Dartmouth Fire District No. 1

10 Bridge Street
Dartmouth, MA. 02748

Station Assessment

WILLIAM STARCK
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WSA Project #18-050
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WSA

WILLIAM STARCK ARCHITECTS, INC.

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SECTION 1

OBJECTIVES/TASKS

The purpose of this assessment was to review and document the observed conditions of the existing Fire District No. 1 station located at 10 Bridge Street, Dartmouth, MA 02748 in respect to the following items:

1. Existing Building Structure
2. Potential of the existing structure to support a 2nd level expansion
3. Accessibility (AAB)
4. Potential for further expansion/development on the existing site outside the current building footprint
5. Recommendations on shower, bathroom and kitchen upgrades
6. Review the existing on site fuel storage (Gas and Diesel) in respect to location and need while considering potential relocation elsewhere on site or removal from the site.

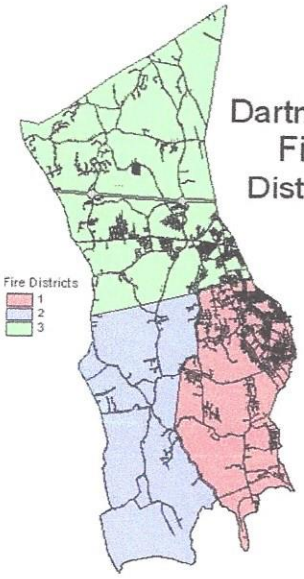
This assessment was meant to serve as a visual evaluation of the Fire District No. 1 Station as limited to the above listed items which focused on the new construction limitations with respect to Zoning requirements and the structural integrity of the existing single story auxiliary building to support a vertical addition. During initial conversations with the town of Dartmouth, the following questions arose:

- What are the limitations for further development of the Fire District No. 1 Fire Station?
- What agencies would need to be included in the discussions regarding future development?
- Could future expansion extend beyond the existing building footprint? If so, where?
- What is the feasibility of constructing a second floor level over the existing single story auxiliary building?
- What recommendations are there for potential upgrades to the existing kitchen, while maintaining the same footprint?
- Are there any recommendations for upgrading the bathrooms, including showers and code compliant accessibility upgrades?
- Does the existing building and site comply with Accessibility requirements (parking areas, building entrances and interior spaces such as meeting areas, office spaces, the kitchen and restrooms)?

As we attempted to answer these questions, it became apparent that considering some of the difficulties and costs associated with the construction of any future projects, a full Zoning and Feasibility Study should be performed. Though this study does contain information beyond the listed tasks, the full Zoning and Feasibility Study should take the information contained within this assessment and evaluate the station as a whole, with the end goal of creating a list of deficiencies, evaluating the technological needs for today's fire stations and exploring potential layouts that would satisfy the Town's future needs.

SECTION 2
HISTORY

Founded in 1664, the Town of Dartmouth encompasses a total area approximately 97.5 square miles and as of the 2010 Census is home to just over 34,000 residents. The Town is currently served by three local fire districts:



- Fire District #1 – All area South of Allen Street and East of Tucker Road and the Russels Mills Road/ Horseneck Road intersection
- Fire District #2 - All area south of the continued westerly projection of Allen Street and West of Tucker Road and the Russels Mills Road/ Horseneck Road intersection
- Fire District #3 – All areas North of Allen Street and its continued westerly projection.

Research on the Fire Districts uncovered some conflicting information related to the history and formation of the various Dartmouth Fire Districts. However during our research, WSA uncovered a video interview by the Dartmouth Wanderers. This interview contained first-hand accounts from prior fire chiefs from each District related to the history of the Dartmouth Fire Districts. Some of the information in this section was taken from this interview.

The first organized system of Fire Prevention was formed in 1912 and known as the Fire Protective Association. The association's primary purpose was to create and maintain a place for social meetings and to house the Company's fire engine and equipment. In 1917, the association formerly established the first fire district. Dartmouth's fire districts are autonomous units made up of a call Fire Service. The districts serve the Town but are an entirely separate entity from the Town. Each district is governed by an elected Prudential Committee, Fire Board of Engineers and Clerk. The Prudential Committee appoint the Fire Chief and both oversee day to day operations of the department. Annual meetings allow voters to approve items related to general policy, budget, and capital planning. The district is financed by Fire tax which is levied at Fire District meetings.

