2013 UPDATE
OF THE
EXTERIOR ENVELOPE SECTIONS

OF THE

2006 FACILITIES ASSESSMENT REPORT
FOR
THE VERMONT VETERANS' HOME
Bennington, Vermont

PREPARED FOR

State of Vermont
Department of Buildings and General Services
Michael J. Obuchowski Commissioner
and
The Vermont Veterans' Home
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I. Executive Summary

Timothy D. Smith & Associates PC is pleased to submit the following Update of the Exterior Envelope Sections of the 2006 Facility Assessment for the Vermont Veterans' Home in Bennington, Vermont.

The goals of this Update include assessing the existing exterior conditions of the building envelope including roofs, walls and exposed foundations of the main facility building in order to identify deficiencies, in particular those deficiencies that are currently contributing, or likely contributing in the near future, to water infiltration into the building, which may result in mold growth if not properly dealt with. The Update uses the original 2006 Report format breaking each section down by building wing, including amendments as necessary for changes of conditions that have occurred between 2006 and 2013. All updates and amendments are highlighted in blue throughout this Update report.

Members of Timothy D. Smith & Associates visited the building on several occasions to observe and document the existing conditions of the roof and exterior walls from the outside of the building. Similar to the original report, conditions are categorized as follows:

- Critical or Failed Condition: Requires immediate attention and/or repair/replacement.
- Poor Condition: Is at or close to the end of its useful life, not serviceable. Repair and/or replacement highly recommended.
- Fair Condition: Acceptable and/or serviceable. Repair and/or replacement required within 5 – 10 years.
- Good Condition: No work required at this time.

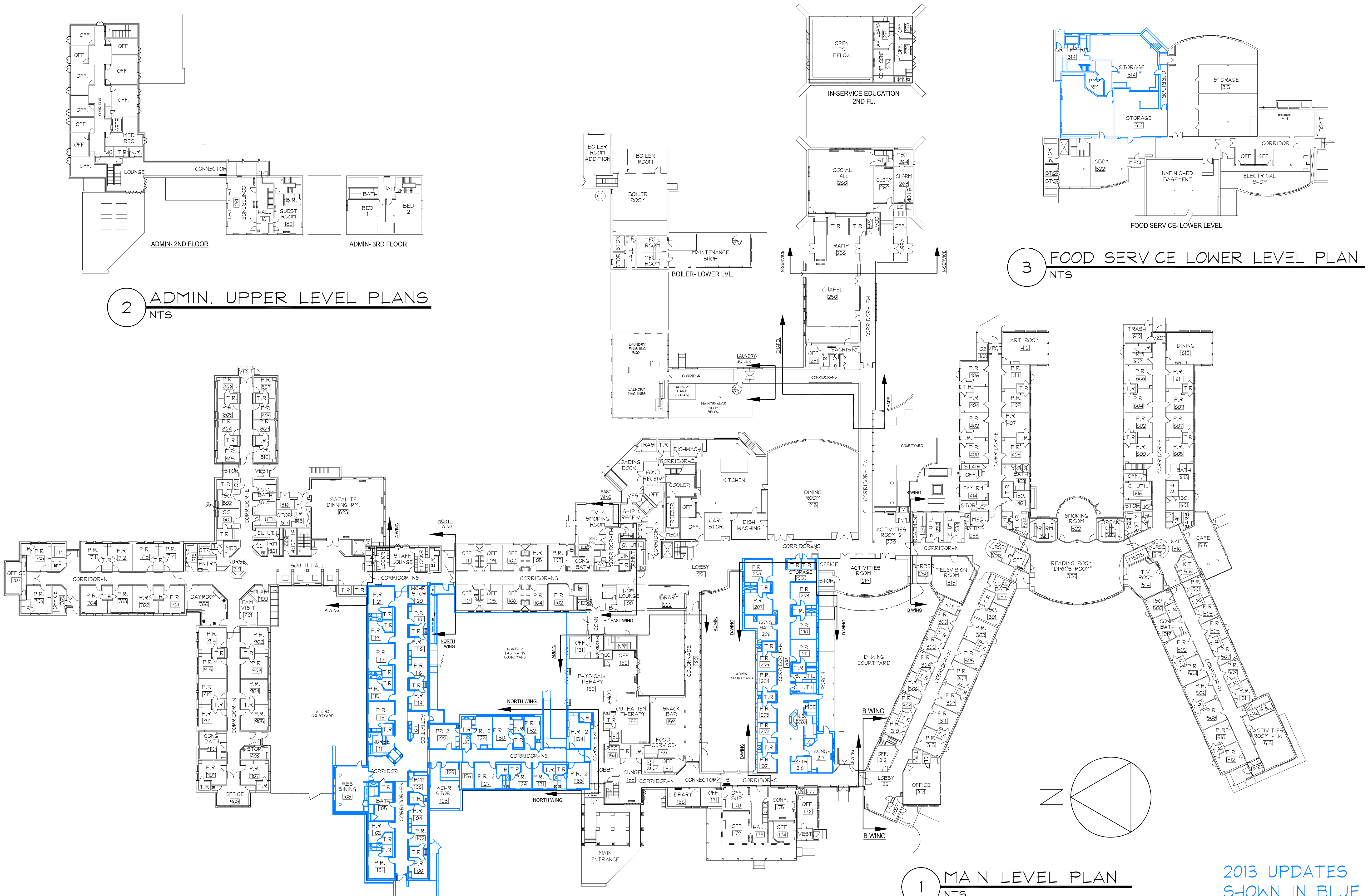
Over the course of the seven years that have transpired between the original 2006 report and this 2013 Update, the Home has accomplished a significant portion of work that has addressed many deficiencies outlined by the original report. Regarding the exterior envelope in particular; almost 75,000 square feet of roofing has been replaced, over 20,000 square feet of patient areas have been completely renovated with new exterior wall systems, and a significant amount of waterproofing measures have been installed in the many basement areas.

Nonetheless, there is still more work that needs to be done to continue to provide a safe and healthy environment for the Veteran Residents, Staff and Visitors that occupy this building on a daily basis. Of particular concern with regard to reducing the possibility of water infiltration which could lead to mold growth, and/or items that may present a potential hazard to the occupants, the following Critical Condition areas should be addressed immediately:

- East Wing Roofing Replacement
- Food Service Roofing Replacement
- Lower Level Boiler-Maintenance Shop Roofing Replacement
- Chapel Connecting Corridor Wood Siding & Trim
- East Wing TV Room Exit Vestibule
- Administration Connecting Corridor Wood Siding & Trim
- B-Wing Canopy Sag at West Entrance

II. KEY PLANS

- Facility Floor Plans, 2013 Update
- Facility Roof Plan, 2013 Update



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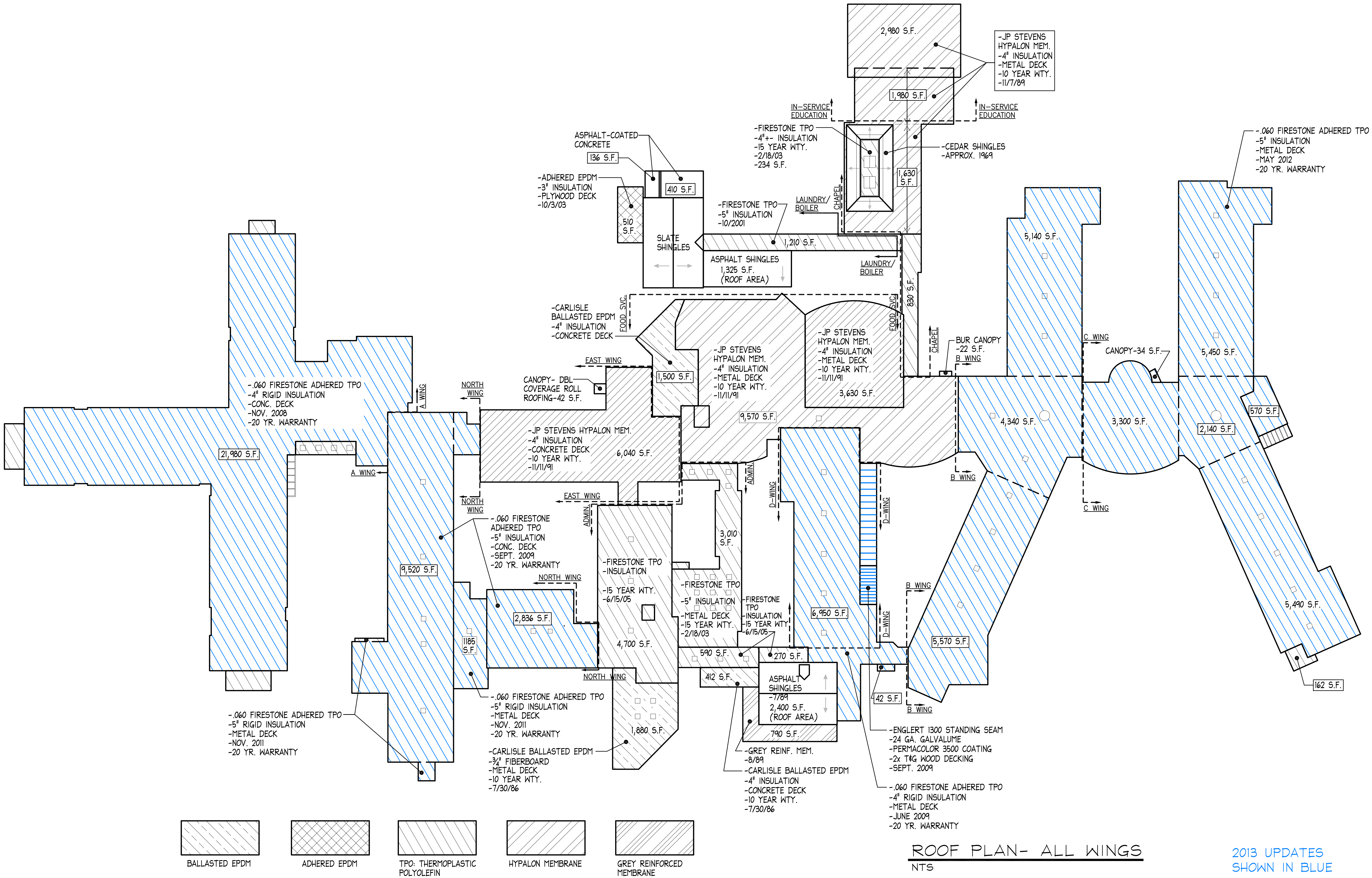

ROOF PLAN- ALL WINGS

NTS

2013 UPDATES SHOWN IN BLUE

III. EXTERIOR ENVELOPE SECTIONS

- Architectural Exterior, 2013 Update
- Roofing, 2013 Update

ARCHITECTURAL EXTERIOR
2013 Update (text in blue Italics)

Note: Where significant renovations or improvements have occurred since the original 2006 Assessment, the 2006 report text has been deleted from this 2013 Update in part or in its entirety where it is no longer applicable.

A Wing - 1985

The A Wing exterior walls are brick veneer/block backup construction with a stone or precast cap at the roof level. At the wing end lounges, dining room, and entries, the wall construction includes EIFS fascia/soffits The windows comprise of Pella metal clad wood fixed and inswinging hopper units at patient rooms and sliding doors units at the dining room and west porch area. *Windows at the patient rooms of the North and West sub-wings of A-wing have been replaced with new similar aluminum clad windows.* At wing entrances, the window walls, doors, and frames are an aluminum storefront system. The Solarium is framed with an aluminum curtainwall system. The 1985 screened west porch area adjacent the Solarium has since been enclosed. An awning is now framed to the exterior wall of the former screened porch.

Masonry

The exterior masonry walls of A-Wing are in fair condition. Some efflorescence on brick surfaces remains from prior roof leaks that have been corrected. Lintels need some minor rust removal and repainting. Cracks in the mortar joints where the sloped brick panels (below windows) adjoin the building wall were also observed. See Photo A06. At the building control joints, the aged sealant is failing.

