Bow Community Center

Concepts and Evaluation for Re-use Options

April 2016

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Table of Contents

Introduction

It is hard to imagine a resident of Bow who hasn't already heard plenty about this building. If you will pardon a little redundancy, this report will try to recap what we know, identify what is still unknown, and set the record straight on a few misconceptions. We will also explore the recreational offerings currently available and talk about what could be improved or expanded if the building is vacated by the fire department.

Understanding that there is a range of opinion on what should be done (as in any NH town), we will also try to sort out what are the "must-do's" from the "nice-to-do's" or even "smart-to-do's." Without advocating for the absolute minimum action, nonetheless that scenario is an important baseline for everyone to know if the town is to be diligent in choosing its course of action.

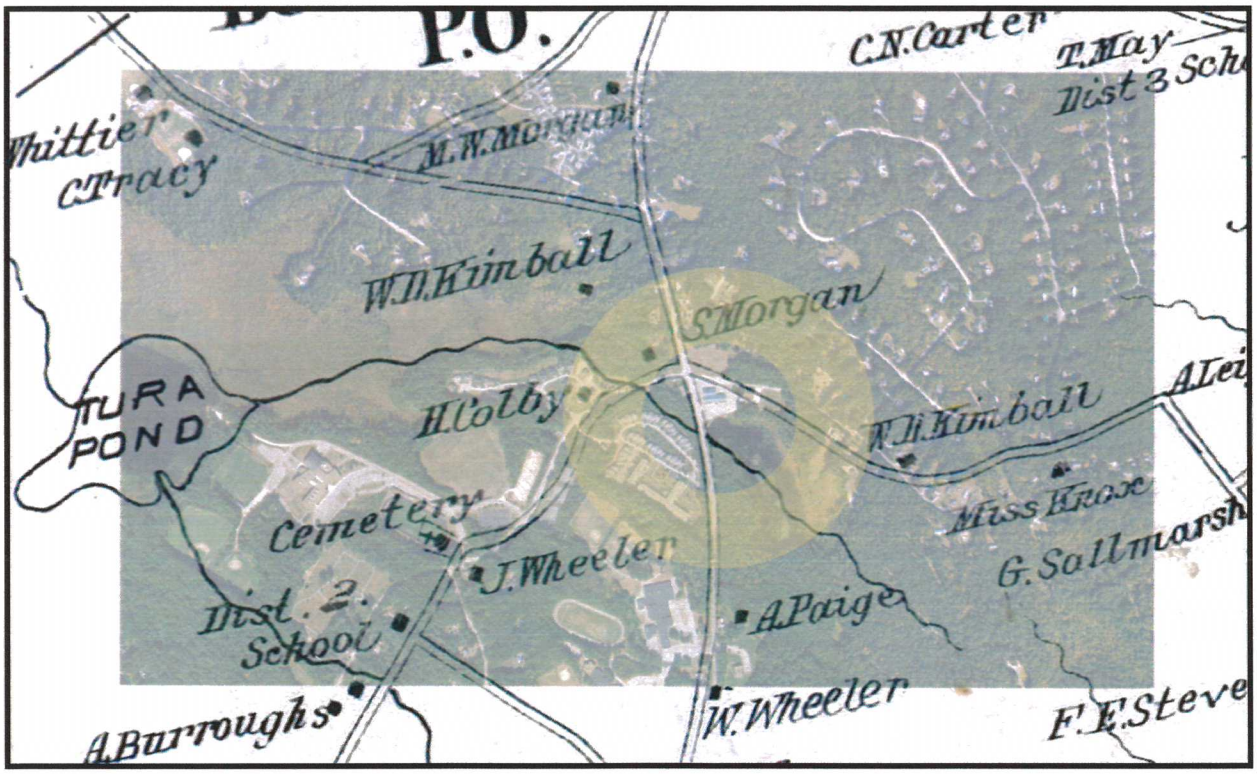
This investigation will go beyond the possible uses and layouts of the core building to look at the grounds. Parking and greenspace are important considerations now that the fire engines are likely to move out. Use of the pond and the shoreline will also be discussed as will the trail system the has a terminus nearby.

This report will look at the impact of this possible building and site improvement on the important intersection of Knox Road, Logging Hill Road and White Rock Hill Road. Regardless of one's view of the proposed changes to this intersection (that are beyond the scope of our report) it is still important to look at what might be done on the site from a town planning point-of-view. This is one of the more significant crossroads in town and we believe any new work should be respectful of that.

Our team also wishes to thank the Bow Recreation Needs Committee for their continued input through the process of this investigation—the final outcome as seen in this report owes much to their collaboration.

Site Use Options

We know that the current building was built on the site in 1957 . We have been told that the site previously housed a sawmill (more on that later). The town map of 1892 shows no buildings in the vicinity of the site, and in fact does not indicate that the pond had yet been formed .

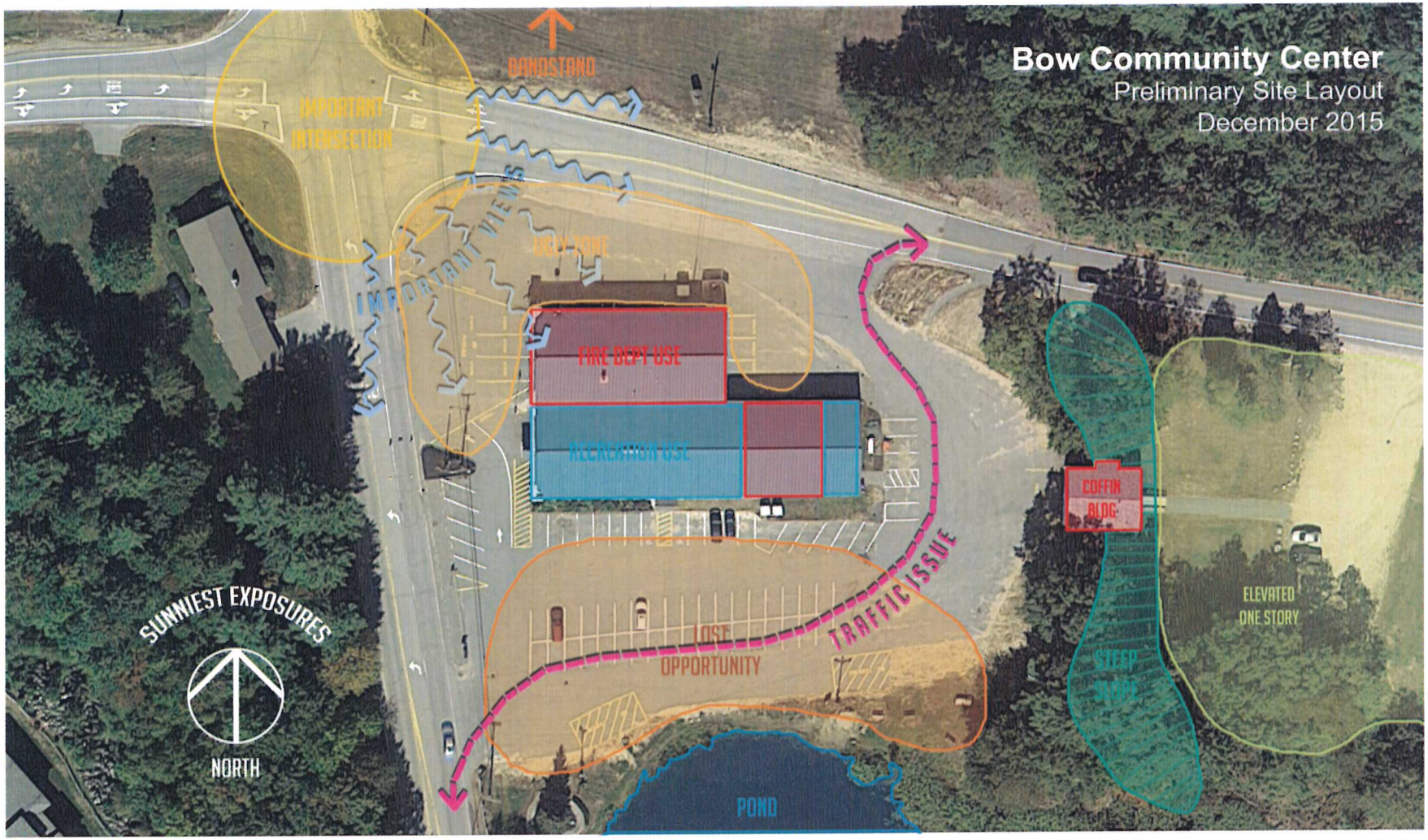


Current Aerial Photo Superimposed over the 1892 Map

The Town is currently considering a plan to have the Bow Fire Department vacate the building and move to a new safety complex along with the police department across Knox Road. Back in 2012 the idea as described by the Town Center & Public Safety Facility Study Committee was as follows:

> *A combined Fire/Police Public Safety Building will be built at the lower part of the Town-owned lot across from the current Fire Station/Community Building. The Gazebo would be moved close to the Town Pond. The current Fire Station would be shuttered and used as storage space for the Community Building. The current Police Department Building can be used by the Heritage Commission or other local community groups. Alternatively, the facilities could be used for other municipal functions where current office space is inadequate.*

Since then the location of the safety building has been changed, but otherwise the 2012 statement could still be valid. We will explore the proposed building use a little further on. In an effort to be transparent and to invite community input, this report will spend some time on the reasoning behind the different design options presented. On the following page is a plan indicating the factors we considered in the re-design of the site following the possible fire department relocation.


