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**space needs study
town administration offices
town of suffield**

**suffield
ct**

tos-2456

december 9, 2005

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project team

The **edm** - Construction Services of Somerset, Inc. (CSS) team facilitating this study included these key members:

Tim Eagles, AIA – **edm**, Principal-in-Charge and Project Architect
Carlo Schneller, P.E. – **edm**, Structural Engineer
John Aulisio – **edm**, Mechanical
Jeff Gonyea – **edm**, Electrical
Eugene Torone – CSS, Construction Project Manager
David Heer – CSS, Cost Estimator

The Space Needs Committee for the Town of Suffield included these key members:

Scott Lingenfelter – First Selectman
Jack Muska – Director of Public Works
Gerald Turbet – Town Engineer
Patrick McMahon – Director of Economic Development
Edward Flanders – Building Official
Philip Chester – Town Planner
John Cloonan – Facilities Manager
Mark Cervione – Highway Foreman
Christine Koren – Administrative Assistant to the Selectmen
Debra Lefcheck – Administrative Secretary

executive summary

This project's objectives were:

- To study the space needs of the staff of the Town of Suffield.
- To establish a long-term space plan to meet those needs.
- To synthesize program and facility information with the Town's strategic goals.
- To create a proactive plan for the future development of the Town's facilities.

The facilities included in this study were: the Town Hall, Bridge Street School, Ambulance Building, Town Garage complex and leased Land Use building at 61 Ffyer Place. These facilities were studied using the process outlined on page 5 of this Executive Summary.

conclusions

Our Team and the Space Needs Committee concluded that the Town's needs are best met by the creation of a Town Administration "Campus", grouping together three (3) projects, and an additional project on the Town Garage site:

- Build a new Land Use Office Building behind the former Ambulance Building.
- Renovate the Town Hall (with a new Records Room expansion).
- Utilize the former Ambulance Building to accommodate Parks & Recreation, Mini-Bus office and 2 Mini-bus garages.
- Build a new Cold Storage facility on the Town Garage site.

Bridge Street School was evaluated to accommodate possible use as a New Senior Center, New Youth Center, future relocation of Parks & Recreation, and Temporary Library location.

These conclusions assume the following:

- The new Land Use Office Building will be built first.
- The new Land Use Office Building and old Ambulance Building will act as swing space during the renovation of Town Hall.
- The offices in the Town Hall will be relocated to the new Land Use Office Building and the old Ambulance Building. This will allow a cost effective renovation of the Town Hall to take place. Additional space in the schools may be required for relocating offices during construction. The Town Clerk and possibly I.T. will be the only departments to remain in the Town Hall during the renovation.
- The Land Use offices will remain at 61 Ffyer Pace beyond December 2006 until the renovation of the Town Hall is complete.
- Construction and renovation costs assume minimal town involvement. Substantial savings can be achieved in areas of demolition, site work and construction management by utilizing town employees.

proposed town administration campus (MP-5)

renovations and addition to town hall (MP-1, MP-2)

To meet requirements of the Space Needs Program some departments currently located within the Town Hall will be relocated to other locations within the facility. Other departments will expand in place. Others will be relocated outside of Town Hall, to other town facilities. An addition is proposed to accommodate an expanded Town Clerk's Records Room on the second floor, with additional program space on the first floor.

The Town Hall will be completely renovated with new finishes consistent with a mid-level office building. Renovations will also address the issues identified in the building evaluation including those dealing with: building code, structure, insulation, building skin, and mechanical, electrical and plumbing systems. *(Refer to Existing Building Evaluations.)*

The IT department will remain and expand in place, to avoid the expense of replacing current connections to Town departments both inside and outside this facility.

During construction, the Town Hall will be vacated, with the exception of the Town Clerk and possibly I.T.

Mechanical Systems: The proposed renovations will include:

- A completely new HVAC system consisting of a new water-cooled chiller, oil fired boiler, water tower, air-handlers, variable air volume (VAV) zoning, and direct digital control (DDC) system.
- Energy recovery ventilators shall provide ventilation air to all occupied spaces.

Plumbing Systems: The proposed renovations will include:

- Plumbing fixtures count and fixtures to comply with code requirements.

Electrical: The proposed renovations will include:

- New service entrance with outside pad-mount transformer.
- New feeders to new HVAC equipment.
- New fire alarm system.
- New emergency generator (sized to service Town Hall, Ambulance Building and new Land Use Office Building) and automatic transfer switch. The generator feed from the Fire House will be disconnected
- Rework of wiring and outlets and thermal imaging of existing equipment.
- Rework of phone & data wiring and outlets with new phone entrance is required and new data closet/ termination point.
- Rework of lighting, wiring and switches.
- Rework of emergency exit signs and emergency lighting.
- New site lighting.

renovations to former ambulance building (MP-2)

Parks & Recreation and Mini-Bus offices will both relocate from the Town Hall to the former Ambulance Building. Two existing garage bays will be used for the Mini-Bus Garage.

The entire building will be renovated with new finishes consistent with a mid-level office building. Renovations will also address the issues identified in the building evaluation including those dealing with: building code, structure, insulation, building skin, and mechanical, electrical and plumbing systems. (*Refer to Existing Building Evaluations.*)

Parking lots will be resurfaced, enlarged and modified as per the Campus Site Plan (*Refer to MP-5*)

Mechanical Systems: The proposed renovations will include:

- A completely new HVAC system(s) consisting of split system direct expansion (DX) cooling units coupled with High efficiency gas fired furnace(s). Ventilation will be provided by Economizer/ fresh air mixing box.
- Ventilation control will be based on CO2 demand and temperature by commercial programmable thermostats.
- Optional control may be incorporated in the DDC system serving the Town Hall.
- The garage shall have a basic heating system consisting of a unit heater and manually controlled exhaust fan.

Plumbing Systems: The proposed renovations will include:

- Plumbing fixtures count and fixtures to comply with code requirements.

Electrical Systems: The proposed renovations will include:

- Generator will be removed and relocated to the New Ambulance Building. This building will not have emergency power.
- New lighting per usage and building layout.
- New feeders to new HVAC equipment.

proposed new land use office building (MP-3)

A new 7000, square foot building, accommodating all the land use offices and some long term town office storage space, will be constructed on a site behind the former Ambulance Building. The exterior design and finishes will be appropriate for a civic building and suitable for the Town Administration campus. The interior finishes will be consistent with a mid-level office building. A new parking lot will be constructed connecting to the parking areas of both the Town Hall and the former Ambulance Building.

Mechanical Systems: The new building will include:

- A split system direct expansion (DX) cooling coupled air handlers (located in the attic area) with High efficiency gas fired boilers to provide perimeter heat and tempering of ventilation air.
- Ventilation will be provided by Economizer/ fresh air mixing box.

- Ventilation control will be based on CO2 demand and temperature by a Variable Volume Temperature (VVT) Zone system.
- Optional control may be incorporated in the DDC system serving the Town Hall.

Plumbing Systems: The new building will include:

- Plumbing fixtures count and fixtures to comply with code requirements.

Electrical Systems: The new building will include:

- New 208vac, 320 amp, 3phase, 4wire system with feed from the pad-mount transformer installed for the Town Hall renovations.
- Connection to new emergency generator at Town Hall.

proposed projects on other town sites

new cold storage building at town garage site (MP-6)

A proposed pre-engineered structure will be constructed on the Town Garage Site to accommodate the relocated and expanded storage space needs for the Town Administration offices. Construction and finishes for the facility will be consistent and appropriate for a low-cost, heavy-duty storage facility. The facility will not be heated or air-conditioned. The demolition of the existing buildings could be performed by town employees.

Mechanical Systems: The proposed building is an unoccupied structure and therefore will not incorporate any mechanical systems.

Plumbing Systems: The proposed building is an unoccupied structure and therefore will not incorporate any plumbing systems.

Electrical Systems: The new building will include:

- New 208vac, 100amp, 3phase, 4wire system for general lighting and power receptacles for building maintenance. Feed from Town Garage Building.

proposed new senior center/youth center at former bridge street school (MP-4, MP-7)

The Bridge Street School will accommodate the proposed New Senior Center, New Youth Center and the future home of Parks & Recreation. A small addition will be constructed containing an elevator and fire stair.

The entire building will be renovated with finishes consistent with a mid-level office building. Renovations will also address the issues identified in the building evaluation including those dealing with: building code, structure, insulation, building skin, and mechanical, electrical and plumbing systems. *(Refer to Existing Building Evaluations.)*

The existing parking lot will be resurfaced and additional spaces added.

Mechanical Systems: The proposed renovations will include:

- A completely new HVAC system consisting of a new water-cooled chiller, oil fired boiler(s), water tower, air-handlers, variable air volume (VAV) zoning, and direct digital control (DDC) system.
- Energy recovery ventilators providing ventilation air to all occupied spaces.
- Control system option with ability to communicate with DDC system serving the Town Hall.

Plumbing Systems: The proposed renovations will include:

- Plumbing fixtures count and fixtures to comply with code requirements.

Electrical Systems: The proposed renovations will include:

- New service.
- New feeders to new HVAC equipment.
- New fire alarm system.
- Rework of wiring and outlets and thermal imaging of existing equipment.
- Rework of phone & data wiring and outlets, new phone entrance, and new data closet/termination point.
- Rework of lighting, wiring and switches.
- Rework of emergency exit signs and emergency lighting.
- New lighting at parking lot and sidewalks.

process

Conclusions in this study resulted from the following processes and services performed with and by Our Team:

Site and Building Evaluations: Existing buildings were documented and existing floor plans were generated in AutoCAD. Existing buildings and sites were analyzed for physical condition, code compliance and adequacy of structural, mechanical, electrical and plumbing systems. *(Refer to Existing Building Plans & Facilities Analyses)*

Programming: Our Team, in a series of interviews and meetings with Town staff, reviewed current facility uses and proposed changes, assisted Town staff in determining their current and future space program needs, and gathered programming information. Ultimately, with the input of the Space Needs Committee, a Space Needs Program was developed summarizing current and proposed space requirements. *(Refer to Space Needs Program)*

Planning: Issues identified in the Evaluation and Programming steps were analyzed and integrated into several concept plan schemes, which were presented at meetings from late October through November 2005. Planning budgets were developed for all scheme and evaluated for value/cost benefits.

Implementation Planning: A final, best scheme was selected from the conceptual schemes and is documented herein. The final scheme has been divided in to five (5) separate projects and is meant to serve as a “road map” to meet the Town’s short and long-term goals. *(Refer to Conclusion and descriptions of schemes below, Conceptual Plans, and Opinion of Probable Cost)*

building evaluation – town hall

Building Code Compliance

The original building and any renovations were required to meet the Building Code at the time of construction. The current building is not required to be brought into compliance with the current Building Code unless it undergoes a change-in-use, is renovated or added on to. In that case, either the entire building or a portion thereof would be required to be brought into compliance.

Based on the building construction viewed, we would consider the construction type to 3B.

The use of the building is a mixed-use with:

- B, Business Use, and A-3, Assembly Use on the lower level.
- B, Business Use on the first and second floor.
- S-1, Storage Use in the attic.

The building is not fully sprinklered. There are areas of limited sprinklers (parks and recreation storage room on lower level, copier area on second floor.)

Height and Area – The largest floor area is 5,136 SF (lower level) and the building is 3 stories in height, plus the attic. To be compliant with the current Building Code the attic level would not be allowed to be occupied as an S-1, Storage Use.

Mixed-Use Separations – A 2-hour fire separation is required to separate the Meeting Room (A-3) Use from the rest of the building.

Major items that do not meet current Building Code requirements include:

- One means of egress off first floor and out of the attic.
- The main stair guardrails are not compliant. The guardrail height is less than 42" high and the baluster spacing exceed 4".
- There are storage and records rooms on the lower level, first floor and attic level that exceed 100 SF and are not sprinklered.
- The corridor walls on all floors are not 1-hour fire-rated. This requirement would go away if the building was fully sprinklered.
- The exits are not well marked with illuminated exit signage.
- Reception counters in department offices are not accessible.
- Drinking fountains are not accessible.

Building Structure

A visual inspection and structural review of the Town Hall has been performed. The issues reviewed include continued existing use and/or change of use, and review of the existing structure regarding compliance with existing code requirements.

The minimum allowable floor loading (as defined in The BOCA National Building Code) is as follows:

Office Buildings, Business Use	
Offices	50 psf.
Lobbies	100 psf.
Corridors above first floor	80 psf.

The minimum allowable roof live loading (as defined in The BOCA National Building Code) is as follows:

Live Load	20 psf.
Snow Load	35 psf.

The Town Hall is a two story building with an occupied lower level and walkup attic. The occupied lower level includes a one story portion (the garage area addition). The building exterior framing consists of a concrete foundation, masonry walls and a wood frame roof. The interior framing consists of masonry bearing walls and a steel joist supporting precast concrete plank deck floors (except the attic floor which is a wood frame floor system).

