## 8.3 Report of Comprehensive Facilities Condition Assessment & Space Utilization Survey For Building 116 (CT-7) (November 2010)

Report of

# Comprehensive Facilities Condition Assessment & Space Utilization Survey

For

Building 116 (CT7)
Saint Elizabeths Hospital
1100 Alabama Avenue, SE
Washington, D.C 20032


Mayor Adrian M. Fenty

Published November 2010, by
District of Columbia Department of Real Estate Services
Robin-Eve Jasper, Director
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November 1, 2010

District of Columbia Capital Construction Services Administration
Department of Real Estate Services
2000 14th Street, NW, Eighth Floor
Washington, D.C. 20009

Attention: Mr. Ajay Kapoor, PE, PMP
Chief of Operations

Reference: Report of Comprehensive Facilities Condition Assessment & Space Utilization Survey
Building 116 (CT7)
Saint Elizabeths Hospital
1100 Alabama Avenue, SE
Washington D.C. 20032
District of Columbia Contract No. DCAM-2008-C-0033-A03

Dear Mr. Kapoor:

Faithful+Gould, Inc. has completed a report of our Comprehensive Facilities Condition Assessment and Space Utilization Survey of Building 116 (CT7) contained within the grounds of the former Saint Elizabeths Hospital located at 1100 Alabama Avenue in Southeast (SE) Washington, D.C. ("the Property").

This report has been prepared under the preface that the Property will be converted to Class B commercial office use in 2010. Under this preface, this report identifies the current condition of the Property, anticipated repairs, replacement and upgrades required to achieve this change-of-use, the costs of these works and anticipated capital and maintenance expenditures required over the next six-years. The report also includes an occupancy profile to include floor plans and summarization of the current utilization of occupiable space.

This report was completed in general accordance with the District of Columbia issued Statement of Works and Faithful+Gould's revised proposal for Facility Condition Assessment as authorized under Purchase Order 335355 by Ms. Diane B. Wooden of the District of Columbia Contract and Procurement Group on July 20, 2010.

It has been a pleasure working with you on this project, and we look forward to working with you on other projects.

Very Truly Yours,

Richard A. Needler, AIA
Senior Facility Assessor

Benjamin J.M. Dutton, MRICS, MCIOB
Scope Compliance & Technical Review

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# EXECUTIVE SUMMARY

Building 116 contained within the east campus of the former St. Elizabeths Hospital located at 1100 Alabama Avenue in Southeast (SE) Washington D.C. ("the Property") consists of a two-story (plus below grade / walkout basement level) concrete-framed (with load-bearing masonry components) wood-framed former hospital / clinical support building. The building is also known as Continued Treatment (CT) 7 and the A.P. Noyos Division Building 7. The Property most closely resembles construction type IIIB (unprotected). The Property shares its site with other buildings on the 170-acre St. Elizabeths Hospital east campus site bounded primarily by Alabama Avenue SE and Martin Luther King Avenue SE.

The Property was developed in circa 1937, subject to large-scale renovation in 1983 and is designated as a National Historic Landmark and is contained within a local Historic District. The Property contains a measured gross floor area of approximately 41,317 square feet. The Property is served by bus stops located on Alabama Avenue SE and Martin Luther King Avenue SE, and by the Congress Heights metrorail station located at the east perimeter of the St. Elizabeths Hospital east campus.

On July 29, 2010 Mr. Benjamin Dutton, MRICS and Mr. Richard North of Faithful+Gould visited the Property to observe and document the condition of the building and site components. During our site visit, Faithful+Gould was assisted intermittently by Mr. Gilbert Taylor, Director, Facilities and Environment with the District of Columbia Department of Mental Health.

The Property is currently vacant having been vacated by the District of Columbia Department of Mental Health in mid 2010. This report considers that in 2010 the Property will be renovated and re-occupied for Class B Commercial Office use. As such, the purpose of this report is to identify visually apparent deficiencies in the building and directly assignable site systems, determine costs required to facilitate change-of-use / re-occupation, determine capital and maintenance costs required over the next six-years and calculate the Facility Condition Index (FCI) of the Property. Based upon the calculated FCI, the Property is in poor condition with a 0.76 rating reflective of a total Deferred Maintenance expenditure requirement of $11,034,558 over the six-year study period. Refer to the next page for further discussion of the Property's Facility Condition Index.

When considering re-use of the Property, the largest capital expenditures anticipated relate to exterior repainting and trim replacement ($81,770), replacement of failed mortar at the cast stone bands ($55,800), refurbishment of windows and related grills ($419,237), replacement of porch screens ($88,900), demolition and reconstruction of the interior build-out ($2,396,386), installation of an additional elevator and modernization of the connector elevator ($600,000), and replacement and upgrade of the mechanical ($1,293,222), electrical ($1,725,000), plumbing ($194,190) and fire life safety systems ($165,268). The proceeding costs as stated exclude Architectural Engineering fees and General Contractor fees. The cost tables included within Appendix A and B detail the capital and maintenance expenditures required over the next six-years.

