**FMW Property Committee Annual Report  
April, 2016**

Friends Meeting of Washington owns three historic buildings with beautiful gardens in the heart of Washington, DC. Properly managed, the campus can both reflect Quaker values and enhance the Meeting’s collective spiritual life. The Property Committee plans for and maintains the safety, security, comfort and attractiveness of the Meeting’s buildings and grounds. It is responsible for the condition, repair and maintenance of building structures, systems, furnishings, equipment and major appliances. We also work closely with Meeting staff and coordinate with the Capital Improvement Task Force (with whom we have two members in common) in planning for the proposed renovation.

This report covers a two year span. Friends may recall that the Property Committee did not meet for several months in 2015 as it underwent a clearness committee process to assess its composition and improve its operations.

Committee members include Ken Orvis, Jay Harris, Justin Kwong, Brian Lutenegger and Merry Pearlstein. Administrative Secretary Debby Churchman is an ex-officio member. We could not function without excellent staff in the form of property manager, Ken Orvis, and events manager, Debby Churchman. We acknowledge our debt to our recent predecessors Francisco del Pozo, Jean Harman, Janet Dinsmore, Steve Coleman, Steve Brooks, Basil Kiwan, Martha Solt and Neil Froemming, as well as Mary Campbell, who served on the ad hoc committee acting in lieu of the committee last year. We work to honor these Friends by building responsibly on the excellent foundations they and their predecessors put in place.

The committee held four work days in 2014 and 2015, and others are being planned. We are grateful for the enthusiasm and generous participation of the community in keeping the campus in good repair.

As part of routine maintenance and to satisfy our insurers, the property manager conducts a monthly inspection of the campus to determine that safety systems are in good working order. Mechanical systems are also checked periodically.

The committee continues to explore opportunities for “greening” our campus such as the purchase of solar panels and/or “green” electricity.

***In the past two years***, ***the committee spent approximately $235,000 on the following projects:***

* Completed HVAC conversion in Quaker House (QH) and Carriage House (CH), resulting in elimination of the old boilers and radiators, increased efficiency in energy costs, and better control of heating and cooling by individual space users.
* Upgraded electrical capacity (“heavy up”) for entire campus to three-phase, 400 amp service, both for current needs and in anticipation of renovation.
* Completed structural repairs to QH
* Installed accessible first floor restroom in QH.
* Created a new kitchenette in CH
* Converted small office on second floor, north wing of QH to a “pass through” room to eliminate the need for traffic through QH Living Room (QHLR) and provide breakout space for QHLR events; furnished same.
* Repaired the east terrace railings and stonework.
* Refurbished the Terrace Room (TR): paint, window shades, ceiling fan/light
* Refinished Meeting House (MH) stairs
* Addressed water infiltration into Decatur Place Room (DPR)
* Installed glass in DPR and TR doors to enhance child safety
* Installed fixed stepladder in North Room (NR) window well for emergency egress
* Addressed asbestos abatement in QH/CH
* Replaced water heater in QH
* Installed dusk-to-dawn, motion-sensing historic LED fixtures for MH east porticos.
* Refinished 1st floor in MH
* Repaired hinges on MH east doors
* Completed numerous other “invisible” improvements.

We negotiated and the Meeting entered into a contract with MacDonald’s Cleaning Service for cleaning our entire campus. The new contract has not only resulted in much improved service for ourselves and our space use partners, but it also exemplifies Quaker values; our annual outlay of about $39,000 provides a living wage to our excellent custodian, Maria Torres.

***Work currently underway or committed*** (at an approximate cost of $43,500, which we have available) includes:

* Restoration and refinishing of Meeting Room cork floor (to be completed by the end of April)
* Repair/repainting of the wrought iron east garden perimeter fence
* Repair and reupholster of the sofas in the Parlor
* Replacement of Meeting Room HVAC (to be done the earlier of failure or start of renovation)

***Future needs***

The property manager has identified and categorized additional work that should be addressed in the future.

The attached Exhibit 1 lists “Property Work Planned, Authorized or In Progress as of early 2016.” The estimated cost of these items (between $20,000 and $35,000) can be paid from funds remaining in the Property Reserve, which will then be nearly depleted.

