter or a family member may request an absentee ballot. Absentee Voters may also vote in person at the Town Clerk's Office.

Applications may be mailed, faxed, or emailed to the Town Clerk. The deadline for all absentee applications is NOON November 7. However, for mailed ballots there is no likelihood of mailing success after noon on Friday November 4. Please allow up to 10 days for mailing of the ballot to the voter and return of the ballot by mail. All absentee ballots must be received by the close of the polls on November 8, or postmarked by Nov 8 and received within 5 days of the election.

For any additional information please contact the Town Clerk at 781-431-1019 ext 2250 or 2258.

11. Executive Director's Report

There are two sets of minutes ready for your consideration from the September 11th and 12th meetings.

MOVE that the Board approve the minutes of the September 11th and September 12th meetings.

1 **Approved:**

2
3 **Board of Selectmen Meeting: September 11, 2018**

4 **Present: Gibbs, Freiman, Sullivan Woods, Ulfelder, Morgan**

5 **Also Present: Robinson, Jop**

6
7 **Warrants approved: 2019-007 \$2,548,097.54**

8 **2019-008 \$4,206,493.47**

9 **2019-009 \$3,648,154.83**

10
11 **Minutes approved: August 21, 2018**

12
13 **Meeting Documents:**

- 14 1. Agenda
- 15 2. BOS calendar
- 16 3. Motions
- 17 4. Draft BOS meeting minutes: August 21, 2018
- 18 5. Babson One Day License Requests: Alumni Weekend
- 19 6. Natick Organic Farm – Charity Wine License request
- 20 7. Invoice re: NEMB
- 21 8. Minutes from School Committee approving NEMB expenditure
- 22 9. Draft Presentation from Sheryl Strother re: FY18 Recap and FY20 Budget outlook
- 23 10. Draft Public Comment Policy – redline version
- 24 11. Draft Public Comment Policy – clean copy
- 25 12. Draft Housing Production Plan
- 26 13. Public Comments received re: Draft Housing Production Plan
- 27 14. Tailby and Railroad Lots Working Group Report
- 28 15. Police Commendation for Officers Dixon, Hughes, and Cunningham
- 29 16. Police Commendation for Officer Debernardi and Dispatcher Harris
- 30 17. Police Commendation for Officers Popovski and Gerard
- 31 18. Wellesley September 11th memorial events
- 32 19. Correspondence from BAA regarding 2019 Boston Marathon
- 33 20. Correspondence from Recreation Commission
- 34 21. Correspondence from Planning Board
- 35 22. Correspondence re: Recycling Dividends Grant
- 36 23. Correspondence from David Himmelberger
- 37 24. Citizen letter re: Bradley Avenue
- 38 25. July 2018 Parking Meter Collections
- 39 26. July 2018 Animal Control report

40
41 **1. Call to Order and Citizen Speak**

42
43 Mr. Morgan, Chairman, called the meeting to order at 7:00 pm.

44
45 Mr. Morgan announced the meeting was being telecast live on Comcast channel 8 and Verizon channel 40
46 and streamed by Wellesley Media and is recorded for subsequent viewing on the cable channels or at
47 wellesleymedia.org.

48
49 Mr. Morgan asked for a moment of silence to recognize the 17th anniversary of the tragic events of
50 September 11, 2001. He thanked Wellesley Police and Fire for hosting the annual Wellesley memorial

51 service and remembrance held at the central fire station reflecting on the tragic events and remembering the
52 four Wellesley residents who lost their lives that day.

53
54 Ms. Sullivan Woods announced that Friday September 14th and Saturday September 15th the Wellesley
55 Square Merchants would host “Mom’s Day Out”; a shopping event designed for families. The Town waived
56 parking at the shopping area for residents to support local business and enjoy the day.

57
58 **Citizen Speak:** None.

59 60 **2. Executive Director’s Report**

61
62 Ms. Robinson reviewed the items to be voted on, specifically the draft BOS meeting minutes, Babson One
63 Day Special License, a Charity Wine license, and the SPED Stabilization Fund expenditure.

64
65 Ms. Sullivan Woods stated she received a request from a resident asking to note in the Board’s minutes the
66 recording of meetings by Wellesley Media to inform residents of the recording and broadcast information.