Bow Community Center
Preliminary Site Layout
December 2015
BANDSTAND
IMPORTANT INTERSECTION
IMPORTANT VIEWS
UGLY ZONE
FIRE DEPT USE
RECREATION USE
COFFIN BLDG
SUNNIEST EXPOSURES
NORTH
LOST OPPORTUNITY
TRAFFIC ISSUE
STEEP SLOPE
ELEVATED ONE STORY
POND

The plan opposite shows the current rough allocation of space between the two departments presently occupying the building. The Coffin building, which is the smaller two story "house" across the parking lot to the east is currently being used as sleeping quarters for the firefighters, but we are assuming that this will also be vacated and thrown into the mix.

The first and perhaps most obvious statement is that there is going to be a lot more pavement than needed after the changeover. Presently the Recreation department has an allocation of 56 parking spaces, and even allowing for more popular, expanded programs, somewhere in the vicinity of 75 spaces would seem to be adequate. Voting has been brought up as an additional use that people would like to bring back to this site (it is now done with some disruption at the High School). This would also justify a moderate parking increase. The parking lot at the community center is used too as a town rendezvous point and ride sharing location. So we still need more parking.

Nonetheless, while accommodating 20 additional spaces or even more, we have found that a large proportion of the paved area currently on the site could be returned to soft landscape of some sort. The question is what do you keep and what do you tear up?

Prime candidate for removal would have to be pavement up to the edge of the pond for several reasons:

- Minimize untreated run-off into the wetland
- Provide a more parklike setting for the enjoyment of the water
- Provide comfortable seating for the relocated gazebo
- Establish a southerly "front lawn" for the community center

This is why this area is shown as a "lost opportunity" in the plan at the left. The fire department currently uses the pond as a fire pond and pulls the apparatus right up to the edge of the water (see hatched pavement); it would be possible to extend this piped connection to a more convenient spot for all parties. This may also figure into the need to provide a reserve of water for a sprinkler system in the building without building a cistern.

Whatever the site design solution, it should also keep in mind the "traffic issue" as indicated. Certain motorists—we understand usually *youthful* motorists—like to avoid the intersection wait time by cutting through the parking lot, sometimes at speed. The new plan should make this a far less attractive option for safety's sake.

The Coffin Building is built into the hillside with the easterly entry at grade a full story higher than the overhead doors facing the community center. This hill is steep, but levels off to an unpaved parking lot on the far side of the building. At some point to the east of this there was a landfill site; construction use of this area would need to proceed with caution and additional subsoil investigation.

The important intersection of Knox Road and Logging Hill Road affords a great view of the site—unfortunately the site does not afford a great view back. Not to knock the fire station; the northwesterly side of the facility is the business end of the building and it was rightfully all about utility. The asphalt aprons would no longer be needed, nor would the various appurtenances and bits of equipment that ended up on this prominent face of the building for lack of an alternative. Add to this consideration that the intersection itself may or may not be getting a roundabout which would make this even more of a focal point in the town.

As part of our investigation, we looked at several alternates for the re-use of the existing building and one that assumed the Town might opt to demolish the entire structure and start from scratch on the same site. We did not look at any hypothetical sites away from the existing community center.

We held a review session with the staff, and after determining that the Recreation Department's desired building program could fit (easily) in the shell of the existing facility, we placed different layout building concepts in the context of different site development approaches.

While parking lots are not the main reason for community buildings, they are an important starting point for site design since they take up a lot of space and they are somewhat inflexible in layout if they are to function properly. Added to that , the building footprint is more or less a given, to the site layout becomes a diagram of building, parking and green space.

The first option, Option A, assumed that the eastern portion of the building would be used for grounds maintenance equipment, since some interest was expressed in that arrangement.

This plan shows 80 parking spaces mostly to the east so the drive can serve the Coffin Building as well. In the main building, the east end garage remains a garage, with staff only parking in front of the overhead doors. The advantage of this arrangement is the reduced visual impact of the parking from the intersection, the elimination of the short cut and the added park land adjacent to the pond. The disadvantage is that there is still pavement up to the edge of the pond.

In consultation with the Committee, we then decided to set aside the idea of housing maintenance vehicles inside the building due to location away from the fields, heightened safety requirements and the desire to bring the pre-school into the Community Center instead.

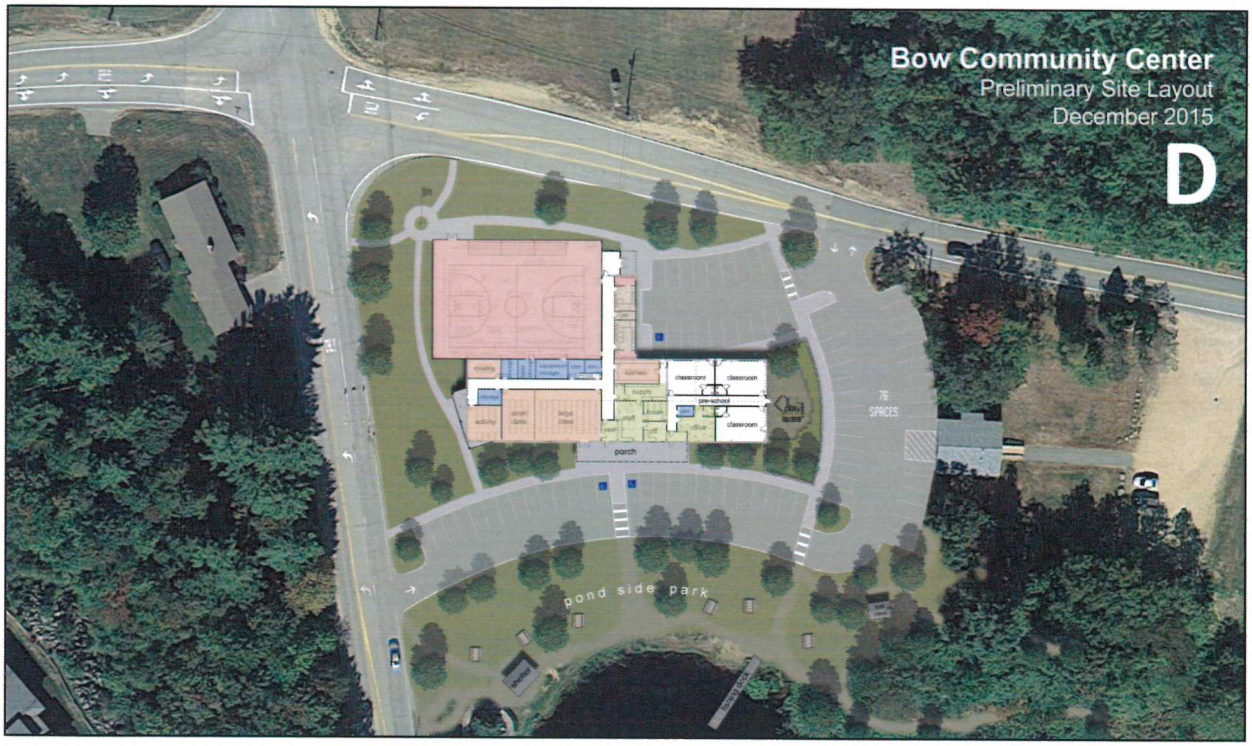
Plan B puts the parking along the street edge since that narrow strip is too small to accommodate most outdoor activities. Note that the gym is now to the north while the offices and activity rooms that benefit from daylight and views are to the south. This plan also brings in the preschool in the easterly end of the building with its associated outdoor play yard. The pond-side park is enhanced, but the look of the building from the intersection is not much improved; this layout turns its back on the town. There are 93 parking spaces shown. We do manage to get a south side entry, but it is far from parking spaces and would encourage people to enter through alternate doors, if possible.