Exhibit 2, “Property Work Contemplated or in Discernment,” lists necessary or highly desirable projects which may cost from $78,000 to $240,000, for which the Meeting has no funds set aside.

Exhibit 3, “Unscheduled Property Work Most Apt to Threaten as of early 2016,” itemizes major systems such as the Meeting House roof and plumbing throughout the property which could fail at any time and require substantial investment. The estimated cost of these items is between $25,000 and $100,000. Funds have not been set aside for these purposes, and the work is not scheduled to be addressed by the proposed renovation.

Exhibit 4,”Property Work Mandated (but not paid for) by Proposed Renovation” lists additional items that will be necessitated by but are outside the scope of the renovation. Again, no funds are currently available for these projects.

***Finances***

The Property Committee does its best to anticipate needs, budget and apply its resources wisely. As is evident from the above discussion, the needs are substantial and the funds are limited, particularly while the Meeting discerns its ability to fund a major campus renovation. Funding for maintenance and improvements comes from our long-term space use partners, event rentals and any excess of annual income over expenses set aside for that purpose by the Meeting.

The committee believes that income from space use partners is currently near the maximum the market will bear given the existing condition of our buildings and uncertainty surrounding possible future renovations. We will revisit that issue once the renovations have been completed -- or if the Meeting decides not to proceed.

Thanks to the excellent work of our events manager, Debby Churchman, we continue to be delighted with event rental activity, despite seasonal fluctuations. Recognizing the limitations that our current alcohol-free policy imposes on event rental income, the committee has recommended that the Meeting approve a one year trial period in which to permit the serving of champagne, wine and beer at weddings and memorial services or as part of fund raisers by non-profit organizations under controlled conditions as one means of enhancing event rentals throughout the year.

Respectfully submitted,

The Property Committee

Brian Lutenegger and Merry Pearlstein, co-clerks

**Exhibit 1**

**Property Work Planned, Authorized or In Progress  
as of early 2016**

**Exterior Walls, Trim, Windows and Doors:**

* Proceed with waterproofing the parapet and adjoining wall areas above the north side of the Decatur Place Room. We have purchased an appropriate sprayer but we need to wait for warm/dry weather—can’t be done when temperatures are near or below freezing, and ineffective if walls contain dampness that has not evaporated.  
  Cost on the order of $400–800.
* The Meeting House (especially) outdoor wooden trim needs a modest amount of re-painting in certain places. We did a big job in 2012 so this is relatively minor.  
  Cost on the order of $1–2K unless we need serious ladder work.
* The Meeting House basement windows on the east side (those in the window wells) were never painted last time, and need work. They are also all termite-damaged so we should consider more extensive work, even replacement.  
  Cost on the order of $500-$1500; termite work more like $10K.
* We need to re-inspect outside windows, especially basement ones, to be certain the caulking is in the correct place (caulk below steel lintel, none above) and adjust as necessary (work day activity?).  
  Cost on the order of $100 if volunteer.
* Install custom acrylic or similar-material window well covers for all east-side window wells, to let in more light, save heat in winter, keep the wells cleaner, and shed a lot of the water that falls.  
  Cost: $1K–2K

**Chimneys**

* The flues that we are not using should be better blocked for energy-conservation reasons. This can be the inflatable pillow approach, or other plans (work day activity?).  
  Cost on the order of $200 if volunteer.

**Exterior Patios and Steps:**

* Unless we start on the Renovation before this summer we need to pressure-wash the existing stoop and steps outside Quaker House Living Room as they have become slippery with algae.  
  Cost on the order of $200 if we do it in-house.
* The east patio needs re-pointing and some repair work including re-leveling the half-moon shaped section above the roses that was added in the 1990s but has since settled and slipped.  
  Cost on the order of $4K–5K.

**Outdoor Lighting**

* Need to install timer for MH2 Meeting Room north portico light.  
  Cost: nil.
* Need to install timer for light at steps outside MH2 Stairwell Hall.  
  Cost: nil.

