Walker Building

255 Main Street
Marlborough, Massachusetts

Redevelopment Study
Phase 1: Assessment and Conceptual Planning

Marlborough Economic Development Corporation

January 16, 2017

Submitted by,

SMMA

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SMMA No. 16071.00

SMMA

Redevelopment Study

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Prepared for the Marlborough Economic Development Corporation
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1 INTRODUCTION AND EXECUTIVE SUMMARY

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STUDY PURPOSE

This report presents the findings of the first phase of a study to explore redevelopment opportunities for the Walker Building. The City is considering options for the building which may in the future include continued ownership by the City or preparation of a Request for Proposal (RFP) for disposition and redevelopment by a private entity.

The report includes an assessment of the current condition of the building and the feasibility of redevelopment. The report considers a range of potential uses and presents conceptual redevelopment plans for selected options that most closely meet the redevelopment goals.

REDEVELOPMENT GOALS (MISSION STATEMENT)

The goals for the redevelopment of the Walker Building are as follows:

1. Promote economic activity in the Marlborough Village District.
2. Preserve the architectural character of the building.
3. Preserve the character of the memorial park and landscape foreground of the building.
4. Minimize investment costs for the City.
5. Reflect input from City residents and stakeholders.

PROPERTY DESCRIPTION

The Walker Building is a former high school building in the classical revival style, comprising three stories of approximately 15,325 square feet per floor, plus basement, on a prominent 1.43 acre lot at 255 Main Street in downtown Marlborough.

The original building was constructed in 1897, enlarged in the 1920s, and renovated in 1964. An elevator was added to the exterior at the back of the building in 1979. Portions of the lower floors have more recently been renovated into offices and are currently used in a limited capacity for City and non-profit offices and some technical school programs, although some of the renovated areas are vacant. The interiors of the upper floors are partially demolished, un-renovated, and vacant.

EXECUTIVE SUMMARY

Architects and Engineers from SMMA reviewed the building to assess its condition and redevelopment potential. SMMA reviewed and compiled building plans from the original construction and subsequent additions and renovations in order to understand the building construction, layout, dimensions and history.

SMMA developed a list of potential re-use options and evaluated these options against the Redevelopment Goals. The full list of alternative uses is included in this report

The analysis identified 4 options that most closely meet the redevelopment goals:

1. **Residential**: The Walker Building's downtown location and recent rezoning makes residential development a potential re-use opportunity. Many schools of this vintage have been successfully transformed into market rate residences that retain the character of their community and site.

2. **Hotel:** The historic architecture and downtown location make a boutique hotel a potential option. Such use would primarily service the local business and corporate market and could also support a restaurant function. Hotel occupancy rates in the city are reportedly high and this location would introduce business activity to the downtown location.

3. **Mixed-Use:** A mixed-use option would most likely include a combination of residential with office, restaurant and possibly some retail functions. This option also has potential to include community functions such as a performing arts space.

4. **Municipal Office:** SMMA identified options for the City to continue operation and ownership of the building. The building is not suited to many 21st century municipal uses such as contemporary educational or library design. The building could be renovated to provide a modern office environment for municipal and governmental functions although such re-use would result in limited increase in downtown economic activity.

A building of this character and vintage cannot be readily converted to market-rate office space. Due to floorplate area, window size and spacing and other constraints, the potential for office redevelopment is limited. Similarly, the structure faces challenges as the basis for retail, assembly, or institutional use conversion.

In addition to establishing the overall suitability of the redevelopment options, SMMA also managed the preparation of conceptual construction cost estimates. The estimates will be useful for planning purposes and for the next phase of feasibility. They are prepared based on redevelopment concepts only, in the absence of schematic designs. Ultimately the feasibility for redevelopment will also depend on the revenue potential of the redevelopment, whether sales, rental or hotel income.

EXISTING CONDITIONS 2

EXISTING CONDITIONS

2.1 SITE

Lot Size

The existing lot is 1.43 acres.

Site Description

The site is bounded by Main Street on the South, Prospect Street on the East, Rawlins Ave on the West, and the Old Common Cemetery on the North.

A strip of land of approximately 20 foot width along Rawlins Ave and between Rawlins Ave and the Property is occupied primarily by 19 municipal parking spaces and is not part of the 1.43 acre property.

Site Topography

The site is sloped upward from Main Street with a total rise of approximately twenty feet to the building front. Prospect Street and Rawlins Avenue also slope upward from Main Street with this grade. The back portion of the site on which the building sits is comparatively flat from front to rear (South to North) although there is some slope from East to West.

The sloping site and the elevated first floor of the building present challenges for handicapped accessibility.

Site Improvements

A World War One memorial monument occupies the middle front of the site along Main Street. Behind the monument is a curving stone retaining wall, behind which is a pedestrian walk parallel to main street and connecting prospect Street and Rawlins Ave. Accessed via this walk is a large open air gazebo that is open to the public. Between this walk and the building a large sloping lawn serves as a front yard to the Walker Building.

Parking and Accessibility

There are two accessible parking spaces at the east end of the Walker Building, accessed via Prospect Street. A pedestrian walk along the back of the building leads to a small lobby serving an elevator at the rear of the building. None of the Building entrances are accessible other than the one at this elevator location.

There is no other parking on site. Parking is available along Rawlins Ave as described above and on-street parallel parking on both sides of Main Street and both side streets.

2.2 ARCHITECTURE

General

The Walker Building is a former high school building in the classical revival style, with masonry bearing exterior walls and wood framed interior walls and floors, and sloping (gable and hip) roofs.

The Floors are approximately 15,325 Gross square feet per floor, measured to the outside face of the outside walls with no deductions for shafts or other spaces. There are three floors and a full basement, as described below, and an unfurnished attic.

Vertical Circulation

Two stairwells, one at each end, serve all three floors and the basement. These stairs are wide as customary for schools. They are at the exterior walls and lit by large windows. The handrails and guardrails are not compliant with current code.

A small hydraulic elevator with a small entrance lobby was added to the back of the building in 1979. It serves three floors but does not serve the basement. It does not connect with the floor level of any building entrance except its own lobby, and that lobby is not accessible to the building except via the elevator.

- The elevator size is approximately 4'-2" wide x 3'-9" front to back, although 4'-6" front to back at the three foot wide doors. This size does not meet code requirements for new construction.
- The Massachusetts Access Board regulations allow elevators in existing buildings to be 48"x48" if existing shaft configuration prohibits strict compliance. However, the amount of renovation involved in any redevelopment will likely trigger requirements that this elevator cannot meet. Refer to part 3 of this report.

Horizontal Circulation

Central corridors connecting the two stairwells divide the floors into a north half and a south half. These corridors are approximately twelve feet wide and offset from the center of the floor plate.

Floor Descriptions

The First Floor is elevated about 1/2 story above grade, except at the west end where it is a full story above grade due to the sloping site. The first floor is served by a stairwell at each end, with a central corridor connecting them, and the elevator, all as described above. The floor was originally classrooms and offices but has been renovated and is used as offices. On the South (front) there are two monumental entrances as described below

The Second Floor is similar to the first floor, except that it does not have the two monumental entrances. It was originally classrooms. The corridor and a portion of

the floor have been renovated. The remained of the floor is unrenovated and unoccupiable in its current state.

The Third Floor is similar to the second floor, except that the windows are smaller, and there is an auditorium. The auditorium is in the original 1870s (east) portion of the building. It extends from the front to the back of the building and thus interrupts the corridor. This means the second means of egress from the remainder of the floor must pass through the auditorium. The auditorium has a small fixed stage, and no fly loft, a flat floor, with no fixed seating, no sound system, and no theatrical lighting.

The basement has an entrance directly from grade at the west end, and windows at this end that allow some daylight. Seven steps down from this entrance is a gymnasium, which is in the 1920's (west) portion of the building. At the east end of the gym, another series of 16 steps leads up to the rest of the basement, which is mostly in the original 1870's portion. Although the gym is an interesting space with high ceilings, the amount of daylight is limited, and the lower floor level is not handicapped accessible. The elevator does not serve the basement at any of its levels. The boiler room is also depressed below the main basement floor level.

A mezzanine level is inserted between the lowest basement level and the first floor, at the Northwest corner of the building. It has its own entrance, accessible via a steel exterior ramp, and connects to the basement via a narrow stair. It is currently occupied by a food pantry.

Entrances and Exits

The two monumental entrances are accessed via exterior stone steps, which lead to entrance doors to a vestibule, leading to a floor level that is below the first floor level. Interior steps lead from this entrance level to the first floor. As such, these entrances are not wheelchair accessible.

The east stair has an entrance/exit at grade from the intermediate landing between the first floor and basement. As such it is not wheelchair accessible. There is no vestibule between the stair and the exterior door, but there is room to install one.

The west stair has an entrance/exit at grade from the basement level. However, this is a small floor area that connects to the rest of the basement only by steps. As such this entrance is not wheelchair accessible. It has a vestibule between the stair and the exterior door.

There is a small entrance lobby at grade on the north (back) of the building to access the elevator. The walkway to this elevator from the two handicapped parking spaces at the east end of the building is accessible, although lengthy. The elevator does not meet current accessibility codes, but it is minimally wheelchair accessible.

There is an entrance/exit to the basement mezzanine via an exterior steel ramp, as described above.

There is an entrance/exit from the basement, adjacent to the boiler room, on the north (back) of the building, via exterior steps and interior steps. This entrance is not wheelchair accessible and does not have a vestibule.

There is an emergency exit stair direct from the basement gymnasium to the exterior, via an enclosed exit stair on the north (back) of the building.

Building Construction

Foundations: The building appears to be founded on strip footings and spread footings. There is no evidence of piles. A foundation plan was not available for review.

Exterior walls: The exterior walls are of masonry construction, brick with stone trim, and are load bearing. Heads of fenestration openings are typically flat masonry arches, with some round arches. The interior finish is plaster. The walls appear to be uninsulated. In the renovated office areas, it appears that gypsum wallboard has been added. It is unknown if any insulation was installed at this time.

Interior walls and partitions: Interior bearing walls are wood framed. It appears that the corridor walls are bearing walls and floor framing spans north-south. The walls perpendicular to the corridor, such as those dividing classrooms, appear to be non-load-bearing wood framed partitions with plaster on wire lath.

Floors: Floor framing is wood dimension lumber. At one location it was observed to be 14” x 2” actual at 12” on center, spanning north-south. Portions of the first floor appear to be framed in steel and cast-in-place concrete. The basement floor appears to be non-structural slab on grade. Flooring is wood, or in some places plywood subflooring. In renovated areas the flooring is resilient tile or carpet.

The roof is pitched, with steel trusses infilled with wood rafters, and wood attic joists. The steel trusses appear to span the width of the building from front to back.

Roof drainage is perimeter gutters with exterior downspouts.

Hazardous materials remediation has been performed, which has resulted in extensive selective interior demolition.

Fenestration

The windows throughout are aluminum double hung replacement windows with double-pane insulated glazing. They appear to be in fair condition.

Exterior and interior doors are typically wood panels doors, uninsulated, with single pane glass.

2.3 PLUMBING AND FIRE PROTECTION SYSTEMS

Storm Water

Storm water drainage from the roof is via external downspouts which discharge below grade to a perimeter underground storm drainage system. The downspouts appear to be in good condition. The underground portion of the storm drainage system was not investigated.

Domestic Water

It is assumed that the existing service is inadequate for the proposed redevelopment and will need to be replaced.

It should be assumed that all of the existing domestic water distribution piping and fixtures within the building will be removed as part of any redevelopment.

Fire Protection

There is no fire protection (sprinkler) system in the existing building.

2.4 MECHANICAL SYSTEMS

Heating

The building is equipped with a perimeter baseboard hydronic heating system, served by large gas-fired hot water boilers located in a dedicated boiler room in the basement. These boilers were converted from oil to gas. The system was apparently converted from steam to hot water. There are newer hydronic pumps and expansion tanks.

Cooling and Ventilation

The third floor auditorium is cooled and ventilated by a D-X air handling unit located directly above it in the attic. A small intake louver on the front pediment serves this unit.

Fan rooms and associated equipment in the basement originally served the gym and other spaces. Vertical air ducts appear to be serve for ventilation and exhaust. This system is aging, inefficient, and inappropriate for any proposed redevelopment. It appears that operable windows were relied upon for some portion of ventilation air in classrooms.

Several condensing units located in the attic serve air conditioning systems in the renovated office areas on the lower floors. Heat rejection to the attic is a substandard approach.

Summary

All of the existing HVAC (heating, ventilating, and air-conditioning) systems are aging, energy inefficient, and inappropriate for any proposed redevelopment use.

They were not investigated in great detail, as it should be assumed that they will be removed in their entirely as part of any redevelopment and replaced with modern, energy efficient, systems appropriate to the new use.

2.5 ELECTRICAL SYSTEMS

Main Service

The existing electrical service is rated 800 Amp at 120/208 volt 3 phase. This is not sufficient for current residential, hotel or office demands.

Distribution

The electrical distribution, lighting, plugs, etc. are not suitable for any proposed redevelopment. It should be assumed that all existing electrical systems will be removed and replaced.

REDEVELOPMENT OPPORTUNITIES

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3.1 REDEVELOPMENT OPPORTUNITES AND CHALLENGES

Zoning Considerations

The Walker Building property is located in the Marlborough Village District.

Parcel and building are in conformance with minimum lot area (5,000 square feet), frontage (25 feet), front yard (10 feet), rear yard (10 feet), and maximum lot coverage (80%) but not in conformance with minimum side yard (10 feet).

From City of Marlborough By-Law §650-34: Marlborough Village District (MV)

- Multifamily dwellings are allowed by Special Permit, but mixed use development including multifamily residential uses, is not subject to the special permit provisions for multifamily uses and is as-of-right.
    - For mixed use development, the mix of uses shall be balanced and compatible and shall contribute to a vibrant downtown atmosphere, including a combination of ground floor street front uses, such as retail or restaurant. Ground floors of buildings fronting streets or public accessways shall be reserved for nonresidential uses.
- Hotels are allowed by right, subject to site plan approval by the City Council with input from department staff who participate in administrative site plan review as provided under § 270-2. See in § 650-34B special provisions for site plan review by City Council of hotels in the Marlborough Village District.
- Retail stores are allowed as of right.
- Business offices are allowed as of right.
- Conversion of buildings to offices is allowed as of right, provided that the exterior character of the building shall not be altered.
- Public buildings such as municipal office buildings are allowed as-of-right.
- Restaurants, including outdoor dining areas, are allowed as of right, subject to certain conditions.
- All projects within the district are subject to site plan review. Site plan review shall be conducted administratively, except projects over 10,000 square feet and hotels must undergo site plan review by the City Council.
- Landscaping and sidewalk amenities. To the maximum extent possible, projects shall provide pedestrian-friendly amenities, such as outdoor seating, patios, porches or courtyards. Links/sidewalks designed to connect Granger Boulevard parking areas with adjacent developments are encouraged to further the goal of providing safe pedestrian access to businesses within downtown Marlborough.
- Service areas, utilities, and equipment. Service and loading areas and mechanical equipment and utilities shall be unobtrusive or sufficiently screened so that they are not visible from streets or primary public open spaces, and shall incorporate effective techniques for noise buffering from adjacent uses.
- Minimum private open space per residential unit shall be 100 square feet.

- Up to 50% of the required open space may be provided by interior rooms such as recreation rooms.

Parking Considerations

Existing Street Parking: 33 parking spaces along the east side of Rawlins Avenue, 10 along the west side of Rawlins Avenue, 19 along Prospect Street, and 10 along the north side of Main Street, totaling 72 spaces (not including the south side of Main Street).

There are two existing handicap accessible parking spaces on the site, adjacent to the building, accessed from Prospect Street.

This report includes a conceptual design showing the potential for converting Rawlins Avenue to a parking use. This increases the parking on Rawlins Avenue from 43 spaces to 64, a net add of 21 spaces.

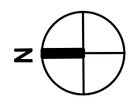
Zoning requirements related to parking in the Marlborough Village District:

- Parking located directly between the building and the street alignment shall be discouraged.
- Parking requirements for residential and the residential component of mixed use projects: studio and one-bedroom units is 0.75 spaces per unit, two-bedroom units is 1.25 spaces per unit.
  - Parking spaces in City-owned garages and lots within 1,000 feet of the development can be counted to fulfill the required spaces, with payment-in-lieu required. (One-time fee of $10,000 per parking space.)
- Parking for hotels is 0.75 space minimum, 1 space maximum per guest room, and no parking required for employees.
  - For hotels with 30 rooms or fewer, spaces in City-owned garages and parking lots within 1,000 feet of the development can be counted to fulfill the required spaces, with payment-in-lieu required. (One-time fee of $10,000 per parking space.)
- Retail, restaurant, and other business uses (office) have no minimum parking requirement. A maximum of 3 spaces per 1,000 SF is allowed.

Site Development Challenges

Topography: The sloping site presents challenges to compliance with handicapped accessibility codes, to design and location of building entrances, and to the potential for providing grade-level parking on site.

Improvements: The World War One Memorial and public gazebo are public amenities on the property that may need to be maintained. It is assumed that the property will be subdivided to retain City control of these amenities.



NOTE:
PARCEL INFORMATION, TOPOGRAPHY, AND AERIAL IMAGERY OBTAINED FROM MASS GIS IN AUGUST 2016.

Existing Conditions Plan:

Redevelopment Study - Phase 1
Walker Building, 255 Main Street, Marlborough, MA

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NOTE:
PARCEL INFORMATION, TOPOGRAPHY, AND AERIAL IMAGERY OBTAINED FROM MASS GIS IN AUGUST 2016.

Proposed Parking Plan:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

9.21.16

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3.2 CODE CONSIDERATIONS

MGL 148, Sections 26G and I - Sprinkler Requirements.

Massachusetts general Law 148, Section 26 G, will require a sprinkler system to be installed for any major renovation or change of use comprising more than 7500 square feet, and Section 26 I will require a sprinkler system for any multi-family residential conversion. The renovation will need to include a new fire suppression system as described in Part 3.2 of this report. Depending upon the water pressure in the street, a fire pump may need to be provided.

Building Code Considerations

Building Code Edition: It is assumed that any development would be subject to the proposed 9th edition of the Massachusetts State Building code, rather than the current 8th edition. Although all details of the 9th edition have not been finalized, the basic requirements are known.

Provisions Related to Renovation and Change of Use: Chapter 34 of the Building Code regulates alterations, additions, and change of use. Chapter 34 consists of the International Existing Building Code, with amendments.

- Any redevelopment would be categorized as Level 3 work, which is when the work area (reconfigured and altered space) exceeds 50% of the area of the building.
- Any redevelopment work would be categorized as a change of occupancy, and a change of occupancy classification and use group.
- The IEBC does not require the entire building to be brought up to the code for new construction. It is beyond the scope of this report to itemize every building component that would need to be upgraded, and to what level.
- Refer to Part 3.2 of this report for structural evaluation and upgrade requirements.
- It should be assumed that all mechanical, electrical, plumbing, and fire protection systems and components will be new and will need to meet the code for new construction.

Use Group: The original use (school) falls into use Group E. The current use (office) falls into use group B. The proposed best use (Residential apartments or condominiums) falls into use group R-2. Accessory uses for a residential development would include Assembly (A-3) for common rooms or fitness rooms, and Storage (S-2) for tenant storage. Hotel use would be group R-1.

Construction Type: The existing construction of exterior masonry bearing walls and interior wood dimension lumber framing is Type III, which is 2-hour fire rated non-combustible exterior walls, and interior elements of any permitted material including wood. (It is assumed that the existing exterior walls are 2-hour rated, but this should be confirmed by analysis.). Within Type III, Type IIIA has the wood interior structure rated to 1-hour, typically by gypsum drywall. Type IIIB has the interior structure non-rated.

Height and Area Limitations: A new building of this size, height, and use(s) could be constructed as IIIB, but much of the interior construction would need to be 1-hour rated to meet requirements for dwelling unit separations and corridor wall ratings. It should be expected that much of the building interior construction will need to be constructed of rated construction in order to meet the separation requirements for residential buildings.

Interior Environment, Ventilation: Due to changes in the 9th edition of the building code and the latest edition of the International Energy Conservation Code, the "natural ventilation" option (i.e. ventilation via operable windows) is probably no longer viable. The dwelling units and common areas will need to be mechanically ventilated. Thus the old code requirement for operable window area equal to 4% of the floor area no longer needs to be achieved.

Interior Environment, Natural Light: While the building code allows either natural light or artificial light, the Massachusetts State Sanitary Code 105 CMR, 410.250 requires that habitable rooms have natural light via windows equal to at least 8% of the floor area of the room. A developer will need to ensure that the room layouts in any redevelopment correspond to the window sizes, since it isn't feasible to change the window sizes. The table below shows the estimated habitable room size based on window size and glass to floor area ratio of 8%, for the five predominant window sizes in the Walker Building. SMMA can provide a plan showing the locations of each window size.

Walker Building Windows.

Window Size (Type)	Window Masonry Opening	M.O. Area	Glass Ratio	Estimated Glass Area	Window to Floor Area Ratio	Daylight Room Floor Area
A	48"x104"	34.6 SF	x.95	32.9	8%	411.25 SF
B	40"x104"	28.9 SF	x.95	27.5	8%	343.75 SF
C	48"x 64"	21.3 SF	x.95	20.2	8%	252.5 SF
D	40"x 64"	17.8 SF	x.95	16.9	8%	211.25 SF

Interior Environment, Acoustics: The code requires that walls between dwelling units or separating dwelling units from other spaces have a sound transmission class (STC) of 50 or better, and that floors have an impact isolation class (IIC) of 50 or better. These are code minimums and higher performance is highly recommended. Achieving these levels with wood framed floors and walls will require careful detailing and some additional costs that potential developers should be aware of. Acoustical isolation of dwelling units from common rooms and other shared spaces should be even better.

While code requirements for acoustical isolation for hotels is not more stringent, as a practical matter, a hotel operator would probably require the acoustic separations for guest rooms to be at least as good as required for residential, and likely better.

Accessibility Code Requirements

The building will be subject to accessibility requirements at both the state and federal level.

The Massachusetts Architectural Access Board Regulations (521 CMR), Section 3.3, defines the requirements for renovations based on cost thresholds. If the cost of the renovations and any additions exceed 30% of the full and fair cash value of the building, then the entire building must be made to comply entirely with the code as for new buildings.

- The building is currently assessed at $2,698,000, the Assessment Ratio (State equalized valuations) is 0.94, so the fair value is $2,870,200.
- 30% of the fair value is $861,000.
- It should be assumed that the cost of any redevelopment will far exceed $861,000, so the renovated building will need to comply fully with all applicable requirements of 521CMR, but subject to exemptions listed below.
- Group 2 dwelling units are “fully accessible units, often referred to as ADA units.
- Group 1 dwelling units are units that have some accessibility provisions and can be made accessible without structural alterations. Typically all units that are not Group 2 units are required to be Group 1 units, but subject to exemptions listed below.
- Any building previously occupied for any purpose, which is converted, renovated, reconstructed, altered or remodeled for residential use is exempt from Group 1 Dwelling Units requirements. (521 CMR 9.2.1)
- Renovation and reuse of dwelling units is subject to Group 2 Dwelling Units requirements and Dwelling Unit Interiors provided the work exceeds 30% of the full and fair cash value of the building. (521CMR 9.3).
- But residential condominium units for sale are exempt from Group 2 requirements (521CMR 9.4)

Based on the above, the following should be assumed:

- If the development is apartments for rent, and the number of dwelling units exceeds 20, then 5% of the units must be fully accessible “Group 2” units.
- If the development is condominiums for sale, then none of them are required to be “Group 2” units.
- All dwelling units in the development are exempt from the “Group 1” requirements.
- The common areas and shared use areas of the development are required to comply fully with all applicable requirements of 521 CMR.

For residential developments, the Federal ADA does not apply. Instead, the Federal Fair Housing Act guidelines apply. Unlike the state regulations, there are no exemptions for existing building or for condominiums. The Act establishes minimum accessibility guidelines that apply to all dwelling unit interiors, and to the common and shared use areas, including site, parking and exterior amenities.

Energy Conservation Code Requirements

If the building undergoes a change of use or occupancy which results in an increase in total energy consumption, then the entire building must be brought into compliance with the energy code for new construction. It would be valuable to know the current yearly energy consumption as a baseline. However, it should be assumed until otherwise proven, that the redeveloped property will need to meet current energy codes.

Marlborough has adopted the Stretch Energy Code, so requirements are more stringent than the base code.

The mechanical systems described in Part 5 of this report are intended to provide the efficiencies needed to meet this goal.

A challenge to meeting the energy code requirements, and also simply to providing thermal comfort and reducing operating costs, is the lack of insulation in the exterior walls. Optimally these walls should be insulated for energy efficiency. However, insulation retrofits of masonry bearing walls in cold climates can upset the moisture balance of the wall, leading to masonry deterioration, mold, mildew, and water damage. Extensive literature has been published on the topic and opinions vary widely. A developer will need to address this issue with the City and design team.

All of the existing windows are operable double-glazed aluminum replacement windows except the windows in the west stair are original wood single pane windows. The wood windows should be replaced with new double pane energy efficient windows. The developer will need to determine if the existing metal windows should remain or should be replaced with newer, more efficient windows.

3.3 POTENTIAL BUILDING RE-USE OPPORTUNITIES

Following are 13 options that were considered for redevelopment. Advantages and disadvantages for each potential use are enumerated, with an emphasis on the development goals stated in Part 1:

1. Promote economic activity in the Marlborough Village District.
2. Preserve the architectural character of the building.
3. Preserve the character of the memorial park and landscape foreground of the building.
4. Minimize investment costs for the City.
5. Reflect input from City residents and stakeholders.

1A. Residential Apartments or Condominiums (Market Rate)

Advantages

1. Desirable residential location near downtown amenities
2. Historic architecture is a potential selling point for buyers or renters
3. The architecture can be seen as appropriately residential in character
4. Windows size and spacing is appropriate for residential
5. Precedent for converting historic school buildings to residential.
6. Open space (lawn) is an attractive amenity for residential.
7. Structural floor live load requirements for residential are low
8. Mechanical ventilation requirements for residential is lower than many other uses.
9. Cooling and heating system design for residential less complex than other uses.

Disadvantages

1. Difficult to provide required parking on site economically.
2. Cost of alterations may be higher than some other uses due to infrastructure (kitchens, baths, millwork, finishes, partitions, etc.)
3. Requires fire rated corridor walls and demising walls, not required in some other uses.
4. Acoustical isolation of dwelling units from each other and from common spaces will be a challenge.

Alignment with Development Goals

1. Local spending by residents will increase economic activity and tax base.
2. The exterior appearance of the building will be minimally affected.
3. The memorial park and landscape will be minimally affected.
4. The bulk of investment costs would be borne by a private developer.

Summary

Although there are some development challenges, market rate apartments or condominiums are well aligned with the development goals stated in Part 1, and thus is a short-listed option.

1B. Residential (Non-Market Rate/Other)

Advantages

1. Desirable residential location near downtown amenities
2. Historic architecture is a potential selling point for buyers or renters
3. The architecture can be seen as appropriately residential in character
4. Windows size and spacing is appropriate for residential
5. Precedent for converting historic school buildings to residential

6. Government or foundation funding may be available for affordable or elderly housing.
7. Wide corridors are desirable for elderly housing.
8. Open space (lawn) is an attractive amenity for residential.
9. Structural floor live load requirements for residential are low
10. Mechanical ventilation requirements for residential is lower than many other uses.
11. Cooling and heating system design for residential may be simpler than other uses

Disadvantages

1. Difficult to provide required parking on site economically.
2. Cost of alterations may be higher than some other uses due to infrastructure (kitchens, baths, millwork, finishes, partitions, etc.
3. Requires fire rated corridor walls and demising walls, not required in some other uses.
4. Potential for mixed use with other functions may present acoustical challenges.
5. Lower potential tax revenue stream than other residential uses.

Alignment with Development Goals

1. Lower potential tax revenue stream than other residential uses.
2. The exterior appearance of the building will be minimally affected.
3. The memorial park and landscape will be minimally affected.
4. Renovation costs would likely require investment of private developer and public funding, but the economics of project delivery will be challenging.

Summary

Below market rate housing is not well aligned with the development goals stated in Part 1, and thus is a not short-listed option.

2. Hotel

Advantages

1. Potential to provide significant economic activity in the downtown district.
2. Historic architecture is a potential advantage for a “boutique” hotel.
3. The architecture can be seen as appropriate character for hotel
4. Windows size and spacing is appropriate for hotel, although not ideal.
5. May be synergy for mixed use with restaurant, fitness club, gathering places.
6. Structural floor live load requirements for hotel are low
7. Mechanical ventilation requirements for hotel is lower than many other uses.
8. Cooling and heating system design for hotel may be simpler than other uses.

