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**MORSE HIGH SCHOOL CONCEPT DEVELOPMENT
REPORT – DRAFT FOR REVIEW**

DECEMBER 1, 2021





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BATH, MAINE FORMER MORSE HIGH SCHOOL AND CAREER TECHNICAL CENTER
Morse High School Concept Development
<i>Introduction and Overview</i>
As a follow up to a redevelopment opportunities study for the Morse High School site and facilities, Harriman created the <i>Morse High School Concept Development</i> study to create a roadmap for initiating and executing the redevelopment Request for Proposals (RFP). Facility and site descriptions are based on the intent to create an RFP for private redevelopment of majority portion of the site and for the City of Bath to retain the remaining property to develop a new Fire Department facility.
There are two conceptual options represented in the study. The first is the base option, referred to as Option 2, includes a single property subdivision into two separate parcels. The second option, referred to as Option 4, includes two subdivisions into three separate parcels.
Key steps in this initiative include: subdivide the property, issue a development RFP, award the redevelopment contract to a successful bidder, demolish two of the existing high school buildings, cap affected utilities, construct a minor addition, repair affected portions of the existing buildings, reconnect utility infrastructure, and renovate the existing remaining buildings with mixed use program.
Independent of the private redevelopment of the property, the City of Bath plans to design and construct a new Central Fire Station facility on a portion of the existing property. The two-development initiative on this site are intended to share some site amenities such as walkways, outdoor spaces, and vehicle circulation access to distinct parking areas.
Narratives are supported by a series of drawings that describe the intended direction of redevelopment. These drawings include: <ol style="list-style-type: none">1. Existing Conditions Survey by Titcomb Associates, 2021.2. Existing Conditions and Demolition Site Plans for Option 2 and Option 4.3. Proposed Site Subdivision Plan.4. Proposed Building Demolition Plans.5. Proposed Building Concept Plans, focused on the building exterior.



City of Bath Morse High School Concept Development

TASK ONE , RESIDENTIAL ANALYSIS

Contributors: Will Gatchell, Christina Porter

October 29, 2021

Harriman Project #21266

Summary

Task One of the Morse High School Concept Development is an analysis of the impact of the proposed fire station on existing and proposed residential program. The following is a summary of Harriman's analysis.

The City of Bath is unique in that its central fire station is located in a residential neighborhood. Review of similar municipalities indicate that most fire stations embedded within residential neighborhoods are substations with 2-3 apparatus bays rather than central stations which typically have between 3-5 apparatus bays. There are exceptions to the typical scenario that are similar to Bath. Harriman selected four as case studies: the municipalities of Biddeford, ME; Portland, ME; Exeter, NH; and Salem, NH.

Biddeford has a large central station surrounded by multi-family residential dwelling units.

Exeter has a central public safety facility with adjacency to multi-family residential dwelling units including a renovated historic brick building.

Salem has a substation with adjacency to single family housing and has plans to expand the facility.

Portland has several examples of urban redevelopment near fire stations. Examples in downtown Portland include middle-to-upper income residential apartments and condos, and boutique hotels. These examples are located in similar proximity to the proposed condition at the Morse High School property. Portland also has a substation with adjacency to a suburban condominium complex and single family residential.

One important consideration about the location of the Bath Fire Department is that it has one of the fastest response times in the state of Maine. One reason for this is the location on High Street provides quick access to Lincoln Street, Centre Street, and Washington Street. Immediate access to Green Street, Chestnut Street, and Winter Street further reduces travel time to the major connecting roads in the city. If the central fire station were located downtown, response times would likely slow due to required travel through congested areas.



Analysis

The following information represents existing and proposed Fire Station adjacency to residential buildings. The first shows distance offsets from the current and proposed Fire Stations. The second shows the amount of adjacent residential program. Precedent studies, beginning with the City of Bath, follow.

- A. **Proposed site showing development and distances to residential program:**
 - a. Fire Station is shown in red.
 - b. Redevelopment to residential program shown in green.
 - c. Right side of image shows existing fire station distances from residences.

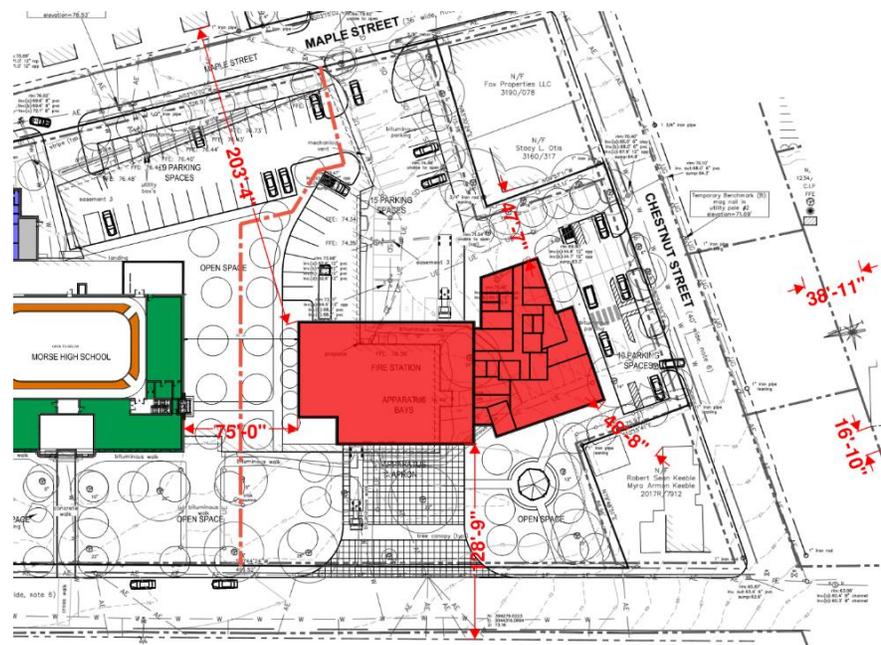


Figure A1: Diagram of existing and proposed fire station distances to residential program



- B. Proposed site showing proposed fire station impact to residential program:
 - a. Current fire station impacts 9 existing residential buildings.
 - b. Proposed fire station impacts 12 existing residential buildings.
 - c. Proposed fire station will impact the redeveloped Morse High School building.

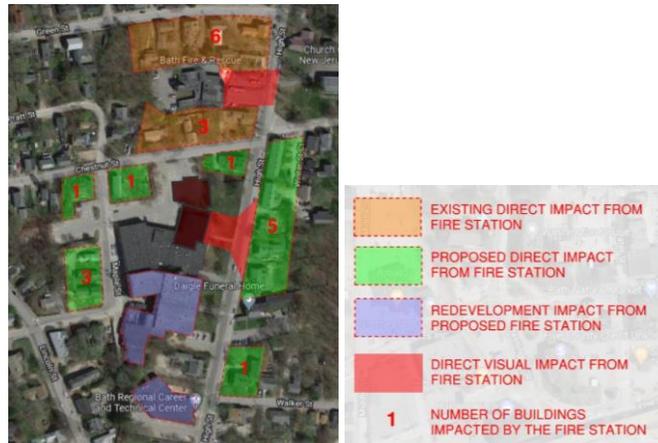


Figure B1: Diagram of existing and proposed fire station impacts on residential program

- C. Existing precedents of fire stations in residential neighborhoods:
 - a. Bath, ME

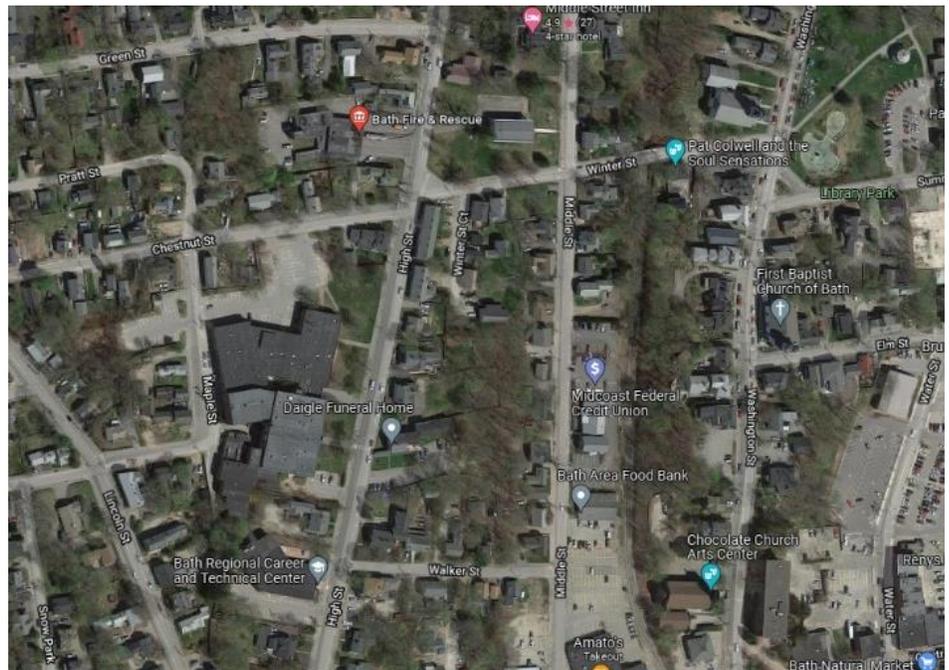


Figure Ca1: Aerial View of existing Bath central station and surrounding neighborhood



Figure Ca2: View of existing central station from High Street



Figure Ca3: View of existing central station from High Street

b. Biddeford, ME

- i. Central Fire Station, located at 125, Alfred St is surrounded by single and multi-family family housing on Alfred St, West Myrtle St, Graham St, and Birch St. Most buildings appear to be 2-3 units based on electric meters, mailboxes, and street numbering. Housing immediately surrounding the Central Fire Station can be generally categorized as lower-middle to middle income.

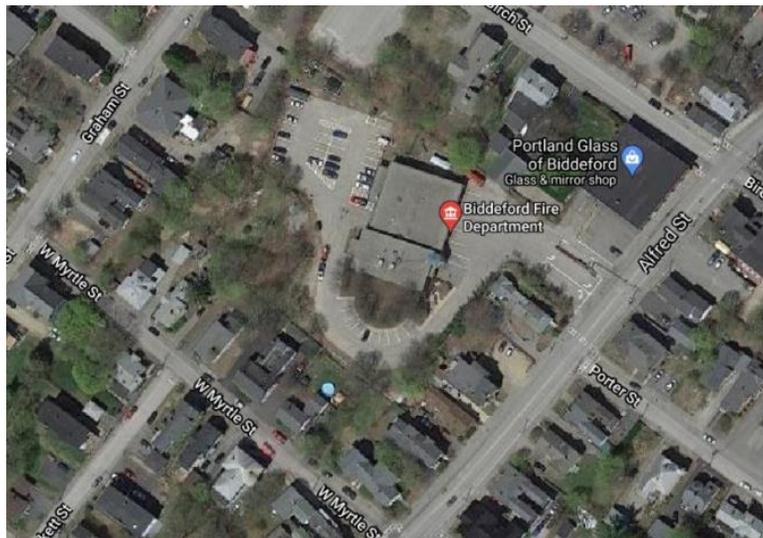


Figure Cb1: Aerial View of Biddeford existing central station and surrounding neighborhood



Figure Cb2: View of existing central station from Alfred Street



Figure Cb3: View of residential context from the corner of Alfred Street and West Myrtle Street



Figure Cb4: View of residential context from Birch Street



c. Exeter, NH

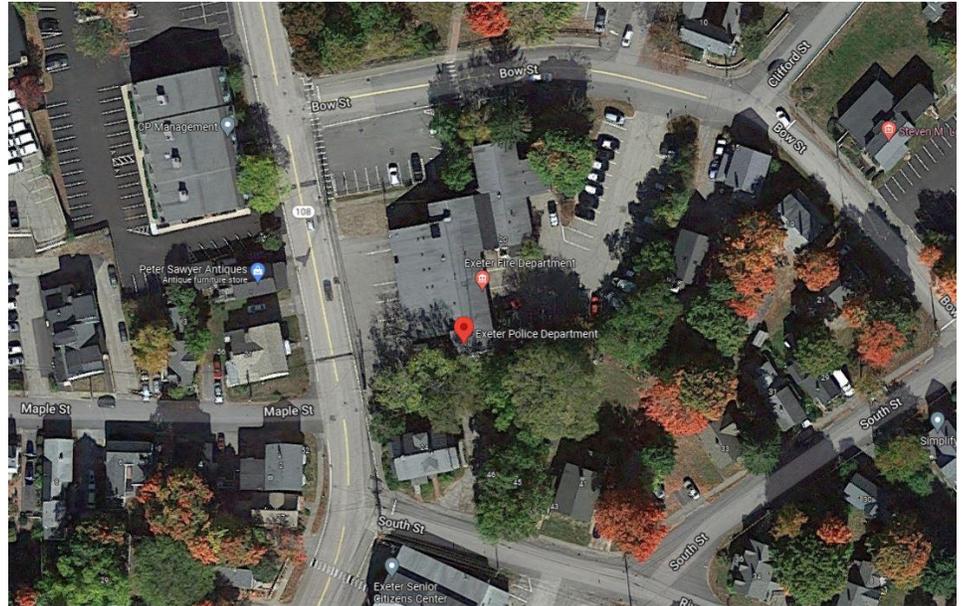


Figure Cc1: Aerial View of Exeter existing central station and surrounding neighborhood



Figure Cc2: View of residential context from Court Street



Figure Cc3: View of residential context from the corner of Clifford Street and Bow Street



d. Salem, NH

Although Station 2 in Salem, NH is a substation, it is included because a major addition is planned in the near future. Expansion will create a total of 3 apparatus bays facing Lawrence Street as well as additional equipment storage at the back of the station. The residential context can be generally categorized as middle to upper-middle income.

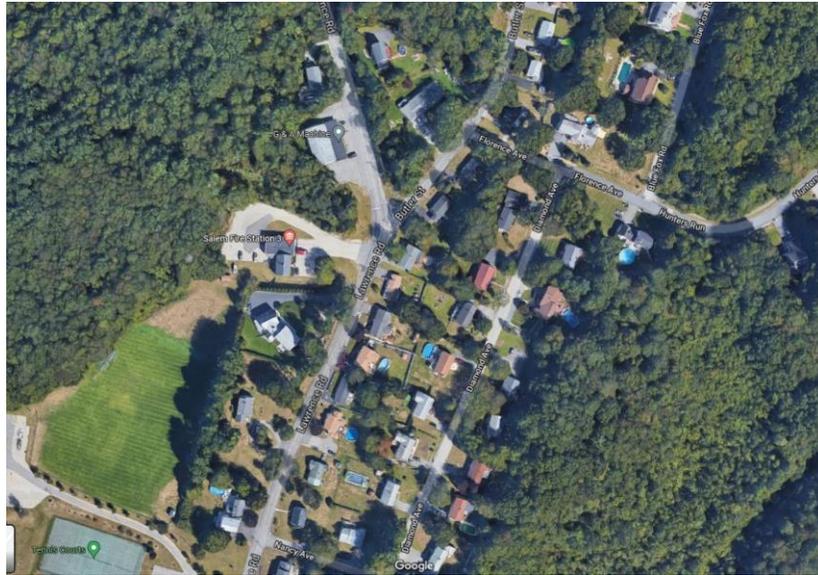


Figure Cd1: Aerial View of Salem existing Station 2 and surrounding neighborhood



Figure Cd2: View of residential context from Lawrence Road



Figure Cd3: View of residential context from Lawrence Road



e. Portland, ME

The Rosemont Station at 212 Stevens Ave is a substation with adjacencies to a suburban condominium complex located at Stoneledge Drive and single family residential on surrounding streets. The residential context can be generally categorized as middle to upper-middle income. The station is also closely situated to a main road on Brighton Ave.

