

Recommendations

All work performed on the structures and site features should be documented through notes, photographs, and measured drawings and/or sketches, or with as-built annotations to construction documents at project completion. These records should be permanently archived with Fairfax County Park Authority as a part of the record of the property and to provide information for future repairs and ongoing maintenance. In addition, these records will allow future observers to identify which materials are original, replacement, and their date of installation.

Prioritization of Treatment

Based on the observed conditions from the July 5, 2017 site visit, the following priority treatments are recommended for work the restoration on the Hannah P. Clark House:

1. Engage a structural engineer to perform further investigation at areas of potential structural concern including:
 - a. Deteriorated floor beams and column in the cellar
 - b. Cracks in parge coating at exterior surfaces of foundation
 - c. Sloped ceilings and floors at the first and second floor
 - d. Racking of the second floor windows at the Period I section
 - e. Cracked plaster and drywall around window frames on the second floor
 - f. Deflecting sapling rafters in the attic
2. Secure the building envelope such that moisture infiltration cannot further degrade the remaining historic elements. Work related to exterior envelope waterproofing should follow to prevent water infiltration and deterioration of building envelope materials, and to address conditions that may lead to continued deterioration and loss of historic fabric. These types of repairs include, but are not limited to:
 - a. Window and door repairs
 - b. Removing vegetation away from the home
 - c. Regrading of soil to slope away from the home, particularly near cellar ventilation windows and downspout discharge locations
 - d. Clearing gutters and roofs of dirt and debris
 - e. Installing splash pads and/or extension pipes for downspouts
3. Replace light fixture in room 100 as the burn marks in the ceiling may be evidence that the heat of the bulbs are a fire hazard.

Exterior

Based on the observed conditions from the July 5, 2017 site visit, the following treatments are recommended for the restoration on the Hannah P. Clark House:

General

- Perform insect and pest control measures to minimize insect activity.
- Perform and schedule cyclical maintenance tasks such as building envelope and site inspection, painting of exterior wood and metal elements, inspection and replacement of joint sealants, tree and vegetation care, cleaning of gutters, and other ongoing maintenance tasks to minimize impact to the historic site

and building fabric. Performance of cyclical maintenance will reduce the need for large-scale repair projects in future.

Wood Siding

- Remove all loose, soft, and deteriorated wood. Perform wood dutchman or full member replacement where required. Replaced members are to utilize in-kind materials.
- All exterior wood elements should be cleaned and repainted on a cyclical basis. Exterior corroding elements, such as hose bibs, should be cleaned and repaired where necessary to inhibit future corrosion and subsequent impact to the siding. In this climate, maintenance cycles for residential grade coatings on wood are typically between 7 and 10 years and depend heavily on the substrate's preparation, exposure, and bond between the new coating and existing elements. At isolated areas requiring repainting, remove the paint layers down to bare wood. Feather the edges of the surrounding paint and allow wood to fully dry. Install prime and repaint.
- Repair cracks in wood siding where possible. Evaluate locations of missing areas of wood in siding. Minor missing material may remain; however, if missing material begins to expose flashing or the joints between wood siding elements, a wood dutchman should be performed.
- Reattach any wood siding and trim pieces that are no longer fully attached. Evaluate flashings to ensure they are properly placed and integrated to minimize water shedding that could impact wood materials.
- Remove abandoned anchors and embedments and seal holes in order to prevent water infiltration.

Foundation

- Seal around pipe penetrations through foundation to minimize water infiltration.

Concrete

- Rout and seal cracked step on the south facade.

Chimney

- Evaluate flashing, if existent, at chimney to roof interface. Repair or install new flashing to assist with the water drainage to gutters. Remove loose, soft, and deteriorated wood. Perform epoxy patch or wood dutchman, where required.
- Evaluate cap flashing to determine if metal needs to be cleaned and a corrosion inhibiting coating applied. Replace cap flashing if missing material due to corrosion is observed.
- Clean and repaint wood siding once repairs have been made.