Disadvantages

1. Depth of floor plate and window size/spacing not optimal for hotel room sizes. Rooms will likely be larger than typically economical in the hotel business. Market and price point needs to be determined.
2. Costs of alterations potentially similar or higher than for apartments/condos.
3. Requires fire rated corridor walls and demising walls, not required in some other uses (but same as apartments).
4. Site constraints make vehicle arrival, drop off and reception difficult, especially considering accessibility requirements.
5. Potential for mixed use with other functions may present acoustical challenges.
6. Market demand for both business and weekend occupancy is undetermined.

Alignment with Development Goals

1. Local spending by hotel operations, support functions and guests will increase economic activity.
2. The exterior appearance of the building will be minimally affected.
3. The memorial park and landscape will be minimally affected.
4. The bulk of investment costs would be borne by a private developer.

Summary

Although there are some development challenges, a hotel is well aligned with the development goals stated in Part 1, and thus is a short-listed option.

3. Retail

Advantages

1. Located at center of downtown retail district.
2. Prominent location.
3. Precedent exists for conversion of historic buildings to destination retail or restaurant.
4. Historic architecture is an attraction for certain retailers.
5. Windows size and spacing could work well for some retailers, but not all.
6. Could work well with mixed uses (restaurant, club, assembly space).
7. Cost of alterations may be lower than for residential or retail (open spaces, fewer partitions, less plumbing, finishes by tenants, open ceilings).
8. Fire ratings not required, unlike residential or hotel.
9. Parking is not required by zoning for retail use.

Disadvantages

1. No street frontage. No display windows. No street presence for pedestrians.
2. Retail in this building would be limited to destination shopping.
3. Very limited on-site parking.
4. The property is unlikely to appeal to major retailers with long investment horizons.
5. HVAC and electrical system loads and infrastructure higher than for residential or hotel.
6. Open space (lawn) is probably not an attractive amenity for retail.
7. The architecture is more suited to destination retail than to storefront retail.
8. Upper floors definitely very limited for retail.
9. Truck loading / unloading as needed for retail is very limited.

Alignment with Development Goals

1. Depending on type of retail, it may or may not increase economic activity.
2. Signage needed for viable retail may negatively affect the exterior appearance of the building.
3. The memorial park and landscape will be minimally affected, but may be a liability to retailers.
4. Given the limited “storefront” visibility and limited first floor area it is unclear if a retail development could support the investment costs.

Summary

Retail is not well aligned with the development goals stated in Part 1, and thus is not a short-listed option.

4. Commercial Office

Advantages

1. Central location may be good for office use catering to the public (visitors).
2. Prominent location.
3. Could work well with some mixed uses (restaurant, fitness studio).
4. Cost of alterations will be lower than for residential or retail (open spaces, fewer partitions, less plumbing, finishes by tenants, open ceilings.

Disadvantages

1. Central downtown location is not of value to many office users.
2. No on-site parking. On street parking not ideal for employees.
3. The floor plates, stair locations, circulation, lease depths, are not conducive to modern office design or Class-A office market.
4. The window size, sill height, spacing is not as expected for Class A office space.
5. The architecture doesn't say "office". Not an advantage for this use.
6. Brokers would perceive office space in this building as Class B.
7. HVAC and electrical system loads and infrastructure higher than for residential or hotel.
8. Floor live load higher than for residential.

Alignment with Development Goals

1. Office tenants and operations would bring economic activity and increased tax base.
2. Signage needed for office may negatively affect the exterior appearance of the building.
3. The memorial park and landscape will be minimally affected, but are not an advantage to office use.
4. The economics of the investment required and resulting Class B rent structure will be challenging.

Summary

Commercial office is not well aligned with the development goals stated in Part 1, and thus is not a short-listed option.

5. Medical Office

Advantages

1. Compared to standard office, window area is not as important. Lease depth not as important. Small rooms and interior rooms typical of medical offices could work well in this building.
2. The floor plates, stair locations, circulation, work better for medical office than standard office.
3. Central location in business district may be desirable for medical office.
4. Not far from the Marlborough hospital.
5. Medical offices do not need as much window area.
6. On street parking might be sufficient, especially if Rawlins Avenue were realigned to provide additional street parking.
7. A building of this size might be attractive to a larger single healthcare provider tenant.
8. The majority of interior fit-up costs are by tenant.
9. Fewer fire rating requirements than residential.
10. Might have synergy of mixed use with a yoga studio, café, etc.

Disadvantages

1. No on-site parking.
2. HVAC and electrical system loads and infrastructure higher than for residential or hotel.
3. Open space (lawn) is probably not an attractive amenity for medical office.
4. Floor live load higher than for residential.

Alignment with Development Goals

1. Medical office operations, staff and visitors would bring economic activity to the district and increased tax base.
2. The exterior appearance of the building would be minimally affected.
3. The memorial park and landscape will be minimally affected, but are not an advantage to medical office use.
4. The economics of the investment required and resulting rent structure will be challenging.

Summary

Although the building might be acceptable to a medical office user, the use is not well aligned with the development goals stated in Part 1, so medical office is not a short-listed option.

6. Library

Advantages

1. Central location
2. Architecture looks like a classical library building.
3. Street parking is better suited to this use than many others.
4. Floor plates and circulation can work well for a library, although small for modern facility.
5. Works well with other community functions.
6. Renovation costs may be lower than for other units, due to open plans. Significant library costs will be FF&E rather than construction.

Disadvantages

1. City is pursuing other options for addressing need for upgraded library space.
2. Floor loading higher than residential uses.
3. HVAC loads and equipment costs higher than other uses.
4. No contribution to tax base and limited contribution to economic activity.

5. *Summary*

6. Due to the alternative initiative in the City combined with uncertain funding and market demand, it is not well aligned with the development goals stated in Part 1, and thus is not a short-listed option.

7. Center for the Arts

Advantages

1. Central location
2. Mix of performance spaces and smaller spaces.

Disadvantages

1. Performance spaces don't need the amount of windows.
2. Unclear if there is a need for this quantity of arts space, beyond performance venues.

3. Third floor auditorium space not conducive to modern theater.
4. Basement gym space is better but not ideal and not really optimal for performance,
5. Lobby and concession space locations not very clear.
6. Accessibility and egress will not be easy to work out due to floor level changes.
7. Most of the building (the ex-classrooms) are of little utility as performance space.
8. Limited on-site parking.

Alignment with Development Goals

1. Center for the arts would bring some increased economic activity, especially in the evenings.
2. Unclear if the exterior appearance of the building would need to be changed.
3. The memorial park and landscape will be minimally affected.
4. Significant private funding would be required. Challenging to align program spaces with the interior floor layouts.

Summary

Due to the uncertain funding and financing for this use, Center for the Arts is not well aligned with the development goals stated in Part 1, and thus is not a short-listed option.

8. Museum

Advantages

1. Central location
2. Building circulation suitable for traditional gallery space.
3. Low on-site parking needs.
4. Synergies with other mixed uses? (Restaurant, small retail, lecture hall?)
5. Mix of types, sizes of spaces good for museum use.

Disadvantages

1. Floor loading higher than other uses.
2. Is there a need for a museum, or a market for one?

Alignment with Development Goals

1. A successful museum of appropriate scale would bring some increased economic activity. Limited tax revenue potential.
2. The exterior appearance of the building could remain relatively unchanged
3. The memorial park and landscape could be used for outdoor program space.
4. Significant private funding (benefactor) would be required.

Summary

Due to the uncertain funding, revenue and demand, it is not well aligned with the development goals stated in Part 1, and thus is not a short-listed option.

9. School or Charter School

Advantages

1. Charter schools may have source of funds for purchase and rehabilitation.
2. Architecture is suitable to traditional education model often used by charter schools.

Disadvantages

1. Minimal contribution to tax base and economic activity.
2. No on-site parking for employees.
3. Depends on charter school success.
4. School design not current with educational philosophies.

Alignment with Development Goals

1. Minimal contribution to economic activity.
2. The exterior appearance of the building could remain relatively unchanged.
3. The memorial park and landscape might be used as potential outdoor recreating space for the school, which may cause objection.
4. Funding for renovations will be significant and would require significant investment by the Charter.

Summary

Charter school is not well aligned with the development goals stated in Part 1, and thus is not a short-listed option.

10. College or Adult Education

Advantages

1. Central location
2. The architecture is conducive to adult learning classrooms.
3. Renovation costs may be lower than for some other uses.
4. Could have synergies with other mixed uses.

Disadvantages

1. Limited market, and one which has not been identified to date.
2. HVAC costs could be higher than some other uses.
3. Limited contribution to tax base and economic activity.
4. The use would require more parking than other uses.

Alignment with Development Goals

1. A college or adult education center would bring some increased economic activity. Limited increase in tax base if operated as a non-profit.
2. Without further information about the type of educational program, it is unclear if the exterior appearance of the building would be affected.
3. The memorial park and landscape could be maintained, and might be an asset for this use if a “campus appearance” is desirable.
4. Renovation would require significant investment.

Summary

Due to the uncertain funding and market demand, it is not well aligned with the development goals stated in Part 1, and thus is not a short-listed option.

11. Municipal Office

Advantages

1. Control of the building remains with the City which ensures municipal control of the building and grounds.
2. Cost of office renovations will be lower than for residential, hotel or most other uses (open spaces, fewer partitions, less plumbing, finishes by tenants, open ceilings).

3. Can more readily accommodate other non-profit activities such as performing arts spaces, educational programs and after-hours activities.
4. Central location, adjacent to other municipal offices.
5. Proximity to City-owned parking garages.

Disadvantages

1. Cost of renovations will be borne by the City.
2. Does not increase real estate tax base.
3. Limited contribution to economic activity.
4. The floor plates, stair locations, circulation, lease depths, are not conducive to modern workplace design.
5. The window size, sill height and spacing are not ideal for office design.
6. Limited on-street parking.
7. HVAC and electrical system loads and infrastructure higher than for residential or hotel.
8. Floor live load higher than for residential.

Alignment with Development Goals

1. City employees and visitors will bring some increased economic activity (although some employees may be relocated from other downtown locations).
2. The exterior appearance of the building could remain relatively unchanged
3. The memorial park and landscape could be maintained and enhanced as a public amenity
4. Redevelopment costs would be borne by the city, but the city would also be the direct beneficiary of the investment. The property would not generate property taxes.
5. Many City residents and stakeholders may be in favor or the city retaining control over the historic property.

Summary

Assuming that the City has need for the office space, municipal office is viable and somewhat aligned with the development goals stated in Part 1, and thus is a short-listed option.

12. Mixed-Use

Advantages

1. A mixed-use approach can capture some advantages of different uses, while avoiding some of the disadvantages.
2. The zoning code encourages mixed-use development including a residential component in the district.
3. A performing arts venue can be included without allocating the entire building to this use, improving viability of this function.
4. The residential component can be incorporated without burdening it with the large non-residential component in the basement and ground floor.
5. A retail component and restaurant can be included to provide activity in manageable sizes and with reasonable investment.
6. The office component could be retained by the city for municipal or non-profit uses, or could be leased to commercial office uses.
7. Central location is advantageous to all of the proposed mixed uses.
8. Proximity to City-owned parking garages.
9. A private developer will undertake most of the development costs.
10. The city can mandate the mix of uses in the development RFP. The mixed-use approach can optimize the value of the various portions of the building to their best use.

Disadvantages

1. The City will need to take a more active role in defining the development goals.
2. To the extent that community space or municipal uses are included, the City may need to contribute financially.
3. HVAC and electrical system loads and infrastructure may be higher than some outer single uses.
4. Acoustical isolation of the various uses may be a challenge.
5. Presents a more complicated revenue model than residential or hotel to potential developers.

Alignment with Development Goals

1. Mixed uses may maximize the economic activity brought to the district by the redevelopment. There may be some synergy between the uses.
2. The exterior appearance of the building could remain relatively unchanged but signage for the retail, restaurant, and performing arts components will need to be added.
3. The memorial park and landscape could be maintained and enhanced as a public amenity.
4. Redevelopment costs would be born primarily by a private developer, but the city may need to contribute more than for some single-use options.
5. By providing a mix of uses popular with various constituencies, a mixed-use development may attract support from more residents than a single-use development.

Summary

Although it would require careful planning and implementation, a mixed-use development could be well aligned with the development goals stated in Part 1, and thus is a short-listed option.

3.4 SHORT-LISTED OPTIONS

The potential redevelopment options described in Part 3.3 were reduced to a short list of four options based on their general advantages and disadvantages with respect to the property and the location, and their best alignment with the redevelopment goals.

1. **Residential**: The Walker Building's downtown location and recent rezoning makes residential development a potential re-use opportunity. Many schools of this vintage have been successfully transformed into market rate residences that retain the character of their community and site. This option is in relatively good alignment with all five development goals.

2. **Hotel:** The historic architecture and downtown location make a boutique hotel a potential option. Such use would primarily service the local business and corporate market and could also support a restaurant function. The hotel industry is a strong asset in the city and this location would introduce business activity to the downtown location. This option is also in relatively good alignment with all five development goals.

3. **Mixed-Use:** A mixed-use option would most likely include a combination of residential with office, restaurant and possibly some retail functions. This option also has potential to include community functions such as a performing arts space. This option is also in relatively good alignment with all five development goals, although it may affect the exterior appearance more than the two preceding options, and also may require more initial or ongoing financial involvement by the city.

4. **Municipal Office:** SMMA identified options for the City to continue operation and ownership of the building. The building is not suited to many 21st century municipal uses such as contemporary educational or library design. The building could be renovated to provide a modern office environment for municipal and governmental functions although such re-use would result in limited increase in downtown economic activity. This option is in good alignment with three of the five redevelopment goals, falling short on minimizing and costs for the city and on promoting economic activity.

SHORT-LISTED REDEVELOPMENT CONCEPTS

4

4.1 DEVELOPMENT OPPORTUNITIES FOR RESIDENTIAL

The Walker Building offers a unique opportunity to provide a new residential community with architectural character and individualized dwelling units on a landscaped site in an urban setting. The building offers opportunities to provide the sort of shared amenity spaces such as common rooms, audio-visual rooms, fitness rooms, and the like, that are expected in contemporary market-rate residential developments, either as rental apartments or condominiums for sale.

Proposed Residential Development Concept

The following floor plan sketches and images depict a proposed residential redevelopment incorporating 15 one bedroom units and 17 two bedroom units, of a total of 32 units, on floors 1 through 3. The west half of the basement is used for shared amenity spaces. The east half of the basement is used for tenant storage and mechanical space.

The one bedroom units are approximately 750 Square feet. The two bedroom units are approximately 1,150 square feet. They are distributed as follows:

- First Floor: 1 Bdrm (5), 2 Bdrm (5), Total 10 units in 15,325 GSF (10,500 NSF excluding proposed lobby area)
- Second Floor: 1 Bdrm (5), 2 Bdrm (6), Total 11 units in 15,325 GSF (12,000 NSF)
- Third Floor: 1 Bdrm (5), 2 Bdrm (6), Total 11 units in 15,325 GSF (12,000 NSF)

This unit mix requires 33 parking spaces based on the parking ratios described in Part 3.1. (The zoning code allows spaces in municipal garages to be used, accompanied by a one-time payment of $10,000 per space.)

The amenity spaces at the west end of the basement include a Common Room, a media room (“home theater”) and a billiards/ping pong room. Alternatively, a fitness room could be provided. These types of amenities spaces are being provided in all current multi-family developments in the metro area. The lower floor level allows for elegant high ceilings in these rooms, and the lower exterior grade on this side allows for daylight to these spaces. The mezzanine in this area is removed to provide for higher ceilings, as this mezzanine space has low ceilings, is not easily accessible, and is of low utility.

- Wheelchair accessibility to this level from the west entrance is provided via ramps and a terraced lounge area that is adjacent to the Common Room. This west entrance can serve as a separate direct visitor entrance for functions being held in the amenities spaces.
- Wheelchair accessibility to his level from the rest of the building is provided by a half-story “jump elevator” from the upper basement level. Space for this elevator is taken by narrowing the existing steps, which are much wider than needed.

One of the building monumental entrances (the one in the east, 1870’s portion of the building) is shown as a new entrance. The exterior steps are replaced by sidewalk grading at 1:20 and a small entrance plaza to provide wheelchair accessibility to the

entrance. The existing handicapped accessible parking spaces will be maintained off Prospect Street, and the walkway will be sloped at no more than 1:20 to meet accessibility requirements without installing ramps. A site structure and outdoor seating is provided to enhance the entrance and provide for a shared outdoor space at the front yard for residents and visitors.

An elevator is provided to transition between the entrance floor level and the first floor level. Adjacent floor areas at the entrance level would be used for a lobby and mail room. Some floor re-framing would be required but should be easily achieved with wood framing. The elevator then extends to the upper levels and the basement.

The other existing monumental entrance is converted to a private patio for one of the dwelling units. This would retain the architecture of the building while providing a unique residential unit.

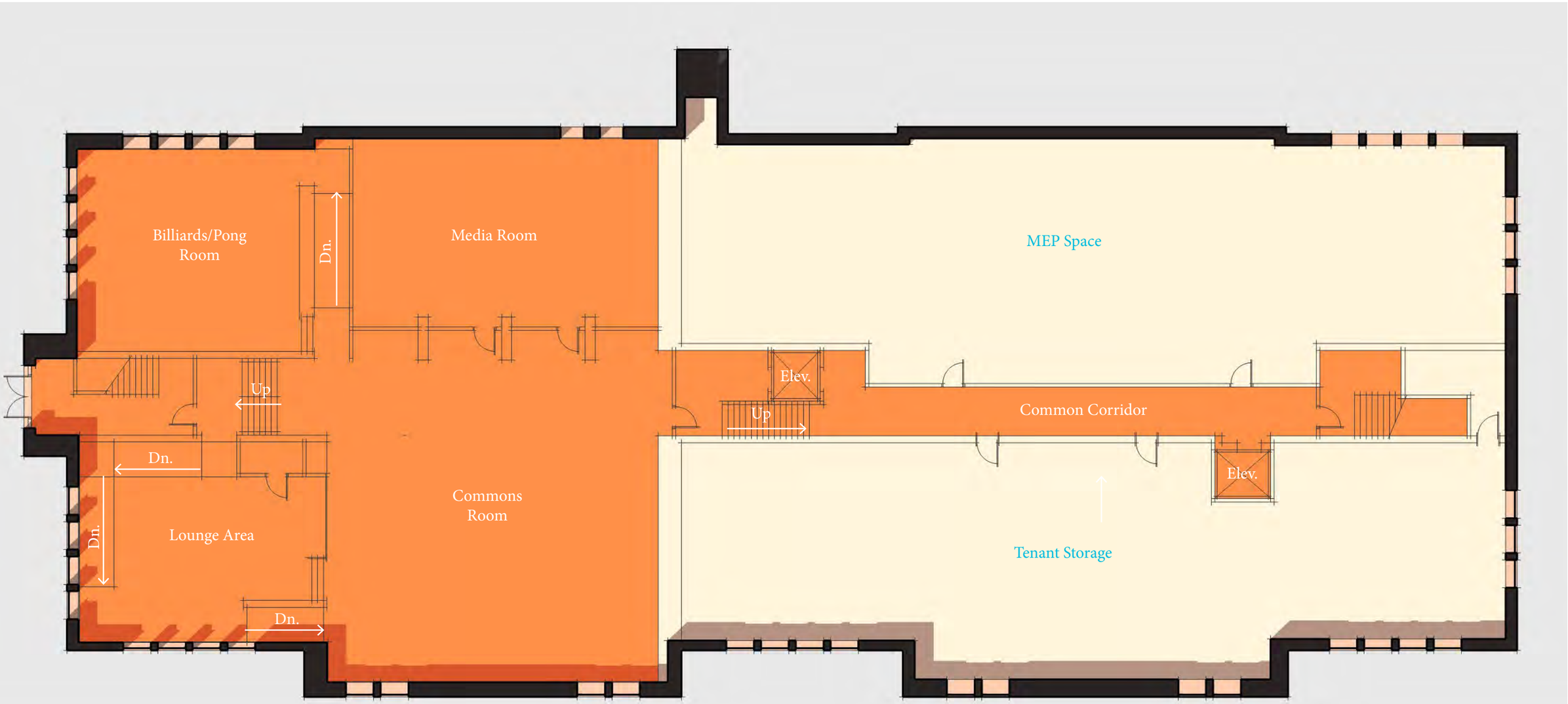
The central corridors, which are currently about 12 feet wide, are much wider than needed or appropriate. These are shown as being narrowed to about 6 feet. The remaining space can be used for duct shafts, riser closets, chases, and other mechanical and utility spaces.

The auditorium on the third floor currently has only two very small windows on the back. New windows are shown cut into the masonry walls, to provide fenestration at this location equivalent to the rest of the building.

The existing elevator is removed as it is inconveniently located, too small to meet current accessibility codes, too small to move residential furniture, and does not serve the basement.

Several variations on this conceptual design can be considered.

- The unit mix could be varied. For instance, studios could be substituted for some of the units, providing a larger number of smaller units in the building. The ultimate unit mix should be determined by the developer in conjunction with the design team and the real estate advisors. Changing the unit mix would involve changing the parking requirements.
- The west end of the basement could be used for additional dwelling units. However, today's market for both rentals and sales places a premium on amenity spaces, and dwelling units at this level would not be preferred units.
- SMMA studied an option where the elevator is located adjacent to the east stair, and a small 1-story entrance lobby addition is added to the west end of the building. This approach is viable but the main entrance is less obvious, corner dwelling units are compromised, and the monumental entrance architecture on the south side become superfluous.
- SMMA studied an option where the elevator is located adjacent to the west stair. This option is also viable but has the same negatives as the location at the east end. Additionally, there is less site area (yard depth) to work with on this side.



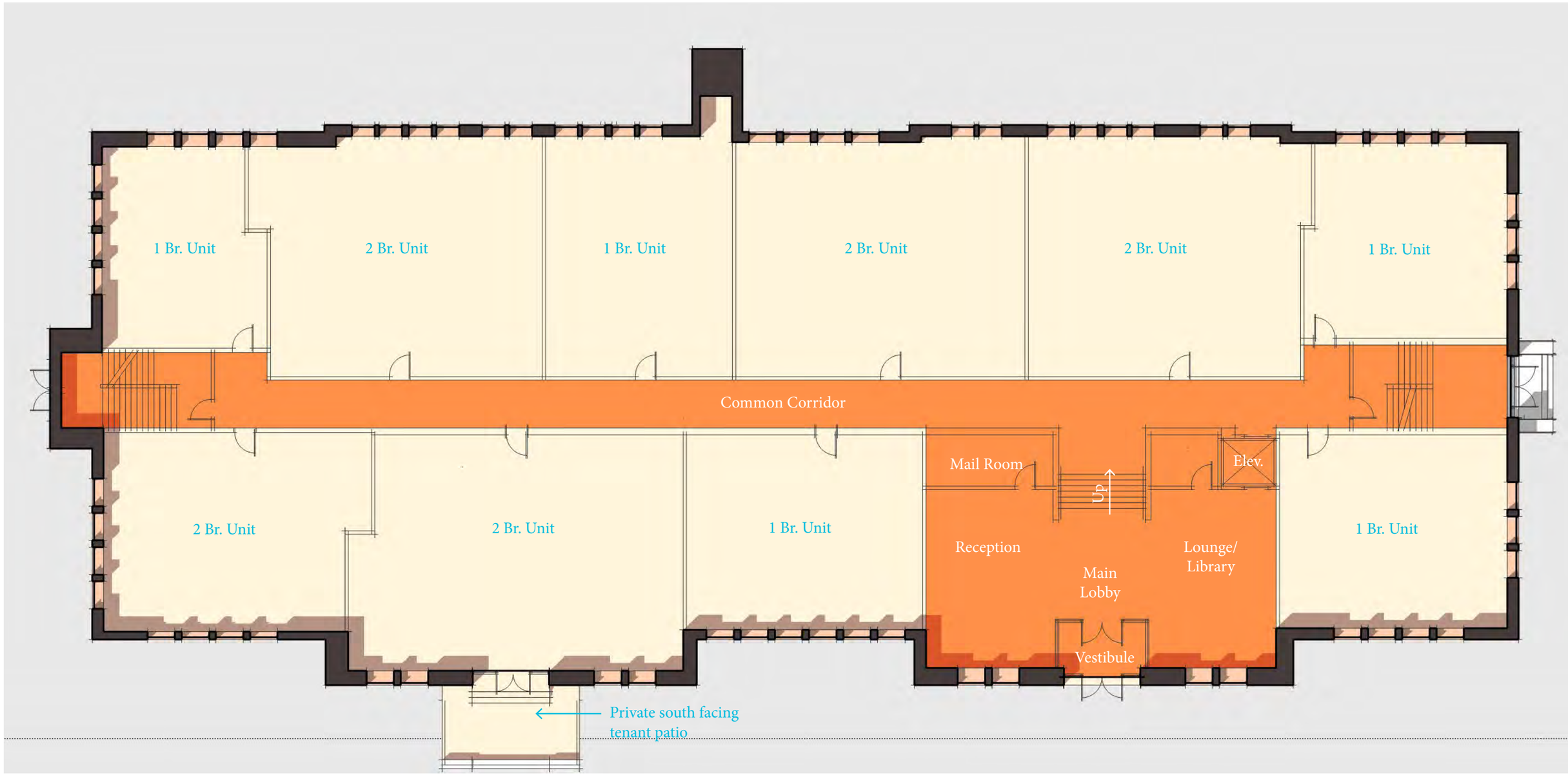
Proposed Basement Level Plan - Residence:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

9.21.16

SMMA



Proposed First Floor Plan - Residence:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

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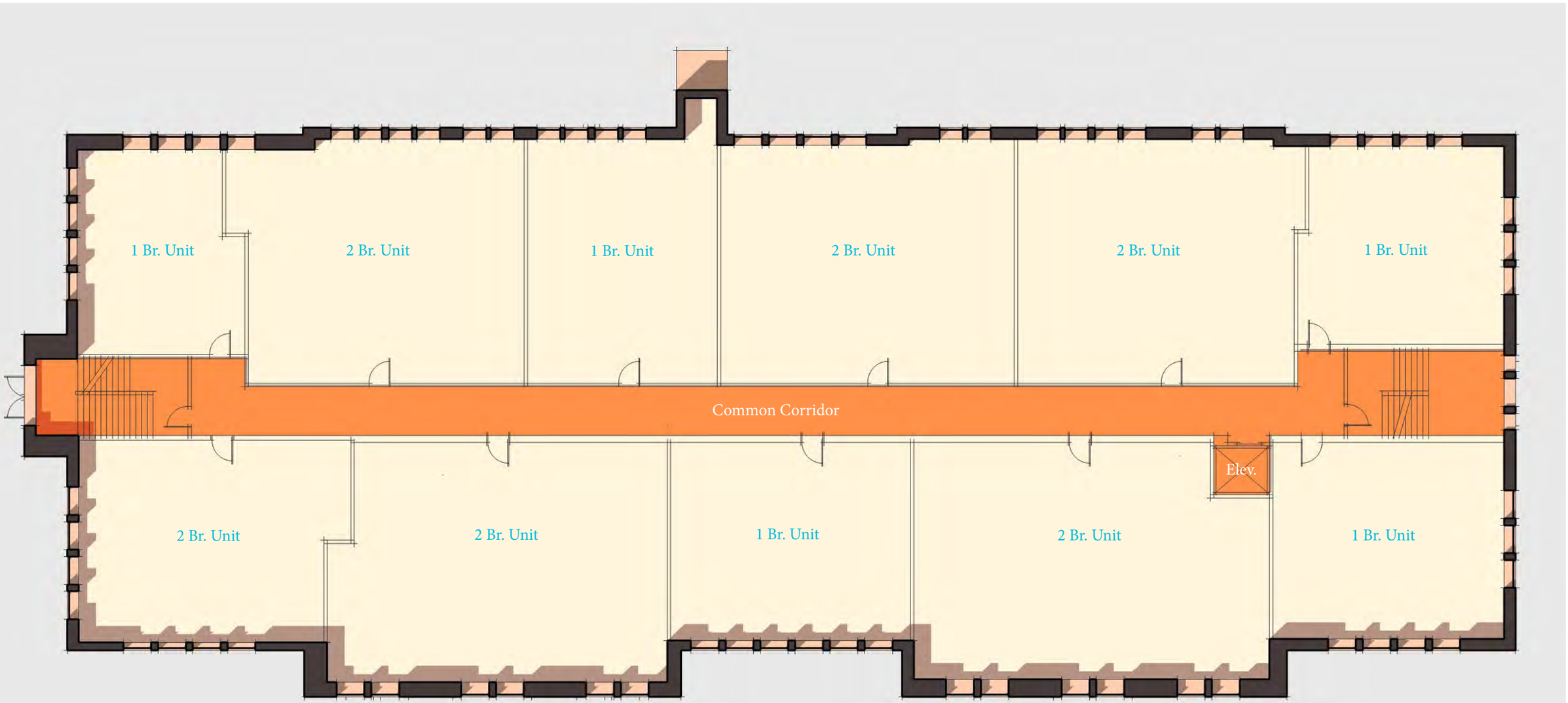
SMMA



Proposed Second Floor Plan - Residence:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

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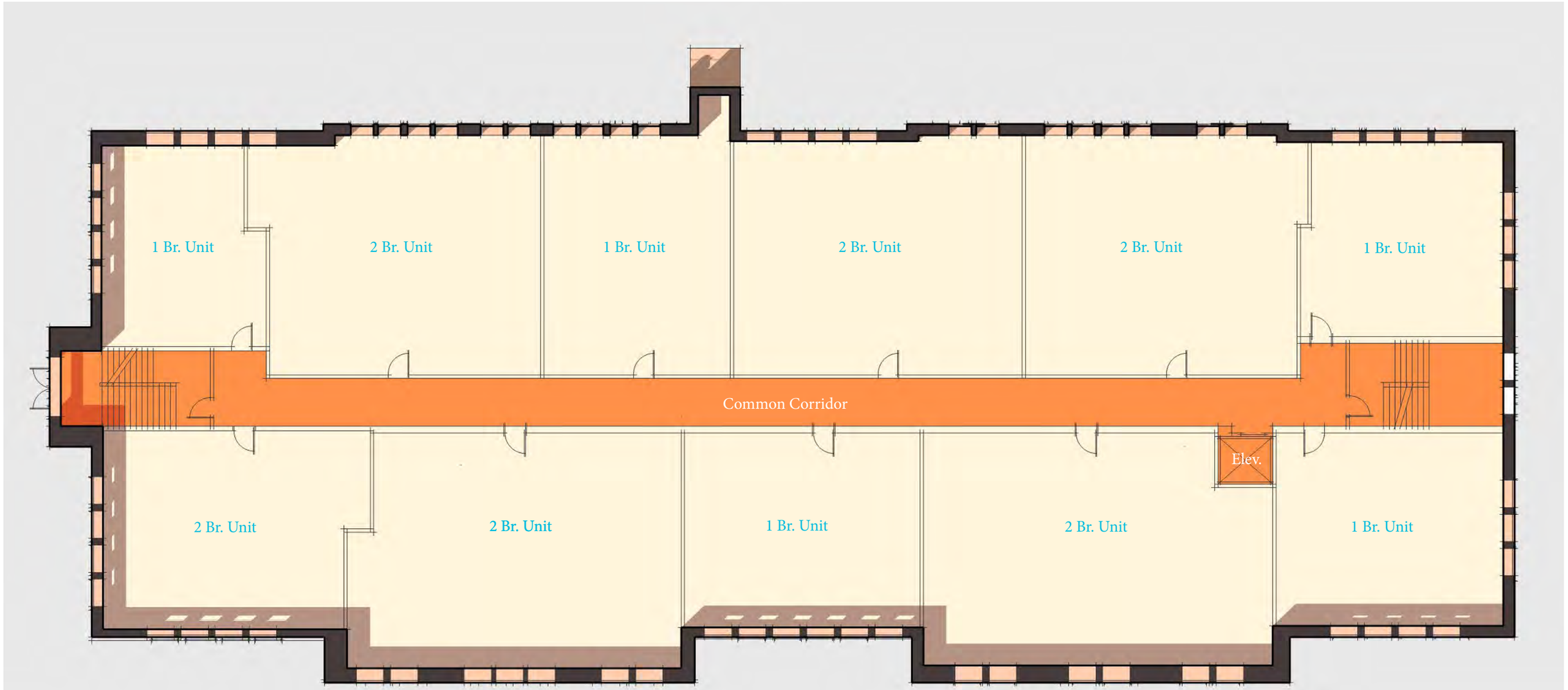
SMMA



Proposed Third Floor Plan - Residence:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

9.21.16

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Front Entry Option A, Residence:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

9.21.16

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Entry Perspective Option A, Residence:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

9.21.16

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Main Street Perspective Option A, Residence:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

9.21.16

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Front Elevation Option A, Residence:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

9.21.16

SMMA

4.2 DEVELOPMENT OPPORTUNITIES FOR HOTEL

The building has some potential as a boutique hotel. The downtown location, prominent site, and historic architecture are advantages. The conceptual layout is good, with a wide central corridor and stairs at both ends and light and views in all directions.