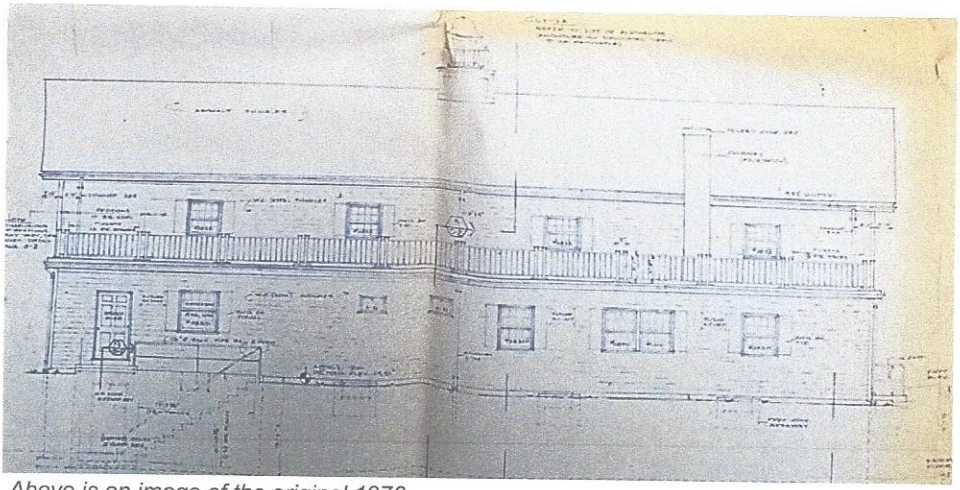
The first fire station, a two level two door structure, was constructed in 1913 and was located diagonally across from the Fire District No. 1 station. As is the case with the current station, the original structure was also used as a meeting hall.

A photograph of Fire District No. 1
(Date unknown)

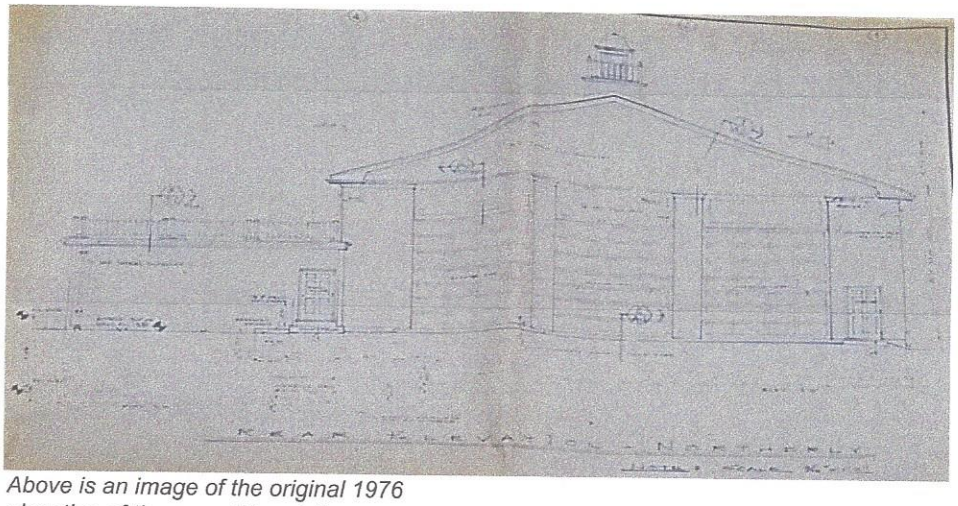
Dartmouth's Fire District No.1 Fire Station, located on 10 Bridge Street in South Dartmouth, MA, was originally constructed in 1976 and is currently composed of two connected but structurally independent building components and a small attached unfinished storage shed.

Plans for the current Fire District No. 1 station were developed and approved in 1976 and since its original date of construction, the building has undergone renovation projects in 1995 and 1996. The original design included an Apparatus Room and an attached Administrative wing. The Apparatus Room is a masonry clad pre-engineered steel framed 55ft by 80ft by 29 ft tall slab on grade building that

featured 3 apparatus bays with doors on the front and rear of the building. To the northeast of the Apparatus Room is the Administrative wing; an attached single level 25ft by 80ft low steel and wood framed structure. This area of the building was designed to house the Main Office, Radio Room, Drill Room, a full kitchen and restrooms. This wing of the building features a full basement, which was designed as a basement storage area along with mechanical room and equipment area. Today, the building is still used as a meeting and election space for the District.



Above is an image of the original 1976 elevation from Cleveland Street side of the station