Doors

- Remove all loose and deteriorated paint to a clean wood substrate. Evaluate isolated areas of separation at joinery to determine if repairs are required to re-engage connection. Remove and repair any soft or deteriorated wood. Perform isolated repairs, such as epoxy patches, if deterioration or damage is found once coatings have been removed.
- Clean and repaint all doors once repairs, if required, have been made.
- Replace deteriorated weather stripping at doors to ensure they are weathertight.
- Reset/adjust slightly displaced French door at the south porch.
- Repair or replace non-historic storm doors at the east facade.

Windows

- Remove acrylic glass covering windows.
- Remove flaked and deteriorated paint at shutters and window surfaces and repaint, including sash channels and sills. Remove soft and deteriorated wood. Perform repairs at deterioration observed such

as installation of consolidant, epoxy patches, isolated dutchman repairs, and wood pinning at any loose or disengaged elements.

- Once cracked glazing lites are replaced (priority treatment recommendation), repair areas of deteriorated glazing putty.
- During window restoration work, inspect all rope lifts, sash locks, weather stripping, and other hardware to permit for full and unhindered operation, replacing in-kind where required.
- Repair hinged ventilation windows in the cellar to close, and replace screens, or other type of permeable material, to allow for ventilation of the space while minimizing openings for animals.
- Monitor areas of previous water infiltration below windows after work is complete to ensure the leakage has been repaired.
- *OPTION* - Replace non-historic window shutters with more era-appropriate shutters if archival documentation can be found to inform general dimensions and design.

Roof

- Coordinate structural evaluation of sapling rafters at the Period I section of the house with partial or full replacement of asphalt shingles. Evaluate sizing and placement of gutters to ensure they are adequate for water flow.

Wood Deck

- Reinstall handrails at the east open porch steps.
- Clean and seal wood deck and benches. Remove any loose, soft, and deteriorated wood. Perform partial or full wood dutchman if required.

Lighting Fixtures

- Replace broken glass at light fixture on north facade.
- Clean all light fixtures.

Interior

Interior Wall Finishes

- Minor cracks, damage, and deterioration in finishes should be repaired in place by filling cracks or damaged areas with compatible new material. Some material, particularly at water-damaged plaster, may need to be removed until sound material is found to ensure any compromised material is removed. Repaint plaster once repairs have been made. Monitor areas with previous water damage to ensure there are no active leaks.
- Repaint walls and ceilings to represent the typical interior finishes of the period of historical significance.
- Evaluate potential use for room 103 and consider removing wall paneling to expose original wood siding along the south wall.
- Reattach crown molding trim pieces that are becoming detached in isolated locations.
- Replace missing baseboards with appropriate profiling and dimensions typical of the time period of significance.

Wood

- Coordinate the evaluation of structural wood members with a structural engineer (priority treatment recommendation). Remove any loose, soft, and deteriorated wood of non-structural members. Remove split or damaged wood. Perform partial or full depth wood dutchman where required.
- Reset rotated rafter at the Period II section.

- Monitor area of water staining in attic after roof replacement to ensure that leaks are no longer present.

Concrete

- Clean ferrous staining from concrete surfaces in the cellar using the most gentle cleaner possible. Minimize water coming into contact with ferrous metals.

Floors

- Remove paint on wood floors and refinish in a manner that represents a typical interior finish of the time period of historic significance.
- Remove and replace non-historic linoleum floor tiles with considerable staining or damage. Consider replacing with materials that may have been in place if archival documentation is found.

Doors

- Clean and repaint or refinish all doors. Repair at joinery and areas of minor damage where needed. Replace any missing thresholds.
- Remove and rehang doors that are unable to close to attempt obtaining full operability of the doors.
- Replace damaged non-historic door to room 103.
- Replace missing historic doors and hardware with materials appropriate of the historic time period.
- *OPTION* - Replace contemporary doors, doors dating after 1960, with more historic appropriate doors.

Fixtures

- Clean all light fixtures.
- Clean or replace all plumbing fixtures and appliances as required. Existent fixtures are not historic.

