Lexington Department of Public Works
Project Narrative

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Written and Edited by Small Group Advisory & Design Team

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EXECUTIVE SUMMARY

The focus of this document is to provide answers to many of the questions posed by the community during December's 2006 Town Meeting and the formal question period afterward. Included in this document is also an overview of the project, outlining the history of the project, the process, evaluation of the existing conditions and a summary of the proposed facility. This report reviews the work performed during the programming, schematic design, design development, review and confirm period, and the 50% construction documents phases. This report outlines the key decisions made during the process and provides cost evaluations for these decisions as appropriate.

Project Overview

At start of the planning effort, the team generated the program from interviews with the staff , comparisons to industry standards and experience building facilities of this kind. We also met with the community for their input into the project, and to understand areas of concern from a neighbor's perspective. The documentation of the existing facility included investigation from all sub-consultants including specialty groups such as geo-technical, hazardous material, traffic and environmental. Following the initial stages of programming and planning, the team, including engineers and architects, developed preliminary designs that documented different approaches to achieve the stated goals. After presentation of these designs and after receiving additional input from the users, Town administration, the Lexington Permanent Building Committee (PBC) and various other committee's, revisions were made in plan, massing and elevation. That process of revision and presentation continued through Schematic and 85% Design Development until there was general agreement on the scheme that was estimated and presented at Town meeting. At Town Meeting, members approved the continuation of the process that would begin with a Review and Confirm phase and continue on through 50% construction documents and a new estimate. The first part of this, which began the day after Town Meeting, included a group of individuals representing the Board of Selectmen (BoS), PBC, Town Management, Department of Public Works (DPW), Capitol Expenditures Committee (CEC), Appropriations Committee (AC), Design Advisory Committee (DAC) and Energy Conservation Committee (ECC). These individuals met with the design team to review all of the work to date and to confirm whether or not that work represented the needs of the town. Once that 8 week process was completed and the results of that presented to the Selectmen the design team was given permission to proceed with construction drawings and specifications.

The directive from the Town was for the design of a new facility, including building, site and equipment. The Town had commissioned a previous study to determine the appropriate location for the new facility. The study found, and was agreed upon at Town meeting in 2005, that the community would be best served with a new facility at the existing DPW site, 201 Bedford Street. The underlying rationale for this decision was that the Town was best served from the existing location. A new facility would be required given that the current facility has not had any major improvements since 1966, operated inefficiently due to layout and work conditions and failed to meet basic space requirements and current building code criteria.

In the two community meetings held, the areas of concern for the reuse of the existing site were highlighted: excessive noise, light spillage off the site, fuel dispensing, saving natural resources, keeping the front green and additional traffic. These meetings provided a beneficial dialog, which enhanced the overall design and helped to alleviate the issues cited by the community.

Simultaneously, the project team addressed the functional necessities of the DPW through conducting interviews with staff, design sessions and regular design reviews with the PBC, Town Selectman and DPW staff. Through this process the team developed floor plans and elevations that reflected the needs expressed by all of those groups.

Key Aspects to the overall project scope:

- Create an efficient facility that provides for the functional aspects of a DPW; the goal of improving operations with a focus on ideal adjacencies of the program elements

- Have an inclusive community process and incorporate reasonable suggestions into the design

- Create flexible spaces for community and other Town uses, such as space for emergency operations and a voting location for precinct 8

- Make sustainable design a priority; as indicated by the Town, to achieve a Silver rating under the Leadership in Energy and Environmental Design (LEED) Green Building Rating System™.

- Consolidate DPW divisions to create a centrally located facility including the projected-to-be, newly formed, Joint Facilities Department

Community Questions

Since the December 2006 Special Town Meeting, the following community questions have been addressed by the project team.

Q. Should the DPW Administration be relocated to 201 Bedford? Should the projected-to-be, newly formed, Joint Facilities Department be located to 201 Bedford? Should the building be increased to accommodate voting / training / EOC needs?

For the November 2006, design, the people and spaces grouped under administration consisted of departmental offices for operations, administration, engineering municipal facilities, support spaces for the DPW, and multi-purpose areas. The spaces that supported the operations of the DPW are the lunchroom, locker rooms, and toilet and shower rooms. The first level lunchroom served as a meeting space for the operations staff (60 employees) and as a community voting space. The other multi-purpose space, the second-level conference room, was for DPW administration and municipal services use on a daily basis, as well as a training room for Town groups, a nighttime meeting room for Town committees and as an Emergency Operations Center.