Above is an image of the original 1976 elevation of the rear of the station

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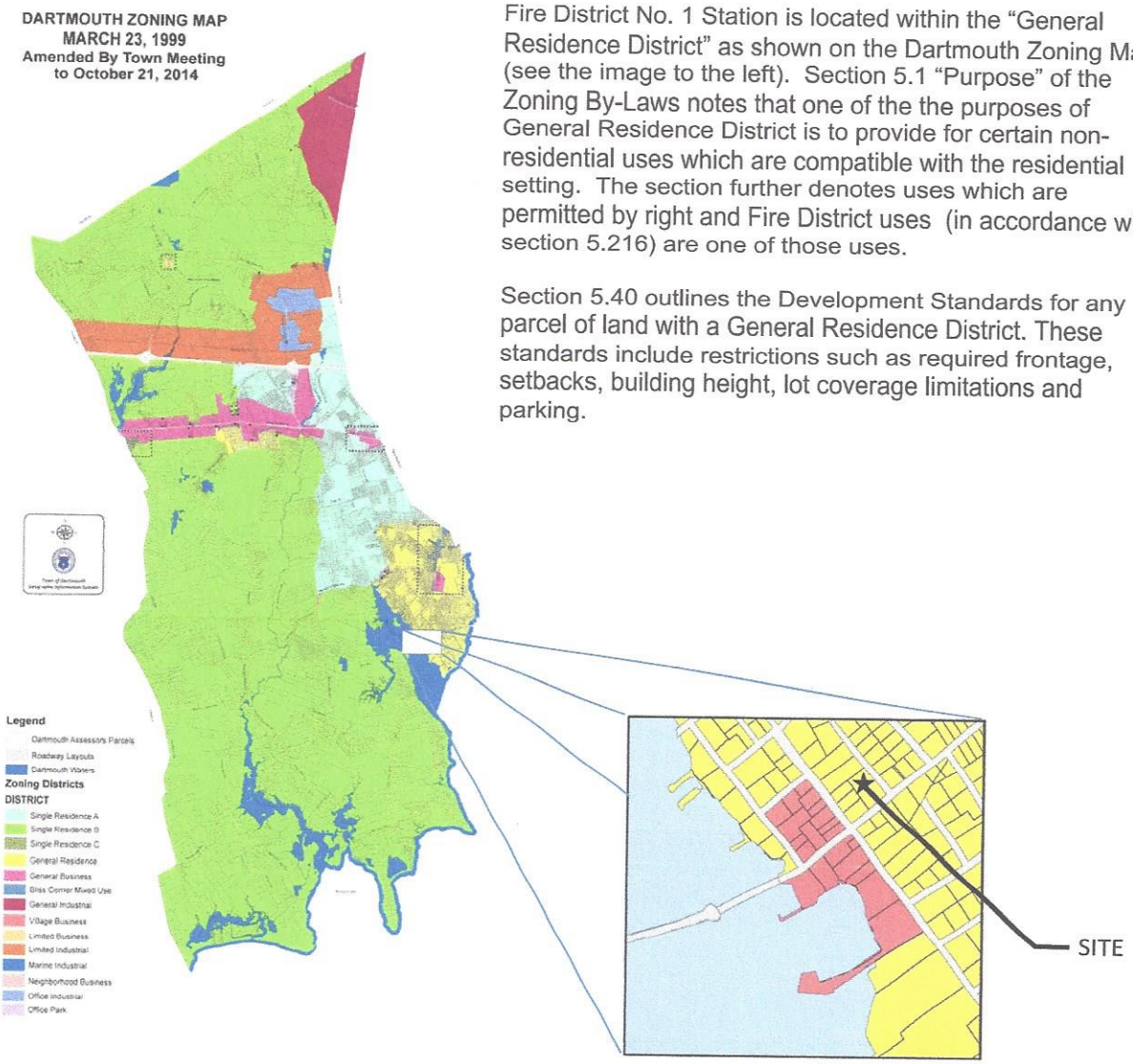
SECTION 3

ZONING RESEARCH & FINDINGS

During initial conversations with the Town of Dartmouth, questions arose as to what the potential limitations for further development of the Fire Station in respect to a future expansion beyond the existing building footprint.

The following is a brief synopsis on the Zoning By-Laws sections that are applicable to the land parcel (Fire District No. 1 Station) and will need to be considered during any design process.

Town of Dartmouth, MA Zoning By-Laws:



Fire District No. 1 Station is located within the "General Residence District" as shown on the Dartmouth Zoning Map (see the image to the left). Section 5.1 "Purpose" of the Zoning By-Laws notes that one of the the purposes of General Residence District is to provide for certain non-residential uses which are compatible with the residential setting. The section further denotes uses which are permitted by right and Fire District uses (in accordance with section 5.216) are one of those uses.

Section 5.40 outlines the Development Standards for any parcel of land with a General Residence District. These standards include restrictions such as required frontage, setbacks, building height, lot coverage limitations and parking.

The following is a summary of the limitations to a "General Residence District" zoned parcel:

Lot Area, Section 5.401

Minimum lot area is 15,000 SF for all uses and 20,000 SF for two family uses.
The existing 0.59 acre lot exceeds the minimum lot area requirements.

Lot Shape, Section 5.402

Lots shall not have a constriction in the area connecting legal frontage to the building site less than fifty (50) feet wide except that estate lots shall have a constriction not less than thirty (30) feet.
The existing lot meets the minimum lot shape requirements

Frontage, Section 5.403

The minimum frontage for all uses shall be 100 feet except that two-family residences shall have a minimum frontage of at least 150 feet.
The existing lot meets the minimum frontage requirements

Setbacks, Section 5.404

Minimum Setback Dimensions: The minimum setbacks are as follows:

- A twenty foot minimum setback from street, r-o-w lines or vehicular easement lines
- A twenty foot minimum setback from all other perimeter property lines

The existing lot and building configurations meets the minimum lot setback requirements. *Future development is possible at both the front and rear of the building however attention at the front of the lot needs to be given so as not to interfere with the Intersection Sight Triangle Setback.*

Intersection Sight Triangle Setback:

At the intersection of streets, the corner lot shall not have any visual barrier placed in the triangle formed by a line connecting the two points 25 feet back from the intersection of the two street r-o-w lines and the lines of the r-o-w to the corner of the property.