The site constraints however make access for arrival and drop off, and handicapped accessibility, a challenge. Parking requirements for hotel are greater than for residential. The guest room widths are hard to optimize due to exterior window spacing, and the guest room depth from outside wall to corridor is fairly deep. As a result the guest rooms are likely to be non-standard size and dimensions.

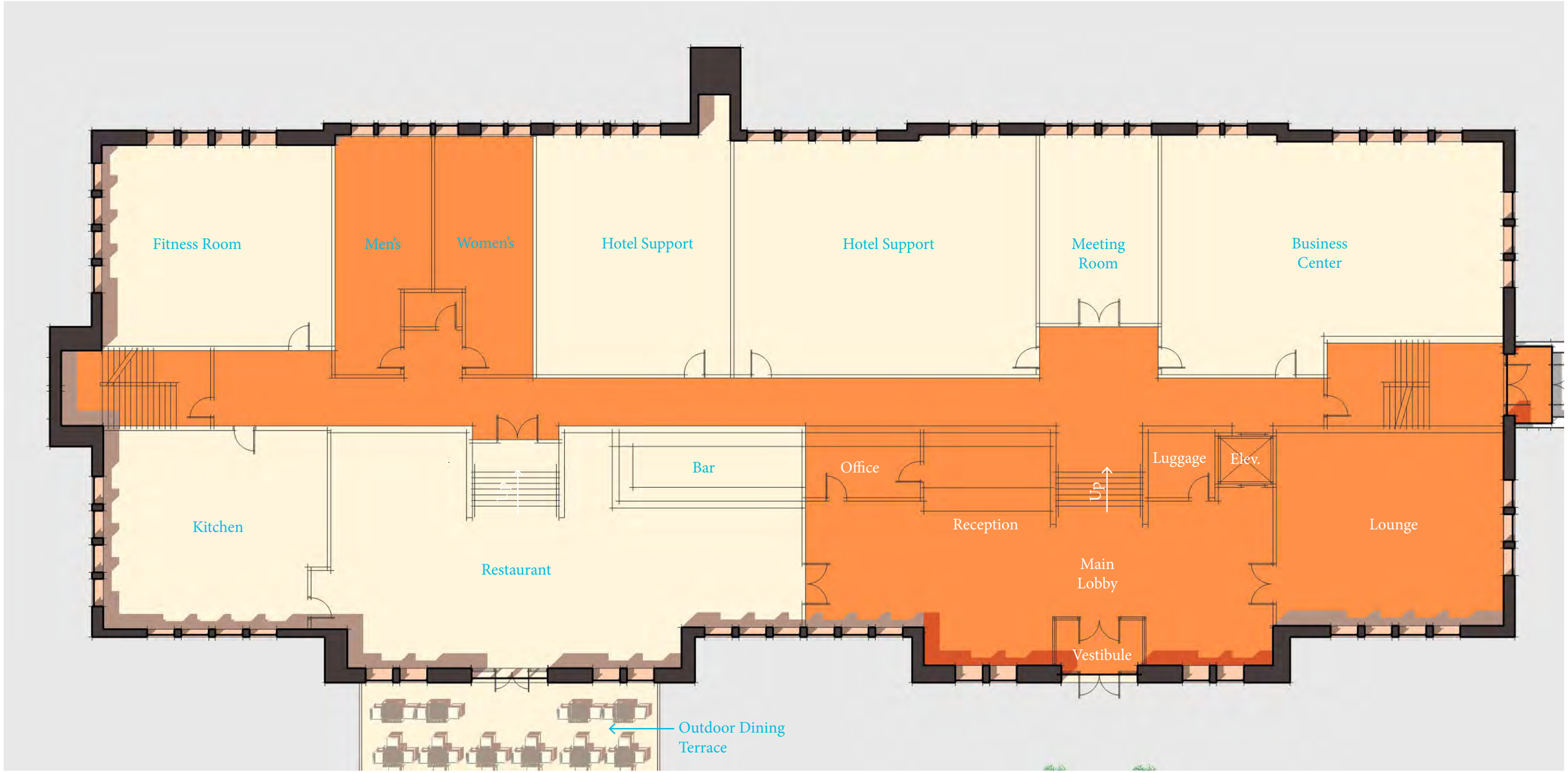
The first floor and basement are not as suitable for guest rooms, but present opportunities for hospitality spaces such as restaurants, meeting rooms, fitness room, and maybe an assembly space such as a performance venue. It is unlikely the hotel will be able to support these spaces economically based solely on guest demand and therefore they would need to serve the larger community in order to be viable.

Proposed Hotel Development Concept

The following floor plan sketches and images depict a proposed boutique hotel redevelopment with 44 keys (guest rooms), on floors 2 and 3. The typical guest room width is 16 feet. Depths are 25 feet or 30 feet. This provides guest rooms of 400 square feet and 480 square feet. Narrower rooms are difficult because of window placement – they would be typically 9 feet wide, approximately. Suites are shown at building corners.

This unit mix requires 33 parking spaces, with a maximum allowed of 44 spaces. The zoning code allows spaces in municipal garages to be used, accompanied by a one-time payment of $10,000 per space.

Accessory and ancillary spaces on the first floor include reception, reception lounge, business center, fitness room, and a restaurant/bar. The basement level could include a large meeting room in the “gymnasium” space, along with mechanical, storage, and other support spaces for the hotel and restaurant such as housekeeping rooms and prep kitchen.



Proposed First Floor Plan - Hotel:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

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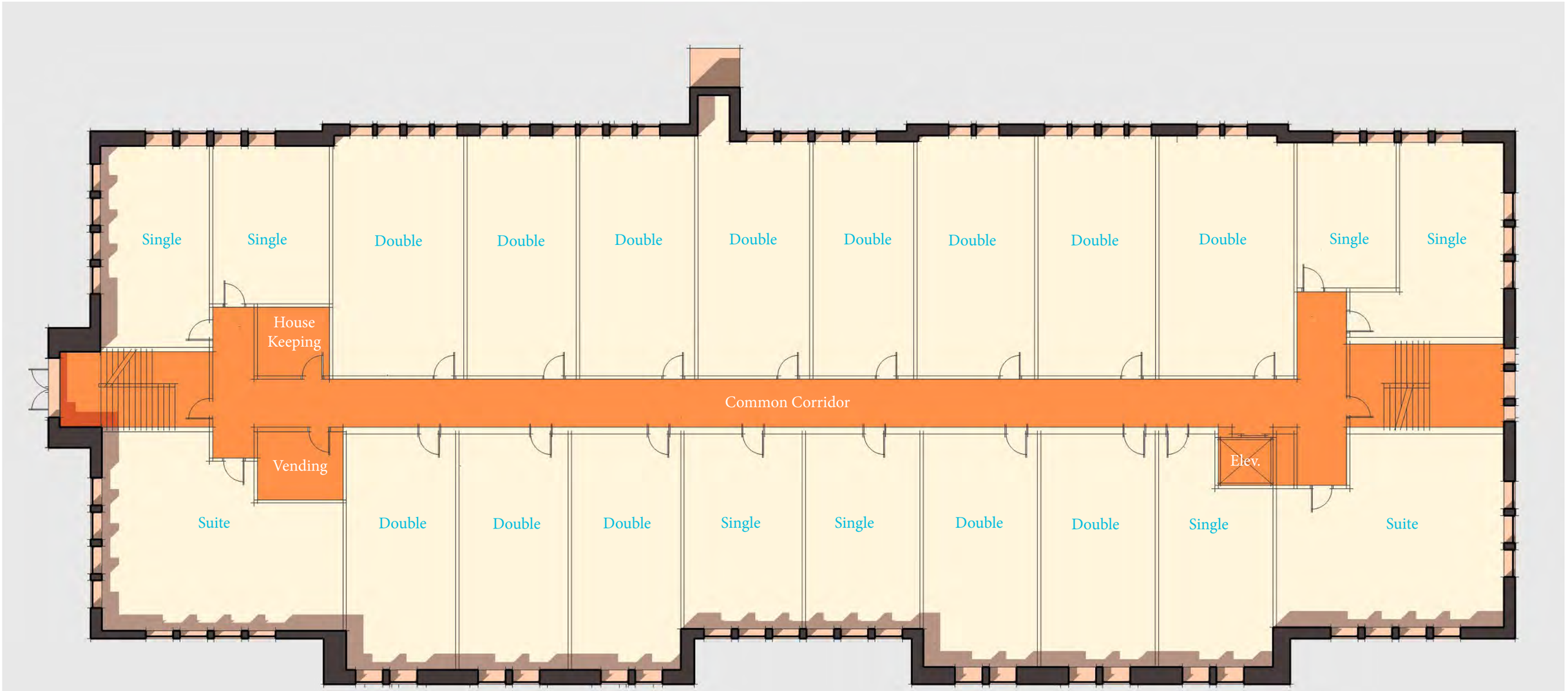
SMMA



Proposed Typical Floor Plan - Hotel:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

9.21.16

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Front Entry Option B, Hotel:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

9.21.16

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Entry Perspective Option B, Hotel:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

9.21.16

SMMA

Main Street Perspective Option B, Hotel:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

9.21.16

SMMA

Front Elevation Option B, Hotel:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

9.21.16

SMMA

4.3 DEVELOPMENT OPPORTUNITIES FOR MIXED-USE DEVELOPMENT

A mixed-use development presents an opportunity to realize the benefits of the residential redevelopment described above, while utilizing portions of the ground floor and basement for uses that will generate revenue, serve the larger community, and further increase economic activity.

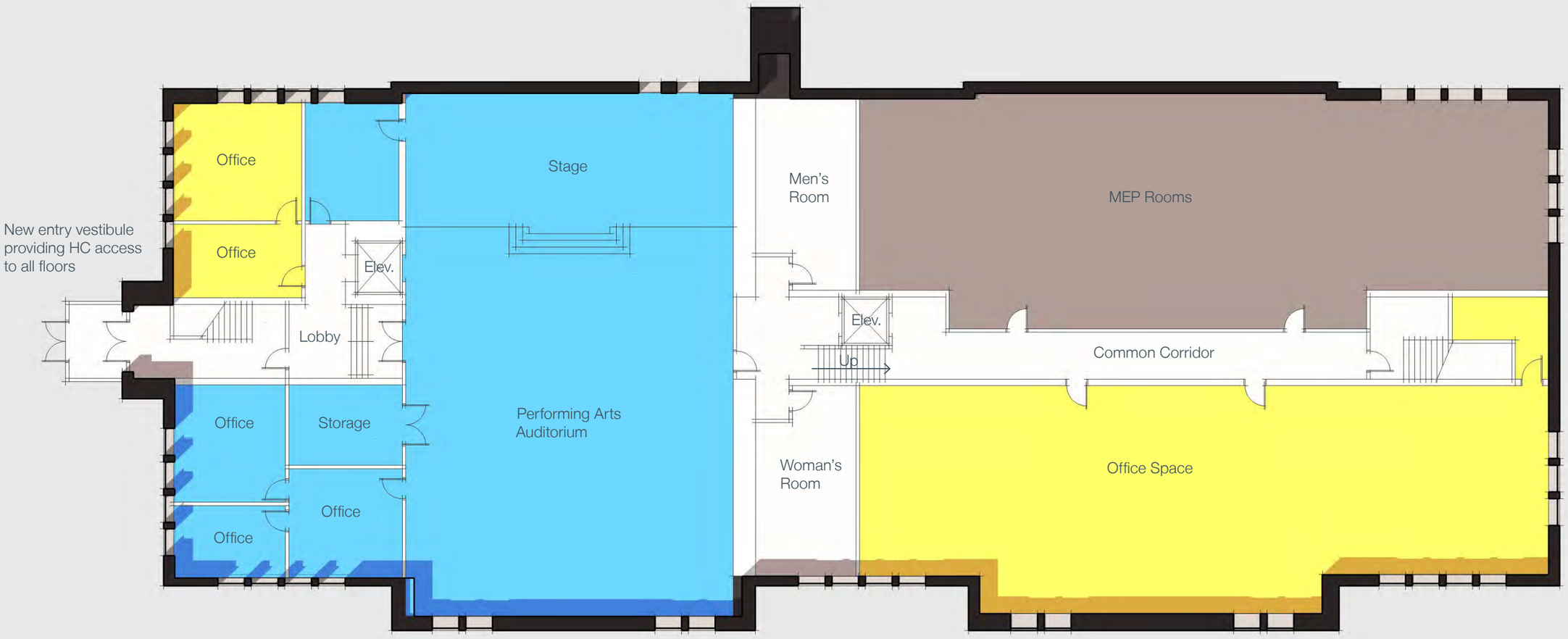
Proposed Mixed-use Concept

The following floor plan sketches and images depict a proposed mixed-use redevelopment with five 1-BR and six 2-BR units on each floor of the second and third floors, adding up to 10 1-BR and 12 2-BR units, or 22 total units. The residential component is approximately 42,000 gross SF including the amenity areas on the first floor.

The other uses depicted are a 4,000 SF restaurant on the first floor, 2,000 SF of retail on the first floor, a 5,000 SF performing arts center in the "gymnasium" space on the basement level, and 7,000 SF of office space distributed on the first floor and basement level.

This unit mix requires 23 parking spaces for the residential component. The zoning code allows spaces in municipal garages to be used, accompanied by a one-time payment of $10,000 per space. No spaces are required for the other uses.

Acoustical isolation of the various uses in this building will present a particular design and construction challenge for mixed-use development.



Mixed Use - Proposed Basement Level Plan:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

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SMMA

Mixed Use - Proposed First Floor Plan:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

1.13.17

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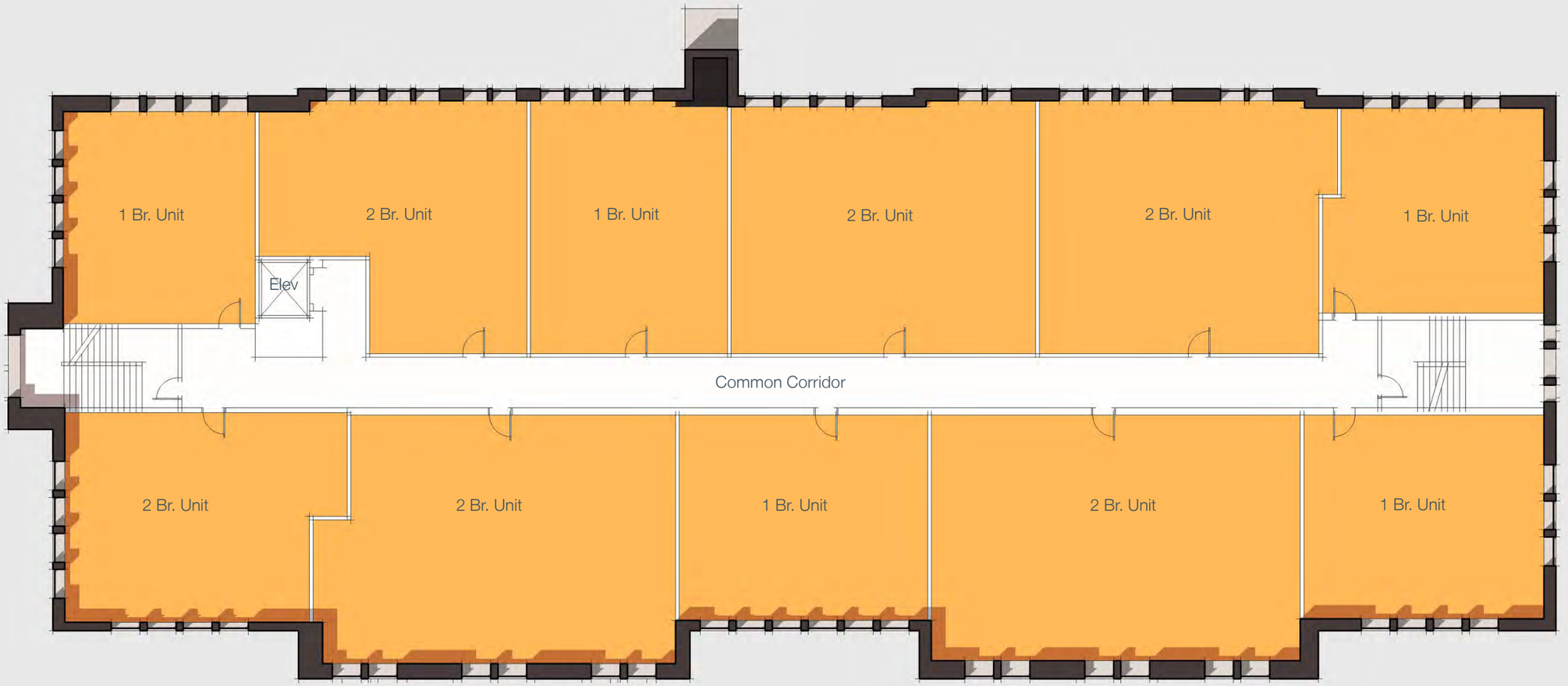

Mixed Use - Proposed Second Floor Plan:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

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Mixed Use - Proposed Third Floor Plan:

Redevelopment Study - Phase 1
Walker Building, 255 Main Street, Marlborough, MA 1.13.17

SMMA

Mixed Use - Perspective View:

Redevelopment Study - Phase 1
Walker Building, 255 Main Street, Marlborough, MA

1.13.17

SMMA

Mixed Use - View from Rawlins Avenue:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

1.13.17

SMMA

Mixed Use - View from Main Street

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

1.13.17

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4.4 DEVELOPMENT OPPORTUNITIES FOR MUNICIPAL OFFICE

A municipal office development presents an opportunity for the City to retain control over the building and property, to use it for public purposes, and to redevelop it a lower cost than the other options, although the development costs would be borne by the city.

Proposed Municipal Office Concept

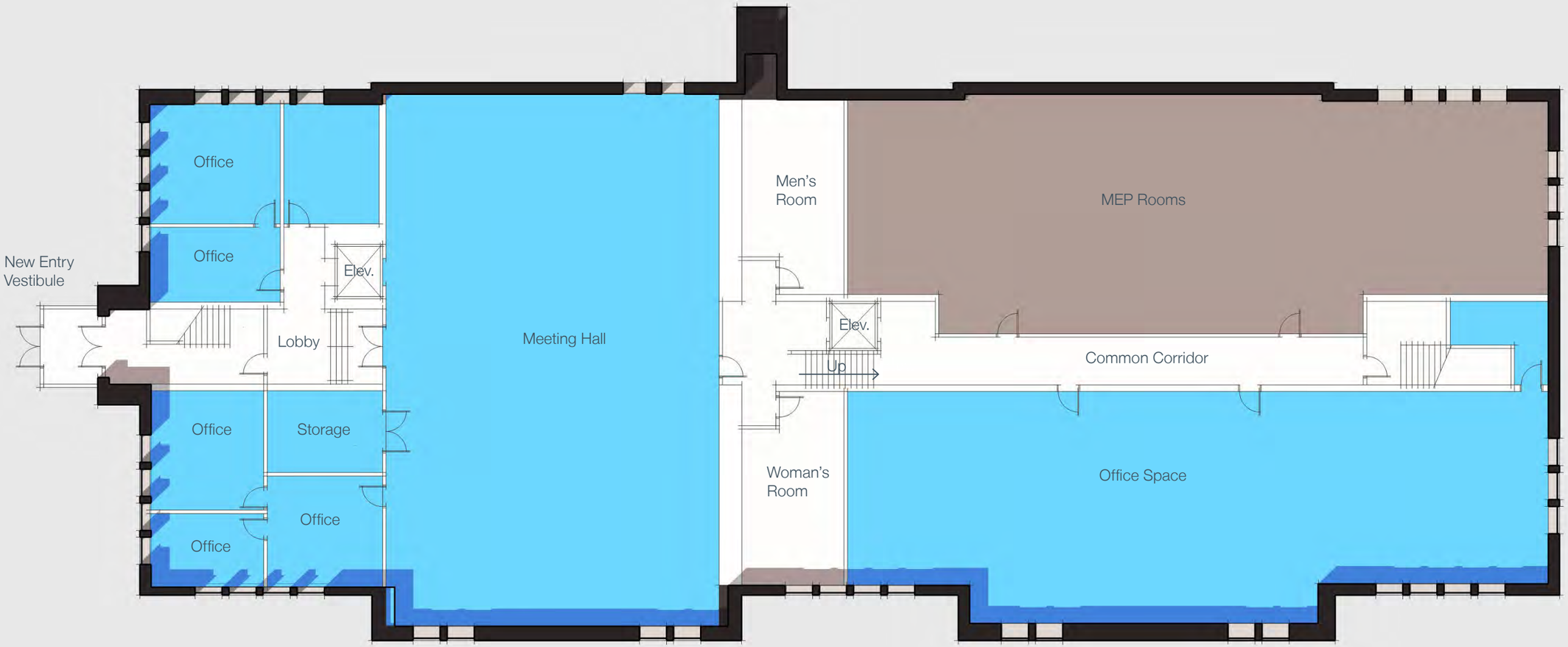
The following floor plan sketches and images depict a proposed municipal office redevelopment with office space on all four levels of the building, and including a meeting hall in the “gymnasium” space on the lower level. The total gross area of the office building would be approximately 60,000 SF.

The primary entrance would be at the west end of the building, accessed from Rawlins Avenue, where a new entry vestibule would need to be added to make the entry inviting, secure and accessible. A new elevator would be added to this end of the building to provide access to all floors. The existing entries at the first floor would remain as architectural features but not as public entrances as they are not accessible.

New accessible restroom facilities would be added on each floor to comply with plumbing code and accessibility code requirements.

The size and dimensions of the office spaces that can be provided lend themselves to independent small departmental office units, rather than larger open-office environments.

This development is not required by zoning to provide any parking spaces, although for practical purposes it may be desirable to provide parking to the extent possible.