The structure meets the minimum structural requirement for the present use as an office building (Business Use) except the attic area which is used for file storage. The storage of files in the attic should be either eliminated or limited to a maximum height of two (2) feet.

Building Exterior

Overall the exterior of the building appears to be in good condition.

Site - A drainage problem was noted at the foundation at the retaining wall on the east side of the building. An additional drainage concern was noted at the front of the building to the left of the entrance stairs. Both of these areas should be regraded to direct water away from the building structure.

Roof – The primary roof is a pitched slate roof. It appears to be in good condition. No leak issues were reported to us in the primary roof. There is a small quantity of missing or broken slate. This should be expected from an older slate roof. Yearly maintenance of the slate to replace missing or broken pieces needs to take place. Ice damming behind the parapets along the north and south sides of the building was reported. To deal with this, insulation in the attic was pulled back to allow heat to escape up to the roof level to melt the ice.

Masonry – The exterior masonry appears to be in good condition with the exception of the false chimneys at the east and west ends of the building. These chimneys should be

removed down to the roof level where they are supported and rebuilt with proper flashing to direct all water to the exterior of the building. Currently there are considerable problems with water entering the building at these chimneys.

Building Trim – The building has painted wood trim. It appears that it is in relatively good shape. There is some trim that is peeling and is in need of preparation / painting including portions of the gables over the former garage space, window trim and eave/rake trim.

Windows – The original windows are primarily wood double-hung units with single glazing. Triple-track aluminum storm windows have been installed on most of these units. Both the wood windows and the storm windows are in fairly good condition. Many of the wood windows behind the storm windows are in need of reglazing and repainting. The windows in the entry/elevator addition are clad-wood double-hungs units in good condition. The windows installed during the garage conversion are a combination of double-hung wood units with insulated glass and double-hung wood units with single glazing and aluminum storm windows.

Doors – The exterior doors appeared to be in good condition. The front doors have sagged over time, but continue to be operational.

Entries – The main entrance exterior stair is well worn. The concrete is spalling, creating a potentially hazardous condition. The railings are not compliant.

Insulation

The building is not very well insulated.

Walls - It was not possible to determine if the walls were insulated, but from the original construction documents it does not appear that they were insulated.

Attic - The attic floor is insulated with a combination of blown-in insulation and fiberglass batt insulation. As noted previously, the insulation has been pulled back along the north and south walls to allow heat to escape and melt the ice dams.

Building Interior

Overall the interior of the building is in good condition. No significant architectural deferred maintenance issues were noted with the exception of the mold noticed in the entry vestibule and on the lower level. This mold appears to be the result of uninsulated chilled water lines (piping that feeds building cooling system) condensing and then dripping water onto various surfaces such as ceiling tiles and gypsum wallboard. In a continuous wet state, these surfaces have grown mold.

Plumbing System

The plumbing fixtures and piping throughout the building are older, but in serviceable condition. The plumbing in the elevator/entry addition is relatively new.

HVAC System

The original building is heated with a hot water system consisting of an H.B. Smith oil fired boiler feeding fan coils located throughout the building. Cooling is provided by an Acme water cooled chiller.

The garage conversion utilizes split system DX air-conditioning.

A split system DX air-conditioning system serves the Server/ Data room.

Building ventilation consists of a single exhaust fan located in the attic area serving the restrooms on each floor.

Mechanical equipment

The boiler and the cooling tower have been replaced within the last fifteen years. Both appear to be in good operating condition.

The chiller and fan-coil units have served well beyond their normal service life and should be replaced.

The Carrier split system serving the Server/ Data room appears to be in good operating condition along with the two American Standard units serving the garage conversion.

At present none of air-conditioning systems in building provide mechanical code-required ventilation air. To provide this a complete upgrade of the HVAC system would be required.

Electrical

Power Distribution & Wiring Methods

The building electrical service and distribution panel is very old. There have been many electrical revisions over the years. The overall electrical power inside the building appears to be in good shape. Several of the power panels are in good shape and replacement breakers should be available. There are a few power panel locations which are overloaded.

The generator feed from the Fire House to the Town Hall is 60 amps. There appears to be more than 60 amps of load connected to the generator circuit in the Town Hall.

Each power panel, major disconnect and similar electrical equipment should have a thermal image conducted to verify any possible hot spots. Further more every power panel main breaker and each branch circuit breaker should be thoroughly tested and documented from a reputable testing agency to verify proper operation at correct ampacity.

Another issue is the age of some of the wiring in the building. Old wiring loses its insulating capabilities over time and when the existing wiring is moved or bent the insulation tends to crack and come apart. During the power panel and circuit breaker inspections the conductors and insulation can be evaluated. We anticipate that most of the wiring is fine.

Lighting

Interior lighting produced by mainly fluorescent fixtures. These fixtures are in reasonably good repair. Lighting levels appear to be adequate.

Exit Signs

All exit access corridors must have approved illuminated "EXIT" signs. The signs must be positioned to direct occupants to the nearest safe way out of the building and have direction arrows when needed. The signs must remain illuminated for ninety minutes upon the loss of power. The light source must provide not less than 5 foot-candles at the illuminated surface and the lettering must comply with 780 CMR 1023.2. They must have integral battery backup.

There are currently illuminated Exit signs in portions of the building, although improvement is required. There are several egress areas with out proper exit coverage as well as stairwells and unfinished areas. It is recommended to upgrade the missing or existing non-compliant signs with compliant low-energy, long-life led type units to reduce energy usage and maintenance.

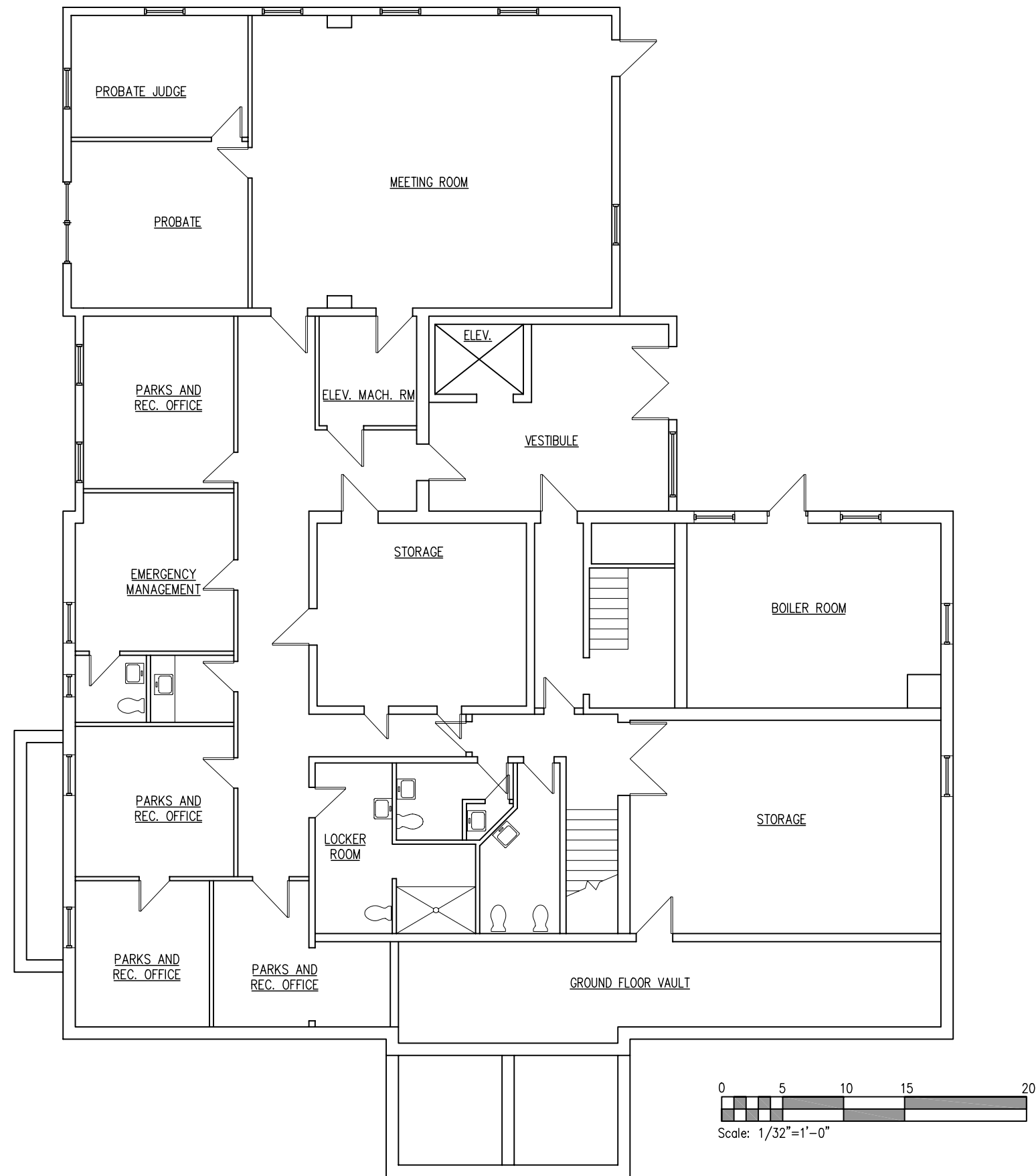
Means of Egress Lighting

It is very hard to determine what level of lighting is present in the event of a power failure. It is recommended that a functional test be conducted at night inside and outside as a design basis. It appears that there are areas that do not meet the minimum lighting levels required. Several doors that egress outside do not have proper lighting to illuminate the egress path. All egress lights must have battery back up to provide a minimum of ninety minutes of automatic operation upon the loss of normal power.

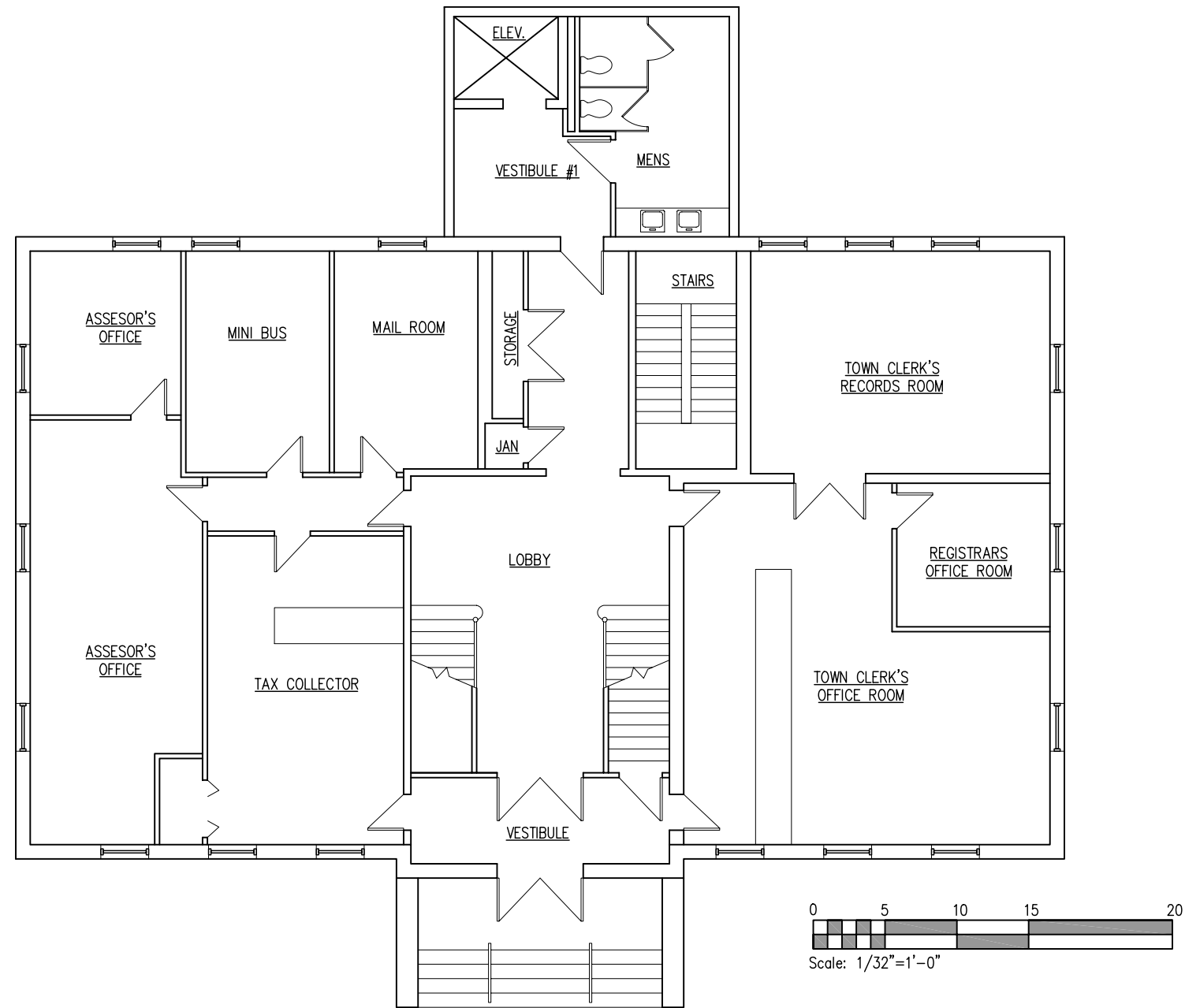
It is recommended to add emergency lights in marginally covered and non-covered areas of egress access. Battery powered remote dual heads should also be installed outside of all egress exit doors to illuminate the area immediately around the exit.