67
68 Ms. Robinson gave a brief update regarding the upcoming multi-board meeting on mental health services
69 that would include representatives from the Board of Selectmen, Council on Aging, Board of Health,
70 Schools, Police, Fire, and Veteran’s Services.

71
72 Ms. Freiman announced there would be a Town Hall Forum on the interior renovation of Town Hall held
73 Wednesday, September 12th, and would focus specifically on the visioning of the Great Hall.

74
75 **Upon a motion by Ms. Gibbs and seconded by Ms. Freiman, the Board voted (5-0) to approve the**
76 **minutes of August 21, 2018.**

77
78 **Upon a motion by Ms. Gibbs and seconded by Ms. Freiman, the Board voted (5-0) to approve the one**
79 **day licenses for Babson College on September 21 and 22, 2018 for all 10 locations identified in the**
80 **application for Alumni Weekend.**

81
82 **Upon a motion by Ms. Gibbs and seconded by Ms. Freiman, the Board voted (5-0) to approve the**
83 **Charity Wine License for Natick Organic Farm at the Wellesley College Club on September 28, 2018.**

84
85 **Upon a motion by Ms. Gibbs and seconded by Ms. Freiman, the Board voted (5-0) to authorize**
86 **payment of invoices in the amount of \$653.34 to New England Medical Billing for the Town’s**
87 **Medicaid filing from the SPED Stabilization Fund.**

88 89 **3. Update from MassBay Community College**

90
91 Dr. David Podell, President of MassBay Community College and Mr. Tom Peisch, MassBay Community
92 College Board Chair, joined the Board.

93
94 Mr. Peisch gave a brief introduction of himself and Dr. Podell and noted that Maura Healey was the
95 commencement speaker last year. Dr. Podell stated there are currently 4,600 students and last May 700
96 students graduated. MassBay awards certificates and associate degrees and for many students the school is
97 an opportunity to continue to a four-year institution or begin a career. He added many of the students find
98 MassBay to be a new start for themselves. He stated the faculty and staff assist students to move beyond or
99 past obstacles to achieve their educational goals. The school has three campuses in Wellesley, Framingham
100 and Ashland and has hired seven new full-time faculty members this academic year.

He noted that they had recently completed a strategic plan for the next five years and are focusing on recruitment and retention. The college asks its students to find strategies that work for them and to commit themselves to a degree. This year the school has introduced “MassBay Academy” which are smaller groups of students that create a framework to assist students make connections with other students and faculty. He noted the school is focused on racial disparities and has a program that focuses on young people of color. He added that food insecurity is also a major concern and many students are hungry, thus the school has been actively forming strategies to help students get food without embarrassment. He recognized the role of the community and Wellesley residents who have worked on the Food Insecurity strategies.

MassBay is currently developing two new buildings, the first to replace the Framingham campus as the City will not renew its lease. The state will provide \$25million to construct a building on a parking lot beside Framingham State to be converted to a new health science building anticipated to open in 2023; the school will be responsible for funding the remaining amount of approximately \$40 million. The second project is the creation of a new fitness and wellness center that they envision building on the Wellesley campus close to Route 9 that the school as well as the Town will enjoy. Dr. Podell added that Mayor Walsh included MassBay in the program that allows Boston Public High School students that achieve a certain grade point average to attend community college for free. He noted several other partnerships with local businesses and schools to enhance the education of MassBay students.

The Board recognized the work of Dr. Podell and of MassBay within the Wellesley community. Mr. Ulfelder noted the importance of community college in assisting students reach their potential. The Board asked several questions regarding financial aid, scholarship foundation, and technology. Dr. Podell thanked the Board, the Wellesley Police Department, and the residents of Wellesley for their continued support.

4. Review of Town Financial Position

Ms. Strother, Town Chief Financial Officer, joined the Board. She gave a brief presentation regarding the annual update from the past fiscal year and the budget cycle for 2020. In 2018, the Town revenue was very strong and exceeded budget. She noted that expense turn back was significant, led by the schools and is consistent with prior years with no draws on the emergency reserves fund. She provided details of the revenue received and noted the building permit funds received are not be expected to be repeated in FY19 as there were significant building projects at Babson College and Wellesley College that added to the total. She provided an overview of FY19 and stated that local and state receipts will exceed the budget and new growth will be updated when the tax rate is set in December. She noted it was too early to measure the impact of the health insurance changes for FY19 as there are still people that are enrolling and un-enrolling; it is expected that 2020 will be better. Mr. Morgan asked for a midyear estimate in December to assist with projections how the license and permit revenue would be in FY19.

