

FOREST PARK BRANCH LIBRARY

380 Belmont Ave.
Springfield, MA 01108

FACILITIES REPORT 12/2/96

BUILT: 1909
SQUARE FOOTAGE: 13,372

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

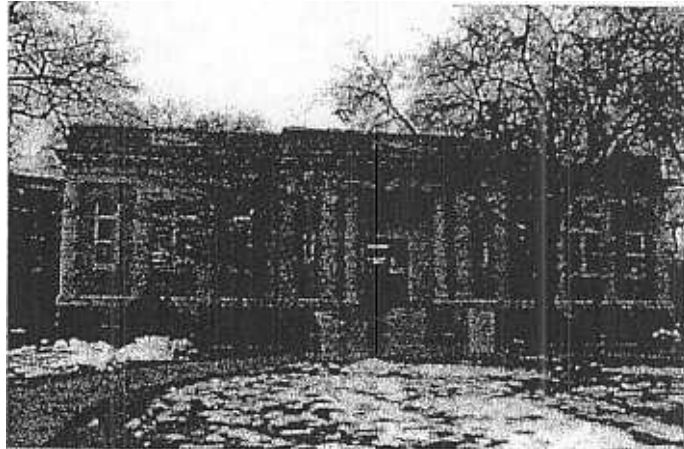


FIG. 1

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

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

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 or side of the building is required for access into the first floor public library space. The ramp will be approximately 65' long with handrails and guardrails. See figure 2. If areas in the basement are to remain as public spaces, (toilet rooms, community room) then

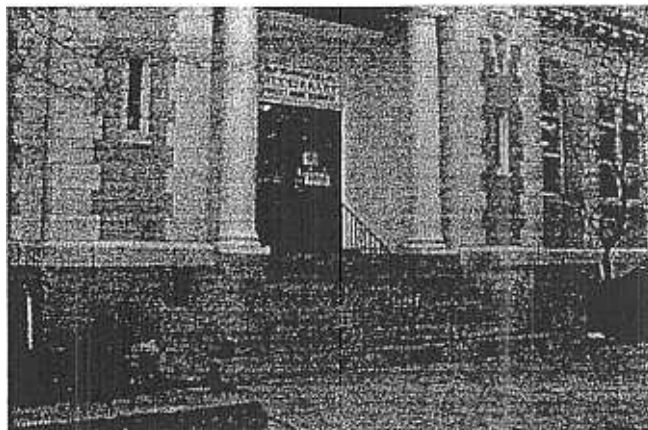


FIG. 2

a lift or elevator would provide access from the exterior to the basement and first floor. An additional ramp is needed from the basement lobby (at bottom of stairs) into the community room. This ramp would be approximately 16'-0" long with handrails and guardrails.

- STAIRS:** ADA 4.9 The existing stairs to the basement requires new handrails on both sides. Several of the risers are uneven heights with nosings that are not acceptable by the code. There is presently no accessible means of egress from the first floor or basement to the exterior. The existing handrails on all entrances to the building and the interior stairs into the community room are not acceptable by the code.
- DOORS:** ADA 4.13.7 The front & side vestibule does not provide the minimum 48" of clearance between the doors. See figure 2. The side vestibule consists two pairs of 2' 6" doors. A 36" clear opening is required.
 ADA 4.13.10 The front and side exterior doors require new door closers/openers to meet the 5 pound push/pull force requirements.
 ADA 4.13.9 All doors in the building require accessible hardware including handles, levers, closers and locks.
 ADA 4.13.5 Several doors to private offices, toilet rooms and work rooms require new 36" clear doors.
- TOILETS:** ADA 4.16 No accessible toilet rooms exist in the building. Two public toilet rooms and one employee toilet room are located in the basement of the building. No accessible route exists from the first floor to the basement. The employee rest room is an uni-sex room with a large water heater installed in it. Both of these conditions are not acceptable by the Building and Plumbing Code.
- SINKS:** ADA 4.19 An inaccessible sink, mirror & dispenser exist in one first floor employee work room and one in a private office. These sinks 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.
- COUNTER:** ADA 4.32.4 The existing check-out counter does not provide a 30" high x 36" wide accessible area.