Office Use Proposed Basement Level Plan:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

12.22.16

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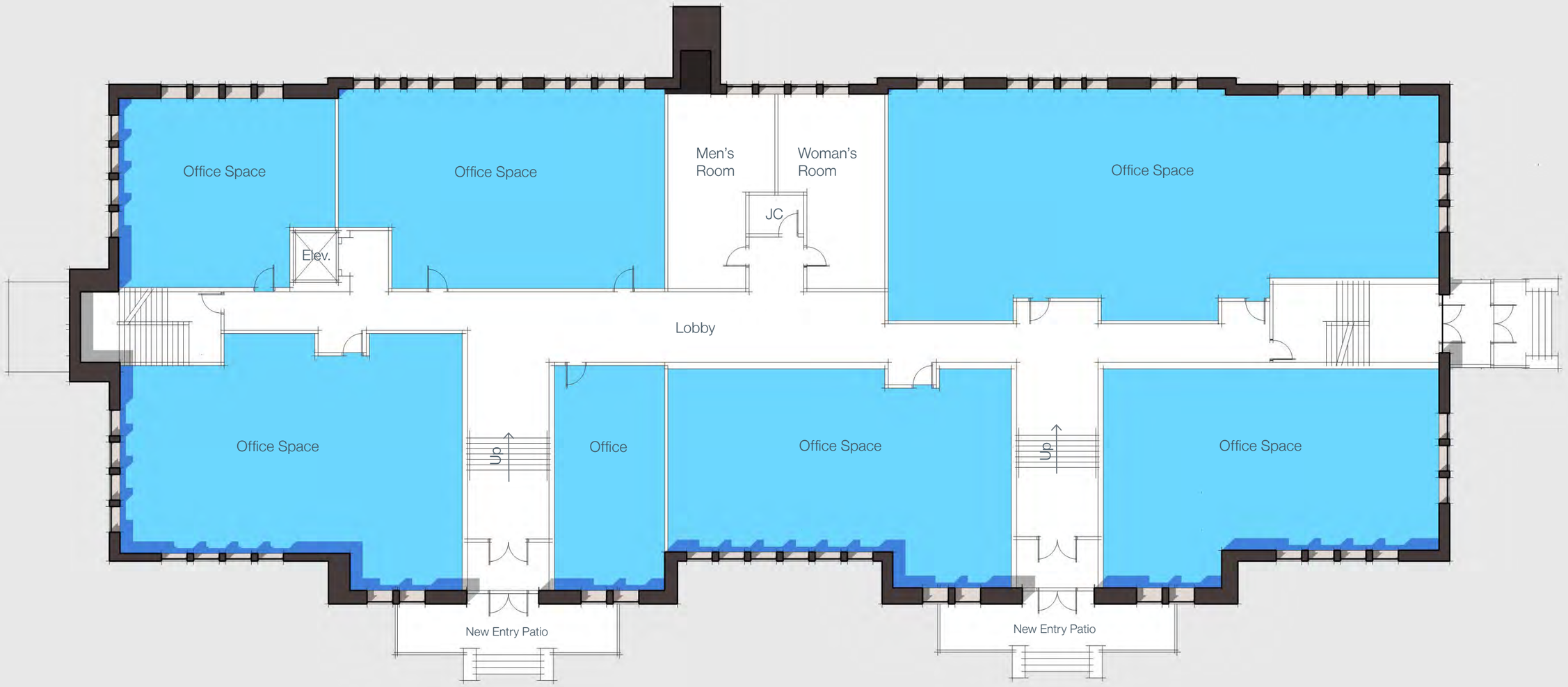

Office Use Proposed First Floor Plan:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

12.22.16

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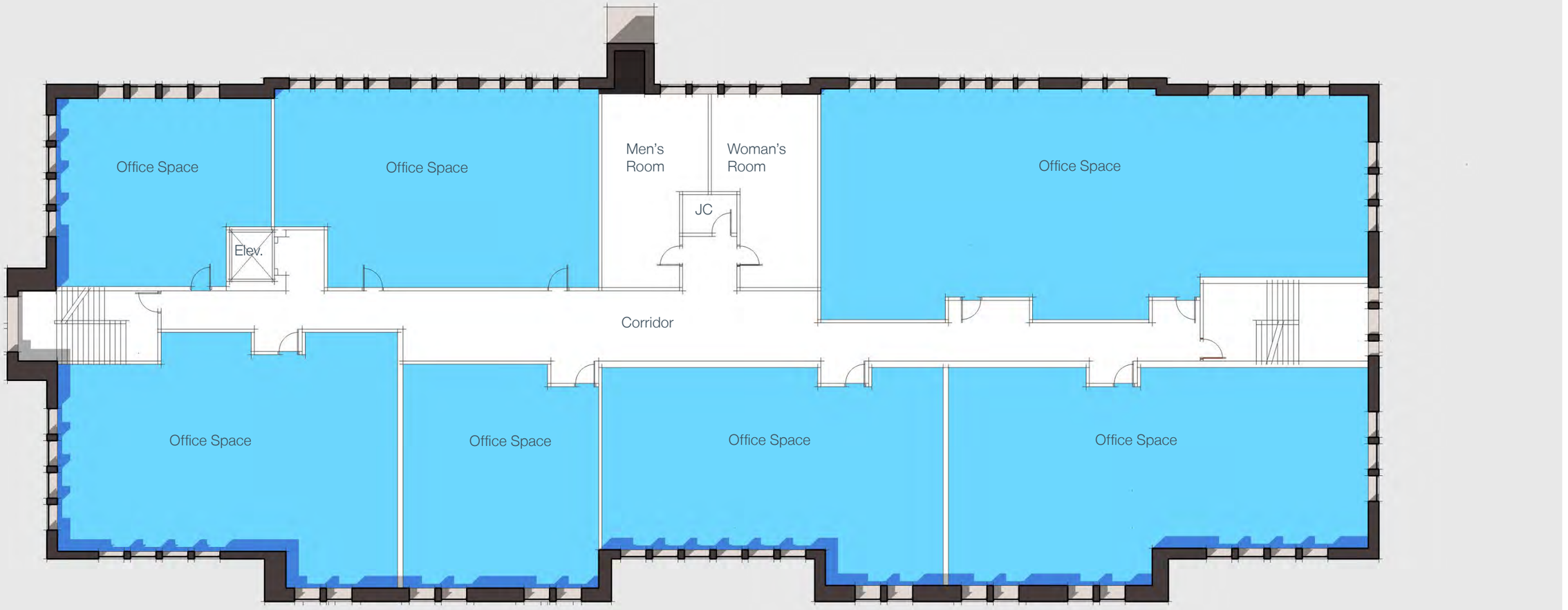

Office Use Proposed Second Floor Plan:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

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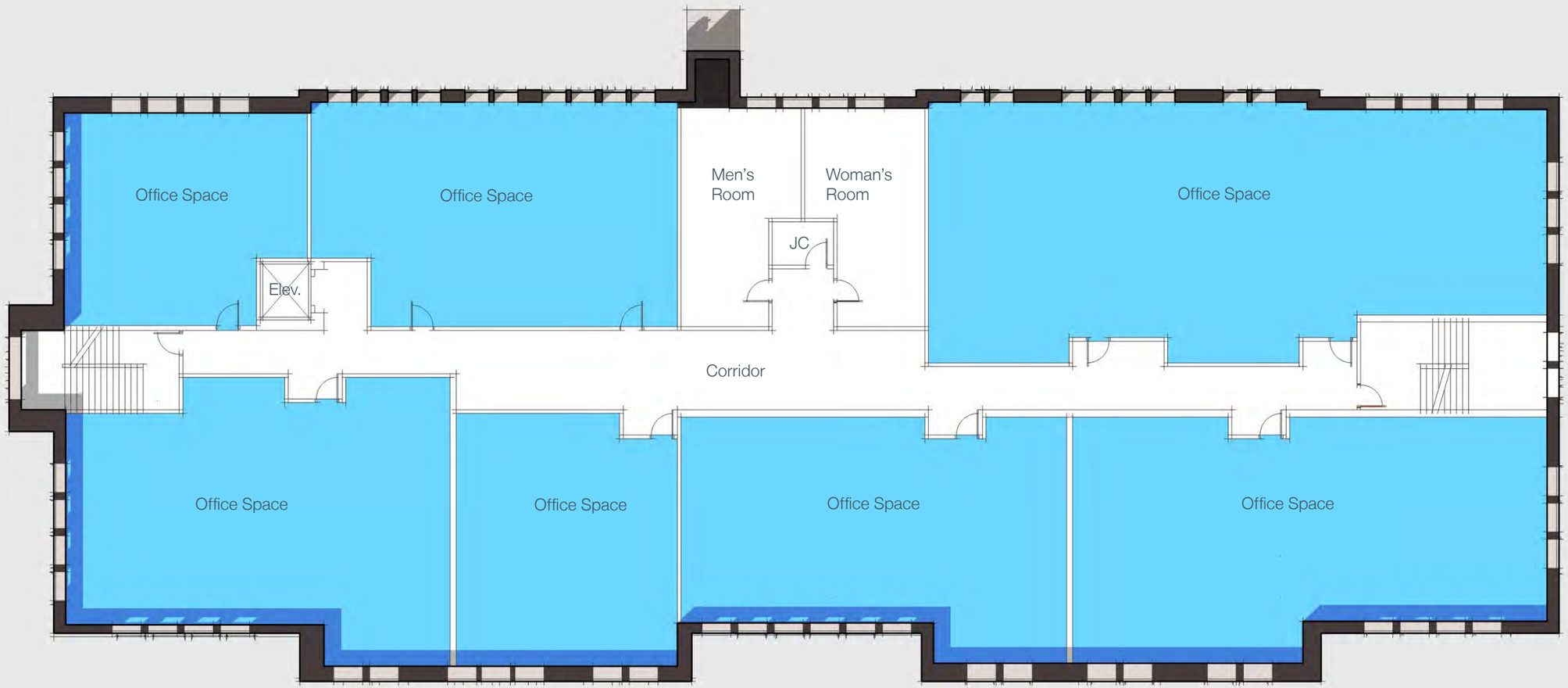

Office Use Proposed Third Floor Plan:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

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ENGINEERING SYSTEMS 5

ENGINEERING SYSTEMS

5.1 STRUCTURAL SYSTEMS

Existing Building Condition

The existing building was constructed in the late 1800's, with a large addition on the western half of building (including basement gymnasium) in the 1920's.

The building structure consists of multi-wythe brick masonry walls that support wood joists and flooring. Structural steel trusses in the attic frame the pitched roof.

Most of the structure (brick walls, wood joists) are concealed, but that which is visible appears to be in satisfactory condition. The building structure appears to be well maintained.

A visual walk through the building revealed that it does not appear to require any immediate remedial structural work. However, depending on the extent and type of any future renovation, the building structure may require some corresponding structural upgrades. Any of this remedial work would occur in conjunction with the renovation work.

Code Considerations

The International Existing Building Code (IEBC) outlines possible scenarios that would trigger structural upgrades. A full building renovation would be classified as a Level 3 Alteration by the IEBC. A Level 3 Alteration is that in which the total "work area" of the building exceeds 50% of the total building area.

Gravity Loads

An increase in stresses caused by additional (or redistribution of) gravity loads would require a structural analysis and likely reinforcing of the existing gravity force resisting system. For the proposed reuse options of this building; upgrades may be required as a result of some of the following items:

- Relocation of gravity support walls increasing the span length of existing floor framing members. This scenario would likely occur if interior load bearing walls are relocated, specifically the central corridor walls.
- Increase of live load based on use per ASCE 7-10 (table 4-1). The existing use is office space with a live load requirement of 50 psf (not including partitions) in office areas and 80 psf (upper floors) to 100 psf (1st floor) in corridors. The original use was a school, which has a live load requirement of 40 psf in classroom spaces and the same loading in corridors as office use. The proposed use live loading scenarios are as follows:
    - Residential: Floor LL = 40 psf in rooms and corridors leading to them; 100 psf in common areas and corridors leading to them.
    - Retail: Floor LL = 100 psf on 1st floor; 80 psf on all other floors.
    - Hotel: Floor LL = Loading is same as Residential.

  - Office: Floor LL = 50 psf in offices; 100 psf in 1st floor corridors; 80 psf in corridors above 1st floor.

- Increase in dead loads on existing framing members. Added dead load may be introduced by: new wall partitions, new HVAC equipment and distribution systems, heavier flooring (including leveling products), heavier roofing material, etc.

For all four potential design options, some increase in gravity loading will likely occur and require local reinforcing. Most of the reinforcing would likely take place on the first floor where we expect the live load requirements to be higher for such uses as: lobbies, hallways, common spaces, retail spaces, etc. The live load demand on upper floors will not increase for all options, with the exception of retail. Assuming that the retail option would be on the first floor only as part of a mixed-use renovation (with office or residential above), only the first floor would require reinforcing. Local reinforcing for increases in dead load will be required for other items discussed previously.

Lateral Loads

The IEBC also outlines requirements for the existing building to resist wind and seismic loads (lateral forces) as well as addressing any seismic hazards that may exist. Included in these requirements is a complete structural evaluation and analysis that establishes the structural adequacy of the proposed altered structure, compared to the original unaltered state of the structure. This requirement is intended to evaluate the effects of the alteration on the building's ability to resist all, gravity, wind, and seismic loads that are prescribed in the code. For all of the proposed building uses some or all of the following items would require analysis and likely structural reinforcing of the existing lateral force resisting system:

- Removal or relocation of existing shear walls. Based on the age of this building, there was likely no purposeful design of the lateral force resisting systems at the time of original construction. Based on the extensive amount of window openings in the exterior brick façade; these walls have limited structural capacity to resist wind and earthquake loads. The lateral stability of the existing structure likely comes from interior partition and bearing walls, in addition to the exterior walls. Any renovation that requires reconfiguration of interior shear walls will trigger a lateral analysis and likely an upgrade to the existing lateral force resisting system. All of the proposed uses are expected to include reconfiguration of existing walls on all floors.
- Additional openings placed in exterior and interior shear walls. These openings include new window, door, or louver type openings in the exterior façade. Also included in this category would be new openings in interior shear walls. Upon further investigation, some interior partition walls may be proven to not be part of the lateral force resisting system, therefore; not triggering a lateral analysis and upgrade, if modified.

- Additions to the existing building. Should the proposed use include additions to the existing footprint; the added seismic mass to existing lateral force resisting elements will need to be evaluated.
- Extensive HVAC equipment upgrades. The cumulative weight of added HVAC equipment will increase the seismic mass of the building and may require upgrades to the lateral force resisting system.

Structural Evaluation

A structural evaluation typically occurs in conjunction with the renovation design. Often, selective demolition of portions of the building may be performed in order accurately complete the evaluation. Examples of selective demolition may include:

- Removing portions of the ceiling to review the structural connections of the floor structure to the load-bearing masonry walls, and to measure and evaluate the load capacity of the wood joists.
- Removing portions of wall finishes to accurately map out the locations and dimensions of brick masonry walls.
- Taking samples of the wood (or testing on site) to determine its species and grade in order to confirm its load capacity.

Cutting sections out of the brick walls and transporting to a laboratory for load testing.

5.2 PLUMBING SYSTEMS

A new 4-inch water service will be required from the municipal service in the street to the basement mechanical room. A reduced pressure backflow preventer and water meter will be installed at the point of entry to the building. Note: a hydrant flow test will be required to confirm the available pressure to the building, however, for the purposes of this narrative, we will assume that the pressure is suitable without the use of booster pumps for domestic and fire protection services.

Cold water distribution will be provided via a horizontal main in the basement supporting vertical risers serving stacked residential units, above.

Domestic hot water can be provided either as a central system for most re-use options or as individual systems for certain residential uses. A central system would include two (2) gas-fired hot water heaters, each sized for 65% of the load, located in the basement level mechanical room, each direct-vented for combustion and exhaust. This system would include a pumped hot water recirculation system throughout.

A new natural gas system will be required to serve all gas-fired equipment and any gas-fired appliances.

A new 6-inch sanitary drainage and vent system will be required throughout the building, connecting to the existing site sanitary system.

Any areaways will require areaway drains to a new storm drainage system which would connect to the street or existing site storm drainage system.

5.3 FIRE PROTECTION SYSTEMS

A new 6-inch dedicated water service will be required from the municipal service in the street to the basement mechanical room. This service will be configured with all NFPA-required specialties for Siamese connection, fire alarm interface and distribution throughout the building for coverage in compliance with NFPA-13 as a wet system. A standpipe with hose stations will be located within each stairwell.

5.4 MECHANICAL SYSTEMS

A new Heating Ventilating and Air Conditioning system will be provided to support the needs of the building for the four short-listed options namely: Residential, Hotel, Mixed Use and Municipal Office.

The following table summarizes the Heating, Ventilating and Air Conditioning capacity requirements sorted according to the proposed development occupancy options for the building:

HVAC System Requirements by Option				
HVAC System	Proposed Occupancy			
	Residential	Hotel	Mixed-Use	Office
Heating	2,100 MBH	2,500 MBH	3,000 MBH	2,400 MBH
Ventilation	3,000 CFM	8,000 CFM	11,000 CFM	6,000 CFM
Air Conditioning	115 Tons	135 Tons	210 Tons	175 Tons

System Options: Summarized below are representative system options that would be viable for the proposed uses. Note that the Office option could simply be an adaptation of the existing installations in their present state with selected modifications.

1. 4-Pipe Fan Coil: This system is based on the use of a hot water plant and chilled water plant, each with distribution supply and return piping throughout the building to fan coil units serving dwelling units. Fan coil units can be either concealed, horizontal ducted units or vertical, enclosed unducted units.
    - Pros: Good quality system, reasonably quiet and temperature control is very good, very good longevity, well known to the industry
    - Cons: Installed cost is higher than most alternatives, need to have space on grade or roof for air cooled chiller(s)

2. Water Source Heat Pump – This system uses a hot water plant and an evaporative cooling tower to provide heat addition and heat rejection to a common distribution loop that is distributed throughout the building to heat pump units serving occupied spaces. The heat pumps can either be concealed, horizontal ducted units or vertical, enclosed unducted units.
   - Pros: Good quality system; temperature control is good; well known to the industry; competitive first cost
   - Cons: Need to have space on grade or roof cooling tower, cooling tower can adversely impact condition of adjacent structures over time; heat pumps within occupied units are noisier than alternative systems; heat pump compressors have a shorter life than alternative system equipment

3. Variable Refrigerant Flow Heat Pump: This system uses a system of common outdoor condensing units to distribute refrigerant throughout the building to refrigerant-based fan coil units serving dwelling units. Fan coils can either be concealed, horizontal ducted units; horizontal, recessed unducted units; wall-mounted exposed units; or floor-standing, exposed units.
   - Pros: Good quality system, very good energy efficiency, extensive range of options for indoor cooling units, reasonably quiet and temperature control is very good; outdoor condensing units are smaller in footprint and easier to accommodate; provides most or all of the heating capacity needed (depending on building envelope insulating value), which allows for a significant reduction in hot water boiler requirement
   - Cons: Installed cost is generally good but system is still somewhat new to the market and pricing can vary

5.5 ELECTRICAL SYSTEMS

Electrical Service and Power Distribution

Existing electrical service (rated 800 Amp at 120/208 volt 3 phase) has a capacity to support 230 kVA load that is not sufficient for the proposed residential, hotel, mixed-use or municipal office renovations.

Power Distribution for the **Residential Option**:

New 120/208 volt 3 phase service will be provided from the National Grid outdoor pad-mounted transformer. New 1600 Amp 120/208 volt 3 phase main switchboard will be located in the basement electrical room.

The circuit breakers in the main switchboard will be provided to serve:
- Three (3) residential metering centers;
- A 225 Amp 120/208 volt 3 phase panel in the main electrical room for the basement lights and receptacles, exterior lighting and for the common areas (lobby, corridors) lights and receptacle loads;

- Building elevators;
- Panels for a central heating/cooling plant, building ventilation and exhaust equipment.

One 400 Amp, 120/208 volt 3 phase residential metering center will be provided in the electrical closet on the floors 1 to 3. Each metering center will serve all residential units on the associated floor and will include the required quantity of the 100 Amp 2 pole circuit breakers and the utility energy meters. The 125 Amp breakers will be provided for the larger size residential units.

A 100 Amp (or 125 Amp for the larger units), 120/208 volt 1 phase load center will be provided in the each unit for wiring of lights, local heating/cooling equipment, appliances and receptacles. The load centers will also power the electrical water heaters in the units if this option is selected.

Power Distribution for the **Hotel Option**:

New 277/480 volt 3 phase service will be provided from the National Grid outdoor pad-mounted transformer. New 800 Amp 277/480 volt 3 phase main switchboard will be located in the basement electrical room.

The circuit breakers in the main switchboard will be provided to serve:
- A set of the electrical distribution equipment on the floors 1 to 3. Each set will include a 225 Amp 277/480 volt 3 phase power/lighting panel, a 45 kVA dry-type transformer and a 150 Amp 120/208 volt 3 phase panel;
- One 100 Amp 277/480 volt 3 phase power/lighting panel, a 45 kVA dry-type transformer and a 150 Amp 120/208 volt 3 phase panel for a restaurant;
- One 100 Amp 277/480 volt 3 phase power/lighting panel, a 30 kVA dry-type transformer and a 100 Amp 120/208 volt 3 phase panel to serve the basement loads and exterior lighting;
- Building elevators;

Panels in the basement mechanical room and in the top floor electrical closet to serve a central heating/cooling plant, building ventilation and exhaust equipment.

Power Distribution for the **Mixed-Use Option**:

A new 120/208 volt 3 phase service will be provided from the National Grid outdoor pad-mounted transformer. New 2000 Amp 120/208 volt 3 phase main switchboard will be located in the basement electrical room.

The circuit breakers in the main switchboard will be provided to serve:
- Two (2) residential metering centers on the 2d and 3d floors;
- Two 225 Amp 120/208 volt 3 phase panels for lighting and receptacle circuits in the tenant spaces in the basement and on the 1st floor;
- One 100 Amp panel for the auditorium in the basement;
- Three (3) retail and (1) restaurant areas with separate energy use metering for each space;

- One 100 Amp 120/208 volt 3 phase panel in the main electrical room for the lights and receptacles in the building common areas (lobby, corridors) and for exterior lighting;
- Building elevators;
- Panels in the basement mechanical room and in the top floor electrical closet for the common area loads such a central heating/cooling plant, building ventilation and exhaust equipment.

A 400 Amp, 120/208 volt 3 phase residential metering center will be provided in the electrical closets on the 2d and 3d floors. Each metering center will serve all residential units on the associated floor and will include the required quantity of the 100 Amp 2 pole circuit breakers and the utility energy meters. The 125 Amp breakers will be provided for the larger size residential units.

A 100 Amp (or 125 Amp for the larger units), 120/208 volt 1 phase load center will be provided in the each residential unit for wiring of lights, local heating/cooling equipment, appliances and receptacles. The load centers will also power the electrical water heaters in the units if this option is selected.

Power Distribution for **Municipal Office** Option:

New 277/480 volt 3 phase service will be provided from the National Grid outdoor pad-mounted transformer. New 1000 Amp 277/480 volt 3 phase main switchboard will be located in the basement electrical room.

The circuit breakers in the main switchboard will be provided to serve:
- A set of the electrical distribution equipment on the floors 1 to 3. Each set will include a 225 Amp 277/480 volt 3 phase power/lighting panel, a 45 kVA dry-type transformer and a 150 Amp 120/208 volt 3 phase panel;
- One 100 Amp 277/480 volt 3 phase power/lighting panel, a 30 kVA dry-type transformer and a 100 Amp 120/208 volt 3 phase panel to serve the basement offices and a meeting room, and exterior lighting;
- Building elevators;
- Panels in the basement mechanical room and in the top floor electrical closet to serve a central heating/cooling plant, building ventilation and exhaust equipment.

Fire Alarm

New building addressable type fire alarm system will be provided in compliance with the Building Code and NFPA-72. The system will include the fire alarm control panel, alarm initiating and signaling devices, a remote annunciator in the lobby and a master box for alarm transmitting to the local Fire Department. A fire alarm exterior beacon will be located at the building main entrance.

The fire alarm initiating devices in the common areas - manual pull stations, the smoke detectors in the corridors and in the storage rooms, and the flow switches of the sprinkler system will initiate the building general alarm signal. The smoke detectors in the elevator lobbies and in the elevator machine room will also initiate

the elevators recall sequence. Manual pull stations will be installed at the all building exterior egress doors and at the egress stairs on the all floors.

The fire alarm notification devices- horns and strobes shall be provided in the all occupied common areas - lobbies, corridors, and in the areas such as the fitness and media rooms, business center, meeting rooms, lounge, etc.

The duct type smoke detectors will be installed for the building air handling units where the detectors are required by the Code.

Fire alarm for the **Residential** option:
- residential units will have a single station smoke detectors with an integral horn. The local alarm only will be initiated upon operation of the detectors in the residential units. The detectors shall be installed in the bedrooms and outside of every bedroom.
- fire alarm strobes will be provided in the residential units designated for the hearing impaired.

Fire alarm for the **Hotel** option:
- hotel rooms will have a single station smoke detectors with an integral horn. The local alarm only will be initiated upon operation of this detector.
- fire alarm strobes will be provided in the hotel rooms designated for the hearing impaired.
- fire alarm strobes will be located in the all public restrooms.
- fire alarm horn/strobes will be installed in the kitchen and in the restaurant. Kitchen hood fire suppression system will be connected to the building fire alarm panel.

Fire alarm for the **Mixed-Use** option:
- residential units will have a single station smoke detectors with an integral horn. The local alarm only will be initiated upon operation of the detectors in the residential units. The detectors shall be installed in the bedrooms and outside of every bedroom.
- fire alarm strobes will be provided in the residential units designated for the hearing impaired.
- fire alarm strobes will be located in the all public restrooms.
- heat detectors will be installed above the auditorium stage. The horn/strobe will be located in auditorium and stage area.

Communications

A Telecommunications Entrance Facility (TEF) will be located in the basement MEP room. The raceways will be provided for the telecommunications service providers to bring new telephone, cable TV and internet services from the street and terminate in the TEF for distribution throughout the building.

A Telecommunications Room (TR) will be located on each of the upper levels. The TRs will be interconnected with conduit sleeves to enable backbone cable distribution from the TEF. The telecommunications service providers will furnish and install the backbone cable infrastructure between the TEF and each TR. The TRs will house the telecommunications service provider's equipment for homerun cable distribution to each unit on the TR's respective floor.

Pending a radio survey conducted by a qualified radio technician, the building may require a bi-directional radio antenna system to support fire and police department radio communications within the structure in the event of an emergency.

Communications for the **Residential** option:

The electrical contractor will provide a wall mounted media enclosure in the each unit to terminate the homerun cables from the TR. The telecommunications subcontractor will extend homerun cables from the TR on each floor to each unit and terminate them in the media enclosure. The telecommunications subcontractor will install horizontal cable between the media enclosure and the telephone, data and TV outlets inside the units.

Amenity spaces (lobbies, media room, fitness room, Auditorium) will be cabled to support telephone, wireless data access, digital signage and cable TV connectivity. The Auditorium will be fitted with power receptacles and cable raceways to support future AV equipment installations.

The building will be equipped with a two-way intercom stations that will be located at the entrance door in the lobby and in the each residential unit enabling access to the building for visitors and deliveries. Each unit will be equipped to display video of the entry to allow residents to identify visitors.

The security system will include access control card readers and door contact switches at the service and entrance doors, and a CCTV camera at the main entrance door.

Communications for the **Hotel** option:

The telecommunications subcontractor will extend homerun cables from the TR on each floor to each guest room and terminate them in voice, data and Cable TV outlets in each room. Amenity spaces (lobbies, fitness, dining and Auditorium) will be cabled to support telephone, wireless data access, digital signage and cable TV connectivity. The Auditorium will be fitted with power and cable raceways to support future AV equipment installations.

Communications for the **Mixed-Use** option:

The residential units and amenity spaces will be cabled for telecommunications and security as described in the previous section.

In commercial tenant spaces, the electrical contractor will provide a media enclosure in the each tenant area to terminate homerun cables from the TR. Commercial tenants will be responsible for telecommunications and security cabling and electronics within their areas.

Common spaces will be wired to support wireless access and digital signage.

Communications for the **Municipal Office** option:

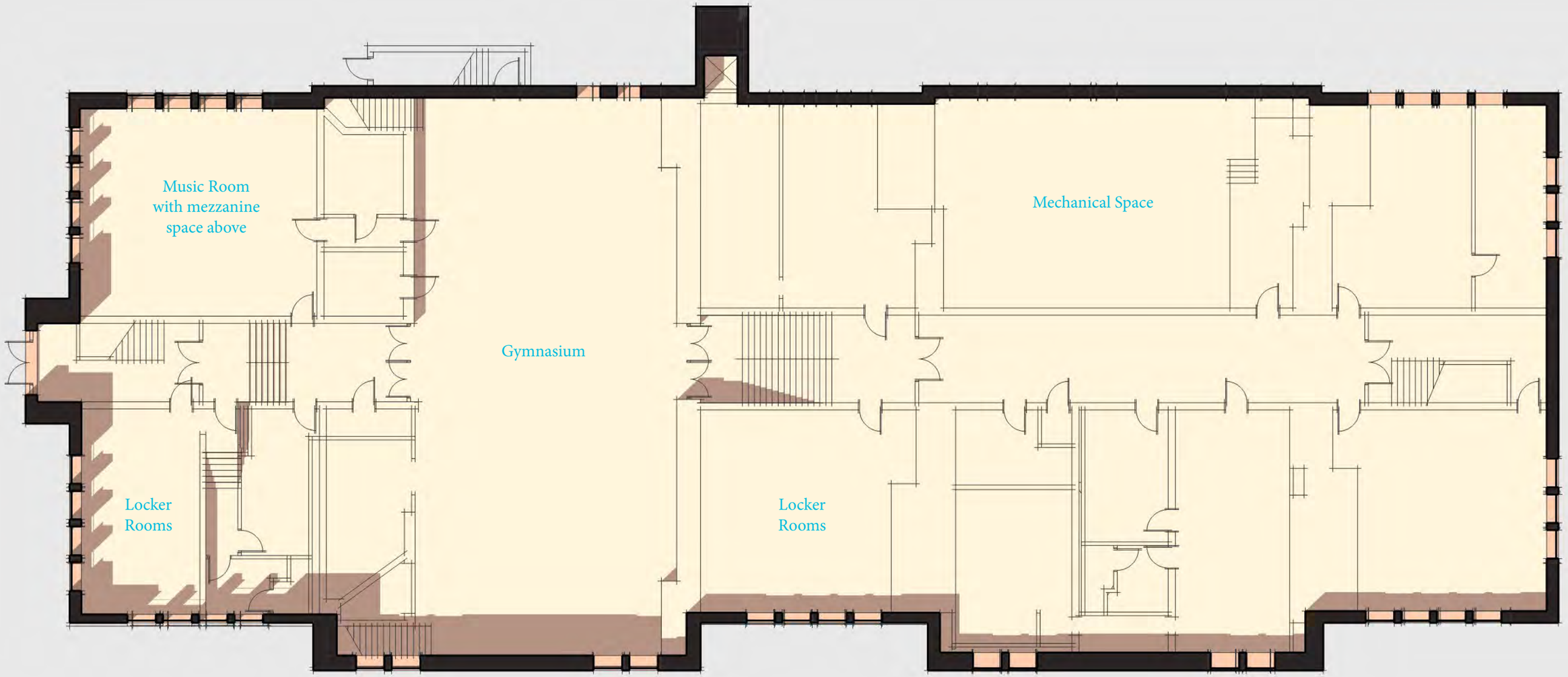
Telephone/data outlets and wiring will be provided from the TRs will be provided on the all levels as required by the interior layouts. The building will be wired to support wireless access and digital signage.