Ms. Strother reviewed the factors impacting FY20 and beyond, noting that she would continue to watch new growth and state budget. She noted that the Town should not expect to receive as much additional funding from the state as in the past year. She added that special education cost uncertainty could be addressed and mitigate the fluctuations in expenses and discussion has begun with the schools. She reviewed the pending debt exclusion requests and the timing of them. The Board discussed expenditures and pending debt exclusion requests. Ms. Strother continued to review the FY20 projections. Ms. Strother reviewed the differences between what had been previously provided to the Selectmen and the current Power Point presentation and how the budget breakdown was revised. The Board continued to discuss the budget outline and agreed to discuss the operating expense guidelines at length at their next meeting. The Board agreed to delay setting capital targets until they receive additional information.

5. Discuss Draft Housing Production Plan

Ms. Gibbs gave a brief update on the process and the next steps of finalizing and submitting the report. She noted the public comment periods and that information that had been gathered, analyzed and distilled in a short period of time to produce the draft report. She stated the group continues working hard to meet the Town's housing needs. Ms. Freiman stated she would appreciate having additional information regarding how community land trusts work and the needs of downsizing for empty-nesters. The Board discussed the difficulty of finding housing in Wellesley for those who wish to downsize.

Ms. Sullivan Woods noted the up-to-date information was helpful, particularly that the racial and ethnic diversity gap between greater Boston and Wellesley is not as large as she had believed. Mr. Ulfelder stated that the process began with a sense of urgency with the 40B projects and the report was produced in a short period of time and done remarkably well. He stated attention should be paid to moderate-income housing and hoped there was also a way to incentivize development of housing for those who wish to downsize.

Ms. Gibbs stated the public comment process was instrumental in providing direction to the plan and the strategies described. She added that the consultant built on a lot of the work the Town had done as part of the Unified Plan process and believed there is a better understanding of what the housing challenges are. Mr. Morgan stated he would like to see additional public outreach.

Ms. Grace of Bristol Road came before the Board. She stated she was appreciative of the work with affordable housing and stated she believed this draft was good, well written and the goals are clear.

Ms. Coffey of Weston Road came before the Board. She stated she did not see the draft but believed there should be a focus on low-income housing. She stated her confusion at hearing doubts if diversity should be the main criteria for housing rather than receiving funding from federal sources for low-income housing. Ms. Jop stated the housing production plan reviews many ways how the Town can meet its goal of 10% of affordable housing stock. She noted the plan reviews various types of housing needs in the community and provided Ms. Coffey with a copy of the plan.

Mr. Carls, Precinct H, came before the Board. He stated he is looking for a Continuing Care Community at the North 40. He stated there are over 3,000 people in Wellesley aged 70 and older. He believed the report would be improved to add additional comments on the elderly and downsizing.

6. Discussion of Tailby/RR Working Group Recommendation

Ms. Jop thanked the members of the working group who dedicated their time to the group and assistance with the report. She provided a review of the recommendation from the working group noting the background of the RFP process and the working group's review of the responses. She noted that responses differed considerably on various points. The working group ranked the respondents based upon how their responses matched the RFP criteria, with much debate. She reviewed the respondents' interviews and presentations and final recommendation of Trinity Financial as the number one ranked respondent. She spoke about the many aspects of the remaining respondents and the decision making process of the ranking. She stated the group had discussed whether a secondary RFP was necessary and if so, which criteria would be used. The group decided it was in the best interest of the project and the Town not to issue a secondary RFP. The group recommended that the Board interview only the top four (4) ranked respondents. Two members of the group felt the Board should only interview Trinity. The group did not want to undervalue the option of the Board potentially not acting on the project, given the amount of proposed development work in the immediate area of the proposed location.

Ms. Sullivan Woods stated her appreciation of the working group and Ms. Jop's capture of the information from the group within the report. She noted the respondents' presentations and proposals were well presented and thought out. She added the working group conversations were focused on only the proposals

203 at the site and did not incorporate discussions of other projects in the immediate area of the site. The Board
204 discussed the possibility of issuing a second RFP and agreed not to do so but instead to interview the top
205 four ranked respondents.

