

Bertram Fieldhouse

Renovation Study
June 9, 2013



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INTRODUCTION AND SUMMARY

This is a study of the Bertram Fieldhouse to document the existing conditions and develop a complete scope of renovations and cost estimate.

The study consisted of the following tasks:

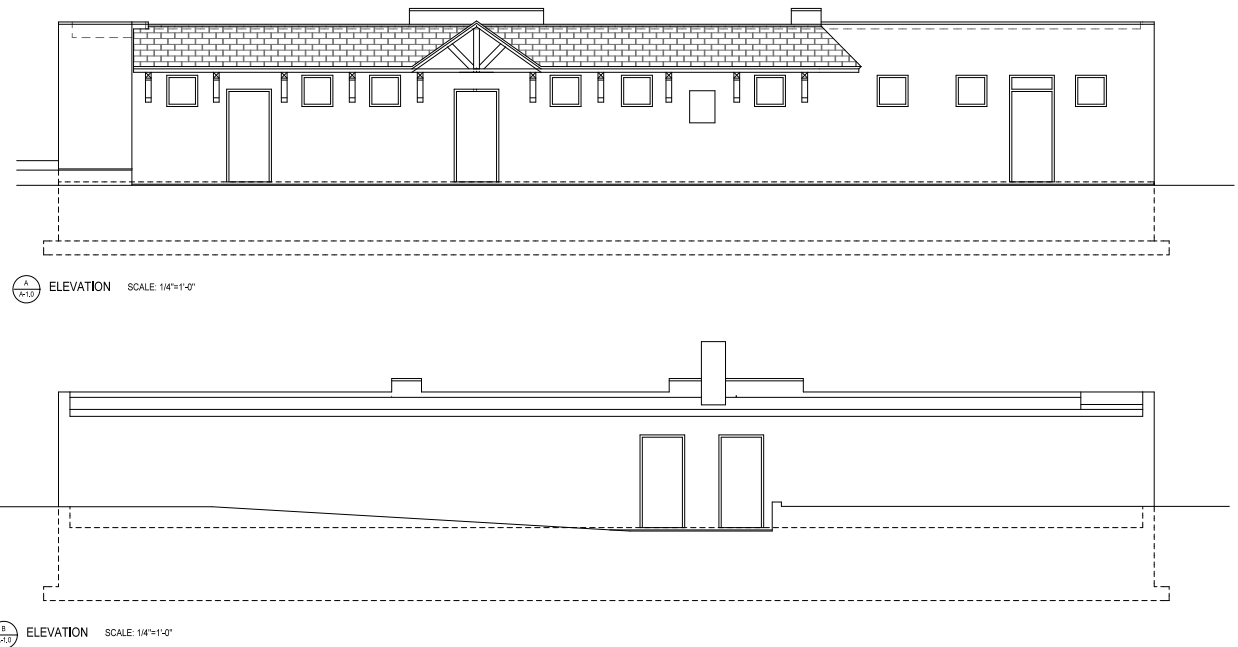
1. Preparation of as built plans and elevations.
2. Evaluation of the building conditions including architectural, structural, mechanical and electrical systems.
3. Development a list of repairs.
4. Preparation of a cost estimate for the repairs.

(A hazardous materials survey was not part of this study but is recommended prior to final decisions about the renovations.)

The building needs renovations and updating of systems. To completely renovate the fieldhouse the estimated cost is between \$280,000 to \$350,000.

The major items in order of priority are:

1. Roof replacement - \$90,000 to \$120,000
2. Fire Alarm - \$6,000 to \$12,000
3. Exterior facade repairs - \$10,000 - \$18,000
4. HVAC systems - \$30,000 - \$60,000
5. Interior renovations (Ceiling, lights, painting)
\$70,000 - \$100 ,000.



EXISTING CONDITIONS, RECOMMENDATIONS AND COST ESTIMATES

Exterior Walls:

(A) Findings:

1. The exterior walls are composed of concrete masonry units with painter stucco finish on the exterior and painted interior.
2. Several locations on the exterior the paint and stucco has deteriorated as well as the back-up masonry.

(B) Recommendations:

1. Remove all loose and deteriorated stucco and replace with new stucco.
2. Repair back-up masonry.
3. Paint facade.

(C) Cost Estimate:

1. Removal \$3,000
2. Repair back-up masonry \$1,500
3. New stucco patching and painting. \$10,000

Exterior Roofing

(A) Findings:

1. The existing roof is tar and gravel built up roof over a wood deck. The roof may be over 30 years old and has

indications of many repair over the years.

2. The front canopy roof is an asphalt shingle roof over wood deck and appears to be in good condition.

3. Side wall parapets are covered with copper flashing and a precast cap stone. This flashing appeared in poor condition. The cap stones are in reasonably good condition.

4. There are several roof top projections, exhaust fans, vents and boiler chimney.

(B) Recommendations:

1. Replace the existing roof, with new built up system including flashings.
2. Repair water damaged wood decking.
3. Replace capstones with metal cap and gravel stop.
4. Replace rear gutter.

(C) Cost Estimate:

1. Replace the existing roof. \$80,000
2. Repair water damaged wood decking (allowance). \$4,000
3. Replace capstones with metal cap. \$3,000
4. Replace rear gutter. \$800



Exterior wall



Roof



Interior ceilings and walls

Interior Ceilings:

(A) Findings:

1. The ceilings are hung acoustical tile. It appears that these are not the moisture resistant type. Some have been damaged through roof leaks.

(B) Recommendations:

1. Replace all ceilings with new hung gypsum type ceilings

(C) Cost Estimate:

1. Demolition of existing ceilings \$2,000
2. New hung gypsum ceilings \$12,960

Interior Walls

(A) Findings:

1. The interior walls are exposed painted CMU. They are in good condition.

(B) Recommendations:

1. Scrape loose paint and repaint with epoxy paint.

(C) Cost Estimate:

1. Interior painting. \$9,720

Doors and Windows.