# BUILDING 116 – CT 7

## PROPERTY DETAILS

ADDRESS: 1100 ALABAMA AVENUE, SE
WASHINGTON, DC 20032

NEAREST INTERSECTION: ALABAMA AVENUE, SE & MARTIN LUTHER KING, JR. AVENUE, SE

SQUARE: 5868 LOT: 0802 QUAD-WARD: SE-8

HISTORIC DISTRICT: YES ☒ NO ☐

HISTORIC BUILDING: YES ☒ NO ☐

GROSS SQUARE FOOTAGE OF BUILDING: 41,317

GROSS SQUARE FOOTAGE OF LAND: 7,405,170

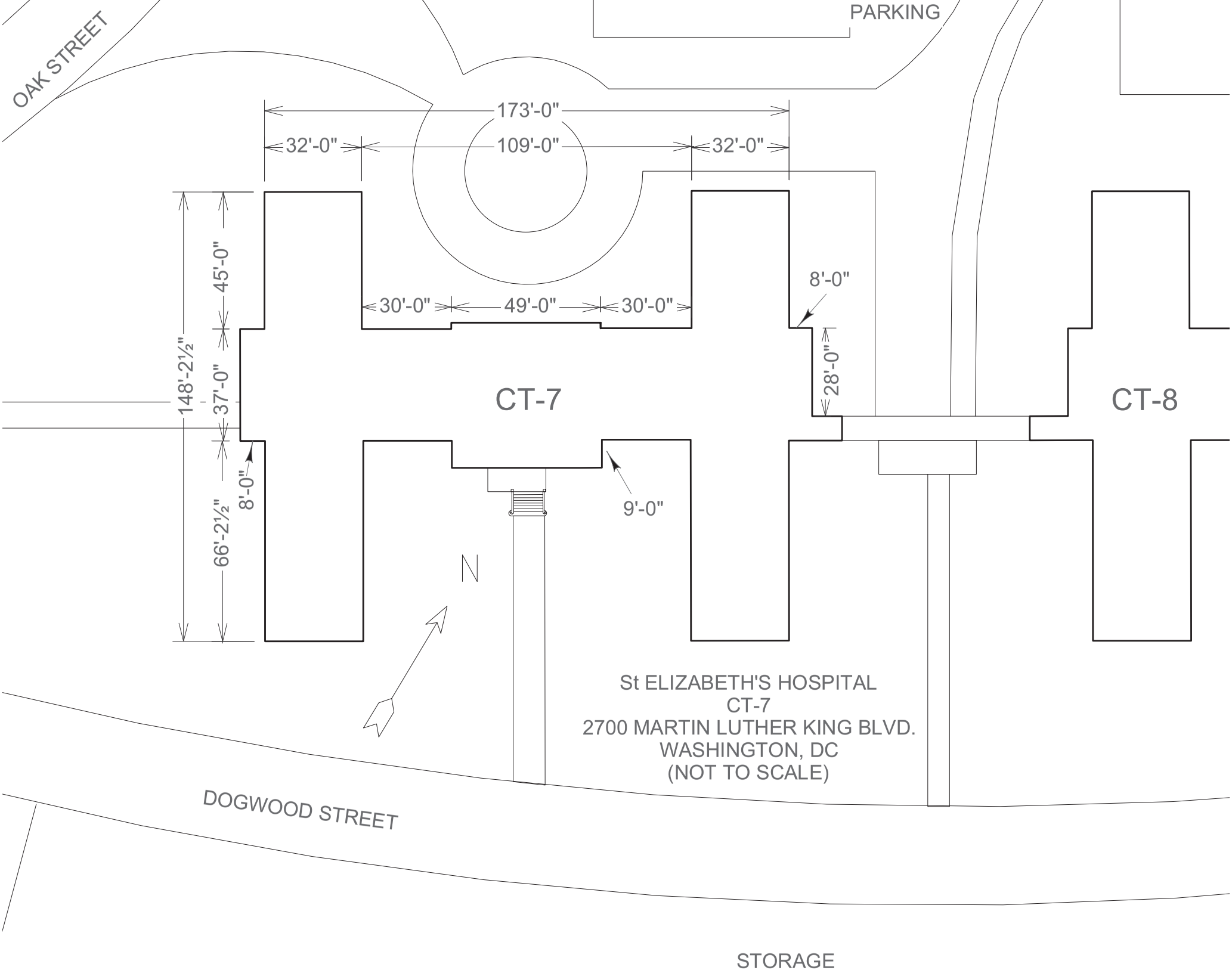
YEAR OF CONSTRUCTION: 1937

NUMBER OF PARKING SPACES: 0

OCCUPANCY STATUS: OCCUPIED ☐ VACANT ☒ PARTIALLY OCCUPIED ☐

ASSESSED BUILDING VALUE: $7,149,570.00

ASSESSED LAND VALUE: $2,357,290.00


PARKING
OAK STREET
173'-0"
32'-0"
109'-0"
32'-0"
45'-0"
148'-2½"
37'-0"
66'-2½"
8'-0"
30'-0"
49'-0"
30'-0"
8'-0"
28'-0"
9'-0"
CT-7
CT-8
N
St ELIZABETH'S HOSPITAL
CT-7
2700 MARTIN LUTHER KING BLVD.
WASHINGTON, DC
(NOT TO SCALE)
DOGWOOD STREET
STORAGE

## USE SCENARIO & REPORT FORMAT

### Scope & Use Scenario

The purpose of this report is to identify visually apparent deficiencies in the building and site systems in order to complete the following specific tasks:

1. Completion of a thorough study of the existing condition of the Property
2. Determination of work required to allow change-of-use / re-occupation to Class B Commercial Office standard
3. Determination of maintenance and upgrade issues
4. Development of a six-year forecast of required capital repair / renewal projects along with estimated costs
5. Cataloging of deferred maintenance items

This report provides an analysis of the Property condition and required capital and maintenance expenditures under the assumption that in 2010 the building will be converted from Hospital / Clinical (I - Institutional Group) to Commercial Office (B - Business Use Group) use and as such will be required to comply with presently enforced District of Columbia codes.

When considering change-of-use issues and the resulting affect upon the Property condition, required repair, replacement and modifications, requirements to comply with grandfathered and presently enforced code requirements, and use dictated expenditures, we have made the following general assumptions:

1. Due to the location and built constraints, under any conversion, the Property would be converted to a Class B Commercial Office building. Class B is considered a mid market commercial office class (as opposed to Class A or Class C ) typically constrained by location, lack of public transportation, lack of on-site or adjacent amenities, mid-level heating, ventilation and air conditioning systems, minimum floor to ceiling heights, and other built constraints. For budgetary and planning purposes, the study further assumes that any conversion would occur in or around 2010. Where possible, when considering projects required as part of the change-of-use, we have attempted to group projects for completion in conjunction with the conversion period.

2. Any change-of-use from I (Institutional) to B (Business) use will result in a loss of grandfathered code status. As a result, the attached expenditure forecasts include the anticipated costs to upgrade the building to achieve compliance with the presently enforced District of Columbia codes.

3. The Property is listed on the National Register of Historic Places and is contained within a Historic District. As a result, any renovations must comply with requirements set by applicable conservation bodies.

4. The Property will be developed to a mid-level specification reflective of the Class B use.

5. The converted building will be subject to the following presently enforced District of Columbia codes:

   - 2000 edition of the International Building Code with 2003 District of Columbia Construction Code Supplement
   - 2000 edition of the International Plumbing Code with 2003 District of Columbia Construction Code Supplement
   - 2000 edition of the International Mechanical Code with 2003 District of Columbia Construction Code Supplement

- 2000 edition of the International Fire Code with 2003 District of Columbia Construction Code Supplement
- 2000 edition of the International Property Management Code with 2003 District of Columbia Construction Code Supplement
- 2000 edition of the International Fuel Code with 2003 District of Columbia Construction Code Supplement
- 2000 edition of the International Energy Code with 2003 District of Columbia Construction Code Supplement
- 1996 edition NFPA National Electrical Code with 2003 District of Columbia Construction Code Supplement

6. The Property will be developed as a stand-alone building and will not share services (i.e. HVAC) with other buildings at the site.

Under this scenario, please consider that although the report attempts to assess the required use and code dictated upgrades, modifications and replacement works required to facilitate any future change-of-use from hospital to Class B office use, the true extent of these works and the actual feasibility for change-of-use will only be known after extensive analysis of codes, consultation and approval by the National Register of Historic Places and other applicable conservation bodies, market conditions and associated factors beyond the scope of this study.

Therefore, the recommendations and opinions of costs contained within this report should be considered as a guide with the full extent of required repairs and replacements not known until change-of-use submittals and fit-out drawings are produced and submitted to the local jurisdictions and the eventual class of the building is determined. Therefore, the discussions and recommendations contained within this report should serve only as a general guide to probable repair and replacement costs required based upon our evaluation of the existing conditions.

Facility Condition Index

As part of this evaluation, Faithful+Gould was requested to calculate the Facility Condition Index ("FCI") of the Property. This was calculated to reflect the current condition of the building and the expenditures required to facilitate change-of-use. The FCI is the ratio of accumulated Deferred Maintenance (DM) to the Current Replacement Value (CRV). The DM includes the total Capital Expenditure Forecast amount indicated in Appendix A and the Maintenance Expenditure Forecast amount indicated in Appendix B, less Environmental Analysis costs. The CRV is based on cost data provided by Faithful+Gould's in-house cost estimators at a value of $350 per gross square foot times the gross square footage of floor area. The FCI of the constructed asset is calculated by dividing DM (maintenance and capital costs) by the CRV as indicated by the following formula:

Deferred Maintenance / Current Replacement Value = Facility Condition Index

The FCI range is from zero for a newly constructed asset, to one for a constructed asset with a DM value equal to its CRV. Acceptable ranges vary by "Asset Type', but as a general guideline the FCI scoring system is as detailed in Table FCI-1.

Table FCI-1 Facility Condition Index (FCI) Values

| Numerical Value | Condition |
|---|---|
| 0.00 to 0.02 | Excellent |

| | |
|---|---|
| 0.02 to 0.04 | Very Good |
| 0.04 to 0.06 | Good |
| 0.06 to 0.10 | Fair |
| Greater than 0.10 | Poor |

We have calculated a Current Replacement Value of $14,460,950 (based on a value of $350 per gross square foot and a floor area of 41,317 gross square feet) and a Deferred Maintenance value of $11,034,558, the FCI ratio for the Property is 0.76 indicating that the Property is in poor condition.

| | |
|---|---|
| Capital Expenditure Forecast | $10,908,548 |
| Maintenance Expenditure Forecast | $126,010 |
| Subtotal | $11,034,558 |
| | |
| Less Environmental Analysis Expenditures | |
| Capital Expenditure Forecast | ($0) |
| Maintenance Expenditure Forecast | ($0) |
| Subtotal | ($0) |
| | |
| Deferred Maintenance (DM) | $11,034,558 |

$11,034,558 DM / $14,460,950 CRV = 0.76 FCI

## National Register of Historic Places / Historic District

The Property is registered on the National Register of Historic Places and is contained within a Historic District. As such, any renovations should be sympathetic to the historic nature of the building, will need to be approved by the National Park Services and other applicable legislative and non-legislative parties, and is likely to focus more on refurbishment of historic systems rather that replacement.

## Opinions of Cost

Our primary opinions of cost have been prepared by our Alexandria, Virginia based cost estimators. These costs have been prepared based upon open market costs and inflated to account for the cost factors listed below:

- National Register of Historic Places (Consultative / Administrative Costs)
- Davis-Bacon Act (State Prevailing Wage Laws)
- District of Columbia Cost Factors (i.e. Procurement Factors etc.)

- Removal of Environmental Contaminants (i.e. Asbestos, Lead Based Paint etc.)

Unless otherwise indicated, opinions of cost presented within this report represent open market costs inflated by these and other applicable factors.

Exclusions & Interpretation

This report and the attached expenditure forecasts generally identify the Expected Useful Life (EUL) and the Remaining Useful Life (RUL) of observed systems and components. EUL is projected based upon industry-standard guidelines and our experience with similar systems. RUL is projected based upon our assessment of age, condition and maintenance / repair history.

Our opinion of cost included within this report are based upon our experience with similar buildings and systems, industry-standard cost data, local cost data, discussions with contractors, and information provided by the current building management and maintenance staff. The costs provided are for planning purposes only and assuming open procurement of the recommended works. Actual project costs may vary significantly to those projected based upon inflationary factors, weather and time of season, unforeseen economic circumstances and market trends, contractor schedules, unusual owner requirements, and other factors beyond our control.

