

# LIBERTY STREET BRANCH LIBRARY

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773 Liberty Street  
Springfield, MA 01104

## FACILITIES REPORT 12/2/96

BUILT: 1931  
SQUARE FOOTAGE: 5,066

**CAOLO & BIENIEK  
ASSOCIATES, INC.**  
435 Cottage Street  
Springfield, MA 01104



FIG. 1

**TOWSLEY ASSOCIATES, INC.**  
32 Knollwood Drive  
East Longmeadow, MA 01028

**E. M. SULLIVAN CO., INC.**  
2 Weston Street  
Wilbraham, MA 01095

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## UNIVERSAL ACCESSIBILITY BARRIERS

(Accessibility requirements are based on the Americans With Disabilities Act & 521 CMR Architectural Access Board)

- SITE:** ADA 4.1.2 No on-site parking is present at the facility. Accessible parking needs to be provided on the street with parking signage, striping and a curb cut.
- RAMPS:** ADA 4.8 A ramp at the front of the building is required for access. The ramp will be approximately 26' long with handrails and guardrails. The existing center guardrail on the entry steps does not comply with the code. See figure 1.
- STAIRS:** ADA 4.9 The second means of egress on the back of the building requires new handrails and a top landing at the exit door.  
ADA 4.3.1 A 36" wide minimum sidewalk is required from the second means of egress door to safe location away from the building.
- DOORS:** ADA 4.13.7 The front vestibule does not provide the minimum 48" of clearance between the doors. See figure 2.  
ADA 4.13.10 The front and rear exterior doors require new door closers/openers to meet the 5 pound push/pull force requirements.  
ADA 4.5.2 The front entrance door requires a new threshold.  
ADA 4.13.9 All doors in the building require accessible hardware including handles, levers, closers and locks.  
ADA 4.13.5 The door into the first floor private office is not the required 36" wide.

- TOILETS:** ADA 4.16 No accessible toilet rooms exist in the building. Two toilet rooms are located in the basement of the building with the required square footage to make accessible private toilet rooms. No accessible route exists from the first floor to the basement.
- KITCHEN:** MASS 45.1 The existing kitchenette facilities in the basement are completely inaccessible.
- SINKS:** ADA 4.19 An inaccessible sink, mirror & dispenser exist in the first floor private office. This sink will be required to be made accessible if no other locations are accessible.
- ALARMS:** ADA 4.28 No fire or security alarms exist in the building. See electrical items.
- SIGNS:** ADA 4.30 No accessible signage exists in the building. Each room requires a sign with a written tactile description, grade 2 Braille description and accessible symbol.
- SEATING:** ADA 4.32 Existing movable furniture does not provide the required 27" high knee space under the tables. Computer tables are not the proper height and do not provide the required 27" knee space, however, these tables are adjustable. A minimum of 5% of all seating and tables are required to be accessible. See figure 2.

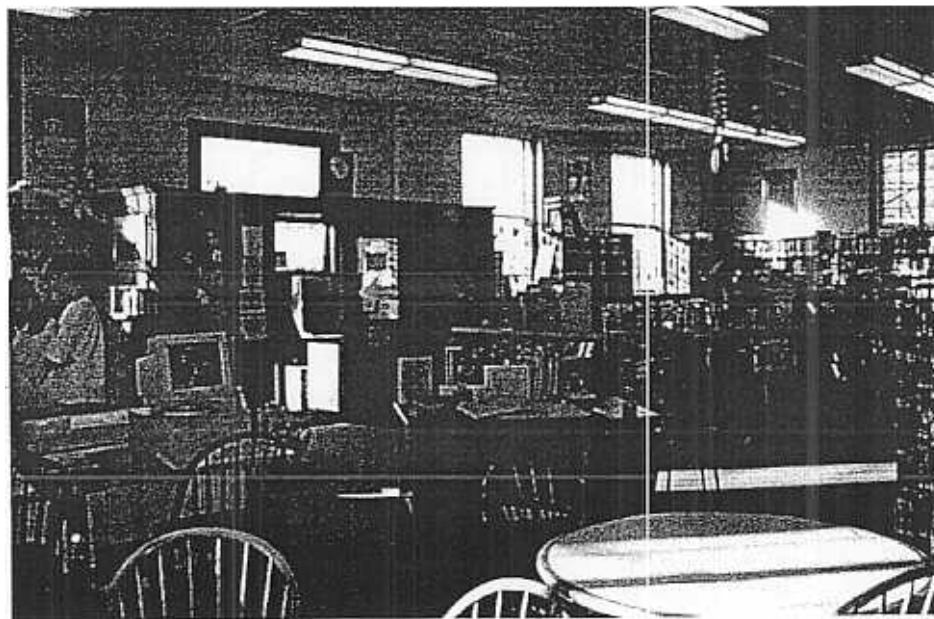


FIG. 2

- COUNTER:** ADA 4.32.4 The existing check-out counter does not provide a 30" high x 36" wide accessible area. See figure 2.
- STACKS:** ADA 8.5 The existing stacks have the required 36" minimum between them, however, the stacks are only 30" away from the wall mounted shelving which is inaccessible. The existing continuous removable step

should be removed at all locations to provide the proper clearances and better access to all shelving.

