Town of Lincoln, Massachusetts
Community Preservation Committee
Project Submission Sheet

Requests received by November 15, 2004 will be considered for recommendation at the April 2005 Town Meeting.

Project Name: Replace roof on the Gund building of the Lincoln Public Library

Submitted by: Barbara Myles, Director  Submission Date: November 15, 2004

Address, Phone, E-mail:
Lincoln Public Library    (781) 259-8465    bmyles@minlib.net
3 Bedford Road
Lincoln, MA 01773

Town Committee or Organization (if applicable): Lincoln Public Library

Brief description of the project: The artificial slate now on the Gund roof is deteriorating. Numerous shingles are cracked and broken. The "skin" of many of the shingles is worn, and the cement-fiber core is exposed. Once the cement-fiber core is exposed, the shingles absorb water like sponges and allow water to enter the building. Already the library has leaks at a couple of locations that could easily be roof related. Gorman Richardson Architects recommends replacing the Gund roof within a 1 - 3 year time frame, with a real slate roof before the roof fails.

Time frame for completion of the project:
Summer 2005

How does this project help preserve Lincoln’s character or further its mission?
Replacing the Gund roof will prevent major leaks from destroying library materials and damaging the library building. The artificial slate shingles now on the Gund roof were a new product in 1989, when the Gund addition was built, so there was no long term product history for these artificial slate shingles. Real slate does have a long term product history with an expected useful life of 80 to 100 years. Real slate will preserve the historic character of the Lincoln Public Library, which is located in the center of Lincoln's History District.

What are your funding requirements?

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Implementation Costs</th>
<th>Maintenance Costs</th>
<th>Total Costs</th>
<th>Other Funding Sources (and $ amount)</th>
<th>CPC Funds Requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>$579,985</td>
<td></td>
<td>$579,985</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

PLEASE ATTACH SUPPORTING DOCUMENTS OR OTHER INFORMATION

2006-03

For CPC Use:
Received on: / / 
Received by: 

Determination:
Reviewed on: / / 
# ROOF REPLACEMENT BUDGET

**Gund Roof North, Gund Roof South**  
**Lincoln Public Library**

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Unit Cost</th>
<th>Quantity</th>
<th>Extension</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demolition of the existing roof and copper</td>
<td>Square foot (SF)</td>
<td>$15</td>
<td>5,000</td>
<td>$75,000</td>
<td></td>
</tr>
<tr>
<td>Gund South, labor &amp; material: Rebuild dormers</td>
<td>Each</td>
<td>$2,500</td>
<td>2</td>
<td>$5,000</td>
<td></td>
</tr>
<tr>
<td>Labor &amp; materials: New slate roof (includes scaffolding)</td>
<td>Square</td>
<td>$5,000</td>
<td>50</td>
<td>$250,000</td>
<td></td>
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<tr>
<td>Labor &amp; materials: New copper gutters</td>
<td>Linear foot (LF)</td>
<td>$45</td>
<td>275</td>
<td>$12,375</td>
<td></td>
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<tr>
<td>Labor &amp; materials: New copper downspouts</td>
<td>LF</td>
<td>$35</td>
<td>336</td>
<td>$11,760</td>
<td></td>
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<tr>
<td>Labor &amp; materials: Copper flashing work @ valleys, roof-to-turret, base of chimney, etc.</td>
<td>Allowance</td>
<td></td>
<td></td>
<td>$50,000</td>
<td></td>
</tr>
<tr>
<td><strong>Sub-total of trades</strong></td>
<td></td>
<td></td>
<td></td>
<td>$364,135</td>
<td></td>
</tr>
<tr>
<td>Dumpster &amp; hauling</td>
<td>Month</td>
<td>$2,000</td>
<td>1</td>
<td>$2,000</td>
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<tr>
<td>Port-A-Toilet</td>
<td>Month</td>
<td></td>
<td>4</td>
<td>$500</td>
<td>$2,000</td>
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<tr>
<td><strong>Sub-total, trades, scaffold, dumpster, toilet</strong></td>
<td></td>
<td></td>
<td></td>
<td>$388,135</td>
<td></td>
</tr>
<tr>
<td>Contingency @ 5%</td>
<td></td>
<td></td>
<td></td>
<td>$19,407</td>
<td></td>
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<tr>
<td>General conditions @ 10%</td>
<td></td>
<td></td>
<td></td>
<td>$40,754</td>
<td></td>
</tr>
<tr>
<td>Overhead and profit @ 10%</td>
<td></td>
<td></td>
<td></td>
<td>$44,830</td>
<td></td>
</tr>
<tr>
<td>Permits and fees @ 6%</td>
<td></td>
<td></td>
<td></td>
<td>$29,588</td>
<td></td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td></td>
<td></td>
<td></td>
<td>$522,714</td>
<td></td>
</tr>
<tr>
<td>Architectural &amp; engineering fees @ 10%</td>
<td></td>
<td></td>
<td></td>
<td>$52,271</td>
<td></td>
</tr>
<tr>
<td>Structural engineering study</td>
<td></td>
<td></td>
<td></td>
<td>$5,000</td>
<td></td>
</tr>
<tr>
<td><strong>GRAND TOTAL, ALL EXPENSES</strong></td>
<td></td>
<td></td>
<td></td>
<td>$579,985</td>
<td></td>
</tr>
</tbody>
</table>
Timeline of the Public Bid Process for the Library’s Building Repairs