Fire Alarm Signaling and Detection Systems

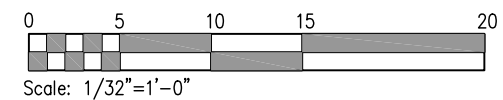
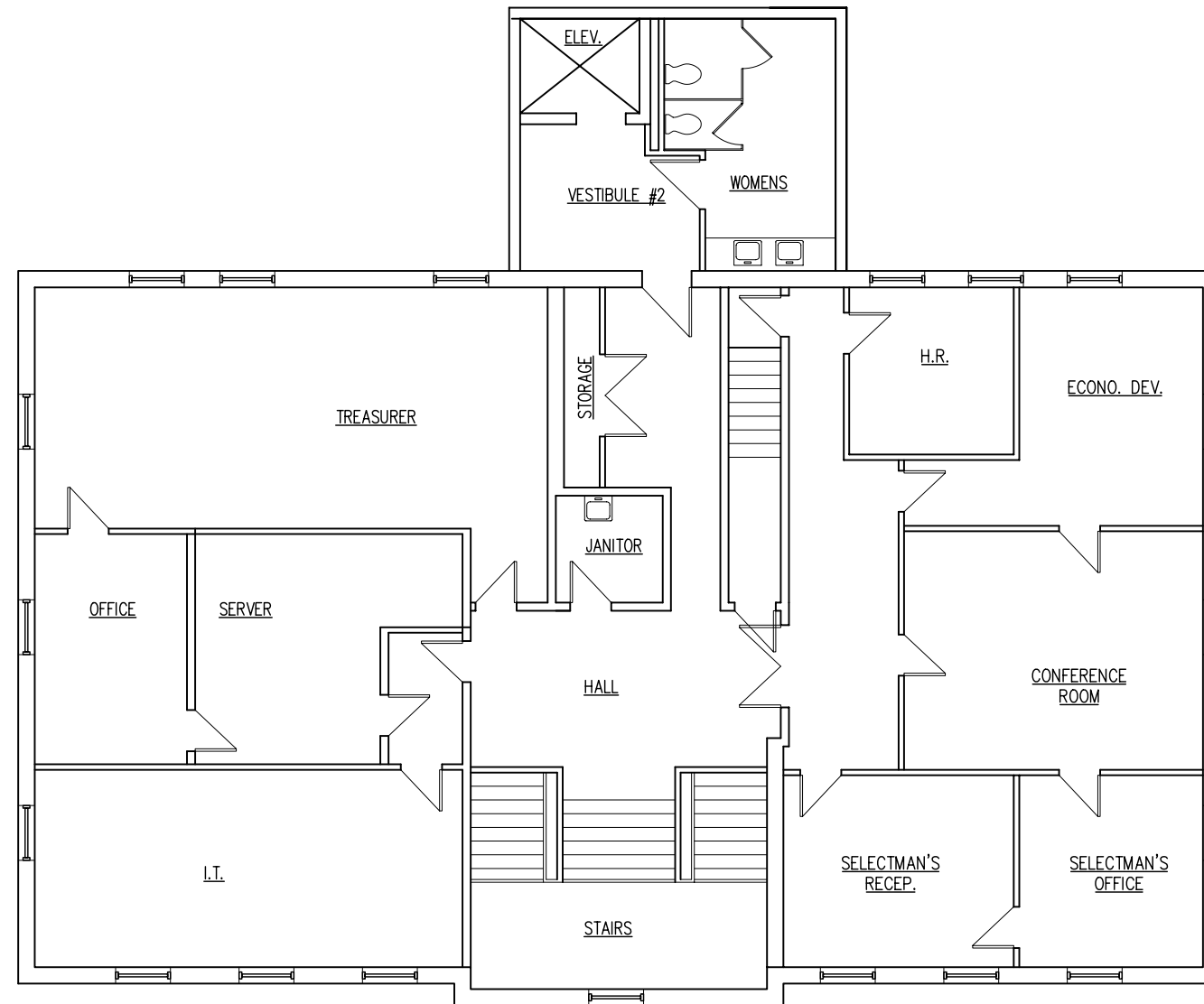
The fire alarm system coverage appears to be fairly good, there is a remote annunciator that appears to be functioning properly.



preliminary



preliminary



preliminary

building evaluation – ambulance building

Building Code Compliance

The original building and any renovations were required to meet the Building Code at the time of construction. The current building is not required to be brought into compliance with the current Building Code unless it undergoes a change-in-use, is renovated or added on to. In that case, either the entire building or a portion thereof would be required to be brought into compliance.

Based on the building construction viewed, we would consider the construction type to 3B.

The use of the building is a mixed-use with:

B, Business Use
S-2, Storage - Low Hazard

The building is not sprinklered.

Height and Area – The floor area is 3,289 SF and the building is one story in height. The building is compliant for the mixed-use of the building.

Mixed-Use Separations – The building is compliant as a non-separated mixed use.

Major items that do not meet current Building Code requirements include:

- The approach path and landing to the main entrance are not accessible. There is a 1" rise at the threshold as well.
- The reception counter is not accessible.

Building Structure

A visual inspection and structural review of the Town Hall has been performed. The issues reviewed include continued existing use and/or change of use, and review of the existing structure regarding compliance with existing code requirements.

The minimum allowable roof live loading (as defined in The BOCA National Building Code) is as follows:

Live Load	20 psf.
Snow Load	35 psf.

The Ambulance Building a one story pre-engineering steel building. This structure is in good condition and meets the minimum load requirements for it present use.

Building Exterior

Overall the exterior of the building appears to be in good condition.

Site - A drainage problem was noted along the east side of the building (between the storage addition and the front of the building.) The area appeared that water would pond in this location in a lowered area created by an incomplete electrical/communication installation (w\the excavated trench was not backfilled.) This area should be backfilled and regraded to direct water away from the building structure.

The landings along the west side of the building appear to have sunk into the ground. At one exterior door the riser created by the sinking landing is approximately 3". At the other door the riser is approximately 9".

Roof – The roof appeared to be a membrane roof. Its condition was not assessed. No problems with the roof were brought to our attention. The addition to the east has an asphalt shingle roof that appears to be in good condition.

Exterior Wall – The exterior wall finish is a combination of brick and vinyl siding. Overall it appears to be in good condition.

Building Trim – The trim for the most part is aluminum clad. There is a portion of the eave at the top of the brick portion that is steel. This eave needs to be prepared and painted.

Windows – The windows are a combination of aluminum clad wood windows, vinyl double-hung windows and aluminum double-hung windows. All windows with the exception of the aluminum windows work well and have insulated glazing.

Doors – The exterior doors are well worn, but continue to be operational.

Concrete – There is some minor spalling of the top of foundation wall at the garage door openings.

Insulation

The building partially insulated.

Walls - It was not possible to determine if the walls were insulated, but from the conversion to ambulance facility construction documents it does appear that the walls of the brick portion of the building were not insulated, while the remaining walls have R-11 batt insulation installed.

Roof - The roof is insulated with batt insulation.

Building Interior

Overall the interior of the building is in good condition. No significant architectural deferred maintenance issues were noted. The finishes are well worn, but servicable.

Portions of the roof vapor barrier in the garage are cracked/damaged.

Plumbing System

The plumbing fixtures and piping appear to be in serviceable condition.

HVAC System

Heating and cooling in the office area is provided by a Williamson oil fired furnace equipped with an air-conditioning evaporator coil and outdoor condensing unit.

A Trane split system air-conditioning unit consisting of an indoor air-handler and outdoor condensing unit provides heating and cooling in the training room. Heating is accomplished by utilizing an electric element within the air handler.

Heating in the garage is provided by two systems, the original (two) electric unit heaters and a recently installed gas fired radiant heater.

Mechanical equipment

The office area system is the only system that incorporates ventilation air. Unfortunately it is the oldest system in the building and near the end of its useful life. The training room system would require outdoor ventilation air brought to the air handler to be code compliant. The garage area would require a complete HVAC system upgrade to become occupied space under the code.

Electrical

Power Distribution & Wiring Methods

The Ambulance Building has a very new electrical service including power panels and an emergency generator with an automatic transfer switch that should provide adequate electrical load requirements for its present use.

Lighting

Interior lighting produced by mainly fluorescent fixtures. These fixtures are in good repair. Lighting levels appear to be adequate.

Exit Signs

All exit access corridors must have approved illuminated "EXIT" signs. The signs must be positioned to direct occupants to the nearest safe way out of the building and have direction arrows when needed. The signs must remain illuminated for ninety minutes upon the loss of power. The light source must provide not less than 5 foot-candles at the illuminated surface and the lettering must comply with 780 CMR 1023.2. They must have integral battery backup.

The exit signage locations appeared to be adequate.

Means of Egress Lighting

The egress lighting appeared to be adequate.

It is recommended to add battery powered remote dual heads outside of all egress exit doors to illuminate the area immediately around the exit to become compliant.



preliminary

building evaluation – bridge street school

Building Code Compliance

The original building and any renovations were required to meet the Building Code at the time of construction. The current building is not required to be brought into compliance with the current Building Code unless it undergoes a change-in-use, is renovated or added on to. In that case, either the entire building or a portion thereof would be required to be brought into compliance.

Based on the building construction viewed, we would consider the construction type to 3B.

The building is currently unoccupied. The last use of the building was:

E, Educational

The building is not sprinklered.

Height and Area – The largest floor area is 12,374 SF (first floor) and the building is one story in height. The height and area of the building will need to be evaluated for any intended reuse of the building.

Mixed-Use Separations – If multiple uses are planned for the building, the types of separations required would need to be identified based on the uses.

Major items that do not meet current Building Code requirements include:

- The building is not accessible.
- The exits from the lower level classrooms are not protected from the accumulation of snow and ice (canopies should be installed.)
- The exterior railings are not compliant.

Building Structure

A visual inspection and structural review of the Town Hall has been performed. The issues reviewed include continued existing use and/or change of use, and review of the existing structure regarding compliance with existing code requirements.

The minimum allowable floor loading (as defined in The BOCA National Building Code) is as follows:

Office Buildings	
Offices	50 psf.
Lobbies	100 psf.
Corridors	80 psf.

Schools

Classrooms	40 psf.
Corridors above first floor	80 psf.
First floor corridors	100 psf.
Libraries	
Reading Rooms	60 psf.
Stack Rooms	150 psf.
Corridors	80 psf.

The minimum allowable roof live loading (as defined in The BOCA National Building Code) is as follows:

Live Load	20 psf.
Snow Load	35 psf.

The Bridge Street School is a one story building with two basement areas. The building consists of a concrete foundation, masonry walls and wood framed roof system. The floor within the building is a wood frame floor system consisting of 2x floor joists and a wood deck and a floor surface. A small projection room is located at the rear of the cafeteria (center of the building) within the attic area. The projection area is fire rated with a concrete floor and masonry walls. The projection area is support with steel beams spanning between the interior masonry bearing partitions.

The framing in the Bridge Street School meets the minimum load requirements for use as a school. The building will also meet the minimum load requirements an office area except for new corridor areas that may be required with the existing class room areas. The use of the area as a library area will require reinforcement of the floor system to meet the minimum load requirement as a library.

A small portion of the wood floor framing exhibits decay and needs to be replaced/repaired.

Building Exterior

Overall the exterior of the building appears to be in good condition.

Site - Water was noted in the basement areas. The finished grade around the building should be regraded to direct water away from building foundation. Additionally it was noted that the existing drainage systems around the building have failed and should be repaired. The storm drain from the back of the building is directed to the property line and needs to be cleaned at the outlet. Other storm drain pipes should be investigated as to the discharge location and repaired or cleaned as required. The size of the drainage pipes connecting to roof rain water leaders should be evaluated. In several cases the rain water leaders are larger than the piping they are supposed to be connected to. This is leading to water being dumped directly on the ground adjacent to the building.

The front sidewalk is in poor condition and should be replaced.

Roof – The primary roof is a pitched slate roof. It appears to be in good condition. No leak issues were reported to us in the primary roof area of the building. There is a small quantity of missing or broken slate. This should be expected from an older slate roof. Yearly maintenance of the slate to replace missing or broken pieces needs to take place. All of the metal roof flashing has been coated with asphaltic roof cement to prevent leaks. This would indicate that the roof flashing (probably copper) has exceeded its life expectancy and needs to be replaced removed and replaced. This includes the valleys, hips and ridges. The ice crash bars are severely rusted and should be replaced.