Plan C is a simple variant of Plan B, leaving the gym where it is now and splitting the entrance to the Community Center and the Preschool to two different locations. There are 86 parking spaces shown. This arrangement lacks the clarity of "where do I go?" that other layouts have. The north side entrance to preschool is another thing that should be avoided; it is difficult to keep up with winter maintenance with this arrangement.

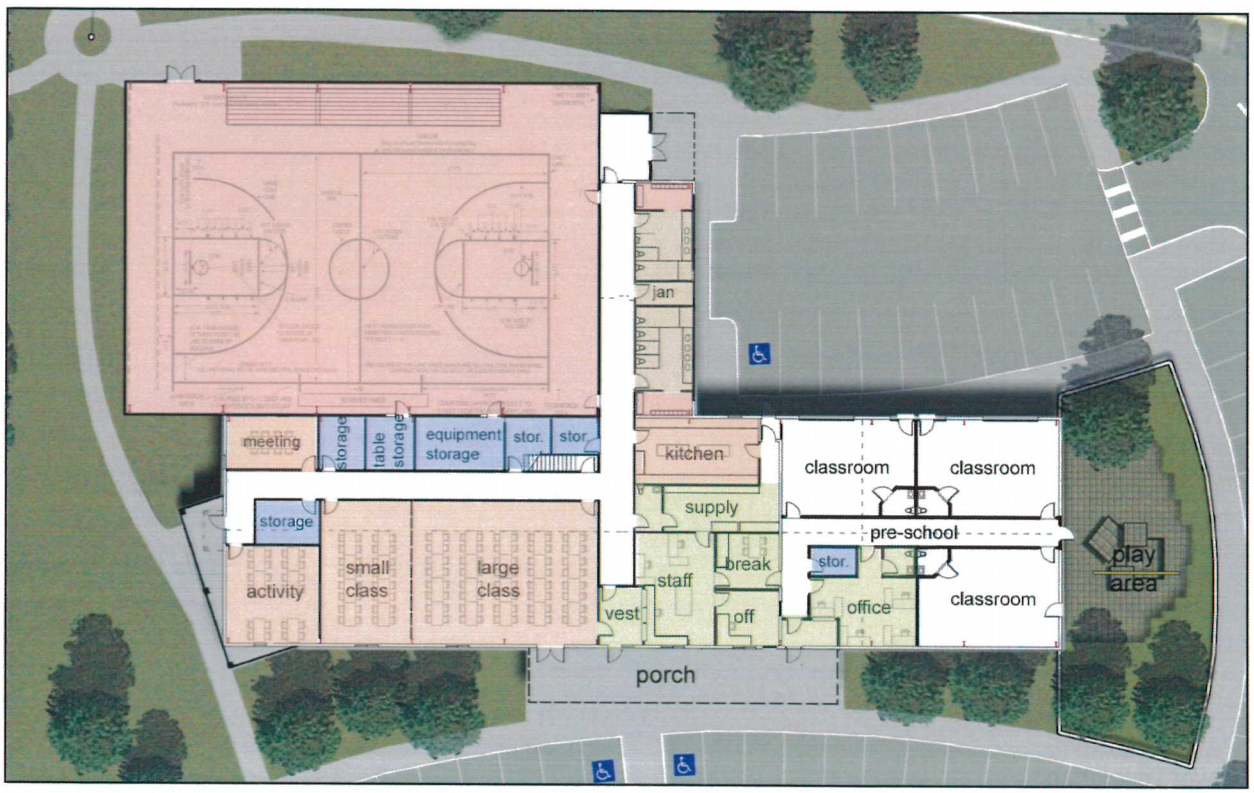
Plan D begins to balance all of these contradictory factors. The bulk of the parking is tucked away and the intersection side of the building could be dressed up a little. The main entry for all uses is consolidated in the middle of the sunny south side at a new entry porch. Parking, especially required accessible spaces are handy to the entry. The pond side park now wraps all along the north side of the water and is likewise handy to parking.

One note on relocating the gym to the north side: Both the fire department steel frame and the community center frame are the same width and height (about 50 feet wide and 23 feet high at the ridge). Given that the old gym will require a new floor surface, it makes equal sense to install it where you want the gym to be. The two basketball backboards are all that would need to be relocated. Aside from blocking off the view to the pond where it now is, the gym is also located at a pinch point in the building that requires visitors to cross the gym to reach the back of the building. These two reasons made it more practical to put the new gym to the north.

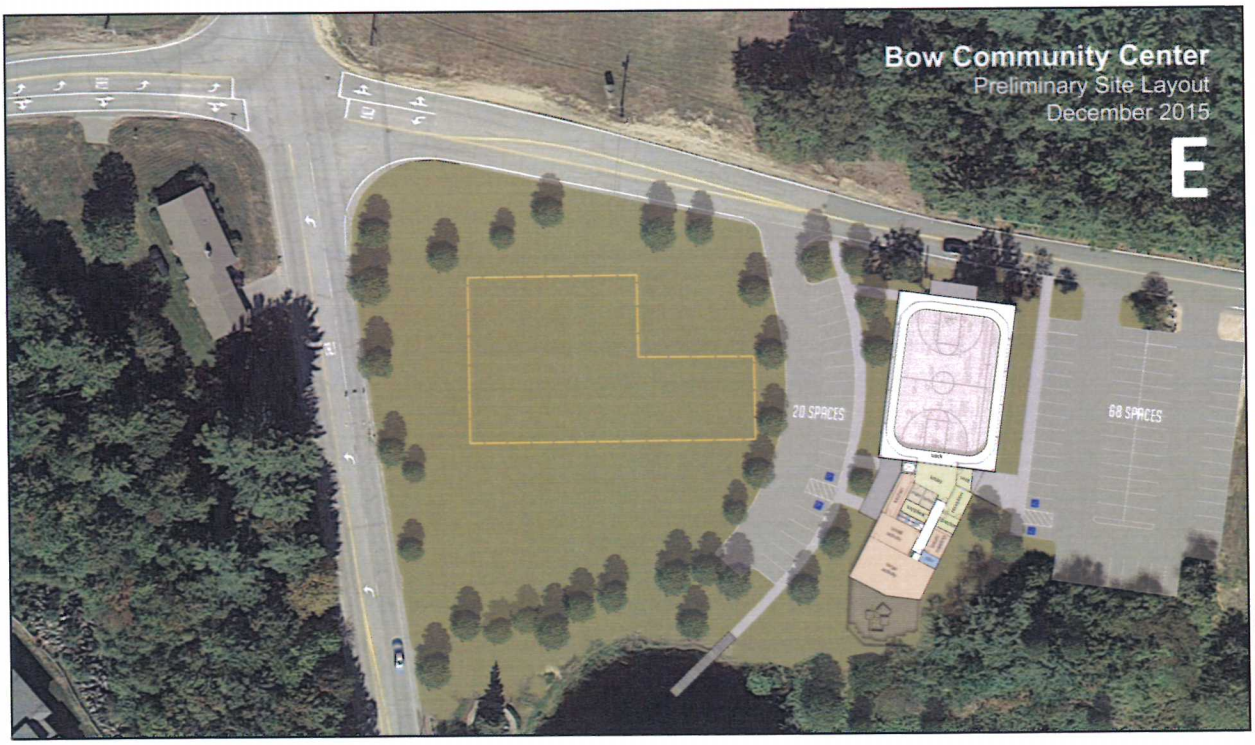
This arrangement also allows the gym to be expanded to regulation size if desired, either during the initial renovation or at some future point. Such an expansion would require the demolition of the building shell in that area, but would not affect the new work elsewhere in the building. This expansion is illustrated on the facing page.



The expanded gym would include a high school sized court and some bleachers along one side. The interior layout of this building option in detail is shown below.