The second floor of the proposed facility is dedicated to the DPW administration, engineering and the municipal facilities department. These are not currently housed at the 201 Bedford Street. It has been determined that bringing these departments to the new facility would serve a number of purposes. The first purpose is an increased efficiency between the DPW administration and the operations. Putting them together provides better communications, oversight and management. Engineering works closely with the DPW in its everyday operations and would benefit from being housed in the same facility. The projected-to-be, newly formed, Joint Facilities Department shares many of the same shop and storage requirements that the DPW has and co-locating them eliminates duplication of these needs somewhere else in town. These divisions located at the

Bedford Street site will consolidate the entities for a more efficient Town operation. In addition, much needed space will become available at Town Hall to address undersized divisions at several Town departments and inadequate meeting areas. Parking, which is in issue in the center of Town, will be less taxed as these departments are freed from Town Hall. All of these programmed spaces have been reconfirmed during this process and will remain at this location.

In the original design, the accommodation of spaces sized to meet the voting needs of precinct 8 and the need for a training/public meeting/emergency operations space in town were met by adding some space to existing program elements. With the addition of 300 square feet to the lunchroom, an adequately sizes voting area was created. The Fire Station, currently utilized for voting, would be free to continue their normal operations. The meeting room on the second level was organized to be available off hours and includes storage for emergency operations supplies, a kitchenette (lunch area for staff *otherwise*) and public bathrooms mentioned above. Training for Town staff from various departments would take place here, freeing up valuable space elsewhere in Town and saving travel time. During this current phase, it was decided to not include the additional 300 square feet of space on the two levels to accommodate these added functions. However, the design will allow a smaller version of the emergency operations space to function adequately and a way to accommodate voting by using the main lobby space as the location where voters check in and out is being reviewed.

Room data sheets describing the functions of all programmed spaces are available for review.

Q. Reconfirm basic programming decisions. Do any spaces exceed true need? Does design of maintenance bays exceed true need; could work be outsourced?

All programmed spaces were reviewed with the DPW administration and operations to confirm need and to assess impact on project if a space were downsized, partly outsourced or eliminated. Areas included every major portion of the building: administration, central stores, maintenance, vehicle staging, wash bay, cold storage and site. It quickly became clear that there was no one area that could be eliminated in its entirety, that careful programming had been done and the resulting building reflected the Town needs. A second approach was considered, tightening each and every space to see what could be achieved. No space was considered untouchable.

In the administration building we downsized the locker sizes, used space underneath the egress stairs, eliminated the 300 square feet added to accommodate voting and reorganized the entry sequence.

In central stores, the overall footprint was reduced and separate rooms to accommodate divisions within the operations department were eliminated as well as the Town Network closet.

In the maintenance area, 10 feet of depth was eliminated that had been planned to allow the division to stack trucks that were being serviced. Other options were considered including reducing the bays by one, but that idea affected the working of the division negatively and was not included.

The vehicle staging area was considered in its entirety. Future growth spaces were eliminated, some trucks were relocated and the space was reconfigured to eliminate some traffic aisles.

The wash bay was repositioned and essentially stayed the same in size.

Cold storage was relocated from its former location to eliminate the need for retaining walls. In addition a covered outdoor cold storage area adjacent to the building was eliminated.

The site organization stayed essentially the same although as the building was reworked the footprint was reduced and the building was shifted on the site to improve the entry sequence and reduce the paved area closest to the wetlands.

Through these changes the building was reduced in size by approximately 13,825 gross square feet. The current reduced program is available for review.

Q. Is the vehicle staging appropriately sized for its intended use? What are the pros/cons of storing vehicles indoors versus outdoors? Are there other vehicle storage options and how do they compare? What building price per SF is break/even for heated space and vehicle life? Is storing vehicles in a heated garaging bad for vehicle life?

