Stempson House Draft Treatment Plan

Adapted from Historic Structure Report: Stempson House, SWSG, 2006

STEMPSON HOUSE TREATMENT PLAN

In 2006, SWSG prepared a Historic Structure Report for Fairfax County Park Authority to better understand the architectural evolution of the house and to develop a treatment plan to guide repairs. The following assessments and recommendations are derived from that treatment plan. In the fall of 2015, FCPA Park Operations Division (POD) conducted a building evaluation to identify further deficiencies in both the Stempson House and the associated garage (See Appendix X). Both the POD evaluation and the following treatment plan should be taken into consideration when proposing rehabilitation measures.

Architecture Assessment and Treatment Plan

Architectural Deficiencies

Generally the architectural and structural condition of the building is fair to good, though there are areas in need of repair and refinishing. Should the house be converted back to a dwelling unit, a kitchen would need to be installed.

Foundation

1. The foundation throughout the building is in good condition and the basement walls do not show any settlement or buckling.
2. There are indications of dampness in the basement that may have been exasperated due to the building being unoccupied and not conditioned.
3. Water seeps through basement window W001.

Exterior

1. The exterior siding and masonry walls are generally in fair to good condition.
2. The metal roofing is in need of repair and a new paint if it is not intended to be replaced soon.
3. The portico slate roofing is in a fair condition and in need of some repairs.
4. One brick is missing and several bricks are chipped on the brick masonry stoop at the front portico.
5. The screens around the screened porch are in a deteriorated condition. There is a hole in the porch screen on the east side.
6. The wood deck of the screen porch, beneath the green carpet, is loose and deteriorated in some areas.
7. The screen in the storm door at the basement exterior door is broken.
8. Most of the wood lattice at the perimeter of the deck is broken.
9. Several courses of brick, perhaps with corbelling, have fallen from the eastern chimney that need to be reconstructed.

Framing

1. A hole in the exterior wall wood siding near the front entrance reveals termite/insect damage to the wood framing.
2. The remainder of the visible framing throughout the building appears to be in good condition.

Windows and Doors

SEE POD BUILDING EVALUATION FROM POD DATED 9/2/15

1. ~~Existing retrofit metal windows are in good condition.~~
2. ~~The wood doors are generally in fair to good condition; however, some do not operate properly.~~
3. ~~Door D100 does not close properly within the frame.~~
4. ~~Door D101 does not close properly within the frame, and the lockset is falling apart. Parts of the door edge, as well as the frame at the strike plate, are broken off. The lockset and strike are loose in place.~~
5. ~~Door D102 does not latch because the strike plate hole is set too far into the jamb for the latch throw to reach.~~
6. ~~Door D103 is tight to close, and won't latch.~~
7. ~~Doors D104 and D105 are missing the lockset, only the knobs and plates remain in place.~~
8. ~~Some glass is broken or missing in basement windows W001, W005, and W008.~~

Interior Spaces

1. ~~Most of the interior walls and ceiling surfaces have been repaired and repainted. There are some areas that have holes and dent that need to be patched and repainted.~~ SEE POD BUILDING EVALUATION FROM POD DATED 9/2/15
2. In order to change the occupancy of the building back to a single family dwelling unit, if desired, a functioning kitchen would be required.
3. The VCT floor tiles in the Vestibule/Pantry (Room 104) are warped.
4. Quarter-round is missing in some locations along the wall in the toilet room (Room 105).
5. Portions of the floor mosaic tiles in first-floor toilet room (Room 105) have come loose due to buckling of the wood panel sub-floor. The buckling was caused by water penetration.
6. Cleaning up the basement and repainting brick masonry walls.
7. The carpet in the second floor room 202/203 is wavy and not leveled properly.
8. Insulation above the second floor ceiling in the attic space is in a deteriorated condition.
9. The northern lunette in the attic is blocked by a plywood panel on the interior side leaving only one lunette (on eastern side) open. This causes insufficient ventilation.

Recommended Architectural Treatments

Foundation

1. Monitor basement dampness following re-occupation of the building.
2. Investigate grade slope at window W001 for possible slope towards the building.

Exterior

1. Repair and repaint all metal roofing and repair slate roofing at portico.
2. All screens at the screened porch to be replaced.
3. Remove existing green carpet, and repair screened porch wood deck.
4. Replace screen in basement storm door.
5. Wood floor deck at screened porch to be repaired, cleaned and repainted.
6. Reconstruct top courses of eastern chimney, including corbelling.
7. Repair damaged areas of front entry masonry stoop.
8. Replace all wood lattice at perimeter of wood deck.