**HAZARDS:** ADA A4.4.1 An existing wall mounted fire extinguisher protrudes more than four inches from the wall and should be relocated.

ADA 4.4 In the basement, the open space under the staircase is a hazard to a blind occupant.

**CONTROLS:** ADA 4.27 All existing controls, switches, dispensers, etc.. are required to be no higher than 54" from the highest operable point to the finished floor. The following items do not comply:

- exterior book drop
- thermostat
- pencil sharpener
- air conditioner controls

**ACCESSIBILITY COST ESTIMATE**

<b>SITE:</b>	Accessible parking:	\$1,250.00
	New sidewalk from rear door:	\$500.00
<b>RAMP:</b>	New accessible 26' 0" ramp:	\$12,500.00
<b>DOORS:</b>	Vestibule doors:	\$1,500.00
	Hardware throughout the building:	\$2,500.00
<b>TOILETS:</b>	Two accessible toilet rooms:	\$5,000.00
<b>KITCHEN:</b>	New accessible kitchenette unit:	\$2,000.00
<b>SINK:</b>	Accessible sink in private office:	\$500.00
<b>ALARMS:</b>	See electrical section:	
<b>SIGNS:</b>	New signage throughout building:	\$500.00
<b>SEATING:</b>	New accessible tables & chairs:	\$500.00
<b>COUNTER:</b>	New accessible check-out counter:	\$1,500.00
<b>STACKS:</b>	Remove existing steps and relocate to provide clearance:	\$3,500.00
<b>HAZARDS:</b>	Remove existing hazards:	\$500.00
<b>CONTROLS:</b>	Relocate existing controls:	\$500.00
	<b>Total:</b>	<b>\$32,750.00</b>

Our recommendation is to construct an addition to the building that would include an accessible entrance with a ramp, accessible toilet rooms and stairway to the basement. An elevator could also be included in this addition if employee accessible access is require to the basement. New mechanical and electrical systems could also be housed in the basement of the new addition.

Cost (including elevator, however other renovations in the existing building would also be required ) \$210,000.00

**BUILDING CODE**

(Building Code requirements are based on the Fifth Edition of the Massachusetts State Building Code 780 CMR)

**EGRESS:** None of the exits from the building are equipped with illuminated exit signs. The staircase leading to the rear exit is "hidden" by book stacks. Both

means of egress are inaccessible to handicap people due to stairs and should be equipped with an area of refuge and emergency call button.

**STAIRS:** All interior and exterior stairs to the building do not comply with the handrail requirements. All staircases and steps are required to have handrails and guardrails on both sides of the stairs that extend 12" beyond the top riser and 12" + one tread at the bottom riser. All handrails should be 1-1/4" to 1-1/2" in diameter and have 1-1/2" clear space between the wall. The rear staircase risers are 8-1/4" high with 10-1/2" treads which do not comply with the 1996 Building Code.

**ASBESTOS:** The existing 8"x8" floor tile in the vestibule appears to be asbestos tile. This 5' 0" x 8' 0" area should be tested.

**BUILDING CODE CORRECTION COST**

<b>EGRESS:</b>	Accessible second means of egress:	\$25,000.00
<b>STAIRS:</b>	New stairs and handrails:	\$10,000.00
	<b>Total:</b>	<b>\$35,000.00</b>

**MAINTENANCE ITEMS**

**WINDOWS:** The existing windows are wood framed with single pane glazing with aluminum storm windows on the exterior. Several windows should be recaulked and repainted. Two residential size air conditioners have been installed in two of the large double hung windows on the ends of the building. The air conditioners have been installed with plywood to seal the remaining area. This installation is not air tight and does not allow the storm windows to be installed during the heating season.

Some of the small basement windows have also been sealed with plywood from the interior. All of these windows should be replaced.

**PAINT:** In several rooms in the basement, the paint on the walls and ceiling is peeling.

**MASONRY:** The exterior masonry requires repointing at the parapet and base of the building. Large openings exist at the coping stones of the parapets. See figure 3.