Where recommended projects require the use of a registered architect, licensed engineer of other professional (collectively referred to as A/E) we have included an allowance of 10% of the base project fee for this retention. Where recommended projects are likely to involve the retention of a General Contractor, we have included a separate collective line item for this retention. This allowance includes a percentage fee based upon the base project cost of 15% for Project Management, 20% for Contractors Profit and Overhead and a Contingency allowance of 10%. Unless otherwise stated project line items included within the capital and maintenance forecasts do not include for A/E fees or General Contractor costs.

When making the determination as to whether a General Contractor will be retained, we have generally considered that a General Contractor will only be retained when a project requires management of multiple contractors is required. A typical example would be brick repair and refurbishment resulting in management of masons, lintel installers, painters and related trades. An example of a project where we have considered that a General Contractor would not be required is pavement resurfacing. For this type of project, we have assumed that a single specialty contractor will be retained to complete and manage the project. Under this scenario, we have included the 45% allowance previously detailed into our unit rate.

The timing of the projected expenditures and their associated costs represent our opinion considering the aforementioned factors. Alternative methods of managing the existing equipment or systems may be feasible over the six-year study period. However, these alternative methods will depend upon actual management practices, financing requirements, and the ability of the engineering staff to perform some of the repairs in-house. Alternative scenarios that have not been presented to Faithful+Gould have not been considered within this report.

This report has been presented based upon our on-site observations, information provided to us, discussion with building management and maintenance staff listed in the executive summary, our review of available documentation (see scope of services and document review section) and our experience with similar systems. If any information

becomes available that is not consistent with the observations or conclusions expressed within this report, we request that this information be immediately forwarded to us.

The evaluation of existing structures requires that certain assumptions be made regarding existing conditions. This evaluation was based upon our visual non-destructive evaluation of accessible conditions of the Property. Furthermore, this evaluation was limited in time on-site, fee, and scope and was not based upon a comprehensive engineering evaluation. As such, our report is not intended to represent a complete review of all systems or system components or a check or validation of design professionals' computations. Therefore, Faithful+Gould's evaluation and this report do not represent, warranty or guarantee any system or system component or the future performance of any site improvement.

Furthermore, under the change-of-use scenario, please consider that this report attempts to assess the required use and code dictated upgrades, modifications and replacement works required to facilitate change-of-use from hospital to Class B office use. The true extent of these works and the actual feasibility for change-of-use will only be known after extensive analysis of codes, market conditions and associated factors. Therefore, the recommendations and opinions of costs contained within this report should be considered as a guide with the full extent of required repairs and replacements not known until change-of-use submittals and fit-out drawings are produced and submitted to the local jurisdictions and the eventual class of the building is determined. Therefore, the discussions and recommendations contained within this report should serve only as a general guide to probable repair and replacement costs required based upon our evaluation of the current existing conditions.

FACILITY CONDITION ASSESSMENT

## A. SUBSTRUCTURE

### A10 FOUNDATIONS

#### Description

In the absence of structural drawings we have based our description of the foundation systems upon our visual observation (where possible) of the systems and our experience with similar structural systems. Based upon the sizing, type and anticipated loadings of the superstructure systems and our visual observation of geotechnical conditions, we anticipate that the superstructure at the southeast (front), northeast (side) and southwest (side) of the building are founded on a series of mild-steel reinforced cast-in-place concrete spread footings.

The northwest (rear) of the building was founded on mild-steel reinforced cast-in-place concrete spread footings at the outer perimeter (supporting the exterior walls and end bearing plate of the cast-in-place concrete beams) and on concrete piers at the interior areas (providing mid-span support to the concrete beams).

#### Condition

Assuming a change-of-use from hospital / clinical to office, the building will be required to meet the structural live and dead loading requirements of the presently enforced District of Columbia structural code (the 2000 edition of the International Building Code with 2003 District of Columbia Construction Code Supplement). Under this code and use profile, the foundation systems will be required to support the following live and dead loads:

*Live Loads*

| Area | Code Required Live Load – Pounds Per Square Foot (psf) |
|---|---|
| General Office | 50 psf plus an additional 20 psf for partition load |
| Lobbies and First Floor Corridors | 100 psf uniform; 2,000 psf concentrated |
| Corridors above First Floor | 80 psf uniform, 2,000 psf concentrated |
| File Rooms / Computer Machine Rooms | Designed for anticipated occupancy but typically 125 psf |

In the absence of structural drawings, we were unable to determine the live loads for which the foundation systems were designed for. However, it is apparent from the proven performance of the foundation systems

that they were adequately designed to support the required loads of Group I (Hospital) occupancy. Group B (Business) design live loads are comparable to Group I occupancy.

Final determination of the adequacy of the foundation systems to support the live loads to be imposed by the converted (I to B group) building use will depend on the design lay-out of the converted building. There may be some foundation modifications necessary to support the point loads imposed by newly installed equipment or systems (i.e. elevators). However, significant upgrade, underpinning or replacement is not anticipated.

*Dead Loads*

Design dead loads in the converted building are likely to be equal to or less than dead loads in the original building. Interior finish materials and other materials used in modern construction are typically lighter than the materials used at the time of the buildings construction (e.g. drywall on light gauge metal stud framing versus concrete masonry unit or structural clay tile walls). Significant upgrade, underpinning or replacement of the foundation systems due to the anticipated dead loads is not expected.

### Projected Expenditures

Required Capital Expenditures:

No capital expenditures are required at this time. However, within section B10 (superstructure) of this report we have recommended the retention of a District of Columbia licensed structural engineer to complete an analysis of the structural systems (including foundations) once any final re-use specifications and layout are determined.

Required Maintenance Expenditures:

No required maintenance expenditures are anticipated at this time.

## A20 BASEMENT CONSTRUCTION

### Description

The building contained a full basement level. To account for the sloping grade, the basement was below grade at the front (southeast) elevation and above grade at the rear (northwest) elevation (reference Photographs 1 & 2 in Appendix C). The basement level housed office and secondary clinical space, storage, service and other support areas.

The basement level at the southeast (front), northeast (side) and southwest (side) of the building contained a slab-on-grade floor. The slab consisted of an 8” thick welded wire mesh reinforced cast-in-place concrete slab founded over a compacted subgrade.

The basement at the northwest (rear) of the building was contained over a mechanical crawlspace (reference Photographs 3 & 4 in Appendix C). At these areas, the basement contained a structural (elevated) slab

consisting of 8" deep cast-in-place concrete joists spaced at 24" on-center and supported on the framework of conventionally-reinforced concrete columns and foundation walls. Floor joists were covered with 5" thick cast-in-place concrete flat panel slabs bearing onto the network of columns and beams. Slab edges were thickened to 24" at the connection with the exterior wall system.

The below ground portions of the basement (and crawl space) were enclosed by 8" to 9" thick cast-in-place concrete walls. Walls were supported on the cast-in-place concrete footings.

### Condition

As part of any change-of-use we anticipate that the basement will continue to provide primary and secondary use spaces. Based upon these uses and observed conditions, under a change-of-use we do not anticipate a requirement to complete condition or code dictated upgrades to the basement construction during the study period.

### Projected Expenditures

Required Capital Expenditures:

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

No required maintenance expenditures are anticipated at this time.

## B. SHELL

## B10 SUPERSTRUCTURE

### Description

<u>Concrete Strength</u>

In the absence of structural drawings, we were unable to determine the designed strength of the concrete elements.

<u>Lowest Floor</u>

The lowest floor at the building was at the basement and the crawlspace. The floor system at the basement consisted of either an 8" thick slab-on-grade or a 5" thick flat panel slab. The floor slab at the crawlspace consisted of a 5" thick slab-on-grade. Refer to report Section A20 for further details of the lowest floor slab construction.

Upper Floors

Upper floors including the floor at the attic space consisted of 8" deep cast-in-place concrete joists spaced at 24" on-center and supported on the concrete frame, interior load-bearing terra cotta walls or the exterior masonry walls (reference Photograph 5 in Appendix C). Floor joists were covered with 5" thick cast-in-place concrete flat panel slabs bearing onto the load-bearing masonry. Slab edges were thickened to 24" at the connection with the exterior wall system.

Superstructure

The superstructure consisted of the concrete columns and beams, exterior load-bearing masonry walls and the interior load-bearing terra cotta (structural clay tile) walls which loaded onto the foundation systems (reference Photographs 6 & 7 in Appendix C). The exterior walls consist of clay face bricks mechanically-attached with wall ties against either a brick back-up (roof levels) or a 4" thick cinder block back-up (remaining levels). Walls load directly onto the foundation systems. Lateral bracing is provided by the back-up and interior configuration. The structure at the interior load-bearing walls consisted of 4" x 8" mortared structural clay tile.

Stairs consisted of prefabricated 14 gauge steel stair assemblies with concrete in-fill slabs. Intermediate landings consisted of 4" thick concrete landings supported on 10 gauge flat Type B steel pan decks. Stairs are attached to the floor system with 3" x 3" x ¼" clips with 5/8" galvanized steel expansion bolts. Stairs are attached to upper supports with 6" x 4" x 3/8" steel shelf lintels with 1 ½" x ¼" strap anchor bolt clips.

