

APPENDIX H:
MATERIALS CONSERVATION REPORT

MASONRY - CONDITION REPORT

HOLLYHOCK HOUSE

Barnsdall Park

July 15, 2009

Los Angeles, California



INTRODUCTION

This report is written at the request of Mr. Robert Chattel of Chattel Architecture and Planning to address the condition of masonry-related issues at the Hollyhock House in Barnsdall Park in Los Angeles, California. The scope of this report is limited to exterior and interior decorative masonry components. Structural masonry elements such as concrete foundations walls and hollow clay tile will be the purview of the Structural Engineer for the final report.

The report is based upon a visual survey of the interior and exterior of the building. Where possible, closer examination of the masonry took place to verify conditions observed from a distance. No intrusive or destructive testing took place, and it should be emphasized that the conclusions drawn from this survey are based upon primarily visual examination. Notwithstanding the limitations of this method, the visual inspection process can be a valuable tool in the assessment of a structure regarding evidence of decorative masonry problems, if they exist.

This report is organized according to the agenda describing areas of special interest and issued during the Pre-Job Walk of March 5, 2009. Where relevant, the comments of the report issued by Melvyn Green and Associates and dated July, 2009 are referenced as well.

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ITEM #1: WATER INFILTRATION AT PORCH ROOF

During forensic investigation recently conducted at the porch roof area, it was determined by the water infiltration specialist that details of the existing flashing were not performing as intended, allowing water to get inside the structure's envelope. This condition was determined by the careful and selective removal of decorative cast stone parapet units to expose the underlying flashing and support system. It was also confirmed during this activity that the decorative cast stone units can be safely removed without damaging the historic surface of the pieces. This is most likely due to the means and methods (softer bedding mortar, passive anchor system) applied during the previous restoration of 2002. This fact will be significant in the anticipated work to be performed in this area.

Additional selective removal was also performed in the central area of the ceramic tile deck above the porch. Examination of the structural interior between roof joists revealed wood decay and confirmed the presence of moisture.

RECOMMENDATION: It is important to remove enough existing building fabric to allow for the installation of a proper and watertight membrane above the roof and porch area. The existing cast stone parapet units should be carefully removed and documented prior to storage. The existing roof tile area should be stripped to structural elements such as joists. After any structural upgrades as recommended by the SE, a new and durable roof should be installed, taking into account the design agenda. If a new roof is desired without the tile surface, a simple and durable waterproof surface can be installed over upgraded plywood subsurface. If the design intent is to cover the area with tile, it will be possible to cover the area with lighter-weight materials (backer-board instead of 2" cement slab, etc.) and still use ceramic to function as the primary surface. The previously removed cast stone units can then be reinstalled after all flashing and waterproofing is completely upgraded.

ITEM #2: LIVING ROOM FIREPLACE AND CHIMNEY

The current fireplace assembly and chimney is recognized by the SE as potentially unsound in future seismic activity and worthy of intervention. He recommends replacement of the upper chimney with a non-masonry material to minimize upper shear forces. He also recommends installation of a new structural support below the existing chimney and firebox foundation to spread the weight of the assembly. Reference is also made to the existing evidence of masonry movement in the decorative bas-relief surface of the south-facing fireplace area.

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RECOMMENDATIONS: Regarding decorative cast stone elements of the fireplace and chimney, it is entirely possible to selectively remove and salvage all the fascia pieces without damaging them if such a program is determined to be necessary. While it may be possible and more desirable to install special support caissons underneath the existing fireplace *in situ*, it may be deemed necessary to remove the existing chimney and fireplace from the top down and install a new foundation. If such a program is initiated, the decorative fascia pieces would be removed by working from the top and inside of the chimney and firebox to cut all metal anchors behind the decorative surface, at the interface between firebrick and/or HCT and decorative cast stone blocks. They could then be documented and stored until later reinstallation after foundation and flue issues are resolved.

If the decision is made to perform the work without removing existing decorative material, it should be noted that the likelihood of successfully shifting stones to counter the differential movement in the face is minimal. The risk of damaging the historic veneer by applying pressure to an edge or side is significant and would have to be carefully considered before proceeding.