**Room-by-Room—Meeting House**

* MH1 Kitchen: The triple outlets at the NE corner really need to be changed so there are three circuits, and they could also be mounted as wire-mold style multiple outlets. This was also on the insurance inspection punch list.  
  Cost $50 (just rewire) to $200 (wire mold).
* MH1 Kitchen / Assembly Room: We have promised to rewire the double outlet at the Assembly Room pass-throughs as a wall outlet in the Assembly Room wall; the present setup is not optimal.  
  Cost on the order of $40
* MH1 Children’s Library: Re-build the separation wall as storage below and a glass wall and glass door in the upper section.  
  Cost on the order of $6K–9K if bundled with DPR mold abatement; more if a more complete job (new floor to replace asbestos; insulate ceiling; dropped ceiling and new lighting; improve electric more than just the new wall; finish and furnish to create “Learning Center” as envisioned by some Friends).
* MH1 North Room: We need to finish designing and installing emergency-egress capabilities at the window well, at this point mainly steps by Jon deWitt leading up to the window sill. This plan should be compatible with new, acrylic window well covers.  
  Cost on the order of $400–800.
* MH1 Vault: Install new flooring over worn-out asbestos tile.  
  Cost on the order of $150–300.
* MH1 Janitor Closet: Finish rough repair of walls, paint interior (the door is frequently left open during events, and viewing the present condition of this room detracts from the overall impression of the building).  
  Cost on the order of $200–400.
* MH1 Janitor Closet: Level/stabilize deteriorating asbestos flooring, install new flooring over top.  
  Cost on the order of $200–400.
* MH1 Main Office: Rewire the surface-mounted “computer” circuit on south wall to provide a second outlet at the right angle (and also branch the unused wire there into a dedicated 20-amp circuit through the wall in the Restroom Alcove).  
  Cost on the order of $10–30.
* MH1 Restroom Alcove: Add dedicated 20-amp outlet for Hall, through wall from Main Office per scheme above.  
  Cost included.
* MH2 Stairway Hall: Need to replace the panic bar and lock.  
  Cost on the order of $200–400.
* MH2 Stairway Hall: Still need to install the new ceiling light and add the new occupancy sensor for it.  
  Cost nil.
* MH2 Stairwell Hall: Install timer for outdoor light over entrance.  
  Cost nil.
* MH2 Restroom Hall: Still need to install the new ceiling light and add the new occupancy sensor for it.  
  Cost nil.
* MH2 Meeting Room: Improve the lighting (replace old 500W halogen floods).  
  Cost on the order of $200–600.
* MH2 Meeting Room: Install timer for north portico light.  
  Cost nil.
* MH2 Both Restrooms: Replace ceiling light fixtures with LED downlights; replace switch with sensor light-fan controls.  
  Cost on the order of $200
* MH2 Terrace Room: Install fan/light fixtures, add required wiring.  
  Cost nil.
* MH4 Meeting Room Attic (The Ballroom): Upgrade wiring to allow use of existing or install new lighting fixtures and allow installation of active, energy-efficient ventilation controls.  
  Cost on the order of $500–1500.

**Room-by-Room—Carriage House**

* CH1 Conference Room, Front Office, Rear Office: Repair floors along western north wall after removal of radiator pipes, perform other remaining radiator-removal repair in walls and ceilings.  
  Cost on the order of $400–800.
* CH1 Front Office: Repair water damage in ceiling from leaking toilet flange upstairs.  
  Cost $50–100.
* CH1 Future ADA Restroom: Complete low-cost conversion to temporary restroom (Renovation appears to be happening no sooner, and we need this as an emergency restroom).  
  Cost on the order of $150–300.
* CH1 Entrance Hall: Repair leaking vent that’s allowing water damage.  
  Cost on the order of $30–60.
* CH2 Corridor and 1st–3rd Offices: Repair floors after radiator removal.  
  Cost on the order of $200–400.