January 2004 – Conception Phase
  · Simpson, Gumpertz, and Heger performed a Condition Site Survey in January 2004 and found $1.2 million of building repairs.

February 2004 – Town Government Authorization
  · Capital Planning Committee and Finance Committee approves $104,100 in building repairs for the library
  · Community Preservation Committee approves $75,000 for window restoration/repairs in the Preston Building.

March 2004 – Approval by Town Residents
  · Residents at Town Meeting approve Article 8 (proposed by the Community Preservation Committee), which includes $75,000 for window restoration/repairs to the Preston Building, and Article 11 $104,100 for building repairs and improvements to the Lincoln Library.
  · Articles 8 and 11 pass when residents vote at townwide election.

April 2004 through August 2004 – Design Phase
  · April
    Building Committee writes a Request for Qualifications (RFQ), with the help of Town Counsel, for architectural/engineering consulting services for repairs at the library.
  · May
    Advertisements are placed in the Central Register and Waltham Tribune for the RFQ for designer services during the week of May 12.
    A pre-bid conference is held on May 18 to show potential bidders the repairs included in the RFQ.
  · June
    Bids are received on June 1 from David L. King Architects, Gorman Richardson Architects, LIEBSTUDIOS – architecture, Peterson Associates Consulting Engineers, and TBA Architects.
    The Building Committee recommends Gorman Richardson Architects (GRA) to the Board of Trustees at the June 15 Trustees meeting.
    On June 21 the Building Committee agreed to the language for a letter of intent, which states that the library awards the designer services contract to GRA and requests that work begin immediately while the contract is finalized.
    The letter of intent is sent to GRA on June 22.
  · July
    The designer services contract is signed by the library (on July 8), Town Counsel, Town Accountant, and GRA (on July 27).
    The Building Committee meets with GRA on July 14 and 21 to develop bid documents for construction phase.
    GRA completes construction bid documents on July 28 and Building Committee approves them on August 4.
Beginning August 2004 – Construction Phases

- August
  Advertisements are placed in the Central Register and Waltham Tribune for remedial construction work during the week of August 4.
  A pre-bid conference is held on August 6 but no companies come to the conference.
  Another advertisement is placed in the Central Register for the week of August 18.
  A second pre-bid conference is held on August 25 and representatives from eight companies are present.

- September
  Sub-bids are received on September 8 for the Preston Building windows and roof work with related metal work on the flat roof. Only one bid is received for each project so these bids are rejected per MGL c. 149 §44S.
  GRA instructs the general contractors to carry allowances in their bids for the rejected sub-bids.
  Bids from general contractors are due on September 14.
  Only two bids for the main bid were received on September 14 and the bids were for amounts over our budget. Both bids were rejected as per MGL c. 149 §44S.
  Invitational bids were sent to qualified companies for the sub-bid on September 20 and are due on October 6.
  Invitational bids were sent to qualified general contractors for the main bid on September 27 and are due on October 13.

- October
  Only one sub-bid was received on October 6 for the roof work with related metal work on the flat roof but the amount of this bid is over our budget. This bid was rejected as per MGL c. 149 §44S.
  One bid was received for the window restoration sub-bid and this bid was within our budget.
  On October 13 one main bid was received but it was over budget. This bid was rejected as per MGL c. 149 §44S.

$228k bid $160 budgeted
sound roof fake slate tiles

Prepared by Barbara Myles, 10/13/2004.
September 23, 2004

Ms. Barbara Myles
Director
Lincoln Public Library
3 Bedford Road
Lincoln, MA 01773

RE: Gund Roof Recommendations

Dear Ms. Myles,

Herein Gorman Richardson Architects, Inc. (GRA) is providing recommendations for action associated with the Gund roofs.

**Background**

The majority of the Gund roof areas are clad with simulated slate shingles, with copper flashings, gutters and downspouts. The intent of the simulated slate shingle product was to provide the look of real slate but at a lower cost. Another feature was the simulated slate weighs less than real slate.