ITEM #3: PLAYROOM FIREPLACE

The engineer's report recommends removal of existing URM flue lining and rebuilding, with new structural attachments at the interface between flue and wood-framed walls. No existing damage was noted on the decorative facing of the fireplace and hearth.

RECOMMENDATION : Assuming that the program of flue replacement is executed, the use of a pre-manufactured metal flue system seems appropriate as it will reduce the mass and weight of masonry in the existing design. Replacing with newer materials will also allow a firmer attachment to the wood portion of the structure, and eliminate the source of cracking and transferral through the exterior stucco. Existing historic cast stone and brick at the fireplace and firebox would remain in place during this process, and be protected and secured as new flue assemblies are installed and anchored.

ITEM#4: GARAGE

According to the March 5th Agenda referenced above, the BOE is seeking suggestions on how to make functional with kitchen and bathroom. Per Mel Green, the work necessary to upgrade the building to meet code requirements was performed during the recent FEMA work and no additional structural work is required at this time. Interior improvements would involve the installation of new and non-historic materials.

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RECOMMENDATION: If interior alterations are performed, the likelihood is that the existing concrete surface will be covered with a new surface material to conform to existing code requirements (ceramic tile, etc.). Until more details are available it is assumed that the existing historic concrete floor will be covered with a non-historic material and therefore not require restoration.

ITEM #5: TREE DISPLACEMENT AT SOUTH WALL

The existing pine tree at the south wall has grown over the years, putting pressure on the foundation of the wall and creating displacement in the wall itself. It was noted at the March 5th Job Walk that the crack had grown by approximately ¾” since the most recent repairs performed in 2002. This was also referenced in the engineer’s report as evidence that the displacement issue will continue to be a long term problem as long as the tree is allowed to remain.


RECOMMENDATION: The tree should be removed and replaced with a new tree planted further away from the wall to allow for future growth. After tree removal the wall could be carefully dis-assembled, with cast stone units removed first, followed by the demolition of existing HCT and cement stucco, and finally the selective removal of any cast stone units that might comprise the base. After installation of a new concrete foundation in this area, the removed portion of the wall could be reinstalled to match its original configuration.

ITEM #6: CRACK AT LIBRARY WALL

The engineer’s report describes cracks at the southwest corner of the library as extending from the base of the foundation up the wall to below the window frame, and ascribes possible causes as soil-related. This crack damage was repaired only on the cast stone base during the recent FEMA work, but will likely occur again in the future given the know propensity of the building site for settlement.

RECOMMENDATION: If remediation is performed, it will likely involve the placement of additional support under the existing foundation in this area. After concrete placement is complete, the existing cast stone and decorative stucco can be repaired, with the likely end of settlement in this area.

Respectfully Submitted,



Charles Kibby
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APPENDIX I:
COST ESTIMATE



Hollyhock House
Historic Renovation
Los Angeles, California

Rough Order of Magnitude Statement of Probable Cost
October 7, 2009
Cumming Project No. 09-00302.00

Prepared for LSA Associates Inc.

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INTRODUCTION

1. Basis Of Estimate

This statement is based on the Rough Order of Magnitude package as prepared by LSA Associates Inc. (dated 5/1/09), received on 8/13/09, along with verbal direction from the architect and engineer.

Consultant Reports: Supplemental Historic Structure Report prepared by LSA, Tree Removal Report prepared by Valley Crest Tree Company, Historic Pool Renovation Report prepared by Addison Pools Inc., Cost Report prepared by Design Doors™

2. Scope of Estimate

Define in detail the Historic Renovation construction broke out into (10) items needed to accurately portray the original look of the Hollyhock House

3. Items Affecting the Estimate

A Specific Inclusions

Items which are detailed in the backup to this estimate include the following:

- 1 Allowance for Bookstore to include: Floor, Ceiling and Wall finishes, Shelving, Casework, etc.