Repairs are also needed in following specific areas:

1, Mortar is loose or missing at some of the window steel lintel end bearing locations
2. A step crack in the brickwork was observed above the window. Refer to Drawing Note AW-1. Water was observed dripping from behind the lintel indicating water infiltration within the wall.
3. Cracked concrete leaving exposed rebar exists at the base of the mechanical room areaway wall. See Photo A14
4. There is a vertical crack through multiple brick courses at a window in the *East sub-wing*.
5. *All sealants in expansion joints have failed.*

EIFS Fascia/Soffits

The EIFS fascia/soffits are in good condition – they were repaired and recoated with the re-roofing project in 2008.

Metal Clad Wood Windows

The metal clad windows *(other than those replaced at patient rooms of the North and West sub-wings)*, fixed and inswinging hopper units, are in need of minor repairs. Gaps exist in the weatherstripping. See Photo A12. Approximately 25% of the screens are torn in areas.

The sliding window (door) units are also in need of minor repairs. Where exposed to sun light, the metal cladding paint finish has faded. The paint finish within the unit sills is peeling. Repairs are also needed in the following specific areas:

1. At the Satellite Dining south elevation:
   - one failed insulating glass panel was observed. See Drawing Note AW-3
   - pull hardware is missing at another unit. See Drawing Note AW-4
   - the bottom rail metal cladding is gouged on another unit. See Drawing Note AW-4

The perimeter caulking, however, is in poor condition, as it is aged and failing.

Aluminum Storefront Entrances & Window Walls

These glazed aluminum entrances and window walls need minor repairs. Complete cleaning of these storefront systems is needed. Also, the perimeter aged caulking should be replaced.

Solarium

The glazed aluminum curtainwall system enclosing the Solarium is in fair condition. The aluminum finish is tarnished in areas and the perimeter sealant joints should be re-caulked.

Enclosed Screened Porch

The metal fascia panels have been subject to apparent recurring roof leaks. A leak was observed above one of the metal clad columns. Joints in the J trim along the bottom edge of the fascia panels and at panel cover plates are open in areas. As a result, the metal fascia panels are in poor condition. *Fascia panels need to be replaced – see photo A01-2013. Perimeter joints need to be re-caulked. Failed insulating glass panel needs to be replaced. Aluminum door is damaged due to hitting wall – need door stop.*

Also, it should be noted that the roof insulation of this former screened porch is only 3/4" fiber board. Since this porch has been converted to interior space, 4" of roof insulation should be provided.

Hollow metal doors need minor repair and need to be repainted.

North Wing - 1970

The North Wing underwent a complete renovation in 2010 including a complete exterior envelope upgrade which is therefore is in good condition. Exterior walls are mostly 4" thick EIFS over the original brick with block back-up, with the exception of three brick veneer areas. The windows are Bonneville fixed / awning aluminum clad units with a few casement units. Exterior doors and storefront systems are aluminum framed with 1" insulated low-E glazing.

At the east side connector to East Wing, the exterior entrances are 1985 aluminum storefront systems.

East Wing - 1967

The East Wing exterior walls are brick with block back-up. Most of the windows are replacement double hung metal clad wood units installed in 1993 and 1995. The exceptions are metal clad wood inswinging hopper units installed in 1985 in the TV Room and one patient room on the west side. A single glazed aluminum framed vestibule provides protective cover for the building exit door at the north side of the TV Room.

Masonry
The exterior masonry walls are in poor condition. At the heads of most windows, the mortar is cracked at the lintel end bearing locations. At some lintel end bearing locations the brick is spalled. In other locations, step cracks and vertical cracks were observed in the brickwork below the windows and at building corners. See Photos E01 thru E04, E06, E09, & E10. Rust was observed on the steel lintels above windows. At building control joints, the aged sealant has failed. See Photo E08. At the northwest corner, the top of concrete foundation wall is broken. See Photos E05 & E11.

Metal Clad Wood Windows
The metal clad wood windows are in need of minor repairs. The perimeter caulking at a majority of these 1993 and 1995 windows has failed -drying out, split, or lacking bond. See Photo E07. Approximately 15% of screens are damaged (bent frame, holes in screening).

Exterior Doors
The door from the East Wing/Administration Connector to the south courtyard needs to be repainted in view of the rust observed.

Exit Vestibule
The aluminum framed exit vestibule off the TV/Smoking room is in critical condition. See Photo (R03). The vestibule exterior door is missing, the roof needs to be replaced, and it does not comply with the ADA. We recommend that this exterior vestibule be removed.

Main Level Administration

With few exceptions, the exterior walls of the Main Level Administration sector are brick with block back-up constructed in 1970 (Middle Wing), 1976 (Phase III), and 1985 (Phase IV). One exception is the wood framed historic manor house with cement asbestos siding. The other is a metal stud framed connecting corridor with hardboard siding that connects the original manor house to the facility on the east side. The windows vary in type due to age. At the historic manor house, the windows are single glazed double hung wood with combination aluminum storm/screens. The 1976 windows at commandant's office are clear anodized aluminum units. The 1985 windows are metal clad wood casement units, metal clad wood sliding (door) units, and painted wood fixed and casement units. Replacement metal clad double hung units were installed at the Library in 1993. The main entrance to the facility as well as courtyard entrances are 1985 aluminum doors and side lites. The entrance to the historic manor house at west side is a wood

paneled door with single glazed sidelights and transom. Other entrances are h.m. doors and frames.

Masonry-(General)
In general, the exterior masonry walls in this sector are in need of minor repairs. An exception is the south entrance to the Commandant's Office. At this entrance, the exterior steps and masonry cheek walls (separate of the building foundation) are in poor condition due to frost heaves. The steps have reverse pitch, masonry cheek walls have shifted, cap stones are loose, and the sealant joints have failed. This site entrance step construction should be replaced. The exterior section of concrete floor slab along its front edge and the west side also needs to be repaired.

Minor repairs are needed as follows:
1. The aged building control/expansion joint sealant has failed in areas
2. Steel lintels throughout should be re-painted.
3. The stone or precast band, brick sills, precast sills, and brick walls (in a few areas) should be cleaned to remove stains.
4. Vertical crack in the brickwork below the window sill to the foundation at the south elevation needs repair.
5. At the entrance to Corridor-S, the concrete at the west edge of the landing (platform) is broken exposing the reinforcing.
6. *A concrete cap at West entrance canopy column brick bases is cracked.*
7. *There are a few concrete spalls at the exposed foundation wall above grade adjacent to the west entrance (Corridor S-1); one spall has exposed rusting rebar.*

Metal Clad Wood Windows
With exception of the caulking, the metal clad wood windows - casement, double hung, and sliders are in need only of minor repairs. The perimeter caulking at number of these windows is in poor condition, as it is aged and failing in areas.

Minor repairs are needed as follows:
1. Sliding Windows (door units): Where exposed to sun light, the metal cladding paint finish has faded. The paint finish within the unit sills is peeling. At a few units, the metal cladding on the bottom rails is abraded by the guides.
2. Replacement 1993 metal clad double hung units at the Library: The steel mullions at this triple double hung window need to be re-painted as they are exposed to weather. *These steel mullions are now rusted. Sill flashing ends need to be recaulked.*

Wood Windows
The 1985 painted wood fixed and casement units at the east elevation of the corridor connecting the historic manor house are in poor condition. Some of the insulating glass units are fogged. A mullion cap is missing. Paint is peeling from sash, frame, and wood casing trim. At the main level windows, water infiltration into the sash is evident (sash has been caulked). Some rotted wood is likely. Head trim is rotted, as there is no drip cap flashing. See Photo AD03. In view of fogged units and water infiltration observed, and in consideration of their age, the sash of these wood windows should be replaced. *Conditions have worsened. Wood trim is rotted. Open joints need to be caulked. Sash sealant is cracked and water is getting in.*

Historic Manor House Wood Windows

These double hung wood windows are in need of minor repairs. The minor repairs include:

1. At the main level, the glazing needs to be repaired in areas and the sash should be repainted. Sills also need to be repainted.
2. At the upper levels (above porch), paint is peeling from the sash, frame, sills, and trim. Glazing needs to be repaired as well. Immediate repair of certain window sills is needed in view of rotted conditions observed in areas. See Photo AD05.

Aluminum Windows

With exception of the caulking, these 1976 clear anodized aluminum sliding windows are in good condition. The perimeter caulking at these windows is in poor condition, as it is aged (drying out).

Exterior Doors

The exterior doors are need of minor repairs as follows:

1. Historic Manor House - Main Entrance: The storm door closer is bent and should be replaced. An overhead stop is recommended. Door, sidelites, transom, frame, and trim should be repainted.
2. Historic Manor House - Upper Level Door above porch roof: Door, frame, and trim need to be repainted. Also, membrane roofing termination and door sill needs to be improved.
3. H.M. doors and frames at Main level south side: Both doors and frames need repainting. At the entrance to Corridor-S, the hinges appear worn and the meeting stile weatherstripping needs to be replaced.

Historic Manor House Siding, Wood Cornice, and Trim

Except for the exterior paint, the cement asbestos siding, wood cornice, and miscellaneous wood trim are in need of minor repairs. The minor repairs include:

1. A number of cement asbestos siding shingles are cracked in the vicinity of the nails and should be replaced.
2. South Elevation: The rake cornice is rotted at the cornice return. Also some of the lineal trim of the lower horizontal cornice appears rotted. See Photo AD 10.
3. The building southwest corner trim is rotted at the base
4. Sprinkler piping needs to be repainted. Also sealed at wall penetrations.

The exterior paint finish above the porch (upper level) is in poor condition. The paint is peeling at cornices and siding in areas. See Photos AD 04, AD 07, and AD 10.

Historic Manor House Porch

The porch needs only minor repairs as follows:

1. The porch decking and skirtboard trim is in good condition, however, should be re-coated with a preservative
2. The porch columns at the base portion should be repainted. (Painted tops of wood base are starting to peel)
3. The porch cornice paint is starting to peel at the west elevation (center)

Connecting Corridor (East Side) - Wood Siding and Trim

The built-up wood columns, hardboard siding , and wood trim are in poor condition. The built up

wood columns are rotted at the base. See Photo AD02. Hardboard siding above the head of the lower windows is rotted (window drip cap flashing). Paint is peeling from the upper level roof cornice trim. Rotted cornice trim, hardboard siding, and corner trim is evident) See Photos AD08 & AD09. *Conditions have worsened, now Critical Condition. Wood trim is rotted. Open joints need to be caulked. Sash sealant is cracked and water is getting in. See photo AD01-2013.*

Steel Fire Escape Paint Finish
The paint on the steel fire escapes (from the historic manor house and the library) is in poor condition. Repainting now is recommended.

West Entrance Canopy (Corridor-S)
This entrance canopy soffit is in good condition as it was repaired during the D-wing renovation project in 2008.

Main Entrance Canopy (other than masonry)
Except for wind screen at the north side, the main entrance canopy is only in need of minor repairs. The minor repairs include:

1. A small water stain was observed in the E.I.F.S ceiling (recently repainted) skylight well.
2. At the north side, tree branches need to be trimmed back, as they now rub the E.I.F.S ceiling.
3. Rusting at the base of the steel columns was observed. Repainting of the steel columns is recommended.
4. The wood benches need to be repainted.
5. Rusting at the base of the steel railings was observed. Repainting of the steel railings is recommended.
6. Main entrance brick at the base of columns needs to cleaned and joints repointed in areas. At the steps, the brick at the column base is cracked at the north face. See Drawing Note AD-3
7. Touch up grout at brick pavers in a few areas. Clean pavers and concrete slab. Remove rust stains at handrails.

The wind screen at the north side is in poor condition. The “plexiglass” on these wood framed panels is broken throughout.

Upper Level Administration

Refer to the Main Level Administration

Domiciliary – 1976 *(Now called D-Wing)*

The Domiciliary Wing underwent a complete renovation in 2008 including a complete exterior envelope upgrade which is therefore is in good condition. At this time the wing was converted to a

Nursing Care level unit and the Domiciliary function moved to another area of the facility. And the wing was therefore renamed to "D-Wing".