Internal Walls & Ceilings

Interior wall construction consisted of two primary types; load-bearing and non-load-bearing. Load-bearing walls consisted of the 4" x 8" mortared structural clay tiles discussed previously. Non load bearing walls consisted of ½" gypsum wallboard applied over either 2" x 4" galvanized steel or wood studs. Studs were spaced at 24" on-center.

The ceiling system consisted of a cementious plaster screed applied over a non galvanized steel mesh. The mesh was supported on horizontal square steel dowel rods that were in-turn supported on the superstructure system.

Exterior Walls

The building is enclosed by a load-bearing clay brick exterior wall system with joints filled with colored recessed cementious mortar. Bricks are mechanically-attached with wall ties against either a brick back-up (roof levels) or a 4" thick cinder block back-up (remaining levels). A series of 45" long cast stone bands are provided continuously at the transition between the basement and first floors. Cast stone sills are provided below each window. Sills are 4 ½" deep and extend 2 ½" past the side of each window.

Roof Structure

The structural system utilized to support the sloped hip roof system consisted of site-assembled wood rafters (reference Photographs 8 & 9 in Appendix C). The structure consisted of 1" x 12" wood rafters placed at 14"

on-center and bearing on 2" x 12" (double 1" x 12") juncture beams. Support at the juncture beams and mid-span support of the rafters was provided by 6" x 4" king posts. The roof deck consisted of 1" x 6" wood tongue and groove decking boards.

Condition

The respective superstructure systems appeared to be in good condition with no evidence of overloading or failure noted. However, continued water ingress through joints in the cast stone panels of the exterior wall system (refer to Section B20) is likely to result in future deterioration of the wall tie connection between the panels and superstructure. Furthermore, continued corrosion of steel lintels at the west ramp will lead to localized failure of the wall system at that location. Assuming the completion of near-term tuckpointing of the exterior wall system and replacement of failed lintels, we do not anticipate a requirement to complete significant repair, replacement or supplementing of the superstructure system during the study period.

In addition to the above conditions, as part of the change-of-use from hospital to office the superstructure will be required to meet the structural live and dead loading requirements of the presently enforced District of Columbia structural code (the 2000 edition of the International Building Code with 2003 District of Columbia Construction Code Supplement). Under this code, the superstructure systems will be required to support the following superimposed live and dead loads:

*Live Loads*

| Area | Code Required Live Load – Pounds Per Square Foot (psf) |
|---|---|
| General Office | 50 psf plus an additional 20 psf for partition load |
| Lobbies and First Floor Corridors | 100 psf uniform; 2,000 psf concentrated |
| Corridors above First Floor | 80 psf uniform, 2,000 psf concentrated |
| File Rooms / Computer Machine Rooms | Designed for anticipated occupancy but typically 125 psf |

In the absence of structural drawings, we were unable to determine the design live loads capacity of the superstructure. However, it is apparent from the proven performance of the superstructure components that the superstructure was adequately designed to support the required loads of Group I (Hospital) occupancy. Group B design live loads are comparable to Group I occupancy.

Final determination of the adequacy of the superstructure systems to support the live loads to be imposed by the converted (I to B group) building use will depend on the design lay-out of the converted building. There may be some superstructure modifications necessary to support the point loads imposed by newly installed equipment or systems (i.e. file rooms). However, significant upgrade or replacement is not anticipated.

*Dead Loads*

Design dead loads in the converted building are likely to be equal to or less than dead loads in the original building. Interior finish materials and other materials used in modern construction are typically lighter than the materials used at the time of building construction (e.g. drywall on light gauge metal stud framing versus masonry walls). Significant upgrade or replacement of the superstructure systems due to the anticipated dead loads is not expected.

### Projected Expenditures

Required Capital Expenditures:

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

1. We reviewed the structural systems (substructure and superstructure) for visually apparent condition and signs of distress. We also completed cursory level analysis to indicate whether the systems as designed appeared to provide adequate resistance to support any change-of-use to commercial office from both a code compliance and use standpoint.

   This evaluation was completed based upon our general interpretation of how the building floor plate may be reconfigured to facilitate any change-of-use. The adequacy of the structural systems cannot be fully determined until the final building layout has been determined, extensive measurements of the structural systems completed and cores taken. We recommend that an allowance be budgeted for the retention of a District of Columbia licensed structural engineer to evaluate the adequacy of the structure once the final building layout has been determined, and to provide recommendations and opinion of cost for any required upgrade. Our opinion of cost for this work is $24,000 in 2010. This cost assumes spending 160 hours on the evaluation at a per hour rate of $150.

## B20 EXTERIOR CLOSURE

### Description

<u>Exterior Wall System</u>

The building is configured in a “H” shape with the principal exterior wall system throughout the Property consisting of a full height clay brick cavity wall system laid in stretcher bond (reference Photographs 10 through 15 in Appendix C). Brick headers are provided above each window. Bricks are mechanically-attached with wall ties against either a brick back-up (roof levels) or the 4” thick cinder block back-up (remaining levels). Painted wood trim is provided at the roof level soffit overhang and associated fascia. Trim at the soffit consisted of 1” x 4” tongue and groove painted southern pine screwed to the underside of the rafter overhang (reference Photograph 16 in Appendix C). Fascia trim consisted of 1” x 6” tongue and groove painted southern pine screwed to the end of each rafter and accented with 1” x 1” curved decorative painted molding.

A series of 45" long cast stone bands are provided continuously at the transition between the basement and first floors. The band is 12" tall and 4" thick with the top 3" of the band tapering towards the building (reference Photograph 17 in Appendix C). The base of each band is provided with a continuous drip edge. Bands are attached into the load-bearing walls with ½" diameter iron bars spaced at 24" on-center. Cast stone sills are provided below each window (reference Photograph 18 in Appendix C). Sills are 4 ½" deep and extend 2 ½" past the side of each window. The base of each sill is provided with a continuous drip edge. A decorative cast stone surround is provided at the outer perimeter of the main entrance vestibule located off Dogwood Street (reference Photograph 19 in Appendix C). The surround is 14' tall and consists of 22" wide tapered plinths with top-level decorative finales. Decorative cast stone or brick keystones are also provided adjacent to the main building entrance.

Windows and Doors

The building contained 269 windows. Windows at the first floor and above consist of single-glazed non-tempered operable sash units placed within painted steel frames (reference Photographs 20 & 21 in Appendix C). The lower section of each window was enclosed by painted iron grates placed within perimeter steel framing assemblies. Grate assemblies are attached to the supporting perimeter brick veneer with 4" long 1/8" diameter steel bolts. The connection between the brick veneer and the window frames was sealed with a 1/8" to ¼" wide urethane sealant.

Windows at the basement level front and side elevations consist of single-glazed non-tempered operable hopper units placed within painted steel frames (reference Photograph 22 in Appendix C). The connection between the brick veneer and the window frames was sealed with a 1/8" to ¼" wide urethane sealant. The two multi-level porches provided at the front corners of the building are enclosed with screen assemblies (reference Photograph 23 in Appendix C). Screens consist of closed steel mesh supported on ½" x ½" painted steel vertical and horizontal bars and covered with 1" x 1" flat panel steel covers.

Table B20-1 summarizes the window areas and quantities.

Table B20-1 Summary of Window Systems

| Location | Type | Dimensions (Square Feet) | Quantity | Total Area (Rounded Square Feet) |
|---|---|---|---|---|
| North (Rear) Elevation | Type A<br>Steel Framed<br>Single Pane<br>Single Hung | 36" x 77"<br>(19.25 SF) | 46 | 886 |
| | Type C<br>Steel Framed<br>Single Pane<br>Single Hung | 45" x 72"<br>(22.5 SF) | 34 | 765 |
| East Elevation | Type A<br>Steel Framed | 36" x 77"<br>(19.25 SF) | 23 | 443 |

| Location | Type | Dimensions (Square Feet) | Quantity | Total Area (Rounded Square Feet) |
|---|---|---|---|---|
| | Single Pane Single Hung | | | |
| | Type B Steel Framed Single Pane Hopper | 39" x 22" (5.96 SF) | 8 | 48 |
| | Type C Steel Framed Single Pane Single Hung | 45" x 72" (22.5 SF) | 11 | 248 |
| | Type D Steel Framed Single Pane Single Hung | 36" x 53" (13.25 SF) | 7 | 93 |
| | Type E Steel Framed Single Pane Single Hung | 36" x 61" (15.25 SF) | 3 | 46 |
| South (Front) Elevation | Type A Steel Framed Single Pane Single Hung | 36" x 77" (19.25 SF) | 47 | 905 |
| | Type B Steel Framed Single Pane Hopper | 39" x 22" (5.96 SF) | 32 | 191 |
| | Type C Steel Framed Single Pane Single Hung | 45" x 72" (22.5 SF) | 4 | 90 |
| West Elevation | Type A Steel Framed Single Pane Single Hung | 36" x 77" (19.25 SF) | 20 | 385 |
| | Type B Steel Framed Single Pane Hopper | 39" x 22" (5.96 SF) | 8 | 48 |
| | Type C Steel Framed | 45" x 72" (22.5 SF) | 12 | 270 |

| Location | Type | Dimensions (Square Feet) | Quantity | Total Area (Rounded Square Feet) |
|---|---|---|---|---|
| | Single Pane Single Hung | | | |
| | Type E Steel Framed Single Pane Single Hung | 36" x 61" (15.25 SF) | 8 | 122 |
| West Ramp | Type F Steel Framed Single Pane Single Hung | 45" x 30.75" (9.61 SF) | 2 | 19 |
| | Type G Steel Framed Single Pane Single Hung | 36" x 48" (12 SF) | 4 | 48 |
| | | TOTAL | 269 | 4,607 |

Table B20-2, Summary of porch screen systems, summarizes the screen type, areas and quantities.