There are several low-slope roofs. On the interior of the building there appear to be leaks below all of these areas. These portions of the roof should be removed and replaced with proper flashing.

Gutters – The gutters and rainwater leaders appear to be relatively new. They are in good shape with the exception of some interior gutter corners that have been damaged by sliding ice. See Site description for conflict with underground drainage piping.

Masonry – The exterior masonry appears to be in relatively good condition. Some repointing is required especially in the areas of the old rain water leaders. The soldier course along the base of the building needs to be repointed and some of the brick needs to be replaced.

Building Trim – The building has painted wood trim. It appears that it is in relatively good shape. There is some trim that is peeling and is in need of preparation / painting including windows, doors, louvers and eave trim.

Windows – The original windows are primarily wood double-hung units with single glazing. They are in various states of repair. All are in need of reglazing and repainting. There is some broken glass in these windows.

There are several steel windows in the kitchen that should be replaced.

Doors – The exterior doors are in various states of repair. They all continue to be operational, but most should be replaced (wood and hollow metal.) The aluminum doors are in reasonably good shape, but are not code-compliant for width (they are 30" wide – minimum width per current code is 32", 36" for handicapped access.)

The hatchway door has a hole through it. The door should be replaced.

Entries – The railings are not compliant at any of the entries. The concrete stoop at the east door off the Cafeteria is spalling. The concrete stoop at the west door off the Cafeteria has sunk leaving a riser of about 9-1/2" at the door.

Storage/Exit Enclosure – The enclosure on the north side of the building that encloses an exit from the basement is in poor shape and should be rebuilt. The storage enclosure should be removed.

Insulation

The building is not very well insulated.

Walls - It was not possible to determine if the walls were insulated, but it does not appear that they are.

Attic – Blown-in insulation was installed onto the plaster ceiling suspended over the classrooms and corridor. Coverage varies.

Building Interior

Overall the interior of the building is in fair condition. The finishes are well worn. Most of the items needing repair are due to water infiltration from roof or foundation leaks.

Most of the blackboards have been removed exposing the structural wall framing (mostly terra-cotta masonry with some wood framing.) The walls were not finished with plaster behind the chalkboards.

Plumbing System

The plumbing fixtures and piping throughout the building are old. Much of this system will need to be replaced. The main restrooms have child height fixtures.

HVAC System

An oil fired hot water boiler with commercial baseboard radiation provides the building heat. The boiler is a 350 Mills H.B. Smith boiler of undetermined age with a modern Beckett oil burner installed. Heating control is provided by an antiquated pneumatic control system.

Mechanical equipment

H.B. Smith still produces the boiler today and it can meet today's energy code requirements, but the boiler may also be near the end of its useful life and replacement should be planned for.

Today's engineering practice would replace the single boiler with a multiple boiler installation. This would provide greater energy savings along with providing protection from no heat situations by creating redundancy.

The existing pneumatic controls, valves, and thermostats should also be updated to modern DDC system to provide adequate temperature control.

The building does not have a means of providing code-required ventilation. Any reuse of the building would require a mechanical ventilation system. The use of a heat recovery system although not code required would recoup its cost in energy savings.

Under the BOCA Mechanical Code mechanical cooling is not required but would be recommended with any renovation.

Electrical

Power Distribution & Wiring Methods

The building electrical service and distribution panel is very old. There have been many electrical revisions within the building over the years.

The electrical service needs to be replaced and relocated into a different area of the building. The existing power panels and wiring are under sized for any potential use.

For any systems that remain in place the following should be done. Each power panel, major disconnect and similar electrical equipment should have a thermal image conducted to verify any possible hot spots. Further more every power panel main breaker and each branch circuit breaker should be thoroughly tested and documented from a reputable testing agency to verify proper operation at correct ampacity. The conductors and insulation should also be evaluated.

Lighting

Interior lighting produced by mainly fluorescent fixtures. These fixtures are in different states of repair. Some fixtures may be reusable.

Exit Signs

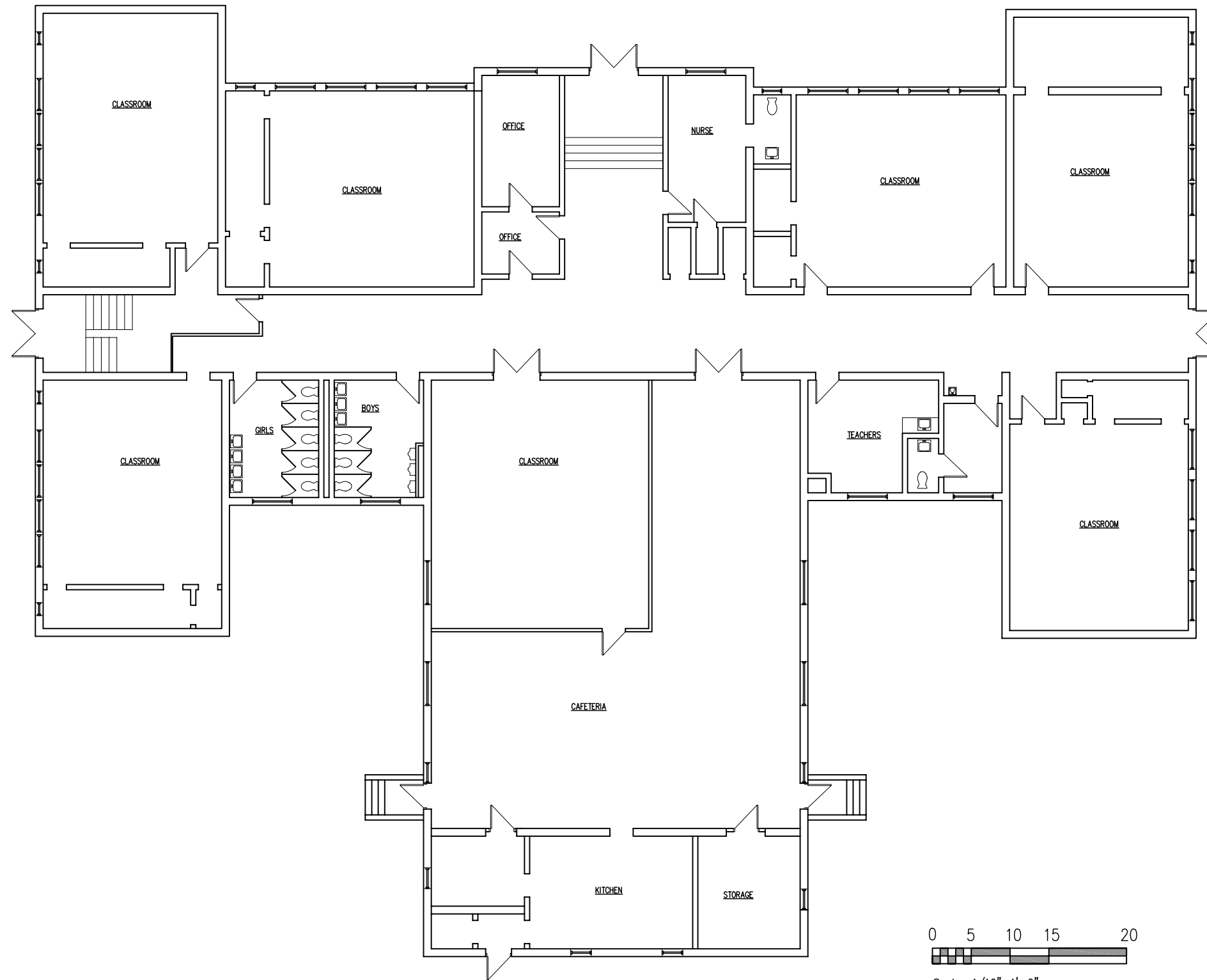
Exit sign coverage appears to be good. We would recommended to upgrade the existing non-compliant signs with compliant low-energy, long-life led type units to reduce energy usage and maintenance as part of any renovations.

Means of Egress Lighting

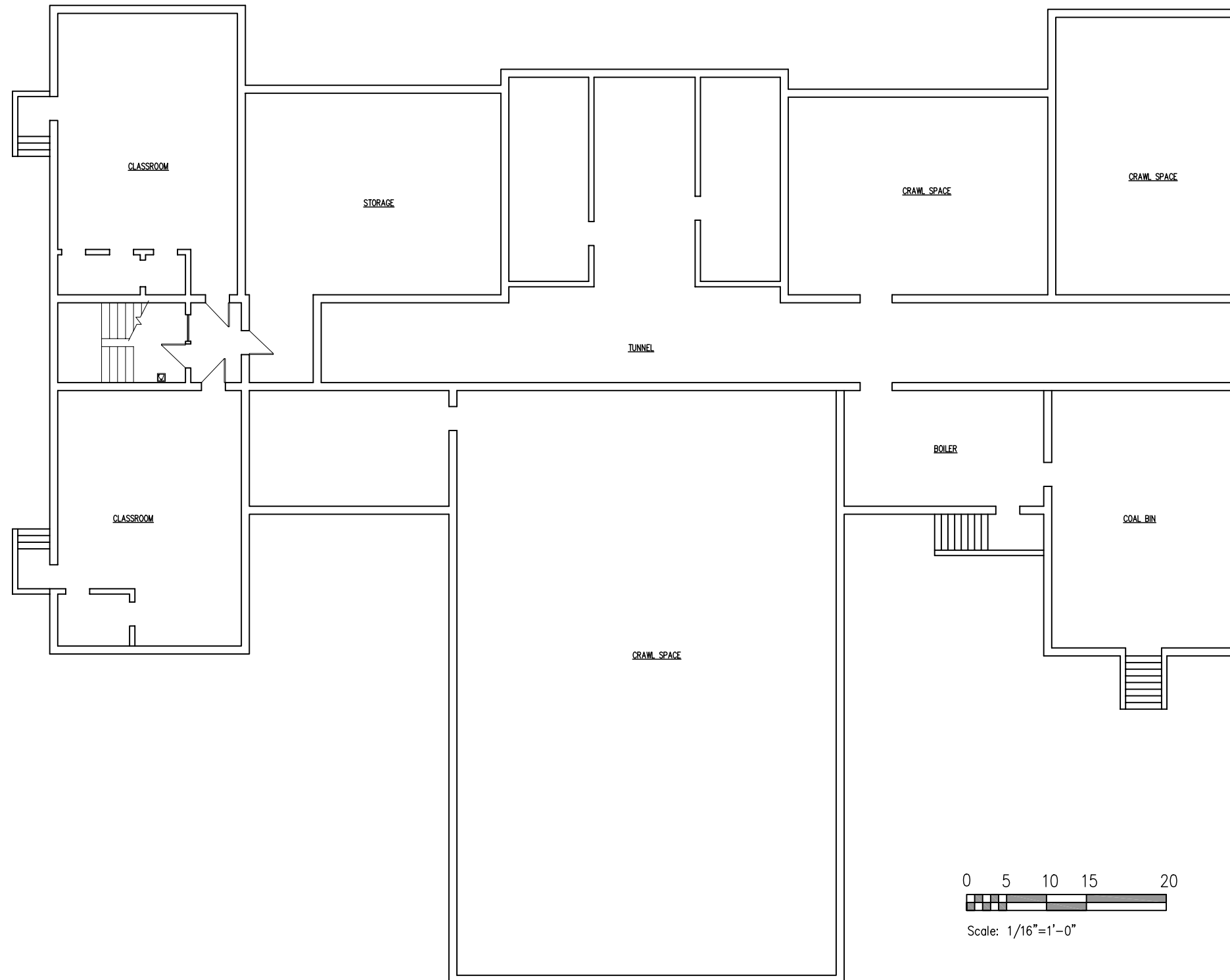
Egress lighting coverage appears to be good with the exception of the exterior egress doors. Battery powered remote dual heads should also be installed outside of all egress exit doors to illuminate the area immediately around the exit.