Indoor storage is the preferred and standard practice for housing valuable investments of vehicles and equipment and currently exists on site. The vehicle staging element of the facility houses the vehicles and equipment that the DPW uses on a daily basis and in addition some cleaning, minor maintenance and equipment attachment will be performed in this area. Stacking of vehicles, which is currently employed, is an inefficient way to operate. The goal is to provide a space which increases life span of the vehicles and decreases maintenance costs. The space requires a clear interior height and it is preferable not to have columns within the space.

Other options are available such as a roofed structure that is either left open to all elements or is partially enclosed but not heated. These options will offer some protection under some inclement weather conditions but are not optimal. In addition, noise generated by engines, light spillage, diesel exhaust, hydraulic leaks and spills and other community and sustainable design issues will be difficult or at best a significant challenge to address.

A cost-benefit analysis has been prepared that outlines the pros/cons of storing the vehicles as currently designed.

Q. Describe the vehicle washing capability as included in the design. Provide a cost breakout.

The wash bay is an integral part of a DPW facility. By very nature of the work, department trucks and equipment are in constant need of washing to remove dirt, salt, sand and other accumulated grime. Ideally, this process, for the vehicle fleet of this size, would include a touchless based wash system to save time and operating costs. It takes approximately an hour to wash a vehicle by hand versus a few minutes using a system such as is proposed. During a storm event, when all the vehicles are in need of washing, it may take several days to wash all the vehicles. Also, this system allows for regular cleaning of the underside of the vehicle which just is not done by hand. The building as designed accommodates that function plus catwalks and hand held sprays to clean non-standard vehicles or to reach hard to access areas. The proposed system includes a water reclamation system which recycles a majority of the water used.

The approximate base cost of the building for this system is $609,000 and the equipment is $151,000.

Q. Is the salt and sand operations appropriately sized and equipped for its intended use?

The size and layout of the building was in response to its emergency use and impact on the surrounding community. The necessity for its 24/7 availability led to a design that minimized noise and light from the building and the vehicles queued while in the worst condition: full night-time operations. While there is little one can do to reduce the effect on the neighbors from overall activity on this site, the noise associated with the current process of delivering the salt/sand to

trucks can be reduced by incorporating a drive-thru bay that keeps the loading vehicle primarily indoors and queuing the receiving trucks in a manner that strives to eliminate the backup beeping required on these vehicles. Light spill will be kept to a minimum and work is oriented away from the nearby houses.

The size of the sand and salt shed has a direct correlation to the amount of the storage needed during the winter season. The proposed shed accommodates the needs of the Town based on needed storage and takes into account regularly deliveries of salt and sand.

No additional costs are associated with this layout but we continue to look for other ways to reduce the costs of this structure.

Q. Energy Model: Prepare document, describe options, assumed energy costs, recommendations, sensitivity of assumptions. Model should utilize cost of money = to rate presented at Town meeting—4.5%. Address hard costs versus future operating costs.

Early on in the project the design team investigated many options regarding the building systems. These investigations ranged from utilizing renewable resources to offset operating costs, to increasing daylighting to lower lighting costs.

The design team made an aggressive effort to use sustainable and renewable technologies in hopes of reducing operating costs and lessening the impact on the environment. Members of the design team met with Jim Christo, Program Director, Green Buildings and Infrastructure from the Massachusetts Technology Collaborative (MTC) to discuss renewable energies and the potential for grants supplied through MTC. The review considered wind power, which was quickly eliminated, after reviewing the area wind chart and finding that there is not enough wind in the area to produce enough energy to make a wind turbine a viable option. We discussed fuel-cell technology which we considered would also not be viable due to the first costs and the additional maintenance costs. The team also reviewed photovoltaic technologies for the facility, and were keen on the technology due to the large expanses of southern exposure and flat roof. To make the technology work a grant would be needed to offset the huge first costs. The MTC offers grants to specific projects, these grants are based on a number of items, including need, public help, and marketability. The MTC likes to provide grants to new and varying technologies. It stated that though photovoltaic technology is a renewable energy the MTC would prefer to offer grants to newer technologies. We could still look at this technology and the possible grant money, but at this time it is only for a demonstration area for the community and the not the facility as a whole. Co-generation was studied as a method to make our electricity on site using natural gas, but the savings is in using the heat generated by this process, and having the system continuously working. We determined that due to the majority of the operations happening during the day that the heating load generated could not be adequately used. This option was not deemed viable.