APPENDICES 6

APPENDIX A: EXISTING FLOOR PLANS

APPENDIX B: CONCEPTUAL COST ESTIMATES

APPENDIX A: EXISTING FLOOR PLANS



Existing Basement Level Plan:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

9.21.16

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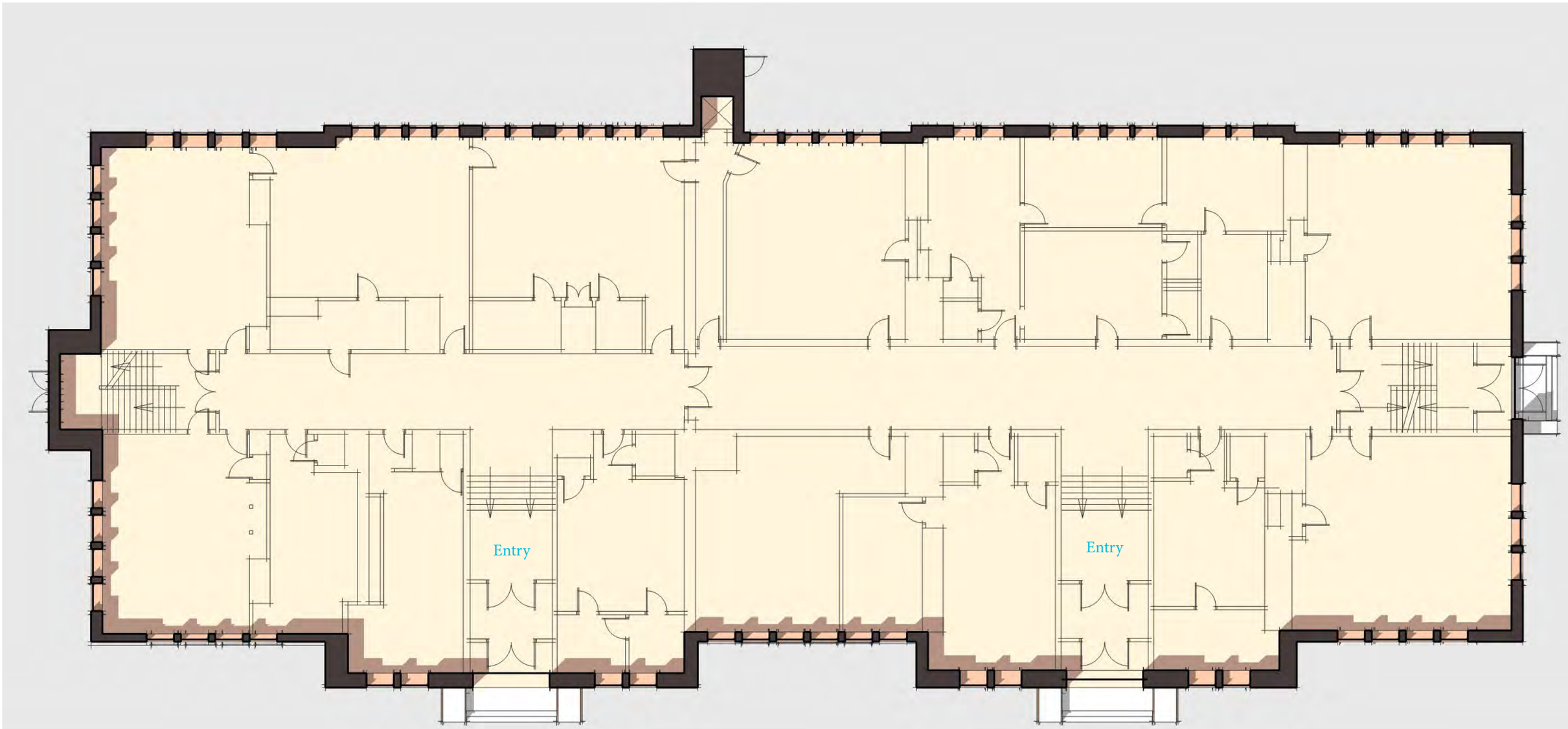

Existing First Floor Plan:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

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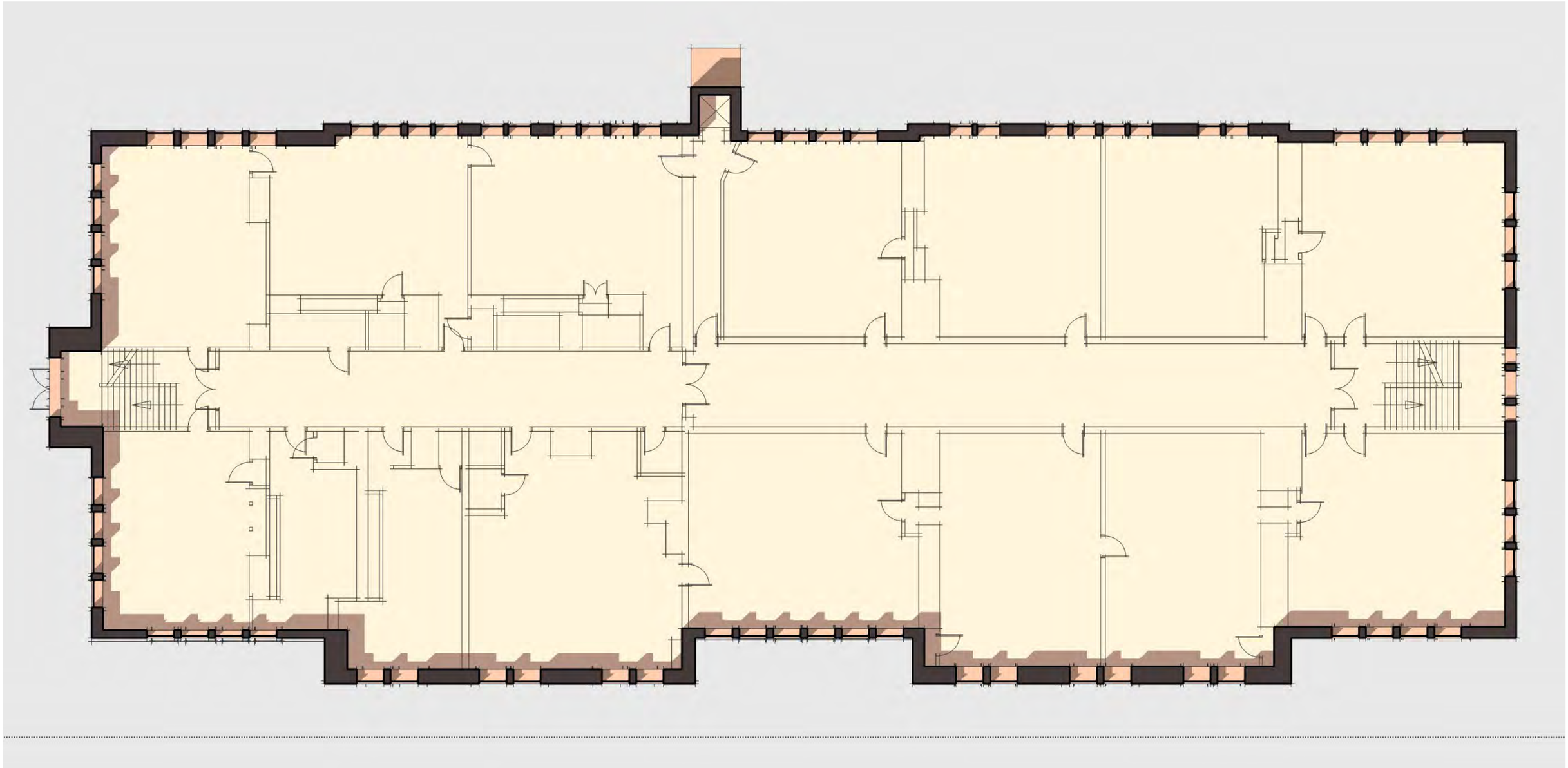

Existing Second Floor Plan:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

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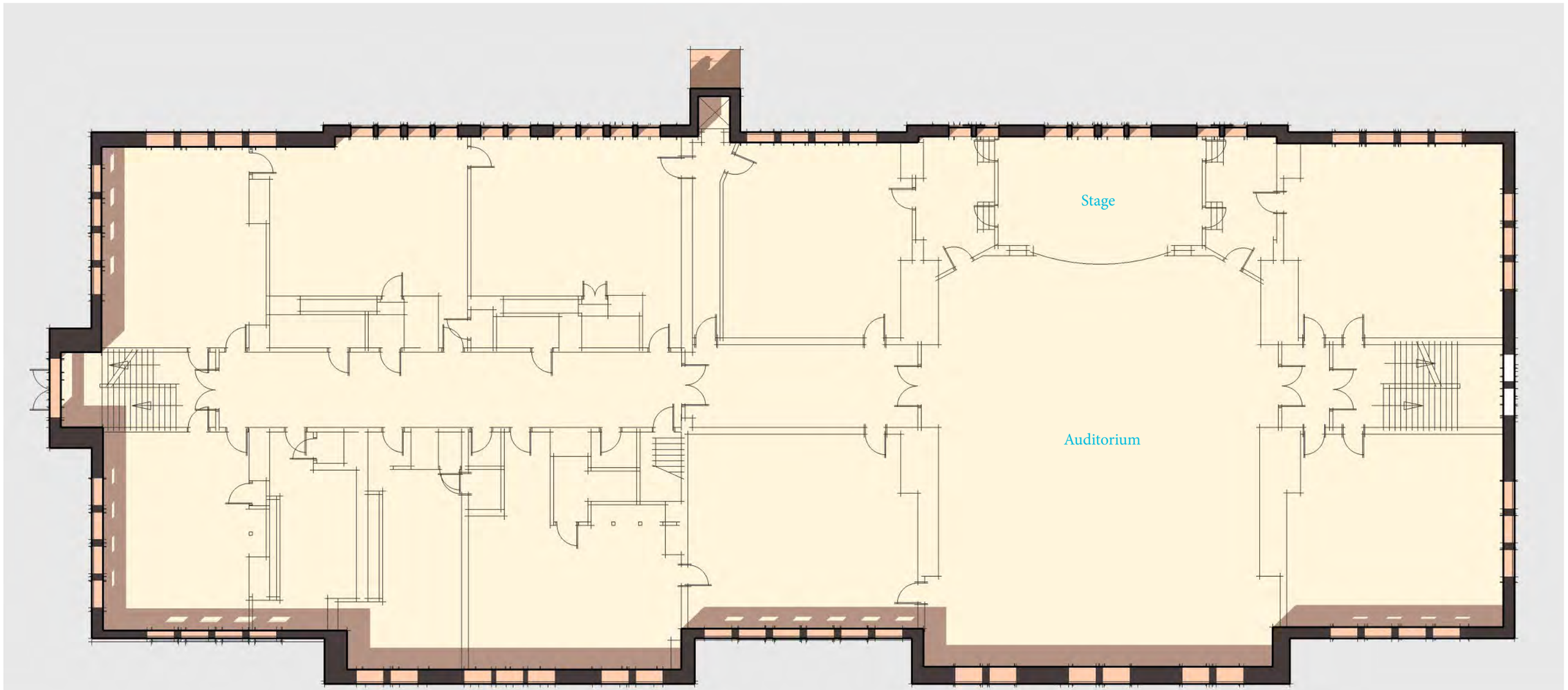

Existing Third Floor Plan:

Redevelopment Study - Phase 1

Walker Building, 255 Main Street, Marlborough, MA

9.21.16

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APPENDIX B: COST ESTIMATES

WALKER BUILDING
Redevelopment Study

CONCEPT DESIGN
COST REPORT

January 17, 2017

Fennessy Consulting Services
27 Glen Street, Suite 9C, Stoughton, MA 02072. T: 781.344.4464 F: 781.344.4452
www.fennessyconsulting.com

January 17, 2017

Brian Lawlor
Symmes Maini & McKee Associates
1000 Massachusetts Ave.
Cambridge, MA 2138

WALKER BUILDING - Redevelopment Study, Marlborough, MA

Dear Brian:

Please find enclosed our Construction Cost Model for the above referenced project based on concept design information prepared by Symmes Maini McKee & Associates dated December 22, 2016.

The financial summary of this cost model is outlined below, however we recommend you review the Executive Summary to fully understand the basis of this report and the included and excluded financial impacts contained therein.

	Const. Start	***Gross Floor Area***	***$/sf***	***Estimated Cost***
Residence	*Jan-18*	*62,480*	*$242.54*	*$15,154,190*
Hotel	*Jan-18*	*62,480*	*$242.72*	*$15,165,015*
Mixed-Use	*Jan-18*	*62,532*	*$240.68*	*$15,050,009*
Office	*Jan-18*	*62,532*	*$219.20*	*$13,707,106*

Alternates

Alternate 1: Utilize non-union labor — *10%- 12% cost reduction*

Bidding conditions are expected to reflect competitive bidding to pre-qualified general contractors, open bidding to prequalified sub-contractors, open specifications for materials and manufactures.

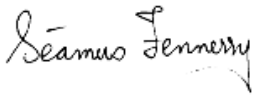
This estimate includes all direct construction costs, general contractor's overhead and profit and design contingency. Cost escalation impacts have been included in this report.

Excluded from the estimate are: construction contingency, hazardous waste removal, loose furnishings and equipment, architect's and engineer's fees, moving, administrative and financing costs. Please refer to Exclusions section of the attached report for further information.

The estimate is based on prevailing union rates for construction in this market and represents a reasonable opinion of cost. It is not a prediction of the successful bid from a contractor as bids will vary due to fluctuating market conditions, errors and omissions, proprietary specifications, lack or surplus of bidders, perception of risk, etc. Consequently the estimate is expected to fall within the range of bids from a number of competitive contractors or subcontractors, however we do not warrant that bids or negotiated prices will not vary from the final construction cost estimate.

If you have any questions or require further analysis please do not hesitate to contact us.

Sincerely,



Seamus Fennessy MRICS
Principal/Owner

Enclosures

Contents

Executive Summary

The Project

This project in Marlborough, Massachusetts comprises the repurposing of the existing Walker Building. Four alternatives uses are been considered, namely residential, hotel, office and a mixed use program.

Financial Status

Our construction cost model for these redevelopment options is shown on page 6. Within the total contained therein we are including a total of 21% for design contingencies and

Risk

A formal risk analysis has not been performed for this project. Some risk factors to be considered at this time include:

- *Design Contingency*
- *Escalation/Market risk due to construction delay*
- *Approvals process/Funding*

Design Contingency

This construction cost model is based on concept drawings. Due to this incomplete nature of the design we have utilized historic data and personal experience to complete this cost model. To help alleviate possible cost increases as a result of design completion we recommend a ***design contingency of 15%.*** *We have included this contingency in our cost model. As design progresses this contingency will reduce.*

Escalation/Market Risk

Despite the relatively high activity in the construction market there is still a risk that contractors and material supplies could cease to exist for a variety of reasons that include bidding below cost. We highly recommend that each project has adequate protection in the form of sub guard (preferred) or bonding for both performance and payment. The current estimate includes for subcontractor bonding.

For the purpose of this exercise we have assumed a construction start of April 2018. In our opinion this is probably the earliest that construction could start assuming that a design contract is awarded within the next two months.

As the industry continues to rebound, labor and material costs and profit margins will increase and are likely to do so for some time. We are anticipating that these cost increases will be relatively significant. Delays in the awarding of a construction contract will have a significant cost impact . To help account for the cost increase between now and the start of construction we have added a ***4.91% escalation factor*** *to the bottom line of this cost report. This escalation factor is currently calculated at 5% per annum (accumulative). As we move closer to design completion, unit rates will become more current and as such the escalation contingency will reduce.*

Approvals Process/Funding.
For the purpose of this report we have included both of these categories together. The risk here is that the funding and approvals process will take significantly longer than expected and hence subject this project to increases in price escalation. We have not included any such pressures in this cost model.

Cost Estimate Prepared From	*Dated*	*Received*
Drawings issued for		
Concept Design	*12/22/16*	*12/22/16*
Discussions with the Project Architect and Engineers		

Conditions of Construction

The pricing is based on the following general conditions of construction

- *A start date of January 2018*
- *A construction period of 16 months*
- *The general contract will be competitively bid to qualified general contractors and main subcontractors*
- *There will not be small business set aside requirements*
- *The contractor will be required to pay prevailing unionwages*
- *There are no phasing requirements*
- *The general contractor will have full access to the site during normal business hours*

The Cost Plan is based on the following conditions:

The costs in this report covers construction costs only calculated at current bidding price level (reflecting the current projected construction schedule) with a separate allowance for cost escalation.

Cost escalation is included to the mid point of the construction schedule. Unit rates in the body of the report include appropriate escalation allowances to deliver specific trades within the prescribed schedule if the project were to commence today.

Cost associated with additional escalation required for future start date are included as a below the line markup. This report has included this additional escalation to the scheduled start date of construction noted in this report.

Bidding Process - Market Conditions

This document is based on the measurement and pricing of quantities wherever information is provided and/or reasonable assumptions for other work not covered in the drawings or specifications, as stated within this document. Unit rates have been obtained from historical records and/or discussion with contractors. The unit rates reflect current bid costs in the area. All unit rates relevant to subcontractor work include the subcontractors overhead and profit unless otherwise stated. The mark-ups cover the costs of field overhead, home office overhead and profit and range from 15% to 25% of the cost for a particular item of work.

Pricing reflects probable construction costs obtainable in the project locality on the date of this statement of probable costs. This estimate is a determination of fair market value for the construction of this project. It is not a prediction of low bid. Pricing assumes competitive bidding for every portion of the construction work for all subcontractors and general contractors, with a minimum of 5 bidders for all items of work. Experience and research indicates that a fewer number of bidders may result in higher bids, conversely an increased number of bidders may result in more competitive bids.

Exclusions

The following cost items have been excluded from this report. Many of these will in fact be required and should be budgeted within the "Soft Cost" component of the project budget

- *Owner supplied and installed furniture, fixtures and equipment*
- *Loose furniture and equipment except as specifically identified*
- *Security equipment and devices*
- *Audio visual head-end equipment*
- *Hazardous material handling, disposal and abatement*
- *Compression of schedule, premium or shift work, and restrictions on the contractor's working hours*
- *Design, testing, inspection or construction management fees*
- *Architectural and design fees*
- *Scope change and post contract contingencies*
- *Assessments, taxes, finance, legal and development charges*
- *Environmental impact mitigation*
- *Builder's risk, project wrap-up and other owner provided insurance program*
- *Land and easement acquisition*
- *Cost escalation beyond a start date of January 2018*

WALKER BUILDING
Redevelopment Study
Marlborough, MA
CONCEPT DESIGN COST REPORT
January 17, 2017

Overall Summary

		Residence	Hotel	Mixed-Use	Office
A10 FOUNDATIONS		$183,654	$183,654	$253,179	$253,173
A20 BASEMENT CONSTRUCTION		$0	$0	$0	$0
B10 SUPERSTRUCTURE		$160,247	$361,866	$220,294	$81,283
B20 EXTERIOR CLOSURE		$786,460	$795,760	$772,761	$820,963
B30 ROOFING		$122,774	$122,774	$122,972	$122,774
C10 INTERIOR CONSTRUCTION		$1,233,510	$1,199,057	$726,907	$673,791
C20 STAIRCASES		$91,000	$91,000	$84,300	$88,800
C30 FINISHES		$1,312,080	$1,499,520	$1,156,842	$859,815
D10 CONVEYING SYSTEMS		$241,310	$241,450	$241,450	$216,450
D20 PLUMBING		$874,720	$843,480	$687,852	$375,192
D30 HVAC		$2,374,240	$1,874,400	$2,501,280	$2,626,344
D40 FIRE PROTECTION		$374,880	$374,880	$375,244	$375,140
D50 ELECTRICAL		$1,562,000	$1,562,000	$1,782,162	$2,001,024
E10 EQUIPMENT		$163,600	$300,000	$415,100	$6,000
E20 FURNISHINGS		$427,140	$319,590	$410,351	$236,365
F10 SPECIAL CONSTRUCTION		$0	$0	$0	$0
F20 SELECTIVE BUILDING DEMOLITION		$590,739	$697,464	$632,967	$587,067
Total Building Construction		**$10,498,354**	**$10,466,895**	**$10,383,661**	**$9,324,181**
G10 SITE PREPARATION		$12,500	$17,500	$25,000	$25,000
G20 SITE IMPROVEMENTS		$70,000	$95,000	$90,000	$90,000
G30 SITE MECHANICAL UTILITIES		$105,500	$105,500	$105,500	$105,500
G40 SITE ELECTRICAL		$69,500	$79,500	$69,500	$69,500
G90 OTHER SITE CONSTRUCTION		$0	$0	$0	$0
Total Site Construction		**$257,500**	**$297,500**	**$290,000**	**$290,000**
TOTAL BUILDING & SITE		**$10,755,854**	**$10,764,395**	**$10,673,661**	**$9,614,181**
MARKUPS		**$1,804,966**	**$1,805,398**	**$1,800,807**	**$1,747,198**
General conditions and project requirements	11.2%	$1,200,000	$1,200,000	$1,200,000	$1,200,000
Bond and insurance	2.0%	$239,117	$239,288	$237,473	$216,284
Building permit	0.0%	$0	$0	$0	$0
General contractor's head office overhead and profit	3.0%	$365,849	$366,110	$363,334	$330,914
PLANNED CONSTRUCTION COST	Jan-17	**$12,560,820**	**$12,569,793**	**$12,474,468**	**$11,361,379**
CONTINGENCIES/ESCALATION		**$2,593,370**	**$2,595,222**	**$2,575,541**	**$2,345,727**
Design and pricing contingency	15.0%	$1,884,123	$1,885,469	$1,871,170	$1,704,207
Gmp contingency	0.0%	$0	$0	$0	$0
Escalation to start date (January 2018)	4.9%	$709,247	$709,753	$704,371	$641,520
ESTIMATED CONTRACT AWARD	Jan-18	**$15,154,190**	**$15,165,015**	**$15,050,009**	**$13,707,106**
	GFA	62,480	62,480	62,532	62,532
	$/sf	$242.54	$242.72	$240.68	$219.20

WALKER BUILDING
Redevelopment Study
Marlborough, MA
CONCEPT DESIGN COST REPORT
January 17, 2017

Residence - Summary

		GFA	62,480
	Total	**$/sf**	**%**
A10 Foundations	**$183,654**	**$2.94**	**1.46%**
A1010 Foundations	$37,640	$0.60	0.30%
A1020 Special Foundations	$44,800	$0.72	0.36%
A1020 Slab on Grade	$101,214	$1.62	0.81%
A20 Basement Construction	**$0**	**$0.00**	**0.00%**
A2010 Basement Earthwork	$0	$0.00	0.00%
A2020 Basement Walls	$0	$0.00	0.00%
B10 Superstructure	**$160,247**	**$2.56**	**1.28%**
B1010 Floor Construction	$130,247	$2.08	1.04%
B1020 Roof Construction	$30,000	$0.48	0.24%
B20 Exterior Closure	**$786,460**	**$12.59**	**6.26%**
B2010 Exterior Walls	$567,045	$9.08	4.51%
B2020 Windows	$183,415	$2.94	1.46%
B2030 Exterior Doors	$36,000	$0.58	0.29%
B30 Roofing	**$122,774**	**$1.97**	**0.98%**
B3010 Roof Covering	$120,274	$1.93	0.96%
B3020 Roof Openings	$2,500	$0.04	0.02%
C10 Interior Construction	**$1,233,510**	**$19.74**	**9.82%**
C1010 Partitions	$794,376	$12.71	6.32%
C1020 Interior Doors	$145,990	$2.34	1.16%
C1030 Specialties	$293,144	$4.69	2.33%
C20 Staircases	**$91,000**	**$1.46**	**0.72%**
C2010 Stair Construction	$50,500	$0.81	0.40%
C2020 Stair Finishes	$40,500	$0.65	0.32%
C30 Finishes	**$1,312,080**	**$21.00**	**10.45%**
C3010 Wall Finishes	$249,920	$4.00	1.99%
C3020 Floor Finishes	$562,320	$9.00	4.48%
C3030 Ceiling Finishes	$499,840	$8.00	3.98%
D10 Conveying Systems	**$241,310**	**$3.86**	**1.92%**
D1010 Elevators and Lifts	$241,310	$3.86	1.92%
D1020 Escalators and Moving Walkways	$0	$0.00	0.00%
D1030 Other Conveying Systems	$0	$0.00	0.00%
D20 Plumbing	**$874,720**	**$14.00**	**6.96%**
D2010 Plumbing Complete	$874,720	$14.00	6.96%
D30 Heating, Ventilation and Air Conditioning	**$2,374,240**	**$38.00**	**18.90%**
D3010 HVAC, Complete	$2,374,240	$38.00	18.90%
D40 Fire Protection	**$374,880**	**$6.00**	**2.98%**
D4010 Fire Protection, Complete	$374,880	$6.00	2.98%
D50 Electrical	**$1,562,000**	**$25.00**	**12.44%**
D5010 Electrical, Complete	$1,562,000	$25.00	12.44%
E10 Equipment	**$163,600**	**$2.62**	**1.30%**
E1010 Commercial Equipment	$18,000	$0.29	0.14%
E1020 Institutional Equipment	$0	$0.00	0.00%
E1030 Vehicular Equipment	$0	$0.00	0.00%
E1090 Other Equipment	$145,600	$2.33	1.16%

WALKER BUILDING
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Residence - Summary

			GFA	62,480
		Total	$/sf	%
E20 Furnishings		**$427,140**	**$6.84**	**3.40%**
E2010 Fixed Furnishings		$427,140	$6.84	3.40%
E2020 Loose Furnishings		$0	$0.00	0.00%
F10 Special Construction		**$0**	**$0.00**	**0.00%**
F1010 Special Structures		$0	$0.00	0.00%
F1020 Integrated Construction		$0	$0.00	0.00%
F1030 Special Construction Systems and Facilities		$0	$0.00	0.00%
F20 Selective Building Demolition		**$590,739**	**$9.45**	**4.70%**
F2010 Building Elements Demolition		$590,739	$9.45	4.70%
F2020 Hazardous Components Abatement		$0	$0.00	0.00%
TOTAL BUILDING CONSTRUCTION		**$10,498,354**	**$168.03**	**83.58%**
G10 Site Preparation		**$12,500**	**$0.20**	**0.10%**
G1010 Site Clearing and Demolition		$7,500	$0.12	0.06%
G1030 Site Earthwork		$5,000	$0.08	0.04%
G1040 Hazardous Waste Remediation		$0	$0.00	0.00%
G20 Site Improvement		**$70,000**	**$1.12**	**0.56%**
G2010 Roadways and Parking Lots		$0	$0.00	0.00%
G2030 Pedestrian Paving		$25,000	$0.40	0.20%
G2040 Site Development		$15,000	$0.24	0.12%
G2050 Landscaping		$30,000	$0.48	0.24%
G30 Site Mechanical		**$105,500**	**$1.69**	**0.84%**
G3010 Mechanical Utilities		$105,500	$1.69	0.84%
G40 Site Electrical		**$69,500**	**$1.11**	**0.55%**
G4010 Electrical Utilities and Site Lighting		$69,500	$1.11	0.55%
G90 Other Site Construction		**$0**	**$0.00**	**0.00%**
G9010 Service and Pedestrian Tunnels		$0	$0.00	0.00%
G9090 Other Site Systems		$0	$0.00	0.00%
Total Site Construction		**$257,500**	**$4.12**	**2.05%**
TOTAL BUILDING & SITE		**$10,755,854**	**$172.15**	**85.63%**
Markups		**$1,804,966**	**$28.89**	**14.37%**
General Conditions				
General conditions and project requirements	11.16%	$1,200,000	$19.21	9.55%
Bond and insurance	2.00%	$239,117	$3.83	1.90%
Building permit	0.00%	$0	$0.00	0.00%
Overhead and profit				
General contractor's head office overhead and profit	3.00%	$365,849	$5.86	2.91%
PLANNED CONSTRUCTION COST	**Jan-17**	**$12,560,820**	**$201.04**	**100.00%**
Contingencies/Escalation		**$2,593,370**	**$41.51**	
Contingencies				
Design and pricing contingency	15.00%	$1,884,123	$30.16	
Gmp contingency	0.00%	$0	$0.00	
Escalation				
Escalation to start date (January 2018)	4.91%	$709,247	$11.35	
ESTIMATED CONTRACT AWARD	**Jan-18**	**$15,154,190**	**$242.54**	

	Quantity	Unit	Rate	Total
A1010 FOUNDATIONS				
Strip footings at elevation change at new Billiards Room				
Excavation	15	CY	80.00	1,200
Remove off site	15	CY	60.00	900
Backfill with gravel	11	CY	60.00	660
Formwork	88	SF	11.00	968
Reinforcement	360	LB	1.30	468
Concrete	4	CY	180.75	723
Strip footings at elevation change at new Lounge Area				
Excavation	28	CY	80.00	2,240
Remove off site	28	CY	60.00	1,680
Backfill with gravel	20	CY	60.00	1,200
Formwork	165	SF	11.00	1,815
Reinforcement	720	LB	1.30	936
Concrete	8	CY	180.75	1,446
Strip footings at elevation change at new wheelchair lift				
Excavation	5	CY	80.00	400
Remove off site	5	CY	60.00	300
Backfill with gravel	4	CY	60.00	240
Formwork	28	SF	11.00	308
Reinforcement	90	LB	1.30	117
Concrete	1	CY	180.75	181
Walls at elevation changes at Billiards Room				
Formwork	264	SF	12.00	3,168
Reinforcement	660	LB	1.30	858
Concrete	3	CY	186.25	559
Waterproofing, mastic	132	SF	2.00	264
Insulation	132	SF	1.75	231
Walls at elevation changes at Lounge Area				
Formwork	495	SF	12.00	5,940
Reinforcement	1,238	LB	1.30	1,609
Concrete	6	CY	186.25	1,118
Waterproofing, mastic	248	SF	2.00	496
Insulation	248	SF	1.75	434
Walls at elevation changes at wheelchair lift				
Formwork	294	SF	12.00	3,528
Reinforcement	735	LB	1.30	956
Concrete	5	CY	186.25	931
Waterproofing, mastic	147	SF	2.00	294
Insulation	147	SF	1.75	257
Miscellaneous				
Miscellaneous concrete costs - premium for pump grade concrete mix and pump	27	CY	45.00	1,215
Subtotal				**$37,640**