Table B20-2 Summary of Screen Systems

| Location | Type | Dimensions (Square Feet) | Quantity | Total Area (Rounded Square Feet) |
|---|---|---|---|---|
| North Elevation (Rear) | No windows | | | |
| East Elevation | Type A Steel Framed Steel Mesh | 81" x 107" (60.19 SF) | 2 | 120 |
| | Type B Steel Framed Steel Mesh | 81" x 119" (66.94 SF) | 2 | 134 |
| South Elevation (Front) | Type A Steel Framed Steel Mesh | 81" x 107" (60.19 SF) | 2 | 120 |
| | Type B Steel Framed Steel Mesh | 81" x 119" (66.94 SF) | 2 | 134 |
| West Elevation | Type A Steel Framed | 81" x 107" (60.19 SF) | 10 | 601 |

| Location | Type | Dimensions (Square Feet) | Quantity | Total Area (Rounded Square Feet) |
|---|---|---|---|---|
| | Steel Mesh | | | |
| | Type B Steel Framed Steel Mesh | 81" x 119" (66.94 SF) | 10 | 669 |
| | | TOTAL | 28 | 1,778 |

The building contained 12 exterior doors. Doors throughout the building consisted of painted hollow-core steel panel doors placed within steel frames (reference Photograph 26 in Appendix E). Door hardware consisted of a combination of mechanical lock-sets and lever handles. The connection between the brick veneer and the door frames was sealed with a 1/8" to ¼" wide urethane sealant. Table B20-3 summarizes the door areas and quantities.

Table B20-3 Summary of Door Systems

| Location | Type | Dimensions | Quantity | Total Area (Rounded Square Feet) |
|---|---|---|---|---|
| North (Rear) Elevation | Mechanical Room Doors Pair of Steel Units in Steel Frames | 72" x 84" | 2 Pairs | 84 |
| | Exit Doors Steel Units with 10" x 10" Wire-glass in Steel Frames | 36" x 84" | 3 | 63 |
| East Elevation | Basement Service Door Steel Unit with 6" x 21" Wire-glass in Steel Frame | 36" x 84" | 1 | 21 |
| South (Front) Elevation | Entry Door Steel Unit in Steel Frame | 44" x 84" | 1 | 26 |
| | Porch Doors Steel Unit with 10" x 10" Wire-glass in Steel Frames | 34" x 84" | 4 | 79 |
| West Elevation | Basement Service Door | 36" x 84" | 1 | 21 |

| | | | | |
|---|---|---|---|---|
| | Steel Unit with 6" x 21" Wire-glass in Steel Frame | | | |
| TOTAL | | | 12 | 294 |

Other Building Features

A pedestrian walkway provides access from Oak Street to the west building entrance (reference Photographs 24 & 25 in Appendix C). The walkway consisted of both elevated and at-grade sections. Elevated sections consisted of an 8" thick exposed aggregate surfaced concrete slab supported on 8" thick (two sections of 4" thick walls) cavity walls. At-grade sections consisted of 5" thick welded wire mesh reinforced panels placed over a compacted subgrade.

The building contained seven wall-mounted exterior lights.

## Condition

Exterior Wall System

The exterior wall system was in fair to good condition and represented a well constructed yet poorly maintained system. We noted a number of concerns resulting primarily from the age of the system and the lack of on-going maintenance and repair. The exterior wall system will require near-term renovation.

The first and primary area of concern noted at the exterior wall system was severe cracking, erosion and separation of the cementious mortar provided between the cast stone panels (reference Photographs 26 through 27 in Appendix C). At the lower level panels this had resulted in localized displacement of the panels and longitudinal and traverse cracks resulting from freeze-thaw cycles. We have recommended budgeting for the near-term replacement of mortar at the cast stone panels and for cleaning of rust stains.

The second principal area of exterior deterioration noted was at the brick masonry. The exterior brick wall system was in fair condition but has been subject to limited on-going maintenance and repair since installation. This has resulted in numerous instances of cracked and detached mortar at the brick veneer, significant brick and mortar deterioration at the west entrance ramp, and areas of cracked and spalled bricks (reference Photograph 28 in Appendix E). We have recommended budgeting for near-term tuckpointing of the exterior wall system.

The third principal area of exterior deterioration noted was peeled paint at the steel lintels, wood trim, wood paneling and entrance doors (reference Photographs 29 through 31 in Appendix C) and sectional corrosion of lintels provided at the west ramp (reference Photograph 32 in Appendix C). These conditions have resulted in surface corrosion at the steel lintels and entrance doors, and localized widespread instances of split, detached and rotted wood trim. We have recommended budgeting for near-term repainting of the exterior of the building.

The final areas of deterioration noted at the exterior system were hardening and separation of the urethane expansion joint sealant provided between the west ramp and the building (reference Photograph 33 in Appendix C). We have recommended budgeting for near-term replacement of the urethane sealant.

Windows and Doors

Windows are original to the building and in fair structural condition and poor aesthetic condition (reference Photographs 34 through 36 in Appendix C). We noted widespread instances of peeled paint at the window frames and lintels, localized instances of cracked glazing panels, hardening and separation of perimeter caulking, corrosion of window mullions and gratings, poor seals between operable and fixed portions of the windows, missing (and now covered with wood) windows at the basement level, and poor operation of the windows. Based upon the extent of deterioration and considering the historic nature of the building, we recommend that windows be refurbished as part of any change-of-use. Refurbishment should consist of the following general scope:

- Determine exact condition of each window and required repair / replacement work
- Remove and deconstruct windows
- Remove lead based paint
- Repair structural mortise and tenon joints
- Replace deteriorated components
- Apply epoxy coating
- Apply epoxy filler
- Finish sand
- Replace glazing and sealants
- Finish prime and paint
- Re-install to include replacing perimeter caulking and installing storm windows

Screens provided at the end porches were in poor condition (reference Photographs 37 & 38 in Appendix C). We noted numerous instances of damaged screen sections, expansive sectional corrosion of structural bars and displacement of covers. Due to the extent of deterioration at their supporting structure, we have assumed that the appropriate regulatory parties will allow removal of the screens and replacement with a new comparative system.

Doors appeared to be in generally fair to poor condition with base level frame and door corrosion noted throughout (reference Photograph 39 in Appendix C). We have recommended budgeting for replacement of doors and associated frames.

Other Building Features

The elevated pedestrian walkway was in good condition. We noted no significant instances of spalled concrete or corroded reinforcing steel at the top, ledge or underside of the slab. Areas of failed brick and lintels provided at the walkway are discussed above.

## Projected Expenditures

Required Capital Expenditures:

When considering the definition of capital and maintenance expenditures, we have considered that the projects recommended below consist of macro level refurbishment. As a result, even when an individual project value falls below the threshold typically considered for capital work, we have still classified the work as capital under the assumption that it will be completed as part of the larger capital renovation.

1. We recommend budgeting for replacement of cracked, spalled and separated mortar and stone at the cast stone panels and at the base of surface-recessed railing assemblies. Our opinion of cost for this work is $35,200 ($160 per linear foot / per instance) in 2010. This opinion of cost excludes applicable Architectural and Engineering fees and General Contractor allowances.

2. At the brick wall system, we recommend budgeting for replacement of cracked, spalled and separated mortar and replacement of deteriorated bricks. Our opinion of cost for this work is $20,600 ($20 per square foot) in 2010. This opinion of cost excludes applicable Architectural and Engineering fees and General Contractor allowances. This cost also includes an allowance of $12,000 for replacement of the 12 failed lintels at the west entrance ramp.

3. We recommend budgeting for replacement of failed exterior trim and other exposed wood in 2010. Our opinion of cost for this work is $27,300. This assumes replacement of 30% of trim.