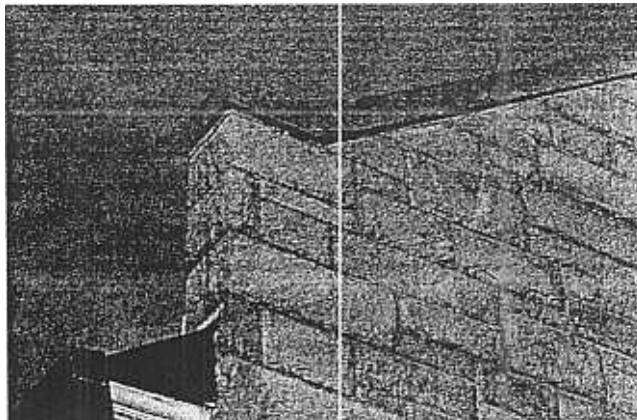


FIG. 3

## MAINTENANCE COST ESTIMATE

WINDOWS:	Replaced with aluminum insulated windows:	\$50,000.00
PAINT:	Interior basement walls, floor & ceiling:	\$2,500.00
MASONRY:	<u>Repointing</u>	<u>\$2,500.00</u>
	Total:	\$50,000.00

## MECHANICAL ITEMS

### HEATING SYSTEM

- A. The building is heated by a cast iron oil-fired boiler located in the basement. The distribution system is a two pipe steam system with manual controls at each radiator. Oil is stored in a buried oil tank outside the building. The buried oil tank should be removed and replaced with three (3) new tanks in the basement with containment enclosures. The heating system is over 65 years old had has to be replaced with an energy efficient hot water system.

### AIR CONDITIONING SYSTEM

- A The air conditioning system consists of two (2) window units.

### VENTILATION SYSTEM

- A. Mechanical ventilation does not exist. Ventilation for this type of building should provide a minimum of 15 CFM per person of outside air. The toilet rooms in the basement do not have exhaust fans (code violation).

### PLUMBING SYSTEM

- A. The cold water piping in the basement is brass and should be replaced with copper. A backflow preventer is not installed in the cold water make up to the boiler (code violation). A separate gas-fired hot water heater should be installed for domestic hot water.

## ENGINEER'S CONSTRUCTION COST ESTIMATE

A.	New HVAC system consisting of a combination gas/oil hot water boiler, air handling unit, refrigerant piping, "DX" cooling coils, pumps, terminal units, distribution system, and gas and oil piping:	\$180,000.00
B.	Fuel oil tank removal:	7,000.00
C.	Domestic water piping replacement:	2,500.00
D.	Toilet room exhaust fans and ductwork:	1,000.00
E.	New gas-fired hot water heater:	1,500.00
F.	Three (3) new fuel oil tanks in the basement with <u>containment enclosures:</u>	<u>1,500.00</u>
	TOTAL:	\$202,000.00

## **ELECTRICAL ITEMS**

### **ELECTRICAL EQUIPMENT EVALUATION/CODE COMPLIANCE**

- A. The electrical panels located in the closet near the circulation desk are in violation of the Massachusetts Electric Code, Article 110-16. Three feet of clearance is required in front of electrical panels.
- B. The electrical service equipment should be replaced because it is inadequate for future building loads.

### **GENERAL ILLUMINATION**

- A. The existing lighting in the stacks area are 1 x 2 surface mounted fixtures which contain 2-T12 fluorescent lamps. These fixtures are in poor condition and not energy efficient. These should be replaced with energy efficient fluorescent 2 x 4 troffers and stack lights.
- B. In the basement rooms incandescent fixtures are used. These fixtures are not energy efficient and should be replaced with energy efficient lighting and occupancy sensors.
- C. Exterior lighting consists of HID fixtures which appear to be adequate.

### **FIRE ALARM SYSTEM**

- A. This branch has no fire alarm system. This does not meet Massachusetts Building Code requirements for use Group A-3.

We recommend a complete fire alarm system installation with pull stations at every exit. Smoke and heat detectors shall be installed for sensing. Strobe lights and speakers for a taped message shall be installed for fire alarms as required by the building code.

### **EMERGENCY LIGHTING/EXIT LIGHTS**

This branch has no emergency or exit lights.

We recommend that the new fixtures described in item 2 should have emergency ballasts to provide proper emergency lighting levels. The exit signs should be LED type fixtures with battery backup and down light.

### **TELEPHONE SYSTEM**

The existing telephone system should be modernized. Additional outlets are required in the office areas, cluster, circulation desk and computer cluster.

### **ENGINEERING ESTIMATE**

A.	Service Equipment, Feeders and Panels	\$14,895.00
B.	Lighting, Emergency Lights and Exit Signs	\$22,695.00
C.	Fire Alarm System	\$11,348.00
D.	Telephone System	\$ 8,510.00
E.	Branch Circuit Wiring	\$13,475.00
	<u>Total</u>	<u>\$70,923.00</u>

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**TOTAL COST FOR BUILDING IMPROVEMENTS**

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**ACCESSIBLE RENOVATION COST**

New addition with renovations to the kitchen, signage, stacks, seating, counter and controls. \$222,000.00

**BUILDING CODE RENOVATION COST**

New second means of egress with area of refuse. New stairs would be constructed in the new addition. \$25,000.00

**MAINTENANCE RENOVATION COST** \$55,000.00

**MECHANICAL RENOVATION COST** \$202,000.00

**ELECTRICAL RENOVATION COST** \$70,923.00

**TOTAL** \$574,923.00