Fire Alarm Signaling and Detection Systems

The fire alarm system coverage appears to be fairly good, there is a remote annunciator that appears to be functioning properly.



preliminary



preliminary

Space Needs Study

Town of Suffield

tos-2456

December 9, 2005

Space Planning Committee Recommendation

program summary

	Existing Program Area Net SF	Proposed Program Area Net SF	
Selectman's Office	295	365	expands on TH-3
Economic Development	190	200	expands on TH-3
Human Resources	100	200	relocates within TH-3
Finance Department	605	825	relocates to TH-1
Information Technology	500	820	expands on TH-3
Mini-Bus	144	150	moves to AB
Tax Collector	300	700	expands on TH-2
Assessor	450	520	expands on TH-2
Town Clerk	850	1,300	expands on TH-2
Registrar	120	150	moves to TH-1
Parks and Recreation	845	1,510	moves to AB/ future at BSS
Probate Court	690	740	in place on TH-1
Town Engineer/Conservation	350	590	New building at TG site
Zoning & Planning	585	650	New building behind AB
Building Department	660	960	New building at TG site
Public Works	405	600	New building at TG site
Emergency Operations	200	200	moves to middle school
Common Space	1,690	3,495	throughout
total net area	8,979	13,975	
Mini-Bus Garage	0	950	AB
DPW Cold Storage	4,500	4,500	New building at TG site
Senior Center	4,725	5,815	At BSS
Youth Center	0	2,725	At BSS
Temporary Library	0	8,800	NIC

Space Needs Study

Town of Suffield

tos-2456

December 9, 2005

Space Planning Committee Recommendation

program

	Existing Program Area			Proposed Program Area			Remarks
	No.	Net Area	Total Area	No.	Net Area	Total Area	
Selectman's Office							
Selectman's Office	1	130	130	1	150	150	existing office a little tight but works with direct access to conference room, needs 1 workstation, 2 guest chairs, prefers direct access into conference room
Selectman's Assistant	1	165	165	1	165	165	1 workstation, files
Conference Room	0	0	0	0	0	0	shared room to seat 10-12 people
Copier/Fax Room	0	0	0	0	0	0	currently in hallway -shared with entire floor, needs own fax
Storage/Files	0	0	0	1	50	50	
subtotal			295			365	
Economic Development							
Office	1	190	190	1	150	150	1 workstation, 2 guest chars, existing office layout very inefficient, prefers direct access into conference room
Conference Room	0	0	0	0	0	0	shared room to seat 10-12 people
Copier/Fax Room	0	0	0	0	0	0	currently in hallway -shared with entire floor
Storage/Files	0	0	0	1	50	50	
subtotal			190			200	
Human Resources							
Office	1	100	100	1	150	150	existing office too small, needs 1 workstation, 2 guest chairs, table for 4
Conference Room	0	0	0	0	0	0	shared room to seat 10-12 people
Copier/Fax Room	0	0	0	0	0	0	currently in hallway -shared with entire floor, needs own fax
Storage/Files	0	0	0	1	50	50	
subtotal			100			200	

	Existing Program Area			Proposed Program Area			Remarks
	No.	Net Area	Total Area	No.	Net Area	Total Area	
Finance Department							
Office	1	130	130	1	150	150	existing office works but could be a little larger, needs 1 workstation, 2 guest chairs
Open Office	1	475	475	1	475	475	3 workstations (1 is part-time treasurer), 7 fireproof files, bookcases, 2 files for ZBA
Conference Room	0	0	0	0	0	0	shared room to seat 10-12 people
Copier/Fax Room	0	0	0	0	0	0	currently in hallway -shared with entire floor, needs own fax
Storage/Files	0	0	0	1	200	200	fire-rated room to replace fireproof files, small conference table for auditors
subtotal			605			825	
Information Technology							
Office	0	0	0	2	150	300	existing workstations in open office, individual offices needed with 1 workstation, 2 guest chairs
Open Office	1	315	315	1	120	120	1 current workstation
Server Room	1	185	185	1	250	250	server room with "shop/assembly" workstation
Copier/Fax Room	0	0	0	0	0	0	currently in hallway -shared with entire floor
Supply Closet	0	0	0	1	50	50	room for consumables, printer cartridges, etc...
Hardware Storage	0	0	0	1	100	100	room for 12 computers, 12 monitors, 5 printers, cables, etc...
subtotal			500			820	
Mini-Bus							
Office	1	144	144	1	150	150	1 workstation, 2 guest chairs, files
subtotal			144			150	
Tax Collector							
Office	0	0	0	1	150	150	space with conference/workstation
Open Office	1	300	300	1	500	500	need larger waiting area, larger reception counter (room for 6 people at counter at one time) 3 workstations, copier
Storage/Files	0	0	0	1	50	50	
subtotal			300			700	

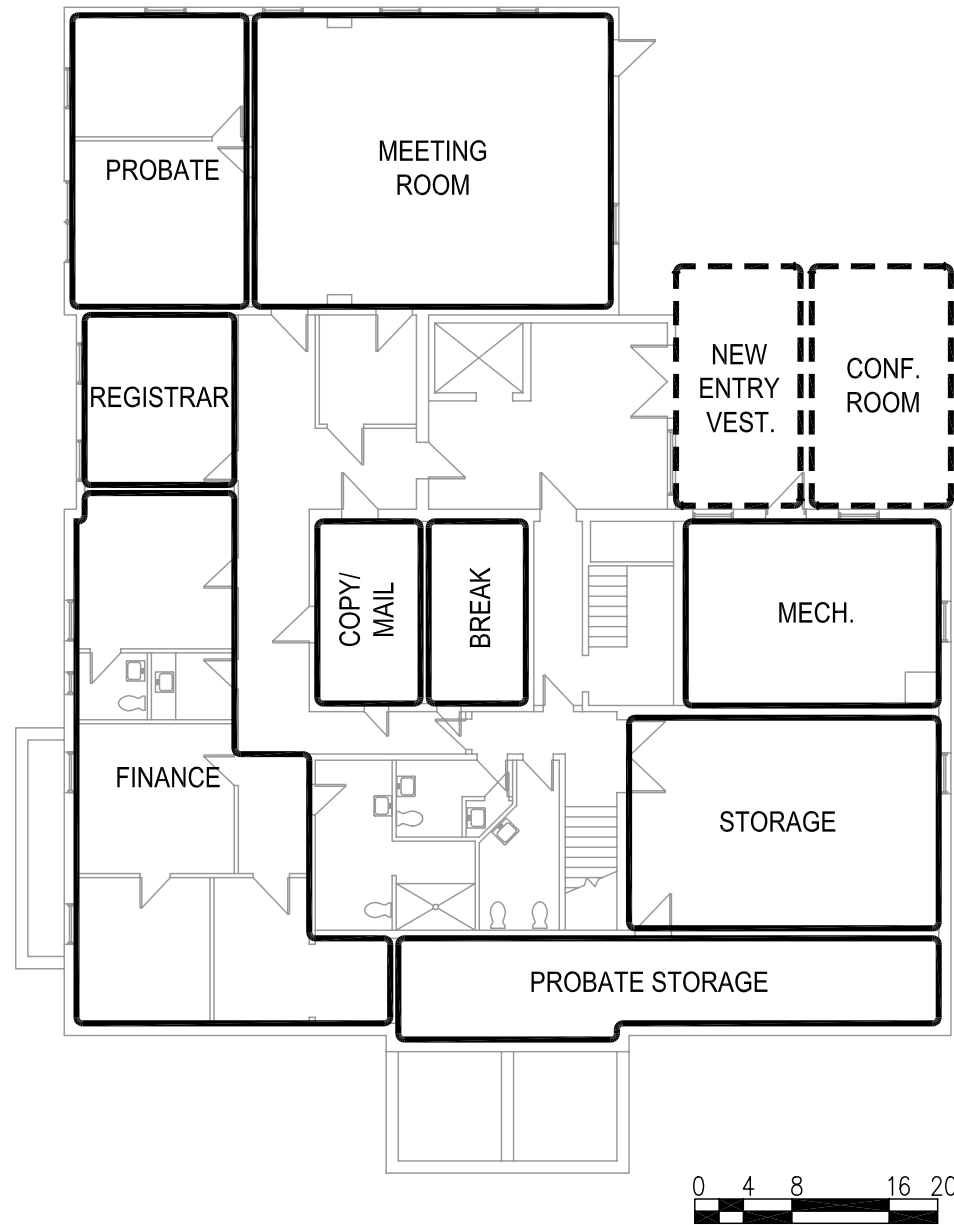
	Existing Program Area			Proposed Program Area			Remarks
	No.	Net Area	Total Area	No.	Net Area	Total Area	
Assessor							
Office	1	120	120	1	120	120	1 workstation, 2 guest chairs
Open Office	1	330	330	1	400	400	reception counter with public access computer, 1 table for public, 1 workstation, files, map file storage, copier, overall the space works OK, could use some reorganization, public access space could be enlarged, need own fax
subtotal			450			520	
Town Clerk							
Office	0	0	0	1	150	150	1 workstation, 2 guest chairs
Open Office	1	525	525	1	500	500	current reception counter OK, 3 current workstations would become 2 with addition of office, double file storage from 7 to 14, copier, need own fax
Vault	1	325	325	1	650	650	vault needs to be doubled in size
subtotal			850			1,300	
Registrar							
Office	1	120	120	1	150	150	2 workstations, double file storage from 2 to 4, space could use reorganization
subtotal			120			150	

	Existing Program Area			Proposed Program Area			Remarks
	No.	Net Area	Total Area	No.	Net Area	Total Area	
Parks and Recreation							
Director's Office	1	130	130	1	150	150	1 workstation, 2 guest chairs
Recreation Supervisor	1	175	175	1	120	120	current space houses both Recreation Supervisor and Special Program Coordinator, 1 workstation in new office
Special Program Coordinator	0	0	0	1	120	120	1 workstation
Administrative Assistant	1	160	160	1	200	200	current space does not function, need separate waiting area with reception counter, 1 workstation behind counter, second workstation for future seasonal position
Conference Room	0	0	0	0	0	0	shared room to seat 10-12 people
Copier/File/Supply Room	1	120	120	1	120	120	copier, files, supply cabinets need own fax
Multi-function Activity Room	0	0	0	1	300	300	
Break Room	0	0	0	0	0	0	shared room - can also be used for Adult Special Needs Sessions
Heated Storage	1	260	260	1	500	500	current storage needs to be doubled in size
Unheated Storage	0	0	0	0	0	0	current space OK at Babbs Beach
subtotal			845			1,510	
Probate Court							
Judge's Office	1	140	140	1	140	140	1 workstation, 2 guest chairs
Clerk's Office	1	200	200	1	200	200	2 work stations, files, copier, fax (need dedicated fax line)
Court Room	0	0	0	0	0	0	share meeting room, current size OK
Ground Floor Vault	1	350	350	1	350	350	historical records
Storage/Files	0	0	0	1	50	50	
subtotal			690			740	
Town Engineer/Conservation							
Town Engineer Office	1	140	140	1	150	150	1 workstation, files
Conservation Admin. Assist.	1	140	140	1	200	200	1 workstation, could use additional plan layout space
Office	0	0	0	1	120	120	future position (1 /2 engineer 1/2 conservation) to share workstation
Conference Room	0	0	0	0	0	0	shared room to seat 6-8 people
Copier Room	0	0	0	0	0	0	shared room with copier/blueprint machine, need own fax
Storage	1	70	70	1	120	120	files, equipment
subtotal			350			590	