The existing lot and building configurations meets the minimum lot intersection sight triangle setback requirements. **Future development is possible at the front of the building without encroaching upon the Intersection Sight Triangle Setback.**

Exemptions from Setback Requirements: Not Applicable due to current conformance

Height, Section 5.405

The maximum height of all buildings or freestanding structures shall be 35 feet.
The existing structure does not exceed 35 feet.

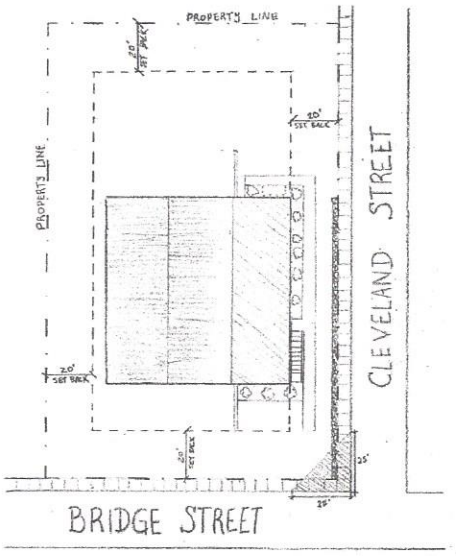
Percentage of Lot Coverage, Section 5.406

All uses on a lot (including but not limited to: buildings, structures, driveways, parking areas, gravel areas, walks, patios, storage areas, impermeable surfaces, etc.) shall not cover more than

50% of the lot. Natural areas such as landscaping, gardens, lawns, etc. are not regulated within the 50% requirement.
The existing lot is +/- 97% paved/improved upon and does not comply with this section of the Zoning By-Laws. Any further development will require a variance from Section 5.406 of the zoning bylaws.

Parking and Driveways, Section 5.407

The number of Required Off-Street Parking Spaces for Fire District Uses is 1 space per employee (to be based on the maximum number of employees per shift).
There are currently 14 standard parking spaces on site and one designated Accessible parking space. The designated accessible parking space is located partially in front of an apparatus bay door and is not being considered an actual parking space by WSA. WSA is unaware of the maximum number of employees per shift, however it is assumed that number does not exceed 14.

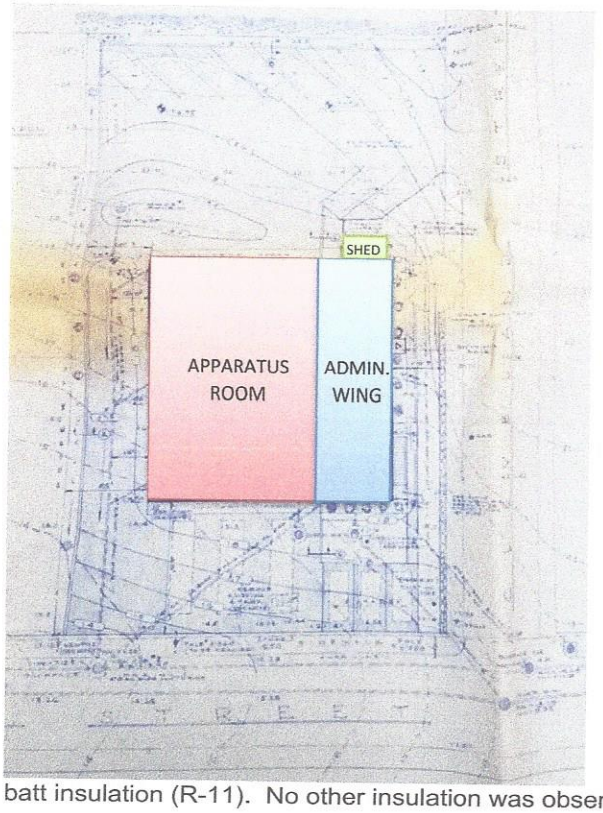


SECTION 4

REVIEW OF EXISTING BUILDING & STRUCTURE

In addition to reviewing the potential expansion of the Fire Station beyond the buildings footprint, one of the tasks associated with this study was to also explore the feasibility of constructing a second floor level over the existing single story Administrative wing.

The Apparatus Room (shown in the image below as the red shaded area) consists of an open +/- 4,400 sq. ft. single level space that, as previously noted, is a pre-engineered metal building with masonry exterior walls. The adjacently attached Administrative Wing (shown below as the blue shaded area) consists of a main ground floor level and a full basement, both totaling approximately 4,000 sq. ft. This area of the building currently houses the administrative, training and residential sleeping quarters of the station. Its main structure is composed of steel beams and columns on a concrete foundation with a wood framed floor, exterior wood stud walls and a low slope membrane wood framed roof. The rear attached shed (shown as the green shaded area) is of wood frame construction and is an unfinished space. Adjacent to the existing shed there is currently an existing fuel pump with two underground fuel storage tanks.