Detail of Plan D with Expanded Gym



Upper Level Plan

Lower Level Plan

Plan E on the facing page explores the option of knocking down the entire structure to start over again with a new building, as some townspeople have suggested. This is a relatively open-ended idea, so we set some ground rules on developing a preliminary concept:

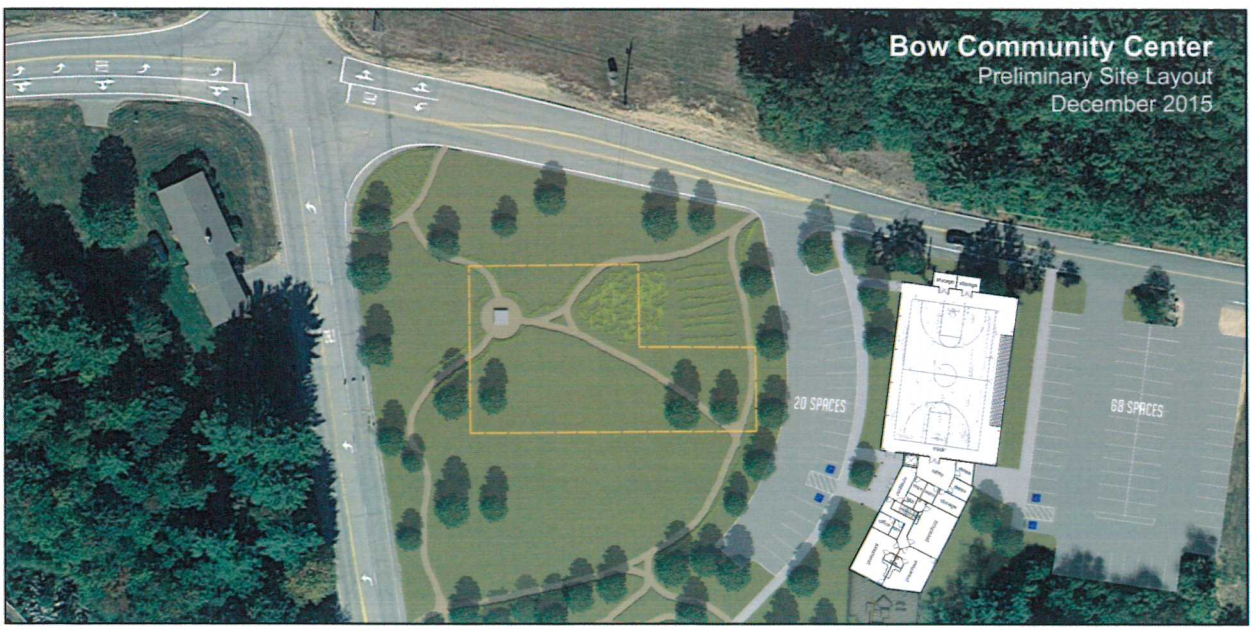
- Let's limit it to the current parcel of land, though it could be elsewhere
- Develop an approach that allows the current community center to operate through construction
- Plan to build a full-sized gym since we are starting from scratch
- Propose some ideas for the re-use of the current building site

This plan puts all of the development to the east and avoids the footprint of the existing building (shown in yellow). The building takes advantage of the full one-story difference in elevation in terrain over by the Coffin Building. The upper floor would be accessible at grade from an upper parking lot, indicating 68 spaces, that occupies the current front lawn and unpaved lot above the Coffin Building. This upper lobby would access administrative space, meeting and activity rooms that overlook the pond. The upper part of the gym, which is set down into the hillside is to the north by Knox Road. An upper level running track around the perimeter of the basketball court could be reached from the lobby. An elevator would be required to connect the two floors.

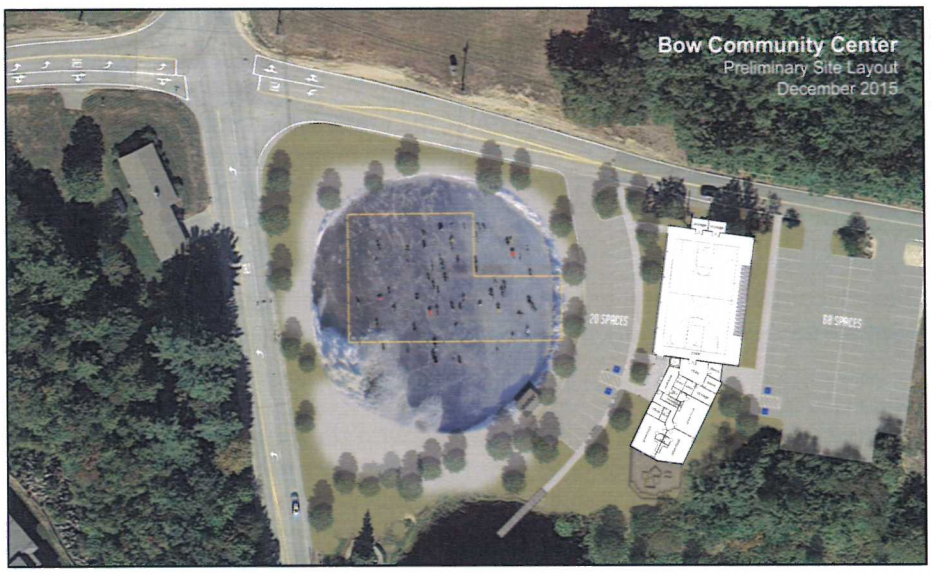
The lower floor is accessed from a lower parking lot. It contains the gym floor and supporting spaces such as changing rooms and toilets. A door on the opposite side of the lobby would bring you into the preschool area, which is entirely separate and located to the south. The required outdoor play area would be south of that. Due to the change in elevation of the ground, the easterly classrooms would have higher windows, above the heads of small children.

Phased construction would have all of this open and operational before the demolition of the existing building. After the ribbon cutting, the staff would move over and be ready to go without interruption of services.

Once the old building is gone, the question becomes, "what do we do with the empty corner?" the options range from the minimal (e.g. loam and grass seed) to a future site for another town building. We have illustrated some options based on the available size on the following pages.

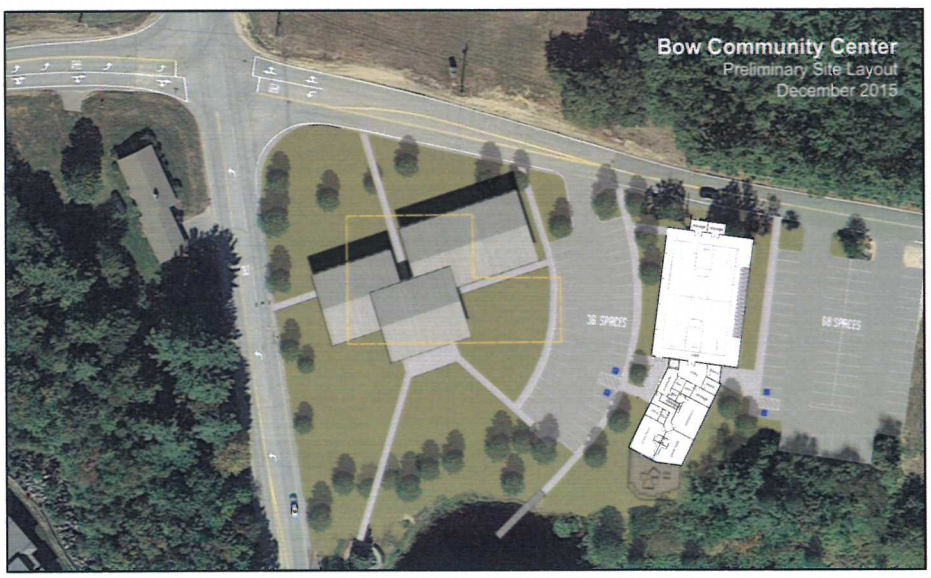


A Little League–sized ball field would fit on the corner (60 foot baseline).



Skating could happen seasonally with higher visibility on the corner.

It could take advantage of park lighting, nearby parking and the changing rooms in the Community Center.



The land could be held in reserve for some future need for a new municipal building that could share parking with the community center. The prominence of the location may be desirable.

Recreation Space and Program Needs

By exploring the alternate site layouts, we took a sort of "outside in" approach to what might be done with the building. The next step is to look at how the recreation department might use the building from the inside out.

Before we jump into consideration of how the recreation department could best use the entire building, we should try to establish a baseline of minimal intervention.

The Baseline Minimum

There have been references in our meetings to a baseline "do nothing" approach to the building once the fire department moves out. This was the assumption of the Town Center & Public Safety Facility Study Committee in 2012 (page 5).