206
207 Mr. Roberti of Weston Road came before the Board. He noted he is speaking as a resident not as a
208 representative of the Planning Board. He urged the Board to continue the process and to hold interviews
209 allowing for public comments. He stated he believed this project could shine for the Town and impact other
210 projects in Town in a positive way.

211
212 Ms. Howland of Whittier Road came before the Board. She is currently the president of the Wellesley
213 Players. She stated the group does not have its own space in Town and this project could provide a space
214 for the arts in Wellesley. She noted particularly that Trinity had offered to work with the Wellesley Arts
215 Alliance to provide space for arts.

216
217 Staff will work to set up interviews with the top four respondents and will provide for at least 60 minutes
218 per respondent.

219
220 7. **New Business and Correspondence**

221
222 Mr. Morgan announced the next Selectmen's Meeting will be held Monday, September, 17th at 7:00pm.

223
224 The meeting was adjourned at 9:27 pm.

1 **Approved:**

2
3 **Board of Selectmen Meeting: September 12, 2018**
4 **Present: Freiman, Sullivan Woods, Ulfelder, Morgan**
5 **Also Present: Robinson**
6

7
8 **Meeting Documents:**

- 9 1. Agenda
10 2. Wellesley Town Hall PowerPoint Presentation
11

12 **1. Call to Order and Citizen Speak**

13
14 Ms. Freiman, Vice Chair, called the meeting to order at 7:12 pm.
15

16 Citizen Speak: None.
17

18 Ms. Freiman announced the meeting was being telecast live on Comcast channel 8 and Verizon channel 40
19 and streamed by Wellesley Media and is recorded for subsequent viewing on the cable channels or at
20 wellesleymedia.org.
21

22 Ms. Freiman announced that the purpose of the meeting was to obtain feedback from the community on
23 what has been learned through the feasibility and visioning process to address deficiencies inside Town
24 Hall. She introduced Ryan Foster with McGinley Kalsow Architects and Kevin Kennedy, Project Manager
25 with FMD and turned the balance of the presentation over to them.
26

27 At the conclusion of the presentation, Ms. Freiman asked if anyone would like to comment. Ms. Sullivan
28 Woods inquired whether the foot traffic to departments in the building was part of the data gathering
29 process. Mr. Foster indicated that they relied on department head information but not actual counts, and
30 further noted that some departments have seasonal shifts in foot traffic such as tax payment due dates.
31 Others, such as the building department have a steady stream of users given the permitting process.
32

33 Mr. Grant Brown, Chair of the Historical Commission, noted that he was glad to see that an annex in another
34 location rather than an addition to the building seemed to be the preferred solution. He also thought that
35 more meeting rooms, improved wayfinding, attention to the brick work of the building and respect for the
36 existing parkland were all positive steps forward. Mr. Ulfelder noted that he would like the committee to
37 explore the idea of moving the Sustainable Energy Committee office to an annex, especially if it is placed
38 at Municipal Way as there are many synergies between this office and other departments located there. Ms.
39 Phyllis Theerman of Sustainable Wellesley also rose to speak. She applauded the work being done to
40 renovate the building, noting that it demonstrates to residents that renovation can work, that it preserves the
41 character of the town, and reinforces that we don't need to just build something new. Ms. Catherine
42 Johnson, Chair of the Planning Board, noted that an annex similar to the one built by the Town of Needham
43 is a very good idea and would benefit residents and contractors looking to business all in one location.
44

45 Ms. Freiman noted that the committee would like to receive any feedback from residents on this topic ahead
46 of the architects completing this study by the end of the year. Further planning will be needed to determine
47 the path forward should the board decide to pursue an annex, especially in light of the deadline set by the
48 State that the Town complete the ADA upgrades by 2022 (three years after the completion of the exterior
49 renovations).
50

51 The meeting was adjourned at 8:16 pm.

12. New Business and Correspondence - Other Documents: The Board will find documents the staff are not seeking action on, but is for informational purposes only. Please find the following:

- ❖ Memo from FMD – Middle School Paving
- ❖ Correspondence from MSBA
- ❖ Parking Meter Collections – August 2018



MEMORANDUM

DATE: September 12, 2018
TO: Blythe Robinson and David Lussier
FROM: Joseph F. McDonough, P.E. 
CC: D. Stewart, D. Hickey, M. Pakstis, M. Ito, D. McGoldrick, Steve Gagosian, M. Jop, PBC, File
SUBJECT: Middle School Paving Project: Status Update
Filing No.: WFMD19.05, .21, .38