**Room-by-Room—Quaker House**

* QH1 Foyer: Terrazzo floor needs sanding and sealing.  
  Cost nil to $200.
* QH1 Foyer Closet: Post-radiator repairs and conversion to coat closet need to be completed.  
  Cost on the order of $200–400.
* QH1 Center Office Closet: The northern (Boiler Room) portion of the closet needs to be partially demolished and rebuilt, with the former radiator section turned into shelving and the back fully walled across for sound privacy.  
  Cost on the order of $600–1400.
* QH1 Boiler Room: Continue to replace the failed electric circuits and remodel the room to be rentable storage space or for similar use.  
  Cost on the order of $1500–3000.
* QH1 Janitor Closet: Finish the ceiling once the Boiler Room electric repairs are complete.  
  Cost on the order of $200–400.
* QH1 Stairs Closet: This space provides access to the former Asbestos Pit in which we need to clean out the remaining debris (very carefully, I would judge, despite the assurances of the asbestos remediation folks).  
  Cost nil.
* QH1 Dumbwaiter Closet: In the near term the plan is to remove tools from this room to the Property Manager office, and to refurbish it—still as a closet, probably with shelves—so it can be rented as storage for tenants.  
  Cost $200–800 depending on how nice we make it.
* QH1 West Office: An old exposed hydronic line still needs to be removed from near the ceiling.  
  Cost on the order of $200–400.
* QH1–2 West Stairs: Add fourth mounting point for east handrail; repaint; address lighting issues.  
  Cost on the order of $400–600.
* QH2 Restroom: Install the vent fan we purchased some time ago.  
  Cost on the order of $50–150.
* QH2–QH3 Offices and North Hall: Repair holes in floors where radiator pipes used to penetrate.  
  Cost on the order of $800–1200.

**Exhibit 2**

**Property Work Contemplated or in Discernment  
as of early 2016**

**Chimneys**

* The one flue we do use is the Assembly Room fireplace, which is out of service due to eroding mortar in the liner joints. We should plan to repair it at some point as having a fire is a traditional part of Thanksgiving and Christmas gatherings.  
  Cost on the order of $2K.

**Security:**

* Since at least 2011, Property Committee has been discussing options for improving our security systems (now a combination of dozens of different locks, most of them residential-grade). The thought has been to wait until we decide what to do in combination with the Renovation.  
  Cost for switching to a professional-grade master/sub-master lock system would be on the order of $400/lockset.  
  Cost for full-on electronic security would be on the order of $10–15K plus ongoing cost of monitoring.

**Exterior Patios and Steps:**

* Need to install code-required handrail at steps from QH1 North Office exit-door areaway up to QH West Alley (NOT AFFECTED by planned Renovation work).  
  Cost on the order of $500–$1000
* The east Terrace pavers need to be re-set, i.e. removed and replaced in firm, level condition with new leveling supports. This is just a few hours’ work along with the purchase of new supports, but requires appropriate experience / skills.  
  Cost on the order of $1K–3K.

**Meeting Room Sound Issues**

A longstanding concern of the Property Committee (and many members) has been the acoustic challenges of the Meeting Room. The central problem is the Quaker Acoustical Quandary—we want to be able to hear anyone, speaking from anywhere in a room, from anywhere else in the room. This is perhaps the ultimate of all acoustical engineering challenges. But we have identified things we can do that can help.

* Install sound-absorbing materials to lower the room’s liveliness: Mainly this means installing carpet atop the sounding form and vestibules, which will only help a little but is easy and cheap. Wall hangings, free hangings, other sound boards, acoustic tile and carpet would all help but Friends are not easy with such visible alterations to Meeting Room. There has also been a suggestion to install carpet or felt or similar on the *bottoms* of the bench seats—not certain of the efficacy of that plan, but it wouldn’t cost much.  
  Cost on the order of $150 to sky’s-the-limit depending on choices.
* Isolate Meeting Room from Florida Avenue: Because Friends like to open the big outside doors during worship—as a signal of welcome—options are limited to installing glass or Plexiglas/acrylic as a second, sound-incompatible layer over street-facing windows and vestibule doors/windows (the key to sound-deadening windows is two *different* layers of glass or etc.). This could be extremely effective at modest cost, or a more aesthetic but expensive route would be to order commercial sound-proofing windows and inner doors. Modifying the insides of the vestibules with sound-absorbing materials (ceilings, walls) would also help.  
  Cost on the order of $3K to perhaps $25K for fully custom acoustic windows to match existing.
* Isolate the Meeting Room from fan noises associated with the HVAC, or else purchase an especially quiet blower, or else install computerized active sound-isolation in the ducting system.  
  Cost on the order of $1K (extra for special blower) to $8K or more for active.
* Upgrade the hearing-assist system, which is at present nearly useless. This is a big topic, but some very good technology is now available.  
  Cost of this can vary over a wide range, with improvement related to price, from several hundred to several thousand dollars.