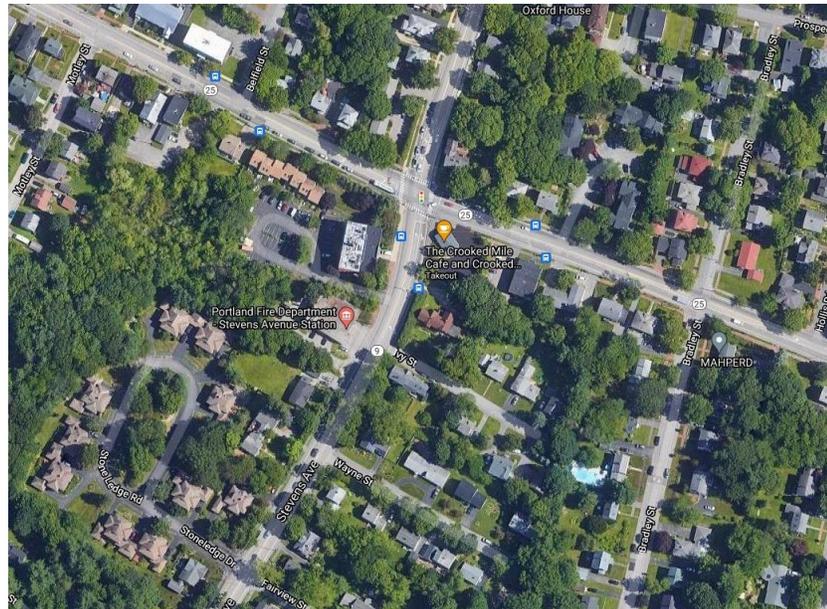


Figure Ce1: Aerial View of Portland existing Stevens Ave substation and surrounding neighborhood



Figure Ce2: View of residential context from Stoneledge Drive.



Figure Ce3: View of residential context from Stevens Ave towards Ivy St.



Figure Ce4: View of residential context from Stevens Ave.



f. Portland, ME

Central Station, located at 380 Congress, houses numerous services for the city and is the most active. While located directly in the Old Port, there are primarily commercial examples, but the most relevant is a high-end hotel located directly to the west. The hotel is located in a renovated historic brick building that used to house the Portland Press Herald offices. It was renovated into a high-end boutique hotel with an upscale restaurant on the ground level. While different than the Morse condition, the direct adjacency of the programs makes it as similar application. A new high-rise residential building is currently under construction nearby on Federal Street, and several luxury condo's have also built within a few blocks. Many of the surrounding commercial buildings are also mixed used, with apartments or condominiums on the upper levels. The residential context can be generally categorized as middle to upper-middle income.

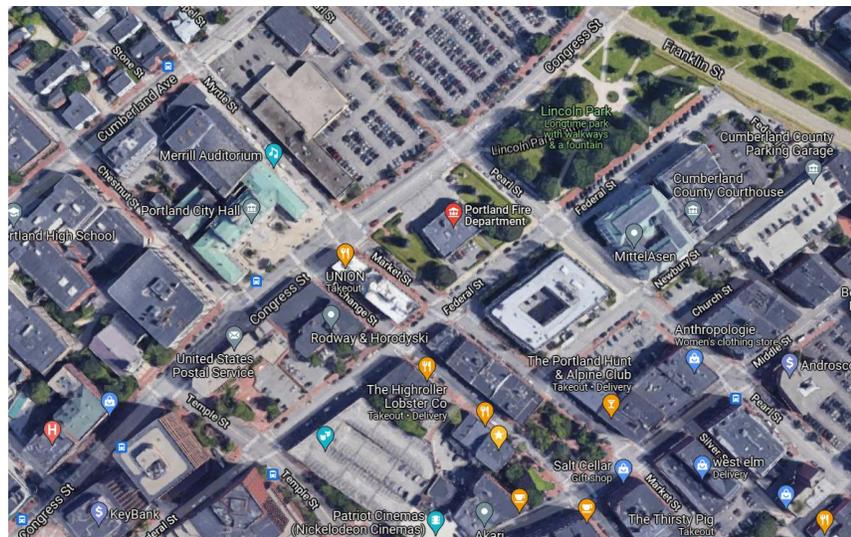


Figure Cf1: Aerial View of Portland Congress St Central Station and surrounding neighborhood



Figure Cf2: View of redevelopment context from Congress Street towards Exchange St..



Figure Cf3: View of redevelopment context along Federal Street.

g. Portland, ME

Portland's Munjoy Station is a substation on the East End of the city at 134 Congress. Located in the middle of single and multi-family homes, there's been a recent surge of upper-middle class condominium buildings being built throughout Munjoy Hill. One example is directly adjacent to the station on Congress Street. The residential context can be generally categorized as a mix between lower income homes and rental properties, and middle to upper-middle income residential redevelopment.

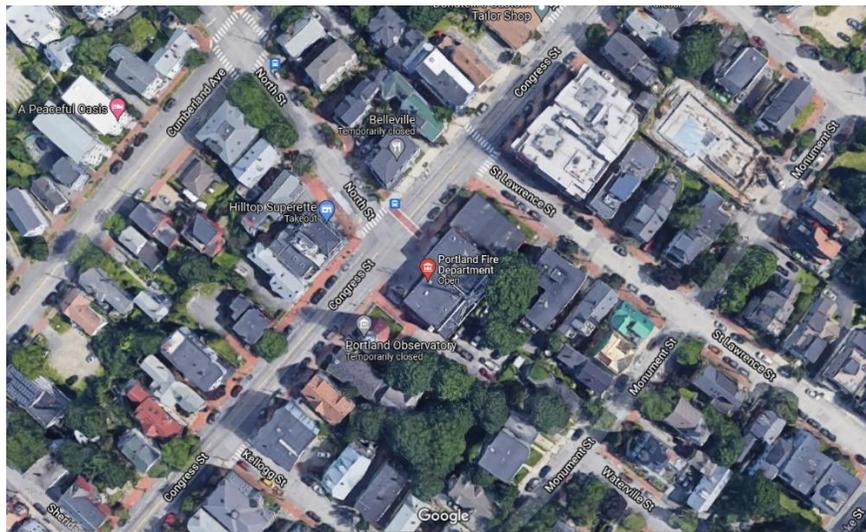


Figure Cf4: Aerial View of Portland Congress St East End Station and surrounding neighborhood



Figure Cf5: View of residential context along Congress Street. New Condominium building on corner of Congress and St. Lawrence, adjacent to fire station.



Figure Cf6: View of residential context along St. Lawrence towards Congress.



Figure Cf7: View of residential context along Congress Street.



Figure Cf8: View of residential context along North Street towards Congress.

D. Conclusion:

- a. Bath has a unique situation with its central fire station being located in the middle of a residential neighborhood but benefits from this with its quick response times. Similar contextual examples, such as Salem, NH, have middle income residential surrounding fire stations. More populated areas will see lower to middle income rental properties, often with multiple apartments within larger, older homes. More recent redevelopment has seen trends of middle to upper income residential developments being located next to fire stations, as can be seen in multiple cases in Portland, ME. These locations should be considered precedents on which to base the Bath Redevelopment concepts.



City of Bath Morse High School Concept Development

TASK TWO, SUBDIVISION OF PROPERTY

Contributors: Frank Crabtree, PE; Thomas Emery, RLA

December 1, 2021

Harriman Project #21266

Summary

Description of Task Two – Subdivision of Property

Task Two of the Morse High School Concept Development is the suggested subdivision of the property which is compliant with current zoning and with the goal of separating the property into two parcels including one for the renovation and reuse to the existing buildings and the second parcel for a new central fire station. The following is a summary of Harriman's analysis.

2.1 EXISTING ZONING PROVISIONS

Zoning

The project site bounded by High St. to the east; Chestnut St. to the north and Maple St. to the west lies within the High-Density Residential District (R1). Just south of the site along Route 1 is the Downtown District (C1) and to the east of the site is a pocket of Mixed Commercial and Residential (C2).

The town of Bath defines the R1 District as follows:

High Density (R1) – This zone covers an area of existing high residential density. A limited amount of new high-density housing is allowed to be built in this area. The purpose of this district is to provide areas of compact development that foster cohesive neighborhoods close to the existing community services.

District Regulations

- Density
The minimum lot area for residential and commercial areas area as follows:
Residential Uses – 6,000 sq. ft. per dwelling unit
Non-residential Uses – 10,000 sq. ft.
Mixed Uses – minimum lot area for each use
- Space and Bulk (For “all other uses” including multifamily residential and commercial/office)

Minimum Setback Principal Structures
Front 20 ft.
Side 20 ft.



Rear 20 ft.

Minimum Yard Areas

Front 10 ft.

Side 15 ft.

Rear 15 ft.

Maximum Lot Coverage (Buildings)

All uses 40 percent

Maximum Building Height

All uses 45 ft.

Minimum Setbacks for other than Single Family and 2-Family Residential Uses with an approved R1 Setback Reduction Plan

Minimum Setback Principal Structures

Front 10 ft.

Side 10 ft.

Rear 10 ft.

Minimum Yard Areas

Front 10 ft.

Side 5 ft.

Rear 5 ft.

Parking Requirements

1.75 spaces per Dwelling Unit Multi-Family Residential Uses

1 space per 400 Gross Square Feet (GSF) General Office

1 space per 250 GSF Medical offices, banks, travel agents and other professions or government office buildings

1 space per 400 GSF private meeting facility

1 space per 200 GSF Function or assembly facility

2.2 CIVIL ENGINEERING REVIEW

Existing

Water Service:

1995 Building – a 6” fire-protection service and a 4” domestic water line enters the Boiler Room from Maple Street. The Maple Street water main appears to be 6” diameter. There is also evidence of a water service extending from High Street to the southerly section of the building. The High Street water main is listed as a 6” diameter also.

1968 Building –A water service enters the building from Maple Street. There is also evidence that another water service may extend to the building from High Street.

1941 Building - A 2” water service enters the building from Maple Street.

1928 Building – a 2” water service extends from High Street to the original main entrance area of the building.

**Sanitary Sewer Service:**

1995 Building – A new sewer connection from a manhole on Maple Street to and beneath the 1941 building appears to avoid the 1995 building footprint. It is unclear whether a sanitary connection was made at this near corner of the building. The south building on High Street has a sanitary sewer service connection to a manhole on High Street.

1968 Building – A 10" or 8" VC (clay) sewer pipe was left in place beneath the building addition, which apparently served the prior 1928 and 1941 buildings. The pipe extends northerly under the building, across the parking lot, and into a sewer manhole on Chestnut Street. This appears to be the sewer connection to the three older buildings. This line may be impacted by a planned Fire Station building constructed in the existing parking lot.

1941 Building – An 8" VC (clay) sewer pipe was placed beneath the building addition, and beneath the 1968 building. The pipe extends northerly under the 1968 building, across the parking lot, and into a sewer manhole on Chestnut Street.

1928 Building – An 8" VC (clay) sewer pipe from the northwest corner was placed beneath the 1941 building and beneath the 1968 building. The pipe extends northerly across the parking lot, and into a sewer manhole on Chestnut Street.

Gas Service:

According to the AVANGRID website. Natural gas service is available in Chestnut St. Currently, a liquid propane (LP) gas tank is located behind the southerly 1995 building. Future gas service may come from on-site LP gas tanks or if feasible, natural gas service.

Fire Department Site Development (Lot 2)**Sanitary Sewer:**

As positioned on Concept Subdivision Plan – Option 2 and Alternate Option 4, the proposed Fire Station building will not impact the existing sewer line, which flows northerly from the 1968 building (to be demolished) to the municipal connection on Chestnut Street. Demolition of the 1968 and 1941 buildings will need to be done carefully to protect one of the existing clay sewer service pipes that will continue to serve the renovated 1928 and 1995 buildings. The old clay line should be replaced eventually by a new PVC sewer pipeline.

Sewer service for the proposed new Fire Station will need to connect westerly to one of the existing manholes in the existing parking lot. This existing sewer line to Chestnut Street appears to be the easiest connection point.

Water Service:

Since the existing building is connected to the city water mains on both High Street and Maple Street, it appears that the new water service could be extended to the proposed new Fire Station building from either direction. Once the 1968 building is removed, there will be multiple possible routes for the new water service to the new building.

Storm Drainage:

A 12-inch diameter storm drain pipeline extends from catch basins on Chestnut Street south into the existing parking lot, then turns west toward Maple Street. The storm drain line extends across Maple Street, under a parking lot, and outlets into an existing vegetated stormwater detention basin. The proposed new Fire Station building will likely impact one drain manhole and a small section of the storm drain piping, which will need to be re-routed around the corner of the new building. The location of the storm drain line is easily accessed by the new building for roof drainage and foundation drainage lines.



Stormwater flows across the parking lot from Maple Street easterly toward the location of the proposed new Fire Station building. The building ground floor will likely be set at approximately elevation 75, which would be 6" to 12" higher than the High Street frontage. The parking lot grade to the west of the building would need to be raised approximately 2 ft. for vehicular access to the apparatus bays. The stormwater will still sheet in from Maple Street, and a shallow catchment area can be created in the newly graded parking lot to capture and control the stormwater. This area can be used for fire equipment training and recycling of the water. The northerly section of the parking lot will remain lower, and will be disconnected from the rear parking lot, and its stormwater will continue to drain into the existing catch basins near Chestnut Street.

2.3 CONCEPT SUBDIVISION(S)/ LAND USE PLAN

Option – 2. Three Lots: Lot-1 Multi-family Residential, Lot-2 Fire Department and Lot-3 Surface Parking

- Option-2 includes three lots as follows:
 - Lot-1 includes Multi-family Residential Uses. This lot encompasses the remaining 1928 and 1995 buildings. The 1941 and 1968 additions are demolished.
 - Lot-2 is the Fire Department Site. This lot encompasses what was part of the 1968 building area and the remaining land to the north bounded in part by High St., Chestnut. St. and Maple St. Lot-3 is the existing Maple St. parking lot.

- Building footprint Lot 1
 - Lot 1 is 123,388 sq. ft. At 6,000 sq. ft. land area per dwelling unit, the lot yields 20 dwelling.

The building footprint is approx. 42,131 GSF. The resulting building coverage is 34.4% (42,131 GSF/ 123,388 sq. ft. lot area). Up to 40% building coverage is allowed.

- Building footprint Lot 2
 - Lot 2 is 72,925 sq. ft.
 - The building footprint is approx. 16,013 GSF. The resulting building coverage is 22% (16,013 GSF/ 72,925 sq. ft. lot area). Up to 40% building coverage is allowed.

- Building Footprint Lot 3. There is no building program proposed for lot 3. It remains as a surface parking lot to support the Fire Department parking needs.

Option – 4. (Alternate) Three Lots: Lot 1A Commercial/ General Office, Lot 1 Multi-family Residential, Lot 2 Fire Department and Lot 3 Surface Parking

- Option-4 (Alternate) includes four lots as follows:
 - Lot-1A includes 2-story Commercial/ General Offices uses. This lot encompasses the southerly wing of the 1995 addition. The "connector" between the southerly wing and northerly wing is demolished. The new property line lies in-part midway between the southerly and northerly wings.