B Specific Exclusions

Items which are not detailed in the backup to this estimate include the following:

- 1 Professional design and consulting fees.
- 2 General building permit.
- 3 Testing fees.
- 4 Owner's field inspection costs.
- 5 Construction / project manager's fees.
- 6 Plan check fees and building permit fees.
- 7 Furnishings, fixtures and equipment (FF&E) / Group II.
- 8 Owner-furnished items.
- 10 Building signage beyond code-required signage.
- 11 Artwork and interior plants.
- 12 Construction contingency.
- 13 Move-in costs or maintenance costs after move-in.
- 14 Financing and carry costs.
- 16 Major site and building structures demolition.

C Items Affecting the Cost Estimate

Items which may change the estimated construction cost include, but are not limited to:

- 1 Modifications to the scope of work included in this estimate.

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- 2 Restrictive technical specifications or excessive contract conditions.
- 3 Any specified item of equipment, material, or product that cannot be obtained from at least three (3) different sources.
- 4 Any other non-competitive bid situations.
- 5 Bids delayed beyond the projected schedule.

D Assumptions made in the Cost Estimate

This estimate was prepared under the following assumptions:

- 1 The site will be fully accessible during normal working hours.
- 2 No phasing will be required.
- 3 Construction contract procurement method is competitive, public G.C. bid.

4. Notes

Statement of Probable Cost

Cumming has no control over the cost of labor and materials, the general contractor's or any subcontractor's method of determining prices, or competitive bidding and market conditions.

This opinion of the probable cost of construction is made on the basis of the experience, qualifications, and best judgment of a professional consultant familiar with the construction industry. However, Cumming cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from this or subsequent cost estimates.

The statement reflects probable construction costs obtainable in a competitive and stable bidding market. This estimate is based upon a minimum of four (4) competitive bids from qualified general contractors, with bids from a minimum of three (3) subcontractors per trade. This statement is a determination of fair market value for the construction of the project and is not intended to be a prediction of low bid. Experience indicates that a fewer number of bidders may result in a higher bid amount, and more bidders may result in a lower bid result.

In accordance with industry analyses, it has been determined that the number of competitive bids obtained may have the following effect:

1 bid	add	15% to 40%
2 to 3 bids	add	8% to 12%
4 to 5 bids		-4% to +4%
6 to 8 bids	deduct	5% to 7%
9 or more bids	deduct	8% to 25%

Caveat emptor! The bid price is not necessarily the final cost. Please be advised that opening up the bid process to all comers invites bid-day errors and "lowball" bids from potentially less-than-qualified bidders who will seek to make their profit on the job via an unending stream of change order requests.

The Cumming staff of professional cost consultants has prepared this estimate in accordance with generally accepted principles and practices. This staff is available to discuss its contents with any interested party.

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Recommendations for Cost Control

Cumming recommends that the Owner and the Architect carefully review this entire document to ensure that it reflects their design intent.

Requests for modifications of any apparent errors or omissions to this document must be made within ten (10) working days of the date of this estimate. Otherwise, it will be understood that the contents have been concurred with and accepted. If the project is over budget, or there are unresolved budgeting issues, alternate systems / schemes should be evaluated before proceeding.

Basis for Quantities

Wherever possible and practical, this estimate has been based upon the actual measurement of different items of work. For the remaining items, parametric measurements were used in conjunction with references from other projects of a similar nature.

The gross floor area (GFA) quantities utilized herein .

Basis for Unit Costs

The unit costs enumerated herein are based on current bid prices in the Los Angeles, California area.

Subcontractor's overhead and profit is included in each line item unit cost. This overhead and profit covers each subcontractor's cost for labor burden, materials and equipment sales taxes, field overhead, home office overhead, and profit. The general contractor's overhead and profit is shown separately on the Summary.

Sources for Pricing

This estimate was prepared by a team of qualified cost consultants experienced in estimating construction costs at all stages of design.

These consultants have used pricing data from the Cumming database for construction, updated to reflect current market conditions in the Los Angeles, California area at the time the estimate was prepared. In some cases, quotes were solicited from outside sources to substantiate in-house pricing data.

Subcontractor's Mark-ups

As stated earlier, subcontractor's mark-ups have been included in each line item unit cost. Depending on the trade, these mark-ups can range from 15% to 20% of the raw cost for that particular item of work.