Framing

1. Patch hole in the exterior wall wood siding near the front entrance. Inspect wood framing for termites.

Windows and Doors

1. Repair all doors that do not function properly. Doors that no longer fit within the door frames may be planed and readjusted.

Interior Spaces

1. Repair the cracks and holes in the walls of rooms 102 and 103 and finish.
2. If the building will be converted to residential use, install new kitchen equipment and fixtures. Replace existing carpet with sheet vinyl or vinyl tiles.
3. Replace all batt insulation above the second ceiling in the attic with new insulation.
4. Remove plywood panel from northern lunette in attic wall, and install new insect screens at both lunette locations.
5. Install new quarter-round in missing locations along the wall in the toilet room (Room 105).
6. Remove and replace existing floor tile and floor deck in Toilet Room 105. There is the remnant of old floor tile adhesive left on the floor deck in the closet of the Toilet Room 105 that may contain asbestos.
7. Replace VCT floor tile in Vestibule/Pantry at the first floor.
8. Reinstall the carpet in the second floor room 202/203 properly.

Mechanical Assessment and Treatment Plan

The house was heated by an oil-fired hydronic boiler located in the basement (Capacity is 131,300 BTU/hr). The age and condition of the boiler is unknown and there is surface rust on the casing. The boiler flue is connected to the masonry chimney. Both the Stempson House and the Barrett House, another house used by prison officials, have the same exact boiler.

Heating water was pumped through uninsulated black steel piping throughout the house to floor mounted radiators. The piping in the basement is thoroughly rusted. An expansion tank is installed at the ceiling of the basement. A single 275 gallon fuel tank is located in the basement adjacent to the boiler and is connected to the boiler. The fuel fill pipe and vent pipe are extended through the exterior wall. There are six radiators on the first floor and six radiators on the second floor, all of which are window radiators.

There are steel security frames around four of the windows on the first floor to house window air conditioners.

The toilet room on the first floor does not have an exhaust fan. Both the bathroom and the toilet rooms on the second floor have combination exhaust fan/light fixtures. There is a transfer fan located in the wall between room 103 and closet 107.

Recommended Mechanical Treatments

SWSG does not necessarily recommend reusing the existing boiler and piping system due to the unknown age and condition of the boiler and the rusting of the piping in the basement. However, the following should be performed if the existing heating system is to be reused:

- Obtain a boiler inspection by a qualified boiler mechanic
- Inspect and pressure test the entire hydronic piping system
- Clean the surface rust off the basement piping
- Replace any severely damaged piping or inoperable valves
- Prime and paint piping

It is recommended to replace the boiler, pump, and hydronic piping system and to reuse the existing radiators. The existing radiators should be pressure tested. There are several fuel options for the new boiler:

1. Oil-fired to match the existing boiler. It is recommended to replace the fuel tank with this option. This option will be reflected in the cost estimate.
2. Propane-fired: A propane (LP) tank would be required outside the house.
3. Natural gas-fired: A natural gas service would be required to be brought to the house. Availability of natural gas in the area would need to be investigated with the gas company.

Provide window air conditioners as needed.

Plumbing Assessment and Treatment Plan

The basement has a laundry sink, wall mounted lavatory, a floor drain, and a water closet flange in the floor where a toilet was once installed. An electric water heater (size and capacity unknown) is also installed in the basement.

The first floor has a single toilet room with an elongated water closet and a wall mounted lavatory. The second floor has a bathroom with bathtub, elongated water closet, and wall mounted lavatory. The second floor also has another toilet room with an elongated water closet and wall mounted lavatory.

The plumbing fixtures in the basement are in fair shape and the remaining fixtures are in good shape.

The domestic water service entrance was not found. The domestic water distribution piping is copper. The waste and vent piping is cast iron, steel, and PVC.

Recommended Plumbing Treatments

It appears that the plumbing systems can be reused without much effort. It is recommended to do the following:

- Cap and seal any open piping
- Replace the electric water heater
- Pressure test the domestic water piping
- Clean and disinfect domestic water piping

Electrical and Special Systems Assessment and Treatment Plan

The following description of the facility electrical and special systems is based on field observations performed on May 26, 2006 by SWSG Engineers.
All code references are based on 2005 National Electrical Code (NEC) and National Fire Protection Association (NFPA).

