Restoration/Repair Needs Assessment for Gardner House

1) Complete ongoing joist repair project (additionally, structural crack injections may be needed on most joists to combat cracks and insect damage)

2) Install half-round gutters

3) Construct cellar cover

4) Install small electrical box outside house to allow for power tools and lights to be used in restoration

5) Re-point masonry with appropriate mortar

6) Repair/restore 4 ground-floor windows
   a) Window 1G to left of door on side of house with single entrance (NW corner?)
      a1) Kill mold/mildew
      a2) Remove sashes
      a3) Repair rot on jambs
      a4) Repair rot on sashes
      a5) Cut glass for sashes
      a6) Install glass using linseed putty
      a7) Paint using linseed paint

   b) Window 2G to right of single entrance (SW corner?)
      b1) Kill mold/mildew
      b2) Remove sashes
      b3) Repair rot on jambs
      b4) Repair rot on sashes
      b5) Cut glass for sashes
      b6) Install glass using linseed putty
      b7) Paint using linseed paint

   c) Window 3G above cellar opening (S side)?
      c1) Kill mold/mildew
      c2) Remove sashes
      c3) Repair rot on jambs
      c4) Repair rot on sashes
      c5) Cut glass for sashes
      c6) Install glass using linseed putty
      c7) Paint using linseed paint

   d) Window 4G left of chimney on E side
      d1) Kill mold/mildew
      d2) Remove sashes
      d3) Repair rot on jambs

d4) Repair rot on sashes
d5) Cut glass for sashes
d6) Install glass using linseed putty
d7) Paint using linseed paint

7) Repair/restore 4 2nd floor windows
   a) Window 1U on E side of Hall chimney
      a1) Kill mold/mildew
      a2) Remove sashes
      a3) Repair rot on jambs
      a4) Repair rot on sashes
      a5) Cut glass for sashes
      a6) Install glass using linseed putty
      a7) Paint using linseed paint

   b) Window 2U on W side of Hall chimney
      b1) Kill mold/mildew
      b2) Remove sashes
      b3) Repair rot on jambs
      b4) Repair rot on sashes
      b5) Cut glass for sashes
      b6) Install glass using linseed putty
      b7) Paint using linseed paint

   c) Window 3U on W side of Parlor chimney
      c1) Kill mold/mildew
      c2) Remove sashes
      c3) Repair rot on jambs
      c4) Repair rot on sashes
      c5) Cut glass for sashes
      c6) Install glass using linseed putty
      c7) Paint using linseed paint

   d) Window 4U on E side of Parlor chimney
      d1) Kill mold/mildew
      d2) Remove sashes
      d3) Repair rot on jambs
      d4) Repair rot on sashes
      d5) Cut glass for sashes
      d6) Install glass using linseed putty
      d7) Paint using linseed paint

8) Remove later dormer from structure

9) Re-roof with an appropriate material (cedar or oak shakes)

10) Install permanent ventilated cap on chimney

11) Re-lay brick around single entrance

12) Install some form of lighting in house to allow for better visibility during work

13) Inspect framing in attic areas, repair as necessary

14) Reconstruct 3 doors using extant door to staircase as model

15) Repair floor in Hall near single entrance

16) Strip or sand all interior window and door trim, repaint using linseed paint

17) Strip all 4 fireplace mantels, repaint using linseed paint

18) Repair/re-construct 2 currently missing upper floor hearths

19) Reconstruct steps to all entrances

20) Remove bead-board ceilings in downstairs rooms, repair plaster underneath

21) Repair all peeling and loose plaster

22) Paint walls and ceilings using linseed paint
23) Repair staircase as needed

Materials Used In the Gardner House Construction

……. = *more info needed*

1) Site-made brick, presumably made of clay, local limestone (burned and crushed), local sand (from the near-by river) and locally-drawn water
2) Lime putty mortar, made of local limestone (burned, crushed, re-constituted and slaked into a viable lime putty), local sand, locally-drawn water
3) Floor joists are timber-type (full log, each spanning entire width of structure), white oak,
4) Trim, doors and moulding are poplar……
5) Firebox hearths are (were) sand filled, presumably with local sands
6) Window glass is…….
7) Roof framing members are……..
8) Original roof was presumably wood shake (cedar or oak)…….
9) No evidence of shutters having been installed is seen…….
10) Foundation is chisel-cut local limestone

Western Kentucky University Sponsored Repairs To-Date (September 13, 2007)

1) Masonry re-pointing of east wall by WASCO using a lime-putty and Portland-Cement mortar.
2) Masonry re-pointing and improper mortar removal in various areas by students via workshops led by Taylor Restoration (Tonya Taylor) through P.I.E. Grant funds (this project is ongoing).
3) Mothballing of structure by students via workshops led by Taylor Restoration (Tonya Taylor) through P.I.E. grant funds. Mothballing included: creation and installation of ventilated window and door coverings, hanging of temporary replacement door to secure building, temporary capping of chimney, partial removal of insect nests from interior walls and windows.
4) Removal of concrete porch structure by students via workshops led by Taylor Restoration (Tonya Taylor) through P.I.E. Grant funds.
5) Ongoing joist repair project (funded by Biology Department WKU Upper Green River Preserve to be carried out by Taylor Restoration) necessitated by years of water damage from improper concrete porch. The project includes the repair of four floor joists using locally milled cedar (chosen for its rot and insect resistance). Various techniques are being used: The repair of two joists has been made via removal of rotted end of joist back approximately 2.5 feet and installing new cedar log section via half-lap joints held by half-inch stainless carriage bolts (both of which utilized the Abatron products LiquidWood and WoodEpox to stabilize, strengthen, adhere and fill-in wood, one of which included a combination of Abatron products and fiberglass mesh to fill in missing areas of wood). The third repair is to be a Timber Replacement System approach using epoxy-coated anchors set into new and existing sections of joist and held in place via epoxy. The final repair is to be a primarily chemical repair using Abatron products and fiberglass mesh or wood splices to rebuild the rotted end of the joist.
6) Half-round galva-lume gutters have been purchased from Classic Gutters, Inc. via P.I.E. Grant funds. Installation will begin later this year by students via workshops led by Tonya Taylor and funded through Graduate Assistantship funds.

Materials List

1) Roofing materials: wood shingles, nails, plywood sheathing Figured on 21 squares of Cedar SHINGLE (not shake) at $172.00/square plus estimated sheathing costs ($4300.00 BuildDirect.com)
2) Replacement flooring for area around door… ($200.00 Longwood Antique Woods)
3) "Old" glass ($0.00 – salvage)
4) Linseed window glazing ($60.00 Solvent-free Paint Allback)
5) Linseed paint for windows and interior trim ($200.00 Solvent-free Paint Allback)
6) Linseed paint for walls and ceilings ($500.00 Solvent-free Paint Allback)
7) Linseed oil ($60.00 Solvent-free Paint Allback)
8) Linseed oil maintenance wax ($30.00)
9) Glazier's points ($5.00 – Ace Hardware)
10) Salvaged wood for doors and replacing missing window parts ($2500.00)
11) Oil for refinishing flooring
12) Sandpaper (various grits) ($100.00 Ace Hardware)
13) Lime and sand for lime-based plaster ($55.00)

Equipment List

1) Hand Planes for profiling wood trim ($150.00)
2) Ladders (10' A-frame-$200.00, 30' extension-$300.00)
3) Miscellaneous replacement parts/repair parts for tools ($300.00)