Exterior walls are mostly 3" thick EIFS over the original brick with block back-up. The windows are Marvin fixed / awning aluminum clad units with a few casement units. Exterior doors are insulated hollow metal. The south facing porch is partially roofed with standing seam metal roofing and partially an open wood framed pergola structure. At the south wall of the *Lounge* is an aluminum solar screen over the windows, mounted with aluminum sleeve brackets which penetrate the brick veneer. *This aluminum screen remains now penetrating the new EIFS wall finish.*

Food Service - 1976, 1985

The Food Service exterior walls are brick veneer / block backup construction, with a gravel stop fascia at the roof. At window openings the brick veneer coursing carries across the top of the opening on an exposed steel lintel (no soldier course or lintel treatment). Window sills are precast masonry at the dining room and brick washes at the food service area.

The windows in the east facade have been reconfigured and replaced several times. In 1976 there were aluminum sliders at the dining room, kitchen, women's toilet room, and men's toilet room. During the 1985 expansion / addition of the loading dock area, the toilet rooms were demolished and their window openings infilled. The dishwashing / pot storage room and a small toilet room (both windowless) took their place. The small loading dock was infilled to make a new trash room. The aluminum sliders in the kitchen were replaced with metal-clad wood casements. After the 1985 work, the only windows in the east facade were in the kitchen and the dining room. In 1993 three metal-clad wood awning windows were added in the dishwashing / pot storage room. At some time, the 1985 aluminum casements in the kitchen were replaced with vinyl double-hung windows.

Exterior doors in Food Service are 1-3/4" hollow-metal doors with insulated cores.

The fascias and ceiling of the loading dock canopy are E.I.F.S. stucco system.

<u>Masonry</u>
The exterior walls are in generally fair condition, with minor repairs needed. New perimeter sealant is needed at all windows and doors. The sealant between the precast sills at the dining room windows is failed (see photo FS09). Sealant is failed or bulged at all expansion joints, and at the trash room the sealant is missing at the bottom of the expansion joint, providing rodents access to the trash room (see photo FS04). There are failed mortar joints where the dining room meets the stairwell, and under the kitchen windows, and at the trash room, to the right of the door (see drawing notes). To the left of that door is a vertical crack through multiple courses of brick. Also to the left of the door, the brick at the outside corner of the building is damaged. Above the windows of the dishwashing room is a vent where brick has spalled and sealant is failed (see photo FS01). Below that vent is a hose connection which leaks (see photo FS05). At the basment windows below the dining room, there are two instances of brick spalled and broken at window

lintel end bearing (see drawing note FS-5 and photo FS10).

Exterior Doors:
The door and frame at the trash room are rusted and deteriorated and must be replaced. The double doors to the food receiving room do not close properly. The double doors at the vestibule leading to the corridor are missing panic hardware. All exterior doors need to be scraped and painted.

Windows:
Of the three sashes of the metal-clad wood awning windows in the dishwashing / pot storage room, one sash has been screwed shut, and the middle sash is rotted and must be replaced. All perimeter sealant at Food Service should be replaced.

Drainage at the Basement Window Well Below Dining Room Curved Window Wall:
At the curved east facing façade below the dining room windows is a row of windows which provide natural light for the large storage room in the basement. In two locations at either end of the row of windows, mechanical louvers connected to HVAC systems replaced the windows. The sill level of the windows is about 3 feet below the exterior grade level and a battered stone-lined well was installed to transition the exterior grade to be below the window sills at the building wall. According to the original construction drawings, underground drain lines are installed just below the grade level at the building wall to collect surface water and take it away from the building.

Over many years, the Home has battled with rain water building up in the well and flowing through the wall/window/louver joints and entering the storage room resulting in significant damage and cleanup, plus contributing to the growth of mold. The reason for the water build-up appears to be as a result of silt and vegetation growth in the stone lined well diminishing the soil infiltration rate coupled with problems with the flow of water in the underground drain lines. Recently we understand that the Home has repaired a significant blockage in the storm drain piping downstream of the underground drain lines serving this area which appears to have stopped the water infiltration in this area. This area should continue to be closely monitored during future rain events to determine if additional measures should be taken.

At the time of this inspection, there was significant vegetation within the well area, the soil level at the bottom of the well was right up to the sills (typically the soil level should be at least 8” below sills), window/louver lintels are rusting, window/louver perimeter sealants are cracked, sealants between cast stone sills have failed, and brick at the window lintel bearing conditions is cracked at a few locations. See photos FS01-2013, FS02-2013, FS03-2013, FS04-2013, FS05-2013, FS06-2013, and FS07-2013.

In general this area is in poor condition. In addition to the necessary building elements repairs and replacements, the entire well area should be restored by removing all vegetation, excavating and removing soil and stone, rebuilding battered stone wall, and installing new filter fabric and gravel above and around the drainpipes. Elevation of bottom of the well should be established at a minimum of 8” below window/louver sills. Existing drainpipes should be checked and replaced if damaged or full of soil.

Laundry/Boiler Room

This sector comprises of the original Laundry-Boiler building, a Laundry Corridor constructed in 1975, a Maintenance Shop addition, and a Temporary Boiler Room added in 2004. Exterior walls are brick composite at Laundry-Boiler building, brick with block back up at the Laundry Corridor and Maintenance Shop, and painted block at the Temporary Boiler Room. Windows types vary with the age of the buildings in this sector - interior single glazed steel units with wood screens at the Laundry-Boiler building, aluminum exterior single glazed units at the Laundry Corridor, and vinyl clad wood awning units at the Maintenance Shop. Note, as a result on alterations to the Laundry-Boiler building through the years, a number of the original windows have been replaced with louvers or plywood infill panels for the installation of exhaust fans, duct wall caps, etc. Exterior doors vary as well, consisting of swinging hollow metal, wood, and aluminum door units, a wood overhead door, and an insulated metal overhead door**.**

Masonry-(General)
In general, the exterior masonry walls in this sector are in need of minor repairs as follows:

Laundry-Boiler Room: Some broken soft brick were observed in areas at the south, east, and west elevations that should be patched. Cleaning brick of stains and patching of holes from obsolete anchors is also needed in areas throughout. At the east elevation, pointing of brick at the Laundry louver is needed. At the north elevation, obsolete steel anchor plates at grade should be removed and the brickwork patched.

Laundry Corridor: At the foundation, bond of the cement plaster applied to the concrete has failed in large areas. See Photo LB01. At East elevation, there are many cracks and spalls in cement plaster coating; steel reinforcing is exposed in some locations. See photo LB01-2013. At the west elevation, the brickwork is step cracked within the mortar joints above the window at the south end. A hole in the brickwork nearby also needs to be patched. At the east elevation, the brickwork is step cracked below the south window unit sill.

Maintenance Shop: The face brick at the west elevation needs to be cleaned to remove the build up of mold in the area where materials stored against the wall.

Masonry -(Boiler Plant Chimney)
The condition of this masonry chimney (stack) is excluded from this report.

Laundry/Boiler Wood Cornice
The wood cornice is in poor condition. The paint is peeling. Sections of the north fascia trim appear to be rotted. Mid sections of the half round metal gutter at the north elevation are rusted and appear ready to fall off. See Photo LB04. At the south elevation(east side), gutter has been removed, yet support brackets and leader at the corner remain.

Windows
Except as noted, the windows in this sector are in need of minor repairs as follows:

Laundry/Boiler: The single glazed steel units(interior glazed) need to be repainted. The wood screen units are in poor condition as all need to be removed for screen/frame repair and repainting. Instead of repairing wood screen units, we recommend these units be replaced new aluminum screen units.

Laundry Corridor: The aluminum single glazed units are in poor condition. All units need to be re-glazed as the existing glazing is typically dried out and cracked. The perimeter joints and joints in the precast sills need to be re-caulked. Steel lintels should be painted as well. All units, including precast sills, need be cleaned. Aluminum mullion covers are fastened with rusting steel screws. These screws need be replaced with stainless steel.
Instead of reglazing, recaulking, and repairing the mullion covers, we recommend these single glazed windows be removed and the wall openings infilled with insulated wall construction.

Maintenance Shop: Wood trim portion of these vinyl clad wood windows needs to be re-painted. The perimeter joints should be re-caulked.

Window Infill Panels:
At the west elevation of the Boiler-Laundry, the plywood infill panels are in poor condition. At the upper gable end, the plywood panel appears rotted and should be replaced. Two other infill panels need to be re-caulked and repainted.

Louvers
Except for the perimeter sealant, the metal louvers are in good condition. At the east elevation, the louver perimeter sealant is aged in poor condition. Sealant is intermittent along the sill and appears missing along the head at the south unit.

Wood Siding & Trim
The wood siding and trim of the Maintenance Shop is in need of minor repairs. The cornice trim of the lower and upper roof sections is due for re-painting. A few trim boards of the upper cornice are warped with open joints and should be replaced. Siding of the upper section should be re-painted as well.

Exterior Doors
Laundry/Boiler: The original wood exterior door at the west elevation is in poor condition and should be replaced. At the east elevation, the h.m. entrance door (pair) and frame is in poor condition. The active door leaf is damaged and should be replaced. This pair of doors and frame, and plywood trim surround, also needs to be repainted.

Laundry Corridor: The aluminum exit door at the east elevation is a single glazed unit in need of minor repairs. The perimeter sealant should be replaced and new weatherstripping installed. Instead of these minor repairs, we recommend that this single glazed entrance door be removed and replaced and insulated hollow metal door and frame. This new door and frame is in concert with the adjacent Laundry Corridor window infill described above. Just outside this door, steel handrails at the exterior concrete stair and landing are in poor condition; rusted in many locations and rusted completely through at some post bases. See photo LB02-2013. We recommend these handrails be replaced with new code-compliant galvanized steel pipe guard rails and handrails.

Maintenance Shop: The h.m entrance door and frame is in poor condition. The h.m. frame is rusted out at the bottom and the door is damaged. Both door and frame should be replaced. See Photo LB02. The overhead door is poor condition as well and should be replaced. The bottom panel has been repaired with mending plates. Replacement wood stops are also needed.

Boiler Room Roof Gravity Ventilators
These painted wood ventilators (doghouses) are in poor condition. See Photo (R19) The plywood siding and trim on both is rotted along the base. We recommend these ventilators be replaced with sheet metal louvered penthouses.

Laundry/Boiler Gas PRV Shed
This wood framed lattice enclosure is in poor condition. The wood trim is rotted and lattice panels are broken. As the pad mounted gas PRV is obsolete, we recommend that this shed and the PRV be removed in its entirety. See Photo LB03

Chapel Wing

The Chapel, constructed in 1970, includes a connecting corridor/ramp to the Food Service sector. Exterior walls at the Chapel are typically concrete block clad with vertical red cedar vee joint siding. Exterior walls of the connecting corridor/ramp consist primarily of wood stud framing with vertical red cedar vee joint siding. Windows in the Chapel comprise of aluminum exterior single glazed units (fixed and awning types) and a single glazed aluminum storefront system at the east elevation. Windows at the connecting corridor/ramp are single glazed aluminum framed fixed and awning units installed on intermediate wood mullions. The exterior door at the north elevation is a h.m. door and frame unit.

Masonry
Connecting Corridor/Ramp: At the foundation(south side), minor repairs are needed as the bond of the cement plaster applied to the concrete has failed in areas. See Photo CH03. At the South elevation connecting corridor/ramp foundation, bond of the cement plaster applied to the concrete foundation has many cracks, spalls, and areas where portions have fallen off. See photo CH01-2013. Also, a pipe penetration through the concrete foundation wall is not properly sealed. See photo CH02-2013.

Windows
Except for the exterior glazing and perimeter caulking, the Chapel single glazed aluminum windows are in good condition. The exterior glazing and caulking is in poor condition. The glazing is cracked and dried out. This aged glazing and caulking needs to be replaced. The aluminum frames, sash, and sill should be cleaned. The exterior perimeter caulking at the single glazed aluminum storefront system is also in poor condition and should be replaced, including the sealant at the extruded aluminum sills. At the connecting corridor/ramp, the single glazed aluminum framed fixed and awning units are in poor condition. The aluminum mullion covers are fastened with rusting steel screws. These mullion covers should be replaced. The aged glazing and caulking

should be also be replaced. The mortar wash at the sill is cracked and open continuously along the front edge. See photo CH03-2013.