**Water Infiltration Issues** (ones not addressed by Renovation plans)

* Water infiltration along base of north basement wall (i.e. back sides of North Room and Furnace Room) and *possibly* also along NE side of North Room. This is rare but does happen and will not be addressed by the Renovation except by installing a stormwater stub under the Furnace Room that we can connect to. The permanent cure is to trench inside the wall and install a perforated drain line and weep mask up the wall behind the baseboard, and then connect the line(s) either to the sump or the proposed stub.  
  Cost on the order of $6K–18K.  
  A temporary cure would be to glue infiltration capture channel to the floor along the affected walls, designed to drain into the sump.  
  Cost on the order of $300–600.
* Until drain is installed and connected to stub, add backup pump, backup power, and/or failure monitoring for the Meeting House sump pump.  
  Cost on the order of $1K–2K.

**Plumbing: Sanitary Drains**

* The thinking on the Terrace Room has been that perhaps we would like to put in a counter and sink along the west wall, which can happen IF it is possible to attach to the adjacent restroom sink drain line. The question is the height (considering the need for the new sink drain to be well above the wye where they join so that restroom sink water doesn’t easily back up into the new Terrace Room sink).  
  Cost on the order of $2K–$6K if the height works.
* Failing toilet connection in CH2 Restroom: The toilet-to-plumbing connection here is damaged and fragile, and requires repeated maintenance. At some point soon we will have to go farther into the floor to replace the connection. That will trigger installing a new floor (which is needed anyway).  
  Cost on the order of $1500–3000 if we don’t remodel otherwise.
* Remaining sewer gas leak near QH1 Janitor’s Closet: This has been an elusive issue, and unfortunately we thought we had solved it before recently repairing the walls. We should probably just cut and cap the lines from this former bathroom right above the slab.  
  Cost on the order of $600–800.

**Plumbing: Hot and Cold Water Supply Lines**

* To meet code we should install anti-siphoning devices especially in the mop sink in the MH1 Furnace Room, but also on all campus hose bibs.  
  Cost on the order of $800.

**Electric**

* The Renovation presents an opportunity to redesign exterior lighting, especially the four powerful mercury lamps along the western eaves of Meeting House. (The Renovation should blow away and replace the ineffective lighting on the north side of Quaker House and Carriage House.)  
  Cost: on the order of $1–2K.
* One tangential piece involves the wooden support structure to which the Meeting House panels are attached. The whole structure has come loose from the wall and is presently supported in large part by the electric connections themselves. It would be a very good idea to address this before Renovation work (and electric inspectors). There is also a minor asbestos problem behind the support.  
  Cost: on the order of $500–1500.