Lot 1 includes the Multi-family Residential Uses. This lot is now reduced in area compared to Option -2. The lot encompasses the remaining 1928 building but



only the northerly wing of the 1995 building. The 1941 and 1968 additions are demolished.

Lot-2 is the Fire Department Site. It is the same as described under Option-2. This lot encompasses what was part of the 1968 building area and the remaining land to the north bounded in part by High St., Chestnut. St. and Maple St.

Lot-3 is the existing Maple St. parking lot. It is the same as described in Option-2.

- Building footprint Lot 1A
Lot 1A is 38,432 sq. ft. in area.
The building footprint is approx. 12,455 GSF. The resulting building coverage is 32.4% (12,455 GSF/ 38,432 sq. ft. lot area). Up to 40% building coverage is allowed.
- Building footprint Lot 1
Lot 1 is 84,956 sq. ft. At 6,000 sq. ft. land area per dwelling unit, the lot yields 14 dwelling.
The building footprint is approx. 22,973 GSF. The resulting building coverage is 27% (22,973 GSF/ 84,432 sq. ft. lot area). Up to 40% building coverage is allowed.
- Building footprint Lot 2
Lot 2 is 72,925 sq. ft.
The building footprint is approx. 16,013 GSF. The resulting building coverage is 22% (16,013 GSF/ 72,925 sq. ft. lot area). Up to 40% building coverage is allowed.
- Building Footprint Lot 3. There is no building program proposed for lot 3. It remains as a surface parking lot to support the Commercial use and Fire Department parking needs.

Option -2 Parking

- Lot 1 Parking
Lot 1 is being developed for multi-family residential uses. The lot yields 20 dwelling units (DU). Zoning requires 1.75 parking spaces per DU.
Parking required: 35 Parking Spaces (20 DU x 1.75 sp per DU)
Parking proposed: the parking for Lot 1 is being accommodated as follows:
23 spaces Parking Lot A (south of 1995 wing)
5 spaces Parking Lot B (in front of MHS)
29 spaces Parking Lot C (behind MHS)
57 spaces available
- Lot 2 Parking
Lot 2 is being developed for the Fire Department. The parking requirements are based on a projected 23 full time staff, 3 visitor spaces and up to 40 spaces total needed for off-site training at the new Fire Station.
Parking required: 26 Parking Spaces (staff) and 3 visitor spaces.
Parking proposed: the staff/ visitor parking for Lot 2 is being accommodated as follows:



15 spaces Parking Lot D (behind the Fire Station)
10 spaces Parking Lot E (in front of Fire Station at Chestnut St.)
25 spaces Parking Spaces Lots D & E.
28 spaces Parking Lot F (Maple St. Lot)
53 spaces available

- Lot 3 Parking. There is no building program proposed for lot 3. It remains as a 28-space surface parking lot to support the Fire Department parking needs.

Option -4 (Alternate) Parking

- Lot 1A Parking
Lot 1A is being developed for General Office Uses. The two floors of the southerly 1995 building wings yields approximately 23,776 GSF. Zoning requires 1 parking space per 400 GSF for general office use.
Parking required is 59 spaces. (23,776 GSF /400 GSF per space)
Parking proposed: the parking for Lot 1A is being accommodated as follows:
23 spaces Parking Lot A (south of 1995 wing)
4 spaces Parking Lot B (in front of MHS)
4 spaces Parking Lot C (behind MHS)
28 spaces Parking Lot F (Maple St. Lot – Shared Parking)
59 spaces available
- Lot 1 Parking
Lot 1 is being developed for multi-family residential uses. The lot yields 14 dwelling units (DU). Zoning requires 1.75 parking spaces per DU.
Parking required: 25 Parking Spaces (14 DU x 1.75 sp per DU)
Parking proposed: the parking for Lot 1 is being accommodated as follows:
25 spaces Parking Lot C (behind MHS)
- Lot 2 Parking (Same as Option – 2)
Lot 2 is being developed for the Fire Department. The parking requirements are based on a projected 23 full time staff, 3 visitor spaces and up to 40 spaces total needed for off-site training at the new Fire Station.
Parking required: 26 Parking Spaces (staff) and 3 visitor spaces.
Parking proposed: the staff/ visitor parking for Lot 2 is being accommodated as follows:
15 spaces Parking Lot D (behind the Fire Station)
10 spaces Parking Lot E (in front of Fire Station at Chestnut St.)
25 spaces Parking Spaces Lots D & E.
28 spaces Parking Lot F (Maple St. Lot)
53 spaces available
- Lot 3 Parking
There is no building program proposed for lot 3. It remains as a 28-space surface parking lot to support the Fire Department parking needs.

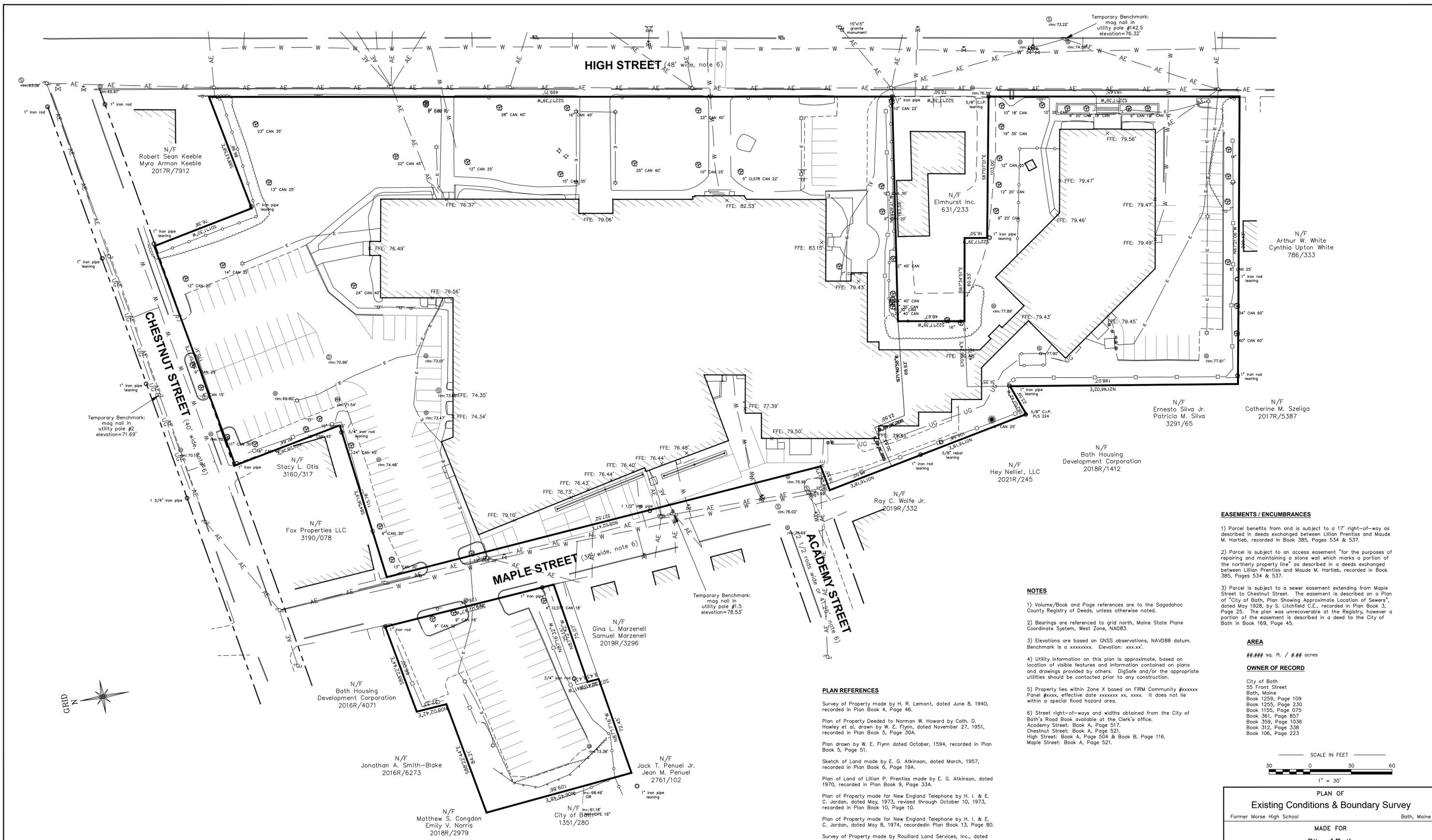


Conclusion:

Subdivision Option -2 is well suited to the existing location, site and context. The proposed uses comply with zoning and the structures conform to all space and bulk requirements. The existing structures provide a historic presence on High St. The proposed residential use will compliment the existing neighboring residential structures. The treatment of the open spaces along High St. and between the 1928 original MHS Building and new Fire Station should provide opportunities for passive recreation; tree plantings, perennial and community gardens; hardscape seating areas and gathering spaces for the residents. Historically, the frontage along Maple St. has served the “back of the house” functions for the schools. Although there is parking proposed along the Maple St. frontage, it is set back from the street and with the demolition of the 1941 and 1968 buildings, the views from Maple St. will be enhanced.

Parking is accommodated on both Lots 1 and 2 for the respective proposed uses with Lot 3 (Maple St. surface parking) being used for the additional parking needed by the Fire Department for off-site training. Special attention will be needed to provide an appropriate buffer between the Fire Station and abutters (mixed vegetation and decorative fencing). The existing Fire Station is located nearby and also abuts residential uses and has its primary access from High St. Its planning and design should evoke the special place of civic structures in the community and with its main façade on High St. continue the rhythm of civic-scale structures along High St.

Streetscape – The streetscape provides a connection to the neighborhood and site. It also compliments and unifies the buildings along the High St. frontage. There are many mature deciduous trees along the High St. frontage. These should be protected during construction and where necessary, in-fill plantings should be provided to assure an on-going, tree-line streetscape and foreground to the historic and once, public buildings. Site lighting should provide safety and also reinforce the streetscape and be respectful of the historic building and context. Low-level lighting can be used to complements the walkways, hardscape and garden areas with little light impact on abutting uses.



HIGH STREET (48' wide, note 6)

CHESTNUT STREET (10' wide, note 6)

MAPLE STREET (36' wide, note 6)

ACADEMY STREET (12' wide, note 6)

N/F Robert Sean Keeble
Myra Armon Keeble
2017R/7912

N/F Elmhurst Inc.
631/233

N/F Arthur W. White
Cynthia Upton White
786/333

N/F Ernesto Silva Jr.
Patricia M. Silva
3291/65

N/F Catherine M. Szeliga
2017R/5387

N/F Bath Housing
Development Corporation
2018R/1412

N/F Hey Nellie, LLC
2021R/245

N/F Ray C. Wolfe Jr.
2019R/332

N/F Fox Properties LLC
3190/078

N/F Stacy L. Otis
3160/317

N/F Gina L. Marzenell
Samuel Marzenell
2019R/3296

N/F Bath Housing
Development Corporation
2016R/4071

N/F Jonathan A. Smith-Blake
2016R/6273

N/F Jack T. Penuel Jr.
Jean M. Penuel
2761/102

N/F Matthew S. Congdon
Emily V. Norris
2018R/2979

N/F City of Bath
1351/280

NOTES

- 1) Volume/Book and Page references are to the Sagadahoc County Registry of Deeds, unless otherwise noted.
- 2) Bearings are referenced to grid north, Maine State Plane Coordinate System, West Zone, NAD83.
- 3) Elevations are based on GNSS observations, NAVD88 datum. Benchmark is a xxxxxxx. Elevation: xxx.xx'.
- 4) Utility information on this plan is approximate, based on location of visible features and information contained on plans and drawings provided by others. DigSafe and/or the appropriate utilities should be contacted prior to any construction.
- 5) Property lies within Zone X based on FIRM Community #xxxxxx Panel #xxxx, effective date xxxxxx xx, xxxx. It does not lie within a special flood hazard area.
- 6) Street right-of-ways and widths obtained from the City of Bath's Road Book available at the Clerk's office.
Chestnut Street: Book A, Page 521.
High Street: Book A, Page 504 & Book B, Page 116.
Maple Street: Book A, Page 521.

EASEMENTS / ENCUMBRANCES

- 1) Parcel benefits from and is subject to a 17' right-of-way as described in deeds exchanged between Lillian Prentiss and Maude M. Hartleb, recorded in Book 385, Pages 534 & 537.
- 2) Parcel is subject to an access easement "for the purposes of repairing and maintaining a stone wall which marks a portion of the northerly property line" as described in a deed exchanged between Lillian Prentiss and Maude M. Hartleb, recorded in Book 385, Pages 534 & 537.
- 3) Parcel is subject to a sewer easement extending from Maple Street to Chestnut Street. The easement is described on a Plan of "City of Bath, Plan Showing Approximate Location of Sewers", dated May 1928, by S. Litchfield C.E., recorded in Plan Book 3, Page 25. The plan was unrecoverable at the Registry, however a portion of the easement is described in a deed to the City of Bath in Book 169, Page 45.

AREA

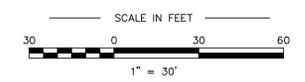
###.### sq. ft. / ### acres

OWNER OF RECORD

City of Bath
55 Front Street
Bath, Maine
Book 1259, Page 109
Book 1255, Page 230
Book 1155, Page 075
Book 361, Page 657
Book 359, Page 1036
Book 312, Page 338
Book 106, Page 223

PLAN REFERENCES

- Survey of Property made by H. R. Lemont, dated June 8, 1940, recorded in Plan Book 4, Page 46.
- Plan of Property Deeded to Norman W. Howard by Cath. D. Howley et al, drawn by W. E. Flynn, dated November 27, 1951, recorded in Plan Book 5, Page 30A.
- Plan drawn by W. E. Flynn dated October, 1594, recorded in Plan Book 5, Page 51.
- Sketch of Land made by E. G. Atkinson, dated March, 1957, recorded in Plan Book 6, Page 19A.
- Plan of Land of Lillian P. Prentiss made by E. G. Atkinson, dated 1970, recorded in Plan Book 9, Page 33A.
- Plan of Property made for New England Telephone by H. I. & E. C. Jordan, dated May, 1973, revised through October 10, 1973, recorded in Plan Book 10, Page 10.
- Plan of Property made for New England Telephone by H. I. & E. C. Jordan, dated May 8, 1974, recorded in Plan Book 13, Page 80.
- Survey of Property made by Rouillard Land Services, Inc., dated May 13, 1993, recorded in Plan Book 30, Page 47.
- Survey of Morse High School Property made by Rouillard Land Services, Inc., dated August, 1993, recorded in Plan Book 30, Page 57.
- Standard Boundary Survey of Proposed Parking Lot for Morse High School made for Bath School Department by Dirigo Land Services, Inc. dated December, 1993, recorded in Plan Book 30, Page 73.