A visual examination of the existing building and its structural elements led to the determination that the main structure of the building as a whole appears to be in good condition with the exception of the existing Drill Room Floor in the "Drill Room". The floor showed signs of excessive bounce, suggesting that some delamination from the subfloor may have taken place which, coupled by the lack of blocking between floor joists, could be allowing for the bounce felt in the floor. From an insulation perspective, some of the existing roof fiberglass batt insulation (R-19) in the Administrative & Residential building seems to have fallen down from between the roof joists or is missing, and the existing 2x4 wood stud exterior walls contain 3 1/2" fiberglass batt insulation (R-11). No other insulation was observed or visible from the surveyed accessible areas.

Further investigation uncovered some existing conditions that should be considered when contemplating any improvements to the property. The basement was originally designed to serve as the home for the buildings mechanical, electrical and plumbing systems however the basement is currently being utilized as sleeping quarters and to house the facilities IT/network servers. The current living and sleeping quarters do not possess any natural light or ventilation and the existing ceiling height is below 7'-0". These sleeping quarters are supported by a single bathroom and, due to the height of the sanitary discharge elevation above the basement slab, waste must be pumped up and outside of the building into the town sewer line. Directly adjacent to the sleeping area is the main mechanical room. This mechanical room contains the buildings electric panels, hot water tank, boiler and sump pump. In addition to this equipment, there is an emergency generator located within the mechanical room which also has a fresh air duct. The fresh air duct leads to outside and provides fresh air to the mechanical room, however once

outside, it is located only a few feet above grade at the rear of the building, directly adjacent to an existing parking space. Lastly, the IT/Server room is located in the basement directly below an extensive array of plumbing piping. Considering the highly sensitive nature of this equipment, it is not ideal to have a network of plumbing lines directly above or adjacent to the IT equipment.

SECTION 5

REVIEW OF EXISTING ACCESSIBILITY DEFICIENCIES & POSSIBLE RESOLUTIONS

The accessibility assessment survey determined the following non-compliant accessibility conditions according to the Massachusetts 521 CMR Architectural Access Board. The following are guidelines that will be used to evaluate the level of required compliance for the building if a new addition or renovation project is undertaken at the station:

PER MASSACHUSETTS 521CMR:

3.3.1 If the work being performed amounts to less than 30% of the *full and fair cash value* of the *building* and

a. if the work costs less than $100,000, then only the work being performed is required to comply with 521 CMR

or

b. if the work costs $100,000 or more, then the work being performed is required to comply with 521 CMR. In addition, an *accessible* public *entrance* and an *accessible* toilet room, telephone, drinking fountain (if toilets, telephones and drinking fountains are provided) shall also be provided in compliance with 521 CMR.

3.3.2 If the work performed, including the exempted work, amounts to 30% or more of the *full and fair cash value* (*see* **521 CMR 5.00**) of the *building* the entire *building* is required to comply with 521 CMR.

Where the cost of constructing an *addition* to a building amounts to 30% or more of the *full and fair cash value* of the existing *building*, both the *addition* and the existing *building* must be fully *accessible*.

The following is a list of deficient conditions and proposed solutions to those conditions observed during the field survey that should be addressed as soon as possible. These conditions are existing accessibility issues; please refer to the above noted excerpt from MASSACHUSETTS 521CMR for applicable and required scope)

Accessible Approach and Entrances:

1. Observed Condition: The main entrance to the building on Bridge Street is non-compliant. The landing outside of the main door exceeds allowable slope and is in excess of 11%. In addition to slope, the landing does not meet the minimum size requirement of 60" x 60". A step of 7 ½" at the door leads into the station. There is no accessible parking on this side of the building. The

access to this door from Cleveland Street includes a stair with a 9" rise and a brick paver walk. (Photos 1-6).

Proposed Solution - The main entrance can be made accessible by modifying the first parking space near the driveway to create a van accessible space. This would require lowering the front of the space significantly to stay within the maximum 2% allowable slope. A switchback ramp would be constructed from the front of the new access aisle toward Cleveland Street and following the existing asphalt walk to the brick paver walkway toward the entrance door. This new ramp would be built up to the level of the threshold of the entrance door. Handrails will be required at this ramp.

2. The entrance at the side/rear on the Cleveland Street side of the building is currently used as the accessible entrance. A ramp leads from the parking lot to a door with a non-compliant threshold. The ramp does not meet requirements for cross slope, distance between handrails, edge protection and handrail extensions. One accessible parking space exists on this side of the building; at 8' wide with a 4' wide access aisle it is not compliant for size and must be van accessible. It is also partially located directly in front of one of the Apparatus support bays overhead doors. The route from this space to the bottom of the ramp has non-compliant changes in level and a cross slope exceeding 11% at its worst point. The path of travel is in disrepair (Photos 7-16).

   Proposed Solution - The entrance at the side/rear of Cleveland Street would require reconstruction of the route from a (new) van accessible parking space to the existing ramp. This ramp will require reconstruction to meet code for width, cross slope and handrails. The door would require a new threshold.

3. All exits with a lighted exit sign also require a tactile sign. (Photos 17-18)

   Proposed Solution - Provide Tactile signage to all exits.