Instead of the reglazing, recaulking, cleaning, and repair work needed, we recommend that these windows and the storefront system be replaced with new insulating glass units.

Exterior Doors

The Chapel north exit hm insulated door is a narrow pair. We recommend that it be replaced to provide a wider active door in this opening to meet Code.

Wood Siding & Trim

Except as noted below, the vertical red cedar siding and wood trim is in good condition.

1. The existing siding should be re-coated with solid color stain as the existing stain is weathered throughout. See Photo CH02. Note: Shrubbery should trimmed to stay clear of the siding.
2. The existing siding at the connecting corridor/ramp (south elevation) is in critical condition. See Photo CH04 and Drawing Note CH-1. The siding is severely weathered. T& G boards are loose, cupped, warped, curled, etc. leaving wall construction exposed to weather and water infiltration. Gaps between boards revealed that there was no sheathing or moisture barrier installed behind the siding along this 35 foot stretch of wall. A few siding boards were removed to inspect the wall cavity. See photo CH04-2013. Due to the severity of siding deterioration and lack of weather barrier, water infiltration into the cavity appears to have been readily occurring over the years resulting in water staining and mold on fiberglass insulation and wood framing members. See photo CH05-2013. We strongly recommend this section of wall be immediately repaired to provide a proper barrier for moisture infiltration. During this repair work, proper mold remediation should also be performed.
3. A 4" cast iron drainpipe outlet discharges roof rainwater onto the concrete foundation and grade below causing staining of the concrete and settlement of the surface grades. This condition can contribute to added water pressure on the building which can enter the building at any cracks, joints or openings. See photo CH06-2013. We recommend that this drainpipe be extended down to grade, run underground about 10 feet to a nearby storm drain structure. Grades should be restored to provide positive drainage away from the building.
4. A section of roof edge metal/fascia at the top of the south facing wall wood siding is bent and loose from the wall. See photo CH07-2013.
5. At the connecting corridor/ramp, the wood subsill trim and head trim at the aluminum window units are in poor condition. See Photo CH03. This trim is severely weathered and should be replaced.
6. Pipe penetrations at the North elevation are not properly sealed. See photo CH08-2013.

In-Service Education Wing - 1970

The In-Service Education Wing was constructed with the Chapel. Exterior walls are typically concrete block clad with vertical red cedar vee joint siding. At the main building four corners are large field stone wing walls. Above the main building upper windows is a large fascia of red cedar horizontal bevel siding and a wide soffit of red cedar vee joint siding. The majority of windows consist of replacement clad wood insulating glass fixed, casement, and awning units installed in 1985. The minority are a few of the original aluminum exterior single glazed units (fixed and awning types) in the corridors. The exterior doors are single glazed aluminum storefront systems with sidelights at the north and south elevations.

Masonry

The field stone wing walls are in need of minor repairs. Mortar joints in areas need to be tuck pointed, especially at the southeast and southwest wing walls. See Photo CH01. Deterioration of mortar joints has worsened slightly resulting in more cracked mortar and a loose stone at the southwest wing wall.

Windows

With few exceptions, the In-Service metal clad wood windows and aluminum windows are in need of minor repairs. The exterior glazing and caulking is in poor condition. The glazing of the aluminum windows is cracked and dried out and should be replaced. This aged perimeter caulking should be replaced as well. The bond of the sealant to the wood soffit along the heads of the upper metal clad wood windows has failed in areas. At the south side, a metal clad wood window mullion cap is missing. All frames, sash, and sills should be cleaned.

Instead of the reglazing and recaulking the aluminum windows, we recommend that these single glazed units be replaced with new insulating glass units.

Wood Siding & Trim

Except as follows, the vertical red cedar siding, soffit red cedar siding, fascia red cedar beveled siding, and wood trim are in good condition.

1. The existing vertical siding and fascia red cedar beveled siding is in poor condition. It should be re-coated with solid color stain as the existing stain is weathered throughout. The soffit red cedar siding paint is peeling in a few areas at east and south sides.
2. Two vertical siding boards at north elevation (east of the aluminum entrance) are in need of minor repairs as they damaged near the bottom and should be replaced.
3. The perimeter sealant at the east and south elevation louvers needs to be re-caulked.
4. The sealant joint between the main building stainless steel corner column covers and the galvanized steel upper window sill flashing is aged and should be replaced.

Exterior Doors

The single glazed aluminum entrance doors and sidelites at the north and south elevations are in poor condition. These 1970 entrance doors appear worn out. Glazing gaskets at the sidelights are loose (coming out). Concealed closers have high opening force. The weatherstripping is worn and/or missing. South door frame stop members are loose. Self closing/latching is not working properly. Clearances need to be adjusted. South door hinge pins are rising. The perimeter sealant should be replaced and new weatherstripping installed. Does not meet ADA code with respect to

closer opening force and pull hardware. Considering the poor condition of these aged single glazed entrance doors and the fact that they don't meet ADA, we recommend that they be replaced with new code compliant entrance doors and sidelites with insulating glass.

Note: Although not part of the exterior wall envelope, but worth mentioning; the concrete sidewalk at walkway from parking lot to south elevation entrance doors is significantly cracked and broken up creating a possible trip hazard. These sidewalks should be replaced.

B Wing - 1976

The exterior walls of B Wing are brick veneer / block backup construction, with a gravel stop fascia at the roof. At window openings the brick veneer coursing carries across the top of the opening on an exposed steel lintel (no soldier course or lintel treatment). Window sills are precast masonry. Above most windows, at the height of the plenum, is an aluminum brick vent.

Windows are aluminum sliders with half-inch insulating glass. The exterior doors are 1-3/4" hollow-metal doors with an insulated core. All exterior doors are protected by canopies. The soffits at the canopies consist of a steel plate near the exterior wall and stucco within.

Over the windows of the solarium, arts room, and the reading room are aluminum solar screens, mounted with aluminum sleeve brackets which penetrate the brick veneer.

Masonry
While in generally good condition, the exterior walls need numerous minor repairs. There are a dozen long cracks in the brick veneer (see drawing note BC-5 and BC-6 and photos B02, B06). All steel lintels should be scraped and painted. Two precast window sills are cracked (see drawing note BC-8). The window perimeter sealant has failed throughout the wing (see photos B01, B04, B07), and the sealant is failed in the expansion joints (see photo B08). The sealant between precast sill pieces is cracked and failed throughout. See photo B01-2013. There's a loose electrical receptacle and a broken sound speaker in the east elevation brick veneer. The concrete foundation is generally in good condition with minor repairs needed including a broken off corner at expansion joint and a few abandoned penetrations on the south elevation.

Windows:
Other than failure of the perimeter sealant, the aluminum sliders are in good condition.

Exterior Doors:
The door, sidelites, and frames of the doors next to the solarium and next to the arts room are rusted and should be scraped and painted. The door by the arts room is difficult to open, as it rubs at the threshold. At the canopy just outside the exterior door leading from the nurses' station out to the west courtyard, there is an aluminum door frame and transom unit with no doors that is in poor condition. It appears that this unit was added after the original building construction to create a vestibule. If the door is no longer needed, this frame should be removed and wall/ceiling finishes patched accordingly.

Canopies:
The canopy at the entry by the arts room has sagged 2-3 inches- see photo B05 in the Appendix. This was reported to be a structural concern in the Structural section of the original report. Although the roofing and gravel stop fascia metal of the canopy appears to have been replaced, the sag remains, indicating that it may still be a structural concern. See photo B02-2013. If this structural concern has not yet been addressed, we strongly recommend that it be temporarily shored immediately and additional investigation be completed to determine the cause.

Fixtures, Equipment:
The solar screen outside of the solarium has been impacted and knocked loose by a truck. The metal railing posts at the entries by the solarium and the arts room are rusted completely through at the base (see photo B03).

Perimeter Grades:
There are several areas around the perimeter of the building where the grades directly adjacent to the building have settled, creating grade surfaces that slope toward the building instead of away from the building. These “negative” drainage conditions can direct surface water runoff to the building foundation adding to hydrostatic pressures on the building envelope elements which can lead to water infiltration into the building. We recommend these areas be re-graded to provide a positive slope away from the building.

New West Courtyard Concrete Patio:
A recent upgrade to the West Courtyard included a concrete patio installed adjacent to the existing exterior brick walls. The joint between the new concrete patio and the existing brick walls has an expansion joint material installed, but no sealant at the surface. We recommend this joint be sealed.

C Wing - 1976

The construction of C Wing is identical to that of B Wing.

Masonry:
The perimeter sealant at windows is failed throughout the wing. There is no perimeter sealant around the windows of the porch known as 'The Club". Sealant at expansion joints is bulged or failed (see photo C02). All steel lintels should be scraped and painted. There are a dozen long cracks in the brick veneer (see drawing note BC-5 and BC-6 and photos C01, C04), and at the east congregate bath there are cracked bricks at the end bearing of window lintels (see drawing note BC-7). Near the western entry there are several bricks broken at the foundation (see photo C03). Also at the western entry, the brick column and concrete base is cracked in several places. See photo C01-2013. And, at the adjacent outside corner of the building, there is a long vertical crack in the brick veneer. At the dining room (the eastern solarium), the brick is cracked around three of the metal bracket sleeves that support the solar screen (see photo C06). The stucco soffit over the east entry door is cracked.

Windows:

The perimeter sealant of all windows in C wing should be replaced, and there are fogged insulating glass lites at rooms 503, 505, 507, 509, 511, 607, and 609.

Exterior Doors:

The exterior doors at "The Club" sunroom are ruined by rust and must be replaced. The door near the western solarium needs paint. The exterior door to the smoking room is rusted and has no closer (see photo C07).

Perimeter Grades:

There are several areas around the perimeter of the building where the grades directly adjacent to the building have settled, creating grade surfaces that slope toward the building instead of away from the building. These “negative” drainage conditions can direct surface water runoff to the building foundation adding to hydrostatic pressures on the building envelope elements which can lead to water infiltration into the building. We recommend these areas be re-graded to provide a positive slope away from the building.

New West Courtyard Concrete Patio:

A recent upgrade to the West Courtyard included a concrete patio installed adjacent to the existing exterior brick walls. The joint between the new concrete patio and the existing brick walls has an expansion joint material installed, but no sealant at the surface. We recommend this joint be sealed.

ROOFING *(2013 Updates in blue italics)*

Note: Where roofs have been completely re-roofed since the original 2006 Assessment, the 2006 Report text has been deleted from this 2013 Update in its entirety as it is no longer applicable.

General

The following roof condition report is based on a April 20, 2006 walk-about inspection with Jon Kenyon of Admiral Building Products, Inc. A copy of the Admiral Building Products 4/20/06 Inspection Report is attached for reference as Appendix C. During this walk-about inspection, roof maintenance practices were observed. In the interest of prolonging of the life of the existing roofing systems, roof maintenance should include trimming back of trees in contact with roof, removing the build up of debris anywhere on the roof - especially at roof drains and scuppers. Roof maintenance needs to be improved in areas as can be seen in Photos R01, R20, & R21.

The following roof condition report updates are based on walk-about inspections conducted by Timothy D. Smith & Associates personnel on the following dates; 3/11/13 and 07/26/13.

A Wing

The A Wing roofing was completely replaced in 2008.

The A Wing roof is a 2008 Firestone .060 Adhered TPO membrane, and 4 " rigid insulation on a concrete deck.

This roof is in good condition, having been in place just 5 years. Standing water was observed throughout the roof surface after a rain event due to the level roof surface condition. This water generally evaporates quickly and was inspected and accepted by Firestone for the 20yr warranty.

North Wing

The North Wing roofing was completely replaced in two phases; September 2009 and November 2011 (refer to roof plan for specific locations).

The North Wing roof is a 2009 or 2011 Firestone .060 Adhered TPO membrane, 5" rigid insulation, on either concrete or metal deck (refer to roof plan for specific locations).