Appendix A - Cost Estimate

**Hannah P. Clark House
RECOMMENDATIONS COSTS SUMMARY**

BUILDING	ESTIMATE TOTAL	GENERAL CONDITIONS 15%	CONTINGENCY 20%	DESIGN ALLOWANCE 12%	GRAND TOTAL	TOTAL SQUARE FEET	COST/FT2
House	\$118,057.88	\$17,708.68	\$29,514.47	\$17,708.68	\$182,989.71	1670	\$109.57
TOTAL FOR ALL BUILDINGS	\$118,057.88	\$17,708.68	\$29,514.47	\$17,708.68	\$182,989.71	1670	\$109.57

RECOMMENDATIONS COSTS SUMMARY INCLUDING OPTIONS

BUILDING	ESTIMATE TOTAL	GENERAL CONDITIONS 15%	CONTINGENCY 20%	DESIGN ALLOWANCE 12%	GRAND TOTAL	TOTAL SQUARE FEET	COST/FT2
House	\$122,182.88	\$18,327.43	\$30,545.72	\$18,327.43	\$189,383.46	1670	\$113.40
TOTAL INCLUDING OPTIONS FOR ALL BUILDINGS	\$122,182.88	\$18,327.43	\$30,545.72	\$18,327.43	\$189,383.46	1670	\$113.40

Note: The projections are based upon the assumption that the work will be undertaken in cost effective parcels where a contractor/laborer will be able to absorb overhead, access, and equipment/tool costs across several similar items. This cost estimate includes restoration of existing elements only and does not include mechanical, plumbing, and comfort upgrades (such as bathroom renovations). Mechanical, lighting, HVAC, plumbing, and reconfiguration upgrades are significant costs.

Hannah P. Clark House

Recommendations	Quantity	Unit	Unit Price	Cost	Comments
Priorities					
Engage a structural engineer to perform an investigation at areas of potential structural concern.	12	hr.	\$169.00	\$2,028.00	At current WJE contract rates.
Replace cracked glazing lites.	5	ea.	\$110.00	\$550.00	
Replace light fixture in room 100 due to heat hazard.	1	ea.	\$250.00	\$250.00	
Exterior					
Perform insect and pest control measures to minimize insect activity.	1	ea.	\$450.00	\$450.00	Cost for initial service, cyclical service is recommended.
Perform and schedule cyclical maintenance tasks such as building envelope and site inspection, painting of exterior wood and metal elements, inspection and replacement of joint sealants, tree and vegetation care, cleaning of gutters, and other ongoing maintenance tasks to minimize impact to the historic site and building fabric.	1	unit	\$500.00	\$500.00	
Remove all loose, soft, and deteriorated wood. Perform wood dutchman or full member replacement where required.	30	sf	\$27.50	\$825.00	Wood siding, including chimney
Repair cracks in wood siding where possible.	4	lf	\$30.00	\$120.00	
Evaluate locations of missing areas of wood in siding. Minor missing material may remain; however, if missing material begins to expose flashing or the joints between wood siding a wood dutchman should be performed.	4	sf	\$25.00	\$100.00	
Reattach any wood siding and trim pieces that are no longer fully attached.	2	lf	\$15.00	\$22.50	
Remove abandoned embedments and seal holes in order to prevent water infiltration.	8	ea.	\$30.00	\$240.00	