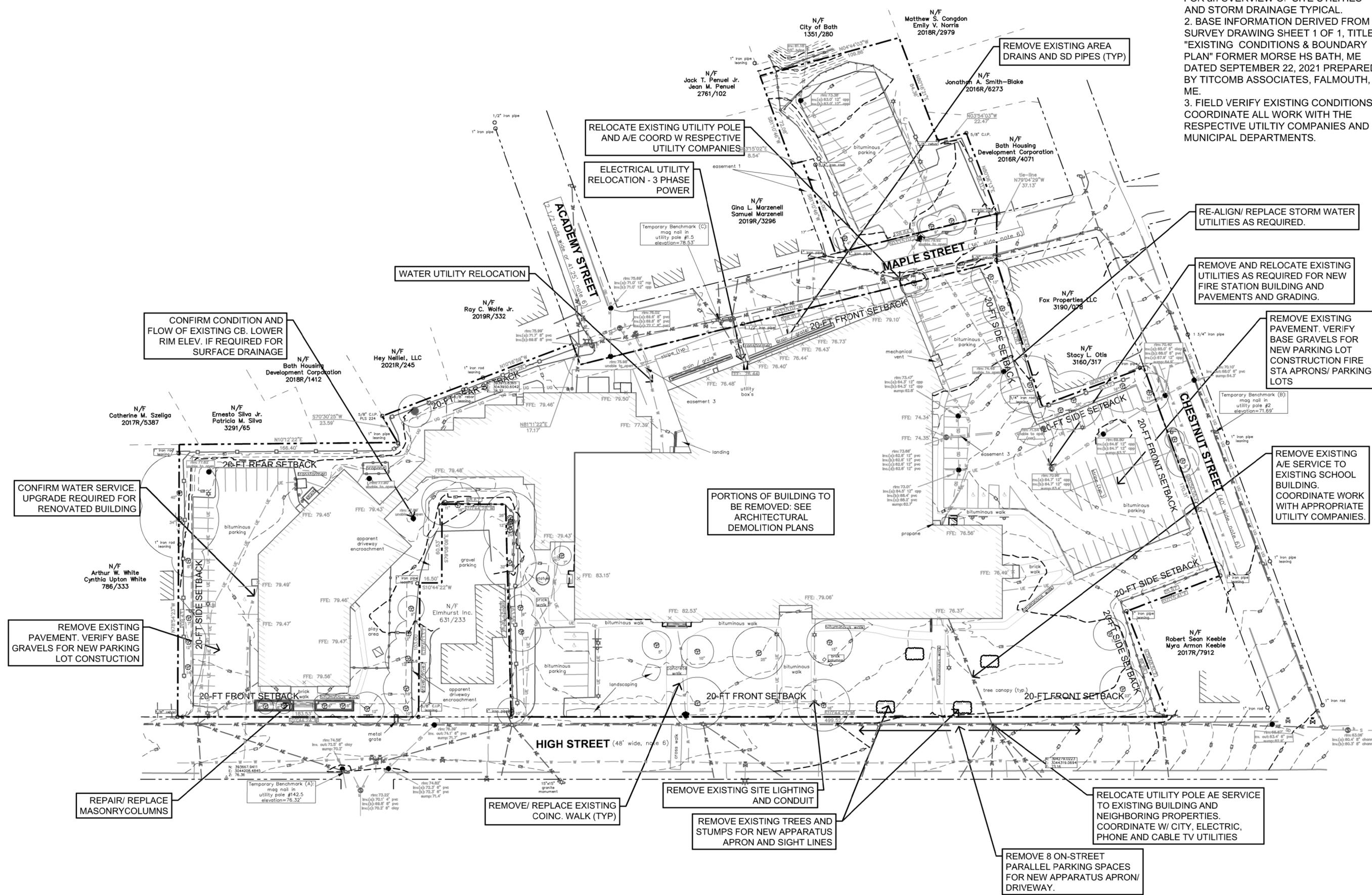


PLAN OF	
Existing Conditions & Boundary Survey	
Former Morse High School	Bath, Maine
MADE FOR	
City of Bath	
55 Front Street	Bath, Maine
JOB #21769	DATE: September 22, 2021 SCALE: 1" = 30'
BOOK #939	
21769.dwg	
Sheet 1 of 1	

PRELIMINARY



NOTE:
 1. REFER to CIVIL ENGINEERING ASSESSMENT, PART 2 OF THE REPORT FOR an OVERVIEW of SITE UTILITIES AND STORM DRAINAGE TYPICAL.
 2. BASE INFORMATION DERIVED FROM SURVEY DRAWING SHEET 1 OF 1, TITLED "EXISTING CONDITIONS & BOUNDARY PLAN" FORMER MORSE HS BATH, ME DATED SEPTEMBER 22, 2021 PREPARED BY TITCOMB ASSOCIATES, FALMOUTH, ME.
 3. FIELD VERIFY EXISTING CONDITIONS COORDINATE ALL WORK WITH THE RESPECTIVE UTILITY COMPANIES AND MUNICIPAL DEPARTMENTS.



ZONING PROVISIONS	
OWNER	CITY OF BATH 55 FRONT ST BATH MAINE 04530
LOT LOCATION	HIGH STREET BATH, MAINE
USE	K-12 EDUCATION (VACANT)
TAX MAP/LOTS	MAP 26 LOT 1 MAP 25 LOT 270
ZONING	
LOT SIZE	R-1 HIGH DENSITY RESIDENTIAL HIGH ST. MAP 26 LOT 1 195,313 SF 4.48 AC MAPLE ST. MAP 25 LOT 270 17,295 SF 0.08 AC TOTAL 212,608 SF 4.88 AC
BUILDING COVERAGE (40% MAX)	
	195,313 SF LOT-1 77,391 GSF BUILDING FOOTPRINT 39.6% EXISTING COVERAGE
SETBACKS PER ZONING	
FRONT	YARD 10 FEET SETBACK* 20 FEET
SIDE	15 FEET 20 FEET
REAR	15 FEET 20 FEET
BUILDING HEIGHT	
DENSITY	45 FEET
PARKING SPACES MULTI-FAM RESIDENTIAL	1 DU PER 6,000 SF
OFFICE USE	1.75 PER DU
	1 PER 400 GSF

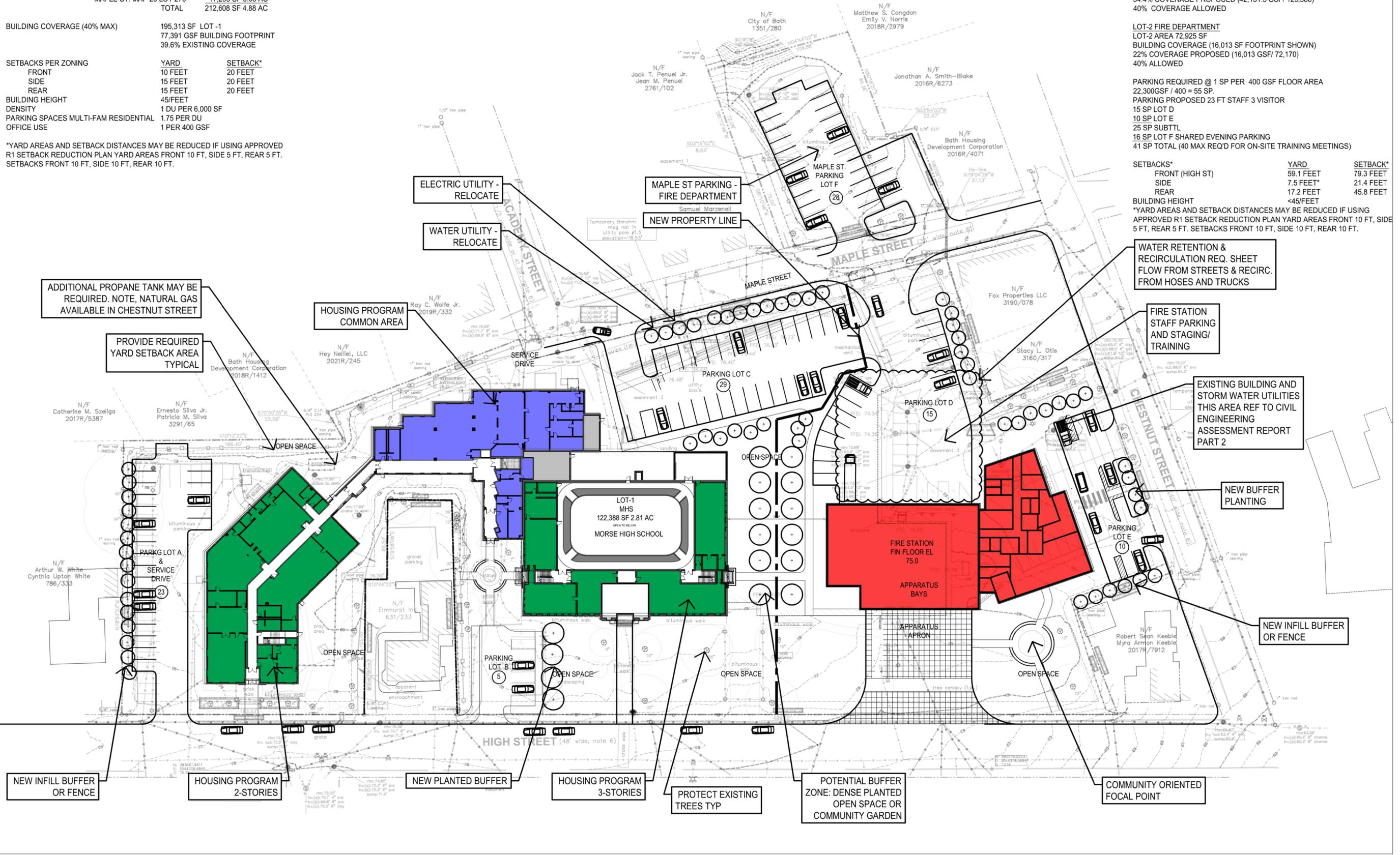
*YARD AREAS AND SETBACK DISTANCES MAY BE REDUCED IF USING APPROVED R1 SETBACK REDUCTION PLAN YARD AREAS FRONT 10 FT, SIDE 5 FT, REAR 5 FT. SETBACKS FRONT 10 FT, SIDE 10 FT, REAR 10 FT.

SUBDIVISION PROVISIONS R1 HIGH DENSITY ZONING	
DENSITY LOT-1 MULTI-FAM RESIDENTIAL	
LOT-1 AREA 123,388 SF±	
DENSITY @ 6,000 GSF/ DU = 20 DU ALLOWED	
PARKING @ 1.75 SP PER DU 20DU X 1.75 = 35 SPACES REQUIRED	
PARKING AVAILABLE	
23 SP LOT A	
5 SP LOT B	
29 SP LOT C	
57 SP TOTAL	
BUILDING COVERAGE (42,131.3 SF FOOTPRINT SHOWN)	
34.4% COVERAGE PROPOSED (42,131.3 GSF/ 123,388)	
40% COVERAGE ALLOWED	

LOT-2 FIRE DEPARTMENT	
LOT-2 AREA 72,925 SF	
BUILDING COVERAGE (16,013 SF FOOTPRINT SHOWN)	
22% COVERAGE PROPOSED (16,013 GSF/ 72,170)	
40% ALLOWED	

PARKING REQUIRED @ 1 SP PER 400 GSF FLOOR AREA	
22,300GSF / 400 = 55 SP.	
PARKING PROPOSED 23 FT STAFF 3 VISITOR	
15 SP LOT D	
10 SP LOT E	
25 SP SUBTTL	
16 SP LOT F SHARED EVENING PARKING	
41 SP TOTAL (40 MAX REQ'D FOR ON-SITE TRAINING MEETINGS)	

SETBACKS*		
FRONT (HIGH ST)	YARD 59.1 FEET	SETBACK* 79.3 FEET
SIDE	7.5 FEET*	21.4 FEET
REAR	17.2 FEET	45.8 FEET
BUILDING HEIGHT		
*YARD AREAS AND SETBACK DISTANCES MAY BE REDUCED IF USING APPROVED R1 SETBACK REDUCTION PLAN YARD AREAS FRONT 10 FT, SIDE 5 FT, REAR 5 FT. SETBACKS FRONT 10 FT, SIDE 10 FT, REAR 10 FT.		



MORSE HIGH SCHOOL CONCEPT DEVELOPMENT
BATH, ME
HARRIMAN 21266 DECEMBER 1, 2021



OPTION - 2
CONCEPT SUBDIVISION
SITE PLAN

ZONING PROVISIONS	
OWNER	CITY OF BATH 55 FRONT ST BATH MAINE 04530
LOT LOCATION	HIGH STREET BATH, MAINE
USE	K-12 EDUCATION (VACANT)
TAX MAP/LOTS	MAP 26 LOT 1 MAP 25 LOT 270
ZONING	R-1 HIGH DENSITY RESIDENTIAL
LOT SIZE	HIGH ST. MAP 26 LOT 1 195,313 SF 4.48 AC MAPLE ST. MAP 25 LOT 270 17,295 SF 0.08 AC TOTAL 212,608 SF 4.88 AC
BUILDING COVERAGE (40% MAX)	195,313 SF LOT-1 77,391 GSF BUILDING FOOTPRINT 39.6% EXISTING COVERAGE
SETBACKS PER ZONING	YARD SETBACK*
FRONT	10 FEET 20 FEET
SIDE	15 FEET 20 FEET
REAR	15 FEET 20 FEET
BUILDING HEIGHT	45 FEET
DENSITY	1 DU PER 6,000 SF
PARKING SPACES MULTI-FAM RESIDENTIAL	1.75 PER DU
OFFICE USE	1 PER 400 GSF

*YARD AREAS AND SETBACK DISTANCES MAY BE REDUCED IF USING APPROVED R1 SETBACK REDUCTION PLAN YARD AREAS FRONT 10 FT, SIDE 5 FT, REAR 5 FT. SETBACKS FRONT 10 FT, SIDE 10 FT, REAR 10 FT.