4. Non-compliant entrances must have signage to direct users to the accessible entrance. (Photos 19-20)

   Proposed Solution - Non-compliant entrances should receive signage identifying the location of the accessible entrance.

Access to Services:

5. The existing vehicle bays are used as public assembly areas for meeting and elections. The entrance to the bays (as noted above) is non-compliant for slope and cross slope. Once inside the bays there is no access to the restrooms, the chief's office or the kitchen which is sometimes used by the public. Entrance from the rear of the building does not gain access to this floor level without a 7 ½" step. (Photo 21)

   Proposed Solution - Correction of the main entrance noted in Item 1 and a ramped area leading to the level accessed by the 7 ½" step.

Access to Public Toilet Rooms:

6. Restroom Hallway
   a. The door to the restroom hallway does not meet the minimum opening dimension of 32" clear.

Proposed Solution - Total reconstruction required.

7. Men's Restroom: (Photos 22-27)
   a. The sign is non-compliant.
   b. There isn't sufficient space outside of the room to allow for push space for the door. The hallway would be required to be 48" wide for any push door to be compliant.
   c. The door does not meet the minimum opening dimension of 32" clear.
   d. There isn't sufficient pull space for the door on the inside of the room. The urinal screen narrows the space to 41", 48" is required.
   e. The toilet stall, at 36" wide, does not meet the minimum requirement of 60" wide and does not contain either side or rear grab bars.
   f. The door to the stall has only a 21¾" clear opening.
   g. The toilet paper dispenser is not at the correct height or distance from the toilet.
   h. The walk-in showers have a 7 ½" step for access
   i. The towel bar is mounted too high
   j. There are protruding objects on the wall (shelves).

   Proposed Solution - Total reconstruction required.

8. Unisex Restroom: (Photos 28-30)

   a. The sign is mounted at the wrong height.
   b. The accessible restroom sign is mounted on the door to a non-accessible restroom.
   c. The door has a door knob instead of a handle.
   d. There isn't sufficient space outside of the room to allow for push space for the door. The hallway would be required to be 48" wide for any push door to be compliant.
   e. The door does not meet the minimum opening dimension of 32" clear.
   f. The toilet stall, at 36" wide, does not meet the minimum requirement of 60" wide and does not contain either side or rear grab bars.
   g. The door to the stall has only a 21¾" clear opening.
   h. The toilet paper dispenser is not at the correct height or distance from the toilet.
   i. A space heater and permanent build-out infringe on the required clear floor space for the toilet.

   Proposed Solution - Total reconstruction required.

<u>Access to other items:</u> (Photos 31-39)

9. There is insufficient push space at the door at the front of the building

   Proposed Solution – Reverse the swing of the door.

10. The telephone in the day room is mounted too high

    Proposed Solution - Remount the telephone to a height not to exceed 48".

11. There are protruding objects in the day room (air conditioners)

    Proposed Solution - Install guards below protruding objects to decrease protruding part to less than 4".

12. There are multiple doors with non-compliant thresholds

    Proposed Solution – Install compliant thresholds on existing doors.

13. The refrigerator in the kitchen blocks required clear floor space for the door

    Proposed Solution – Relocate the existing refrigerator out of door clear floor space.

14. Items in the kitchen exceed allowable reach ranges

    Proposed Solution - The kitchen will only need to be modified further if it is to be considered public space or if an employee who used the space requires it to become compliant.

15. The required space between island and counters does not exist

    Proposed Solution - The kitchen will only need to be modified further if it is to be considered public space or if an employee who used the space requires it to become compliant.

Images of Deficient Conditions:

DARTMOUTH FIRE - 01

DARTMOUTH FIRE - 02

DARTMOUTH FIRE – 03

DARTMOUTH FIRE - 04

DARTMOUTH FIRE - 05

DARTMOUTH FIRE – 06

DARTMOUTH FIRE - 07

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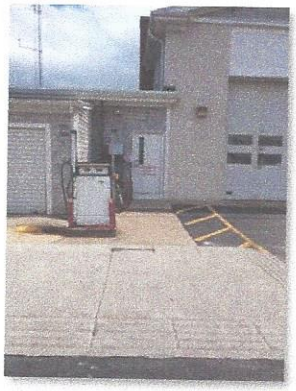
DARTMOUTH FIRE -09

DARTMOUTH FIRE -10

DARTMOUTH FIRE - 11

DARTMOUTH FIRE – 12



DARTMOUTH FIRE - 13

DARTMOUTH FIRE - 14

DARTMOUTH FIRE – 15

DARTMOUTH FIRE - 16

DARTMOUTH FIRE - 17

DARTMOUTH FIRE -18

DARTMOUTH FIRE - 19

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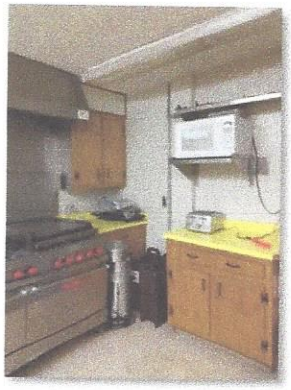
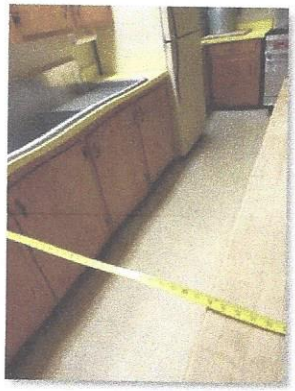
DARTMOUTH FIRE -33