5. Prorates

General Conditions

A reasonable allowance based on 15% of the construction cost subtotal has been included for the contractor's general conditions.

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Contractor's Bonds

A reasonable allowance based on 1% of the construction cost subtotal has been included for the contractor's payment and performance bonds (if required).

Contractor's General Liability Insurance

A reasonable allowance based on 1% of the construction cost subtotal has been included for the contractor's general liability insurance.

Contractor's Fee

A reasonable allowance based on 10% of the construction cost subtotal has been included for the general contractor's home office over head and profit. Site overhead is included in the general conditions.

Design / Estimating Contingency

A reasonable allowance of 25% for undeveloped design details has been included in the Summary of this estimate. As the design of each system is further developed, details which increase cost become apparent and are incorporated into the estimate.

Escalation

Escalation is calculated from the basis of this estimate to the Midpoint of Construction using the following rates:

Construction Start:	01/01/10
Construction Completion:	12/31/10
Construction Midpoint:	07/02/10
Construction Duration:	12 Months
Compound Escalation:	2.21%
Annual:	2009 3.00%
	2010 3.00%
	2011 5.00%

Phasing Allowance

No phasing is required for this project.

Construction Management Fee

Not applicable.

Construction Contingency

This is a part of the Soft Costs which have been excluded from this estimate but it is prudent for all program budgets to include an allowance for change orders which occur during construction. These change orders normally increase the cost of the project. It is recommended that the owner, in their program budget, carry a percentage of anywhere from 5% - 10% of the construction cost for this construction contingency.

Construction Cost Summary

Element	Total
Areas of Study	\$2,111,298
Areas of Study w/ Option 1	\$2,108,001
Areas of Study w/ Option 2	\$1,943,127

Hollyhock House
Historic Renovation
Rough Order of Magnitude Statement of Probable Cost

Areas of Study

Areas of Study Construction Cost Summary

Element	Total
Item 1: Living Room Fireplace	\$521,000
Item 2: Child's Room Fireplace	\$197,848
Items 3, 4, and 5a: Roofing: Porch, Dining Room, and Gallery	\$111,949
Item 5b: Gallery (Interior)	\$52,760
Item 6: Library Exterior Wall	\$141,519
Item 7: Sunroom Wall	\$52,760
Item 8: Patio Wall at Location of Mature Tree	\$164,873
Item 9a: Round Fountain	\$164,873
Item 9b: Square Fountain	\$329,747
Item 10: Garage Building	\$373,969
Total Cost:	\$2,111,298

Areas of Study Detail Elements

Element	Quantity	Unit	Unit Cost	Total
<u>Item 1: Living Room Fireplace</u>				
Foundation				
Underpin the fireplace foundation with caissons extending into bedrock under the existing foundation	1	LS	\$70,000.00	\$70,000
Add new concrete beam	1	LS	\$32,000.00	\$32,000
Chimney				
Remove a portion of the brick chimney above the roof and skylight, and construct a new chimney comprised of metal studs	1	LS	\$64,000.00	\$64,000
Cast Stone Mural				
Refurbish existing individual blocks to recreate the monolithic appearance with structural integrity	1	LS	\$150,000.00	\$150,000
Markups	64.87	%	\$316,000.00	\$205,000
				<u>\$521,000</u>
<u>Item 2: Child's Room Fireplace</u>				
Reconstruct the chimney from the 2nd floor	1	LS	\$120,000.00	\$120,000
Markups	64.87	%	\$120,000.00	\$77,848
				<u>\$197,848</u>
<u>Items 3, 4, and 5a: Roofing: Porch, Dining Room, and Gallery</u>				
Refurbish existing damaged roof areas (Based on cost provided by Independent Roofing Consultants)				
Built-up Roofs	1	LS	\$13,500.00	\$13,500
Waterproofing (Elastomeric Deck Coating)	1	LS	\$47,200.00	\$47,200
Waterproofing (Under glazed tile)	1	LS	\$5,200.00	\$5,200
Miscellaneous refurbishing, allow	1	LS	\$2,000.00	\$2,000
Markups	64.87	%	\$67,900.00	\$44,049
				<u>\$111,949</u>