Hannah P. Clark House

Recommendations	Quantity	Unit	Unit Price	Cost	Comments
Seal around pipe penetrations through foundation to minimize water infiltration.	2	ea.	\$27.50	\$55.00	
Rout and seal cracked step on the south facade.	2	lf	\$10.00	\$20.00	
Evaluate flashings, if existent, at secondary roof and chimney-to-roof interface.	4	hrs.	\$169.00	\$676.00	At current WJE contract rates.
Repair or install flashing any deteriorated or missing flashings.	70	lf	\$25.00	\$1,750.00	
Evaluate cap flashing to determine if metal needs to be cleaned and corrosion inhibit coating applied.	1	hrs.	\$169.00	\$169.00	At current WJE contract rates.
Replace cap flashing if missing material due to corrosion is observed.	10	lf	\$25.00	\$250.00	
Remove all loose and deteriorated paint to a clean wood substrate.	825	sf	\$22.00	\$18,150.00	Wood siding; assuming 50% of painted surface is deteriorated.
Clean and repaint wood siding once repairs have been made.	1,650	sf	\$3.00	\$4,950.00	
Remove all loose and deteriorated paint at doors to a clean substrate.	65	sf	\$3.00	\$195.00	Not including french doors; assuming 50% of paint will need removed
Evaluate isolated areas of separation at door joinery to determine if repairs are required to re-engage connection.	2	ea.	\$50.00	\$100.00	
Replace non-historic storm doors at the east facade.	2	ea.	\$300.00	\$600.00	NOTE: these doors were the only doors with deteriorated wood, so their repair was included in this count above
Clean and repaint all doors once repairs, if required, have been made.	135	sf	\$3.00	\$405.00	4 solid doors @ approx. 7 ft. tall, 2 ft. wide (both sides); 4 screen doors and 2 french doors approx. eight of area is wood

Hannah P. Clark House

Recommendations	Quantity	Unit	Unit Price	Cost	Comments
Replace deteriorated weatherstripping at doors to ensure they are weathertight.	110	lf	\$5.00	\$550.00	6 doors total (including 2 french doors) @ approx. 7 ft. tall, 2 ft. wide; assuming weatherstripping at threshold as well
Reset/adjust slightly displaced French door at the south porch.	1	ea.	\$150.00	\$150.00	
Remove acrylic material covering windows.	7	ea.	\$100.00	\$700.00	4 exterior acrylic 3 interior acrylic
Remove flaked and deteriorated paint at shutters and window surfaces, including sash channels and sills.	100	sf	\$3.00	\$300.00	15 shutters @ 3' x 1'; 17 windows @ 2'x3', 1 @ 2'x1.5' (not including sunroom windows because those did not have any flaking paint); assume 50% will need removed (from both interior and exterior)
Remove soft and deteriorated wood. Perform repairs at deterioration observed such as installation of consolidant, epoxy patches, isolated dutchman repairs, and wood pinning at any loose or disengaged elements.	2	sf	\$27.50	\$55.00	Interior of 2 windows on 2nd floor
Once cracked glazing lites are replaced, repair areas of deteriorated glazing putty.	175	lf	\$3.00	\$525.00	17 windows @ approx. 2'x3' (10 lf putty; 1 window interior), 1 window @ 2'x1.5' (5 lf putty) (assumed 100% of all putty would need repaired/replaced)
During window restoration work, inspect all rope lifts, sash locks, weatherstripping, and other hardware to permit for full and unhindered operation, replacing in-kind where required.	6	hrs.	\$169.00	\$1,014.00	Allowance for inspections does not include repairs. At WJE rates per contract.

Hannah P. Clark House

Recommendations	Quantity	Unit	Unit Price	Cost	Comments
Repair hinged ventilation windows in the cellar to close and replace screens, or other type of permeable material, to allow for ventilation of the space while minimizing openings for animals.	1	ea.	\$150.00	\$150.00	Approx. 2'x3' window
Monitor areas of previous water infiltration below windows after work is complete to ensure the leakage has been repaired.	4	hrs.	\$169.00	\$676.00	At current WJE contract rates.
OPTION - Replace non-historic window shutters with more era-appropriate shutters if archival documentation can be found to inform general dimensions and design.	33	ea.	\$125.00	\$4,125.00	15 existing shutters and 18 shutters missing (9 windows without shutters).
Replace asphalt shingle roof.	1,170	sf	\$15.00	\$17,550.00	Assumed 100% replacement; based on measurements from floor plan
Coordinate structural evaluation of sapling rafters at the Period I section of the house with partial or full replacement of asphalt shingles.	4	hrs.	\$169.00	\$676.00	At current WJE contract rates.
Evaluate sizing and placement of gutters to ensure they are adequate for water flow.	4	hrs.	\$169.00	\$676.00	At current WJE contract rates.
Reinstall handrails at the east open porch steps.	8	lf	\$250.00	\$2,000.00	
Clean and seal wood deck and benches.	275	sf	\$5.00	\$1,375.00	2 benches @ 6ft long, 16" wide; deck @ approx. 265 sf
Remove any loose, soft, and deteriorated wood. Perform partial or full wood dutchman if required.	13	sf	\$27.50	\$364.38	Verify amount of repairs required after removal of soft and deteriorated wood.
Replace broken glass at light fixture on north facade.	1	ea.	\$200.00	\$200.00	
Clean all light fixtures.	4	ea.	\$50.00	\$200.00	
Interior					