	Quantity	Unit	Rate	Total
A1020 SPECIAL FOUNDATIONS				
Underpinning				
At Billiards Room	3	CY	3,200.00	9,600
At wheelchair lift	4	CY	3,200.00	12,800
At elevator	7	CY	3,200.00	22,400
Subtotal				**$44,800**
A1030 SLAB ON GRADE				
Slab on grade at Billiards Room				
Excavate to reduce level	172	CY	80.00	13,760
Remove excavated material off site	172	CY	60.00	10,320
Gravel fill	57	CY	60.00	3,420
Rigid insulation under slab on grade	1,526	SF	1.75	2,671
Vapor barrier	1,526	SF	0.40	610
Mesh reinforcing 15% lap	1,755	SF	0.85	1,492
Reinforcement - dowel to existing	35	EA	35.00	1,225
Concrete in slab, complete	24	CY	175.25	4,206
Finishing and curing	1,526	SF	1.50	2,289
Control and construction joints	1,526	SF	0.50	763
Perimeter joints	154	LF	3.00	462
Slab on grade at Lounge				
Gravel fill to raise level	142	CY	60.00	8,520
Rigid insulation under slab on grade	1,377	SF	1.75	2,410
Vapor barrier	1,377	SF	0.40	551
Mesh reinforcing 15% lap	1,584	SF	0.85	1,346
Reinforcement - dowel to existing	35	EA	35.00	1,225
Concrete in slab, complete	18	CY	175.25	3,155
Finishing and curing	1,377	SF	1.50	2,066
Control and construction joints	1,377	SF	0.50	689
Perimeter joints	154	LF	3.00	462
Slab on grade at wheelchair lift and elevator				
Excavate to reduce level	27	CY	80.00	2,160
Remove excavated material off site	27	CY	60.00	1,620
Gravel fill	18	CY	60.00	1,080
Rigid insulation under slab on grade	475	SF	1.75	831
Vapor barrier	475	SF	0.40	190
Mesh reinforcing 15% lap	546	SF	0.85	464
Reinforcement - dowel to existing	14	EA	35.00	490
Concrete in slab, complete	7	CY	175.25	1,227
Finishing and curing	475	SF	1.50	713
Control and construction joints	475	SF	0.50	238
Elevator/Escalator pit				
Excavation	62	CY	80.00	4,960
Remove excavated material off site	62	CY	60.00	3,720
Backfill with gravel	28	CY	60.00	1,680
Formwork to slab edge	92	SF	11.00	1,012
Reinforcement in slab	720	LB	1.30	936

	Quantity	Unit	Rate	Total
Concrete in slab	8	CY	180.75	1,446
Formwork to pit walls	306	SF	12.00	3,672
Reinforcement	765	LB	1.30	995
Concrete in pit walls	11	CY	186.25	2,049
Cementitious waterproofing to elevator pit	444	SF	12.00	5,328
Miscellaneous				
Miscellaneous concrete costs - premium for pump grade concrete mix and pump	68	CY	25.00	1,700
Existing slab on grade				
Patching existing surface after demolition	12,242	SF	0.25	3,061
Subtotal				**$101,214**
B1010 FLOOR CONSTRUCTION				
Steel construction				
Floor framing				
W sections in framing over old entry	1.4	T	6,000.00	8,400
W sections in reframing new main lobby	8	T	6,000.00	48,000
W sections in framing at elevator openings	2	LOC	4,000.00	8,000
Shear studs	424	EA	3.75	1,590
Bent plate in pour stop	22	LF	20.00	440
Metal decking				
Metal decking, over old entry	320	SF	4.50	1,440
Metal decking at lobby reframing	1,800	SF	4.25	7,650
Metal decking, long span		SF	9.00	
Concrete construction				
Concrete topping to floors at old entry				
Mesh reinforcing 15% lap	368	SF	0.85	313
Reinforcement - dowel to existing	79	EA	35.00	2,765
Concrete topping	5	CY	175.25	876
Finishing and curing	320	SF	1.50	480
Control and construction joints	320	SF	0.50	160
Concrete topping to floors at Lobby				
Mesh reinforcing 15% lap	2,070	SF	0.85	1,760
Reinforcement - dowel to existing	64	EA	35.00	2,240
Concrete topping	28	CY	175.25	4,907
Finishing and curing	1,800	SF	1.50	2,700
Control and construction joints	1,800	SF	0.50	900
Existing concrete topping				
Patching after demolition, including infilling opening	44,740	SF	0.25	11,185
Miscellaneous concrete costs				
Premium for pump grade concrete mix and pump	33	CY	17.50	578
Added cost for lightweight concrete	33	CY	27.00	891
Masonry wall - load bearing				
Included in Partitions				
Miscellaneous				
Fireproofing steel	2,120	SF	2.20	4,664

		Quantity	Unit	Rate	Total
Fire stopping		46,860	SF	0.30	14,058
Equipment pads		250	SF	25.00	6,250
	Subtotal				**$130,247**
B1020 ROOF CONSTRUCTION					
Steel construction					
Steel members in roof framing					
Modifications to existing		1	LS	30,000.00	30,000
	Subtotal				**$30,000**
B2010 EXTERIOR WALL					
Interior face of exterior wall					
Furring		25,100	SF	2.50	62,750
Insulation		25,100	SF	3.00	75,300
Air barrier		25,100	SF	5.00	125,500
Drywall lining to interior face of stud backup		25,100	SF	3.00	75,300
Exterior skin - brick					
Wash		25,100	SF	2.00	50,200
Repoint, assume 15%		3,765	SF	15.00	56,475
Exterior skin - metal panel/wood					
Allow for repairs and paint to cornice work		1	LS	50,000.00	50,000
Miscellaneous					
Scaffolding to exterior wall		36,800	SF	1.50	55,200
Rough blocking		5,440	LF	3.00	16,320
	Subtotal				**$567,045**
B2020 WINDOWS					
Aluminum windows and glazing					
Windows, glazed					
Complete		168	SF	85.00	14,280
Aluminum storefront					
Storefront system, glazed					
Complete		492	SF	90.00	44,280
Ancillaries					
Backer rod and double sealant		8,554	LF	4.50	38,493
Wood blocking at openings		274	LF	3.00	822
Interior trim		8,554	LF	10.00	85,540
	Subtotal				**$183,415**
B2030 EXTERIOR DOORS					
Aluminum doors					
Double leaf					
Complete		4	PR	7,000.00	28,000
Miscellaneous					
Added cost for door operators		2	EA	4,000.00	8,000
	Subtotal				**$36,000**

		Quantity	Unit	Rate	Total
B3010 ROOF COVERING					
Slate roofing					
Allow for repairs and flashing work		21,868	SF	5.50	120,274
	Subtotal				**$120,274**
B3020 ROOF OPENINGS					
Roof hatch/ vents		1	LS	2,500.00	2,500
	Subtotal				**$2,500**
C1010 PARTITIONS					
Partitions, drywall					
Standard		58,994	SF	12.00	707,928
Infill existing door		182	SF	24.00	4,368
Window walls and borrowed lights					
Glass partition , aluminum, complete		450	SF	60.00	27,000
Rails and handrails, painted metal					
Rails at access ramps		20	LF	180.00	3,600
Handrails at access ramps		46	LF	50.00	2,300
Miscellaneous					
Sealants and caulking at partitions		62,480	SF	0.35	21,868
Rough blocking		9,104	LF	3.00	27,312
	Subtotal				**$794,376**
C1020 INTERIOR DOORS					
Wood doors					
Single leaf					
Complete		51	EA	2,000.00	102,000
Aluminum doors					
Double leaf door					
Complete		2	EA	7,000.00	14,000
Specialty doors					
Allowance for miscellaneous access doors		18	EA	400.00	7,200
Miscellaneous					
Added cost for door operators		2	EA	4,000.00	8,000
Paint to door and frame		51	EA	120.00	6,120
Sealants and caulking		51	EA	90.00	4,590
Wood blocking at openings		51	EA	80.00	4,080
	Subtotal				**$145,990**
C1030 SPECIALTIES					
Specialties					
Vanity counters					
Solid surface		147	LF	250.00	36,750
Toilet accessories					
Small toilet		49	EA	1,500.00	73,500
Signage/Directories		62,480	SF	0.25	15,620
Fire extinguishers and cabinets		18	EA	400.00	7,200

	Quantity	Unit	Rate	Total
Miscellaneous				
Backer panels in electrical closets	1	LS	750.00	750
Allowance for miscellaneous metals not identifiable at this stage	62,480	SF	2.20	137,456
Miscellaneous sealants throughout building	62,480	SF	0.35	21,868
Subtotal				**$293,144**
C2010 STAIR CONSTRUCTION				
Feature staircase				
Handrail to feature staircase	25	LF	60.00	1,500
Egress/Internal circulation staircases				
Circulation staircase, including rails and handrails	1	FLT	12,000.00	12,000
Modifications to existing	6	FLT	5,000.00	30,000
Miscellaneous steps and ladders				
Steps at Billiards and lounge	2	LS	3,500.00	7,000
Subtotal				**$50,500**
C2020 STAIR FINISHES				
Stair finishes				
Staircase finish	9	FLT	4,500.00	40,500
Subtotal				**$40,500**
C3010 WALL FINISHES				
Wall finishes				
Allowance	62,480	SF	4.00	249,920
Subtotal				**$249,920**
C3020 FLOOR FINISHES				
Floor finishes				
Allowance	62,480	SF	9.00	562,320
Subtotal				**$562,320**
C3030 CEILING FINISHES				
Ceiling finishes				
Allowance	62,480	SF	8.00	499,840
Subtotal				**$499,840**
D1010 ELEVATORS AND LIFTS				
Passenger elevators				
Passenger elevator,5 stop	1	EA	175,000.00	175,000
Elevator cab finish	1	EA	15,000.00	15,000
Pit ladders	1	EA	750.00	750
Sill angles	16	LF	35.00	560
Lifts				
Wheelchair lift	1	EA	50,000.00	50,000
Subtotal				**$241,310**

Residence - Estimate Detail

	Quantity	Unit	Rate	Total
D2010 PLUMBING				
Plumbing, complete				
Complete	62,480	SF	14.00	874,720
Subtotal				**$874,720**
D3010 HVAC				
Hvac				
Complete	62,480	SF	38.00	2,374,240
Subtotal				**$2,374,240**
D4010 FIRE PROTECTION				
Sprinkler installation				
Complete	62,480	SF	5.00	312,400
In attic	15,620	SF	4.00	62,480
Subtotal				**$374,880**
D5010 ELECTRICAL				
Electrical installation				
Complete	62,480	SF	25.00	1,562,000
Subtotal				**$1,562,000**
E1010 COMMERCIAL EQUIPMENT				
Laundry equipment				
Commercial washer	3	EA	3,000.00	9,000
Commercial dryer	3	EA	3,000.00	9,000
Subtotal				**$18,000**
E1090 OTHER EQUIPMENT				
Residential equipment				
Kitchen equipment	32	RMS	4,550.00	145,600
Subtotal				**$145,600**
E2010 FIXED FURNISHINGS				
Kitchen casework				
Base storage units	512	LF	200.00	102,400
Counter top, plastic laminate	512	LF	100.00	51,200
Wall storage units	512	LF	160.00	81,920
Miscellaneous				
Allowance	1	LS	20,000.00	20,000
Entry mat				
Entry mat and frame	70	SF	50.00	3,500
Window treatment				
Mecho shades	11,208	SF	15.00	168,120
Subtotal				**$427,140**

	Quantity	Unit	Rate	Total
E2020 LOOSE FURNISHINGS				
Loose furnishings				
By owner				
Subtotal				**$0**
F2010 BUILDING ELEMENTS DEMOLITION				
Interior demolition				
Remove partitions and doors	31,260	SF	1.50	46,890
Remove floor and ceiling finishes	62,480	SF GFA	3.00	187,440
Remove casework and specialties	62,480	SF GFA	1.00	62,480
Remove MEP systems (excluding ductwork)	62,480	SF GFA	3.00	187,440
Remove ductwork and louvers	62,480	SF GFA	0.50	31,240
Remove stairs at grade	136	SF	12.00	1,632
Remove stairs upper floors	92	SF	18.00	1,656
Remove stage	300	SF	12.00	3,600
Exterior demolition				
concrete stair	55	SF	15.00	825
Structural demolition				
Remove existing concrete slab on grade	3,378	SF	12.00	40,536
Remove elevated slab	1,800	SF	15.00	27,000
Subtotal				**$590,739**
F2020 HAZARDOUS COMPONENTS ABATEMENT				
Hazardous materials abatement				
Remove hazardous building materials		EXCLUDED		
Subtotal				**$0**
G1010 SITE CLEARING AND DEMOLITION				
Clearing and grubbing				
Allowance for site clearance	1	LS	7,500.00	7,500
Subtotal				**$7,500**
G1030 SITE EARTHWORK				
Site earthwork				
Allowance	1	LS	5,000.00	5,000
Subtotal				**$5,000**
G1040 HAZARDOUS WASTE REMEDIATION				
Hazardous waste remediation				
Remove contaminated soils		EXCLUDED		
Subtotal				**$0**
G2030 PEDESTRIAN PAVING				
Paving				
Allowance	1	LS	25,000.00	25,000
Subtotal				**$25,000**

		Quantity	Unit	Rate	Total
G2040 SITE DEVELOPMENT					
Improvements					
Allowance		1	LS	15,000.00	15,000
	Subtotal				**$15,000**
G2050 LANDSCAPING					
Planting					
Allowance		1	LS	30,000.00	30,000
	Subtotal				**$30,000**
G3010 MECHANICAL UTILITIES					
Water supply					
Allowance		1	LS	18,000.00	18,000
Sanitary sewer					
Allowance		1	LS	50,000.00	50,000
Storm drainage					
Allowance		1	LS	30,000.00	30,000
Gas distribution					
Gas connection piping			By Utilities Company		
Connect to existing			By Utilities Company		
Excavation/trenching		1	LS	7,500.00	7,500
	Subtotal				**$105,500**
G4010 ELECTRICAL UTILITIES AND SITE LIGHTING					
Electrical service					
Primary electrical service duct bank		1	LS	15,000.00	15,000
Secondary electrical service duct bank		1	LS	10,000.00	10,000
Manhole		1	EA	4,000.00	4,000
Transformer pad		1	EA	1,500.00	1,500
Site lighting					
Allowance		1	EA	20,000.00	20,000
Site communication					
Communication service duct bank		1	LS	15,000.00	15,000
Manhole		1	EA	4,000.00	4,000
	Subtotal				**$69,500**
MARKUPS					
General conditions and project requirements					
General conditions and requirements		16.0	MTH	75,000	1,200,000
Bond and Insurance		2.00%		11,955,854	239,117
Building permit		0.00%		12,194,971	
Overhead and Profit					
Contractors overhead and profit (Fee)		3.00%		12,194,971	365,849
	Subtotal				**$1,804,966**

		Quantity	Unit	Rate	Total
CONTINGENCIES/ESCALATION					
Contingencies					
Design contingency		*15.00%*		*12,560,820*	*1,884,123*
GMP contingency		*0.00%*		*14,444,943*	
Escalation					
Escalation to Start Date (January 2018)		*4.91%*		*14,444,943*	*709,247*
	Subtotal				***$2,593,370***

WALKER BUILDING
Redevelopment Study
Marlborough, MA
CONCEPT DESIGN COST REPORT
January 17, 2017

Hotel - Summary

	Total	GFA $/sf	62,480 %
A10 Foundations	**$183,654**	**$2.94**	**1.46%**
A1010 Foundations	$37,640	$0.60	0.30%
A1020 Special Foundations	$44,800	$0.72	0.36%
A1020 Slab on Grade	$101,214	$1.62	0.81%
A20 Basement Construction	**$0**	**$0.00**	**0.00%**
A2010 Basement Earthwork	$0	$0.00	0.00%
A2020 Basement Walls	$0	$0.00	0.00%
B10 Superstructure	**$361,866**	**$5.79**	**2.88%**
B1010 Floor Construction	$331,866	$5.31	2.64%
B1020 Roof Construction	$30,000	$0.48	0.24%
B20 Exterior Closure	**$795,760**	**$12.74**	**6.33%**
B2010 Exterior Walls	$564,915	$9.04	4.49%
B2020 Windows	$194,845	$3.12	1.55%
B2030 Exterior Doors	$36,000	$0.58	0.29%
B30 Roofing	**$122,774**	**$1.97**	**0.98%**
B3010 Roof Covering	$120,274	$1.93	0.96%
B3020 Roof Openings	$2,500	$0.04	0.02%
C10 Interior Construction	**$1,199,057**	**$19.19**	**9.54%**
C1010 Partitions	$539,912	$8.64	4.30%
C1020 Interior Doors	$338,330	$5.42	2.69%
C1030 Specialties	$320,815	$5.13	2.55%
C20 Staircases	**$91,000**	**$1.46**	**0.72%**
C2010 Stair Construction	$50,500	$0.81	0.40%
C2020 Stair Finishes	$40,500	$0.65	0.32%
C30 Finishes	**$1,499,520**	**$24.00**	**11.93%**
C3010 Wall Finishes	$374,880	$6.00	2.98%
C3020 Floor Finishes	$562,320	$9.00	4.47%
C3030 Ceiling Finishes	$562,320	$9.00	4.47%
D10 Conveying Systems	**$241,450**	**$3.86**	**1.92%**
D1010 Elevators and Lifts	$241,450	$3.86	1.92%
D1020 Escalators and Moving Walkways	$0	$0.00	0.00%
D1030 Other Conveying Systems	$0	$0.00	0.00%
D20 Plumbing	**$843,480**	**$13.50**	**6.71%**
D2010 Plumbing Complete	$843,480	$13.50	6.71%
D30 Heating, Ventilation and Air Conditioning	**$1,874,400**	**$30.00**	**14.91%**
D3010 HVAC, Complete	$1,874,400	$30.00	14.91%
D40 Fire Protection	**$374,880**	**$6.00**	**2.98%**
D4010 Fire Protection, Complete	$374,880	$6.00	2.98%
D50 Electrical	**$1,562,000**	**$25.00**	**12.43%**
D5010 Electrical, Complete	$1,562,000	$25.00	12.43%
E10 Equipment	**$300,000**	**$4.80**	**2.39%**
E1010 Commercial Equipment	$0	$0.00	0.00%
E1020 Institutional Equipment	$0	$0.00	0.00%
E1030 Vehicular Equipment	$0	$0.00	0.00%
E1090 Other Equipment	$300,000	$4.80	2.39%

WALKER BUILDING
Redevelopment Study
Marlborough, MA
CONCEPT DESIGN COST REPORT
January 17, 2017

Hotel - Summary

			GFA	62,480
		Total	$/sf	%
E20 Furnishings		**$319,590**	**$5.12**	**2.54%**
E2010 Fixed Furnishings		$319,590	$5.12	2.54%
E2020 Loose Furnishings		$0	$0.00	0.00%
F10 Special Construction		**$0**	**$0.00**	**0.00%**
F1010 Special Structures		$0	$0.00	0.00%
F1020 Integrated Construction		$0	$0.00	0.00%
F1030 Special Construction Systems and Facilities		$0	$0.00	0.00%
F20 Selective Building Demolition		**$697,464**	**$11.16**	**5.55%**
F2010 Building Elements Demolition		$697,464	$11.16	5.55%
F2020 Hazardous Components Abatement		$0	$0.00	0.00%
TOTAL BUILDING CONSTRUCTION		**$10,466,895**	**$167.52**	**83.27%**
G10 Site Preparation		**$17,500**	**$0.28**	**0.14%**
G1010 Site Clearing and Demolition		$10,000	$0.16	0.08%
G1030 Site Earthwork		$7,500	$0.12	0.06%
G1040 Hazardous Waste Remediation		$0	$0.00	0.00%
G20 Site Improvement		**$95,000**	**$1.52**	**0.76%**
G2010 Roadways and Parking Lots		$0	$0.00	0.00%
G2030 Pedestrian Paving		$40,000	$0.64	0.32%
G2040 Site Development		$25,000	$0.40	0.20%
G2050 Landscaping		$30,000	$0.48	0.24%
G30 Site Mechanical		**$105,500**	**$1.69**	**0.84%**
G3010 Mechanical Utilities		$105,500	$1.69	0.84%
G40 Site Electrical		**$79,500**	**$1.27**	**0.63%**
G4010 Electrical Utilities and Site Lighting		$79,500	$1.27	0.63%
G90 Other Site Construction		**$0**	**$0.00**	**0.00%**
G9010 Service and Pedestrian Tunnels		$0	$0.00	0.00%
G9090 Other Site Systems		$0	$0.00	0.00%
Total Site Construction		**$297,500**	**$4.76**	**2.37%**
TOTAL BUILDING & SITE		**$10,764,395**	**$172.29**	**85.64%**
Markups		**$1,805,398**	**$28.90**	**14.36%**
General Conditions				
General conditions and project requirements	11.15%	$1,200,000	$19.21	9.55%
Bond and insurance	2.00%	$239,288	$3.83	1.90%
Building permit	0.00%	$0	$0.00	0.00%
Overhead and profit				
General contractor's head office overhead and profit	3.00%	$366,110	$5.86	2.91%
PLANNED CONSTRUCTION COST	**Jan-17**	**$12,569,793**	**$201.18**	**100.00%**
Contingencies/Escalation		**$2,595,222**	**$41.54**	
Contingencies				
Design and pricing contingency	15.00%	$1,885,469	$30.18	
Gmp contingency	0.00%	$0	$0.00	
Escalation				
Escalation to start date (January 2018)	4.91%	$709,753	$11.36	
ESTIMATED CONTRACT AWARD	**Jan-18**	**$15,165,015**	**$242.72**	

Hotel - Estimate Detail

	Quantity	Unit	Rate	Total
A1010 FOUNDATIONS				
Strip footings at elevation change at new Billiards Room				
Excavation	15	CY	80.00	1,200
Remove off site	15	CY	60.00	900
Backfill with gravel	11	CY	60.00	660
Formwork	88	SF	11.00	968
Reinforcement	360	LB	1.30	468
Concrete	4	CY	180.75	723
Strip footings at elevation change at new Lounge Area				
Excavation	28	CY	80.00	2,240
Remove off site	28	CY	60.00	1,680
Backfill with gravel	20	CY	60.00	1,200
Formwork	165	SF	11.00	1,815
Reinforcement	720	LB	1.30	936
Concrete	8	CY	180.75	1,446
Strip footings at elevation change at new wheelchair lift				
Excavation	5	CY	80.00	400
Remove off site	5	CY	60.00	300
Backfill with gravel	4	CY	60.00	240
Formwork	28	SF	11.00	308
Reinforcement	90	LB	1.30	117
Concrete	1	CY	180.75	181
Walls at elevation changes at Billiards Room				
Formwork	264	SF	12.00	3,168
Reinforcement	660	LB	1.30	858
Concrete	3	CY	186.25	559
Waterproofing, mastic	132	SF	2.00	264
Insulation	132	SF	1.75	231
Walls at elevation changes at Lounge Area				
Formwork	495	SF	12.00	5,940
Reinforcement	1,238	LB	1.30	1,609
Concrete	6	CY	186.25	1,118
Waterproofing, mastic	248	SF	2.00	496
Insulation	248	SF	1.75	434
Walls at elevation changes at wheelchair lift				
Formwork	294	SF	12.00	3,528
Reinforcement	735	LB	1.30	956
Concrete	5	CY	186.25	931
Waterproofing, mastic	147	SF	2.00	294
Insulation	147	SF	1.75	257
Miscellaneous				
Miscellaneous concrete costs - premium for pump grade concrete mix and pump	27	CY	45.00	1,215
Subtotal				**$37,640**

	Quantity	Unit	Rate	Total
A1020 SPECIAL FOUNDATIONS				
Underpinning				
At Billiards Room	3	CY	3,200.00	9,600
At wheelchair lift	4	CY	3,200.00	12,800
At elevator	7	CY	3,200.00	22,400
Subtotal				**$44,800**
A1030 SLAB ON GRADE				
Slab on grade at Billiards Room				
Excavate to reduce level	172	CY	80.00	13,760
Remove excavated material off site	172	CY	60.00	10,320
Gravel fill	57	CY	60.00	3,420
Rigid insulation under slab on grade	1,526	SF	1.75	2,671
Vapor barrier	1,526	SF	0.40	610
Mesh reinforcing 15% lap	1,755	SF	0.85	1,492
Reinforcement - dowel to existing	35	EA	35.00	1,225
Concrete in slab, complete	24	CY	175.25	4,206
Finishing and curing	1,526	SF	1.50	2,289
Control and construction joints	1,526	SF	0.50	763
Perimeter joints	154	LF	3.00	462
Slab on grade at Lounge				
Gravel fill to raise level	142	CY	60.00	8,520
Rigid insulation under slab on grade	1,377	SF	1.75	2,410
Vapor barrier	1,377	SF	0.40	551
Mesh reinforcing 15% lap	1,584	SF	0.85	1,346
Reinforcement - dowel to existing	35	EA	35.00	1,225
Concrete in slab, complete	18	CY	175.25	3,155
Finishing and curing	1,377	SF	1.50	2,066
Control and construction joints	1,377	SF	0.50	689
Perimeter joints	154	LF	3.00	462
Slab on grade at wheelchair lift and elevator				
Excavate to reduce level	27	CY	80.00	2,160
Remove excavated material off site	27	CY	60.00	1,620
Gravel fill	18	CY	60.00	1,080
Rigid insulation under slab on grade	475	SF	1.75	831
Vapor barrier	475	SF	0.40	190
Mesh reinforcing 15% lap	546	SF	0.85	464
Reinforcement - dowel to existing	14	EA	35.00	490
Concrete in slab, complete	7	CY	175.25	1,227
Finishing and curing	475	SF	1.50	713
Control and construction joints	475	SF	0.50	238
Elevator/Escalator pit				
Excavation	62	CY	80.00	4,960
Remove excavated material off site	62	CY	60.00	3,720
Backfill with gravel	28	CY	60.00	1,680
Formwork to slab edge	92	SF	11.00	1,012
Reinforcement in slab	720	LB	1.30	936

	Quantity	Unit	Rate	Total
Concrete in slab	8	CY	180.75	1,446
Formwork to pit walls	306	SF	12.00	3,672
Reinforcement	765	LB	1.30	995
Concrete in pit walls	11	CY	186.25	2,049
Cementitious waterproofing to elevator pit	444	SF	12.00	5,328
Miscellaneous				
Miscellaneous concrete costs - premium for pump grade concrete mix and pump	68	CY	25.00	1,700
Existing slab on grade				
Patching existing surface after demolition	12,242	SF	0.25	3,061
Subtotal				**$101,214**
B1010 FLOOR CONSTRUCTION				
Steel construction				
Floor framing				
W sections in reframing new main lobby and restaurant	32	T	6,000.00	192,000
W sections in framing at elevator openings	2	LOC	4,000.00	8,000
Shear studs	1,423	EA	3.75	5,336
Bent plate in pour stop	22	LF	20.00	440
Metal decking				
Metal decking at lobby/restaurant reframing	7,115	SF	4.25	30,239
Concrete construction				
Concrete topping to floors at Lobby				
Mesh reinforcing 15% lap	8,182	SF	0.85	6,955
Reinforcement - dowel to existing	125	EA	35.00	4,375
Concrete topping	111	CY	175.25	19,453
Finishing and curing	7,115	SF	1.50	10,673
Control and construction joints	7,115	SF	0.50	3,558
Existing concrete topping				
Patching after demolition, including infilling opening	39,745	SF	0.25	9,936
Miscellaneous concrete costs				
Premium for pump grade concrete mix and pump	111	CY	17.50	1,943
Added cost for lightweight concrete	111	CY	27.00	2,997
Masonry wall - load bearing				
Included in Partitions				
Miscellaneous				
Fireproofing steel	7,115	SF	2.20	15,653
Fire stopping	46,860	SF	0.30	14,058
Equipment pads	250	SF	25.00	6,250
Subtotal				**$331,866**
B1020 ROOF CONSTRUCTION				
Steel construction				
Steel members in roof framing				
Modifications to existing	1	LS	30,000.00	30,000
Subtotal				**$30,000**