A meeting was held in the Superintendent's Conference Room on August 30, 2018 for the purpose of discussing the current status of the referenced project and the likely schedule. Attendees included representatives from DPW, Engineering, WPS, WMS and FMD. *You may recall that this project was first presented to School Committee on December 12, 2017.*

Status: The majority of the project has been on hold since February 2018 when the 95% design submission was completed by the Town Engineering Department; however, DPW did make interim improvements to D'Auria Drive over the summer to address the extremely poor condition of this particular area of pavement and to improve pedestrian safety.

Other MS Projects: There was significant discussion at the meeting about the potential impact to the paving project by two other capital building projects at the school which are in design or study phase. The **Steam Piping** project is currently being designed under PBC's oversight with a likely construction start in June 2019 (pending 2019 ATM approval). The **Building Systems Study** is currently being performed by Harriman Architects, with a very preliminary construction start of June 2020. The results of this study will be presented at a joint BOS/SC meeting on September 24th.

Proposed Schedule: Although the potential construction impacts of these two projects could likely be addressed with thoughtful phasing for the paving project, it was the consensus of the group that a **Summer 2021 start of the paving project was the best schedule.** We felt that 2019 was not an option due to the limited available time and the level of permitting/approvals that will be needed. Summer 2020 might be impacted most by the Building Systems project – particularly the exterior façade work. Summer 2022 was deemed too long to wait (permit approvals generally good for 2 years), so ultimately the group agreed that Summer 2021 was the most appropriate time to start the paving project.

Funding: In the December 2017 presentation we had were assuming an estimate of \$1.5M in additional funds would be needed to complete the paving project. We felt that consideration should be given to including this request in a "bundled" appropriation, perhaps at the 2019 ATM, as part of an overall request for all three Middle School projects: Paving, Steam Piping and Building Systems.

Please share this memo with SC, BOS and Advisory, and let me know if you have any questions.

Town of Wellesley ■ Facilities Management Department
■ 888 Worcester Street, Suite 370 ■ Wellesley, MA 02482
■ (781)489-4254 tel ■ (781)489-4266 fax ■

Massachusetts School Building Authority

Deborah B. Goldberg
Chairman, State Treasurer

James A. MacDonald
Chief Executive Officer

John K. McCarthy
Executive Director / Deputy CEO

September 14, 2018

Mr. Jack Morgan, Chair
Wellesley Board of Selectmen
Wellesley Town Hall, Selectmen's Office
525 Washington Street, Third Floor
Wellesley, MA 02482

Re: Town of Wellesley, Ernest F. Upham Elementary School

Dear Mr. Morgan:

I would like to thank representatives of the Town of Wellesley (the "District") for meeting with Massachusetts School Building Authority (the "MSBA") staff on August 10, 2018 to review enrollment projections and methodologies for the Ernest F. Upham Elementary School project (the "Proposed Project"). As discussed, the next critical step is for the MSBA and the District to agree on a study enrollment for the Ernest F. Upham Elementary School.

The Ernest F. Upham Elementary School presently serves a portion of the District's grade K-5 enrollment. In addition to studying options for the Ernest F. Upham Elementary School, the MSBA understands that the District would like its feasibility study to also examine reducing the number of K-5 elementary schools from seven facilities to six facilities combined with the redistricting of K-5 students district-wide to equalize enrollment across the six remaining elementary school facilities. Accordingly, this analysis will be particularly focused on the enrollment projections for grades K-5.

The table below illustrates the District's K-12 enrollment during the most recent ten-year period, including enrollment for the most recent school year (2017-2018) as reported by the Department of Elementary and Secondary Education ("DESE").

Year	K-5	6-8	9-12	Total
2008	2,480	1,059	1,256	4,795
2009	2,413	1,134	1,220	4,767
2010	2,363	1,135	1,294	4,792
2011	2,352	1,176	1,353	4,881
2012	2,309	1,165	1,381	4,855
2013	2,341	1,164	1,434	4,939
2014	2,303	1,178	1,477	4,958
2015	2,303	1,152	1,513	4,968
2016	2,255	1,145	1,512	4,912
2017	2,209	1,128	1,569	4,906

The total K-5 enrollment in the Town of Wellesley as reported by the District for the 2017-2018 school year was 2,209 students which reflects a decrease of 271 students (-10.9%) from the K-5 enrollment reported in 2008-2009, which was the maximum K-5 enrollment reported in the preceding ten years. Additionally, the 2017-2018 K-5 enrollment reflects a decrease of approximately 124 students (-5.3%) from the average K-5 enrollment reported during the preceding ten-year period.

