

## Cost Matrix Summary

May 25, 2010

Costs based primarily on 3/9/2000 BML Memorial Coliseum Improvement Summary report.

These costs have been escalated 29% to 10/2009 per Hoffman Construction.

No escalation since 10/2009 is currently warranted, future escalation is targeted at 5% per year per Hoffman.

Note that continued use of the building in its current capacity does not require any code improvements.

<b>CATEGORY 1</b>	<b>\$15,171,086</b>
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**Known maintenance costs (10 year horizon)**

Known code issues (good steward approach)

Includes soft costs (30%) & contingency (20%)

<b>CATEGORY 2</b>	<b>\$10,111,780</b>
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**Limited improvements for successful stand-alone spectator facility**

(pending further market study)

Known maintenance issues beyond 10 year horizon

Includes soft costs (30%) & contingency (20%)

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<b>TOTAL IDENTIFIED COSTS</b>	<b>\$25,282,865</b>
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Note that costs are not cumulative -

some improvements will negate need for others

<b>CATEGORY 3</b>	<b>\$ TBD</b>
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**Additional improvements remaining from BML study or noted as desirable in 2009 walkthrough.**

Market study required to determine need/value.

Detailed building investigation required to determine need.

## Category 1 - Deferred Maintenance

Known maintenance costs (10 year horizon), known code issues (good steward approach)

Item #	Improvement	Need	Cost (10/09)	Remarks/Timeline
1	Future replacement of exterior fascia	Maintenance	\$1,235,520	Existing simplistic metal panel has 5-8 year lifespan, minor operational impact
2	Future replacement of roof	Maintenance	\$1,170,000	At end of lifespan (23 years old), some recent patching, some operational impact
3	Upgrade handrails & guardrails at arena & concourse	Code	\$205,110	Impacts use, best done as part of building remodel, operational impact
4	Replace ice rink (concrete flooring, cooling piping & heat exchanger)	Maintenance	\$1,200,000	Currently at 2x life expectancy & deficient, operational impact
5	ADA upgrades of remaining concourse restrooms (3W, 2M compliant)	Code	\$187,140	Some operational impact
6	Replace HM Arena entry doors from concourse (ADA)	Code	\$251,550	Some operational impact
7	Misc. ADA upgrades throughout, door hardware, etc.	Code	\$193,500	Some operational impact, exact scope needs further clarification (allowance)
8	New emergency lighting throughout (incl. aisle lights at arena)	Code	\$325,000	Some operational impact
9	Provide accessible counter height at concessions POS	Code	\$21,000	Assumes 6 (negotiate w/City), some operational impact
10	Provide slip resistant nosings at stairs	Code	\$70,000	Some operational impact

## Category 1 - Deferred Maintenance

Known maintenance costs (10 year horizon), known code issues (good steward approach)

Item #	Improvement	Need	Cost (10/09)	Remarks/Timeline
11	Seal misc. rated wall penetrations	Code	\$20,000	Allowance, minor operational impact
12	Repair leaks at plaza into Exhibit Hall	Maintenance	\$10,000	Allowance, some operational impact
13	Replace freight elevator	Operations	\$250,000	Critical element, temperamental, some operational impact
14	Install fire alarm system	Code	\$335,000	Some operational impact
15	Reconnect & repair fire sprinklers at exterior canopy	Code	\$92,880	Minor operational impact
16	Inspect & test power supply system	Ensure reliability of system	\$50,000	Discretionary, no operational impact. Will inform other possible improvements
17	Seismic restraint to mechanical & electrical equipment	Code	\$206,250	Detailed survey required (allowance), minor operational impact
18	Partial replacement of plumbing domestic, waste & vent piping	Maintenance	\$725,625	Detailed survey required, best done as part of building remodel, operational impact
19	Replace existing chillers	Maintenance	\$1,290,000	Original equipment at 2x life expectancy, operational impact
20	Replace existing air handling systems & modify ductwork as required	Maintenance	\$967,500	Original equipment at 2x life expectancy, operational impact

## Category 1 - Deferred Maintenance

Known maintenance costs (10 year horizon), known code issues (good steward approach)