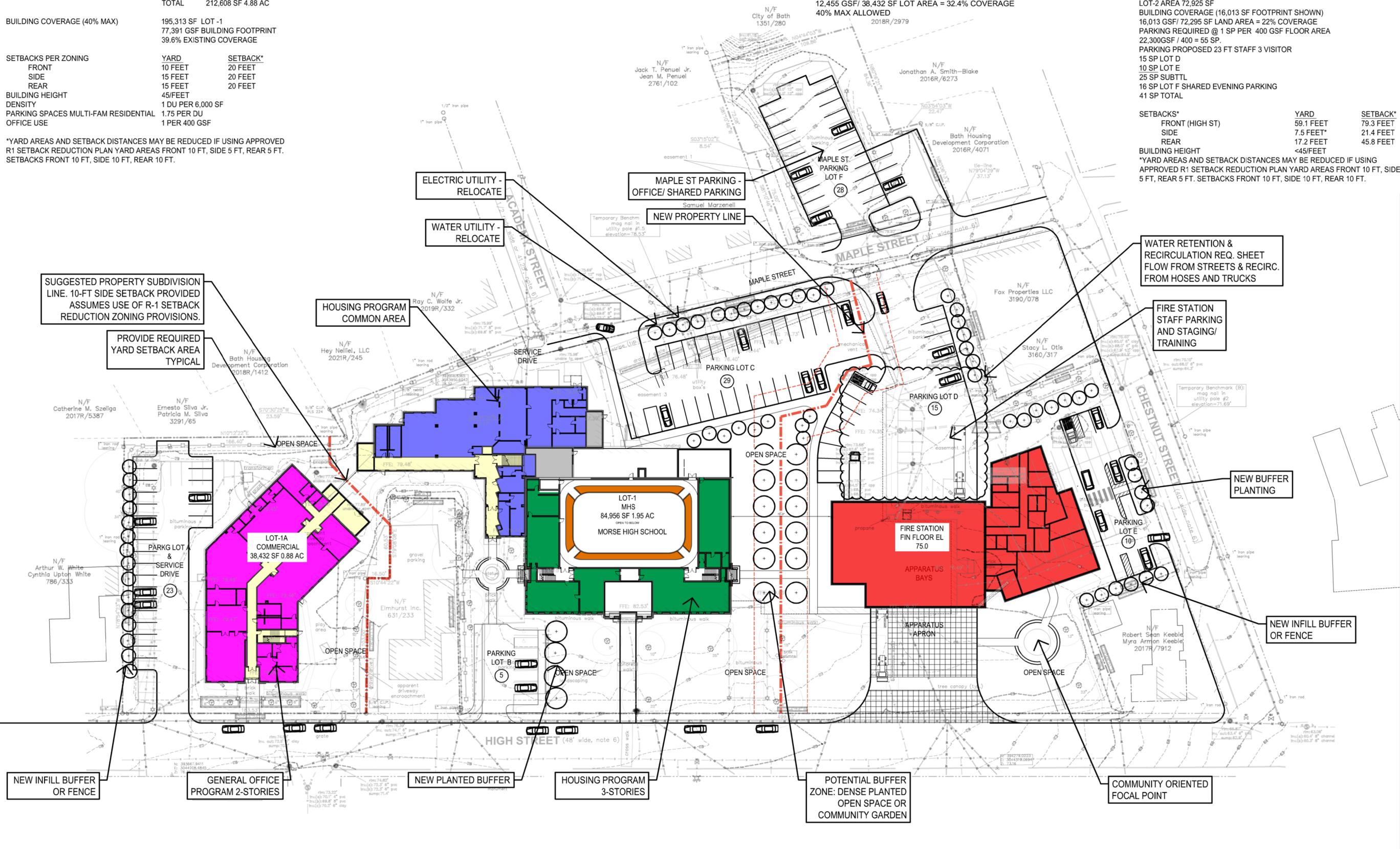
OPTION-4 SUBDIVISION PROVISIONS R1 HIGH DENSITY ZONING
 LOT-1A COMMERCIAL GENERAL OFFICE
 LOT-1A AREA 38,432 SF±
 BUILDING AREA (2-FLOORS) 23,776 GSF
 PARKING @ 1 SP PER 400 GSF = 59 SPACES REQUIRED
 PARKING AVAILABLE
 23 SP LOT-A
 4 SP LOT-B
 4 SP LOT-C
 28 SP LOT-F (MAPLE ST. LOT- SHARED PARKING)
 59 SP TOTAL
 BUILDING COVERAGE (12,455 GSF FOOTPRINT SHOWN)
 12,455 GSF/ 38,432 SF LOT AREA = 32.4% COVERAGE
 40% MAX ALLOWED

OPTION-4 SUBDIVISION PROVISIONS R1 HIGH DENSITY ZONING
 DENSITY LOT-1 MULTI-FAM RESIDENTIAL
 LOT-1 AREA 84,956 SF±
 DENSITY @ 6,000 GSF/ DU = 14 DU ALLOWED
 PARKING @ 1.75 SP PER DU 14 DU X 1.75 = 25 SPACES REQUIRED
 PARKING AVAILABLE
 25 SP LOT-C
 BUILDING COVERAGE (22,973 GSF FOOTPRINT SHOWN)
 22,973 GSF/ 84,956 GSF LOT AREA = 27% COVERAGE
 40% MAX. ALLOWED

LOT-2 FIRE DEPARTMENT
 LOT-2 AREA 72,925 SF
 BUILDING COVERAGE (16,013 SF FOOTPRINT SHOWN)
 16,013 GSF/ 72,295 SF LAND AREA = 22% COVERAGE
 PARKING REQUIRED @ 1 SP PER 400 GSF FLOOR AREA
 22,300GSF / 400 = 55 SP.
 PARKING PROPOSED 23 FT STAFF 3 VISITOR
 15 SP LOT D
 10 SP LOT E
 25 SP SUBTTL
 16 SP LOT F SHARED EVENING PARKING
 41 SP TOTAL

SETBACKS*	YARD	SETBACK*
FRONT (HIGH ST)	59.1 FEET	79.3 FEET
SIDE	7.5 FEET*	21.4 FEET
REAR	17.2 FEET	45.8 FEET
BUILDING HEIGHT	<45 FEET	

*YARD AREAS AND SETBACK DISTANCES MAY BE REDUCED IF USING APPROVED R1 SETBACK REDUCTION PLAN YARD AREAS FRONT 10 FT, SIDE 5 FT, REAR 5 FT. SETBACKS FRONT 10 FT, SIDE 10 FT, REAR 10 FT.



NEW INFILL BUFFER OR FENCE

GENERAL OFFICE PROGRAM 2-STORIES

NEW PLANTED BUFFER

HOUSING PROGRAM 3-STORIES

POTENTIAL BUFFER ZONE: DENSE PLANTED OPEN SPACE OR COMMUNITY GARDEN

COMMUNITY ORIENTED FOCAL POINT

NEW BUFFER PLANTING

NEW INFILL BUFFER OR FENCE

WATER RETENTION & RECIRCULATION REQ. SHEET FLOW FROM STREETS & RECIRC. FROM HOSES AND TRUCKS

FIRE STATION STAFF PARKING AND STAGING/ TRAINING

MAPLE ST PARKING - OFFICE/ SHARED PARKING

NEW PROPERTY LINE

ELECTRIC UTILITY - RELOCATE

WATER UTILITY - RELOCATE

SUGGESTED PROPERTY SUBDIVISION LINE. 10-FT SIDE SETBACK PROVIDED ASSUMES USE OF R-1 SETBACK REDUCTION ZONING PROVISIONS.

PROVIDE REQUIRED YARD SETBACK AREA TYPICAL

HOUSING PROGRAM COMMON AREA



BATH, MAINE FORMER MORSE HIGH SCHOOL AND CAREER TECHNICAL CENTER
TASK THREE, EXISTING FACILITY ASSESSMENT
<i>Introduction</i>
<p>As a follow up to several in-depth and high-level facility studies, Harriman assessed the current condition of the existing former Morse High School campus to establish a summary-level facility baseline for the concept development of subdividing and development of the property. Facility and site descriptions are based on the intent to create an RFP for private redevelopment of majority portion of the site and for the City of Bath to retain the remaining property to develop a new Fire Department facility.</p>
<p>Independent of the private redevelopment of the property, the City of Bath plans to design and construct a new Central Fire Station facility on a portion of the existing property. The two development initiatives on this site are intended to share some site amenities such as walkways, outdoor spaces, and vehicle circulation access to distinct parking areas.</p>
<p>The assessment is broken down by each separate building construction: 1928, 1941, 1968, and 1995. Buildings that are intended to be demolished are identified as such. Future considerations, focused mainly on utility infrastructure, may pertain to the private redevelopment or the proposed Fire Station. Each building has a series of headings that identify major systems or components.</p>

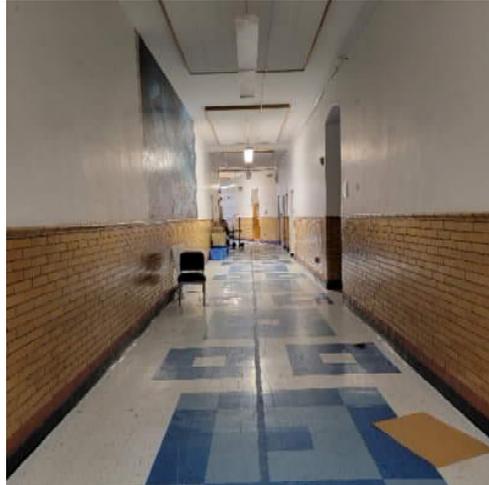


BATH, MAINE FORMER MORSE HIGH SCHOOL AND CAREER TECHNICAL CENTER	
ARCHITECTURAL SYSTEMS SUMMARY	
1928 Building	
<i>Interior Systems</i>	
<p>The original building was constructed in 1928 by Bunker & Savage Architects. The three-story building consists of a gymnasium, known as ‘the Pit’, and associated spaces on the below-grade level, an auditorium surrounded by classrooms on the first floor, and additional classrooms/office spaces around the second level of the auditorium on the third floor. Existing corridors, stairways, restrooms, and utility spaces fill out the remainder of the building.</p> <p>Conditions of the classroom interior finish materials are generally in good condition but have seen areas of decline. Some ground level floor slabs are uneven with numerous cracks. Window replacements occurred in 2014 as part of facility maintenance, and finishes were patched around the windows as part of this work. While most of the existing flooring has been replaced with VCT, future renovation and finishes replacement will require asbestos testing, particularly for flooring and flooring mastic.</p>	
	
<i>Existing classroom with cracking slab.</i>	<i>Existing classroom finishes.</i>
<p>Existing corridor interior finish materials are generally in good condition. Many corridors have tile wainscoting with plaster above. The third floor has a ramp to gain access into the adjacent 1968 wing. It’s believed the ramp is built up construction and can be removed to regain functional space when the 1968 wing is demolished. While most of the existing flooring has been replaced with VCT, future renovation and finishes replacement will require asbestos testing, particularly for flooring and flooring mastic.</p>	

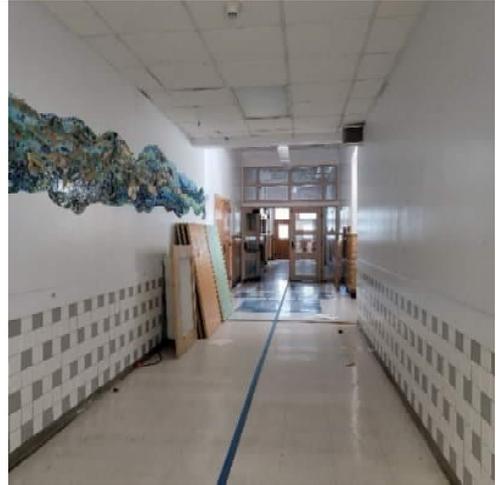


BATH, MAINE FORMER MORSE HIGH SCHOOL AND CAREER TECHNICAL CENTER

ARCHITECTURAL SYSTEMS SUMMARY



Existing 1928 corridor conditions.



Existing 1928 corridor conditions.

Existing stairs do not meet current codes or accessibility requirements, such as tread and riser dimensions, guardrails, handrails, and fire separation for egress stairs. Existing stairs are allowed under the existing building code regulations and would be considered compliant if in the opinion of the code official, they do not constitute a distinct hazard to life. New guardrails, handrails and fire separations are anticipated as being required with any significant building upgrades or change of use, if the stairs are to remain as part of the egress route. Elevators currently allow access to all levels except the 1928 building gymnasium level. With the proposed demolition of the 1941 and 1968 wings, a new elevator will need to be added to provide access. Future renovation and finishes replacement will require asbestos testing.



Existing 1928 egress stair.



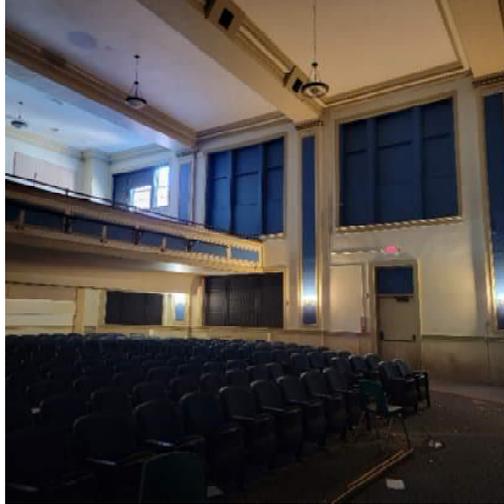
Existing 1928 main entry stair.



BATH, MAINE FORMER MORSE HIGH SCHOOL AND CAREER TECHNICAL CENTER

ARCHITECTURAL SYSTEMS SUMMARY

The existing auditorium is in decent condition. It has been recently renovated (past 10-15 years?) in comparison to the rest of the building. The fire escape stairs from the auditorium were replaced as part of the 2014 facilities maintenance renovations.

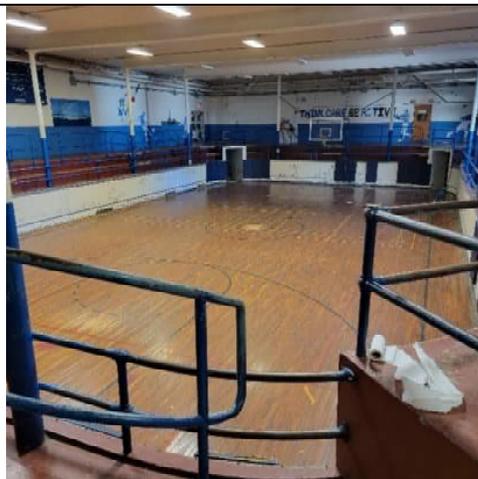


Interior conditions of Auditorium.



New Fire Escape Stair from Auditorium.

The existing gymnasium, known as 'the Pit', is located below grade in the center of the building. This basement level is only accessible by stair, or a mixture of elevator/stair/lifts through the additions and presents numerous issues for accessibility. The boiler room is also located off this level, with additional exterior access.



Interior conditions of the 'Pit'.



BATH, MAINE FORMER MORSE HIGH SCHOOL AND CAREER TECHNICAL CENTER	
ARCHITECTURAL SYSTEMS SUMMARY	
<i>Exterior Systems</i>	
<p>The existing façade is comprised of a steel structure with brick facades. The original 1928 building was constructed of a brick that was found to have a high level of porosity leading to moisture migration through the wall, and plaster deterioration and efflorescence on interior walls. To prevent continual migration of moisture through the walls, it was recommended that the building undergo sealing of the brickwork as part of a periodic maintenance program, with resealing occurring approximately every two years.</p> <p>Windows in the existing 1928 building were replaced as part of facility maintenance in 2014, and minor interior patching was completed to address moisture issues seen at the interior finishes.</p>	
	
<i>Window replacements on existing 1928 wing.</i>	<i>Detail of bricks on existing 1928 wing.</i>
<p>Portions of the existing roof were view from inside the building, but direct review of roofing was not included in this assessment. **Contact Facility Director for more roof info to include in this report.</p> <p>The boiler room roof structure was upgraded, and re-roofing occurred as part of the 2014 facility maintenance renovations.</p>	
1941 Building (to be demolished)	
<i>Interior Systems</i>	
<p>The 1941 wing is a three-story classroom addition designed by Alonzo. J. Harriman Architects. Finishes are severely deteriorated, and in need or repair. The building is currently slated for demolition and not examined in detail during this assessment.</p>	
<i>Exterior Systems</i>	
<p>The addition is a steel structure with brick facades, similar to the main existing building. The building is currently slated for demolition and not examined in detail during this assessment.</p>	



BATH, MAINE FORMER MORSE HIGH SCHOOL AND CAREER TECHNICAL CENTER
ARCHITECTURAL SYSTEMS SUMMARY
1968 Building (to be demolished)
<i>Interior Systems</i>
The 1968 wing is a two-story classroom addition designed by Allied Engineering. The building still has Vinyl Asbestos Tile and will need testing and abatement as part of the demolition. The building is currently slated for demolition and not examined in detail during this assessment.
<i>Exterior Systems</i>
The building is a steel structure with brick veneer and 'plastic' fascia panels on the exterior. Issues have persisted with the fascia panels falling off the building, requiring periodic replacement. The building is currently slated for demolition and not examined in detail during this assessment.
1995 Building
<i>Interior Systems</i>
The 1995 wing is a two-story Vocational Center addition designed by WBRC Architects and Engineers. Interior spaces include typical classroom spaces, as well more specific lab spaces. The cafeteria and commercial kitchen also occupy the first floor the building. The interior finishes are in relatively good condition, as this portion of the building remains occupied. Corridors have a tile wainscotting and wood rail. It was noted that the ground level has seen water issues in the past, with a test finding 4 lbs. of hydrostatic pressure at the slab. An epoxy floor on this level has contained the issue for now but may be a future issue if finishes are renovated or replaced. An elevator connects the two levels, and the second floor is aligned with the second floor of the 1928 wing. A rated stair enclosure also provides access to all levels between the 1995 and 1928 wings, apart from the basement level of the 1928 building.
<i>Exterior Systems</i>
The building is a steel structure with brick façade. It remains in good condition.