DARTMOUTH FIRE -34



DARTMOUTH FIRE - 35

DARTMOUTH FIRE – 36



DARTMOUTH FIRE - 37

DARTMOUTH FIRE - 38

DARTMOUTH FIRE – 39

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SECTION 6

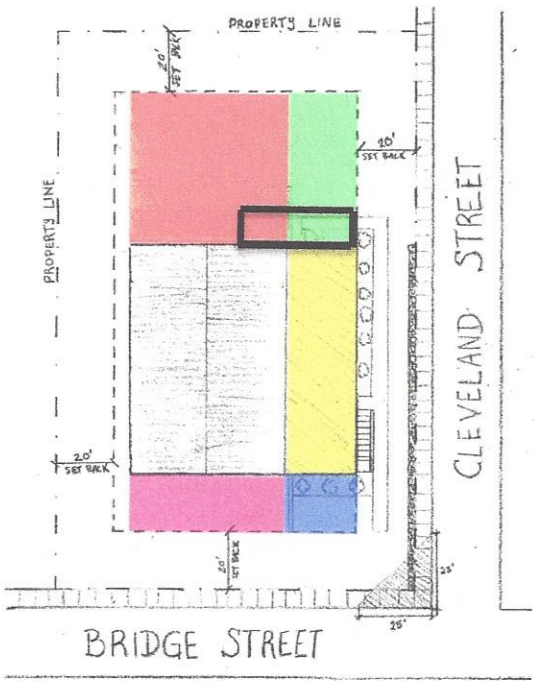
REVIEW OF EXISTING DEFICIENCIES & PROPOSED OPTIONS

While reviewing the site and potential for future development, WSA also reviewed the condition of the existing building and the ability of the existing structure to support a vertical addition. Part of that review process included our incorporating the following factors as part of our evaluations: onsite walkthrough and discussions with the client, observations made during our research & field visits, investigation into code requirements and a review of available original building plans.

Building Code

Building code requires that any addition, vertical or horizontal, will be governed by the 2015 International Existing Building Code (IEBC), 2015 International Building Code (IBC), 2015 International Energy Conservation Code, Massachusetts amendments 780 CMR and Massachusetts Architectural Access Board 521 CMR.

Horizontal Expansion of Vertical Addition



As previously noted, per zoning regulations the existing 25,700 SF lot is allowed a maximum of 50% (12,850 SF) of built upon/paved areas. Currently, almost the entire site is paved/built upon which translates to the existing site not meeting the current zoning requirements. Some form of relief, if not already given, will need to be applied for in respect to any new projects.

Considering the configuration and height of the Apparatus room (overhead doors on the front and rear of the space, pre-engineered metal building and 30 ft tall structure), an addition across the entire front or rear of the Apparatus Room would not be the most ideal solution due to the ramifications to access and the inability of the existing structure to support any additional loads (see magenta and red shaded areas in the image to the left). However, a two story addition (see the outlined rectangular enclosed red and green shaded area in the image to the left) could be constructed at the rear of the Apparatus Room by infilling a single overhead door and building across the rear of the Administrative Wing. This location would eliminate one of the overhead doors however it would allow for a true living quarters area on the second level with additional storage/network area on the 1st level. If 3 rear overhead doors are essential to the operations of the station, an expansion is possible at the front and rear of the Administration wing (see shaded green and blue areas in the image to the left) however any addition located solely across the rear of the Administration Wing is limited by the existing vehicular access point

into the parking lot from Cleveland Street. Therefore, the entire green shaded area would need to be reduced to allow for access or access to the parking lot from Cleveland Street would somehow need to be reconfigured around the addition.

The remaining viable option would be a vertical addition above the existing Administration wing. Existing zoning regulations do not prohibit the construction of a new vertical addition; however regulations do limit the maximum building height of 35ft. This height restriction does not account for any limitations in building height due to additional snow loads the addition may create on the existing Apparatus Room roof, which would need to be considered as part of any new design.

Structural Considerations

There are three types of additions that could be considered: a structurally independent addition, a horizontal structurally connected addition or a vertical addition. In the case of a structurally independent addition, the addition will need to comply with the code for new construction (i.e. IBC 2015 with 780 CMR amendments). In the case of a horizontal structurally connected addition or a vertical addition, the addition will be required to comply with the code for new construction AND any existing structural members whose stress is increased by more than 5% needs to comply with the 2015 International Building Code (IBC).