The MSBA understands that the District is proposing an enrollment to accommodate approximately 375 students in grades K-5 at the Ernest F. Upham Elementary School after a district-wide redistricting. The grade K-5 enrollment reported to DESE for the 2017-2018 school year at the Ernest F. Upham Elementary School was 236 students. An equalized enrollment for six K-5 elementary schools in 2017-2018 would have been 368 students.

With respect to future enrollments, the MSBA's base enrollment forecast indicates the District's grade K-5 enrollment will continue to experience a slight declining trend through the 2020-2021 school year, will remain stable through the 2023-2024 school year, and then will begin to increase slightly through 2027-2028. The average grade K-5 base enrollment forecast for the projected period through the 2027-2028 school year is 2,155 students.

As a result of a sensitivity analysis performed by the MSBA on this base enrollment projection and further discussion with the District, the following adjustment has been made to the base enrollment projection:

- Development
 - Based on the discussions between the District and the MSBA, and the anticipated development information provided by the District, the MSBA enrollment model has been adjusted to use the five-year 75th percentile cohort survival rate for 2019 and 2020 rather than the five-year average cohort survival rate which is utilized throughout the base enrollment forecast.
 - This adjustment added approximately 25 students to the average total grade K-5 enrollment as compared to the projection without this adjustment.

As of the 2017-2018 school year, the Ernest F. Upham Elementary School accommodated approximately 11% of the Town of Wellesley's grade K-5 population. Based on the historical enrollment trends of the District, the adjustment, analysis, and discussion with the District described above, the MSBA recommends study enrollments for the Proposed Project as follows:

- One of seven grade K-5 schools: 240 students
- One of six grade K-5 schools with equalized enrollments: 365 students

With regard to current and future utilization of the District's grade K-5 facilities, as noted above, the MSBA understands that the District is considering discontinuing use of one of its seven elementary schools as a K-5 facility, resulting in six K-5 elementary school facilities. As also noted above, the MSBA further understands that the District is then considering a full redistricting of students in order to attain equalized enrollments at each of those six schools. The District has informed the MSBA that it will be undertaking a renovation project at the Hunnewell

Elementary School separate but concurrent with the Ernest F. Upham Elementary School project in order to “right-size” this building according to the needs associated with the proposed redistricting of the District’s elementary school students.

If reducing the number of K-5 elementary schools from seven facilities to six facilities combined with the redistricting of K-5 students district-wide to equalize enrollment across the six remaining grade K-5 facilities is determined to be the Preferred Solution, the MSBA understands that the District would subsequently and immediately discontinue use of one of the elementary schools as a K-5 facility barring an unforeseen long-term shift in enrollment that may result in the need for additional capacity. The MSBA also understands that the District may use the discontinued facility for swing space for this and subsequent construction projects. The MSBA further understands that any issues associated with redistricting, the use of the discontinued elementary school building as swing space, and the potential renovation project at the Hunnewell Elementary School would be addressed outside of the Proposed Project.

If six grade K-5 elementary schools with equalized enrollments is determined to be the preferred solution, as part of the Preferred Schematic Report the District will be required to establish the proposed future use or disposition of any existing spaces vacated or otherwise reprogrammed as a result of the proposed project, submit additional information regarding its proposed redistricting strategy including how it will be implemented, and demonstrate that the School Committee and necessary District officials support the proposed redistricting associated with the change from seven to six K-5 elementary facilities. The MSBA will require a written plan from the District describing the process for determining local support for potential redistricting and/or consolidation. Upon the MSBA’s approval of the District’s Preferred Solution, a design enrollment certification that is specific to the enrollment number associated with the approved Preferred Solution will be forwarded to the District.