**Room-by-Room—Meeting House**

* MH1 Kitchen: Some Friends would like a disposal. There may be electric service for that; it’s not clear (there’s a box with wires, but they are not live).  
  Cost on the order of $250–800 depending on electric supply situation.
* MH1 Assembly Room: Long term, depending also on the different full-floor reconfiguration options discussed above, it would be very worthwhile to open up the false ceilings and change the geometry to something more open with a better aesthetic. This could include a vaulted design—symmetrical taller areas with lower shelves left around for routing utilities and the like. Lighting would also be a factor.  
  Cost on the order of $15K–75K
* MH1 Rear Hall: While rebuilding Children’s Library wall and doing related work, replace old stationery cupboard and kluged storage shelf above pass-through: rebuild custom storage along this wall and above; also beneath pass-through. Insulate ceiling; install dropped ceiling; replace asbestos floor; clean up baseboards and electric.  
  Cost on the order of $3K–9K.
* MH1 North Room: The plan has been to build temporary storage for the stored tables and chairs in this room, out of more or less freestanding 2x4s with attractive fabric stapled over, and kind a barn door setup.  
  Cost on the order of $500–1000.
* MH1 North Room: Long-term, we need to finish the job of renovating this room from storage into usable multipurpose space (First-day school, adult classroom, conference room, small-event space), started in 2010, and furnishing it appropriately. This includes insulating the ceiling; installing a dropped ceiling and lighting; furring the north wall to pre-empt any moisture seepage issues that occur over time; adding electrical outlets on the west wall; etc.  
  Cost nil to perhaps $5K depending on options.
* MH1 Restroom Alcove: This area was built much later than the rest of the first floor and doesn’t match it at all. It would be useful to plaster the cinderblock wall, and add wainscot and baseboard (and perhaps install a new ceiling / lighting as well).  
  Cost on the order of $1000–2500 (or to $4500 with ceiling etc.).
* MH1 Restroom Alcove: This would be one possible place to install a drinking fountain.  
  Cost on the order of $3K–6K.
* MH1 Men’s Restroom: Needs a new vanity or other sink setup, and probably a new faucet.  
  Cost on the order of $500–800.
* MH1 Decatur Place Room: Property Committee has approved in principle a plan to renovate this room minimally providing (1) mold abatement, (2) effective insulation below Terrace; (3) replacement of ceiling / ducts / lighting as necessary; (4) repair of water-damaged portions of walls; (5) access to Crypt.  
  Cost on the order of $10K–20K.
* MH2 Restrooms: Re-grout the ceramic tile floors.  
  Cost on the order of $300–600.
* MH2 Terrace Room: Turn two window radiator cavities into window seats.  
  Cost on the order of $800–1200.
* MH2 Terrace Room: Replace solid door with glass-panel door to invite integration with east garden.  
  Cost on the order of $600–1000.
* MH2 Terrace Room: Replace bookshelves with buffet counter including better electric outlets and small sink, to allow use of this room for social events that involve food (especially when Assembly Room is unusable during Renovation).  
  Cost on the order of $2K–5K.

**Room-by-Room—Quaker House**

* QH2 Quaker House Living Room: This room has been ignored and needs comprehensive, thoughtful refurbishing to keep it from deteriorating. Flooring is literally irreplaceable American Chestnut random-width boards.  
  Cost on the order of $2K–8K; more if we use a professional floor outfit.
* QH3 North and South Offices: Western casement windows are in poor repair and should be replaced by modern, energy-efficient casement windows.  
  Cost on the order of $2K–4K.
* QH3 North and South Offices and Hallway: These floors were never refinished and will need to be at some point.  
  Cost on the order of $1K–2K.

**Exhibit 3**

**Unscheduled Property Work Most Apt to Threaten  
as of early 2016**

**Roofs:**

* Meeting Room roof will need replacing in the next eight or so years. Inspected last year and passed, but need to keep inspecting regularly.  
  Cost on the order of $10–20K.

**Plumbing: Drain Lines**

* Many Meeting House drains are antique and fragile, and there are quite a few abandoned leads, but as of this moment they work fine. However, given their age and other issues, the situation can change at any time. In the worst case we would have to trench five feet below the Foyer and Assembly Room. (Avoiding that scenario is why we requested a sanitary stub as part of the Renovation.)  
  Unanticipated cost without Renovation stub: $20K–60K.  
  Unanticipated cost with Renovation stub: $5K–15K.
* NB: Quaker House / Carriage House drains are almost a complete mystery and remain exactly as they were when we purchased the property, except for some upgraded attachment points/sections. Failure potential is unknown.  
  Unanticipated costs most probably in the $500–5000 range.
* Other than the MH east-side window-well drains, which should be protected from flooding if we install appropriate window-well covers, four outdoor areaway drains can cause serious flooding problems if they clog. These are:
  + The drain outside the QH1 North Office entrance to the QH west alley, which has in the past flooded the adjacent rooms when clogged by leaves (it also clogs with sand/tree roots over time).
  + The drain at the east end of the north-CH areaway, which has in the past flooded the office/conference room portion of CH1 when clogged.
  + The drain outside the MH1 Kitchen, which may have clogged and flooded the Kitchen in the past according to FMW lore.
  + The drain in the areaway outside the MH1 Decatur Place Room (between the two HVAC compressors) which tends to clog and which floods the Decatur Place Room floor through the wall when water rises too high in the walled-in areaway.