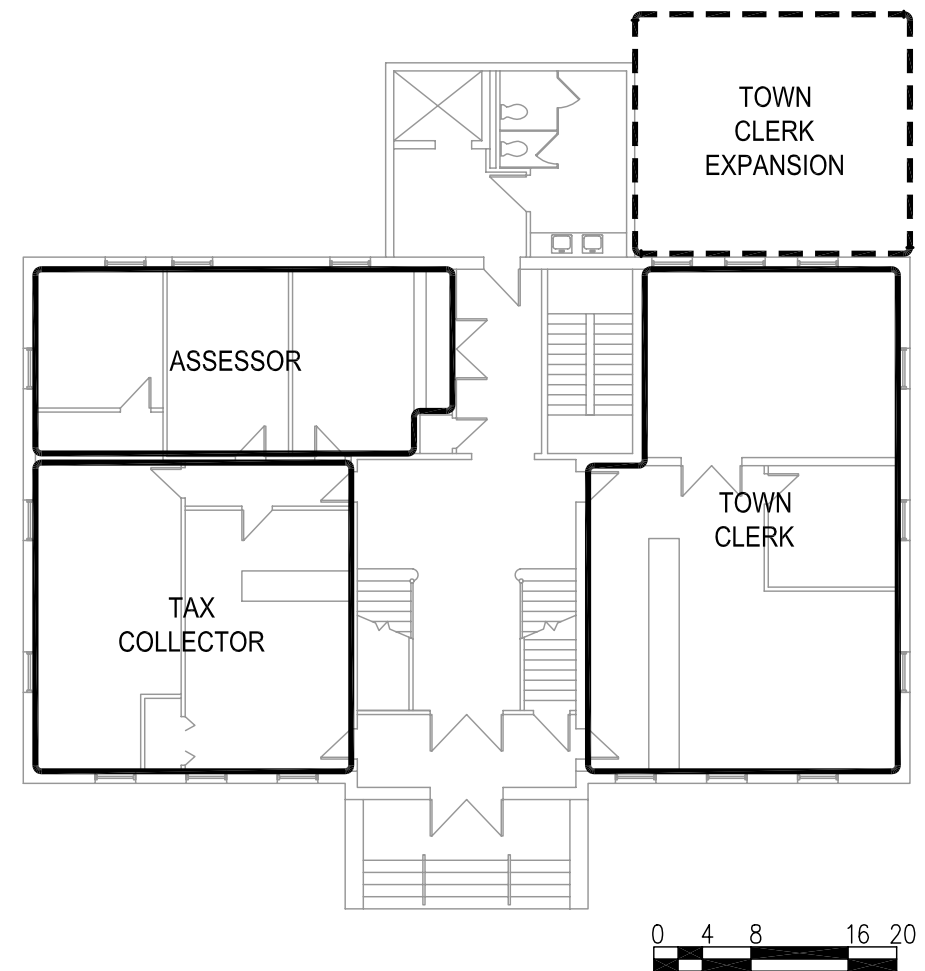
	Existing Program Area			Proposed Program Area			Remarks
	No.	Net Area	Total Area	No.	Net Area	Total Area	
Zoning & Planning							
Town Planner	1	140	140	1	150	150	1 workstation, 2 guest chairs
Zoning Enforcement Officer	1	140	140	1	120	120	1 workstation
GIS Services/Technician	0	0	0	1	120	120	currently shared space with Zoning EO
Administrative Assistant	1	260	260	1	160	160	1 workstations, files, current space includes conference table which will move to conference room
Public Meeting Room	0	0	0	0	0	0	current meeting room in Town Hall too small for ZP meetings, need video and audio
Conference Room	0	0	0	0	0	0	shared room to seat 6-8 people
Copier Room	0	0	0	0	0	0	shared room with copier/blueprint machine, need own fax
Storage	1	45	45	1	100	100	files
subtotal			585			650	
Building Department							
Office	1	240	240	1	240	240	2 workstations
Open Office	1	400	400	1	600	600	public waiting area with counter, 1 administrative assistant/reception workstation, 2 workstations, 40 files behind counter
Conference Room	0	0	0	0	0	0	shared room to seat 6-8 people
Copier Room	0	0	0	0	0	0	shared room with copier/blueprint machine, need own fax
Storage	1	20	20	1	120	120	rolled plan storage, equipment
subtotal			660			960	
Public Works							
Director's Office	1	115	115	1	150	150	1 workstation, 2 guest chairs
Facilities Manager Office	0	0	0	1	120	120	1 workstation
Inmate Coord./Animal Control	0	0	0	1	120	120	1 workstation
Open Office	1	290	290	1	160	160	1 administrative assistant workstation, files, current space includes conference table which will move to conference room
Conference Room	0	0	0	0	0	0	shared room to seat 6-8 people
Copier Room	0	0	0	0	0	0	shared room with copier/blueprint machine, need own fax
Storage	0	0	0	1	50	50	rolled plan storage, equipment
subtotal			405			600	

	Existing Program Area			Proposed Program Area			Remarks
	No.	Net Area	Total Area	No.	Net Area	Total Area	
Emergency Operations							all functions need emergency power
Communication/Radio Room	1	200	200	1	200	200	dedicated space, current space has 1 workstation with bathroom
Operations Room	0	0	0	0	0	0	capable of setting up 4 workstations with power and data at each, shared room
Conference Room	0	0	0	0	0	0	shared room to seat 10-12 people
Rest Area	0	0	0	0	0	0	shared room for 6 people
Break Room	0	0	0	0	0	0	shared room
Copier/Fax Room	0	0	0	0	0	0	shared room to seat 10-12 people
subtotal			200			200	
Common Space							
Meeting Room	1	700	700	1	700	700	meeting room to accommodate 44 people
Large Conference Room	1	265	265	1	265	265	table with seating for 10-12 people
Small Conference Room	0	0	0	2	160	320	table with seating for 8
Break Room	1	40	40	2	180	360	kitchenette, two tables with seating for 4, currently only small kitchenette in basement Town Hall
Copier Room	1	85	85	2	100	200	Town Hall common copier in corridor on second floor, 1 copier room at Flyler Place
Mail Room	1	150	150	1	150	150	kitchenette, two tables with seating for 4
Storage/Files	1	450	450	1	1500	1,500	long term storage, current Town Hall basement storage room & non-compliant attic use
subtotal			1,690			3,495	
DPW Cold Storage							
Cold Storage	1	4500	4,500	1	4500	4,500	
subtotal			4,500			4,500	
Mini-Bus Garage							
Vehicle Bay	0	0	0	3	300	900	enclosed, non-heated garage space for mini-busses adjacent to office (12 x 25 bays)
Bus Supply Storage	0	0	0	1	50	50	
subtotal			0			950	

	Existing Program Area			Proposed Program Area			Remarks
	No.	Net Area	Total Area	No.	Net Area	Total Area	
Senior Center							
Multipurpose Room	1	2400	2,400	1	3400	3,400	enclosed room with moving partitions
Computer Lab	1	270	270	1	270	270	
Cards/Crafts	1	350	350	1	350	350	
Office w/closet	2	160	320	2	160	320	
Lounge w/Reception	1	420	420	1	420	420	
Pool Table Room	1	320	320	1	320	320	
Exercise Room	1	165	165	1	165	165	
Clinic	1	180	180	1	180	180	
Kitchen	1	190	190	1	190	190	
Storage/Files	2	55	110	2	100	200	
subtotal			4,725			5,815	
Youth Center							
Director's Office				1	150	150	
Reception office/Control				1	120	120	
Multi-purpose Room				1	870	870	
Youth Lounge				1	650	650	
Children's Lounge				1	525	525	
Storage				1	410	410	
subtotal			0			2,725	

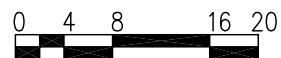
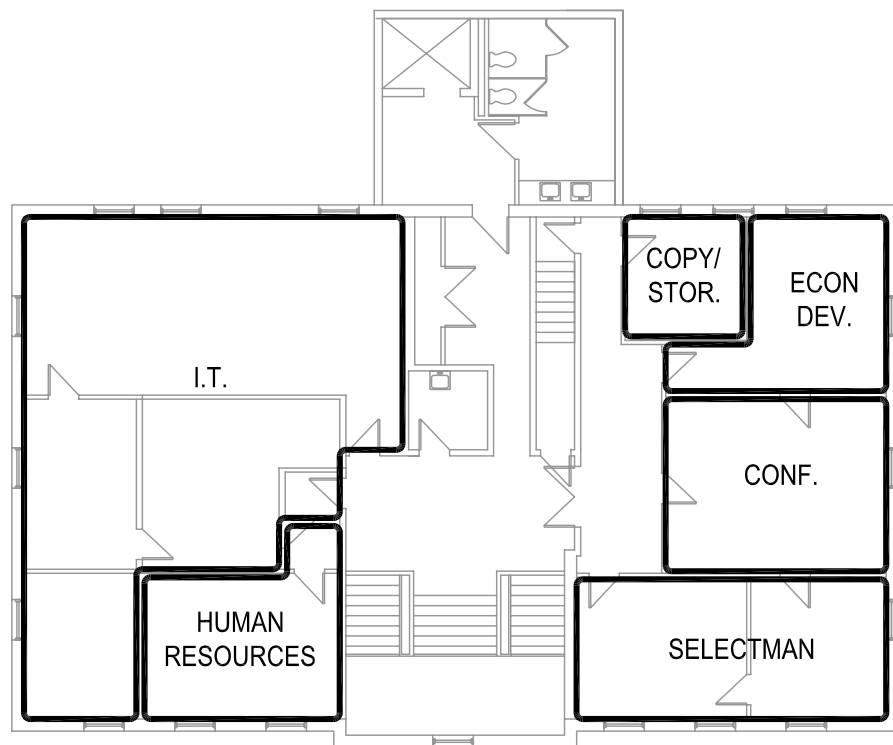


Town Hall- LOWER LEVEL

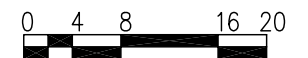
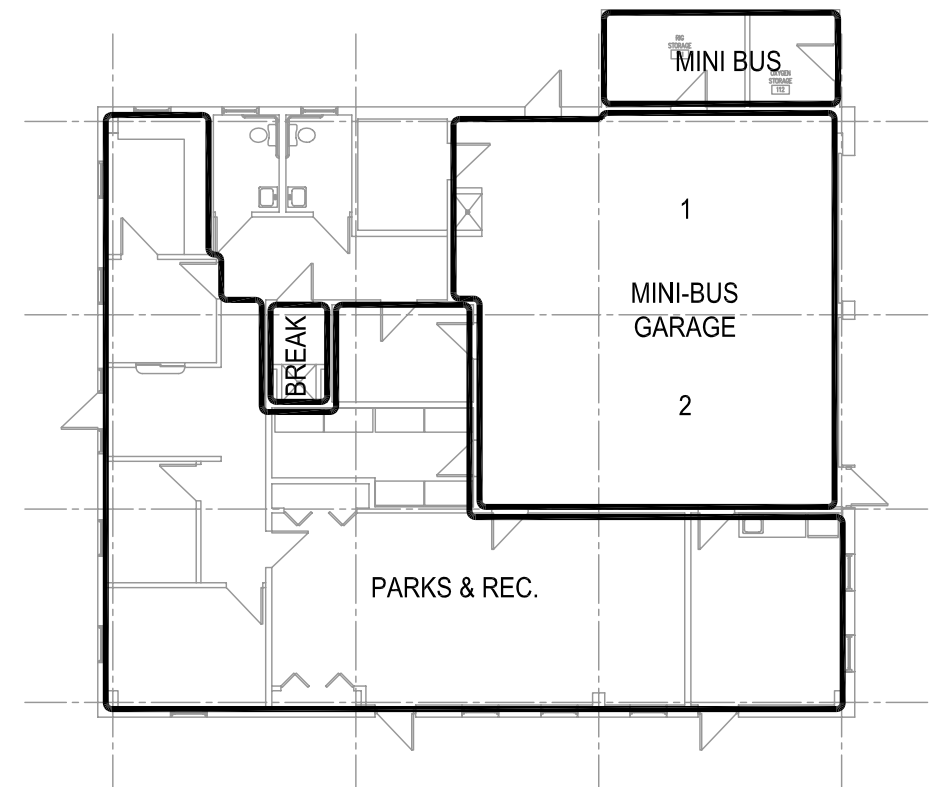