Please note that the MSBA’s recommendations for multiple study enrollments do not represent an affirmation by the MSBA for approval and/or funding of any of these options and are intended only to provide a framework to inform the Feasibility Study to be conducted as a means of determining the most cost effective and educationally sound solution to be agreed upon by the District and the MSBA. The MSBA’s study enrollment recommendations assume full utilization of all school facilities that remain on-line. Accordingly, as part of the Feasibility Study, the District will be required to document the enrollment capacity of each existing facility anticipated to remain in service and how the spaces within each existing facility are anticipated to be used once the Proposed Project opens.

The MSBA believes that this study enrollment recommendation will position the District to efficiently meet space capacity needs throughout future enrollment variations. Please sign and return the attached certification within 21 calendar days to confirm agreement on this study enrollment. If the District feels that this study enrollment does not meet the needs of the District, please respond to this letter via e-mail to Jennifer Flynn and propose three meeting/conference call times for which the District can be available to discuss enrollment.

If you have any questions regarding this matter, please do not hesitate to contact me or Jennifer Flynn (Jennifer.Flynn@massschoolbuildings.org) at 617-720-4466.

Page 4
September 14, 2018
Ernest F. Upham Elementary School Enrollment Letter

Sincerely,



Mary Pichetti
Director of Capital Planning

Cc: Legislative Delegation
Blythe C. Robinson, Wellesley Town Executive Director
Matt Kelley, Chair, Wellesley School Committee
Dr. David Lussier, Superintendent, Wellesley Public Schools
Sharon Gray, Chair, Wellesley School Building Committee
File: 10.2 Letters (Region 4)

**MASSACHUSETTS SCHOOL BUILDING AUTHORITY
TOWN OF WELLESLEY
ERNEST F. UPHAM ELEMENTARY SCHOOL
STUDY ENROLLMENT CERTIFICATION**

As a result of a collaborative analysis with the Massachusetts School Building Authority (the “MSBA”) of enrollment projections and space capacity needs for the Ernest F. Upham Elementary School (the “Proposed Project”), the Town of Wellesley hereby acknowledges and agrees that the design of alternatives, which may be evaluated as a part of the feasibility study for the Ernest F. Upham Elementary School, shall be based in accordance with the following:

Enrollment for Grades K-5, in seven school facilities	Enrollment for Grades K-5, in six school facilities with equalized enrollments
240 students	365 students

The Town of Wellesley further acknowledges and agrees that, pursuant to 963 CMR 2.00 *et seq.*, the MSBA shall determine the square feet per student space allowance and total square footage according to the enrollments noted above. The Town of Wellesley acknowledges and agrees that it has no right or entitlement to any particular design enrollment, square feet per student space allowance, or total square footage and that it has no right or entitlement to a design enrollment greater than any of the enrollments noted above, and further acknowledges and agrees that it shall not bring any claim or action, legal or equitable, against the MSBA, or any of its officers or employees, for the purpose of obtaining an increase in the design enrollment for the Proposed Project that it has acknowledged and agreed to herein. The Town of Wellesley further acknowledges and agrees that, among other things, the design enrollment, square feet per student space allowance, and total square footage of the Proposed Project shall be subject to the approval of the MSBA’s Board and that the final approval of a Proposed Project shall be within the sole discretion of the MSBA’s Board.

The undersigned, for themselves and the Town of Wellesley, hereby certify that they have read and understand the contents of this study enrollment certification and that each of the above statements is true, complete and accurate. The undersigned hereby certify that they have been duly authorized by the appropriate governmental body to execute this Certification on behalf of the Town of Wellesley and to bind the Town of Wellesley to its terms.

Chief Executive Officer

Duly Authorized Representative of School Committee

Date

Date

Superintendent of Schools

Date

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FY18		FY19
\$54,003.77	JULY 2018	\$63,222.92
\$61,112.19	AUGUST	\$66,674.76
\$55,629.78	SEPTEMBER	
\$51,914.25	OCTOBER	
\$62,836.07	NOVEMBER	
\$46,604.28	DECEMBER	
\$35,145.28	JANUARY	
\$65,329.44	FEBRUARY	
\$65,527.70	MARCH	
\$51,080.85	APRIL	
\$68,547.60	MAY	
<u>\$65,115.00</u>	JUNE	
\$682,846.21		\$129,897.68
\$56,915.25		\$43,299.23
\$53,784.87		\$0.00
\$55,334.14		\$0.00
\$61,581.15		\$0.00

Category	2019	2020	2021
Operating income	\$12,553.75	\$187,170.95	\$33,626.21