4. We recommend budgeting for repainting of painted wood trim, wood paneling, steel panel doors, grates and steel lintels at the building exterior. Our opinion of cost for this work is $54,470 in 2010.

5. We recommend budgeting for refurbishment of windows in accordance with the guidelines previously listed. Our opinion of cost for this work is $419,237 in 2010.

6. We recommend budgeting for replacement of porch screens in 2010. Our opinion of cost for this work is $88,900 ($50 per square foot).

7. We recommend budgeting for replacement of exterior doors in 2010. Our opinion of cost for this work is $18,000 ($1,500 per door).

Additional Project Incurred Costs

- The entire project listed above will require the retention of a District of Columbia registered engineer and architect to write specifications, produce design documents, monitor installation and provide final sign-off of the completed work. We have included an allowance of 10% of the capital cost of completing the work.

- The entire project listed above represent is of a complexity that will require the retention of a General Contractor. We recommend budgeting a General Contractor percentage allowance of 45% for each of these projects. The percentage includes 15% for project management, 20% overhead and profit and 10% contingency. Percentages are based upon the base cost to complete the work excluding A/E fees.

Required Maintenance Expenditures:

No required maintenance expenditures are anticipated at this time.

## B30 ROOFING

### Description

The building contained one sloped roof area. The plan below shows the general configuration of the roof system.

Overview of Roof Configuration


The roof is covered with a sloped hip roof covered with clay pan tiles (reference Photograph 40 in Appendix C). The roof was placed at a field slope of 4 (V):12 (H) and drained to perimeter 6" wide painted copper gutters. Gutters drained to 2" x 4" (nominal) copper downspouts which in-turn drained to the below-grade drainage system. Pan tiles appeared to be attached to 1" x 2" nominal non-graded southern pine purlins with surface recessed stainless steel roofing nails. Purlins are mechanically-attached through the wood roof deck. Table B30-1 provides a summary of the roof system.

Table B30-1 Summary of Roof Construction (Central Wing)

| Roof Component | Sloped Roof |
|---|---|
| Age | Original (1937) |
| Roof Area (total / approx. square footage) | 17,536 |
| Application/ Membrane | Mechanically-Attached Clay Tile |
| Manufacturer / Model | Unknown |
| Surface | Exposed |
| Deck Type | Wood |
| Insulation | Fiberglass Batt at Attic Space Floor |
| Cover Board | None |
| Drainage | Perimeter Gutters & Downspouts |
| Overflow Scuppers | None |
| Base Flashings | None |
| Cap Flashings | None |
| Perimeter Enclosure | Unenclosed |
| Warranty (Manufacturer) | None |
| Warranty (Contractor) | None |

Condition

We were unable to access the surface of the roof. Our findings are based upon our visual observation of the roof from ground level using binoculars and from walking the entire length of the attic space. Based upon these observations, the roof system is in generally good condition. We noted no evidence of significant water ingress through the roof system of significant slipped or cracked slates. However, minor instances of slipped and detached slates were noted. In addition, we noted localized instances of detached gutters. We have

included a near-term and periodic allowance for replacement of detached or cracked tiles and for re-attachment of gutters.

### Projected Expenditures

Required Capital Expenditure:
No capital expenditures are anticipated at this time.

Required Maintenance Expenditure:

1. We recommend budgeting an allowance of $5,000 per year for as-needed repair and life-extension maintenance of the sloped roof system and associated drainage systems. Per cycle, this cost assumes the retention of two roof operatives for a sixteen hour period at a per hour / per operative rate of $100 (combined value of $1,600 per day) and a combined material, contingency and disposal cost of $1,800.

## C. INTERIORS

C10 INTERIOR CONSTRUCTION
C20 STAIRS
C30 INTERIOR FINISHES

### Description

The interior configuration was generally consistent throughout the building (reference Photographs 41 through 44 in Appendix C). The interior areas consisted of a central loaded corridor enclosed at each side with structural clay tile walls. Variable size clinical spaces or administrative offices were provided at the outer perimeter of each corridor with demising walls between the rooms constructed of steel or wood stud walls. The list below provides a summary of the interior areas:

- Clinical space
- Conference rooms
- Assembly rooms
- Office
- Restrooms
- Residential rooms
- Restrooms
- Support and storage areas

Interior finishes were generally consistent throughout the building. Finishes consisted of a combination of 12" x 12" resilient vinyl floor tiles, painted and partially tiled gypsum board or structural clay tile walls and a painted cementious plaster ceilings. Interior doors typically consisted of either painted steel panel or varnished wood.

Stairs consisted of painted steel-framed, concrete-filled metal pan tread and steel riser assemblies, with cast-in-place concrete on corrugated metal deck intermediate landings, with painted steel railings. Stairs were supported by the floor decks, with intermediate landings supported by secondary faming.

### Condition

The interior of the building is configured specifically to support the current hospital / clinical use. Under the change-of-use scenario, in order to allow effective and efficient change-of-use we anticipate a requirement to complete large-scale reconfiguration. The extent of this reconfiguration will be dependant upon the final floor plan selection and space utilization requirements of the building. However, for budgetary purposes we have assumed that the reconfiguration will consist of complete clearing (demolition) of the existing configuration (except structural walls) and reconstruction. Based upon this assumption and our observation of the condition and configuration of the construction and finishes, we anticipate that any change-of-use will consist of the following steps:

*Design*

Following market analysis to determine the final use (i.e. single / multi tenant) of the building, design of the interior floor plate to show rentable areas, common areas and the final layout should be completed. We have included a 10% Architectural / Engineering fee for the completion of this work.

*Demolition & Abatement*

Based upon the constraints of the current interior configuration, we anticipate that any commercial owner or leaseholder will opt to remove the interior construction (walls, ceilings, doors, floor coverings, restrooms) back to the exposed superstructure. At this time, the interior areas will consist of exposed floor slabs, exposed structure, the exposed face of the cinder block exterior wall back-up, and the exposed underside of the structural floor slabs. Based upon observed and reported areas of asbestos containing floor and ceiling tiles, and lead-based paint, this project will also include removal of hazardous materials.

*Reconstruction*

Following demolition and removal of the existing interior construction, the building interior will be exposed to the superstructure elements. At this point, we anticipate that interior reconstruction will commence to allow commercial office use. For budgetary purposes, we have assumed that the building will be built-out to standard office configuration including common areas (including restrooms).

Projected Expenditures

Required Capital Expenditures:

1. We recommend budgeting for demolition and disposal of the interior construction in 2010. Our opinion of cost for this work to include removal and disposal of hazardous materials is $6 per square foot to a total cost of $247,902.This opinion of cost excludes applicable Architectural and Engineering fees and General Contractor allowances but includes for anticipated environmental contaminants.

2. We recommend budgeting for reconstruction of the interior areas to include providing perimeter and interior gypsum board walls and finishing of common areas. Our opinion of cost for this work is $52 per square foot to a total cost of $2,148,484 in 2010. This opinion of cost excludes applicable Architectural and Engineering fees and General Contractor allowances.

Additional Project Incurred Costs

- Items one and two above will require the retention of a District of Columbia registered engineer and architect to write specifications, produce design documents, monitor installation and provide final sign-off of the completed work. We have included an allowance of 10% of the capital cost of completing the work.

- Items one and two above represent complex projects that will require the retention of a General Contractor. We recommend budgeting a General Contractor percentage allowance of 45% for each of

these projects. The percentage includes 15% for project management, 20% overhead and profit and 10% contingency. Percentages are based upon the cost to complete the work excluding A/E fees.

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

# D. SERVICES

## D10 CONVEYING

### Description

The connector provided between Building 116 (the subject building) and Building 115 contains a single three-stop 75 feet per minute 2,500-lbs capacity hydraulic passenger / freight elevator. The elevator was installed in circa 1983.

### Condition / Change-Of-Use

The existing elevator is obsolete and in generally poor condition. The elevator is not of a condition that will adequately support any re-use of the building. In addition, based upon our experience with Class B commercial office buildings in the D.C. marketplace, we anticipate that in order to create a market-ready building under a change-of-use scenario, the installation of an additional elevator at or near the center core will be required. For budgetary purposes, we have recommended budgeting for modernization of the existing elevator and the installation of a single hydraulic passenger elevator.

### Projected Expenditures

Required Capital Expenditure:

1. We recommend budgeting for modernization of the existing hydraulic elevator in 2010. Our opinion of cost for this work is $200,000.

2. We recommend budgeting for the installation of one hydraulic passenger elevator at or near the center core. The installation will consist of creating a fire-rated elevator shaft and below-grade pit (to include removal of the floor slab), removing walls to create elevator lobbies, creating a fire-rated ground floor machine room, and installing the elevator equipment. Our opinion of cost for this work is $400,000 in 2010.

Additional Project Incurred Costs

- Items one and two above will require the retention of a District of Columbia registered engineer and architect to write specifications, produce design documents, monitor installation and provide final sign-off of the completed work. We have included an allowance of 10% of the capital cost of completing the work.