Areas of Study Detail Elements

Element	Quantity	Unit	Unit Cost	Total
<u>Item 5b: Gallery (Interior)</u>				
Refurbish damaged "cracked" areas	1	LS	\$32,000.00	\$32,000
<i>Markups</i>	64.87	%	\$32,000.00	\$20,760
				<u>\$52,760</u>
<u>Item 6: Library Exterior Wall</u>				
Underpin the corner of the existing structure with concrete, (The concrete should extend down to competent material)	1	LS	\$64,000.00	\$64,000
Install stainless horizontal rods at the 1/3 points of the wall height	1	LS	\$36,000.00	\$36,000
<i>Markups</i>	64.87	%	\$64,000.00	\$41,519
				<u>\$141,519</u>
<u>Item 7: Sunroom Wall</u>				
Refurbish crack on existing Sunroom wall	1	LS	\$32,000.00	\$32,000
<i>Markups</i>	64.87	%	\$32,000.00	\$20,760
				<u>\$52,760</u>
<u>Item 8: Patio Wall at Location of Mature Tree</u>				
Demo and haul off-site including root ball (1) pinus specie. Valley Crest Tree Company will construct temporary plywood walls for protection of the existing walls from falling debris. The plywood walls will be built with 3/4" plywood 2" x 4" and 2" x 6" Douglas fir.	1	LS	\$59,500.00	\$59,500
Demo and haul off-site including root ball (2) Laurel trees	1	LS	\$4,500.00	\$4,500
Refurbish existing stucco wall, including the addition of a new foundation	1	LS	\$36,000.00	\$36,000
<i>Markups</i>	64.87	%	\$100,000.00	\$64,873
				<u>\$164,873</u>

Areas of Study Detail Elements

Element	Quantity	Unit	Unit Cost	Total
<u>Item 9a: Round Fountain</u>				
Refurbish structure, (Cost based on the report from Addison Pools Inc.)	1	LS	\$100,000.00	\$100,000
<i>Markups</i>	64.87	%	\$100,000.00	\$64,873
				<u>\$164,873</u>
<u>Item 9b: Square Fountain</u>				
Replace structure, (Cost based on the report from Addison Pools Inc.)	1	LS	\$200,000.00	\$200,000
<i>Markups</i>	64.87	%	\$200,000.00	\$129,747
				<u>\$329,747</u>
<u>Item 10: Garage Building</u>				
Demolition				
Allowance to demolish existing interior of garage and bathroom, and prepare for new finishes	1,015	SF	\$10.00	\$10,150
Architectural				
Allowance to transform garage into a bookstore, and refurbish existing bathroom, including all necessary finishes.	1,015	SF	\$185.00	\$187,775
Historic Garage Doors				
Remove existing and install (3) new historic garage doors, (Based on cost provided by Designer Doors™)	1	LS	\$28,896.75	\$28,897
<i>Markups</i>	64.87	%	\$226,821.75	\$147,147
				<u>\$373,969</u>

Living Room Fireplace Options

Living Room Fireplace Options

Element	Quantity	Unit	Unit Cost	Total
<u>Option 1: Slurry Foundation</u>				
Add				
Foundation				
Inject an engineered soil comprised of a slurry mixture into the existing foundation	1	LS	\$100,000.00	\$100,000
Deduct				
Foundation				
Underpin the fireplace foundation with caissons extending into bedrock under the existing foundation	(1)	LS	\$70,000.00	(\$70,000)
Add new concrete beam	(1)	LS	\$32,000.00	(\$32,000)
<i>Markups</i>	64.87	%	-\$2,000.00	(\$1,297)
				<u>(\$3,297)</u>

Option 2: "Do Nothing"

Deduct				
Foundation				
Underpin the fireplace foundation with caissons extending into bedrock under the existing foundation	(1)	LS	\$70,000.00	(\$70,000)
Add new concrete beam	(1)	LS	\$32,000.00	(\$32,000)
<i>Markups</i>	64.87	%	-\$102,000.00	(\$66,171)
				<u>(\$168,171)</u>