Three energy models have been completed and each has examined the base assumptions and compared them to other systems. The latest model was recently completed following a meeting with the Energy Conservation Committee, PBC, BoS, and the project mechanical, electrical and plumbing engineers and the architect in which all systems and building construction methods were described in detail and the benefits of each were discussed. The results of that meeting, including systems and wall construction, centering primarily on insulation systems were included in the final design. The engineers have determined the best course for design of the project considering first costs, energy consumption, maintenance and ease of operation.

Q. With the potential consolidation of the town and schools maintenance departments, how will the Town of Lexington plan on availing itself of the necessary services to make the newer more sophisticated systems run at their intended efficiency levels?

The Town acknowledges and understands the need for training of individuals to maintain and operate the MEPFP systems designed into town buildings. The Town recognizes training as a significant issue and has hired a Commissioning firm during the design phase to operate independently from the project design team to make sure that the proposed systems meet the goals of the Town and will serve the town well after construction has been completed. Adequate training will be available to all maintenance employees who are responsible for making systems run smoothly and efficiently.

Q. What is the LEED goal for this project, and what is the cost associated with this goal? Is attaining LEED Silver enough, should we be striving for LEED Gold?

The Town has set a sustainable design policy for all new capital projects within the Town. This policy dictates that all new capital projects conform to LEED Silver standards. Through this study process the design team has incorporated these sustainable design principals into the design of the facility. The design team has used LEED-certified professionals in many areas of the project including architecture, landscape architecture, civil engineering and mechanical, electrical, and plumbing engineering and are focused on reaching a LEED silver rating.

The current design has a number of elements that reflect our sustainable goals. The layout of the 9.6-acre site helps us use the path of the sun in our design. The current design orients the maintenance bays and lunchroom to optimize southern exposure and faces the active work areas away from many of the neighbors. By placing these elements on the southern façade we use passive solar in heating the spaces and equipment. This orientation also allows us to bring in large quantities of natural light into these spaces and will reduce lighting costs and increase employee production.The current design has less of an impact on the site then the current facility. We are reducing the amount of impervious surface on the site by up to twenty percent. We are creating a buffer along the northern portion of the site and placing the building and drive outside of the 50-foot Riverfront Protection setback, where currently there is paving, metal storage units and equipment. Lighting will have full cutoffs to limit light spill off site.

Another way we reduce the impact of the new facility on the site is by storm water management. The current design treats the storm water from the site before it goes into the North Lexington Brook. The design is for the “first flush”, or the storm water from the first hours of a storm, which tends to be the dirtiest of the water, to be treated through the use of bio-retention areas and constructed wetlands. Plantings will not require irrigation and most plantings will be native species.

Materials selected will include low emitting materials for adhesives, sealants, paints, coatings, carpet systems and composite wood and agrifiber products. Lighting and thermal comfort will be controllable and daylight and views will be available to the majority of the employees for improved indoor environmental quality.

We will continue to pursue additional ideas related to sustainable design if they prove worthwhile including educational area which demonstrates the sustainable aspects of the facility, and photovoltaic cells which could supplement the electrical load for the project.

The project has not been planned as a project that could receive a LEED gold rating.

Q. How does the building materials selected respond to the building's use? How does the proposed facility affect its neighbors? What is the benefit of the proposed design as it pertains to noise and stray light on nearby residents?

The design team used the site and the needs of the DPW to create a facility that maximizes the operation efficiencies and the aesthetics of that functionality. Due to the proportions of the facility it was determined to use the horizontal nature of the buildings by drawing on them not as a problem, but as an asset. The building emphasizes that horizontality by breaking the elevations into three major components. The first component is the base, which has been designed to be pre-cast concrete. This base protects the building from the everyday functions of a DPW. The second element is corrugated metal panel, placed to re-enforce the horizontal aspects of the building. We used this material for its inexpensive costs and durable nature. The last component is a clerestory which helps to bring daylighting light into the spaces. This clerestory is made of polycarbonate which has a higher insulating value then glass and is less expensive. We have spent consider time and effort creating a public façade along Bedford Street that reflects the nature of the building and yet still conveys the aesthetic of a public building. At this portion of the facility we utilize the same materials but use windows with glass instead of the polycarbonate glazing. The overall image will be of a facility of similar materials and proportions and the image will not be limited to what is seen from Bedford Street, but what is seen by the neighbors and by the many users of the bike path.