- Items one and two above represent complex projects that will require the retention of a General Contractor. We recommend budgeting a General Contractor percentage allowance of 45% for each of these projects. The percentage includes 15% for project management, 20% overhead and profit and 10% contingency. Percentages are based upon the cost to complete the work excluding A/E fees.

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

## D20 PLUMBING

The following information was obtained through our visual observations of the building systems. The plumbing systems include domestic cold and hot water systems, sanitary waste and vent systems, and storm water collection system. Natural gas service is not provided to the building.

### Domestic Water Systems

#### Description

Domestic Cold Water

Domestic cold water enters the building at core area of the basement level. The incoming line size is 6" diameter and appears to be ductile iron pipe. The piping is changed to copper for routing throughout the building. There is no pressure booster system, with water service for the building supplied directly from the street pressure. Taps are made to the water line and routed to plumbing fixtures and equipment in the various wings of the building. A water meter was not observed within the building, but may be provided in an exterior in-ground vault.

Domestic Hot Water

Domestic hot water (as well as heating system hot water) is generated by a heat exchanger located in a basement mechanical room. Steam generated in a central plant is provided to the insulation-wrapped exchanger, producing hot water for the building. Storage tanks or independent domestic water heaters were not observed.

Domestic Water Piping

Observed domestic water piping included ductile iron and galvanized steel tubing in larger sizes and copper tubing in smaller sizes. Domestic cold and hot water piping is partially insulated.

#### Condition

The building was unoccupied and the domestic water systems were not in service at the time of our assessment. However, the system appeared to be in fair to poor condition. Based upon our experience with similar buildings in the District of Columbia, the 6" diameter incoming water service line should be adequate to serve for the needs of the building assuming conversion to commercial office. Piping in exposed locations within the basement had damaged or deteriorated insulation and the tubing was corroded. Because the systems were not in service, no active problems were observed, but it was evident that the systems have lacked adequate maintenance for an extended period and that original portions of the systems have reached the end of useful life. The basement floor had standing water in many locations, although the source of the

water may have been attributable to the heating system. We recommend that the domestic cold and hot water systems be replaced as part of any re-use.

Projected Expenditures

Required Capital Expenditure:

1. A change in building occupancy classification will trigger a requirement to meet current code requirements. If the Property is converted to commercial office use, we recommend that the domestic cold and hot water system be replaced. Our opinion of cost for this work is $2.50 per square foot of floor area to a total cost of $103,293 in 2010. Costs for replacement of plumbing fixtures are included within the interior reconstruction allowance previous included. This opinion of cost excludes applicable Architectural and Engineering fees and General Contractor allowances.

Additional Project Incurred Costs

- Item one above will require the retention of a District of Columbia registered engineer or architect to write specifications, produce design documents, monitor installation and provide final sign-off of the completed work. We have included an allowance of 10% of the capital cost of completing the work.

- Item one above represents a complex project that will require the retention of a General Contractor. We recommend budgeting for a General Contractor percentage allowance of 45% for this project. The percentage includes 15% for project management, 20% overhead and profit and a 10% contingency. Percentages are based upon the cost to complete the work excluding A/E fees.

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

Sanitary Waste and Vent Systems

Description

Sanitary waste is collected from multiple riser stacks throughout the building and tied to horizontal mains that are routed out of the building via gravity drain lines to campus sanitary lines at various points around the perimeter of the building. Duplex sewage ejector pump systems, with submersible pumps, are provided in the basement level mechanical room and collect waste in the below-grade areas that cannot be directly discharged through the gravity lines.

Sanitary waste and vent piping materials vary. Much of the waste and vent piping is threaded galvanized steel piping or cast iron hub and spigot type material.

### Condition

The domestic water systems, and therefore the sanitary waste and vent systems, were not in service at the time of our assessment, but appeared to be in fair to poor condition. Because the systems were not in service, no active problems were observed, but it was evident that the systems have lacked adequate maintenance for an extended period and that original portions of the systems have reached the end of useful life. We recommend the sanitary waste and vent system be replaced as part of any re-use.

### Projected Expenditures

Required Capital Expenditures:

2. A change in building occupancy classification will trigger a requirement to comply with current code requirements. If the Property is converted to commercial office use, we recommend that the sanitary waste and vent piping system be replaced. Our opinion of cost for this work is $2.20 per square foot of floor area to a total cost of $90,897, excluding applicable Architectural and Engineering fees and General Contractor allowances.

Additional Project Incurred Costs

- The item above will require the retention of a District of Columbia registered engineer or architect to write specifications, produce design documents, monitor installation and provide final sign-off of the completed work. We have included an allowance of 10% of the capital cost of completing the work.

- The item above represents a complex project that will require the retention of a General Contractor. We recommend budgeting for a General Contractor percentage allowance of 45% for this project. The percentage includes 15% for project management, 20% overhead and profit and a 10% contingency. Percentages are based upon the cost to complete the work excluding A/E fees.

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

## Storm Water Systems

### Description

The building is constructed with sloped roofs. Storm water from the sloped roofs is collected in gutters at the roof perimeters and routed to grade in external downspouts and into the campus' underground storm water drainage system.

Gutter and downspout materials vary, with the original sections copper, with repairs, replacements and extensions comprised of aluminum.

### Condition

The conditions of the gutter and downspout storm water systems and recommendations for repairs or replacement are described in the roofing section of this report.

### Projected Expenditures

Required Capital Expenditure:

No required capital expenditures have been identified at this time.

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

## Natural Gas Systems

Natural gas service is not provided to the Property.

# D30 HVAC

The heating, ventilation and air conditioning systems include central heating systems, local cooling systems, and central air-handling, exhaust and ventilation systems.

## Heating Systems

### Description

The building is heated using low pressure steam piped through a steam-to-hot-water shell-in-tube heat exchanger located in the basement mechanical rooms, providing hot water circulated through radiators and perimeter convection units, ceiling recessed and suspended cabinet fan-coil units and through coils in central air-handling units.

Steam is provided by a St. Elizabeth Hospital campus central plant via underground piping to the Property. Steam condensate from the heat exchanger is collected within the respective wing's mechanical room and routed via dual pump sets to the central plant's condensate return unit/boiler feed-water system.

The steam piping system is welded black steel pipe. Most steam piping is insulated except at equipment connections and steam traps. Most of this older steam piping insulation is believed to contain asbestos.

Heating hot water from the heat exchanger is circulated by a loop system by two end-suction style pumps in each of the mechanical rooms, providing heating hot water through the heat exchanger to the perimeter

baseboard radiation convectors, to cabinet heaters in the stairwells, entry vestibule and mechanical rooms and to heating coils in two central air handling units located in the basement of the building.
The heating hot water piping system is typically welded black steel pipe in the larger sizes, with smaller piping and run-out connections to equipment assumed to be copper. Heating hot piping is typically insulated except at equipment connections. It is suspected that the insulation contains asbestos.

### Condition

The building was unoccupied and the heating system was not in operation at the time of our assessment. The basement mechanical rooms are accessible from the rear of the building. Only Mechanical Room A in the building was accessible at the time of our assessment, as the doors to Mechanical Room B were locked. Neither the air handling units and their supply and return air fans, nor the heating hot water circulating pumps or cabinet units were operating on the day our assessment was conducted.

Conditions observed in the accessible mechanical room and within the basement level indicated numerous leaks within the system, causing corrosion and rusting of piping, deterioration and failure of piping insulation and standing water on the basement floor. It was unclear whether the standing water was due to a leak in the heating system, or was associated with the domestic water or storm water systems. The major equipment in the mechanical room with legible data tags appeared to be installed in 1983, making the equipment 27 years old. It is assumed that portions of the hot water distribution system piping may be original, or approximately 73 years old.

Much of the distribution piping is at the end of its service life, as are the heat exchangers, heating hot water pumps and air handling units. We anticipate that the overall heating system and its major components should be replaced regardless of the proposed use of the building.

### Change-of-Use

A change in building occupancy classification will trigger a requirement to comply with current code requirements. If the Property is converted to commercial office use, we recommend that the entire heating system be replaced and upgraded. The total area of the building was measured at 41,317 gross square feet. For office occupancies, loads usually run in the 300 square feet per ton (SF/ton) of cooling range. This can vary depending on the types and quantities of windows, and the roof and wall insulation values. Given the amount of glazing in this building, a load estimate of 275 SF/ton seems more appropriate. Therefore, the Property is estimated to have a total cooling load of 150 tons.

Given the structural and historic architectural constraints of the building and the assumption that under a change-of-use the building will be reconfigured as "Class B" office space, there are a limited number of cost appropriate HVAC systems. Final selections may depend on the landlord's decisions relative to allocation of utility costs.

For the purposes of this report, we have assumed that split system heat pump units will be installed. This system will consist of indoor fan units installed in the ceiling plenum above each occupied zone with condensing units located on grade. The system can be easily configured for separate metering by tenant,

however, the system is somewhat inefficient under heavy load conditions and results in "condenser unit farms" (i.e. large quantities of grouped condensing units).