Under this scenario the Community Center would remain as -is and the vacated fire station would simply be locked up as "storage." This is an over-simplification of what would really have to happen, but once we do establish the practical minimum it will help us evaluate the cost and benefit of more involved solutions.

The oversimplification comes from two sources. The Community Center really cannot remain as-is; though the building will be more safe once the vehicles and their fuel are moved out, some moderate expenditure would have to be made to correct some blatant problems. Secondly, the fire station is too large to serve as storage for the Community Center. Great care would have to be taken that this abandoned space didn't devolve into the town attic, becoming yet more of a repository of unknown items placed by multiple people and creating a hazard similar to what we have seen on the mezzanine over the administrative offices.

A preferable solution would be to establish the right-sized storage room or rooms, laid out and equipped in an orderly fashion and wall them off from the remainder of the fire station with appropriate partitions. The existing mezzanine storage would then be retired and sealed off and the remainder of the fire station would be locked up and mothballed.

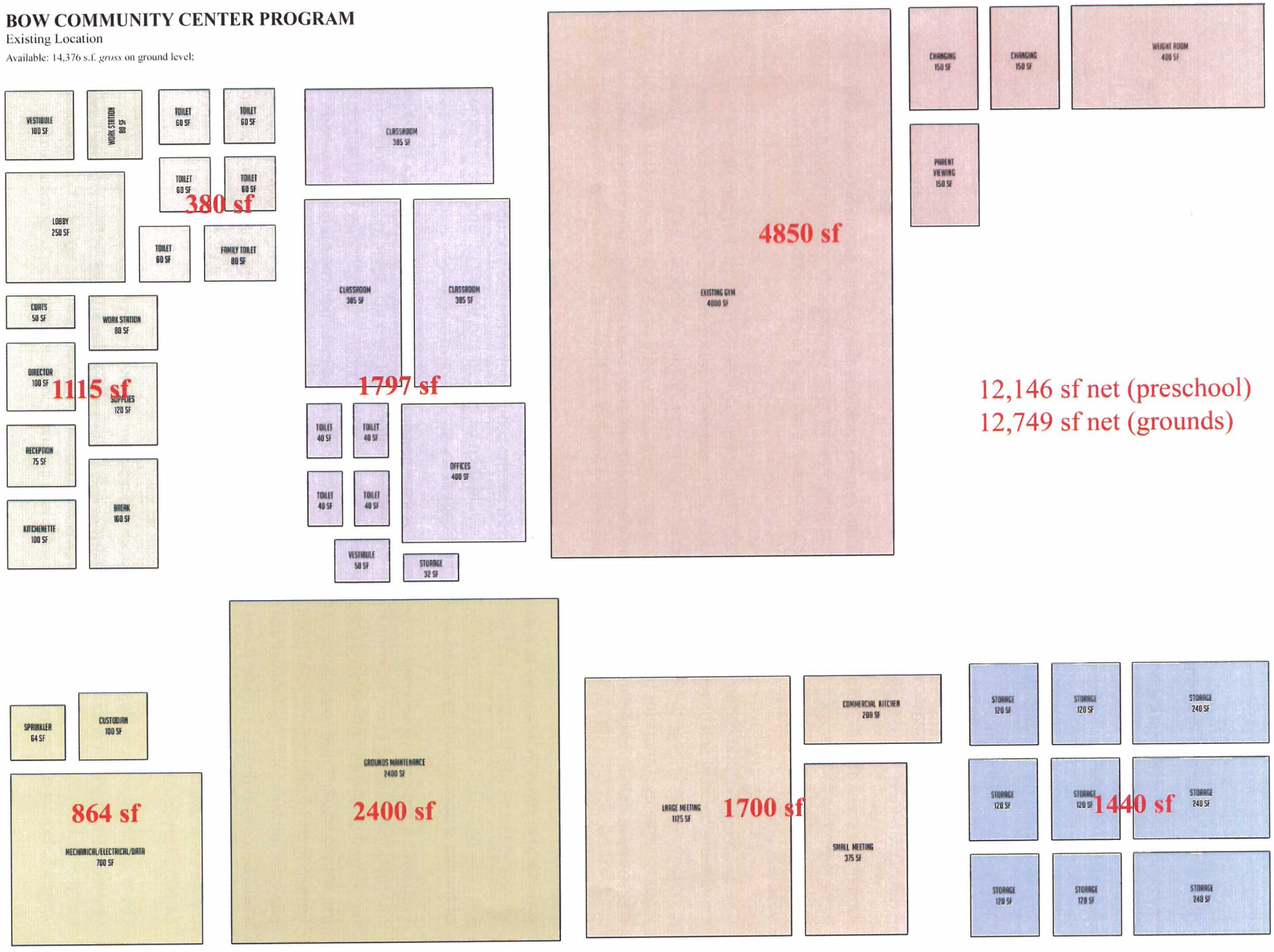
Even with this modest intervention there remains a further problem under the building code (2009 IBC International Building Code, now in effect). Though the building will be much safer moving from housing several unrelated unseparated uses (including vehicles) to one single assembly use, the change of use should trigger code compliance. The State Fire Marshall's office classified the building as wood framed in its inspection report of 2014. The primary structure, that you can see exposed in the gym is unprotected steel, but the infilling walls whether original or added are a mixture of concrete block, wood framing and steel girt and panel, typical of Butler buildings. This has put the community center into the Construction Type 5B, combustible and unprotected. Buildings of this type of construction in the A3 assembly category (Table 503) are only allowed to be one story tall and 6000 s.f. in area. At 14,000 gross square feet, we have a problem.

There are three ways to close this gap: Add a sprinkler system, remove part of the building, and/ or ,under paragraph 506.2, count the free perimeter fire truck access for an area bonus. The bonus for being able to fight a fire from all four sides of the building doubles the allowable area to 12,000 s.f., still somewhat short of the mark. At this point we believe it makes sense to look to adding sprinklers.

BOW COMMUNITY CENTER PROGRAM

Existing Location

Available: 14,376 s.f. *gross* on ground level;



Recreation Space Allocation

Programs at the Community Building for both adults and children are wide and varied. Sports include basketball, volleyball, floor hockey and archery as well a free gym time. Exercise programs include 50 plus fitness, cardio programs, yoga, Zumba and meditation. There is instruction in art, dog obedience, and a variety of dance. There are special activities outside such as an Easter egg hunt, snowshoe hike, sledding and skating. There is a bridge club, a men's club, Young-at-heart, Rotary Club and the Boy Scouts—all who use the building.

Each of these has space requirements, a suitable environment for the activity and many of them use a lot of equipment. For example, the gym is too small and too low for standard high school basketball. The concrete floor is too hard and uneven for may of the active sports and dance classes. Basic heat, ventilation and lighting need to be considered too. These needs went into the program.

A visit to the building makes the need for significant equipment storage quite evident. At the same time, storage for outside groups (not under the auspices of the department) was the subject of much discussion. For safety, especially fire safety, and orderly operation of the building, the team concluded that the department should control the contents of all the storage areas in its building and unsupervised contributions would no longer be allowed. These storerooms would also be made code compliant and accessible in the new building arrangement.

An array of meeting rooms of different sizes was included in the program to accommodate several of the above mentioned activities. These rooms would also allow some quiet and separation from more lively activities in the gym that could therefore go on simultaneously.

There is a modest staff/administrative requirement, with office space and supply area, fronted by a service counter.