**Plumbing: Water Supply System**

* A portion of the Meeting House plumbing has been upgraded to copper from galvanized steel, but remaining galvanized portions are prone to clogs that can happen suddenly without warning. Some scenarios and repair options would require opening up walls, ceilings, or soffits.  
  Unanticipated cost: nil to perhaps $15K.
* The hot water lines to the MH2 Restrooms appear to extend from the old line to the pre-1951 former restroom above the stairs, which is all but clogged with scale and rust. Practically any work on the restroom faucets etc. risks losing pressure or losing flow altogether; I have had to back-flush the line repeatedly but one of these days the line may fail completely.  
  Unanticipated cost would depend on how we address the problem, from sand-blasting and epoxy-lining the line in-place (perhaps $4k–8K), to replacing the line (wall/ceiling/floor repairs required; perhaps $10K), to using only the cold line and installing on-demand water heaters under the sinks (on the order of $5K–8K each I would imagine).
* Unlike Quaker House, almost none of the Carriage House lines have been upgraded from the original galvanized steel, now very old and subject to failure without warning. Hot water pressure in particular is an issue. There are also some strange routing and valving issues. Copper lines do serve the Kitchenette and future ADA restroom between the buildings (and supply-line plumbing in that area will be replaced if we carry through with that part of the Renovation).  
  Unanticipated cost to make emergency repairs is apt to be in the $1000 range or less since many lines are exposed, but a more comprehensive solution would cost more (and be extremely difficult if not in the context of a complete renovation).

**Exhibit 4**

**Property Work Mandated (but not paid for) by Renovation  
as of early 2016**

*This document highlights work that is necessitated by the Renovation but is not part of the scope of the Renovation.*

**Chimneys**

* The Meeting House rear flue may need to be remodeled into a multiple-self-venting manifold system for optimal esthetics and efficiency of our two gas furnaces in the Furnace Room. Cost uncertain—perhaps $4K or so?

**Plumbing: Hot and Cold Water Supply Lines**

* The Meeting House hot water heater is of unknown age and not tremendously efficient for several reasons. If we proceed with a more efficient Meeting Room furnace and other Renovation-related changes, then we will need to replace the water heater to keep systems compatible. Our options will be electric (possibly distributed on-demand setups) or self-venting using the chimney with heating-system venting, or perhaps something even greener like solar-assist or heat-pump-related. In this we should better address the needs of the dishwasher which really should be receiving 140-degree water.  
  Cost potentially from several hundred for a cheap electric, to a couple of thousand for a heat-pump style unit, or perhaps more for distributed on-demand electric units (some restrooms are a very long way from the water heater) which require appropriate electricity to be installed.
* We had to take out the former QH-CH gas hot water heater, and we replaced it with a very small (30 gallon) electric heater that runs on 120V. With or after the Renovation we will at some point need to revisit the issue of the QH-CH hot water supply.  
  Cost will depend on the choice of path.

**Telecom**

* Construction for the Renovation will almost immediately require moving our Verizon POTS (“plain old telephone service”) service panel and all associated entrance cabling into Meeting House, along with some Meeting House Ethernet cables. This will be a stupid expense because we want to switch to something else at the first possible moment.  
  Cost: Depends on Verizon or other plan.
* Construction for the Renovation will at some point also require careful treatment of (at least) or moving (probably) our Ethernet connection between Meeting House and our service entrance in the north wing of Quaker House.  
  Cost: nil if successful.

**Electric**

* Note that the Renovation will almost certainly involve replacing our 1940s-era (?) fire alarm systems with a single, modern, campus-wide system, and may require altering the emergency-lighting circuits and other safety features along with that.  
  Cost: depends entirely on what the Fire Marshall and others mandate.