In review of the Construction Documents for the original Gund construction (done on September 16, 2004) GRA learned the following product was specified for installation to the roofs:

- Simulated slate: The style is "Slate"; the size is "Continental", meaning each shingle is 10 – 5/8" x 15 – 3/4" x 3/16" thick, and were manufactured by Eternit, Inc. At this juncture we believe this is the installed product.

This past July and August, GRA performed field survey work associated with producing construction documents for Phase 1 Repairs. The work included surveying the Gund roofs to confirm observations as communicated in the *Condition Survey Report* dated 26 January 2004, prepared by Simpson Gumpertz & Heger, Inc. (SG&H, Boston, MA). SG&H's recommendations include:

- Within the next 0 – 18 months: "replace all broken simulated slate shingles". The budget amount for this year for this is $500. Note that this work was bid recently as part of the Phase 1 repairs.

- In the long term, 7 – 12 years: "remove and replace all synthetic slate shingles." The budget amount for this is $396,000.

**Product History**

While finding supporting documentation is difficult, GRA’s own recollection is that around the time the shingles were installed, Eternit simulated slates and similar
September 23, 2004
Ms. Barbara Myles
GRA Recommendations
Page 2

products by other manufacturers were experiencing problems on a wide-scale basis. Specifically, shingles were experiencing deterioration due to water penetrating into the cement-fiber core.

As stated, documentation of this is difficult to find, given this occurred better than 10 years ago. However, discussions with roofers during the bidding period for the Phase 1 repairs confirmed GRA's recollection of such problems. Meaning, during the bid phase, roofers did call and volunteered that they do not believe replacing broken shingles is wise, because 1) the product is not available, 2) walking on the roof will likely cause more damage, and 3) because of the product history, consideration should be given to replacement anyway.

The problem was that the shingles themselves had a smooth polished surface that formed what is commonly called “the skin.” The purpose of the skin was to provide a barrier against water penetration. In many cases, the skin would wear exposing the cement-fiber core, and this core is what would take on water.

Observations

During GRA’s field survey work, our observations included the following:

- Numerous shingles are cracked and broken
- The “skin” of many shingles is worn, and the cement-fiber core is exposed
- At a couple locations, there are leaks that could easily be roof related

Recommendations

GRA recommends consideration be given to replacing the Gund shingles with a new roof within a 1 – 3 year time frame. This is based on the following:

- The history of the product
- Discussions with roofers
- GRA’s own observations
- Walking on the roof to replace broken shingles may cause more damage
- The product is no longer available for replacement work
- There are a couple of locations of potential roof leaks

One other consideration is that during the recent bidding, GRA learned that the budgeted amount of $500 for the repair of broken and cracked shingles is not enough money anyway.

Even beyond this, there is support for doing the work on an even more expeditious schedule than 1 – 3 years. Another SG&H recommendation is to install new snow fences above pedestrian walkways, because currently there are none. The budgeted amount for this is $3,000.
THIS REPRESENTS A LIFE SAFETY CONCERN THAT SHOULD BE ADDRESSED IMMEDIATELY.

Doing the roof work would better facilitate installing new snow fences at required locations as opposed to doing new snow fences and roof work independently. One final consideration is this: The phase 1 repairs require some flashing work and installation of new downspouts. This too could be better performed as part of new roofing work, and may provide some savings, as doing only gutters means higher individual unit costs --- there is an economy of scale with doing more work.

Budget Recommendation

GRA recommends consideration be given to a budget amount of $425,000 - $475,000 that includes the work, new snow fences, and architectural and engineering fees, assuming the project is executed in the short term.

By way of commentary, it is possible to leave the roof in place for another 3 – 5 years or maybe even longer. However, if doing so the following should be kept in mind:

☐ The product will continue to deteriorate
☐ Predicting when and where pieces of shingles will fall is difficult:
  ☐ This too represents a life-safety concern
☐ Arguably the rate of deterioration will increase over upcoming years
☐ The product itself is no longer available for use in a replacement program
☐ Access to the roof to do the work is problematic anyway
☐ Ongoing leaks will cause additional deterioration

As you review and discuss this matter please do not hesitate to contact me directly with questions, comments or concerns. My direct dial is 508-544-2721.

Sincerely,

Gorman Richardson Architects, Inc.