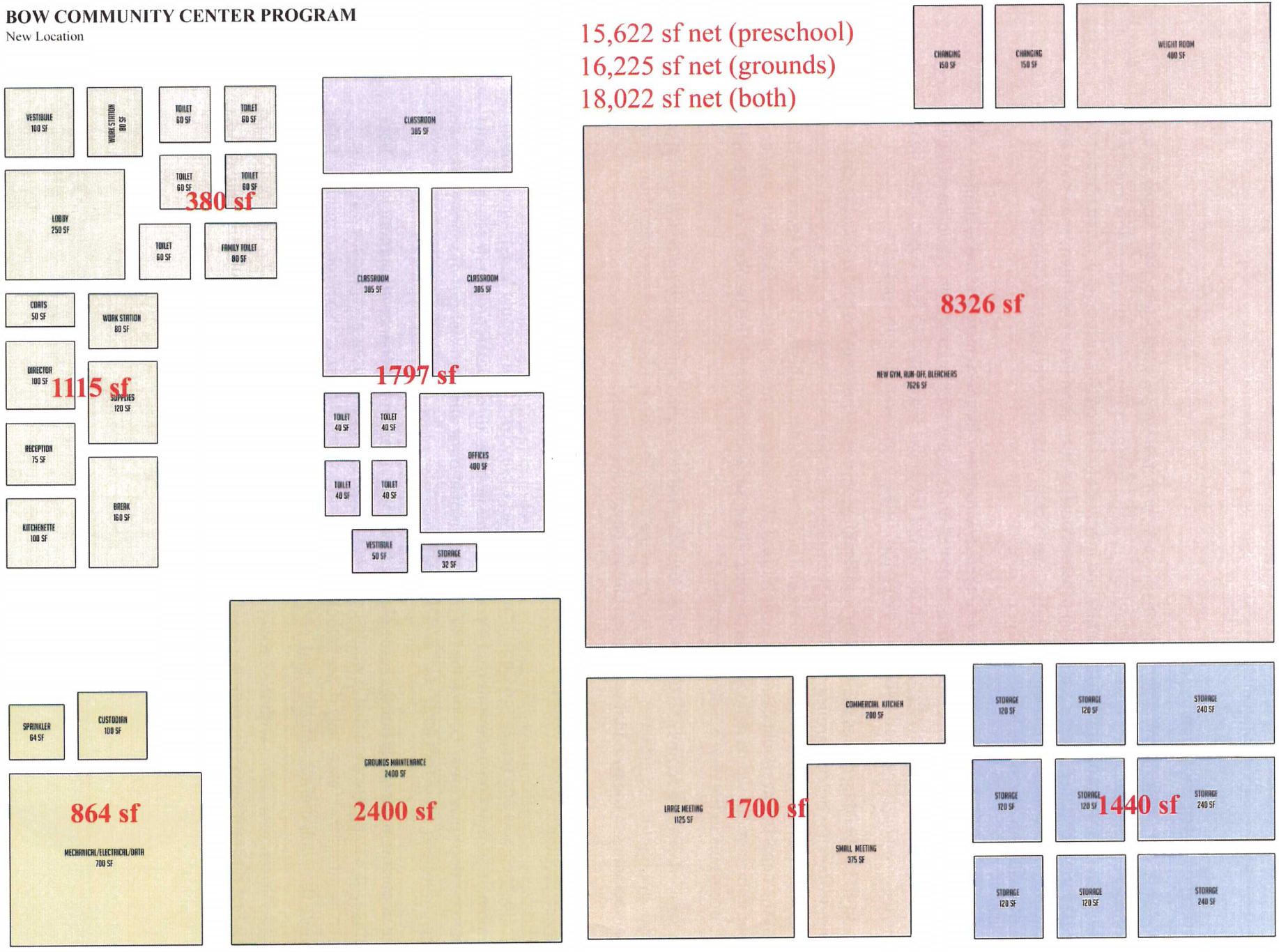
Offsite, the Parks and recreation Department operates a preschool, and it would be advantageous to combine that function under this roof if possible. This involves three classrooms, staff area and dedicated outdoor play area. Co-locating the preschool would bring about efficiencies of sharing space and equipment and allow for better staff communication.

The department currently houses some playing field mowing and maintenance equipment in the back garage. It was determined that it would be more suitable to move vehicles and gasoline out of the building altogether, especially if preschool would be moving in. The site is also remote from the fields where the equipment is actually used, and a better located small shed would make better sense.

A graphic representation, with the various rooms shown to relative scale is included on the facing page. This first diagram shows the program assuming the current gym is to remain. Calculations with and without the pre-school and the grounds maintenance garage are shown.

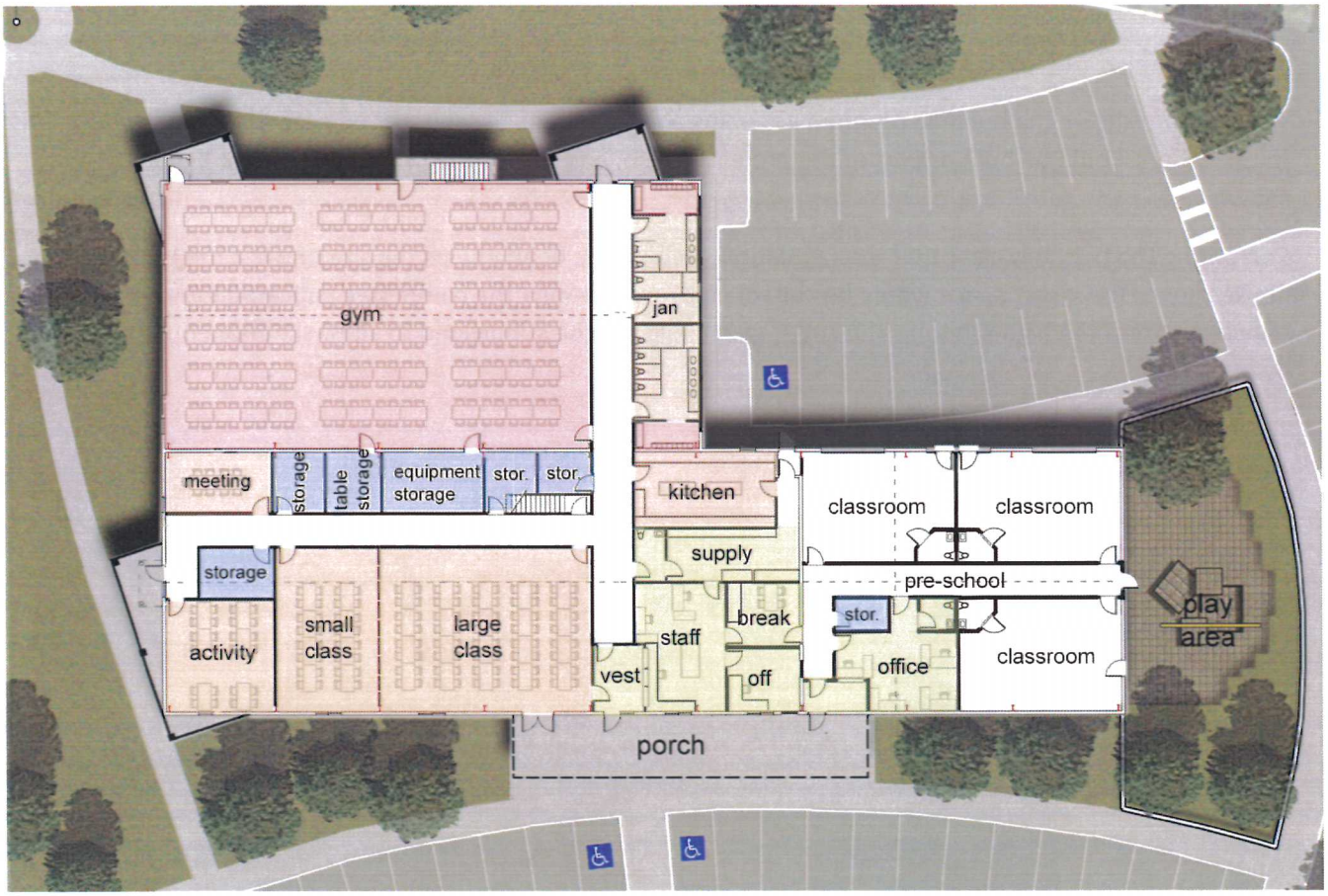
BOW COMMUNITY CENTER PROGRAM

New Location



This diagram shows the building program assuming a regulation high school sized gym with some space for bleachers would be built as part of the project. Again, add-ins for the pre-school and garage are shown.