This roof is in good condition, having been in place just 4 years or less. Standing water was observed at a few specific locations due to less than ideal slope conditions, but again the water generally evaporates quickly and was inspected and accepted by Firestone for the 20yr warranty.

A few areas to note on North Wing roof that could benefit from some more frequent maintenance and/or improvements to prolong it's life are as follows:

- *Area directly adjacent to 2-story Administration Wing – pitch to drain is slight and standing water causes moss to grow. See photo R01-2013.*
- *Shallow ledge between North Wing and Main Entrance Canopy – pitch is not enough to flow water out of this area. See photo R02-2013.*
- *Lower section of roof at "connector" between North-North and North-South sub-wings – crickets installed to both sides of drain would help to drain standing water at the level valley. See photo R03-2013.*

East Wing

The East wing roof systems are unchanged from the 2006 Assessment. Conditions have worsened to critical condition and replacement is necessary to avoid probable leaks. See photos R04-2013, R05-2013, R06-2013, and R07-2013.

The East Wing roof consists of two roofing systems

- J.P. Stevens white hypalon membrane system with aluminum gravel stops and insulation on a concrete deck. This 1991 roofing system is in poor condition as it is at the end of its average efficient life of 14 years. See Admiral Building Products 4/20/06 Inspection Report - Appendix C regarding the condition of this hypalon membrane. Two to four years of reliable service can be expected with a pro-active repair and maintenance program in place.

- Double coverage roll roofing at the north exit canopy. This aged roofing is in critical condition. See Photo R03. We recommend that this exit canopy be removed. Thus replacement of this roofing is not required.

  The estimated cost to replace J.P Stevens roofing system is as follows:

  Replace the hypalon membrane roofing with a fully adhered 20 year white TPO membrane system, 5" insulation, and new metal gravel stops:

6,040 SF x $9.60/SF =	57,984
EAST WING PRELIMINARY PROBABLE ROOF REPLACEMENT COST	**$57,984**

Main Level Administration

The Main Level Administration roof systems are unchanged from the 2006 Assessment. Conditions have worsened and replacement is critical to avoid probable leaks.

The Main Level Administration roof consists of six roofing systems:

- 1986 Carlisle ballasted EPDM membrane system with aluminum gravel stops and 3/4" fiberboard on a metal deck at the Main Entrance Canopy
- 1986 Carlisle ballasted EPDM membrane system with aluminum gravel stops and 4" insulation on concrete deck at the Library
- 1989 Grey reinforced membrane system at the Porch
- 1991 J.P Stevens white hypalon membrane system with aluminum gravel stops and 4" insulation on a metal deck *Replaced in 2009 with Firestone adhered TPO, 4" rigid insulation on metal deck.*
- Built-up roofing on plywood deck at the west entrance canopy *Replaced in 2009 with Firestone adhered TPO, 4" rigid insulation on metal deck.*
- 2003 Firestone TPO membrane system with aluminum gravel stops and 5" insulation on a metal deck

The Carlisle ballasted EPDM roofing systems at the Main Entrance Canopy and Library are in poor condition - at the end of their service life. At the entrance canopy, the membrane is pulling away from the skylight curbs. These roofing systems should be replaced. ~~when the A Wing roof (?) is replaced.~~ *Moss is growing in a few locations at both the main entrance canopy and the library roofs. See photo R08-2013.*

The grey reinforced membrane system at the Porch is aged 16 years, yet is in fair condition. This roofing system should be budgeted for replacement in 5 years. *This roof system is now 23 years old and is in poor condition at the end of its useful life. Two problem areas to note are as follows:*

- *Standing water at the drain located at the south end of the porch roof resulting from negative pitch. See photo R09-2013.*
- *Conductor head at the northeast end of the roof is plugged. See photo R10-2013.*

The J.P Stevens white hypalon roofing system is in poor condition, as it is at the end of its average efficient life of 14 years. See Admiral Building Products 4/20/06 Inspection Report - Appendix C regarding the condition of this hypalon membrane. Two to four years of reliable service can be expected with a pro-active repair and maintenance program in place.

The built-up roofing at the west canopy is in critical condition. Water damage is obvious of a recurring leak. This roofing should be replaced as soon as possible. In the meantime, immediate temporary repairs are needed.

The J.P. Stevens white hypalon roofing systems at the south and east roofs adjacent to the old Manor house, and the built-up roofing at the west canopy have been completely replaced with a new .060 Firestone Adhered TPO and 4" rigid insulation in 2009 and is in good condition.

The Firestone TPO roofing system at the Canteen Area is in good condition. It is currently covered by a 15 year warranty.

The estimated cost to replace the roofing systems that are in poor condition is as follows:

Replace the main entry canopy roofing with a mechanically attached 20 year white TPO membrane, 3/4" insulation, and new metal gravel stops:

1,880 SF x 8.65/SF = 16,262

Replace the library roofing with a fully adhered 20 year white TPO membrane, 5" insulation, and new metal gravel stops:

412 SF x 9.60 = 3,955

~~Replace the J.P Stevens hypalon roofing with a mechanically attached 20 year white TPO membrane, 4" insulation, and new metal gravel stops:~~

~~1110 SF x 7.00 = 7,770~~

~~Replace the canopy built-up roofing with a mechanically attached 20 year white TPO membrane and new metal gravel stops:~~

~~42 SF x 7.00 x 2 = 588~~

Replace the Grey reinforced membrane system at the porch with a fully adhered 20 year white TPO membrane, ½" underlayment, and new metal gravel stop/fascia:

790SF x 8.00 = 6,320

MAIN LEVEL ADMIN. PRELIMINARY PROBABLE ROOF REPLACEMENT COST **$26,537**

Second Floor Administration

The Second Floor Administration roof is a 2005 Firestone TPO membrane system with aluminum gravel stops and insulation on a metal deck. This roof is in good condition, covered by a 15 year warranty. No work required. *Roofing system is now 8 years old and is still in good condition, with the following deficiencies noted:*

- *Perimeter 2' is not adhered, but is weathertight.*
- *Aluminum perimeter cover plate sealants need replacing.*
- *Flashing boot for antennae pole is cracked and could be point of water infiltration.*
- *Elevator penthouse steel (?) sash needs to be resealed.*

Third Floor Administration

The Third Floor Administration roof consists of 1989 asphalt shingles. This roof is in fair condition with a life expectancy of approximately five more years. Replacement shingle roofing should be budgeted accordingly. *Roof shingles are now 24 years old and still in fair condition, although starting to show some signs of wear; some broken or missing shingles and some bubbled areas.*

Domiciliary Wing ***Now called D-Wing***

D-Wing roofing was completely replaced in 2009.

D-Wing roof consists of .060 Firestone Adhered TPO and 4" rigid insulation on metal deck and is in good condition.

Food Service

The Food Service wing roof systems are unchanged from the 2006 Assessment. Conditions have worsened to critical condition and replacement is necessary to avoid probable leaks. See photo R011-2013, R12-2013, and R13-2013.

The Food Service roof consists of three roofing systems:

1. J.P. Stevens white hypalon membrane system with aluminum gravel stops and insulation on a metal deck. This 1991 roofing system covering 13200 SF is in poor condition, as it is at the end of its average efficient life of 14 years. See Admiral Building Products 4/20/06 Inspection Report - Appendix C regarding the condition of this hypalon membrane. Two to four years of reliable service can be expected with a pro-active repair and maintenance program in place.
2. 1986 Carlisle ballasted EPDM membrane system with aluminum gravel stops and 4" insulation on concrete deck. This 20 year old roofing system covering 1500 SF is critical condition. The membrane wall flashings are split open in several areas. Existing counterflashings are being pulled out of the wall. See Photos (R04,R05). This roofing system should be replaced as soon as possible. In the meantime, immediate temporary repairs are needed.
3. Built-up roofing on plywood deck at the east entrance canopy. This roofing system is in poor condition. It should be replaced with the J.P Stevens hypalon roof in two to four years.

The estimated cost to replace the Food Service roofing is as follows:

Replace the J.P Stevens hypalon roofing system with a mechanically attached 20 year white TPO membrane, 5" insulation, and new metal gravel stops:

(3,630SF + 9,570SF) x 9.60 = 126,720

Replace the Carlisle ballasted EPDM roofing system with an adhered 20 year white TPO membrane, 5"(min.) tapered insulation system (1/8"/ft), and new metal gravel stops:

1,500SF x 11.15 = 16,725

Replace the east entrance canopy built-up roofing with a mechanically attached 20 year white TPO membrane and new metal gravel stops:

42 SF x 9.60 x 2 = 806

The skylight on this roof is in poor condition as well. The acrylic domes are crazed on the Domiciliary. As they are of the same age, this skylight should be replaced as well . The estimated cost to replace this skylight is:

1 - 37" x 37" acrylic dbl dome curb mounted unit X (310M + 130L) + 55% 682

FOOD SERVICE PRELIMINARY PROBABLE ROOF REPLACEMENT COST **$144,933**

Laundry/Boiler Room

The Laundry/Boiler wing roof systems are unchanged from the 2006 Assessment. Conditions are generally unchanged, with the following observations noted below.

The Laundry/Boiler Room roof consists of four roofing systems:

- Firestone TPO membrane system with aluminum gravel stops/parapet cap flashings and 5" insulation on metal deck. This 2001 roofing system covering the Laundry Corridor is in good condition.
- Slate Shingles covering the original building. This slate shingle roof is in need of minor repair. Missing or broken slate shingles were observed in a few areas. See Photo (R15)
- Adhered EPDM membrane system with metal edge strips and 3" insulation on plywood deck. This 2003 roofing system covering the Boiler Room Addition is in good condition. *Debris in gutter and and slate debris on roof should be removed. Sealant at fascia to gutter lacks adhesion.*
- Asphalt coated concrete. This coating of the original building concrete roof is in critical condition. See Photos (R17, R18, R19). Roof leaks through this aged coating were observed during the 2005/2006 Phase I/Stage A Central Heating System renovation project. Replacement of this roof coating should be done as soon as possible.

The estimated cost to replace the asphalt coated roofing with a new elastomeric coating system is as follows. A Gacoflex fluid applied polyurethane coating system (similar to systems used on parking garage decks) is recommended.

(136SF + 410SF) x 6.20/SF = 3,385

The estimated cost to repair the slate shingles is: 620

BOILER ROOM/ LAUNDRY PRELIMINARY PROBABLE ROOF REPLACEMENT/REPAIR COST **$4,005**

Lower Level Boiler-Maintenance Shop

The Maintenance Shop roof is an aged asphalt shingle roof in critical condition. It is completely

worn out and should be replaced as soon as possible. A section of metal counterflashing is also missing. See Photo (R12) *Replacement of the Maintenance Shop roofing is overdue – shingles are cracked and brittle, broken, open in areas, temporarily caulked in areas, etc. See photo R14-2013.*

The estimated cost to replace this asphalt shingle roof is as follows:

1325SF x 6.80/SF = 9,010

LOWER LEVEL BOILER-MAINTENANCE SHOP
PRELIMINARY PROBABLE ROOF REPLACEMENT COST **$9,010**

Chapel Wing

The Chapel Wing roof systems are unchanged from the 2006 Assessment. Conditions have worsened and replacement should be considered in the near future to avoid probable leaks for roofs noted in poor condition.