The building layout with minimal overhead doors for vehicles and with most of the active work zones facing away from the neighbors or oriented to minimize queuing noises from the vehicles, an enhanced green zone off of Bedford Street, plus planting positioned to screen parking and the fuel island and full cut off lighting to be used only as needed will improve the relationship of this Town building to its neighbors. The view from the bike path will no longer be one of old trailers overflowing with equipment and the site filled with off season equipment and piles of pipes and fittings but an enclosed and organized site with space to house vehicles, equipment and activities.

Q. Describe the Community Benefits and their associated costs. Address elements of the project that are neighborhood responsive.

The Community concerns are straight forward and reasonable. Being a direct neighbor to any public building, in which off-hours operation is a given, requires a level of understanding of what happens at these facilities and patience and understanding by those neighbors. Existing conditions at this site have been well documented and the response to those concerns is measured, reasonable and easily attained. The selection of full-cutoff lighting for site pole lighting fixtures will reduce light spill; limiting lighting in the back section of the site to building-mounted fixtures that operate on an as needed basis only will limit spill. Locating the fuel island behind the security gate eliminates lighting that would have been necessary if the island were located in a more remote location. Additional planting along the bike path will screen this area as well. The design of the vehicle staging area, with limited entries in and out on the east and west elevations will greatly improve site circulation allowing vehicles to move efficiently within the building. Noise will be contained in the vehicle structure and in the layout of the sand and salt sheds. The green area, brook protection area, and wetlands will be restored in some measure. The bike path will be improved with access to parking and educational information. The image will be cohesive and orderly.

Q. How will the DPW operate during the construction process?

In the current cost estimate a sum of $200,000 has been allotted for operational expenses, including rent, during the 18 months of construction. Though the final details and approvals need to be made the current plan is to utilize Minuteman Regional High School for the center of operations.

The possible uses at Minuteman Regional High School:

- The use of 2 or more mechanical bays so we will be able to maintain our fleet and when needed some welding i.e.. snow plow blades.
- The use of the rear parking lot as the DPW operations during the transition. The area is large enough to have the majority of DPW located in this area. Highway, Public Grounds, Water/Sewer and the operation staff will be located here. We are looking to house the staff in construction trailers and are also looking into renting some type of heated vehicle storage covering. Some inventory may also be stored in this area.

Remaining transition plan is as follows:

- The Forestry Division will be relocated to the Cemetery Building.
- The seasonal storage shed will be re-located to the Compost Facility
- The Storage Trailers will be re-located to the Compost Facility
- We are discussing the possibility of sharing the sand and salt site with Mass Highway at the Forbes Road
- We are looking into using the former Animal Shelter for storage and possible office space

Process

Program and Design

The initial stages focused on identifying major program elements and accumulating the information required to create the program specific to this facility. During this process HKT Architects and the DPW design expert interviewed DPW supervisors, foremen, administrators and staff, followed by staff from Town Hall, Community Development, Engineering, Transportation, Planning, Police and School Facilities. From these meetings room data sheets, which outline each programmed room and describes the requirements of these spaces including furniture, finishes and mechanical and electrical requirements, and a program spreadsheet were created, reviewed by the end user, the DPW administration, Selectmen and the PBC,, edited and then approved as the planning document for the design work that was to follow.

After the programming was complete, the project team conducted a design session that included architects, civil/site engineers, landscape architects and a DPW programmer. The project team familiarized itself with the available documentation of the building, the proposed program of the facility and laid out goals for the project. During this initial meeting the members worked as a team realizing the strengths of all participants in their areas of expertise. In this design charrette the members developed site and space diagrams which clarified which pieces of the program needed to be adjacent to each other in order for the occupants of the building to work most efficiently, and addressed how to physically locate each function to achieve optimal operational productivity , The group discussed the 9.6 acre site and building options generated, analyzing the merits of each one. This initial meeting was used as the springboard for the initial layout and design for the facility.