		Quantity	Unit	Rate	Total
B2010 EXTERIOR WALL					
Interior face of exterior wall					
Furring		24,980	SF	2.50	62,450
Insulation		24,980	SF	3.00	74,940
Air barrier		24,980	SF	5.00	124,900
Drywall lining to interior face of stud backup		24,980	SF	3.00	74,940
Exterior skin - brick					
Wash		24,980	SF	2.00	49,960
Repoint, assume 15%		3,747	SF	15.00	56,205
Exterior skin - metal panel/wood					
Allow for repairs and paint to cornice work		1	LS	50,000.00	50,000
Miscellaneous					
Scaffolding to exterior wall		36,800	SF	1.50	55,200
Rough blocking		5,440	LF	3.00	16,320
	Subtotal				**$564,915**
B2020 WINDOWS					
Aluminum windows and glazing					
Windows, glazed					
Complete		168	SF	85.00	14,280
Aluminum storefront					
Storefront system, glazed					
Complete		612	SF	90.00	55,080
Ancillaries					
Backer rod and double sealant		8,590	LF	4.50	38,655
Wood blocking at openings		310	LF	3.00	930
Interior trim		8,590	LF	10.00	85,900
	Subtotal				**$194,845**
B2030 EXTERIOR DOORS					
Aluminum doors					
Double leaf					
Complete		4	PR	7,000.00	28,000
Miscellaneous					
Added cost for door operators		2	EA	4,000.00	8,000
	Subtotal				**$36,000**
B3010 ROOF COVERING					
Slate roofing					
Allow for repairs and flashing work		21,868	SF	5.50	120,274
	Subtotal				**$120,274**
B3020 ROOF OPENINGS					
Roof hatch/ vents		1	LS	2,500.00	2,500
	Subtotal				**$2,500**

	Quantity	Unit	Rate	Total
C1010 PARTITIONS				
Partitions, drywall				
Standard	38,558	SF	12.00	462,696
Infill existing doors	182	SF	24.00	4,368
Window walls and borrowed lights				
Glass partition , aluminum, complete	450	SF	60.00	27,000
Rails and handrails, painted metal				
Rails at access ramps	20	LF	180.00	3,600
Handrails at access ramps	50	LF	50.00	2,500
Miscellaneous				
Sealants and caulking at partitions	62,480	SF	0.35	21,868
Rough blocking	5,960	LF	3.00	17,880
Subtotal				**$539,912**
C1020 INTERIOR DOORS				
Wood doors				
Single leaf				
Complete	130	EA	2,000.00	260,000
Double leaf				
Complete	3	PR	3,400.00	10,200
Aluminum doors				
Double leaf door				
Complete	2	EA	7,000.00	14,000
Specialty doors				
Allowance for miscellaneous access doors	18	EA	400.00	7,200
Miscellaneous				
Added cost for door operators	2	EA	4,000.00	8,000
Paint to door and frame	136	EA	120.00	16,320
Sealants and caulking	133	EA	90.00	11,970
Wood blocking at openings	133	EA	80.00	10,640
Subtotal				**$338,330**
C1030 SPECIALTIES				
Specialties				
Toilet partitions, phenolic, handicapped	2	EA	1,200.00	2,400
Toilet partitions, phenolic, regular	3	EA	1,000.00	3,000
Toilet partitions, phenolic, urinal screens	2	EA	450.00	900
Miscellaneous metal to ceiling supported toilet partitior	5	EA	225.00	1,125
Vanity counters				
Solid surface	188	LF	250.00	47,000
Toilet accessories				
Large toilet	2	EA	2,500.00	5,000
Small toilet	44	EA	1,500.00	66,000
Signage/Directories	62,480	SF	0.45	28,116
Fire extinguishers and cabinets	18	EA	400.00	7,200
Miscellaneous				
Backer panels in electrical closets	1	LS	750.00	750

	Quantity	Unit	Rate	Total
Allowance for miscellaneous metals not identifiable at this stage	62,480	SF	2.20	137,456
Miscellaneous sealants throughout building	62,480	SF	0.35	21,868
Subtotal				**$320,815**
C2010 STAIR CONSTRUCTION				
Feature staircase				
Handrail to feature staircase	25	LF	60.00	1,500
Egress/Internal circulation staircases				
Circulation staircase, including rails and handrails	1	FLT	12,000.00	12,000
Modifications to existing	6	FLT	5,000.00	30,000
Miscellaneous steps and ladders				
Steps at Billiards and lounge	2	LS	3,500.00	7,000
Subtotal				**$50,500**
C2020 STAIR FINISHES				
Stair finishes				
Staircase finish	9	FLT	4,500.00	40,500
Subtotal				**$40,500**
C3010 WALL FINISHES				
Wall finishes				
Allowance	62,480	SF	6.00	374,880
Subtotal				**$374,880**
C3020 FLOOR FINISHES				
Floor finishes				
Hotel flooring	62,480	SF	9.00	562,320
Subtotal				**$562,320**
C3030 CEILING FINISHES				
Ceiling finishes				
Allowance	62,480	SF	9.00	562,320
Subtotal				**$562,320**
D1010 ELEVATORS AND LIFTS				
Passenger elevators				
Passenger elevator, 5 stop	1	EA	175,000.00	175,000
Elevator cab finish	1	EA	15,000.00	15,000
Pit ladders	1	EA	750.00	750
Sill angles	20	LF	35.00	700
Lifts				
Wheelchair lift	1	EA	50,000.00	50,000
Subtotal				**$241,450**

		Quantity	Unit	Rate	Total
D2010 PLUMBING					
Plumbing					
Complete		62,480	SF	13.50	843,480
	Subtotal				**$843,480**
D3010 HVAC					
Hvac					
Complete		62,480	SF	30.00	1,874,400
	Subtotal				**$1,874,400**
D4010 FIRE PROTECTION					
Sprinkler					
Complete		62,480	SF	5.00	312,400
In attic		15,620	SF	4.00	62,480
	Subtotal				**$374,880**
D5010 ELECTRICAL					
Electrical installation					
Complete		62,480	SF	25.00	1,562,000
	Subtotal				**$1,562,000**
E1090 OTHER EQUIPMENT					
Food service and bar equipment					
Complete		1	LS	300,000.00	300,000
	Subtotal				**$300,000**
E2010 FIXED FURNISHINGS					
Miscellaneous					
Bar counter		25	LF	1,500.00	37,500
Reception		15	LF	1,200.00	18,000
Other		1	LS	93,720.00	93,720
Entry mat					
Entry mat and frame		45	SF	50.00	2,250
Window treatments					
Mecho shades		11,208	SF	15.00	168,120
	Subtotal				**$319,590**
E2020 LOOSE FURNISHINGS					
Loose furnishings					
By owner					
	Subtotal				**$0**
F2010 BUILDING ELEMENTS DEMOLITION					
Interior demolition					
Remove partitions and doors		31,260	SF	1.50	46,890
Remove floor and ceiling finishes		62,480	SF GFA	3.00	187,440
Remove casework and specialties		62,480	SF GFA	1.00	62,480

	Quantity	Unit	Rate	Total
Remove MEP systems (excluding ductwork)	62,480	SF GFA	3.00	187,440
Remove ductwork and louvers	62,480	SF GFA	0.50	31,240
Remove stairs at grade	136	SF	12.00	1,632
Remove stairs upper floors	92	SF	18.00	1,656
Remove stage	300	SF	12.00	3,600
Exterior demolition				
concrete stair	55	SF	15.00	825
Structural demolition				
Remove existing concrete slab on grade	3,378	SF	12.00	40,536
Remove elevated slab	8,915	SF	15.00	133,725
Subtotal				**$697,464**

F2020 HAZARDOUS COMPONENTS ABATEMENT

Hazardous materials abatement				
Remove hazardous building materials		EXCLUDED		
Subtotal				**$0**

G1010 SITE CLEARING AND DEMOLITION

Clearing and grubbing				
Allowance for site clearance	1	LS	10,000.00	10,000
Subtotal				**$10,000**

G1030 SITE EARTHWORK

Site earthwork				
Allowance	1	LS	7,500.00	7,500
Subtotal				**$7,500**

G1040 HAZARDOUS WASTE REMEDIATION

Hazardous waste remediation				
Remove contaminated soils		EXCLUDED		
Subtotal				**$0**

G2030 PEDESTRIAN PAVING

Paving				
Allowance	1	LS	40,000.00	40,000
Subtotal				**$40,000**

G2040 SITE DEVELOPMENT

Improvements				
Allowance	1	LS	25,000.00	25,000
Subtotal				**$25,000**

G2050 LANDSCAPING

Planting				
Allowance	1	LS	30,000.00	30,000
Subtotal				**$30,000**

		Quantity	Unit	Rate	Total
G3010 MECHANICAL UTILITIES					
Water supply					
Allowance		1	LS	18,000.00	18,000
Sanitary sewer					
Allowance		1	LS	50,000.00	50,000
Storm drainage					
Allowance		1	LS	30,000.00	30,000
Gas distribution					
Gas connection piping			By Utilities Company		
Connect to existing			By Utilities Company		
Excavation/trenching		1	LS	7,500.00	7,500
	Subtotal				**$105,500**
G4010 ELECTRICAL UTILITIES AND SITE LIGHTING					
Electrical service					
Primary electrical service duct bank		1	LS	15,000.00	15,000
Secondary electrical service duct bank		1	LS	10,000.00	10,000
Manhole		1	EA	4,000.00	4,000
Transformer pad		1	EA	1,500.00	1,500
Site lighting					
Allowance		1	EA	30,000.00	30,000
Site communication					
Communication service duct bank		1	LS	15,000.00	15,000
Manhole		1	EA	4,000.00	4,000
	Subtotal				**$79,500**
MARKUPS					
General conditions and project requirements					
General conditions and requirements		16.0	MTH	75,000	1,200,000
Bond and Insurance		2.00%		11,964,395	239,288
Building permit		0.00%		12,203,683	
Overhead and Profit					
Contractors overhead and profit (Fee)		3.00%		12,203,683	366,110
	Subtotal				**$1,805,398**
CONTINGENCIES/ESCALATION					
Contingencies					
Design contingency		15.00%		12,569,793	1,885,469
GMP contingency		0.00%		14,455,262	
Escalation					
Escalation to Start Date (January 2018)		4.91%		14,455,262	709,753
	Subtotal				**$2,595,222**

WALKER BUILDING
Redevelopment Study
Marlborough, MA
CONCEPT DESIGN COST REPORT
January 17, 2017

Multi-Use - Summary

	Total	GFA $/sf	62,532 %
A10 Foundations	**$253,179**	**$4.05**	**2.03%**
A1010 Foundations	$80,055	$1.28	0.64%
A1020 Special Foundations	$16,000	$0.26	0.13%
A1020 Slab on Grade	$157,124	$2.51	1.26%
A20 Basement Construction	**$0**	**$0.00**	**0.00%**
A2010 Basement Earthwork	$0	$0.00	0.00%
A2020 Basement Walls	$0	$0.00	0.00%
B10 Superstructure	**$220,294**	**$3.52**	**1.77%**
B1010 Floor Construction	$183,034	$2.93	1.47%
B1020 Roof Construction	$37,260	$0.60	0.30%
B20 Exterior Closure	**$772,761**	**$12.36**	**6.19%**
B2010 Exterior Walls	$514,572	$8.23	4.13%
B2020 Windows	$230,189	$3.68	1.85%
B2030 Exterior Doors	$28,000	$0.45	0.22%
B30 Roofing	**$122,972**	**$1.97**	**0.99%**
B3010 Roof Covering	$120,472	$1.93	0.97%
B3020 Roof Openings	$2,500	$0.04	0.02%
C10 Interior Construction	**$726,907**	**$11.62**	**5.83%**
C1010 Partitions	$288,952	$4.62	2.32%
C1020 Interior Doors	$186,060	$2.98	1.49%
C1030 Specialties	$251,895	$4.03	2.02%
C20 Staircases	**$84,300**	**$1.35**	**0.68%**
C2010 Stair Construction	$43,800	$0.70	0.35%
C2020 Stair Finishes	$40,500	$0.65	0.32%
C30 Finishes	**$1,156,842**	**$18.50**	**9.27%**
C3010 Wall Finishes	$187,596	$3.00	1.50%
C3020 Floor Finishes	$468,990	$7.50	3.76%
C3030 Ceiling Finishes	$500,256	$8.00	4.01%
D10 Conveying Systems	**$241,450**	**$3.86**	**1.94%**
D1010 Elevators and Lifts	$241,450	$3.86	1.94%
D1020 Escalators and Moving Walkways	$0	$0.00	0.00%
D1030 Other Conveying Systems	$0	$0.00	0.00%
D20 Plumbing	**$687,852**	**$11.00**	**5.51%**
D2010 Plumbing Complete	$687,852	$11.00	5.51%
D30 Heating, Ventilation and Air Conditioning	**$2,501,280**	**$40.00**	**20.05%**
D3010 HVAC, Complete	$2,501,280	$40.00	20.05%
D40 Fire Protection	**$375,244**	**$6.00**	**3.01%**
D4010 Fire Protection, Complete	$375,244	$6.00	3.01%
D50 Electrical	**$1,782,162**	**$28.50**	**14.29%**
D5010 Electrical, Complete	$1,782,162	$28.50	14.29%
E10 Equipment	**$415,100**	**$6.64**	**3.33%**
E1010 Commercial Equipment	$12,000	$0.19	0.10%
E1020 Institutional Equipment	$0	$0.00	0.00%
E1030 Vehicular Equipment	$0	$0.00	0.00%
E1090 Other Equipment	$403,100	$6.45	3.23%

WALKER BUILDING
Redevelopment Study
Marlborough, MA
CONCEPT DESIGN COST REPORT
January 17, 2017

Multi-Use - Summary

			GFA	62,532
		Total	$/sf	%
E20 Furnishings		**$410,351**	**$6.56**	**3.29%**
E2010 Fixed Furnishings		$410,351	$6.56	3.29%
E2020 Loose Furnishings		$0	$0.00	0.00%
F10 Special Construction		**$0**	**$0.00**	**0.00%**
F1010 Special Structures		$0	$0.00	0.00%
F1020 Integrated Construction		$0	$0.00	0.00%
F1030 Special Construction Systems and Facilities		$0	$0.00	0.00%
F20 Selective Building Demolition		**$632,967**	**$10.12**	**5.07%**
F2010 Building Elements Demolition		$632,967	$10.12	5.07%
F2020 Hazardous Components Abatement		$0	$0.00	0.00%
TOTAL BUILDING CONSTRUCTION		**$10,383,661**	**$166.05**	**83.24%**
G10 Site Preparation		**$25,000**	**$0.40**	**0.20%**
G1010 Site Clearing and Demolition		$15,000	$0.24	0.12%
G1030 Site Earthwork		$10,000	$0.16	0.08%
G1040 Hazardous Waste Remediation		$0	$0.00	0.00%
G20 Site Improvement		**$90,000**	**$1.44**	**0.72%**
G2010 Roadways and Parking Lots		$0	$0.00	0.00%
G2030 Pedestrian Paving		$30,000	$0.48	0.24%
G2040 Site Development		$30,000	$0.48	0.24%
G2050 Landscaping		$30,000	$0.48	0.24%
G30 Site Mechanical		**$105,500**	**$1.69**	**0.85%**
G3010 Mechanical Utilities		$105,500	$1.69	0.85%
G40 Site Electrical		**$69,500**	**$1.11**	**0.56%**
G4010 Electrical Utilities and Site Lighting		$69,500	$1.11	0.56%
G90 Other Site Construction		**$0**	**$0.00**	**0.00%**
G9010 Service and Pedestrian Tunnels		$0	$0.00	0.00%
G9090 Other Site Systems		$0	$0.00	0.00%
Total Site Construction		**$290,000**	**$4.64**	**2.32%**
TOTAL BUILDING & SITE		**$10,673,661**	**$170.69**	**85.56%**
Markups		**$1,800,807**	**$28.80**	**14.44%**
General Conditions				
General conditions and project requirements	11.24%	$1,200,000	$19.19	9.62%
Bond and insurance	2.00%	$237,473	$3.80	1.90%
Building permit	0.00%	$0	$0.00	0.00%
Overhead and profit				
General contractor's head office overhead and profit	3.00%	$363,334	$5.81	2.91%
PLANNED CONSTRUCTION COST	**Jan-17**	**$12,474,468**	**$199.49**	**100.00%**
Contingencies/Escalation		**$2,575,541**	**$41.19**	
Contingencies				
Design and pricing contingency	15.00%	$1,871,170	$29.92	
Gmp contingency	0.00%	$0	$0.00	
Escalation				
Escalation to start date (January 2018)	4.91%	$704,371	$11.26	
ESTIMATED CONTRACT AWARD	**Jan-18**	**$15,050,009**	**$240.68**	

	Quantity	Unit	Rate	Total
A1010 FOUNDATIONS				
Column footings at exterior				
Excavation	58	CY	13.00	754
Remove excavated material off site	58	CY	20.00	1,160
Backfill with gravel	55	CY	37.00	2,035
Formwork	96	SF	11.00	1,056
Reinforcement	270	LB	1.30	351
Concrete	3	CY	180.75	542
Strip footings at exterior				
Excavation	55	CY	11.00	605
Remove off site	55	CY	20.00	1,100
Backfill with gravel	49	CY	37.00	1,813
Formwork	106	SF	11.00	1,166
Reinforcement	540	LB	1.30	702
Concrete	6	CY	180.75	1,085
Strip footings at elevation change at offices/auditorium				
Excavation	15	CY	80.00	1,200
Remove off site	15	CY	60.00	900
Backfill with gravel	11	CY	60.00	660
Formwork	92	SF	11.00	1,012
Reinforcement	360	LB	1.30	468
Concrete	4	CY	180.75	723
Strip footings at elevation change at new wheelchair lift/rest				
Excavation	32	CY	80.00	2,560
Remove off site	32	CY	60.00	1,920
Backfill with gravel	22	CY	60.00	1,320
Formwork	158	SF	11.00	1,738
Reinforcement	900	LB	1.30	1,170
Concrete	10	CY	180.75	1,808
Foundation walls at exterior				
Formwork	424	SF	11.00	4,664
Reinforcement	1,060	LB	1.30	1,378
Concrete	10	CY	186.25	1,863
Waterproofing, mastic	212	SF	2.00	424
Insulation	212	SF	1.75	371
Walls at elevation changes at Office/Auditorium				
Formwork	322	SF	12.00	3,864
Reinforcement	805	LB	1.30	1,047
Concrete	4	CY	186.25	745
Waterproofing, mastic	161	SF	2.00	322
Insulation	161	SF	1.75	282
Walls at elevation changes at wheelchair lift/restrooms				
Formwork	1,659	SF	12.00	19,908
Reinforcement	4,148	LB	1.30	5,392
Concrete	31	CY	186.25	5,774
Waterproofing, mastic	830	SF	2.00	1,660
Insulation	830	SF	1.75	1,453

	Quantity	Unit	Rate	Total
Miscellaneous				
Miscellaneous concrete costs - premium for pump grade concrete mix and pump	68	CY	45.00	3,060
Subtotal				**$80,055**
A1020 SPECIAL FOUNDATIONS				
Underpinning				
At elevator	5	CY	3,200.00	16,000
Subtotal				**$16,000**
A1030 SLAB ON GRADE				
Slab on grade at vestibules				
Gravel fill	6	CY	37.00	222
Rigid insulation under slab on grade	175	SF	1.75	306
Vapor barrier	175	SF	0.40	70
Mesh reinforcing 15% lap	201	SF	0.85	171
Concrete in slab, complete	3	CY	175.25	526
Finishing and curing	175	SF	1.50	263
Control and construction joints	175	SF	0.50	88
Perimeter joints	78	LF	3.00	234
Slab on grade at Offices/Auditorium				
Excavate to reduce level	125	CY	80.00	10,000
Remove excavated material off site	125	CY	60.00	7,500
Gravel fill	53	CY	60.00	3,180
Rigid insulation under slab on grade	1,444	SF	1.75	2,527
Vapor barrier	1,444	SF	0.40	578
Mesh reinforcing 15% lap	1,661	SF	0.85	1,412
Reinforcement - dowel to existing	28	EA	35.00	980
Concrete in slab, complete	18	CY	175.25	3,155
Finishing and curing	1,444	SF	1.50	2,166
Control and construction joints	1,444	SF	0.50	722
Perimeter joints	154	LF	3.00	462
Slab on grade at Restrooms				
Excavate to reduce level	487	CY	80.00	38,960
Remove excavated material off site	487	CY	60.00	29,220
Gravel fill	122	CY	60.00	7,320
Rigid insulation under slab on grade	1,300	SF	1.75	2,275
Vapor barrier	1,300	SF	0.40	520
Mesh reinforcing 15% lap	1,495	SF	0.85	1,271
Reinforcement - dowel to existing	60	EA	35.00	2,100
Concrete in slab, complete	24	CY	175.25	4,206
Finishing and curing	1,300	SF	1.50	1,950
Control and construction joints	1,300	SF	0.50	650
Perimeter joints	176	LF	3.00	528
Slab on grade at wheelchair lift				
Excavate to reduce level	6	CY	80.00	480
Remove excavated material off site	6	CY	60.00	360

	Quantity	Unit	Rate	Total
Gravel fill	6	CY	60.00	360
Rigid insulation under slab on grade	153	SF	1.75	268
Vapor barrier	153	SF	0.40	61
Mesh reinforcing 15% lap	176	SF	0.85	150
Reinforcement - dowel to existing	10	EA	35.00	350
Concrete in slab, complete	2	CY	175.25	351
Finishing and curing	153	SF	1.50	230
Control and construction joints	153	SF	0.50	77
Elevator/Escalator pit				
Excavation	62	CY	80.00	4,960
Remove excavated material off site	62	CY	60.00	3,720
Backfill with gravel	28	CY	60.00	1,680
Formwork to slab edge	92	SF	11.00	1,012
Reinforcement in slab	720	LB	1.30	936
Concrete in slab	8	CY	180.75	1,446
Formwork to pit walls	306	SF	12.00	3,672
Reinforcement	765	LB	1.30	995
Concrete in pit walls	11	CY	186.25	2,049
Cementitious waterproofing to elevator pit	444	SF	12.00	5,328
Miscellaneous				
Miscellaneous concrete costs - premium for pump grade concrete mix and pump	63	CY	30.00	1,890
Existing slab on grade				
Patching existing surface after demolition	12,749	SF	0.25	3,187
Subtotal				**$157,124**

B1010 FLOOR CONSTRUCTION

Steel construction				
Floor framing				
W sections in reframing restaurant	14	T	6,000.00	84,000
W sections in framing at elevator openings	3	LOC	4,000.00	12,000
Shear studs	640	EA	3.75	2,400
Metal decking				
Metal decking at restaurant reframing	3,200	SF	4.25	13,600
Wood construction				
Wood floor structure to platform, stage, etc.	400	SF	25.00	10,000
Concrete construction				
Concrete topping to floors at Lobby				
Mesh reinforcing 15% lap	3,680	SF	0.85	3,128
Reinforcement - dowel to existing	64	EA	35.00	2,240
Concrete topping	50	CY	175.25	8,763
Finishing and curing	3,200	SF	1.50	4,800
Control and construction joints	3,200	SF	0.50	1,600
Existing concrete topping				
Patching after demolition, including infilling opening	43,686	SF	0.25	10,922
Miscellaneous concrete costs				
Premium for pump grade concrete mix and pump	50	CY	17.50	875

	Quantity	Unit	Rate	Total
Added cost for lightweight concrete	50	CY	27.00	1,350
Masonry wall - load bearing				
Included in Partitions				
Miscellaneous				
Fireproofing steel	3,200	SF	2.20	7,040
Fire stopping	46,886	SF	0.30	14,066
Equipment pads	250	SF	25.00	6,250
Subtotal				**$183,034**
B1020 ROOF CONSTRUCTION				
Steel construction				
Steel members in roof framing				
Modifications to existing	1	LS	30,000.00	30,000
Vestibules	1	T	6,000.00	6,000
Metal decking				
Metal decking, standard	175	SF	5.00	875
Masonry wall - load bearing				
Included in partitions				
Miscellaneous				
Fireproofing steel	175	SF	2.20	385
Subtotal				**$37,260**
B2010 EXTERIOR WALL				
Interior face of exterior wall				
Furring	25,105	SF	2.50	62,763
Insulation	25,105	SF	3.00	75,315
Air barrier	25,105	SF	5.00	125,525
Drywall lining to interior face of stud backup	5,278	SF	3.00	15,834
Exterior skin - brick				
Wash	25,105	SF	2.00	50,210
Repoint, assume 15%	3,766	SF	15.00	56,490
Exterior skin - metal panel/wood				
Allow for repairs and paint to cornice work	1	LS	50,000.00	50,000
Eaves/fascia work, 2' overhang at vestibules	54	LF	60.00	3,240
Light gauge metal support to eaves	54	LF	16.00	864
Plywood sheathing at eaves	135	SF	4.00	540
Insulation at eaves	135	SF	2.00	270
Air barrier	135	SF	5.00	675
Miscellaneous				
Scaffolding to exterior wall	37,476	SF	1.50	56,214
Rough blocking	5,544	LF	3.00	16,632
Subtotal				**$514,572**
B2020 WINDOWS				
Aluminum windows and glazing				
Windows, glazed				
Complete	168	SF	85.00	14,280

		Quantity	Unit	Rate	Total
Aluminum storefront					
Storefront system, glazed					
Complete		960	SF	90.00	86,400
Ancillaries					
Backer rod and double sealant		8,846	LF	4.50	39,807
Wood blocking at openings		414	LF	3.00	1,242
Interior trim		8,846	LF	10.00	88,460
	Subtotal				**$230,189**
B2030 EXTERIOR DOORS					
Aluminum doors					
Double leaf					
Complete		4	PR	7,000.00	28,000
	Subtotal				**$28,000**
B3010 ROOF COVERING					
Slate roofing					
Allow for repairs and flashing work		21,904	SF	5.50	120,472
	Subtotal				**$120,472**
B3020 ROOF OPENINGS					
Roof hatch/ vents		1	LS	2,500.00	2,500
	Subtotal				**$2,500**
C1010 PARTITIONS					
Partitions, drywall					
Standard		18,876	SF	12.00	226,512
Infill existing doors		168	SF	24.00	4,032
Window walls and borrowed lights					
Glass partition , aluminum, complete		450	SF	60.00	27,000
Miscellaneous					
Sealants and caulking at partitions		62,532	SF	0.35	21,886
Rough blocking		3,174	LF	3.00	9,522
	Subtotal				**$288,952**
C1020 INTERIOR DOORS					
Wood doors					
Single leaf					
Complete		57	EA	2,000.00	114,000
Double leaf					
Complete		3	PR	3,700.00	11,100
Aluminum doors					
Double leaf door					
Complete		4	EA	7,000.00	28,000
Specialty doors					
Allowance for miscellaneous access doors		18	EA	400.00	7,200

	Quantity	Unit	Rate	Total
Miscellaneous				
Added cost for door operators	2	EA	4,000.00	8,000
Paint to door and frame	63	EA	120.00	7,560
Sealants and caulking	60	EA	90.00	5,400
Wood blocking at openings	60	EA	80.00	4,800
Subtotal				**$186,060**
C1030 SPECIALTIES				
Specialties				
Toilet partitions, phenolic, handicapped	4	EA	1,200.00	4,800
Toilet partitions, phenolic, regular	6	EA	1,000.00	6,000
Toilet partitions, phenolic, urinal screens	4	EA	450.00	1,800
Miscellaneous metal to ceiling supported toilet partitior	10	EA	225.00	2,250
Vanity counters				
Solid surface	126	LF	250.00	31,500
Toilet accessories				
Medium toilet	4	EA	2,500.00	10,000
Signage/Directories	62,532	SF	0.45	28,139
Fire extinguishers and cabinets	18	EA	400.00	7,200
Miscellaneous				
Backer panels in electrical closets	1	LS	750.00	750
Allowance for miscellaneous metals not identifiable at this stage	62,532	SF	2.20	137,570
Miscellaneous sealants throughout building	62,532	SF	0.35	21,886
Subtotal				**$251,895**
C2010 STAIR CONSTRUCTION				
Feature staircase				
Handrail to feature staircase	30	LF	60.00	1,800
Egress/Internal circulation staircases				
Circulation staircase, including rails and handrails	1	FLT	12,000.00	12,000
Modifications to existing	6	FLT	5,000.00	30,000
Subtotal				**$43,800**
C2020 STAIR FINISHES				
Stair finishes				
Staircase finish	9	FLT	4,500.00	40,500
Subtotal				**$40,500**
C3010 WALL FINISHES				
Wall finishes				
Allowance	62,532	SF	3.00	187,596
Subtotal				**$187,596**