BATH, MAINE FORMER MORSE HIGH SCHOOL AND CAREER TECHNICAL CENTER
MECHANICAL AND PLUMBING SYSTEMS SUMMARY
1928 Building
<i>Mechanical Systems</i>
<p>The heating plant is located in 1928 building and contains two Cleaver Brooks 32 year old 6,277 mbh input oil fired (L.P. pilot light) fire tube low pressure steam boilers which generate 5 psig steam. Steam feeds terminal equipment such as unit ventilators, steam heating coils, cast iron radiators and convectors within the 1928 & 1941 buildings, a steam to hot water heat exchanger and base mounted pumps that in turn feeds terminal equipment such as unit ventilators, hot water coils, fin tube radiation and convectors within the 1968 wing and a steam to hot water heat exchanger and base mounted pumps that in turn feeds terminal equipment such as unit ventilators, cabinet unit heaters, fin tube radiation, convectors, duct mounted reheat coils, unit heaters, air handling unit heating coils, and fan powered variable air volume units within the 1995 wing. All heat exchangers and pumps appear to be original to when the additions were constructed. The condensate receiver tank was replaced in 2014 and is in good condition. Controls were upgraded from pneumatic to DDC as part of a renovation in 2014. Some portions are wireless and some are wired with surface mounted wiremold on the existing walls.</p>
<p>The auditorium ventilation is provided by a large single backward curved centrifugal fan located in a plenum room above the stage area. Within the plenum located on the return wall is a large steam coil that actually heats the air coming back to the fan room. The air is then drawn in through the inlet bell of the fan and distributed to the space below. The coil is not protected with adequate filtration. This fan appears to be an original mechanical component of the building's construction. The current arrangement of this fan causes significant concern for safety of the individuals who have access to this room. The fan has no inlet guard or fan belt guards in place. The wall mounted steam coil is also completely exposed within the room and poses a risk for burns, as it has no protective guard around it.</p>
<p>Proposed – The existing heating plant is located in this portion of the existing building. As noted in previous studies, the major existing mechanical systems have already served well beyond their anticipated life span and need upgrade or replacement. Given the size and scope of the renovation required in this property for the new use of this property, we would recommend a complete system replacement with new condensing boilers and variable speed pumps.</p>
<i>Plumbing and Domestic Hot Water Systems</i>
<p>Water is supplied from High Street through a 2" copper service in room off the wood shop under the main building entrance.</p>
<p>Domestic hot water is generated by the building boilers and stored in a 2,000 gallon storage tank.</p>



BATH, MAINE FORMER MORSE HIGH SCHOOL AND CAREER TECHNICAL CENTER
MECHANICAL AND PLUMBING SYSTEMS SUMMARY
Toilet Room fixtures: The fixtures do not comply with ADA accessibility standards. Some rooms are partially but not completely compliant. Examples include: Flush handles point away from the wide side of the stall, urinals are not mounted at 17" to the rim, toe space below lavatories does not comply.
The fixture counts within the 1928 building are not sufficient to support the gym and lower assembly space.
Liquid Propane fuel will be required the building hot water and space heating needs.
It is estimated four 1,000 gallon propane tanks may be required on the site based on the final connected load. Two 1,000 gallon L.P. tanks may be an option to four if a vaporizer is provided to save space.
<i>Sprinkler System</i>
The only space protected by a sprinkler system is the boiler room.
The existing sprinkler system which serves the 1928 boiler room and the 1995 building may remain in the boiler room to serve the renovated 1928 building.
1941 Building (to be demolished)
<i>Mechanical Systems</i>
As noted above, the 1941 building portion is served by two steam boilers in the 1928 boiler room, that feeds terminal equipment such as unit ventilators, steam heating coils, cast iron radiators and convectors
Proposed – Steam piping will be demolished back to the 1928 boiler room. All equipment in the 1941 building portion will be completely removed.
<i>Plumbing and Domestic Hot Water Systems</i>
There is a 2" domestic water service from Maple Street which will need to be discontinued and capped at the street. The water service provides water only to the 1941 building and has no impact the other portions of the building.
Domestic hot water will be demolished back to the point of entrance to the 1941 building. The hot water source is in the 1928 Boiler Room.
Toilet Rooms within the 1941 portion serve that part of the building as well as the 1928 building. The 1928 building will require additional restrooms.



BATH, MAINE FORMER MORSE HIGH SCHOOL AND CAREER TECHNICAL CENTER
MECHANICAL AND PLUMBING SYSTEMS SUMMARY
<i>Sprinkler System</i>
There are no sprinklers within the 1941 building.
1968 Building (to be demolished)
<i>Mechanical Systems</i>
As noted above, the 1968 building portion is served by a steam to hot water heat exchanger and base mounted pumps that in turn feeds terminal equipment such as unit ventilators, hot water coils, fin tube radiation and convectors.
Terminal equipment such as unit ventilators appear to be of three different age vintages with the original UVs well past their expected life span.
Proposed – Hot water piping will be demolished back to the 1928 boiler room. In addition to the existing steam to hot water heat exchanger and associated pumps in the 1928 boiler room, all equipment in the 1968 building portion will be completely removed.
<i>Plumbing and Domestic Hot Water Systems</i>
There is a 2” domestic water service from Maple Street which will need to be discontinued and capped at the street. The water service provides water only to the 1968 building and has no impact the other portions of the building.
Domestic hot water will be demolished back to the point of entrance to the 1968 building. The hot water source is in the 1928 Boiler Room.
Toilet Rooms within the 1968 portion serve that part of the building as well as the 1928 building. The 1928 building will require additional restrooms.
<i>Sprinkler System</i>
There are no sprinklers within the 1941 building.
1995 Building
<i>Mechanical Systems</i>
As noted above, the 1995 building portion is served by a steam to hot water heat exchanger and base mounted pumps that in turn feeds terminal equipment such as unit ventilators, cabinet unit heater, fin tube radiation, convectors, duct mounted reheat coils, unit heaters, air handling unit heating coils, and fan powered variable air volume units.



BATH, MAINE FORMER MORSE HIGH SCHOOL AND CAREER TECHNICAL CENTER
MECHANICAL AND PLUMBING SYSTEMS SUMMARY
<i>Plumbing and Domestic Hot Water Systems</i>
Domestic water and fire protection are provided from the 1928 Boiler Room. These services will be severed by the separation of the 1995 building. A new 2" water service will be required. The new service will connect to the existing domestic water system.
Domestic hot water is generated by the building boilers in the 1928 building and stored in a 2,000 gallon storage tank. The hot water will be severed by the separation of the 1995 building.
Toilet Room fixtures: The fixtures within the 1995 building are ADA compliant. The fixture counts within the 1995 building will need to be evaluated based on the use occupancy of the building.
Liquid Propane fuel will be required the building hot water and space heating needs. It is estimated four 1,000 gallon propane tanks may be required on the site based on the final connected load. Two 1,000 gallon L.P. tanks may be an option to four if a vaporizer is provided to save space.
<i>Sprinkler System</i>
The 1995 building is fully sprinklered with an NFPA 13 compliant system, but the water supply will be severed by the building separation. A new water and fire service will be required. A new 6" sprinkler service will be required. The new service will connect to the existing sprinkler system.
Undeveloped area for future Fire Department
<i>Mechanical Systems</i>
<i>All new HVAC systems will be required. These may include systems such as a L.P. boiler, VRF systems to serve areas such as living/lobby/exercise/corridors/offices/sleeping, etc. type spaces, radiant floor heating and destratification fans in vehicle bays, commercial kitchen hood(s) with associated kitchen exhaust fans and gas fired makeup air units, vehicle exhaust systems, cabinet unit heaters at entrances/exists of the building, dedicated ductless air conditioner to serve an IT room, unit heaters in vehicle bays and mechanical rooms, energy recovery ventilator to exhaust storage & toilet rooms and provide ventilation air to the VRF system.</i>
<i>Plumbing and Domestic Hot Water Systems</i>
2" Water service connection will be required either High Street or Maple Street. Domestic hot water will be created by a liquid propane fired water heater.
A 6" sanitary sewer will be required from the building. A storm drain will be required for any flat roofs of the proposed building.



BATH, MAINE FORMER MORSE HIGH SCHOOL AND CAREER TECHNICAL CENTER
MECHANICAL AND PLUMBING SYSTEMS SUMMARY
Liquid Propane fuel will be required the building hot water and space heating needs.
It is estimated four 1,000 gallon propane tanks may be required on the site based on the final connected load. Two 1,000 gallon L.P. tanks may be an option to four if a vaporizer is provided to save space.
<i>Sprinkler System</i>
6" Water service connection will be required from either High Street or Maple Street.



BATH, MAINE FORMER MORSE HIGH SCHOOL AND CAREER TECHNICAL CENTER
ELECTRICAL SYSTEMS SUMMARY
1928 Building
<i>Electrical Systems</i>
<p>Power distribution – with the removal of the 1941 wing the main distribution board serving the 1928 building the 1968 addition and the 1941 wing will be demolished. The 1928 building will need a complete new electrical service entrance. The branch circuit panelboards may be able to be reused if situated adequately but some are older style and should be considered for replacement. All branch panelboards will need new feeders originating from the new electrical service. It should be noted that the panels are three phase and may not be conducive of being reused based on the reuse of the building i.e., if residential 120/240volt panels would be more inline. The new service would most likely come in from Maple Street the street behind the school, (it should be noted that only a portion of Maple Street has three phase service) or in front of the building (High Street). Chestnut street only has single phase power which will limit the electrical service size.</p> <p>Lighting is generally fluorescent there was an energy retrofit about 15 years ago that change the T12 lamps to T8 in classrooms and similar spaces and T5 lamps in the Gym and some shops. The auditorium has some chandeliers. The reuse will dictate if fluorescent lamp fixtures are appropriate. For a residential reuse it would be expected to upgrade to LED fixtures.</p> <p>Exit signage is present and is generally LED. The signs are old but functional. Paths of egress will need to be coordinated with any reuse design and paths properly marked.</p> <p>Emergency lighting is existing battery units (EBU) and will need to be tested to ensure compliance with NFPA 101 life safety code and egress paths properly lite.</p>
<p>Fire alarm – the panel was replaced within the last few years to an EST3, this is a good panel but based on the reuse an upgrade may be warranted to better suit the reuse occupancy. For example, Residential occupancy will require Carbon monoxide detection.</p>
<p>New communications will be required and most likely come in from High Street for phone, fiber, and cable tv.</p>
1941 Building (to be demolished)
<i>Electrical Systems</i>
<p>The electrical service entrances (two) serve the building with the exception of the 1995 addition. The main service was upgraded in 1995 and the old switchboard (on the opposite side of the wall) in the 1968 wing was used as a splice box. Demolition of either the 1941 wing or the 1968 wing will require rework of the power distribution system. Where both are scheduled under this exercise to be demolished a new entrance for the original 1928 building will be required – see above. The second electrical entrance is for the welding shop in the 1941 wing which is where the main electrical entrance is also located.</p>



BATH, MAINE FORMER MORSE HIGH SCHOOL AND CAREER TECHNICAL CENTER
ELECTRICAL SYSTEMS SUMMARY
<p>Lighting is comprised of fluorescent fixtures of which demolition will require the lamps to be recycled and properly disposed of. There is a mixture of fixture types most are surface mounted fixtures. Reuse of these fixtures is not expected with LED technology replacing fluorescent lamp technology and the age of the light fixtures.</p> <p>There is Exit signage that will require removal and be properly disposed of.</p> <p>Emergency lighting is existing battery units (EBU) and will need to be removed and the batteries recycled and the remaining components disposed of properly.</p> <p>Fire alarm – the panel serving the building is located in the 1928 building. Any of the existing wiring that runs through this wing will require rework for the 1928 building to still function.</p>
1968 Building (to be demolished)
<i>Electrical Systems</i>
<p>The electrical service entrance is in the 1941 wing with circuits extending through to this wing using the old switchboard enclosure as a junction box. Where both the 1941 and 1968 wings are scheduled under this exercise to be demolished a new entrance for the original 1928 building will be required – see above.</p> <p>Lighting is comprised of fluorescent fixtures of which demolition will require the lamps to be recycled and properly disposed of. There is a mixture of fixture types most are surface mounted fixtures. Reuse of these fixtures is not expected with LED technology replacing fluorescent lamp technology and the age of the light fixtures.</p> <p>There is Exit signage that will require removal and be properly disposed of.</p> <p>Emergency lighting is existing battery units (EBU) and will need to be removed and the batteries recycled and the remaining components disposed of properly.</p> <p>Fire alarm – the panel serving the building is located in the 1928 building. Any of the existing wiring that runs through this wing will require rework for the 1928 building to still function.</p>
1995 Building
<i>Electrical Systems</i>
<p>This building has its own electrical service entrance from High Street to a pad mounted utility transformer just past the parking lot. When this addition is split from the portion built on to the 1928 building by removing the connector the portion attached to the 1928 building will not have electrical services. Electrical feeds emanating from the 1995 electrical service entrance feeding panels in the 1995 addition built on to the 1928 building will need to be removed and the panels will need to be re-fed to the new distribution system that will be required for the 1928 building.</p>



BATH, MAINE FORMER MORSE HIGH SCHOOL AND CAREER TECHNICAL CENTER

ELECTRICAL SYSTEMS SUMMARY

Lighting is fluorescent lamped fixtures. The fixture types are a combination of up-light linear and recessed troffers. The lighting in this addition does have some lighting controls.

Exit signage is present and is LED. The signs are old but functional.

Emergency lighting is existing battery units (EBU) and will need to be tested to ensure compliance with NFPA 101 life safety code.

Fire alarm originates from the 1928 wing fire alarm control panel as such this wing will need a completely new fire alarm system. What remains of the existing system in this building will need to be removed and properly disposed of and a completely new system designed to accommodate the reuse occupancy.