As noted in the previous section, the existing pre-engineered metal building (Apparatus Room) is not designed to accommodate any sort of addition loading. These structures are typically designed intentionally "thin" as the intentional lack of overdesign results in significantly minimized costs which is what makes these building attractive. The Administrative wing on the other hand is of a completely different construction. The existing perimeter 12 inch concrete foundations are more than capable of withstanding a second floor and roof addition, as are the existing perimeter 4x4x1/4 steel columns as they bear on those foundations. However, the interior 4x4x1/4 steel columns are not as they are only capable of withstanding the load of a second floor. The reason for this is the existing interior columns which carry the loads down an additional level (basement) to existing 54 inch x 54 inch footings. Any proposed solution would require that any proposed roof beams would span the entire width of the addition and ultimately transfer the roof loads down to the top of the foundations. In addition, the existing roof beams are not capable of supporting any uses on the second floor other than sleeping and living quarters. Even if the intended use was for the second floor to house living and sleeping quarters, work would be required to stiffen the existing steel beams and eliminate significant bounce.

Additional Observed Building Deficiencies

Below is a list of other observed deficiencies that any future development/renovation projects should attempt to address. Those deficiencies are as follows:

- There is no entry lobby or a clearly defined entry from a Bridge or Cleveland Street approach.
- Compliance with 521 CMR (A compilation of Architectural Access Board regulations regarding persons with disabilities) is lacking throughout the site and building. A complete overview of observed conditions are noted in Section 5 of this assessment but some specific instances are as follows:
    - The current designated accessible parking space is non-compliant

- The building entrances are non-compliant.
- There is a lack of accessibility to all the different existing building levels. A 7 ½" step separates the two main spaces on the ground level and the living and sleeping quarters in the basement can only be accessed by stairs.
- The current designated accessible restrooms are non-compliant.
- The current kitchen layout and counters including appliances are non-accessible.

- There is a lack of a large enough public gathering space for community activities.
- There appears to be signs of excessive deflection in the existing floor of the "Drill Room".
- The existing emergency generator is located inside the building adjacent to the living and sleeping quarters in the basement.
- The existing living and sleeping quarters are located in the basement which has a clear finish ceiling height of approximately +/- 6'-10" and there is currently no natural lighting or ventilation in that space.
- The existing IT space is located in the basement directly below an extensive plumbing pipe network.
- Existing exterior underground fuel tanks and its environmental impacts.

Accessible Parking

After careful consideration, it is our opinion that the accessible parking spaces should be located in the front of the building (Administration Wing) and back of the possible building addition area.

Review of On-Site Fuel Storage

After reviewing the facility and the use of the basement area, it is our professional opinon that the sound and fumes created by a generator have no place inside of or adjacent to any occupied areas. Considering the available space in the rear parking lot, it is also our professional opinion that the more appropriate location for the generator is somewhere on the exterior of the building. Furthermore, due to the dependability and availability of natural gas to the site, we recommend that a new natural gas generator be considered and installed on site. This would eliminate the need for on-site fuel storage as well as eliminate any potential liabilities that can be associated with ruptured or leaking storage tanks.

SECTION 7

SUMMARY

Since its construction in 1976, it is our understanding that the Fire District 1 station has served the district well. However, with the increased growth in town, new technologies and changes in the workforce, the station in its original design has outlived its life. This is not to say that an entirely new station is required. The existing Apparatus room is still functional and based on the existing equipment; it is adequate in size for vehicle sizes. The primary issues with the station surround the existing Administration wing and the activities that occur within this space. For that reason and others outlined in this study, it was apparent to us that a well thought out plan is necessary for the successful implementation and development of a Fire Station that will adequately serve District No. 1 for the next thirty years. The development of this plan should consider:

- Appropriate locations for emergency generators and appropriateness of onsite fuel storage. With the availability of natural gas to the building there is no need for onsite storage of fuel. In addition, it is our recommendation that the generator should be located outside but adjacent to the building.
- Parking and driveway access in and out of the existing Apparatus Bays and of the current Fire Station facility. Some thought needs to be given as to how the Apparatus Room ideally functions. Are three operable overhead doors required at the front and rear of the Apparatus Room? Can one of the rear doors be in-filled to allow for a new addition at the rear of the building?
- Use of the facility – It is understood that the Apparatus Room is currently used as a large public gathering space for community activities and elections. Will this hold true in the future? If so, attention to ensure AAB compliant facilities (i.e. toilet rooms, eating areas, kitchens, etc.) will need to be part of any future expansion projects.
- Updated and separate individual sleeping quarters and shower facilities. Today's fire station is not the station of yesterday. Today's workforce is comprised of both men and women. Adequate facilities for both, as well as separated sleeping quarters must be reviewed.
- Updated accessible restrooms.
- Location of new technology centers – any new project should review the location of existing technology centers (i.e. IT/Servers) and the impact that a broken plumbing pipe or flood could have on the operational ability of the station.
- Storage needs of the current facility.

It is our opinion that either infilling an Apparatus room door and constructing a two level addition behind the station OR the construction of a second level expansion over the existing Administration wing are the only viable options for improving the existing Fire Station facility conditions and satisfying its current needs. After reviewing similar projects and considering today's construction climate, it is our opinion that the costs of either type of project would be approximately +/- $350 per square foot of affected area. As outlined in the report each option comes with its own set of obstacles, but each is a viable option.