STACKS: ADA 8.5 The existing stacks have the required 36" minimum between them in most areas, however, the books in the stacks project into the isles allowing only 30" of clear space which is inaccessible. The wood shelving at this library is not as deep as other branch libraries causing this problem. All of the stacks should be relocated to provide the required clearance between stacks. Some of the open space that exists in the children's section of the library that could be used in relocating the stacks. The side isle along the exterior walls are only 30" wide. Some of the existing stacks have a continuous removable step that should be removed at all locations to provide the proper clearances and better access to all shelving. See figure 3 and figure 4.

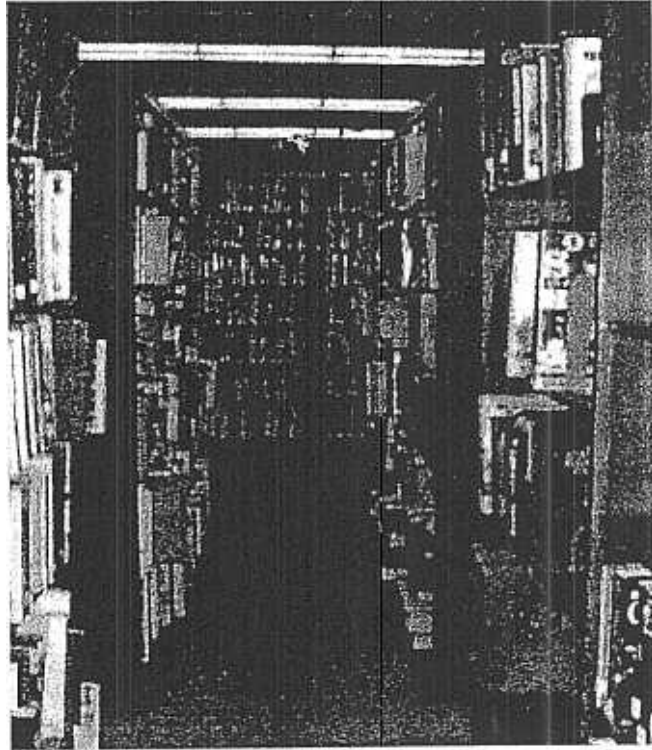


Fig. 3

HAZARDS: ADA A4.4.1 All existing wall mounted fire extinguisher protrudes more than four inches from the wall and should be relocated. The books projecting from the stacks into the isles are also a hazard.



Fig. 4

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 drops
- thermostat
- air conditioner controls

FLOORING: MASS 29.1 The existing floor material in the break room is badly deteriorated and is a tripping hazard. This material should be replaced. Entrance mats are located at the front and side entrances that should be recessed or anchored to the floor.

COOLER: MASS 36.2 The existing drinking fountain in the basement lobby is not accessible and should be replaced.

KITCHEN: MASS 45.1 The existing kitchenette facilities in the basement are completely inaccessible. The existing bank of lockers in the break room is not equipped with an accessible locker.

ACCESSIBILITY COST ESTIMATE

SITE:	Accessible parking:	\$1,250.00
	New sidewalk from rear door:	\$500.00
RAMP:	New accessible side entrance ramp:	\$50,000.00
	Ramp into Community Room:	\$10,000.00
STAIRS:	New stair tower to basement:	\$15,000.00
DOORS:	Vestibule doors:	\$2,500.00
	Hardware throughout the building:	\$5,500.00
	Enlarge Office doors to 36" wide:	\$5,000.00
TOILETS:	Two accessible toilet rooms:	\$15,000.00
SINK:	Accessible sink in private office:	\$500.00
ALARMS:	See electrical section:	
SIGNS:	New signage throughout building:	\$500.00
SEATING:	New accessible tables & chairs:	\$750.00
COUNTER:	New accessible check-out counter:	\$1,500.00
STACKS:	Remove existing steps and relocate to provide clearance:	\$5,000.00
HAZARDS:	Remove existing hazards:	\$500.00
CONTROLS:	Relocate existing controls:	\$500.00
FLOORING:	New floor in Break Room, anchor mats:	\$1,000.00
COOLER:	New accessible drinking fountain:	\$500.00
KITCHEN:	New accessible kitchenette unit:	\$2,000.00
	Total:	\$117,500.00

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 would also be included in this addition because of the public community room in 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) \$250,000.00

BUILDING CODE

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

EGRESS: All means of egress are inaccessible to handicap people due to stairs and should be equipped with an area of refuge and emergency call button. One of the means of egress needs to be equipped with a illuminated exit sign.