The preliminary phase centered on the site and the concerns of circulation, building placement, sustainable design opportunities and how the facility addressed the surrounding context. The floor plans developed simultaneously with the site plan with each helping to inform the other. As the team moved into schematic design, the forms and elevation of the facility were studied using design sketches, scaled models, precedent studies and analysis. An initial estimate of building construction costs along with soft costs (including such items as fees, testing, permitting, printing and surveys) was developed at this time. Using the agreed-upon site and building layout the team moved into design development, in which multiple design schemes were developed and evaluated as to how well they met the established criteria. This process of review generated the resulting design, which reflects a functional facility that is respectful of the surrounding context and conveys the utilitarian nature of facility through an architectural language.

Review and Confirm

Following the presentation to Town Meeting in December, 2006, the team moved into a new phase of review and confirmation to assess the project as presented to make sure each questions or concern generated either at that Town Meeting or subsequently during the formal question period would be addressed to the satisfaction of the group. The smaller group representing the BoS, DPW, Town Management, CEC, AC , DAC and ECC, met at least weekly throughout an 8 week period to review the data generated, including room data sheets, programming documents, adjacency diagrams that showed how the building was organized to maximize efficiency and all of the design options presented, to understand how the program got to be the size it is, how the plan was developed, how it met the goals established early on, and what elements had been considered and either dismissed or incorporated.

The design team, working with the end users, looked at ways of tightening up the plan in a manner that might reduce square footages, reduce volumes, or reorganize the site to minimize more complicated site development. In some cases, those suggestions resulted in a plan that still met the needs of the DPW and Town, although compromises were clearly made. Some ideas generated were deemed unacceptable as they changed the stated objectives and compromised the efficiency of the building. In total, approximately 13,825 gross square feet of space was cut from the building and outside storage facility, the building was lowered to reduce the volume, alternative mechanical, plumbing and mechanical systems were considered, and the building was shifted on the site to increase the green space on Bedford Street and decrease site disturbance at the back of the property. In addition, energy modeling to estimate operating costs based on selected systems, equipment and building construction details was performed by an independent firm hired to do preliminary and enhanced commissioning services. The results of those reports helped fine tune decisions made by the team as we moved through the document process.

The revised plan, as presented to the BoS on February 12, 2007, was the result of that entire team working toward this common goal. Each end user signed off on the final agreed upon floor plans and those plans, elevations and site plans were the documents that the design team used to generate the 50% construction documents, including drawings and specifications that have been estimated.

Assessment and Evaluation of Existing Conditions

The facility borders the Minuteman Bike path and North Lexington Brook to the north, where a residential neighborhood is also located. The eastern portion of the site borders Conservation Land along with a commercial property. The area along the southern portion of the site also contains commercial properties extending to Bedford Street to the west of the site where a front green buffers the current facility from the road.

The DPW has used the site since approximately 1929 and before that it was used as a maintenance facility and barn for the trolley. The total area of the site is approximately 9.6 acres. Based on the zoning requirements for the site, the front setback is 30 feet along Bedford Street and there is a 20-foot setback along all other property lines. In the northeast corner of the site is an area of wetlands which has additional setback requirements. The North Lexington Brook borders the north of the site and creates further buffers into the site based on the Riverfront Protection Act. Other features on the site include the salt and sand sheds, which occupy approximately 8,000 gross square feet on the site. Housed directly off Bedford Street by the entrance is the fuel island, which is used by all Town vehicles, including the fire and police departments. The existing site contains 103 parking spaces for employees and the public, not including the vehicles stored inside.

The existing facility consists of two distinct buildings. The oldest structure is the vehicle storage garage which is at least as old as 1929. This building once served as the trolley barn with the entrance on the west façade of the building, and now stores all of the DPW's vehicles. The current circulation is along the north side of the site with vehicles stacked behind the overhead doors. The 1966 administration building now occupies the west façade of the building, adjacent to Bedford Street. It serves as the public entrance and the location of the support spaces and offices for the DPW.

The administration building contains approximately 24,400 gross square feet of space; including storage, mezzanine areas, shops, offices, a lunchroom and locker facilities. The exterior of the administration building is brick veneer, while the interior environment consists of acoustical ceiling tiles, carpet, vinyl flooring, and gypsum wallboard. The interior is cramped and inefficient, with inadequate ventilation and natural light. The interior materials are damaged, out-dated and create a poor work environment.