		Quantity	Unit	Rate	Total
C3020 FLOOR FINISHES					
Floor finishes					
Allowance		62,532	7	7.50	468,990
	Subtotal				**$468,990**
C3030 CEILING FINISHES					
Ceiling finishes					
Allowance		62,532	SF	8.00	500,256
	Subtotal				**$500,256**
D1010 ELEVATORS AND LIFTS					
Passenger elevators					
Passenger elevator, 5 stop		1	EA	175,000.00	175,000
Elevator cab finish		1	EA	15,000.00	15,000
Pit ladders		1	EA	750.00	750
Sill angles		20	LF	35.00	700
Lifts					
Wheelchair lift		1	EA	50,000.00	50,000
	Subtotal				**$241,450**
D2010 PLUMBING					
Plumbing, complete					
Complete		62,532	SF	11.00	687,852
	Subtotal				**$687,852**
D3010 HVAC					
Hvac					
Complete		62,532	SF	40.00	2,501,280
	Subtotal				**$2,501,280**
D4010 FIRE PROTECTION					
Sprinkler					
Complete		62,532	SF	5.00	312,660
In attic		15,646	SF	4.00	62,584
	Subtotal				**$375,244**
D5010 ELECTRICAL					
Electrical installation					
Complete		62,532	SF	28.50	1,782,162
	Subtotal				**$1,782,162**
E1010 COMMERCIAL EQUIPMENT					
Laundry equipment					
Commercial washer		2	EA	3,000.00	6,000
Commercial dryer		2	EA	3,000.00	6,000
	Subtotal				**$12,000**

		Quantity	Unit	Rate	Total
E1090 OTHER EQUIPMENT					
Food service and bar equipment					
Complete		1	LS	300,000.00	300,000
Residential equipment					
Commercial space		1	LS	3,000.00	3,000
Kitchens		22	LOC	4,550.00	100,100
	Subtotal				**$403,100**
E2010 FIXED FURNISHINGS					
Miscellaneous					
Restaurant		1	LF	40,000.00	40,000
Other		1	LS	31,266.00	31,266
Residential kitchen casework					
Base storage units		352	LF	200.00	70,400
Counter top, plastic laminate		352	LF	100.00	35,200
Wall storage units		352	LF	160.00	56,320
Entry mat					
Entry mat and frame		120	SF	50.00	6,000
Window treatment					
Mecho shades		11,411	SF	15.00	171,165
	Subtotal				**$410,351**
E2020 LOOSE FURNISHINGS					
Loose furnishings					
By owner					
	Subtotal				**$0**
F2010 BUILDING ELEMENTS DEMOLITION					
Interior demolition					
Remove partitions and doors		31,260	SF	1.50	46,890
Remove floor and ceiling finishes		62,480	SF GFA	3.00	187,440
Remove casework and specialties		62,480	SF GFA	1.00	62,480
Remove MEP systems (excluding ductwork)		62,480	SF GFA	3.00	187,440
Remove ductwork and louvers		62,480	SF GFA	0.50	31,240
Remove stairs at grade		136	SF	12.00	1,632
Remove stairs upper floors		92	SF	18.00	1,656
Remove stage		300	SF	12.00	3,600
Exterior demolition					
concrete stair		55	SF	15.00	825
Structural demolition					
Remove existing concrete slab on grade		2,897	SF	12.00	34,764
Remove elevated slab		5,000	SF	15.00	75,000
	Subtotal				**$632,967**

	Quantity	Unit	Rate	Total
F2020 HAZARDOUS COMPONENTS ABATEMENT				
Hazardous materials abatement				
Remove hazardous building materials		EXCLUDED		
Subtotal				**$0**
G1010 SITE CLEARING AND DEMOLITION				
Clearing and grubbing				
Allowance for site clearance	1	LS	15,000.00	15,000
Subtotal				**$15,000**
G1030 SITE EARTHWORK				
Site earthwork				
Allowance	1	LS	10,000.00	10,000
Subtotal				**$10,000**
G1040 HAZARDOUS WASTE REMEDIATION				
Hazardous waste remediation				
Remove contaminated soils		EXCLUDED		
Subtotal				**$0**
G2030 PEDESTRIAN PAVING				
Paving				
Allowance	1	LS	30,000.00	30,000
Subtotal				**$30,000**
G2040 SITE DEVELOPMENT				
Improvements				
Allowance	1	LS	30,000.00	30,000
Subtotal				**$30,000**
G2050 LANDSCAPING				
Planting				
Allowance	1	LS	30,000.00	30,000
Subtotal				**$30,000**
G3010 MECHANICAL UTILITIES				
Water supply				
Allowance	1	LS	18,000.00	18,000
Sanitary sewer				
Allowance	1	LS	50,000.00	50,000
Storm drainage				
Allowance	1	LS	30,000.00	30,000
Gas distribution				
Gas connection piping		By Utilities Company		
Connect to existing		By Utilities Company		
Excavation/trenching	1	LS	7,500.00	7,500
Subtotal				**$105,500**

		Quantity	Unit	Rate	Total
G4010 ELECTRICAL UTILITIES AND SITE LIGHTING					
Electrical service					
Primary electrical service duct bank		1	LS	15,000.00	15,000
Secondary electrical service duct bank		1	LS	10,000.00	10,000
Manhole		1	EA	4,000.00	4,000
Transformer pad		1	EA	1,500.00	1,500
Site lighting					
Allowance		1	EA	20,000.00	20,000
Site communication					
Communication service duct bank		1	LS	15,000.00	15,000
Manhole		1	EA	4,000.00	4,000
	Subtotal				**$69,500**
MARKUPS					
General conditions and project requirements					
General conditions and requirements		16.0	MTH	75,000	1,200,000
Bond and Insurance		2.00%		11,873,661	237,473
Building permit		0.00%		12,111,134	
Overhead and Profit					
Contractors overhead and profit (Fee)		3.00%		12,111,134	363,334
	Subtotal				**$1,800,807**
CONTINGENCIES/ESCALATION					
Contingencies					
Design contingency		15.00%		12,474,468	1,871,170
GMP contingency		0.00%		14,345,638	
Escalation					
Escalation to Start Date (January 2018)		4.91%		14,345,638	704,371
	Subtotal				**$2,575,541**

WALKER BUILDING
Redevelopment Study
Marlborough, MA
CONCEPT DESIGN COST REPORT
January 17, 2017

Office - Summary

		GFA	62,532
	Total	$/sf	%
A10 Foundations	**$253,173**	**$4.05**	**2.23%**
A1010 Foundations	$80,055	$1.28	0.70%
A1020 Special Foundations	$16,000	$0.26	0.14%
A1020 Slab on Grade	$157,118	$2.51	1.38%
A20 Basement Construction	**$0**	**$0.00**	**0.00%**
A2010 Basement Earthwork	$0	$0.00	0.00%
A2020 Basement Walls	$0	$0.00	0.00%
B10 Superstructure	**$81,283**	**$1.30**	**0.72%**
B1010 Floor Construction	$44,023	$0.70	0.39%
B1020 Roof Construction	$37,260	$0.60	0.33%
B20 Exterior Closure	**$820,963**	**$13.13**	**7.23%**
B2010 Exterior Walls	$577,054	$9.23	5.08%
B2020 Windows	$211,909	$3.39	1.87%
B2030 Exterior Doors	$32,000	$0.51	0.28%
B30 Roofing	**$122,774**	**$1.96**	**1.08%**
B3010 Roof Covering	$120,274	$1.92	1.06%
B3020 Roof Openings	$2,500	$0.04	0.02%
C10 Interior Construction	**$673,791**	**$10.78**	**5.93%**
C1010 Partitions	$250,102	$4.00	2.20%
C1020 Interior Doors	$181,950	$2.91	1.60%
C1030 Specialties	$241,739	$3.87	2.13%
C20 Staircases	**$88,800**	**$1.42**	**0.78%**
C2010 Stair Construction	$43,800	$0.70	0.39%
C2020 Stair Finishes	$45,000	$0.72	0.40%
C30 Finishes	**$859,815**	**$13.75**	**7.57%**
C3010 Wall Finishes	$109,431	$1.75	0.96%
C3020 Floor Finishes	$375,192	$6.00	3.30%
C3030 Ceiling Finishes	$375,192	$6.00	3.30%
D10 Conveying Systems	**$216,450**	**$3.46**	**1.91%**
D1010 Elevators and Lifts	$216,450	$3.46	1.91%
D1020 Escalators and Moving Walkways	$0	$0.00	0.00%
D1030 Other Conveying Systems	$0	$0.00	0.00%
D20 Plumbing	**$375,192**	**$6.00**	**3.30%**
D2010 Plumbing Complete	$375,192	$6.00	3.30%
D30 Heating, Ventilation and Air Conditioning	**$2,626,344**	**$42.00**	**23.12%**
D3010 HVAC, Complete	$2,626,344	$42.00	23.12%
D40 Fire Protection	**$375,140**	**$6.00**	**3.30%**
D4010 Fire Protection, Complete	$375,140	$6.00	3.30%
D50 Electrical	**$2,001,024**	**$32.00**	**17.61%**
D5010 Electrical, Complete	$2,001,024	$32.00	17.61%
E10 Equipment	**$6,000**	**$0.10**	**0.05%**
E1010 Commercial Equipment	$0	$0.00	0.00%
E1020 Institutional Equipment	$0	$0.00	0.00%
E1030 Vehicular Equipment	$0	$0.00	0.00%
E1090 Other Equipment	$6,000	$0.10	0.05%

WALKER BUILDING
Redevelopment Study
Marlborough, MA
CONCEPT DESIGN COST REPORT
January 17, 2017

Office - Summary

		Total	GFA 62,532 $/sf	%
E20 Furnishings		**$236,365**	**$3.78**	**2.08%**
E2010 Fixed Furnishings		$236,365	$3.78	2.08%
E2020 Loose Furnishings		$0	$0.00	0.00%
F10 Special Construction		**$0**	**$0.00**	**0.00%**
F1010 Special Structures		$0	$0.00	0.00%
F1020 Integrated Construction		$0	$0.00	0.00%
F1030 Special Construction Systems and Facilities		$0	$0.00	0.00%
F20 Selective Building Demolition		**$587,067**	**$9.39**	**5.17%**
F2010 Building Elements Demolition		$587,067	$9.39	5.17%
F2020 Hazardous Components Abatement		$0	$0.00	0.00%
TOTAL BUILDING CONSTRUCTION		**$9,324,181**	**$149.11**	**82.07%**
G10 Site Preparation		**$25,000**	**$0.40**	**0.22%**
G1010 Site Clearing and Demolition		$15,000	$0.24	0.13%
G1030 Site Earthwork		$10,000	$0.16	0.09%
G1040 Hazardous Waste Remediation		$0	$0.00	0.00%
G20 Site Improvement		**$90,000**	**$1.44**	**0.79%**
G2010 Roadways and Parking Lots		$0	$0.00	0.00%
G2030 Pedestrian Paving		$30,000	$0.48	0.26%
G2040 Site Development		$30,000	$0.48	0.26%
G2050 Landscaping		$30,000	$0.48	0.26%
G30 Site Mechanical		**$105,500**	**$1.69**	**0.93%**
G3010 Mechanical Utilities		$105,500	$1.69	0.93%
G40 Site Electrical		**$69,500**	**$1.11**	**0.61%**
G4010 Electrical Utilities and Site Lighting		$69,500	$1.11	0.61%
G90 Other Site Construction		**$0**	**$0.00**	**0.00%**
G9010 Service and Pedestrian Tunnels		$0	$0.00	0.00%
G9090 Other Site Systems		$0	$0.00	0.00%
Total Site Construction		**$290,000**	**$4.64**	**2.55%**
TOTAL BUILDING & SITE		**$9,614,181**	**$153.75**	**84.62%**
Markups		**$1,747,198**	**$27.94**	**15.38%**
General Conditions				
General conditions and project requirements	12.48%	$1,200,000	$19.19	10.56%
Bond and insurance	2.00%	$216,284	$3.46	1.90%
Building permit	0.00%	$0	$0.00	0.00%
Overhead and profit				
General contractor's head office overhead and profit	3.00%	$330,914	$5.29	2.91%
PLANNED CONSTRUCTION COST	**Jan-17**	**$11,361,379**	**$181.69**	**100.00%**
Contingencies/Escalation		**$2,345,727**	**$37.51**	
Contingencies				
Design and pricing contingency	15.00%	$1,704,207	$27.25	
Gmp contingency	0.00%	$0	$0.00	
Escalation				
Escalation to start date (January 2018)	4.91%	$641,520	$10.26	
ESTIMATED CONTRACT AWARD	**Jan-18**	**$13,707,106**	**$219.20**	

	Quantity	Unit	Rate	Total
A1010 FOUNDATIONS				
Column footings at exterior				
Excavation	58	CY	13.00	754
Remove excavated material off site	58	CY	20.00	1,160
Backfill with gravel	55	CY	37.00	2,035
Formwork	96	SF	11.00	1,056
Reinforcement	270	LB	1.30	351
Concrete	3	CY	180.75	542
Strip footings at exterior				
Excavation	55	CY	11.00	605
Remove off site	55	CY	20.00	1,100
Backfill with gravel	49	CY	37.00	1,813
Formwork	106	SF	11.00	1,166
Reinforcement	540	LB	1.30	702
Concrete	6	CY	180.75	1,085
Strip footings at elevation change at offices/meeting hall				
Excavation	15	CY	80.00	1,200
Remove off site	15	CY	60.00	900
Backfill with gravel	11	CY	60.00	660
Formwork	92	SF	11.00	1,012
Reinforcement	360	LB	1.30	468
Concrete	4	CY	180.75	723
Strip footings at elevation change at new wheelchair lift/rest				
Excavation	32	CY	80.00	2,560
Remove off site	32	CY	60.00	1,920
Backfill with gravel	22	CY	60.00	1,320
Formwork	158	SF	11.00	1,738
Reinforcement	900	LB	1.30	1,170
Concrete	10	CY	180.75	1,808
Foundation walls at exterior				
Formwork	424	SF	11.00	4,664
Reinforcement	1,060	LB	1.30	1,378
Concrete	10	CY	186.25	1,863
Waterproofing, mastic	212	SF	2.00	424
Insulation	212	SF	1.75	371
Walls at elevation changes at Office/Meeting Room				
Formwork	322	SF	12.00	3,864
Reinforcement	805	LB	1.30	1,047
Concrete	4	CY	186.25	745
Waterproofing, mastic	161	SF	2.00	322
Insulation	161	SF	1.75	282
Walls at elevation changes at wheelchair lift/restrooms				
Formwork	1,659	SF	12.00	19,908
Reinforcement	4,148	LB	1.30	5,392
Concrete	31	CY	186.25	5,774
Waterproofing, mastic	830	SF	2.00	1,660
Insulation	830	SF	1.75	1,453

	Quantity	Unit	Rate	Total
Miscellaneous				
Miscellaneous concrete costs - premium for pump grade concrete mix and pump	68	CY	45.00	3,060
Subtotal				**$80,055**
A1020 SPECIAL FOUNDATIONS				
Underpinning				
At elevator	5	CY	3,200.00	16,000
Subtotal				**$16,000**
A1030 SLAB ON GRADE				
Slab on grade at vestibules				
Gravel fill	6	CY	37.00	222
Rigid insulation under slab on grade	175	SF	1.75	306
Vapor barrier	175	SF	0.40	70
Mesh reinforcing 15% lap	201	SF	0.85	171
Concrete in slab, complete	3	CY	175.25	526
Finishing and curing	175	SF	1.50	263
Control and construction joints	175	SF	0.50	88
Perimeter joints	78	LF	3.00	234
Slab on grade at Offices/Meeting				
Excavate to reduce level	125	CY	80.00	10,000
Remove excavated material off site	125	CY	60.00	7,500
Gravel fill	53	CY	60.00	3,180
Rigid insulation under slab on grade	1,444	SF	1.75	2,527
Vapor barrier	1,444	SF	0.40	578
Mesh reinforcing 15% lap	1,661	SF	0.85	1,412
Reinforcement - dowel to existing	28	EA	35.00	980
Concrete in slab, complete	18	CY	175.25	3,155
Finishing and curing	1,444	SF	1.50	2,166
Control and construction joints	1,444	SF	0.50	722
Perimeter joints	154	LF	3.00	462
Slab on grade at Restrooms				
Excavate to reduce level	487	CY	80.00	38,960
Remove excavated material off site	487	CY	60.00	29,220
Gravel fill	122	CY	60.00	7,320
Rigid insulation under slab on grade	1,300	SF	1.75	2,275
Vapor barrier	1,300	SF	0.40	520
Mesh reinforcing 15% lap	1,495	SF	0.85	1,271
Reinforcement - dowel to existing	60	EA	35.00	2,100
Concrete in slab, complete	24	CY	175.25	4,206
Finishing and curing	1,300	SF	1.50	1,950
Control and construction joints	1,300	SF	0.50	650
Perimeter joints	176	LF	3.00	528
Slab on grade at wheelchair lift				
Excavate to reduce level	6	CY	80.00	480
Remove excavated material off site	6	CY	60.00	360

	Quantity	Unit	Rate	Total
Gravel fill	6	CY	60.00	360
Rigid insulation under slab on grade	153	SF	1.75	268
Vapor barrier	153	SF	0.40	61
Mesh reinforcing 15% lap	176	SF	0.85	150
Reinforcement - dowel to existing	10	EA	35.00	350
Concrete in slab, complete	2	CY	175.25	351
Finishing and curing	153	SF	1.50	230
Control and construction joints	153	SF	0.50	77
Elevator/Escalator pit				
Excavation	62	CY	80.00	4,960
Remove excavated material off site	62	CY	60.00	3,720
Backfill with gravel	28	CY	60.00	1,680
Formwork to slab edge	92	SF	11.00	1,012
Reinforcement in slab	720	LB	1.30	936
Concrete in slab	8	CY	180.75	1,446
Formwork to pit walls	306	SF	12.00	3,672
Reinforcement	765	LB	1.30	995
Concrete in pit walls	11	CY	186.25	2,049
Cementitious waterproofing to elevator pit	444	SF	12.00	5,328
Miscellaneous				
Miscellaneous concrete costs - premium for pump grade concrete mix and pump	63	CY	30.00	1,890
Existing slab on grade				
Patching existing surface after demolition	12,723	SF	0.25	3,181
Subtotal				**$157,118**
B1010 FLOOR CONSTRUCTION				
Steel construction				
Floor framing				
W sections in framing at elevator openings	3	LOC	4,000.00	12,000
Concrete construction				
Existing concrete topping				
Patching after demolition, including infilling opening	46,860	SF	0.25	11,715
Masonry wall - load bearing				
Included in Partitions				
Miscellaneous				
Fire stopping	46,860	SF	0.30	14,058
Equipment pads	250	SF	25.00	6,250
Subtotal				**$44,023**
B1020 ROOF CONSTRUCTION				
Steel construction				
Steel members in roof framing				
Modifications to existing	1	LS	30,000.00	30,000
Vestibules	1	T	6,000.00	6,000
Metal decking				
Metal decking, standard	175	SF	5.00	875

		Quantity	Unit	Rate	Total
Masonry wall - load bearing					
Included in partitions					
Miscellaneous					
Fireproofing steel		175	SF	2.20	385
	Subtotal				**$37,260**
B2010 EXTERIOR WALL					
Interior face of exterior wall					
Furring		25,297	SF	2.50	63,243
Insulation		25,297	SF	3.00	75,891
Air barrier		25,297	SF	5.00	126,485
Drywall lining to interior face of stud backup		25,297	SF	3.00	75,891
Exterior skin - brick					
Wash		25,297	SF	2.00	50,594
Repoint, assume 15%		3,795	SF	15.00	56,925
Exterior skin - metal panel/wood					
Allow for repairs and paint to cornice work		1	LS	50,000.00	50,000
Eaves/fascia work, 2' overhang at vestibules		53	LF	60.00	3,180
Light gauge metal support to eaves		53	LF	16.00	848
Plywood sheathing at eaves		133	SF	4.00	532
Insulation at eaves		133	SF	2.00	266
Air barrier		133	SF	5.00	665
Miscellaneous					
Scaffolding to exterior wall		37,476	SF	1.50	56,214
Rough blocking		5,440	LF	3.00	16,320
	Subtotal				**$577,054**
B2020 WINDOWS					
Aluminum windows and glazing					
Windows, glazed					
Complete		168	SF	85.00	14,280
Aluminum storefront					
Storefront system, glazed					
Complete		768	SF	90.00	69,120
Ancillaries					
Backer rod and double sealant		8,789	LF	4.50	39,551
Wood blocking at openings		356	LF	3.00	1,068
Interior trim		8,789	LF	10.00	87,890
	Subtotal				**$211,909**
B2030 EXTERIOR DOORS					
Aluminum doors					
Double leaf					
Complete		4	PR	7,000.00	28,000
Miscellaneous					
Added cost for door operators		1	EA	4,000.00	4,000
	Subtotal				**$32,000**

		Quantity	Unit	Rate	Total
B3010 ROOF COVERING					
Slate roofing					
Allow for repairs and flashing work		21,868	SF	5.50	120,274
	Subtotal				**$120,274**
B3020 ROOF OPENINGS					
Roof hatch/ vents		1	LS	2,500.00	2,500
	Subtotal				**$2,500**
C1010 PARTITIONS					
Partitions, drywall					
Standard		15,768	SF	12.00	189,216
Infill existing doors		168	SF	24.00	4,032
Window walls and borrowed lights					
Glass partition , aluminum, complete		450	SF	60.00	27,000
Miscellaneous					
Sealants and caulking at partitions		62,532	SF	0.35	21,886
Rough blocking		2,656	LF	3.00	7,968
	Subtotal				**$250,102**
C1020 INTERIOR DOORS					
Wood doors					
Single leaf					
Complete		57	EA	2,000.00	114,000
Double leaf					
Complete		2	PR	3,700.00	7,400
Aluminum doors					
Double leaf door					
Complete		4	EA	7,000.00	28,000
Specialty doors					
Allowance for miscellaneous access doors		18	EA	400.00	7,200
Miscellaneous					
Added cost for door operators		2	EA	4,000.00	8,000
Paint to door and frame		61	EA	120.00	7,320
Sealants and caulking		59	EA	90.00	5,310
Wood blocking at openings		59	EA	80.00	4,720
	Subtotal				**$181,950**
C1030 SPECIALTIES					
Specialties					
Toilet partitions, phenolic, handicapped		8	EA	1,200.00	9,600
Toilet partitions, phenolic, regular		12	EA	1,000.00	12,000
Toilet partitions, phenolic, urinal screens		8	EA	450.00	3,600
Miscellaneous metal to ceiling supported toilet parti		20	EA	225.00	4,500
Vanity counters					
Solid surface		48	LF	250.00	12,000

	Quantity	Unit	Rate	Total
Toilet accessories				
Large toilet	2	EA	2,500.00	5,000
Medium toilet	6	EA	2,000.00	12,000
Signage/Directories	62,532	OPE	0.25	15,633
Fire extinguishers and cabinets	18	EA	400.00	7,200
Miscellaneous				
Backer panels in electrical closets	1	LS	750.00	750
Allowance for miscellaneous metals not identifiable at this stage	62,532	SF	2.20	137,570
Miscellaneous sealants throughout building	62,532	SF	0.35	21,886
Subtotal				**$241,739**
C2010 STAIR CONSTRUCTION				
Feature staircase				
Handrail to feature staircase	30	LF	60.00	1,800
Egress/Internal circulation staircases				
Circulation staircase, including rails and handrails	1	FLT	12,000.00	12,000
Modifications to existing	6	FLT	5,000.00	30,000
Subtotal				**$43,800**
C2020 STAIR FINISHES				
Stair finishes				
Staircase finish	10	FLT	4,500.00	45,000
Subtotal				**$45,000**
C3010 WALL FINISHES				
Wall finishes				
Allowance	62,532	SF	1.75	109,431
Subtotal				**$109,431**
C3020 FLOOR FINISHES				
Floor finishes				
Allowance	62,532	7	6.00	375,192
Subtotal				**$375,192**
C3030 CEILING FINISHES				
Ceiling finishes				
Allowance	62,532	SF	6.00	375,192
Subtotal				**$375,192**
D1010 ELEVATORS AND LIFTS				
Passenger elevators				
Passenger elevator, 5 stop	1	EA	175,000.00	175,000
Elevator cab finish	1	EA	15,000.00	15,000
Pit ladders	1	EA	750.00	750
Sill angles	20	LF	35.00	700

	Quantity	Unit	Rate	Total
Lifts				
Wheelchair lift	1	EA	50,000.00	25,000
Subtotal				**$216,450**
D2010 PLUMBING				
Plumbing				
Complete	62,532	SF	6.00	375,192
Subtotal				**$375,192**
D3010 HVAC				
Hvac				
Complete	62,532	SF	42.00	2,626,344
Subtotal				**$2,626,344**
D4010 FIRE PROTECTION				
Sprinkler				
Complete	62,532	SF	5.00	312,660
In attic	15,620	SF	4.00	62,480
Subtotal				**$375,140**
D5010 ELECTRICAL				
Electrical installation				
Complete	62,532	SF	32.00	2,001,024
Subtotal				**$2,001,024**
E1090 OTHER EQUIPMENT				
Residential equipment				
Allowance	1	LS	6,000.00	6,000
Subtotal				**$6,000**
E2010 FIXED FURNISHINGS				
Kitchen casework				
Base storage units	20	LF	200.00	4,000
Counter top, plastic laminate	20	LF	100.00	2,000
Wall storage units	20	LF	160.00	3,200
Miscellaneous				
Allowance	1	LS	50,000.00	50,000
Entry mat				
Entry mat and frame	120	SF	50.00	6,000
Window treatments				
Mecho shades	11,411	SF	15.00	171,165
Subtotal				**$236,365**
E2020 LOOSE FURNISHINGS				
Loose furnishings				
By owner				
Subtotal				**$0**

		Quantity	Unit	Rate	Total
F2010 BUILDING ELEMENTS DEMOLITION					
Interior demolition					
Remove partitions and doors		31,260	SF	1.50	46,890
Remove floor and ceiling finishes		62,480	SF GFA	3.00	187,440
Remove casework and specialties		62,480	SF GFA	1.00	62,480
Remove MEP systems (excluding ductwork)		62,480	SF GFA	3.00	187,440
Remove ductwork and louvers		62,480	SF GFA	0.50	31,240
Remove stairs at grade		136	SF	12.00	1,632
Remove stairs upper floors		92	SF	18.00	1,656
Remove stage		300	SF	12.00	3,600
Exterior demolition					
concrete stair		55	SF	15.00	825
Structural demolition					
Remove existing concrete slab on grade		3,072	SF	12.00	36,864
Remove elevated slab		1,800	SF	15.00	27,000
	Subtotal				**$587,067**
F2020 HAZARDOUS COMPONENTS ABATEMENT					
Hazardous materials abatement					
Remove hazardous building materials			EXCLUDED	1.00	
	Subtotal				**$0**
G1010 SITE CLEARING AND DEMOLITION					
Clearing and grubbing					
Allowance for site clearance		1	LS	15,000.00	15,000
	Subtotal				**$15,000**
G1030 SITE EARTHWORK					
Site earthwork					
Allowance		1	LS	10,000.00	10,000
	Subtotal				**$10,000**
G1040 HAZARDOUS WASTE REMEDIATION					
Hazardous waste remediation					
Remove contaminated soils			EXCLUDED		
	Subtotal				**$0**
G2030 PEDESTRIAN PAVING					
Paving					
Allowance		1	LS	30,000.00	30,000
	Subtotal				**$30,000**
G2040 SITE DEVELOPMENT					
Improvements					
Allowance		1	LS	30,000.00	30,000
	Subtotal				**$30,000**

		Quantity	Unit	Rate	Total
G2050 LANDSCAPING					
Planting					
Allowance		1	LS	30,000.00	30,000
	Subtotal				**$30,000**
G3010 MECHANICAL UTILITIES					
Water supply					
Allowance		1	LS	18,000.00	18,000
Sanitary sewer					
Allowance		1	LS	50,000.00	50,000
Storm drainage					
Allowance		1	LS	30,000.00	30,000
Gas distribution					
Gas connection piping			By Utilities Company		
Connect to existing			By Utilities Company		
Excavation/trenching		1	LS	7,500.00	7,500
	Subtotal				**$105,500**
G4010 ELECTRICAL UTILITIES AND SITE LIGHTING					
Electrical service					
Primary electrical service duct bank		1	LS	15,000.00	15,000
Secondary electrical service duct bank		1	LS	10,000.00	10,000
Manhole		1	EA	4,000.00	4,000
Transformer pad		1	EA	1,500.00	1,500
Site lighting					
Allowance		1	EA	20,000.00	20,000
Site communication					
Communication service duct bank		1	LS	15,000.00	15,000
Manhole		1	EA	4,000.00	4,000
	Subtotal				**$69,500**
MARKUPS					
General conditions and project requirements					
General conditions and requirements		16.0	MTH	75,000	1,200,000
Bond and Insurance		2.00%		10,814,181	216,284
Building permit		0.00%		11,030,465	
Overhead and Profit					
Contractors overhead and profit (Fee)		3.00%		11,030,465	330,914
	Subtotal				**$1,747,198**
CONTINGENCIES/ESCALATION					
Contingencies					
Design contingency		15.00%		11,361,379	1,704,207
GMP contingency		0.00%		13,065,586	
Escalation					
Escalation to Start Date (January 2018)		4.91%		13,065,586	641,520
	Subtotal				**$2,345,727**