Comparing the two, it is clear that the regulation sized gym is nearly twice the size of what the building houses now. The larger space would be suitable for town voting (the committee indicated interest in relocating from the high school). The larger gym could also be subdivided to allow simultaneous use by two groups.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office
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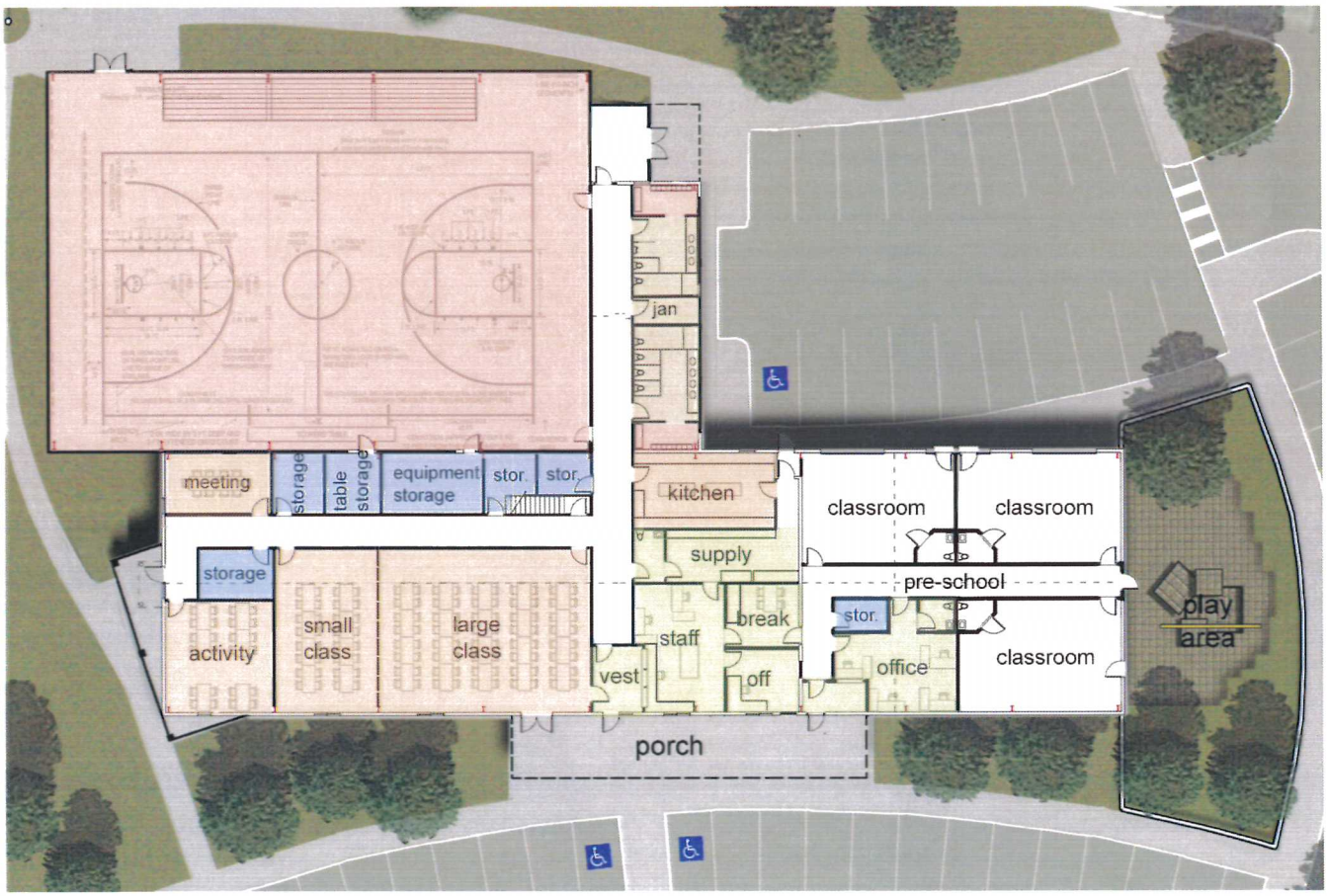
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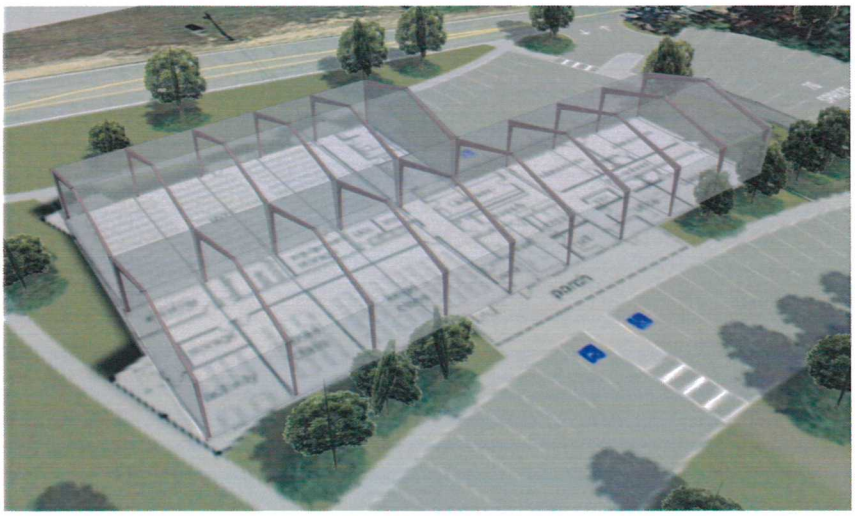
porch

Building Layout Options

The plan opposite shows an arrangement of the building program using the current size gym within the existing footprint of the building (corresponding to the page 17 diagram). The building is laid out with simple straight corridors to avoid confusion both in day-to-day and emergency situations. The main entry is on the south side close to parking. This is the arrangement preferred by Bow Recreation Needs Committee



It is important to note that the shell of the existing building is entirely supported by the pre-engineered steel frame as shown in this inset. Existing interior partitions would be relatively easy to remove and replace. Relocating the gym to the north side would eliminate the mezzanine, currently used for training/day room, but it also removes the need for an elevator.

The covered porch serves both the Community Building and the pre-school. This also allows staff from each to be in proximity for mutual support, sharing a breakroom and supplies. The three preschool classrooms have direct access to the exterior and share access to a dedicated play area.

The kitchen is centrally located with the ability to serve the meeting rooms or the gym. It has a back door to parking for easy deliveries.

Storage rooms are clustered in the core of the building since they do not benefit from exterior views or daylight. Because they are low, relative to the 23 feet in height available inside, the plan anticipates mechanical space above (see stair). The meeting and activity rooms are arranged across the south (pond) side since they do benefit. The gym, which is the same size as the existing one, is shown to the north side. Table seating for 288 is shown to give a sense of the size. Toilet rooms are positioned close to this large population center.

Also indicated in the plan are some sort of entry enhancements to provide cover and improve the appearance of the building at the several entrances visible from the street.

The second plan on the facing page shows what a regulation high school gym would look like as part of this plan. Bleachers are indicated along the north wall. If the larger gym is significantly taller that the existing building, it will necessitate roof reinforcement on the old part due to added snow drift loads.

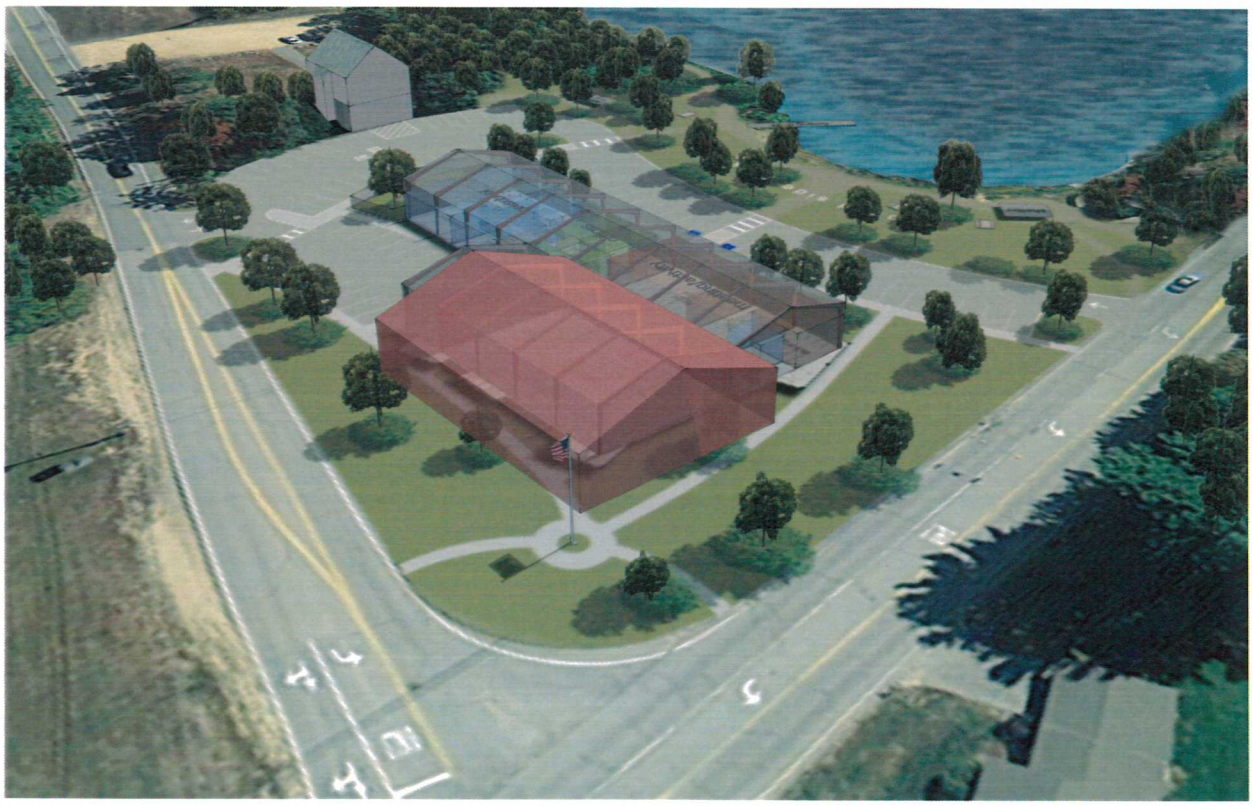
Such a gym expansion could be done as a later phase of construction without disrupting the earlier improvements; however the savings achieved by consolidating the effort into one phase would be significant. Note that there is currently a partial basement under the east end of the proposed gym. Due to its condition and location, this basement was not considered suitable space to use for part of the building program space.