Electrical Service Entrance

The facility is served by overhead secondary distribution with secondary voltage of 120/240 volts, single phase, 3-wire from utility transformer to a wall mounted disconnect switch located outside the building, which is not metered by the utility company. The service entrance summary follows:

- Type: Service Disconnect Switch - Challenger # RGD324SNC.
- Voltage: 120/240 volt, NEMA 3R enclosure.
- Over current protection: 200A.
- Service Disconnect is in good condition.
- Service Panel - Clutter Hammer, type PRL-1A, cat.# 1C96649G02, 200A main lugs only, 120/240V, single phase, 3-wire, 42 pole located in the basement and is fed from service disconnect switch via 2-1/2 PVC conduit and is also in good condition.
- A copper grounding electrode conductor was observed connected to exterior below grade ground rod in fair to good condition and a copper grounding electrode conductor was observed connected to cold water pipe in the basement also in fair to good condition.

The equipment appears to be in good condition. The service equipment is not property identified or labeled.

Recommendations:

- Check all grounding and bonding connections at main service equipment to ensure compliance with code.
- Check all bolted connections for proper torque pressure.
- Provide identification labels on all electrical equipment and service disconnect as required by code.
- Provide upgrade circuit directory card.

Receptacles and Branch Circuiting

Most of the receptacles observed in the spaces were rated 120 Volt, 20 Amp (NEMA 5-20R). The receptacles appear to be in fair to good condition. The receptacles located in the basement and are mounted approximately 36" AFF and close to the sink are not ground fault interrupter (GFCI) type and are in very poor working condition. The receptacles in the bathrooms are not GFCI type.
There is one receptacle located outside of the building and is weather proof, GFI with cover and appear to be in good condition.
Branch wiring methods throughout the facility consists of EMT, MC Cable, Romex, and BX not supported properly in attic. In general the wiring methods used are in good condition.
Branch wiring methods in the basement space appear to be in very bad conditions and consist in rusted EMT conduits and junction boxes, MC cable, exposed Romex, which may be subject to physical damage.
Junction boxes for branch circuits located in the attic space are without cover and the wires are exposed.

Recommendations:

- Ensure that all devices are grounded and provided with green ground wires in individual branch circuits per NEC Articles 250 and 210-7.
- Install GFCI receptacles and AFCI circuit breakers or at all applicable locations such as basement and bathrooms.
- Replace all circuit serving the basement space (rusted EMT conduits, rusted junction boxes and wires) with new circuits in EMT conduit to ensure protection of conductor
- Provide appropriate covers for the junction boxes located in the attic space.
- Identify branch circuits to upgrade circuit directory card on panel board.
- Provide additional GFI weather proof receptacles in room 106 and outside in front of the Building and near the electrical service entrance.
- Replace all connections to mechanical equipment in the basement space including disconnect switches, wires and conduits.)

Interior lighting

Basement - Basement uses fluorescent industrial open reflector surface mounted, fluorescent with prismatic lens surface mounted, and incandescent porcelain base fixtures surface mounted, all in very poor condition. Light switches are in very bad condition. The lighting level is poor at the main service electrical panel. There are no exit lights at doors to exterior in the basement.

Room 100 living room - Living room uses two fluorescents 4-lamps T-12 with prismatic lens in fair to good condition and one incandescent decorative type in bad condition all fixtures are surface mounted. Light switches appear to be in fair to good condition. Exposed wire between light fixtures is protected by wire mold.

Room 101 - room 101 uses one fluorescent 4-lamp T-12 with prismatic lens and appear to be in fair to good condition. Light switch appear to be in fair to good condition.

Room 102 - room 102 uses one fluorescent 4-lamps T-12 with prismatic lens and appear to be in fair to good condition. Light switches appear to be in fair to good condition.

Room 103 -Room 103 uses two fluorescents 4-lamps T-12 with prismatic lens surface mounted and appear to be in fair to good condition. Light switches appear to be in fair to good condition. Exposed wire between to light fixtures is protected by wire mold.

Room 104 vestibule - Room 104 uses one incandescent lamp enclosure in a metal and glass box and appears to be in fair to good condition. Light switch appear to be in fair to good condition.