Item #	Improvement	Need	Cost (10/09)	Remarks/Timeline
21	Asbestos abatement at pipe & mechanical insulation	Code	\$208,980	Required if impacted by equipment replacement/modification, some operational impact
22	Replace central plant boilers (2)	Maintenance	\$500,000	Median life is 25 years, operational impact
23	Replace central plant heat exchangers (Steam to HW & Domestic Water)	Maintenance	\$70,000	Median life is 25 years although no problems currently noted, operational impact, excludes ice rink exchanger covered with rink (\$80K)
24	Replace damaged roof mounted exhaust fans (4)	Maintenance	\$40,000	Some damage to housings, no operational impact
25	Replace branch circuit panels (range of \$40K - \$100K, detailed inspection required)	Maintenance	\$100,000	Early vintage, beginning to show signs of wear, some operational impact

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SUBTOTAL CONSTRUCTION COSTS		\$9,725,055
SOFT COSTS	30%	\$2,917,517
CONTINGENCY	20%	\$2,528,514

**TOTAL Category 1 - Deferred Maintenance** **\$15,171,086**

## Category 2 - Reasonable Functionality

Limited improvements for successful stand-alone spectator facility, known maintenance issues beyond 10 year horizon

Item #	Improvement	Need	Cost (10/09)	Remarks/Timeline
1	Clean & paint existing metal ceiling in concourse	Aesthetics	\$198,660	Some operational impact
2	Upgrade 4 existing concessions areas	Operations	\$129,000	2 remodeled post 2006, limited opportunities in existing location, operational impact
3	Re-seal existing concrete floor at concourse	Aesthetics	\$221,880	Operational impact
4	Additional interior signage	Aesthetics/Code	\$64,500	Re-branding/aesthetics (allowance), minor operational impact
5	Replace existing seating (9,135 seats)	Operations	\$3,000,000	Does not include ADA upgrades or reconfiguration, operational impact
6	Remodel meeting rooms at lower level	Aesthetics	\$554,750	Architectural & electrical improvements, some operational impact
7	Asbestos abatement of plaster ceilings at lower level hallways (includes replacing with GWB)	Aesthetics	\$149,640	Only required if area remodeled, operational impact this area
8	Remodel/upgrade Exhibit Hall	Aesthetics/Operations	\$1,093,720	Finishes, M/E/P, fire protection, restrooms, operational impact this area
9	Replace HM exterior & misc. interior doors & hardware throughout	Code/Aesthetics	\$245,100	Some operational impact

## Category 2 - Reasonable Functionality

Limited improvements for successful stand-alone spectator facility, known maintenance issues beyond 10 year horizon

Item #	Improvement	Need	Cost (10/09)	Remarks/Timeline
10	Replace large roll-up doors at arena level	Operations	\$69,300	Functional but maintenance intensive, minor operational impact
11	Upgrade kitchen (replace all equipment)	Operations	\$250,000	Some operational impact this area
12	Revise & upgrade fire sprinkler coverage at entire lower level (current conditions meet code)	Code	\$56,760	Combine with remodel of entire area, minor operational impact to arena
13	Provide fire sprinkler coverage at concourse (sidewall mounted under bowl, current conditions meet code)	Code	\$161,250	Operational impact
14	Improve smoke evacuation	Code	\$64,500	Some operational impact
15	Shore power stations in parking lot - (3) 50 amp receptacles & associated conduit, wiring & distribution panels	Operations	\$10,000	Provides power for tour buses etc., minor operational impact
16	Provide video security system throughout facility	Operations	\$212,850	Provides stand-alone system
SUBTOTAL CONSTRUCTION COSTS			\$6,481,910	
SOFT COSTS			30%	\$1,944,573
CONTINGENCY			20%	\$1,685,297

**TOTAL Category 2 - Reasonable functionality** **\$10,111,780**

## Category 3 - Ideal Improvements

Additional improvements pending market study & detailed building investigation

Item #	Improvement	Need	Cost TBD	Remarks/Timeline
1	Asbestos abatement at underside of seating bowl			Currently encapsulated & compliant, operational impact
2	Provide new fixed seating (9,135 seats) in arena with 131 ADA locations (revised railings, ramps, etc.)	Code		Currently 32 ADA seats provided, 99 additional needed, possible Landmarks issue, operational impact
3	Upgrade exterior canopy lighting	Aesthetics		No operational impact
4	Provide new ceiling lighting in arena & concourse	Operations		Improve energy efficiency, some operational impact
5	Replace metal ceiling in concourse	Operations		Improve acoustics, some operational impact
6	Replace metal ceiling in arena	Operations		Further study needed, existing ceiling removed to allow rigging access, operational impact
7	Reduced seating capacity	Operations		5,000 - 7,000 seats + luxury suites or club seating
8	Increased structural loading capacity	Operations		Currently at 50% of required capacity for touring shows
9	Loading dock	Operations		Difficult to accomplish
10	Concessions areas	Operations		Portable units