(A) Findings:

1. Doors and windows were in good condition.

(B) Recommendations:

2. Paint

(C) Cost Estimate:

3. \$3,000

Flooring

(A) Findings:

1. Floors are painted concrete and need to be repainted.

(B) Recommendations:

2. Paint floor with epoxy paint

(C) Cost Estimate:

1. Paint floors \$7,290

Architectural Sub-total: \$200,000

Plumbing:

(A) Findings:

1. The building toilets and urinals are older, not high efficiency, but in good condition. The fixtures are wall mounted and code compliant.

2. The lavatories are older, in good condition but with differing, non-sensing, faucet types. The waste lines beneath the lavatories are not protected as required for accessible toilet rooms.

3. Each toilet room includes a floor drain and hose bibb for cleaning.

4. There is existing abandoned gas piping in the Mechanical Room and entering adjacent spaces which must be removed per the Massachusetts Plumbing code.

5. The existing 50-gallon gas-fired hot water heater is new and in good condition.



Walls at toilet



Electric panel room



Water leaking locker room A

6. Insulation is missing from hot and cold water piping within the mechanical room.

(B) Recommendations:

1. Replace existing toilets and urinals with high efficiency fixtures including flush valves with sensors.
2. Provide new ADA compliant sensor faucets for existing lavatories.
3. Provide proper protection for lavatory waste lines.
4. Remove all obsolete, abandoned gas piping. The furnace and water heater are the only gas appliances which should be piped.

(C) Cost Estimate:

1. Water closets (incl. flush valves)	10 @ \$1,700
	\$17,000
2. Urinals (including flush valves) 8 @ \$1,600	
	\$12,800
3. Lavatory sensing faucet set	15 @ \$ 400
	\$ 6,000
4. ADA Waste line protection	14 @ \$ 100
	\$ 1,400
5. Closed-cell Pipe Insulation	
	\$ 1,500
6. Gas Piping Removal	
	\$ 2,500

Plumbing Subtotal: \$41,200

HVAC

(A) Findings:

1. The existing 180,000 btu/hr gas-fired furnace is very old and is no longer functioning.
2. There is no ventilation air provided to the building.
3. The existing roof mounted toilet room exhaust fans

are not working and have been disconnected from the exhaust ductwork in above the toilet room ceilings.

4. The existing ductwork is in acceptable condition, however, there is no return ductwork or transfer grilles apparent in the building. The mechanical room door is often closed.

5. The existing diffusers are old and in poor condition.

(B) Recommendations:

1. Replace the existing furnace with a new high-efficiency gas-fired furnace with stainless steel heat exchanger and sealed combustion. The new concentric furnace vent shall pass directly through the roof. Provide a minimum of ventilation air through the furnace with a control damper to open during occupied hours.

2. Provide new supply air diffusers; replace ductwork as required based on site conditions.

3. Provide a minimum of return air ductwork and registers for proper furnace operation.

4. Provide new roof mounted exhaust fans, ductwork and exhaust grilles, one per toilet room. Provide time-clock control for operation during occupied hours.

5. Provide air balancing for proper distribution following new equipment installation.

(C) Cost Estimate:

1. Removals	\$ 2,500
2. Furnace replacement (installed)	\$ 8,500
3. New ductwork, registers and diffusers	\$ 5,500
4. Exhaust Fans, grilles, ductwork and control	\$ 5,800
5. Air Balancing	\$ 750

HVAC subtotal: \$23,050

Electrical



Public toilet



Partial insulation above ceiling



Panel room

(A) Findings:

1. This building has two electric services one for the team locker room and one for Sports field flood lights. Sports field flood light service has no utilization within the team locker room facility.

a. Sports field flood light electric service is 480/277V 3 phase, 4 Wire, 200A fed from a 75 kVA pole mount transformer with overhead service cables and pipe. Main 200A service disconnect switch has sub distribution feeders for four sports field flood light poles each sized at 60A. Main and four sub-feed disconnects are housed within team locker room facility in a dedicated room.

b. Team Room Locker facility electric service is 240/120V, 1 phase 3 wire, 200A with individually metered overhead service cables. Main service entrance Panel is located in a corner closet. Water was present in the closet creating a hazardous condition. Service entrance panel Panel is old FPE with discontinued parts. Most of the outgoing branch circuits from FPE panel are old.

2. The current wiring system of branch circuits is done with BX & MC cables above ceiling areas and inside walls, and with occasional piped circuits where exposed.

3. The building does not have Fire Alarm System except few individual Smoke Detectors.

4. Existing lighting and emergency/exit system is old, and seems inefficient with worn out lenses, ballasts, lamps etc. with inadequate switching. Emergency/exit system coverage is inadequate.

(B) Recommendations:

1. Provide small conventional Fire Alarm System with smoke/heat detectors, pull stations, ADA complied audio/visual devices etc.

2. Replace some old type BX wiring branch circuits with new wiring in conduits or with type MC cables.

3. Replace existing lighting system and emergency/exit lights with new energy efficient fluorescent lighting and L.E.D. exit/emergency lights, also provide new single and /or three way switching.

4. Replace existing service entrance FPE panel with new panel and circuit breakers.

5. Provide additional convenient receptacles at few locations.

(C) Estimate:

1. Lighting	\$ 5,500
2. Fire Alarm system	\$ 3,500
3. Panelboard	\$ 2,000
4. Misc. wiring replacement	\$ 3,000
5. Wiring to HVAC equipment	\$ 2,000
6. Wiring devices	\$ 2,500

Electrical subtotal: \$18,500

PLANS