The Chapel Wing roof consists of four roofing systems:

- J.P. Stevens white hypalon membrane system with aluminum gravel stops and insulation on a metal deck. This 1989 roofing system covering 1630SF is in poor condition, as it is at the end of its average efficient life of 14 years. See Admiral Building Products 4/20/06 Inspection Report - Appendix C regarding the condition of this hypalon membrane. Two to four years of reliable service can be expected with a pro-active repair and maintenance program in place. *Membrane reinforcing starting to show through, drains need to be cleaned, sealants brittle. See photos R15-2013 and R16-2013.*
- Firestone TPO membrane system with aluminum gravel stops/parapet cap flashings and 5" insulation on metal deck. This 2001 roofing system covering the Chapel Corridor is in good condition.
- Firestone TPO membrane system with aluminum gravel stops/parapet cap flashings and approx. 4" insulation on wood deck. This 2003 roofing system covering the Chapel is in good condition. It is covered by a 15 year warranty. See Photo (R13) *Few un-adhered ripples in membrane. Acrylic dome skylight is crazed, patched sealant at perimeter failing, conductor head is loose, and parapet flashing is lacking adhesion. This roofing system is now in fair condition with the skylight in* poor condition. *See photos R17-2013 and R18-2013.*
- Cedar shingle roofing appears to be the original dating to 1969. They are installed at a low slope (9/12 at lower section) and high slope (upper section) over furred wood decking. The shingles have been coated with a stain. As expected, the shingles are weathered with splits, loose shingles, broken shingles, and missing shingles in areas. See Photos (R15, R16). This shingle roof is in need of minor repair. *Cedar shingles continue to degrade – many more split, warped, and heavily weathered (rotted) shingles – now in poor condition. Significant moss growth on the shingles was observed. More significant repairs are needed and/or consideration should be given to full replacement. See photos R16-2013,*

R19-2013, R20-2013, R21-2013 and R22-2013.

The estimated cost to replace the Chapel Wing roofing in poor condition and perform minor repairs to the cedar shingle roofing is as follows:

Replace the J.P Stevens hypalon roofing system with a mechanically attached 20 year white TPO membrane, 5" insulation, and new metal gravel stops:

(1,630SF) x 9.60 = 15,648

Repair cedar shingle roofing. Replace shingles at the low slope hips and replace broken or missing shingles. Recoat shingles with solid color stain.

Replace shingles	(80MH x 44) + 600M+ 55% =	4,450
Recoat shingles	Allow	3,000

CHAPEL WING PRELIMINARY PROBABLE ROOF REPLACEMENT/REPAIR COST **$23,098**

In-Service Education Wing

The In-Service Education Wing roof system is unchanged from the 2006 Assessment. Conditions have worsened and replacement should be considered in the near future to avoid probable leaks.

The In-Service Education Wing roof is a J.P. Stevens white hypalon membrane system with aluminum gravel stops and insulation on a metal deck. This 1989 roofing system is in poor condition, as it is at the end of its average efficient life of 14 years. See Photo (R14). See Admiral Building Products 4/20/06 Inspection Report - Appendix C regarding the condition of this hypalon membrane. Two to four years of reliable service can be expected with a pro-active repair and maintenance program in place. *Membrane reinforcing starting to show through, drains need to be cleaned, sealants brittle. See photo R23-2013.*

The estimated cost to replace this roofing is as follows:

Replace the J.P Stevens hypalon roofing system with a mechanically attached 20 year white TPO membrane, 5" insulation, and new metal gravel stops:

(1,980SF + 2,980SF) x 9.60 = 47,616

IN-SERVICE EDUCATION PRELIMINARY PROBABLE ROOF REPLACEMENT COST **$47,616**

"B"Wing

B-Wing roofing was completely replaced in 2012..

B-Wing roof consists of .060 Firestone Adhered TPO and 5" rigid insulation on metal deck and is in good condition.

"C" Wing (Includes Dirk's Room)

C-Wing roofing was completely replaced in 2012..

C-Wing roof consists of .060 Firestone Adhered TPO and 5" rigid insulation on metal deck and is in good condition.

IV. STATEMENT of PRELIMINARY PROBABLE COSTS

- Architectural Exterior, 2013 Update
- Roofing, 2013 Update

PRELIMINARY PROBABLE COSTS-
ARCHITECTURAL EXTERIOR- ALL WINGS

A WING	$101,445
NORTH WING	$0
EAST WING	$20,505
ADMINISTRATION	$146,046
DOMICILIARY	$0
FOOD SERVICE	$56,193
LAUNDRY-BOILER	$91,573
CHAPEL	$119,937
IN-SERVICE EDUCATION	$60,650
B WING	$87,411
C WING	$61,591
TOTAL	$745,351

PRELIMINARY PROBABLE COSTS- ARCHITECTURAL EXTERIOR

NOTE: For a detailed, line-item breakdown of this summary information, see "Architectural Exterior Cost Detail" following the spreadsheets

A WING	
MASONRY	
	$30,107
~~EIFS FASCIA / SOFFIT~~	
	~~$5,736~~
METAL-CLAD WOOD WINDOWS	
	$10,634
ALUM. STOREFRONT ENTRANCES & WINDOW WALLS	
	$1,865
SOLARIUM	
	$3,772
ENCLOSED SCREEN PORCH	
	$3,204
Direct Cost- A Wing	$49,582
Subcontractor Overhead and Profit: 55%	$27,270
Subtotal	$76,852
General Conditions: 12% of Subtotal	$9,222
Insurance and Bonds: 5% of Subtotal	$3,843
General Contractor O&P: 15% of Subtotal	$11,528
Total Cost- A Wing	$101,445

NORTH WING	
MASONRY	
	$5,000
METAL-CLAD WOOD WINDOWS	
	$4,086
SINGLE-GLAZED WINDOWS	
	$10,165
ALUM. STOREFRONT ENTRANCES	
	$550
WEST WING EXIT DOOR AND ROOF CANOPY	
	$3,348
SOUTHEAST ENTRANCE TO COURTYARD 1	
	$2,447
Direct Cost- North Wing	$25,596
Subcontractor Overhead and Profit: 55%	$14,078
Subtotal	$39,674
General Conditions: 12% of Subtotal	$4,761
Insurance and Bonds: 5% of Subtotal	$1,984
General Contractor O&P: 15% of Subtotal	$5,951
Total Cost- North Wing	$52,369

EAST WING	
MASONRY	
	$4,145
METAL-CLAD WOOD WINDOWS	
	$3,135
EXTERIOR DOOR	
	$262
NORTH EXIT VESTIBULE	
	$1,860
BASEMENT WINDOW AREAWELLS	
	$620
Direct Cost- East Wing	$10,022
Subcontractor Overhead and Profit: 55%	$5,512
Subtotal	$15,534
General Conditions: 12% of Subtotal	$1,864
Insurance and Bonds: 5% of Subtotal	$777
General Contractor O&P: 15% of Subtotal	$2,330
Total Cost- East Wing	$20,505

ADMINISTRATION	
MASONRY	
	$12,581
METAL-CLAD WOOD WINDOWS	
	$6,847
WOOD WINDOWS	
	$16,000
HISTORIC MANOR HOUSE WOOD WINDOWS	
	$2,682
ALUMINUM WINDOWS	
	$695
EXTERIOR DOORS	
	$1,115
HISTORIC MANOR HOUSE SIDING, WOOD CORNICE, AND TRIM	
	$10,125
HISTORIC MANOR HOUSE PORCH	
	$3,038
CONNECTING CORRIDOR (EAST SIDE) WOOD SIDING AND TRIM	
	$4,658
STEEL FIRE ESCAPE	
	$1,240
~~WEST ENTRANCE CANOPY (CORRIDOR S)~~	
	~~$3,100~~
MAIN ENTRANCE CANOPY	
	$12,400
Direct Cost- Administration	$71,381
Subcontractor Overhead and Profit: 55%	$39,260
Subtotal	$110,641
General Conditions: 12% of Subtotal	$13,277
Insurance and Bonds: 5% of Subtotal	$5,532
General Contractor O&P: 15% of Subtotal	$16,596
Total Cost- Administration	$146,046

DOMICILIARY	
MASONRY	
	$1,150
EXTERIOR DOORS	
	$156
ALUMINUM WINDOWS	
	$2,190
PORCH	
	$1,650
Direct Cost- Domiciliary	$5,146
Subcontractor Overhead and Profit: 55%	$2,830
Subtotal	$7,976
General Conditions: 12% of Subtotal	$957
Insurance and Bonds: 5% of Subtotal	$399
General Contractor O&P: 15% of Subtotal	$1,196
Total Cost- Domiciliary	$10,529

FOOD SERVICE	
MASONRY	
	$4,720
EXTERIOR DOORS	
	$4,060
WINDOWS	
	$4,965
WIND SCREEN	
	$3,720
BASEMENT WINDOW WELL	
	$10,000
Direct Cost- Food Service	$27,465
Subcontractor Overhead and Profit: 55%	$15,106
Subtotal	$42,571
General Conditions: 12% of Subtotal	$5,108
Insurance and Bonds: 5% of Subtotal	$2,129
General Contractor O&P: 15% of Subtotal	$6,386
Total Cost- Food Service	$56,193

LAUNDRY / BOILER	
MASONRY	
	$4,810
WOOD CORNICE	
	$4,000
WINDOWS	
	$20,285
WINDOW INFILL PANELS	
	$1,117
LOUVERS	
	$180
WOOD SIDING AND TRIM	
	$806
EXTERIOR DOORS	
	$9,579
BOILER ROOM GRAVITY VENTILATORS	
	$1,860
GAS PRV SHED	
	$620
CORRIDOR EXIT HANDRAILS	
	$1,500
Direct Cost- Laundry / Boiler	$44,757
Subcontractor Overhead and Profit: 55%	$24,616
Subtotal	$69,373
General Conditions: 12% of Subtotal	$8,325
Insurance and Bonds: 5% of Subtotal	$3,469
General Contractor O&P: 15% of Subtotal	$10,406
Total Cost- Laundry / Boiler	$91,573

CHAPEL	
MASONRY	
	$2,500
WINDOWS	
	$36,580
DOORS	
	$3,100
WOOD SIDING AND TRIM	
	$16,440
Direct Cost- Chapel	$58,620
Subcontractor Overhead and Profit: 55%	$32,241
Subtotal	$90,861
General Conditions: 12% of Subtotal	$10,903
Insurance and Bonds: 5% of Subtotal	$4,543
General Contractor O&P: 15% of Subtotal	$13,629
Total Cost- Chapel	$119,937

IN-SERVICE EDUCATION	
MASONRY	
	$1,000
WINDOWS	
	$6,635
WOOD SIDING AND TRIM	
	$9,508
EXTERIOR DOORS	
	$12,500
Direct Cost- In-Service Education	$29,643
Subcontractor Overhead and Profit: 55%	$16,304
Subtotal	$45,947
General Conditions: 12% of Subtotal	$5,514
Insurance and Bonds: 5% of Subtotal	$2,297
General Contractor O&P: 15% of Subtotal	$6,892
Total Cost- In-Service Education	$60,650

B WING	
MASONRY	
	$9,700
ALUMINUM WINDOWS	
	$7,448
EXTERIOR DOORS	
	$1,465
WEST ENTRANCE CANOPY	
	$18,600
EAST ENTRANCE SUNSCREEN	
	$310
PERIMETER GRADES	
	$5,000
CONCRETE PATIO JOINTS	
	$200
Direct Cost- B Wing	$42,723
Subcontractor Overhead and Profit: 55%	$23,498
Subtotal	$66,221
General Conditions: 12% of Subtotal	$7,946
Insurance and Bonds: 5% of Subtotal	$3,311
General Contractor O&P: 15% of Subtotal	$9,933
Total Cost- B Wing	$87,411

C WING	
MASONRY	
	$9,510
ALUMINUM WINDOWS	
	$11,728
EXTERIOR DOORS	
	$3,665
PERIMETER GRADES	
	$5,000
CONCRETE PATIO JOINTS	
	$200
Direct Cost- C Wing	$30,103
Subcontractor Overhead and Profit: 55%	$16,557
Subtotal	$46,660
General Conditions: 12% of Subtotal	$5,599
Insurance and Bonds: 5% of Subtotal	$2,333
General Contractor O&P: 15% of Subtotal	$6,999
Total Cost- C Wing	$61,591

ARCHITECTURAL EXTERIOR COST DETAIL

2013 Update (text in Blue Italics)

Note: Where work has been performed since the original 2006 Assessment, text and costs are shown with ~~strikethrough.~~