Town Hall- MAIN LEVEL

preliminary

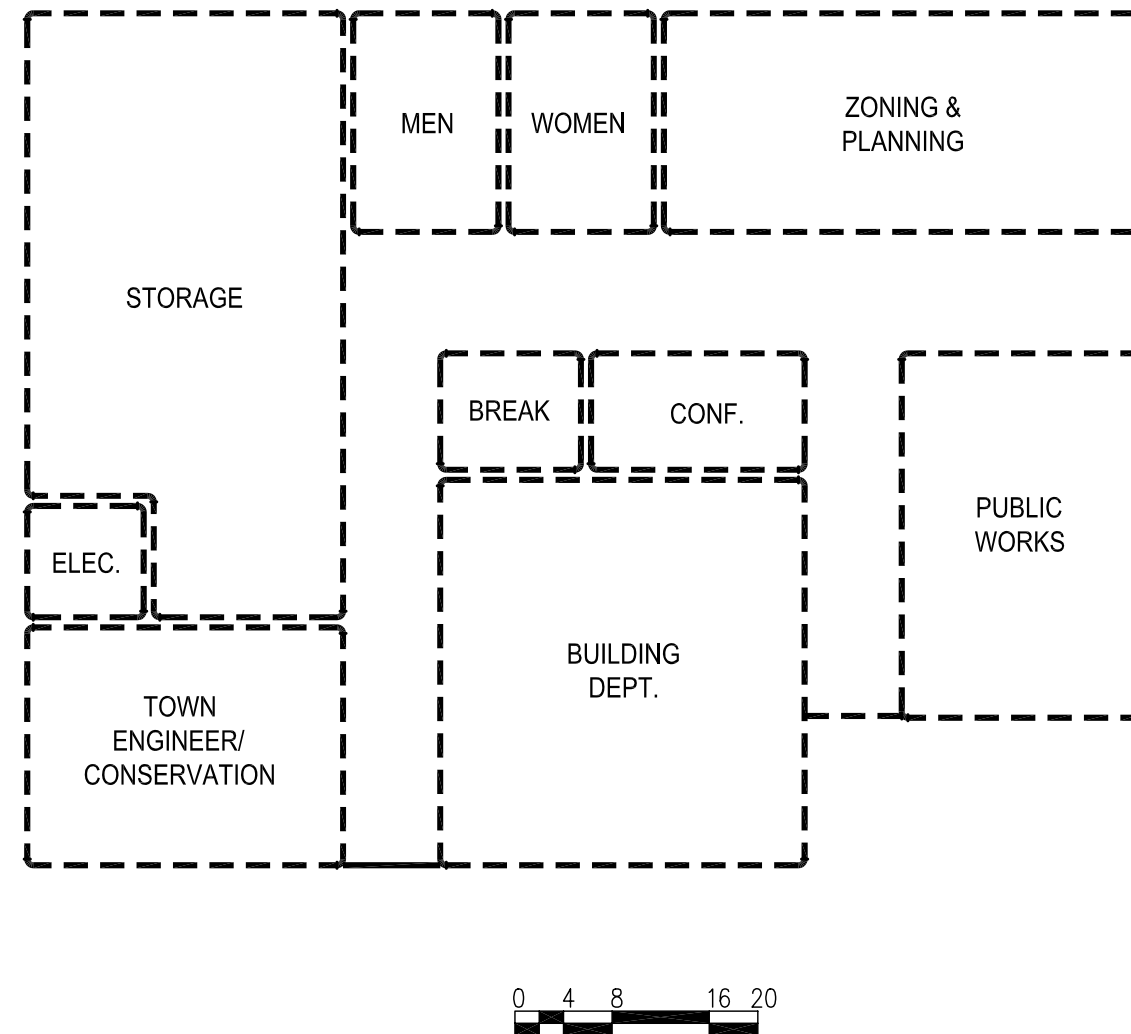


Town Hall- UPPER LEVEL



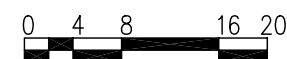
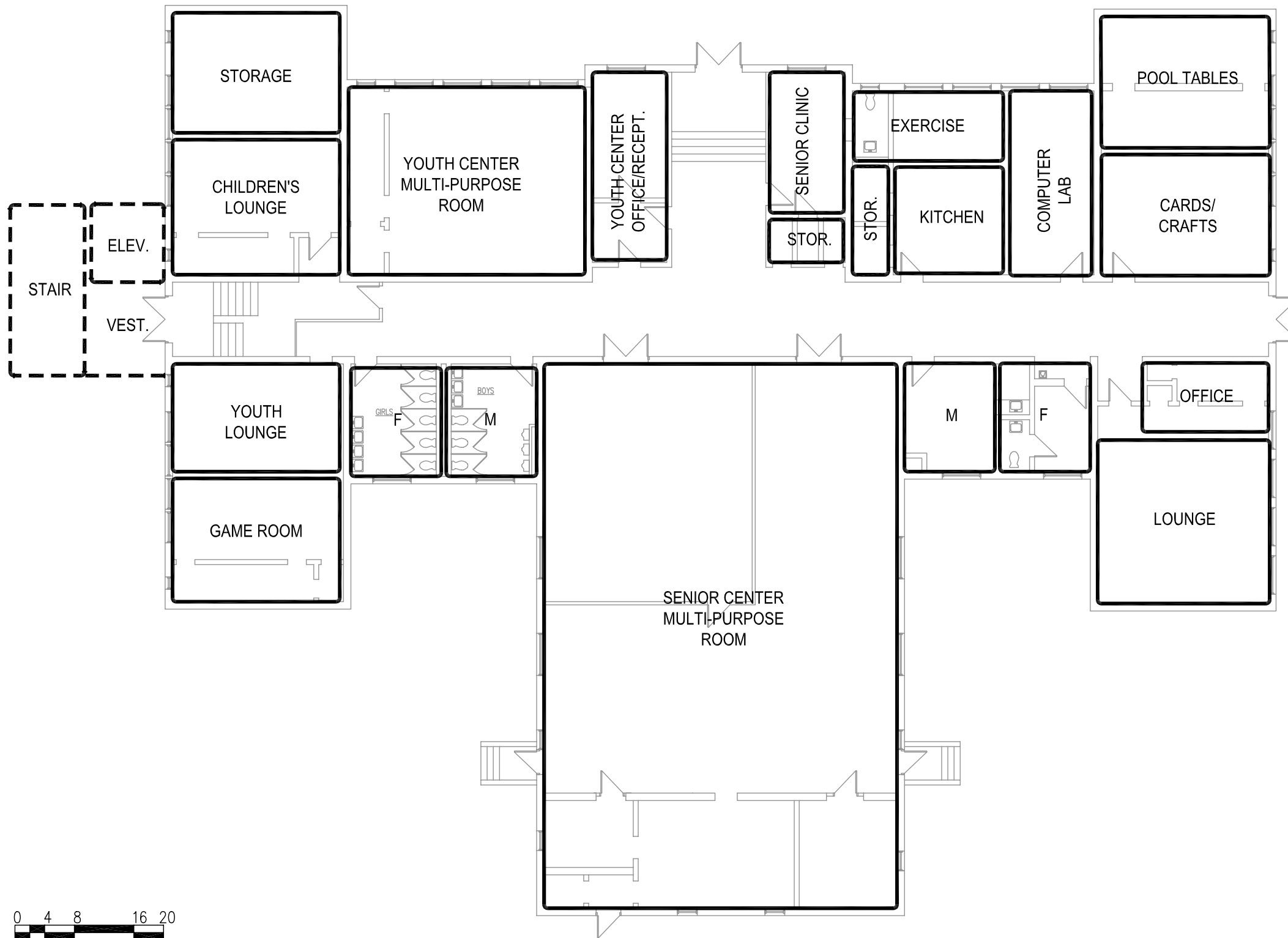
Ambulance Building

preliminary

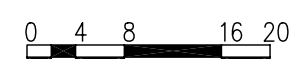
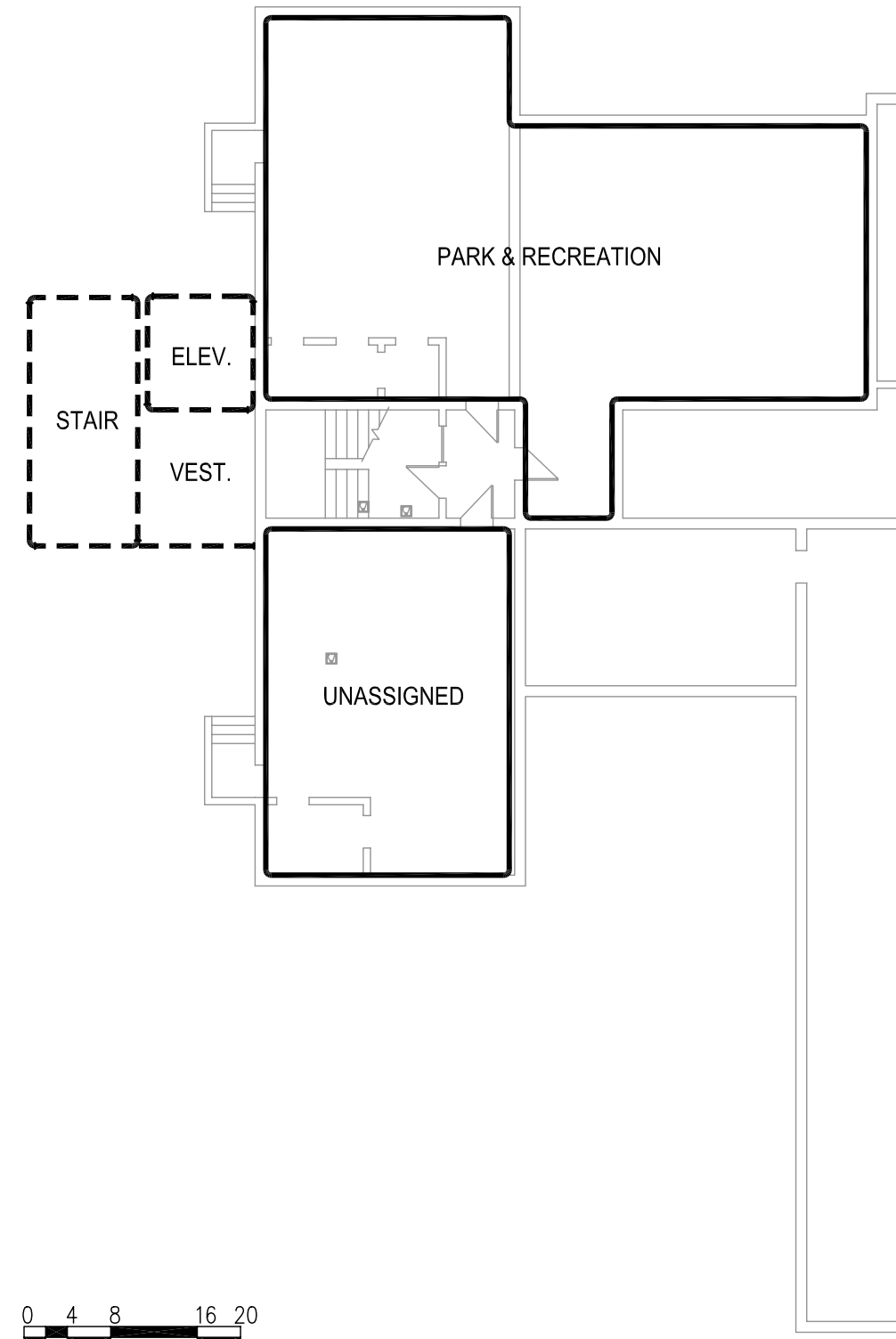