These three views g*enerally* show how the proposed project might sit on the site with the proposed site improvements. These are essentially x-ray views with the building frame and the color-coded rooms visible through the building skin for clarity.

The first view on the top of the opposite page shows the basic program as viewed from the intersection of Knox Road and Logging Hill Road. We consider this an important view of the building. The scope of work would include re-cladding the existing building (not shown). Options for re-cladding could range from replacement vinyl siding to cement board panels to insulating panels to masonry—depending on the budget.

The view opposite below shows a concept for treating the new entry points and dressing up the building from the public side.

The view below on this page shows what the larger replacement gym could possibly be if the existing fire department space were removed.




storage
meeting/activity
office
gym
shelter


storage
meeting/activity
office
gym
shelter

These three views show the pond-side development of the proposed concept. Again the upper view opposite shows the base building with its main entry across the parking lot from the pond-side park.

The view below opposite shows the possible enhancements to the entries, especially the porch roof at he main entry to the Community Building and preschool.

The image below shows the effect of the enlarged gym on the north side of the building.

Benefits of the Proposed Approach

Why would the Town undertake this project? There are benefits to expansion of the Community Building in general, and there are also benefits to this particular option.

In favor of expansion *at all* there are several factors, for example:

- As mentioned, the "empty" fire station scenario has significant costs associated with it anyway.
- The current arrangement only allows one indoor activity at a time and does not meet the need.
- A "multi-tasking" facility reduces the competition between users for space.
- A "multi-tasking" facility reduces the disruption of unrelated foot traffic through the gym.
- Consolidating pre-school on site would lead to operational efficiency.
- Pre-schoolers could also use the facilities of the community center.
- Expansion would allow more afterschool programs/vacation camp programs.
- Expansion would allow more senior activities/drop In/sing-a-longs, luncheons, games.
- Voting could come back from the high school gym.
- A restored kitchen would add to public events.
- A restored kitchen would allow for cooking classes and activities.
- A collection of varying-sized activity rooms allows for flexibility in "booking" various groups.
- New offerings contemplated include wellness clinics, drama, music, dances, photography and media, children's entertainers, adult comedy shows, etc.

This particular concept has added benefits:

- Reclaiming the edge of the pond as a public park and recreation area.
- "Traffic calming" through the parking lot.
- Enhancing the look of the building.
- Improved safety and universal access to all occupiable spaces.
- Visual supervision of the entry.
- The potential of operable partitions between the meeting rooms for flexibility.
- Providing daylight and views for the staff and activity rooms.
- Providing a secure outdoor play area *directly* off the preschool.
- Easy access for the kitchen for events and deliveries.
- Retention of the Coffin Building for Town uses.

It would seem the advantages are reasonably clear. The big question that remains, given the history of the building, is the remaining code problem—our next topic.

Code Compliance Concerns

Why is the building OK for children's recreation when the State Fire Marshall told us it was unsafe for firemen?

This is an obvious question and one that deserves some attention. The State found the building to be non-compliant because of the combination of the way it was constructed and the use to which it was being put. First, let's review the facts.

Despite appearances, the fire station/community center building is considered a wood-framed building. It was built by the erection of several pre-engineered steel frames (literally "Butler Buildings") but all the infilling walls and elevated floors are combustible wood framing. The brick out front is only a decorative applique.

The Problem:

In brief, what the State Fire Marshall's Office (per Ron Anstey) says in its report of 10/16/14 was:

- The building houses three different uses (assembly, fire station and storage) that are not separated by fire partitions.
- There is a second floor training room that constitutes an unprotected assembly area.
- The vehicles stored in such a building cannot have full gas tanks or connected batteries.
- There is no sprinkler system.
- The generator is too close to combustible siding.
- The basement boiler room is also not separated by fire rated partitions.
- Wiring in the various areas is not all enclosed and not all properly supported.
- Exposed wood finishes are not allowed in this kind of assembly use.
- The storage mezzanine is combustible, unseparated and not accessed by a regulation stair.
- Storage is not fire separated. Rooms larger than 100 sf need a one hour fire separation.
- Impromptu storage lofts are not built to hold the proper weight.
- Storage cages block access to exits.
- Assembly spaces over a 300 person capacity* have to have a fire alarm.
- Some door thresholds present tripping hazards.
- The kitchen hood has no fire protection. Commercial hoods require a suppression system.
- The restroom has no required ventilation.
- Generator fuel tank is not protected from vehicles.

An earlier memo from the Fire Marshall on 7/24/13 brought up another serious concern, namely that since firefighters were sleeping in the building, it should be evaluated as a residential occupancy as well. The safety requirements for buildings where people sleep are understandably elevated above normal use. Add to that the general requirement in the building code that a fire department, like a police station or a hospital, is an "essential facility". This means that there are special safety and durability provisions above and beyond those for a "normal" occupancy.

*while the gym has been limited to 250 occupants by agreement, it is big enough under the building code to hold over 500.

The Solution:

First, the building should have only one occupant, the community center. This puts the responsibility for safe practices squarely on one party and eliminates hidden hazards stemming from the use of unknown others in other parts of the building. There will still be some special rooms that require fire separation, such as store rooms and mechanical rooms, but this is normal, standard operating procedure.

The building will get a sprinkler system and a fire alarm system which both render it much safer and allow much more leeway under the building code.

Similarly wiring and ventilation would be brought into compliance as a matter of course, no matter what use went into the building. Yes, there is a cost associated with addressing items of deferred maintenance, but many of these are costs that have been avoided since 1954.

The upper areas of the building, namely the training room and the storage lofts are not accessible to the public and should be abandoned as occupiable space, i.e. places where the public can freely go or space where someone regularly works. This will eliminate the conflict. The training room could qualify as an attic, storage or mechanical, if it is put off limits to occupancy and has the proper fire separation. On the other hand, since the new use will likely involve removal of some partitions below, it is a strong possibility that this room may be demolished, and you could reach code compliance by simply not building it back again. This would also free up the area now taken up by stairways for other uses.

The kitchen, if used for cooking, as opposed to just re-warming food from elsewhere, it needs to be a complete re-do, with fire suppression in the hood and so on. Such an overhaul would be an opportunity to relocate the kitchen to a more convenient location in the building, nearer a delivery door. Existing appliances and equipment can be salvaged as appropriate.

Fuel and vehicles should be out of the building. There is some interest in re-using the rear bays for recreation Department equipment, but this would trigger a requirement for a significant fire separation, and should be avoided if possible. As we understand it, this location in town is not handy to the playing fields where the equipment would be used—the garage is just seen as a free opportunity. If the free opportunity ends up costing a significant sum in the upgrade of the rest of the building, it is not so free. Ultimately you have to ask the question, "does it make sense to park vehicles inside a wooden community center?" We concur with the Recreation Needs Committee that the answer is "No"