Room 105 toilet - Room 105 uses one incandescent decorative type lamp and appears to be in good condition. Light switch appear to be in fair to good condition.

Room 106 sunroom - Room 106 uses one incandescent decorative type lamp and appears to be in fair to good condition. Light switch appear to be in fair to good condition.

Room 107 closet - Room 107 uses one incandescent porcelain base fixture and appears to be in good condition. Light switch appear to be in fair to good condition.

Room 200 - Room 200 uses one fluorescent 4-lamp T-12 with prismatic lens and appears to be in fair to good condition. Light switch appear to be in fair to good condition.

Room 201 - Room 201 uses one fluorescent 4-lamp T-8 with prismatic lens and appears to be in fair to good condition. Light switch appear to be in fair to good condition.

Room 202 - Room 202 uses one fluorescent 4-lamp T-12 with prismatic lens and appears to be in fair to good condition. Light switch appear to be in fair to good condition.

Room 203 - Room 203 uses one fluorescent 4-lamp and appears to be in fair to good condition. Light switch appear to be in fair to good condition.

Room 204 corridor - Room 204 uses one incandescent 3 bulbs without cover in bad condition. Light switch appear to be in fair to good condition.

Room 205 bathroom - Room 204 uses a combination exhaust fan/light fixture and appear to be in fair to good condition and uses a combination light switch and receptacle.

Room 206 bathroom - Room 206 uses a combination exhaust fan/light fixture and appears to be in fair condition. Light switch appear to be in fair to good condition.

Room 207 - Room 207 uses one incandescent porcelain base fixture with pull chain switch and appear to be in fair to good condition.

Room 208 - There is not light fixture for this room. A ceiling mounted junction box was observed in the room.

Room 209 - Room 204 uses one incandescent porcelain base fixture and appears to be in fair to good condition. Light switch appear to be in fair to good condition.

Room 210 bathroom - There is not light fixtures and light switch in this room.

Recommendation:

To convert the existing House into a Rentable Unit, it is recommended to upgrade the levels of illumination in accordance with Illuminating Engineering Society of North America (IES). We recommend:

- Remove lighting fixtures in basement space and provide more appropriate type fixtures such as 4 industrial fluorescent 2-lamp strip fixture surface mounted and shall be located to obtain the maximum light distribution possible.
- Remove light switches in basement space and provide new switches wall mounted as required by code.
- Provide EMT conduit for lighting circuits in basement space to protect wire for physical damage and connect in separate circuit.
- Replace incandescent decorative light fixture in room 100.
- Provide one fluorescent fixture surface mounted to match existing and relocate existing ones for rooms; 101, 102, 200, 201, 202 to obtain maximum light distribution.
- Connect new fixtures in separate circuit using wall mounted EMT conduit, or Romex with wire mold to protect the wires. Use separate switch for new light fixtures for energy saving.
- Clean and re-lamp all existing light fixtures on a regular basic as part of an on-going maintenance program.
- Check ballast for signs of overheating and replace as necessary.

Exterior lighting

Exterior lighting consists in PAR-38 type wall mounted light fixtures and appears to be in fair to good condition.

Recommendation:

Clean and re-lamp.

Emergency Lighting

There are no emergency lights and exit signs in the facility.

Recommendation:

We recommended to install LED type exit and emergency light fixtures in all essential areas and throughout all paths of egress within the facility, and connect to existing lighting circuits.

Fire Alarm and Security Systems

There are some smoke detectors (residential type) installed throughout the facility.There are no ADA compliant audio/visual Fire Alarm devices anywhere in the facility. There is a security panel located in closet 107 and some sensor motion devices installed throughout the facility. The security system is not connected and there are exposed cables inside of the closet 107.

Recommendation:

Add a Fire Alarm System that is NFPA and ADA compliant. Consider off-site central station monitoring. All devices and connections shall be wall and ceiling surface mounted.
Coordinate with contractor for appropriate installation of Security System.
Protect exposed wires from physical damage.

~~Telephone Service and Data System, and Distribution~~

~~A multiple line, residential telephone service backboard is located in the basement room. A data rack enclosure was observed mounted in room 210 all are in bad condition. The existing telephone wall outlets appear to be in fair to bad condition. Telephone wires are exposed through the building.~~

Recommendation:

- ~~Install new telephone service~~
- ~~Provide new telephone wall outlets~~
- ~~Run telephone wires in conduit or wire mold to protect from physical damage~~