Proposed Land Use Office Building behind former Ambulance Building

preliminary



Renovated Bridge Street School- Upper Level



Renovated Bridge Street School- Lower Level

preliminary

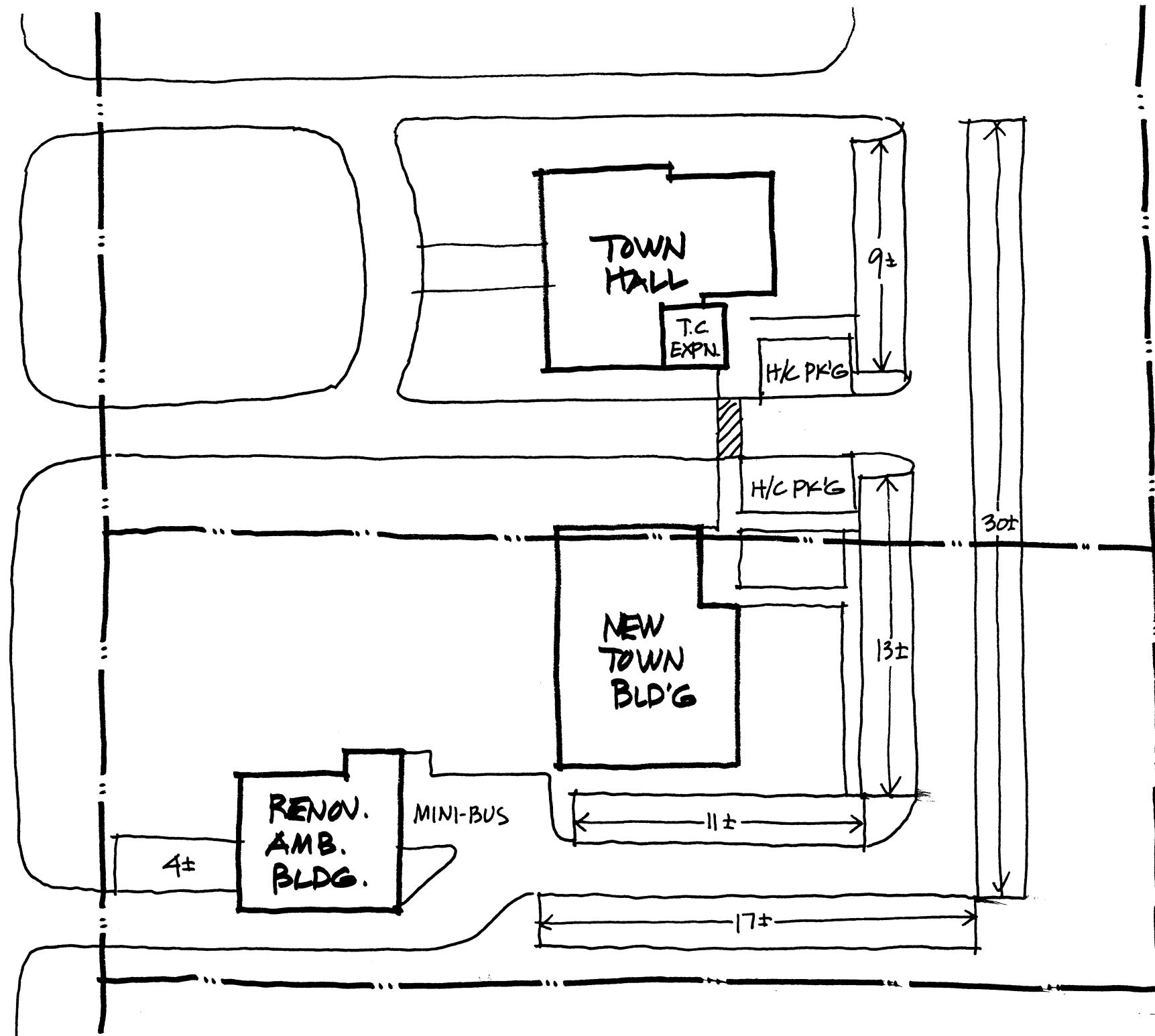


SPACE NEEDS STUDY Town of Suffield, CT

Final Scheme

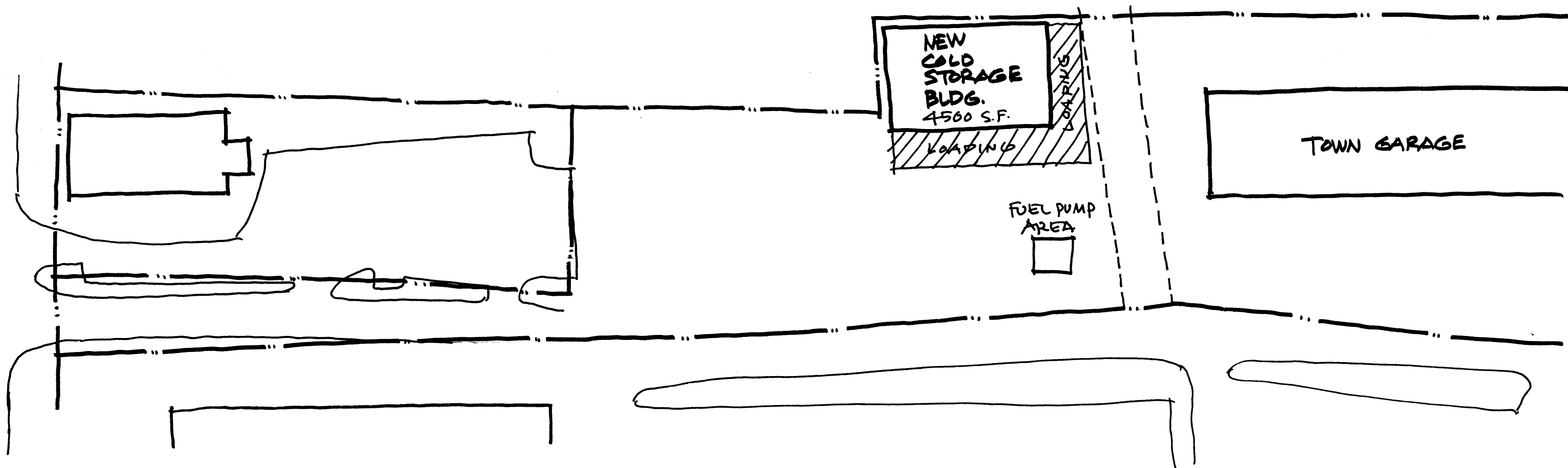
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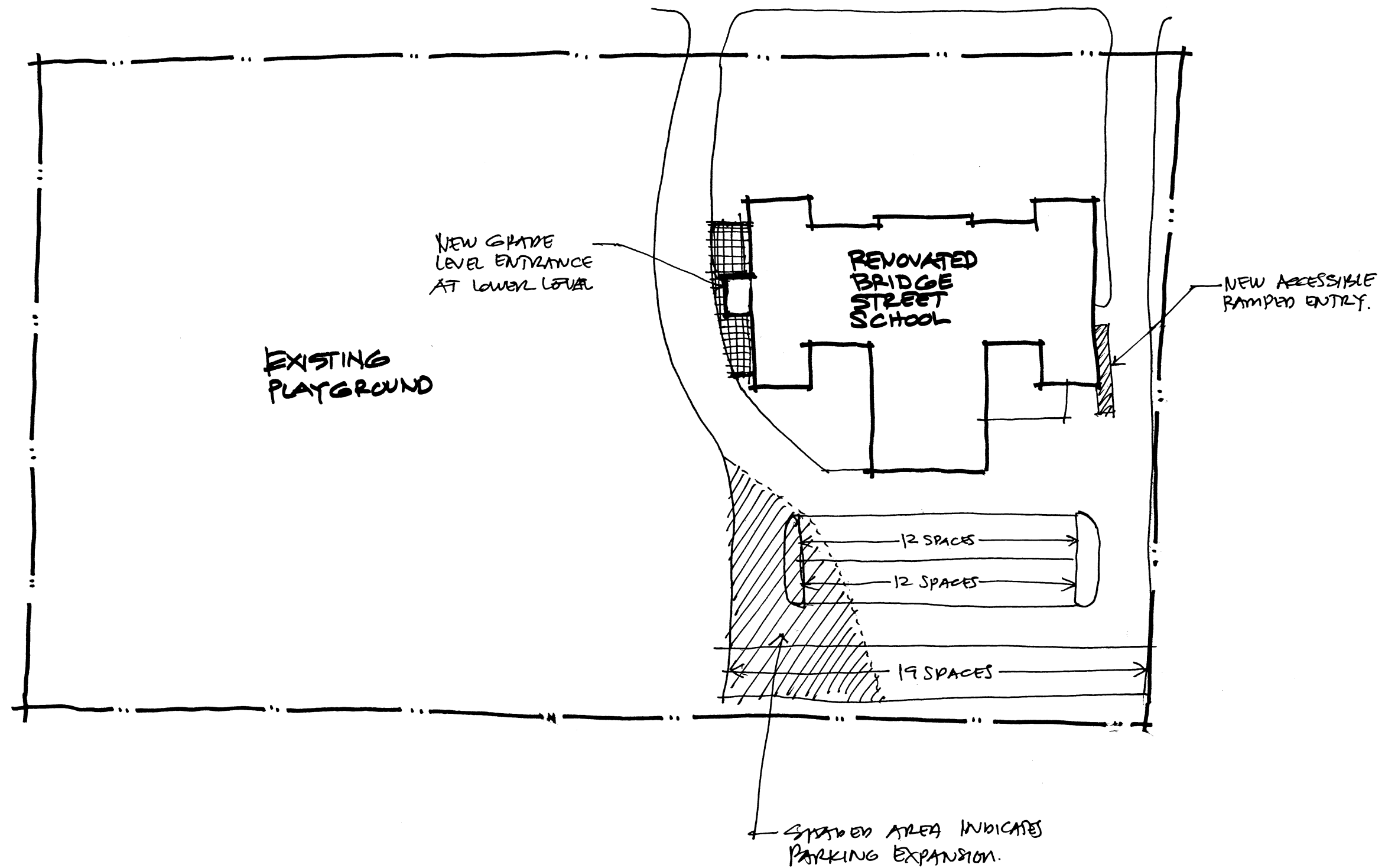
Site Plan- Proposed Town Hall & Administration Campus

preliminary



Site Plan- Proposed Cold Storage Building at Town Garage Site

preliminary



Site Plan- Proposed Senior Center/ Youth Center/ Future Parks & Recreation

preliminary

Suffield 4 Options Study 11.21.05

Town Hall Renovation
Renovation Varies
New Construction Varies
Total Area

Estimate: Program Study
Drawings: edm MP-2.1 thru MP-6.3
Dated: Nov 17th 2005
Project # edm

06/07/06



Opinion of probable cost

Non Taxed Construction Costs

			SF 7,000	SF 25,490	SF 4,500	SF 3,172	SF 40,162
			New Land Use Bldg	Town Hall renovation	Cold Storage	Reno Old Ambulance	Total
Trade Costs							
Division	Description	Ave					
02200	Sitework / Utilities / Demolition	\$11.88	\$184,708	\$253,473	\$13,500	\$25,524	\$477,205
03000	Concrete Work	\$4.04	\$110,202	\$24,308	\$27,000	\$920	\$162,430
04000	Masonry	\$9.81	\$176,605	\$173,708	\$0	\$43,560	\$393,873
05000	Metals	\$4.84	\$0	\$194,465	\$0	\$0	\$194,465
06000	Woods & Plastics	\$1.87	\$25,336	\$39,218	\$0	\$10,682	\$75,235
07000	Moisture and Thermal Protection	\$6.94	\$28,218	\$210,800	\$0	\$39,784	\$278,802
08000	Doors and Windows	\$6.13	\$67,551	\$150,545	\$9,000	\$19,297	\$246,393
09000	Finishes	\$9.53	\$129,643	\$243,533	\$0	\$9,695	\$382,872
10000	Specialties	\$1.04	\$18,334	\$18,460	\$4,500	\$547	\$41,841
11000	Equipment	\$0.10	\$4,025	\$0	\$0	\$0	\$4,025
12000	Furnishings	\$0.59	\$10,465	\$8,228	\$0	\$5,044	\$23,737
13000	Special Construction	\$10.13	\$294,400	\$0	\$112,500	\$0	\$406,900
14000	Conveying Systems	\$0.00	\$0	\$0	\$0	\$0	\$0
15300	Fire Protection Systems	\$1.25	\$29,325	\$20,848	\$0	\$0	\$50,173
15400	Plumbing Systems	\$3.90	\$96,370	\$60,319	\$0	\$0	\$156,689
15500	HVAC Systems & Equipment	\$12.78	\$161,545	\$326,765	\$0	\$25,001	\$513,311
16000	Electrical Systems	\$14.90	\$133,060	\$431,118	\$31,500	\$2,553	\$598,232
	Subcontracted	\$99.75	\$1,469,787	\$2,155,787	\$198,000	\$182,607	\$4,006,182
	Subtotal		\$209.97	\$84.57	\$44.00	\$57.57	\$100
Construction Contingencies and Fees							
10.0%	Estimating Contingency		\$146,979	\$215,579	\$19,800	\$18,261	\$400,618
Months	General Requirements		\$400,000	\$480,000	\$50,000	\$60,000	\$990,000
16/k	Permits		\$23,517	\$34,493	\$0	\$0	\$58,009
1.0%	General Insurance		\$14,698	\$21,558	\$1,980	\$1,826	\$40,062
1.2%	Bonding		\$16,903	\$24,792	\$0	\$0	\$41,694
	Escalation		\$58,791	\$172,463	\$7,920	\$7,304	\$246,479
3.5%	CM / GC Fees		\$51,443	\$75,453	\$6,930	\$0	\$133,825
	Subtotal		\$712,330	\$1,024,336	\$86,630	\$87,391	\$1,910,687
Total Construction Costs			\$2,182,117	\$3,180,123	\$284,630	\$269,999	\$5,916,869
Ave. Cost / sqft			\$312	\$125	\$63	\$85	\$147.3
Total Construction Costs			\$2,182,117	\$3,180,123	\$284,630	\$269,999	\$5,916,869
Total Soft Costs			\$545,529	\$1,017,639	\$71,158	\$94,499	\$1,728,826
Total Estimated Project Costs			\$2,727,646	\$4,197,763	\$355,788	\$364,498	\$7,645,695
sqft cost			\$390	\$165	\$79	\$115	\$190

Suffield 4 Options Study 11.21.05

Town Hall Renovation
 Renovation Varies
 New Construction Varies
 Total Area

Estimate: Program Study Draft
 Drawings: edm MP-2.1 thru MP-6.3
 Dated: Nov 17th 2005
 Project # edm

06/07/06

**Opinion of probable cost****Non Taxed Construction Costs**

Draft

SF
9,200SF
9,200**Trade Costs**

Division	Description	Ave	Bridge Street School Phase VI	Total
02200	Sitework / Utilities / Demolition	\$5.25	\$264,534	\$264,534
03000	Concrete Work	\$1.42	\$71,552	\$71,552
04000	Masonry	\$2.59	\$130,375	\$130,375
05000	Metals	\$1.31	\$66,132	\$66,132
06000	Woods & Plastics	\$1.54	\$77,488	\$77,488
07000	Moisture and Thermal Protection	\$3.78	\$190,485	\$190,485
08000	Doors and Windows	\$3.34	\$168,199	\$168,199
09000	Finishes	\$3.92	\$197,341	\$197,341
10000	Specialties	\$0.53	\$26,872	\$26,872
11000	Equipment	\$0.21	\$10,350	\$10,350
12000	Furnishings	\$0.23	\$11,730	\$11,730
13000	Special Construction	\$0.00	\$0	\$0
14000	Conveying Systems	\$1.19	\$60,000	\$60,000
15300	Fire Protection Systems	\$0.69	\$34,730	\$34,730
15400	Plumbing Systems	\$2.93	\$147,752	\$147,752
15500	HVAC Systems & Equipment	\$4.26	\$214,452	\$214,452
16000	Electrical Systems	\$4.92	\$247,641	\$247,641
	Subcontracted			
	Subtotal	\$38.12	\$1,919,633	\$1,919,633

\$208.66**\$209****Construction Contingencies and Fees**

10.0%	Estimating Contingency	\$191,963	\$191,963
Months	General Requirements	\$360,000	\$360,000
1.2%	Permits	\$22,076	\$22,076
1.0%	General Insurance	\$19,196	\$19,196
1.2%	Bonding	\$22,076	\$22,076
4.0%	Escalation for work in 2006 3Q	\$76,785	\$76,785
3.5%	CM / GC Fees	\$67,187	\$67,187
	Subtotal	\$759,284	\$759,284

Total Construction Costs**\$2,678,917****\$2,678,917**

Ave. Cost / sqft

\$291**\$291.2**

Total Construction Costs

\$2,678,917

\$2,678,917

Total Soft Costs

\$1,205,513

\$1,205,513

Total Estimated Project Costs**\$3,884,430****\$3,884,430**