Undeveloped area for future Fire Department

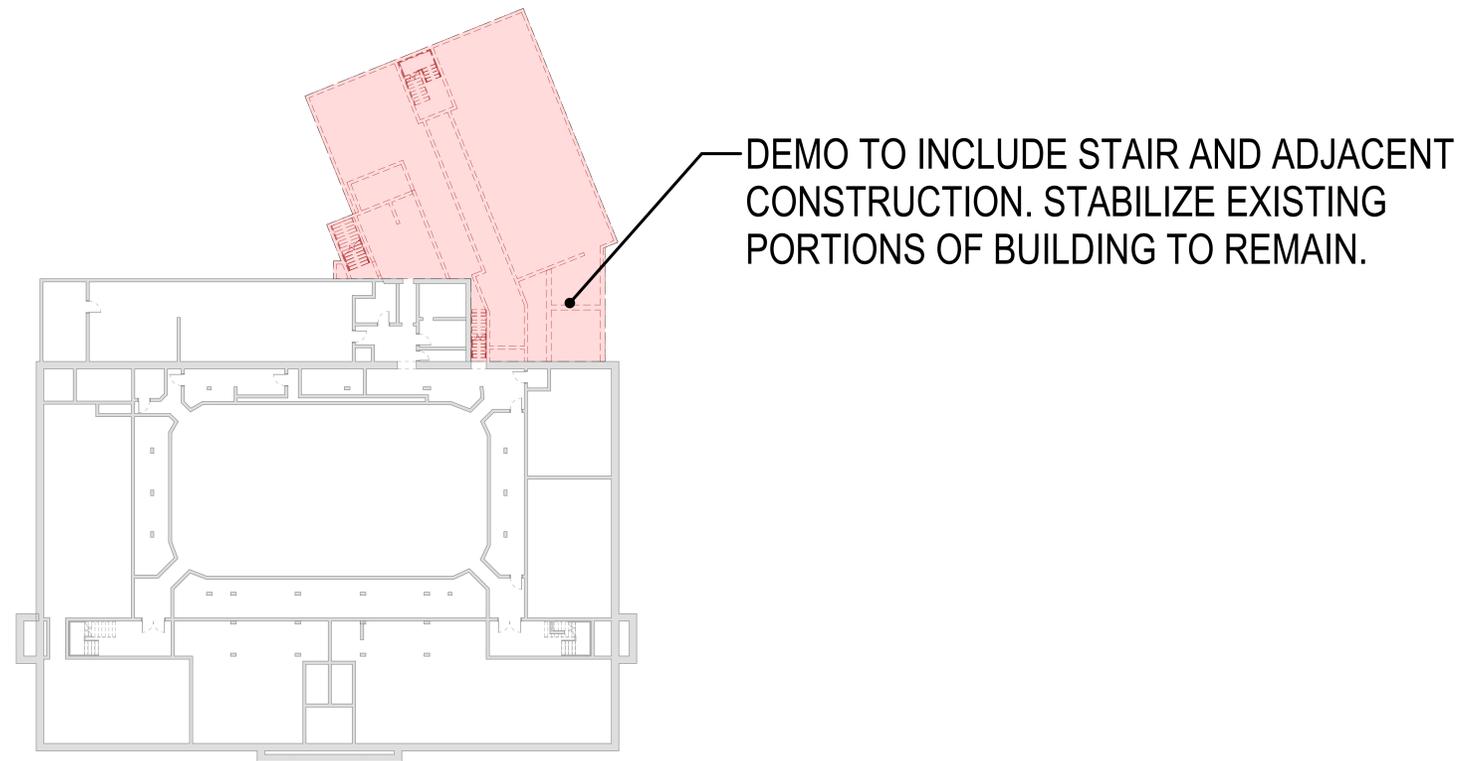
Electrical Systems

A new electrical service entrance will be required most likely from High Street (Maple Street has three phase only for a portion although it is possible that the utility will upgrade the remaining Maple street to three phase (utility would have to consulted for feasibility and cost). The transformer location will need to be set back from the building and have access by the utility for maintenance (no more than ten feet from a road/paved drive to allow a boom truck to pick up the transformer and replace as necessary).

New communications will also most likely come in from High Street for phone, fiber and cable tv.

Generator and fuel provisions will need to be made.

DEMOLISHED 4,970 SF



OPTION ONE

0 8' 16' 24'



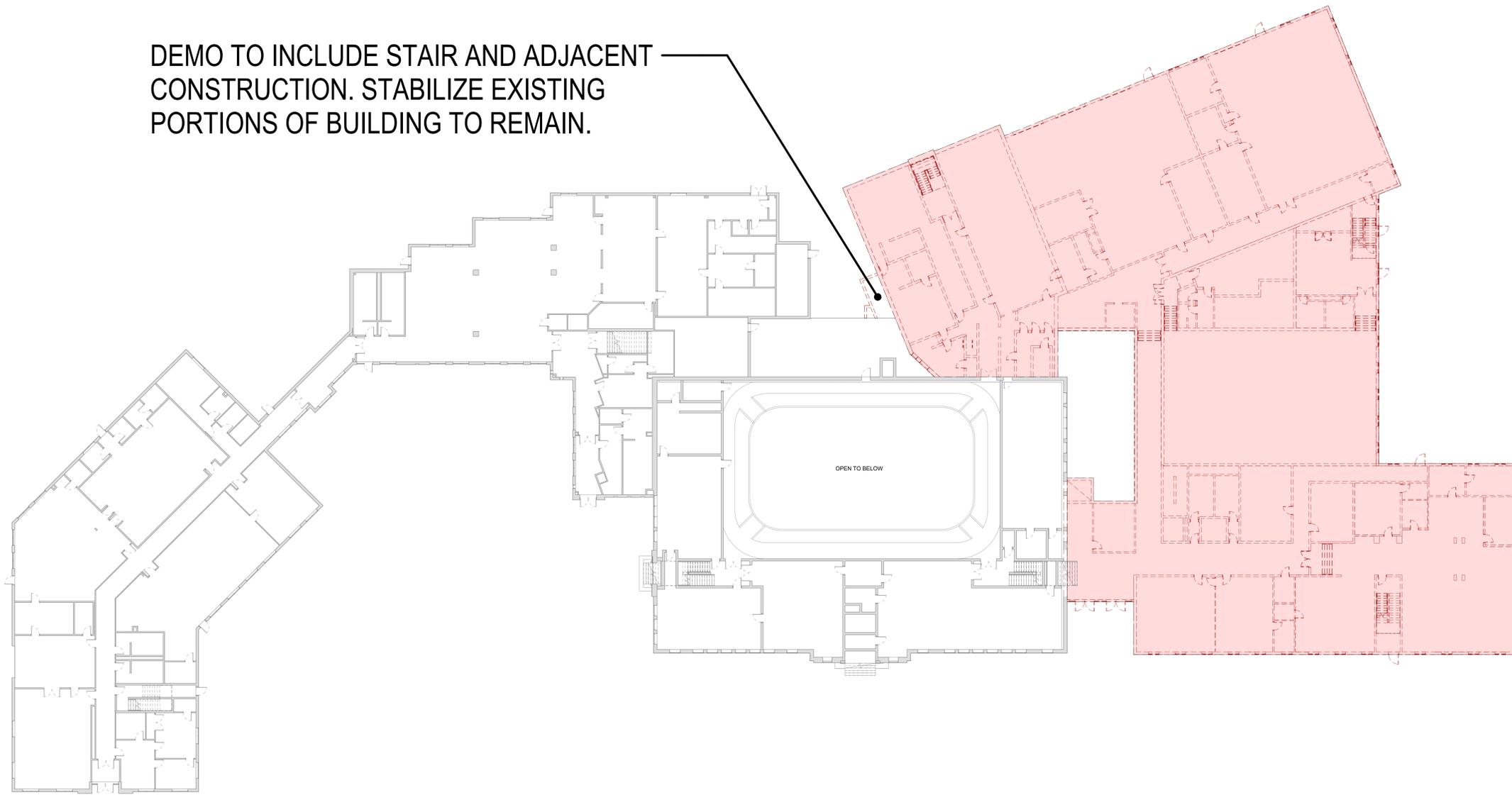
MORSE HIGH SCHOOL
CONCEPT DEVELOPMENT

BASEMENT FLOOR DEMOLITION PLAN

11/30/2021

DEMOLISHED 34,290 SF

DEMO TO INCLUDE STAIR AND ADJACENT CONSTRUCTION. STABILIZE EXISTING PORTIONS OF BUILDING TO REMAIN.



OPEN TO BELOW

OPTION ONE
0 8' 16' 24'