Hannah P. Clark House

Recommendations	Quantity	Unit	Unit Price	Cost	Comments
Minor cracks, damage, and deterioration in finishes should be repaired in place by filling cracks or damaged areas with compatible new material. Some material, particularly at water-damaged plaster, may need to be removed until sound material to ensure any compromised material is removed.	70	lf	\$38.50	\$2,695.00	
Monitor areas with previous water damage to ensure there are no active leaks.	4	hrs.	\$169.00	\$676.00	At current WJE contract rates.
Repaint walls and ceilings to represent the typical interior finishes of the period of historical significance.	5,600	sf	\$3.50	\$19,600.00	Assume all walls and ceilings are painted (except wood paneling)
Evaluate potential use for Room 103 and consider removing wall paneling to exposed original wood siding along the south wall.	275	sf	\$6.00	\$1,650.00	Approx. 275 sf of wood paneling
Reattach crown molding trim pieces that are becoming detached in isolated locations.	3	lf	\$15.00	\$45.00	2 locations
Replace missing baseboards with appropriate profiling and dimensions typical of the time period of significance.	105	lf	\$20.00	\$2,100.00	3 rooms on 2nd floor
Reset or sister rotated rafter at the Period II section of the attic and monitor to ensure rotation does not occur again.	8	lf	\$750.00	\$5,850.00	1 rafter approx. 8 ft. long
Clean ferrous staining from concrete surfaces in the cellar using the most gentle cleaner possible. Minimize water coming into contact with ferrous metals.	15	sf	\$3.00	\$45.00	
Remove paint on wood floors and refinish in a manner that represents a typical interior finish of the time period of historic significance.	900	sf	\$12.00	\$10,800.00	900 sf of painted wood

Hannah P. Clark House

Recommendations	Quantity	Unit	Unit Price	Cost	Comments
Remove and replace non-historic linoleum floor tiles with considerable staining or damage. Consider replacing with materials that may have been in place if archival documentation is found.	125	sf	\$10.00	\$1,250.00	440 sf of non historic wood (kitchen, porch enclosure); 125 sf of non historic linoleum tiles (2nd floor bathroom and sunroom)
Clean and repaint or refinish all doors. Repair at joinery and areas of minor damage where needed.	18	ea.	\$245.00	\$4,410.00	18 doors @ approx. 2'x7'
Replace any missing thresholds.	4	lf	\$30.00	\$120.00	2 thresholds @ 2' long
Replace damaged non-historic door to room 103.	1	ea.	\$250.00	\$250.00	
Replace missing historic doors and hardware with materials appropriate of the historic time period.	4	ea.	\$300.00	\$1,200.00	1 missing door, 3 historic doors missing hardware
OPTION - Replace contemporary doors, doors dating after 1960, with more historic appropriate doors.	15	ea.	\$300.00	\$4,500.00	Not including any exterior doors
Clean all interior light fixtures.	18	ea.	\$50.00	\$900.00	Approximate (assuming 1 per room)
Clean or replace all plumbing fixtures and appliances as required. Existent fixtures are not historic.	6	ea.	\$400.00	\$2,400.00	

Summary Total

\$118,057.88

Summary Total Including Options

\$122,182.88