## Category 3 - Ideal Improvements

Additional improvements pending market study & detailed building investigation

Item #	Improvement	Need	Cost TBD	Remarks/Timeline
11	Replace (2) main circulating system circulating pumps	Maintenance		Beyond life span, no problems currently noted
12	Modify arena and concourse area return air ductwork	Code		Assume separation from basement level desired - further study required to confirm need
13	Install new emergency generator & transfer switch	Code		Building currently has backup capability, City not currently requiring upgrade, further study needed
14	Significant/structural renovation of Exhibit Hall	Aesthetics		Increase column spacing, provide skylights
<b><u>Additional year 2000 report items requiring further study to determine need</u></b>				
15	Replace exterior curtainwall	Energy efficiency		Possible conflict with Landmark status
16	Structural seismic upgrades	Code		Required if occupancy load increases by more than 10%
17	Corrugated metal panels under seating bowl	Acoustics		Possible conflict with Landmark status
18	Provide second (backup) water heater	Maintenance		Need not identified
19	Replace existing main power supply & distribution system	Maintenance		Need will be determined by system testing - no need known at this time
20	Replace existing telephone system	Maintenance		Need not identified

## Category 3 - Ideal Improvements

Additional improvements pending market study & detailed building investigation

Item #	Improvement	Need	Cost TBD	Remarks/Timeline
<b><u>Additional sustainability items requiring further study - potential to achieve 40% - 55% energy savings &amp; LEED-EB O&amp;M certification</u></b>				
<b>Note: Some items replace/adjust items noted in Categories 1 &amp; 2</b>				
Improvements based on Glumac reports, Energy & Water Use Comparisons (dated 1/4/10) and Solar Feasibility Report (dated 4/15/10), available in RQDP Library under Key Background Documents				
21	Increase roof insulation to R-30	Energy efficiency		Roof replacement identified in Cat. 1 - increased insulation should be done at that time
22	Insulate beneath event floor	Energy efficiency		Floor replacement identified in Cat. 1 - insulation should be done at that time, included in rink replacement number (verify qty.)
23	Insulate exterior walls	Energy efficiency		Unclear how to achieve this
24	Replace loading area doors w/insulated doors with automatic closers	Energy efficiency		
25	Provide daylight harvesting controls at concourse perimeter fixtures	Energy efficiency		
26	Provide new premium efficiency chiller (magnetic bearing, frictionless with Turbocore compressors)	Energy efficiency		Chiller replacement identified in Cat. 1 - determine if cost premium for high efficiency unit
27	Provide new high efficiency condensing boilers	Energy efficiency		Boiler replacement identified in Cat. 1 - determine if cost premium for high efficiency unit

## Category 3 - Ideal Improvements

Additional improvements pending market study & detailed building investigation

Item #	Improvement	Need	Cost TBD	Remarks/Timeline
28	Provide modular chiller system (either chiller-heaters or heat pump chillers) in lieu of boiler replacement	Energy efficiency & minimizes fossil fuel combustion on-site		Would replace items noted in Cat. 1, needs economic analysis
29	Provide new air handlers w/FanWall technology (reduces fan motor size, energy & maintenance savings)	Energy efficiency		Air handler replacement identified in Cat. 1 - determine if cost premium for high efficiency unit
30	Add air-to-air heat recovery system	Energy efficiency		
31	Install large paddle fans within rafters for air destratification during building warm-up mode	Energy efficiency		BAF products, requires economic analysis
32	Provide photovoltaic & solar hot water panel system on roof - could possibly achieve 225-kW. Thin film membrane would minimize load on roof.	Energy efficiency		Requires further study, may be conflict with Landmarks depending on system, most efficiently done as part of roof replacement
33	Install dual flush or high efficiency hands-free toilets, urinals, lavatories & showers	Water efficiency		Some restroom upgrades identified in Cat. 1 - fixture upgrade should be done at that time
34	Install Energy Star appliances, low flow devices & sink aerators at concessions and kitchen	Water efficiency		See Cat. 2 for concession & kitchen upgrades - may increase cost
35	Provide drip irrigation for all landscape areas	Water efficiency		Verify existing system
36	Provide green roof & rainwater recovery system for irrigation and/or flushing non-potable fixtures	Water efficiency		Not included in Cat. 1 roof replacement costs, could save btw. 1.25M & 1.5M gallons/year