"A" Wing - Preliminary Probable Costs to Repair

A. Masonry

1.	Clean existing brickwork ~~and limestone caps~~	18,600	
2.	Clean and repaint window steel lintels 50 ea x 1.5 x 35 + 175m	3,500	
3.	~~Point limestone caps~~ ~~242lf vert jts + 760lf horiz jts~~	~~7,500~~	
4.	Point mortar joints at sloped brick window panels 50ea x 7 x 7.08/lf	2,500	
5.	Re-caulk masonry control joints 4ea x 12 x 5.00/lf + 10.00	250	
6.	Repair loose or missing mortar at window lintel end bearings (allow 60% of windows) 42 x 107/ea window	4,500	
7.	Repair step cracks in brickwork 2 x 186/ea location	375	
8.	Repair exposed rebar at concrete foundation 6 x 44 + 112m	382	
		30,107	
	Sub Total		30,107

~~B. EIFS Fascia/Soffits~~

~~1.~~	~~Clean stains from fascia/soffits~~ ~~620 sf x 1.50~~	~~930~~	
~~2.~~	~~Repair damaged fascia/soffits~~ ~~150 sf x 10.00~~	~~1,500~~	
~~3.~~	~~Refinish fascia/soffits~~ ~~(485 + 617) sf x 3.00~~	~~3,306~~	
		~~5,736~~	
	~~Sub Total~~		~~5,736~~

C Metal Clad Wood Windows

4.	Re-caulk the perimeter sealant joints - windows and sliders 500lf x 5.00	2,500	
5.	Replace aged window weatherstripping Allow	1,000	
6.	Repair torn screen units (10% of units) 8 vents x 62	500	
7.	Refinish sliding door units & repaint sills Allow	3,100	
8.	Repair Satellite Dining units Allow	3,100	
6.	Repair unit with broken glass Allow	434	
		10,634	
	Sub Total		10,634

D Aluminum Storefront Entrances & Window Walls

1.	Clean glass and aluminum Allow	850	
2.	Re-caulk the perimeter sealant joints 204lf x 4	1,015	
		1,865	
	Sub Total		1,865

E Solarium

~~1.~~	~~Investigate and repair sag condition~~ ~~Allow~~	~~5,000~~	
~~2.~~	~~Replace apparent temporary flashing with permanent flashing properly terminating under the limestone cap~~ ~~Allow~~	~~2,000~~	
3.	Clean glass & aluminum & repair Allow	3,472	
4.	Re-caulk perimeter joints 50lf x 4.00	300	
		3,772	
	Sub Total		3,772

F Enclosed Screened Porch

1.	Remove & reinstall awning 16 x 44.00	704	
2.	Replace metal fascia system Allow	2,500	
		3,204	
	Sub Total		3,204
"A" Wing Sub Total			49,582
	Sub Contractor OH&P 55%		27,270

Total Preliminary Probable Costs to Repair
"A" Wing Exterior Walls **$76,852**

North Wing - Preliminary Probable Costs to Repair

~~A Masonry~~

~~1.~~	~~Re-caulk masonry control/expansion joints~~ ~~4 x 12 x 5.00 + 1 x 12 x 4.0~~	~~288~~	
~~2.~~	~~Clean and repaint window steel lintels~~ ~~21 x 1.5 x 35 +100m~~	~~1,203~~	
~~3.~~	~~Clean stains from existing brickwork~~ ~~16 x 35 + 100m~~		~~660~~
~~4.~~	~~Repair loose or missing mortar at window lintel end bearings~~ ~~10 x 75~~		~~750~~
~~5.~~	~~Repair cracked brick at lintels and sills~~ ~~6 units x 2 x 150~~		~~1,800~~
~~6.~~	~~Repair foundation wall~~ ~~6 x 35 + 89m~~	~~299~~	
		~~5,000~~	
~~Sub Total~~			~~5,000~~

~~B Metal Clad Wood Windows~~

~~1.~~	~~Re-caulk the perimeter sealant joints, including interior joints at cover plates and brake metal trim~~ ~~834 lf x 4~~		~~3,336~~
~~2.~~	~~Repair torn screen units (25% of units)~~ ~~5 x 50~~	~~250~~	
~~3.~~	~~Refinish window units with blotchy finish~~ ~~Allow~~		~~500~~

		4,086	
	Sub Total		4,086

C Single Glazed Windows

1.	Replace single glazed aluminum windows		
	Allow 2 x 5000	10,000	
2.	Paint steel lintels and mullions		
	2 x 2.0 x 35 + 25	165	
		10,165	
	Sub Total		10,165

D Aluminum Storefront Entrances

1.	Re-caulk perimeter sealant joints		
	2 x 25lf x 4	200	
2.	Paint steel lintels		
	2 x 35 + 20	90	
3.	Replace weatherstripping, adjust hardware	120	
4.	Replace hinges at east entrance	140	
		550	
	Sub Total		550

E West Wing Exit Door and Roof Canopy

1.	Re-caulk perimeter sealant joints		
	22lf x 4	88	
2.	Repair anodized aluminum fascia		
	16 x 35 + 200m	760	
3.	Refinish canopy - soffit & fascia		
	Allow	2,500	
		3,348	
	Sub Total		3,348

F Southeast Entrance to Courtyard 1

1.	Remove existing h.m. door and frame		
	4 x 35	140	
2.	Install new h.m. door and frame and hardware.		
	Allow 831 + 1318	2,149	
3.	Paint new door and frame and lintel.		
	2 x 35 +20m	90	
4.	Perimeter caulk frame		

~~17lf x 4~~	~~68~~	
	~~2,447~~	
~~Sub Total~~		~~2,447~~
~~North Wing Sub Total~~	~~25,596~~	
~~Sub Contractor OH&P 55%~~		~~14,078~~
~~Total Preliminary Probable Cost to Repair North Wing Exterior Walls~~	~~**$39,674**~~	

East Wing - Preliminary Probable Costs to Repair

A	Masonry		
1.	Re-caulk masonry control/expansion joints 2 x 12 x 6.20	150	
2.	Clean and repaint window steel lintels 11 x 1.5 x 44 +75m	800	
3.	Repair loose or missing mortar/spalled brick at window lintel end bearings 7 x 95	665	
4.	Repair step cracks & vertical cracks in brickwork 7 locations x 265 + 310m	2,165	
5.	Repair foundation wall 6 x 45 + 95m	365	
		4,145	
	Sub Total		4,145
B	Metal Clad Wood Windows		
1.	Re-caulk the perimeter sealant joints, including interior joints at cover plates and brake metal trim 545lf x 5	2,725	
2.	Repair damaged screen units (25% of units) Allow (5 x 65 + 85)	410	
		3,135	
	Subtotal		3,135
C.	Exterior Door - Repair and repaint the exterior door to the south courtyard 4 x 45 + 32M + 50	262	

	Subtotal		262
D.	North Exit Vestibule - Remove aluminum framed exit vestibule. Repair ext walls & walk Allow	1,860	
	Subtotal		1,860
E	Repair Basement Window Area wells Allow	620	
	Subtotal		620
East Wing Subtotal			10,022
	Sub Contractor OH&P 55%		5,512
Total Preliminary Probable Cost to Repair East Wing Exterior Walls			**$15,534**

Administration Wing - Preliminary Probable Costs to Repair

A	Masonry		
	1. Re-caulk masonry control/expansion joints 107lf x 5.0	535	
	2. Clean and repaint window steel lintels 34 1.25 x 44 +125m	2,000	
	3. Clean stains from existing brickwork, limestone band, brick sills, precast sills 16 44 + 125m	830	
	4. Repair vertical crack in brickwork at south elevation 8 x 44 + 62m	414	
	5. Repair concrete landing at entrance to Corridor -S. 8 x 44 + 250m	602	
	6. Repair Commandant's Office south entrance steps and masonry cheek walls Allow	6,200	
	7. Repair concrete cap at West entrance canopy column brick base Allow	1,000	
	8. Repair spalls at concrete foundation Allow	1,000	

			12,581	
	Sub Total			12,581
B	Metal Clad Wood Windows			
	1.	Re-caulk the perimeter sealant joints 995lf x 5	4,975	
	2.	Refinish sliding door units & repaint sills 24 x 44 + 62m	1,118	
	3.	Repair and Paint steel mullions at 1993 window at Library 16 x 44 + 50m	754	
			6,847	
	Sub Total			6,847
C.	Wood Windows			
	1.	Replace all painted wood Pella window sash at the east elevation of the corridor connecting the historic manor house. Scope includes replacing wood casing trim and repainting. Plus possible additional substrate rot repair. Allow	16,000	
	Sub Total			16,000
D.	Historic Manor House Wood Windows			
	1.	Re-paint main level double hung windows, including sills. Repair glazing as req'd 6 units	992	
	2.	Re-paint upper level windows, including frame, sills, & trim. Repair glazing as req'd 10 units	1,690	
			2,682	
	Sub Total			2,682
E.	Aluminum Windows			
	1.	Re-caulk the perimeter sealant joints 139 lf x 5	695	
	Sub Total			695
F.	Exterior Doors			

	1.	Repaint H.Manor House Main Entrance Door & repair storm door closer	345	
	2.	Repaint H.Manor House Upper Level door & improve roofing term	305	
	3.	Repaint H.M entrance doors 2 x 75	150	
	4.	Corridor S west entrance door - Replace hinges & m.s.weatherstrip	315	
			1,115	
	Sub Total			1,115
G	Historic Manor House Siding, Wood Cornice, and Trim			
	1.	Repair rotted cornice return & lineal trim @ South West corner. Also corner trim below Allow	2,935	
	2.	Repaint siding, cornice, & trim above porch Allow	6,200	
	3.	Repaint building siding & trim under porch Allow	990	
			10,125	
	Sub Total			10,125
H	Historic Manor House Porch			
	1.	Repaint porch columns, cornice, ceiling Allow	2,480	
	2.	Coat porch decking with preservative Allow	558	
			3,038	
	Sub Total			3,038
I	Connecting Corridor (East Side) - Wood Siding and Trim			
	1.	Repair built-up wood columns at base	1,060	
	2.	Replace head casing & siding course	250	
	3.	Replace rotted fascia trim, corner trim, and siding at south end	1,798	
	4.	Repaint siding, trim, & cornice	1,550	
			4,658	

	Sub Total		4,658
J.	Steel Fire Escape		
	1. Repaint upper and lower steel fire escape		
	Allow	1,240	
	Sub Total		1,240
~~K.~~	~~West Entrance Canopy (Corridor -S)~~		
	~~1. Replace stucco ceiling with E.I.F.S ceiling~~		
	~~Allow~~	~~1,600~~	
	~~2. Replace fascia~~		
	~~Allow~~	~~1,500~~	
		~~3,100~~	
	~~Sub Total~~		~~3,100~~
L.	Main Entrance Canopy		
	1. Repaint 9 steel columns		
	Allow	1,674	
	2. Lightly refinish 6 benches		
	Allow	1,860	
	3. Repaint steel pipe rails		
	Allow	930	
	4. Clean and repoint brick at column bases		
	Allow	1,054	
	5. Clean pavers and concrete slab		
	Allow	682	
	6. Replace “plexiglass” wind screen on the north side		
	Allow	6,200	
		12,400	
	Sub Total		12,400
Administration Wing Subtotal			71,381
	Sub Contractor OH&P 55%		39,260
Total Preliminary Probable Cost to Repair Administration Exterior Walls			**$110,641**

Domiciliary - Preliminary Probable Costs to Repair

~~A Masonry~~

~~1. Repair vertical cracks in brickwork. Also cracked precast sills, misc. pointing, and cleaning~~
~~Allow 750~~
~~2. Repair stucco soffit~~
~~Patch cem.stucco & thoroseal 400~~
~~1,150~~
~~Sub Total 1,150~~

~~B Exterior Doors~~

~~1. Re-caulk the perimeter sealant joints~~
~~39lf x 4 156~~

~~Sub Total 156~~

~~C Aluminum Windows~~

~~1. Re-caulk the perimeter sealant joints~~
~~510lf x 4 2,040~~
~~2. Repair torn screen units~~
~~3 vents x 50 150~~
~~2,190~~
~~Sub Total 2,190~~