The vehicle garage is a large open wood structure with wood siding on the exterior. The structural integrity of the building is in question, as documented in a 1990 design study. The existing garage is approximately 18,625 gross square feet and is grossly inadequate for the needs of the DPW. They currently park their vehicles by stacking the vehicles one in front of the other. If a need arises and the require vehicle or piece of equipment is located in the back, they must move all the vehicles in front of it. This process reduces an employee's production and increases the time it takes to respond in emergency situations. Both structures are outdated and inadequate for the DPW.

The existing facility has had no major upgrades to it in at least forty years. Due to this, the existing facility fails to meet current Massachusetts State Building Codes, 7th Edition, Massachusetts State MEPFP Codes in many areas which are addressed in the following paragraph. Additionally, the facility is not in compliance with both the Americans with Disabilities Act (ADA) and the Massachusetts Architectural Access Board (MAAB) requirements. The main entrance is inaccessible to handicapped patrons or staff, as there is a change in elevation from grade to vestibule. Most door hardware, plumbing fixtures, restrooms and stairs also do not meet current regulations within the facility. Lighting and mechanical systems are insufficient in the vehicle storage areas and the makeshift offices found throughout the facility.

The facility does not meet the Building Code requirements for egress, as there is only one approved egress from the administration building. The facility also has no approved separation between the vehicle storage area and the administration building. In a general sense, the facility is in a state of disrepair based on the age and function of the facility.

Previous building documentation conducted by the Town has confirmed these findings:

1. Evaluation of Alternative Sites for Department of Public Works Garage Facility, January 2001, Camp, Dresser & McKee, Inc
2. Existing Conditions Report, Department of Public Works, Lexington, Massachusetts. Structural Analysis and Examination of Existing Vehicle Storage and Associated Operations, February 28, 1990, Knight, Bagge & Anderson, Inc
3. Proposal for a New Public Works Facility (prepared by Robert Bowyer, Planning Director) – August 14, 1995
4. Space/Building Needs Assessment Advisory Committee – April 2000

Proposed Facility

Background

The proposed program was based on interviews with all potential staff members during the first phase of the project. This data was verified and documented as room data sheets. These documents outlined the size of each room, adjacencies, furnishings, mechanical/electrical/plumbing (MEP) requirements and intent of each space. DPW and Town staff then reviewed this data and their comments were incorporated into the document. Individual specialized room such as the maintenance department or the central storage areas were laid out to make sure they had enough room to contain equipment and assure safe use by employees. Various options were considered for the organization of the major building components based on these conversations and then critiqued during the review meetings. The final layout of the DPW was determined and can be broken down into six these major components: administration/operations, central storage and shops, vehicle staging, vehicle maintenance, wash bay and site elements such as the salt/sand shed, yard storage and circulation for vehicles.

In summary the new facility will provide space for all of the Operations Divisions currently housed on site plus the DPW administration and engineering, and the newly formed Joint Facilities Department. This will increase the number of total employees from 60 to approximately 87 at the facility. The site will also house the DPW vehicles and supporting equipment, a salt and sand shed, cold storage structures that will contain items that can be stored outside but in a controlled and protected enclosure and all necessary parking for employees and visitors. The Bedford Street frontage will be maintained and enhanced as a public green space and will include several public amenities such as parking for the bike path, benches, a water fountain, and a demonstration rain garden (part of the overall water management design).

The reorganized site and building will also take advantage of natural site elements such as solar orientation or the use of the hill to screen site activities, will specify light fixtures that cut off light spill, and trees and plantings that require no irrigation, and will capture water runoff on site in bio-retention basins, constructed wetlands or into tanks for reuse in the wash bay or street sweepers. Indoors, insulation values have been specified to exceed MA Building Code requirements in all heated and air conditioned spaces as well as tempered spaces such as the vehicle staging areas, operable windows are available in all major occupied spaces, roofing materials will reduce the heat-island affect, natural daylight is maximized in all occupied spaces to minimize the use of lighting, sensors will shut off lights if rooms that are not in use and mechanical and ventilation equipment will be set on timers so for instance when trucks are off site mechanical systems will not run unless mechanically triggered by an alarm. Care has also been taken, if at all possible, to specify materials that come from renewable resources or from local manufacturers so as to minimize the impact on our environment.