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 stair to the basement and side egress presently has several book shelves filled with combustible material. These materials should be removed to have a rated means of egress.

ASBESTOS: Existing piping in the mechanical room is insulated with asbestos and 8"x8" floor tile in the private offices and employee office appears to be asbestos tile. These materials should be tested.

TOILETS: The employee rest room is a uni-sex room with a large water heater installed in it. Uni-sex toilets are not acceptable by the Plumbing Code and the hot water heater should be located in the Mechanical Room.

GUARS The side egress stair from the Community Room is constructed as an open "well" concrete stair with pipe railings. These railings do not comply with the code. New guardrails are required the are 42" high with less than 6" space between all railings. See figure 5.

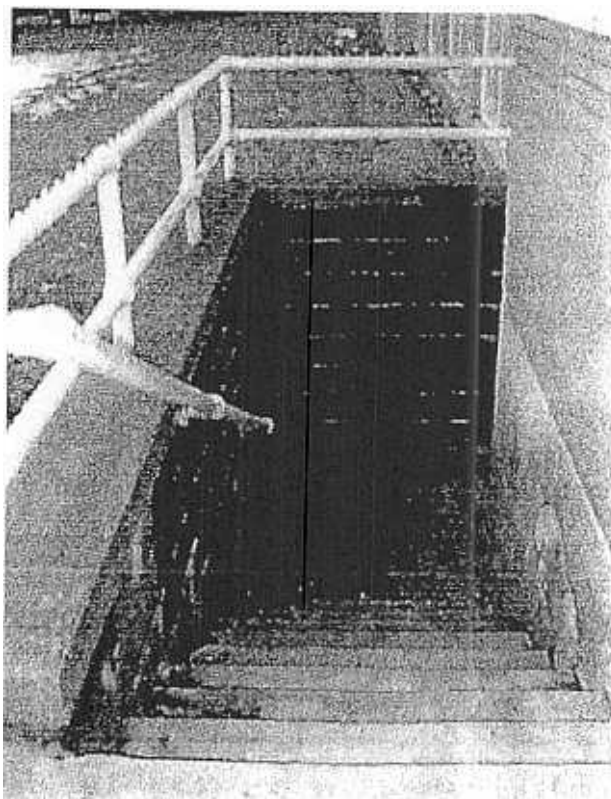


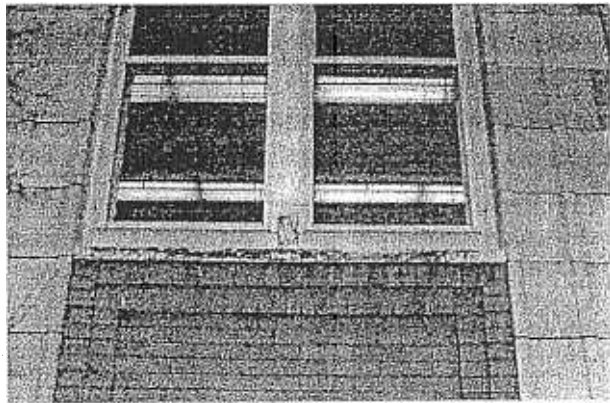
Fig. 5

BUILDING CODE CORRECTION COST

EGRESS:	Accessible second means of egress:	\$75,000.00
STAIRS:	New stairs and handrails:	\$15,000.00
TOILETS:	Remove water heater:	\$2,500.00
GUARDS:	<u>New guard and handrails on side stair:</u>	<u>\$5,000.00</u>
	Total:	\$97,500.00

MAINTENANCE ITEMS

WINDOWS: The existing windows are wood framed single pane glazing with aluminum storm windows on the exterior of some windows. The wood frames and sills of all of the windows show large amounts of deterioration and should be replaced. See figure 6. Four residential size air conditioners have been installed in four of



the large double hung windows on the sides 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.

Fig. 6

Some of the smaller basement windows have also been sealed with plywood from the interior in the storage and mechanical rooms. 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 base of the building.