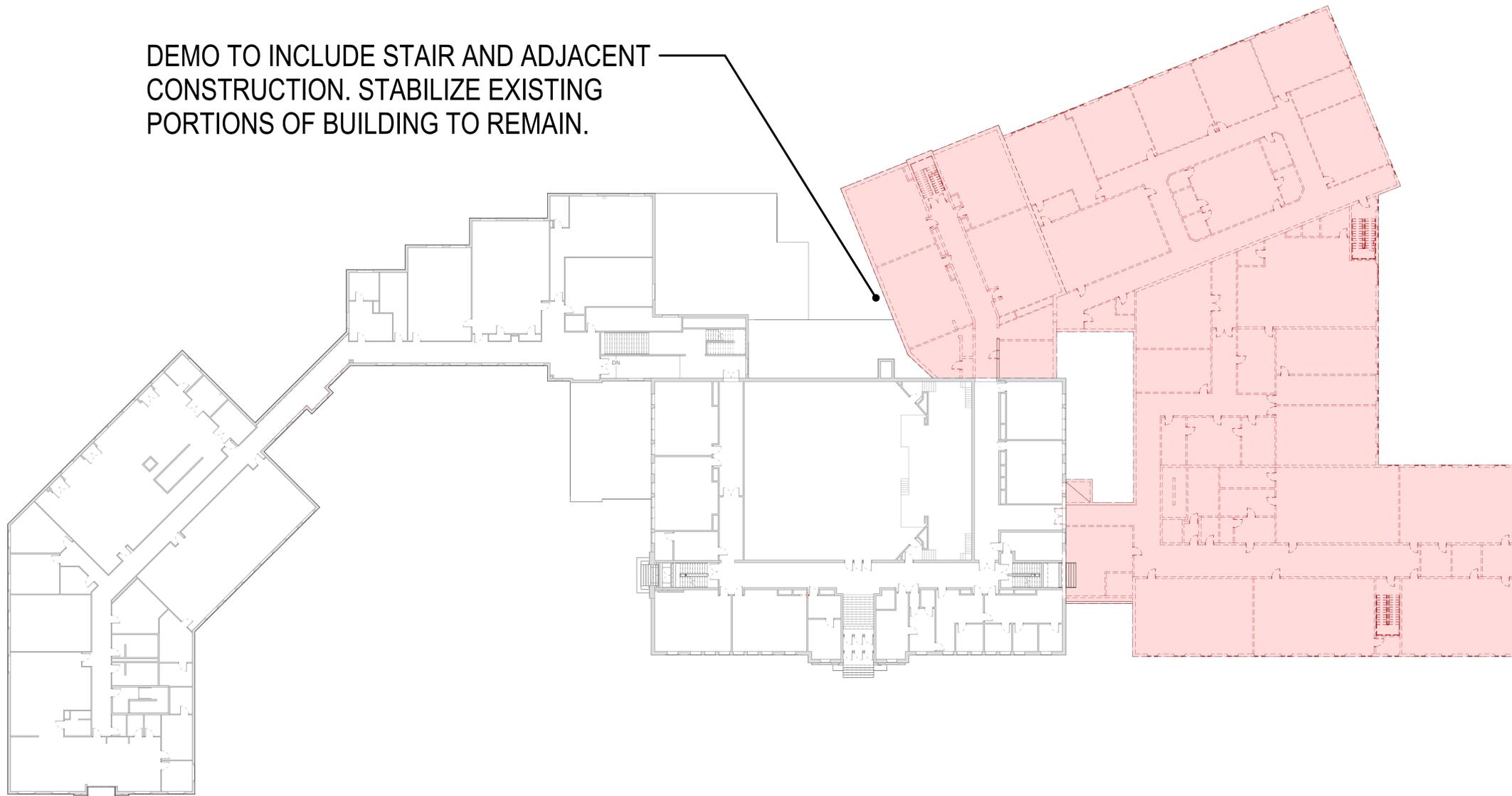
MORSE HIGH SCHOOL
CONCEPT DEVELOPMENT

GROUND FLOOR DEMOLITION PLAN

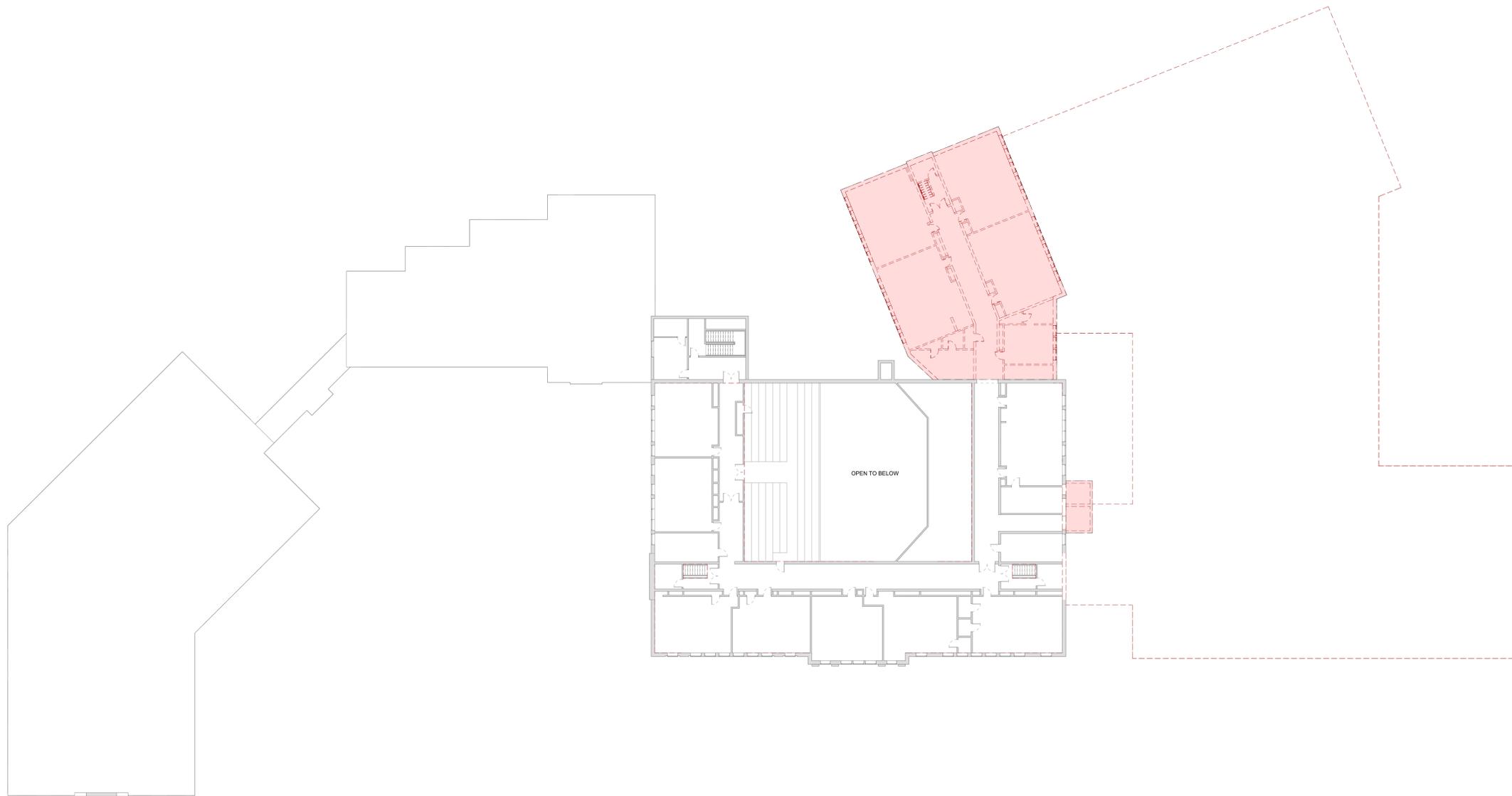
11/30/2021

DEMOLISHED 34,290 SF

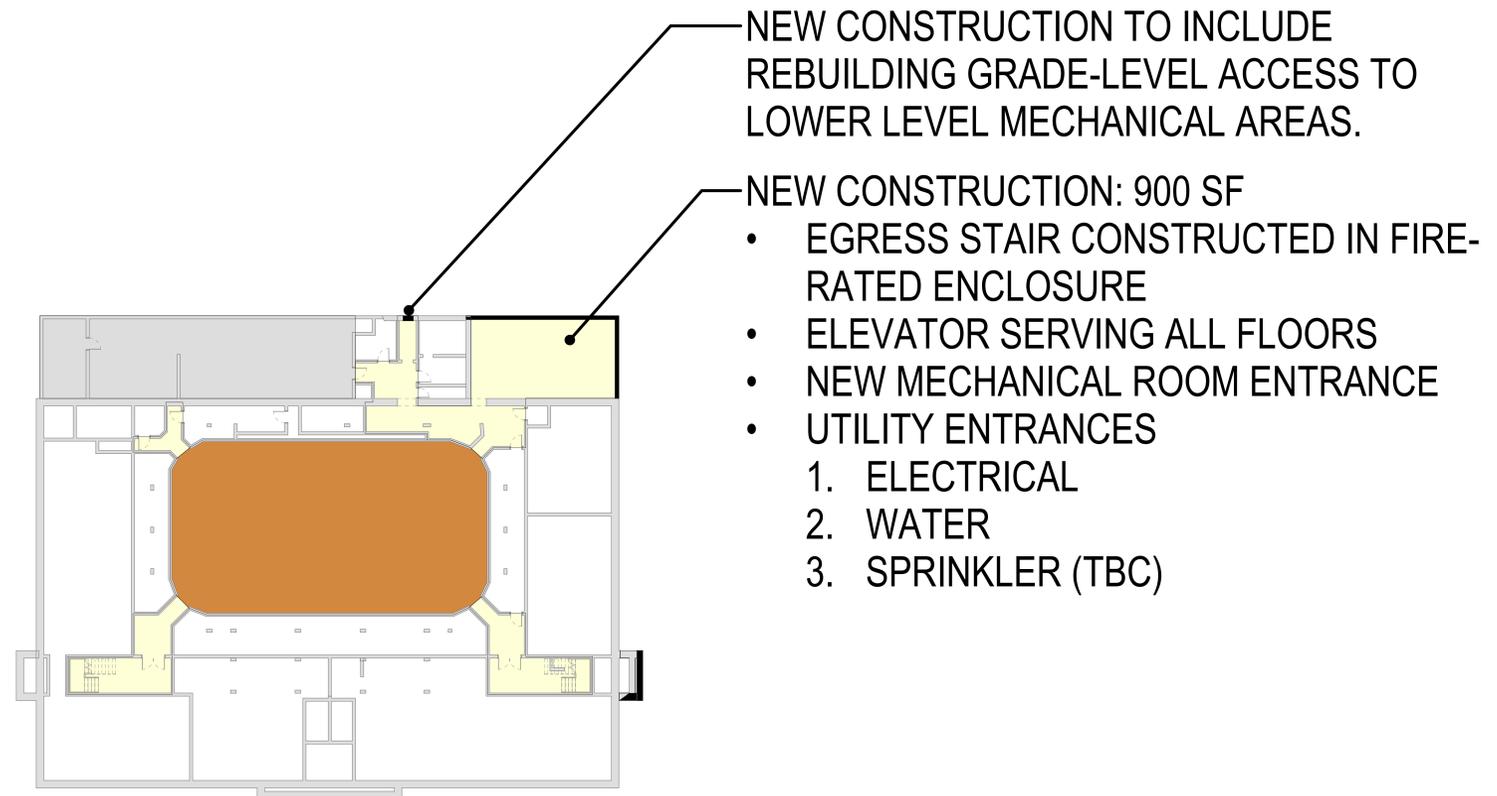
DEMO TO INCLUDE STAIR AND ADJACENT CONSTRUCTION. STABILIZE EXISTING PORTIONS OF BUILDING TO REMAIN.



DEMOLISHED 5,560 SF



■	EXG PIT - TBD	3,850 SF
■	MECH / UTIL	1,860 SF
■	CIRCULATION	2,500 SF
	TOTAL:	8,210 SF



OPTION ONE

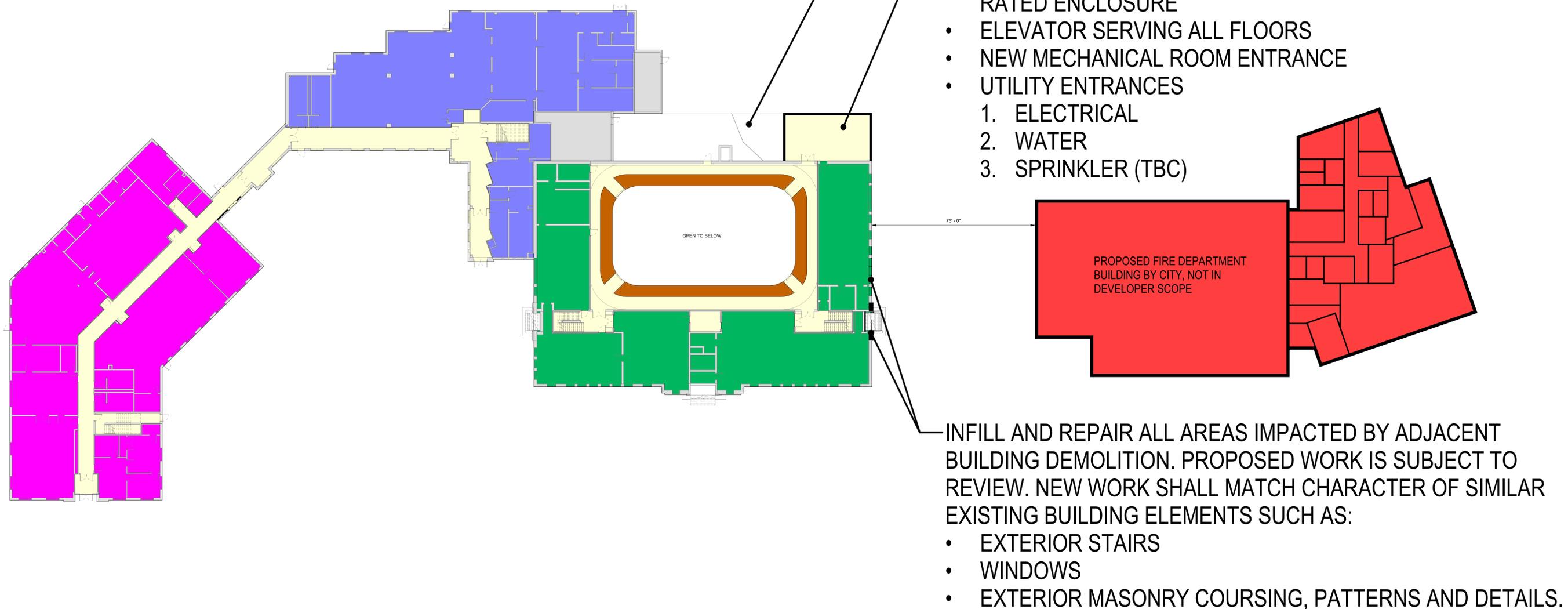


MORSE HIGH SCHOOL
CONCEPT DEVELOPMENT

BUILDING REMOVAL & NEW CONSTRUCTION SCOPE
BASEMENT FLOOR PLAN

11/30/2021

	EXG PIT - TBD	1,320 SF
	HOUSING COMMON AREA	8,070 SF
	HOUSING	8,260 SF
	OFFICE	10,240 SF
	FIRE STATION	16,030 SF
	MECH / UTIL	1,080 SF
	CIRCULATION	7,660 SF
	TOTAL:	52,660 SF



OPTION ONE

0 8' 16' 24'

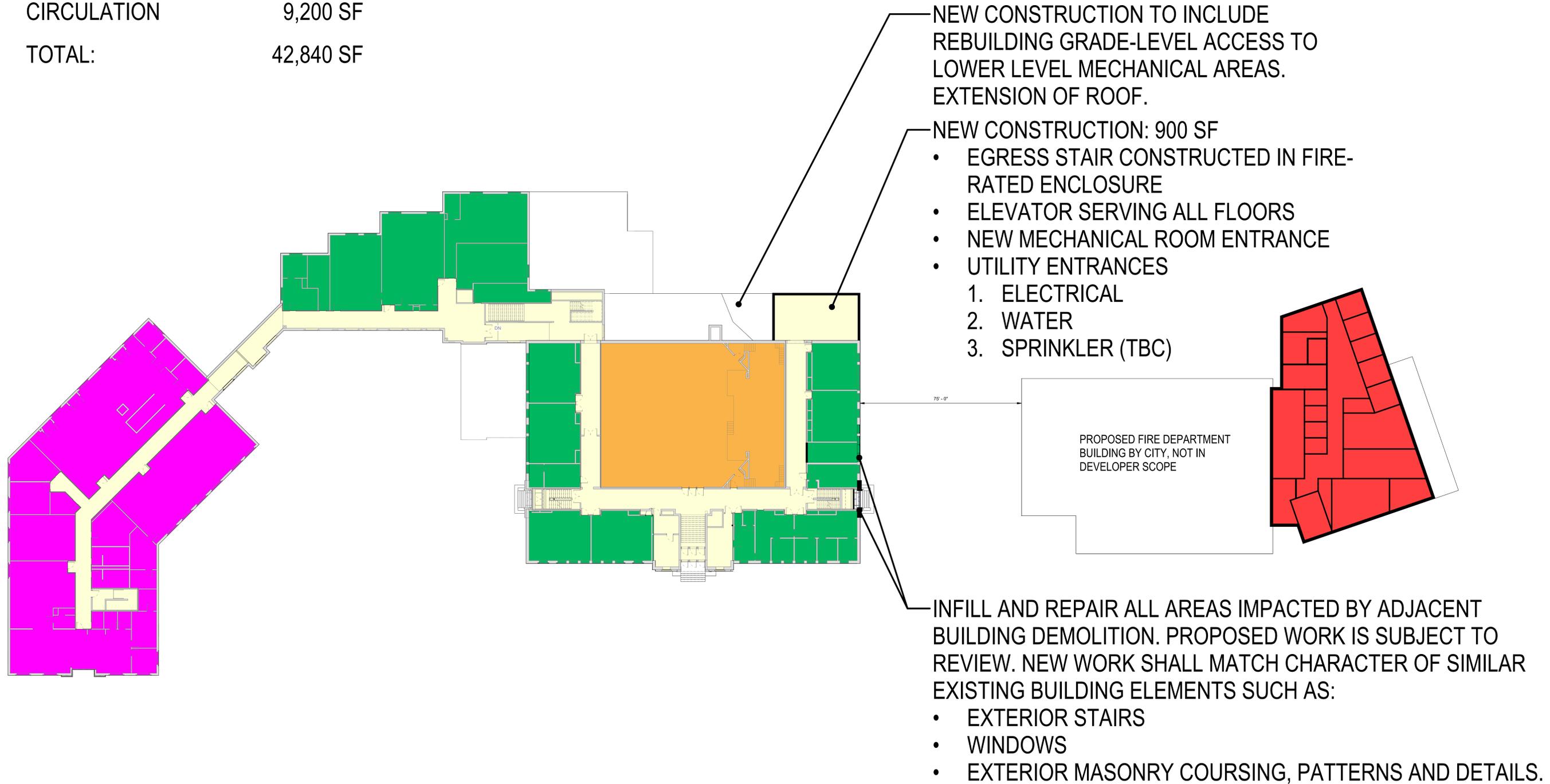


**MORSE HIGH SCHOOL
CONCEPT DEVELOPMENT**

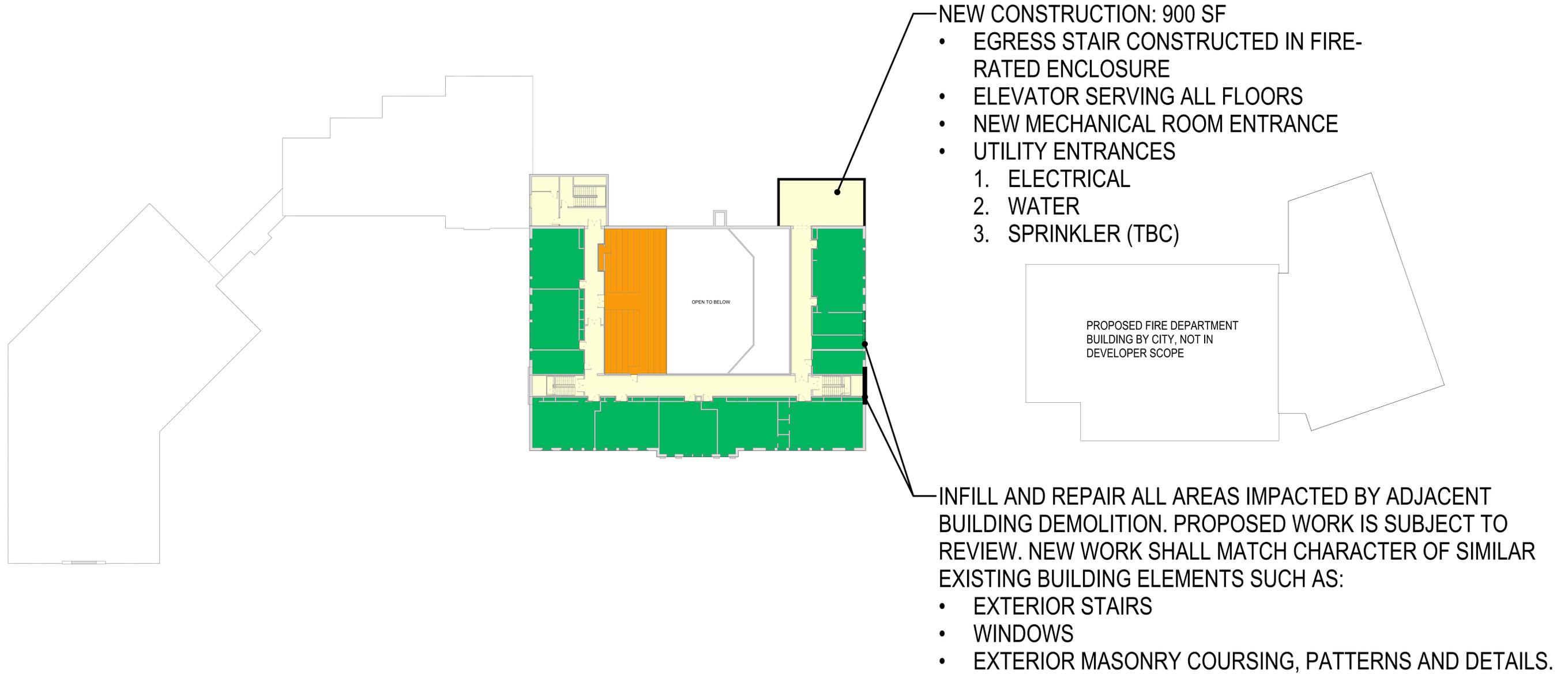
**BUILDING REMOVAL & NEW CONSTRUCTION SCOPE
GROUND FLOOR PLAN**

11/30/2021

	EXG AUDITORIUM - TBD	5,910 SF
	HOUSING	11,070 SF
	OFFICE	10,390 SF
	FIRE STATION	6,270 SF
	CIRCULATION	9,200 SF
	TOTAL:	42,840 SF



	EXG AUDITORIUM - TBD	2,020 SF
	HOUSING	7,310 SF
	CIRCULATION	4,750 SF
	TOTAL:	14,080 SF



Questions:
 -Will the City perform the demolition ahead of development?
 -Will the new Fire Station occur immediately, regardless of the path of the redeveloped school buildings?
 -What utility service does the City desire for the buildings? Natural gas, propane, 3-phase power?