Neil W. Rouleau, CCCA
Vice President, Building Envelope Services
First floor turret facing Trapelo Road - broken tile

First floor turret facing LL and terrace - worn tiles

Corner at LL and Bedford - broken tile

Story room turret - worn tiles
Greenwood Industries, Inc.
PO Box 2800
Worcester, MA 01613
Phone: 508 865 4940
Estimating Fax: 508 865 8016
John D’Ella – Ext. 211

To: Neil Rouleau, Gorman Richardson
From: John D’Ella

Fax: 508-435-0072
Pages: 1
Phone: 508-544-2800
Date: 9-28-04
Re: Lincoln Public Library
CC: File

Urgent % For Review Please Comment Please Reply Please Recycle.

Neil,

I did some budget pricing for just the roofs that have the faux slate on them. I came up with around 50 sq of roof area. If we use an unlined black or gray slate (roughly $400.00 per sq for material on that type of slate) it will cost around $250,000.00 to do the roofing. If you use Ecostar by Carlisle in lieu of the slate it would cost somewhere around $235,000.00. In both cases I figured new copper work as it relates to those roofs (gutters, downspouts, crickets, valleys, ridge & hip cap, snow guards, drip, conductor heads, step & base flashing). I didn’t go to crazy with the copper work or snow guards so you may need to adjust the pricing if you feel there may be some tricky or difficult metal conditions. There are other faux slates out there Bradco Supply made me aware of another one by Tamko I think it was called Lamonite that they said was pretty good as well. Ray Pike is the rep for the Ecostar product he has a new number that I do not have. If you call Bradco at 1-800-442 3039 ask for Pat he can probably direct you to who or where to call for samples and literature. You could also go online and see what's out there and find out how to contact for literature or samples.

Thank You,

John D’Ella
Barbara,

Attached is the budget prepared by Greenwood Industries for simulated slate roof replacement. In review of this, please keep the following in mind:

☐ When doing budgets, contractors often work to get the lowest possible number — as they always approach this as if they were bidding the project. Accordingly, costs are likely to be higher.

☐ Additional dollars should be added for gutter work. By way of recommendation, waiting on the downspouts (as discussed) makes sense as gutters are going to be required anyway, if redoing the roof.

☐ Additional dollars should be added for architectural fees. 10% is a good number for budget purposes.

Any questions please call me direct: 508-544-2721

Regards

Neil W. Rouleau
18 January 2005

Lincoln Library

Roofing budget:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget price from James M. McKenna &amp; Son (See attached)</td>
<td>$374,750</td>
</tr>
<tr>
<td>Bond</td>
<td>$6,000</td>
</tr>
<tr>
<td>Contingency (10%)</td>
<td>$38,000</td>
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<tr>
<td>Sub-total</td>
<td>$418,750</td>
</tr>
<tr>
<td>Consultant fees (arch &amp; struct eng.)</td>
<td>$43,000</td>
</tr>
<tr>
<td>Total</td>
<td>$461,750</td>
</tr>
</tbody>
</table>
JAMES M. MCKENNA AND SON
SPECIALTY ROOFING AND SHEET METAL
SLATE - COPPER - TILE - E.P.D.M.
3 CASTLE HILL ROAD - HOPKINTON, MA 01748
TELEPHONE (508) 435-6402 - FAX (508) 497-5148

JANUARY 3, 2005

LINCOLN PUBLIC LIBRARY
BEDFORD ROAD
LINCOLN, MA 01773

RE: BUDGET PRICING FOR THE LINCOLN PUBLIC LIBRARY ROOF.

JOB DESCRIPTION:

- ERECT SCAFFOLDING
- REMOVE AND DISPOSE OF SIMULATED SLATE ROOF TILES
- REMOVE AND STORE COPPER HIPS AND RIDGES
- RE-NAIL ROOF BOARDS OR PLYWOOD
- INSTALL 45-LB. TAMKO ORGANIC BASE SHEET TO ROOF SURFACE
- INSTALL W.R. GRACE ICE AND WATER SHIELD TO EYES, SIDEWALLS AND VALLEY AREAS
- FABRICATE AND INSTALL 20 OUNCE COPPER VALLEYS
- LOCATE, PURCHASE AND INSTALL A NEW OR SALVAGED ROOFING SLATE TO MATCH BLACK SLATE ON ORIGINAL LIBRARY BUILDING
- FABRICATE AND INSTALL NEW COPPER FLASHINGS WHERE NEEDED
- INSTALL 5 NEW DOWNSPOUTS AS PER ARCHITECTS SPECIFICATIONS
- RE-INSTALL COPPER HIPS AND RIDGES

ESTIMATED STOIC AND LABOR: $ 374,750.00

PLEASE NOTE: THERE MAY BE ADDITIONAL COST FOR REMOVAL AND DISPOSAL IF SIMULATED SLATE ROOF TILES CONTAIN ASBESTOS.

BUILDING PERMITS ARE INCLUDED IN PRICING, HOWEVER, ANY REQUIRED BONDS ARE NOT.