MAINTENANCE COST ESTIMATE

WINDOWS:	Replaced with aluminum insulated windows:	\$100,000.00
PAINT:	Interior basement walls, floor & ceiling:	\$7,500.00
MASONRY:	<u>Repointing</u>	<u>\$7,500.00</u>
	Total:	\$115,000.00

MECHANICAL ITEMS

HEATING SYSTEM

- A. The building is heated by a cast iron oil-fired boiler. The distribution system is a one (1) pipe system with manual control valves and air vents at each radiator. A separate hot water loop serves the basement, with baseboard radiation used as terminal units. An Everhot heater is installed below the water line of the boiler to produce hot water for the baseboard radiation. Oil is stored in a buried fuel oil tank outside the building. The distribution system is 87 years old and the boiler installation is about 36 years old. The entire heating system has to be replaced with an energy efficient hot water system. The relief valve outlet from the hot water loop has to be piped down to 12" from floor (code violation).

AIR CONDITIONING SYSTEM

- A. The air conditioning system consists of several window units located in the Reading Room.

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 system in the basement is brass and should be replaced with Type "L" copper tubing. A backflow preventer is not installed in the cold water make-up to the boiler (code violation). The existing gas-fired hot water heater should be replaced with point-of-use elect hot water heaters.

ENGINEER'S CONSTRUCTION COST ESTIMATE

A.	New HVAC system consisting of a dual fuel, cast iron boiler/burner unit, air handling unit, "DX" cooling coil, refrigerant piping, pumps, temperature controls, terminal units, distribution system, and gas and oil piping:	\$210,000.00
B	Fuel oil tank removal:	7,000.00
C	Domestic water piping replacement, including backflow preventer:	3,000.00
D.	Toilet room exhaust fans and ductwork:	,500.00
E.	<u>New point-of-use electric hot water heaters:</u>	<u>1,500.00</u>
	<u>TOTAL:</u>	<u>\$223,000.00</u>

ELECTRICAL ITEMS

ELECTRICAL EQUIPMENT EVALUATION/CODE COMPLIANCE

- A. The 200 amp, 2 pole fused electrical service equipment should be replaced with circuit breakers because it is in questionable condition and is inadequate for future load increases.
- B. Electrical and telephone panels should be located in areas which are not accessible to the public or should have locked covers.

GENERAL ILLUMINATE

- A. The existing lighting in the stacks area are 1 x 4 pendant mounted fixtures which contain 2-T12 fluorescent lamps. Many of the fixtures have been retrofitted to energy efficient T-8 lamps. These fixtures are in poor condition and the lenses are damaged and yellow. These should be replaced with energy efficient fluorescent 2 x 4 troffers and stack lights.
- B. Exterior lighting consists of HID fixtures which are in fair condition. This lighting is inadequate and more HID fixtures should be installed at each building entrance.
- C. Lighting in offices and restrooms which are frequently unoccupied should have ceiling mounted occupancy sensors for energy savings. Existing wall mounted occupancy sensors do not work properly and can be easily obstructed.
- D. Storage areas with incandescent lighting should be replaced with fluorescent fixtures and occupancy sensors.

FIRE ALARM SYSTEM

- A. This branch has no fire alarm system. To meet Massachusetts Building Code requirements for use Group A-3, signaling devices should be audio/visual and voice type. The rest rooms require signaling devices and ADA requires pull stations and audio/visual devices at specific heights above the finished floor.

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 SIGNS

- A. Egress lighting is provided by emergency lights at the exits. Some signs have down lights but are obstructed and do not provide the light levels required by code.

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 replaced with LED type fixtures with battery backup and down light. The exit signs should be mounted so that the down light is not obstructed by the door frame.

TELEPHONE SYSTEM

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

ENGINEERING ESTIMATE

A. Service Equipment, Feeders and Panels	\$ 39,310.00
B. Lighting, Emergency Lights and Exit Signs	\$ 59,905.00
C. Fire Alarm System	\$ 29,950.00
D. Telephone System	\$ 22,465.00
E. <u>Branch Circuit Wiring</u>	<u>\$ 35,750.00</u>
Total	\$187,200.00

TOTAL COST FOR BUILDING IMPROVEMENTS

ACCESSIBLE RENOVATION COST

New addition with renovations to the kitchen, signage, stacks, seating, counter, hazards, mats and controls. \$295,750.00

BUILDING CODE RENOVATION COST

New second means of egress with area of refuse. New stairs would be constructed in the new addition. \$97,500.00

MAINTENANCE RENOVATION COST \$115,000.00

MECHANICAL RENOVATION COST \$223,000.00

ELECTRICAL RENOVATION COST \$187,200.00

TOTAL \$918,450.00