~~D Porch~~

~~1. Reseal acrylic skylight domes~~
~~Allow 1,000~~
~~2. Refinish posts & rafters~~
~~Allow (re-stain/re-paint) 650~~

~~1,650~~

~~Sub Total 1,650~~

~~Domiciliary Sub Total 5,146~~

~~Sub Contractor OH&P 55% 2,830~~

~~Total Preliminary Probable Cost to Repair Domiciliary Exterior Walls~~ **$ 7,976**

Food Service - Preliminary Probable Costs to Repair

A	Masonry			
	1.	Re-caulk masonry control/expansion joints & precast sills		
		35lf x 5.0 + 14 x 5.0	245	
	2.	Repair cracks in brickwork. Also spalled/broken brick, failed mortar joints		
		Allow	2,000	
	1.	Paint rusted lintels		
		39 x 45 + 125	1,880	
	2.	Repair cracked/spalled soffit		
		Patch cem. stucco & thoroseal	500	
	3.	Recaulk loading dock soffit joint at perimeter	95	
			4,720	
		Sub Total		4,720
B	Exterior Doors			
	1.	Replace Trash Room H.M.Door & Frame		
		Allow	1,365	
	2.	Re-paint exterior doors		
		Allow	620	
	3.			
	4.	Adjust Food Receiving Doors		
		Allow	90	
	5.	Replace panic hardware at Vestibule ext. door		
		Allow	1,985	
			4,060	
		Sub Total		4,060
C	Windows			
	1.	Re-caulk the perimeter sealant joints		
		(426lf + 480lf)x 5	4,530	
	2.	Replace rotted metal clad window awning unit		
		Allow	435	

		4,965	
	Sub Total		4,965
D.	Wind Screen		
1.	Replace “plexiglass” wind screen on the north side		
	Allow	3,720	
	Sub Total		3,720
E.	Drainage at Basement Window Well		
1.	Excavate, remove and replace soil/gravel, rebuild stone-lined well area and replace drainpipe		
	Allow	10,000	
	Subtotal		10,000
Food Service Sub Total			27,465
	Sub Contractor OH&P 55%		15,105
Total Preliminary Probable Cost to Repair Food Service Exterior Walls			**$42,570**

Laundry/Boiler Room - Preliminary Probable Costs to Repair

A	Masonry		
1.	Repair existing brickwork - patch holes, repair broken brick, point where needed		
	Allow	1,500	
2.	Clean and repaint window steel lintel		
	1 x 1.5 x 35	65	
3.	Clean stains from existing brickwork. Also mold.		
	12 x 35 + 180m&e	745	
4.	Repair foundation wall cem. plaster		
	Allow	2,500	
		4,810	
	Sub Total		4,810
B	Laundry/Boiler Wood Cornice		

	1.	Replace rotted trim and existing gutter at north elev.		
		Allow	1,750	
	2.	Repaint wood cornice		
		194 sf x 3.70	2,250	
			4,000	
		Sub Total		4,000
C	Windows			
	1.	Laundry/Boiler: Repaint single glazed steel units		
		Allow (15 x 165)	2,475	
	2.	Replace existing wood screen units with new aluminum screen units		
		Allow	2,480	
	3.	Laundry Corridor: Remove existing s. glazed units. Infill with insulated wall		
		Allow (3 units)	14,880	
	4.	Maintenance Shop: Recaulk perimeter		
		5 x 18 x 5	450	
			20,285	
		Sub Total		20,285
D	Window Infill Panels			
	1.	Replace rotted infill panel at west gable end. Repaint & recaulk		
		Allow	745	
	2.	Repaint/recaulk infilled window units		
		Allow 2 x 186	372	
			1,117	
		Sub Total		1,117
E	Louvers			
	1.	Recaulk louver perimeter joints		
		18lf x 2 x 5	180	
		Sub Total		180
F	Wood Siding & Trim			

	1.	Replace warped trim boards at Maint Shop upper cornice		
		Allow	186	
	2.	Repaint Maint Shop cornice trim, upper and lower. Repaint upper siding		
		Allow	620	
			806	
		Sub Total		806
G		Exterior Doors		
	1.	Replace exterior damaged hm door at east entrance.	1,054	
	2.	Replace exterior worn damaged wood door at west entrance. Provide new hardware	1,550	
	3.	Remove laundry/corridor alum. exit door at east entrance. Install new hm door & frame to adjoin insulated wall infill.		
		Allow	2,852	
	4.	Replace rusted Maint shop hm door and frame. Provide new hardware		
		Allow	2,635	
	5.	Replace overhead door		
		Allow	1,488	
			9,579	
		Sub Total		9,579
H		Boiler Room Gravity Ventilators		
	1.	Replace rotted doghouses with sheet metal louvered penthouses		
		Allow 2 x 750	1,860	
		Sub Total		1,860
I		Gas PRV Shed		
	1.	Remove wood framed lattice enclosure		
		Allow	620	
		Sub Total		620
J		Corridor Exit Handrails		
	1.	Replace steel handrails and paint		

	Allow	$1,500	
	Subtotal		1,500
Laundry/Boiler Room Sub Total			44,757
	Sub Contractor OH&P 55%		24,616
Total Preliminary Probable Cost to Repair Laundry/Boiler Room Exterior Walls			**$69,363**

Chapel Wing - Preliminary Probable Costs to Repair

A	Masonry			
	1.	Repair foundation wall cem. Plaster and seal penetrations		
		Allow	2,000	
	2.	Repair mortar wash at window sill		
		Allow	500	
			2,500	
		Subtotal		2,500
B	Windows			
	1.	Replace single glazed aluminum window units (6)		
		Allow	7,440	
	2.	Replace single glazed storefront unit (south elev)	10,540	
		Allow		
	3.	Replace connecting corridor/ramp single glazed alum. framed units		
		Allow	18,600	
			36,580	
		Sub Total		36,580
C	Doors			
	1.	Replace Chapel exit door (narrow pair) to be meet code		
		Allow	3,100	
		Sub Total		3,100

D	Wood Siding & Trim			
	1.	Recoat T&G vertical siding with solid color stain		
		Allow	4,340	
	2.	Replace severely weathered cedar vertical siding at connecting corridor ramp including new plywood sheathing, air & moisture barrier, cavity insulation and new roof edge/fascia metal		
		Allow	10,000	
	3.	Extend 4" c.i. drainpipe to nearby catch basin		
		Allow	2,000	
	4.	Seal pipe penetrations		
		Allow	100	
			16,440	
		Sub Total		16,440
Chapel Wing Sub Total				58,620
	Sub Contractor OH&P 55%			32,241
Total Preliminary Probable Cost to Repair Chapel Wing Exterior Walls				**$90,861**

In-Service Education Wing - Preliminary Probable Costs to Repair

A	Masonry			
	1.	Re-point field stone wing walls		
		Allow	1,000	
		Sub Total		1,000
B	Windows			
	1.	Re-caulk wood clad window perimeters and clean		
		Allow	2,915	
	1.	Replace single glazed aluminum units. (3) Allow	3,720	
			6,635	
		Sub Total		6,635
C	Wood siding & trim			

1.	Re-coat T&G vertical siding with solid color stain Allow 1238sf x 1.62	2,005	
2.	Re-coat fascia horizontal beveled siding with solid color stain Allow	5,208	
3.	Re-paint soffit 1364 sf x 1.24	1,692	
4.	Repair vert cedar siding boards at north entrance Allow	199	
5.	Re-caulk louver perimeters and s.steel column covers Allow	404	
		9,508	
	Sub Total		9,508
D	Exterior Doors		
1.	Replace single glazed aluminum entrance doors and side lites at the north and south entrances Allow	12,500	
	Sub Total		12,500
In-Service Education Wing Sub Total			29,643
	Sub Contractor OH&P 55%		16,304
Total Preliminary Probable Cost to Repair In-Service Education Exterior Walls			**$45,947**

"B" Wing - Preliminary Probable Costs to Repair

A	Masonry			
	1.	Re-caulk masonry control/expansion joints 120lf x 5	600	
	2.	Clean and repaint window steel lintels 70 x 1.0 x 35 +50m	3,100	
	3.	Repair cracks in brickwork Allow	3,500	
	4.	Clean and repair precast window sills and re-caulk all head joints Allow	1,500	
	5.	Repair foundation and seal penetrations Allow	1,000	
			9,700	
		Sub Total		9,700
B	Aluminum Windows			
	1.	Re-caulk perimeter sealant joints 1440lf x 5	7,200	
	2.	Repair torn screen units Allow 4 vents x 62	248	
			7,448	
		Sub Total		7,448
C	Exterior Doors			
	1.	Re-caulk perimeter sealant joints 61 lf x 5	305	
	2.	Re-paint doors and frames Allow	410	
	3.	Remove unnecessary door frame and patch finishes Allow	750	
			1,465	
		Sub Total		1,465
D	West Entrance Canopy			
	1.	Rebuild sagging west entrance canopy Allow	18,600	

		Sub Total		18,600
E	East Entrance Sunscreen			
	1.	Repair damaged sunscreen Allow	310	
		Sub Total		310
F	Perimeter Grades			
	1.	Repair grades for positive flow away from building Allow	5,000	
		Subtotal		5,000
G	Concrete Patio Joints			
	1.	Seal perimeter joint between concrete and brick wall Allow	200	
		Subtotal		200
"B" Wing Sub Total				42,723
	Sub Contractor OH&P 55%			23,498
Total Preliminary Probable Cost to Repair "B" Wing Exterior Walls				**$66,221**

"C" Wing - Preliminary Probable Costs to Repair

A	Masonry		
1.	Re-caulk masonry control/expansion joints 48lf x 5	240	
2.	Clean and repaint window steel lintels 64 x 1.0 x 44 +75m	2,890	
3.	Repair cracks in brickwork Allow	4,464	
4.	Clean and repair precast window sills Allow	620	

	5.	Repair stucco soffit Patch cem. stucco & thoroseal	496	
	4.	Repair brick and concrete at west entry portico column Allow	800	
			9,510	
		Sub Total		9,510
B		Aluminum Windows		
	1.	Re-caulk the perimeter sealant joints 1308lf x 5 + 120lf x 5	7,140	
	4.	Repair torn screen units Allow 4 vents x 62	248	
	3.	Replace fogged insulating glass 10 lites - Allow	4,340	
			11,728	
		Sub Total		11,728
C		Exterior Doors		
	1.	Re-caulk perimeter sealant joints 81 lf x 5	405	
	2.	Re-paint doors and frames Allow	410	
	3.	Replace rusted hm door and frame at Sunroom Allow	2,850	
			3,665	
		Sub Total		3,665
D		Perimeter Grades		
	1.	Repair grades for positive flow away from building Allow	5,000	
		Subtotal		5,000
E		Concrete Patio Joints		
	1.	Seal perimeter joint between concrete and brick wall Allow	200	

Subtotal	200
“C” Wing Sub Total	30,103
Sub Contractor OH&P 55%	16,557
Total Preliminary Probable Cost to Repair “C” Wing Exterior Walls	**$46,660**

PRELIMINARY PROBABLE COSTS- ROOFING

RESIDENT WINGS	UNIT	QTY	UNIT COST	TOTAL COST
Data Upgrades				
A-wing	ea			$0
North wing	ea			$0
East wing	ea			$57,984
Admin wing	ea			$26,537
Domiciliary	ea			$0
Food Service	ea			$144,933
Boiler Room / Laundry	ea			$4,005
Lower-Level Boiler / Maintenance Shop	ea			$9,010
Chapel	ea			$23,098
In-Service Education	ea			$47,616
B-wing	ea			$0
C-wing	ea			$0
				Subtotal- Roofing
				$313,183
General Conditions: 12% of Subtotal				$37,582
Insurance and Bonds: 5% of Subtotal				$15,659
General Contractor O&P: 15% of Subtotal				$46,977
				Total- Roofing
				$413,402

V. PHOTOGRAPHS

A01-2013

AD01-2013

FS01-2013

FS02-2013

FS03-2013

FS04-2013

FS05-2013

FS06-2013

FS07-2013

LB01-2013

LB02-2013

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