Projected Expenditures

Required Capital Expenditure:

1. We recommend budgeting for the installation of split system heat pump units. Our opinion of cost for this work is $29 per square foot of floor area to a total cost of $1,198,193 in 2010 excluding applicable Architectural and Engineering fees and General Contractor allowances.

2. We recommend budgeting for an allowance of $2.30 per square foot of floor area to a total cost of $95,029 in 2010 for removal of the existing HVAC systems as part of any change-of-use.

Additional Project Incurred Costs

- The items above will require the retention of a District of Columbia registered engineer or architect to write specifications, produce design documents, monitor installation and provide final sign-off of the completed work. We have included an allowance of 10% of the capital cost of completing the work.

- The items above represent a complex project that will require the retention of a General Contractor. We recommend budgeting for a General Contractor percentage allowance of 45% for each of these projects. The percentage includes 15% for project management, 20% overhead and profit and a 10% contingency. Percentages are based upon the cost to complete the work excluding A/E fees.

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

Cooling Systems

Description

Description

Chilled water for the air handler systems' cooling coils was supplied from the central plant via an insulated steel piping system. Some administrative offices and treatment areas are furnished with in-window electric air conditioners, most appearing to have been installed in the past 10 years. The window units are self-contained packaged air-conditioning units with cooling capacities of between 1- and 2-tons of refrigeration each and utilize R-22 refrigerant.

Condition

The chilled water distribution system was not in service during the assessment. The system is in poor visually apparent condition and should be replaced as part of any change-of-use.

### Projected Expenditures

Required Capital Expenditure:

A change in building occupancy classification will trigger a requirement to comply with current codes. If the building is converted to commercial office use, we recommend that the entire heating and cooling systems be replaced and upgraded including a change from in-window air-conditioning systems to systems with split system heat pump units described above. Our opinion of cost for completion of this work is included within the cost for installation of the heating system heat pump units (as previously included).

## Air-Handling Units

### Description

Central station air-handling systems are installed to heat and ventilate the building. These consist of an air-handling unit located in a basement mechanical room in each wing of the building. Each unit consists of a central hot water heating coil component, a supply air fan and a return air fan. Supply air is routed to the spaces through sheet metal ducts and distributed overhead (above the ceilings) and discharged to the spaces via ceiling-mounted diffusers. Return air is collected at ceiling-mounted grilles into the plenum and into a riser, ducted back to the respective air-handling unit. The air-handling units were installed in approximately 1983 and are, therefore, 27-years old. Ductwork is sheet metal and is appears to be uninsulated.

### Condition

The air-handling units are in fair to poor condition and are at the end of their service lives. Completion of on-going maintenance, such as replacing motors, fan belts and greasing bearings could extend the life of the equipment, but replacement of all air-handling equipment is recommended for a change in building occupancy.

### Projected Expenditures

Required Capital Expenditure:

A change in building occupancy classification will trigger a requirement to comply with current code requirements. If the building is converted to commercial office use, we recommend that the entire air-handling system be replaced and upgraded, as part of the heating and cooling systems. Refer to the discussion above under “Heating Systems”.

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

## Ventilation and Exhaust Systems

### Description

Outside air for ventilation of the occupied floors is supplied through operable windows around the perimeter of the building and by the central air handling units. Fresh air for the air handling units is provided through sidewall louvers in the mechanical area wells and ducted to the units.

The building contains several exhaust systems, primarily serving the restrooms/bathrooms. Exhaust air is ducted trough ceiling grilles and up to exhaust fans installed in the attic space, venting through louvered opening in dormers. Fan capacities vary.

### Condition

The windows are operable and adequately sized to comply with requirements for "natural ventilation". The various exhaust systems appeared to be in fair to poor condition, nearing the end of useful life and should be replaced. In the absence of design or shop drawings and product data that indicate fan capacities, it is uncertain if the mechanical ventilation and exhaust systems meet current code requirements.

### Projected Expenditures

Required Capital Expenditure:

A change in building occupancy classification will trigger a requirement to comply with current code requirements. If the building is converted to commercial office use, we recommend that the entire mechanical ventilation and exhaust system be replaced and upgraded. Refer to the discussion above under "Heating Systems".

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

## Temperature Control Systems

### Description

Controls for the HVAC systems' major equipment generally consists of a pneumatic system. There is a control air compressor pump and line air-dryer system installed in the basement Mechanical Room A that provide control air for valve actuators and thermostats.

### Condition

The pneumatic control system was not operating on the day of our assessment. The control system is believed to be functional, but provides a minimum in flexibility to adapt system operations to changing

conditions. The air dryer is in fair to good condition and appears to have been more recently installed, whereas the compressor pump equipment appears to have been installed with the air handling units in 1983.

### Projected Expenditures

Required Capital Expenditure:

A change in building occupancy classification will trigger a requirement to comply with current code requirements. If the facility is converted to commercial office use, we recommend that a new digital device control system be provided that is compatible with the selected HVAC system. Refer to the discussion above under "Heating Systems".

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

## D40 FIRE PROTECTION

Fire and life safety elements observed included structural fire protection, audible fire alarm and detection systems, a fire suppression sprinkler system, handheld fire extinguishers, and fire-rated means of egress.

### Structural Fire Protection

#### Description

The structure consisted of concrete floors, a concrete attic space floor, a concrete-framed superstructure, masonry walls and a wood-framed roof structure. Common area corridors were constructed with a one hour fire rating. Enclosures at each egress stairwell and the floor structure were designed to be rated with a two hour fire rating with 1 ½ hr fire resistance rated doors. Doors at interior rooms typically consisted of ¾-hr fire resistance rated doors. Doors at exit stairs consisted of 1 ½-hr fire resistance rated metal doors, automatic door closers and panic hardware. The building construction resembles a Type IIIB construction per IBC Table 601.

#### Condition

We noted the condition and adequacy of the structural fire protection systems at the mechanical rooms in the basement, in the corridors and exit stair shafts. The structural fire protection appeared to be in good condition and generally installed in accordance with industry accepted practice and the codes enforced at the time of construction. However, we noted piping penetrations in the basement level corridor without fire stooping (reference Photograph 78 in Appendix E). This condition will be resolved when the building floor plate is reconstructed.

### Projected Expenditures

Required Capital Expenditures:

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

No required maintenance expenditures are anticipated at this time.

## Means of Egress

### Description

The building is provided with exiting through three stairwells distributed throughout the building and leading to the street level at the basement level, rear elevation (reference Photograph 45 in Appendix C). Stairs are enclosed in two-hour rated protected staircases. Exit doors had a clear opening width of 33" per leaf. Battery backup exit signs are provided at each exit and at appropriate locations along the path of egress.

### Condition

The paths of egress appeared to be generally compliant with the building codes in effect at the time of construction and presently enforced codes.

### Projected Expenditures

Required Capital Expenditures:

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

No required maintenance expenditures are anticipated at this time.

## Fire Suppression Systems

### Description

The laundry rooms and other limited rooms were provided with an automatic fire suppression sprinkler system. Other areas of the building were not provided with an automatic fire suppression sprinkler system. Standpipes were provided in the stairwells. Handheld fire extinguishers, located in wall cabinets, were provided in the central hallway on each floor.

### Condition

Under a change-of-use to commercial office, the presently enforced District of Columbia fire code will require that an automatic sprinkler system be installed throughout the building.

### Projected Expenditures

Required Capital Expenditures:

1. Under a change-of-use, code will require the installation of a fire suppression sprinkler system throughout the building. Our opinion of cost for this work assuming installation when the interior areas are removed to the superstructure (i.e. at the time of interior reconstruction) is $4 per square foot of floor area to a total cost of $165,268 in 2010 for the suppression system excluding applicable Architectural and Engineering fees and General Contractor allowances.

Additional Project Incurred Costs

- The item above will require the retention of a District of Columbia registered engineer and architect to write specifications, produce design documents, monitor installation and provide final sign-off of the completed work. We have included an allowance of 10% of the capital cost of completing the work.

- The item above represents a complex project that will require the retention of a General Contractor. We recommend budgeting a General Contractor percentage allowance of 45% for each of these projects. The percentage includes 15% for project management, 20% overhead and profit and 10% contingency. Percentages are based upon the cost to complete the work excluding A/E fees.

Required Maintenance Expenditures:

No required maintenance expenditures are anticipated at this time.

## Fire Detection and Alarm Systems

### Description

The building is protected by a manual hard wire, conventional fire alarm system installed in circa 1990 and manufactured by Cerberus Pyrotronics (reference Photograph 46 in Appendix C). The fire alarm control panel (FACP) is located at the basement level. The fire alarm system monitors manual pull stations, strobes, smoke and heat detectors and flow switches. The FACP drives audio and visual devices located in the corridors and provides only local alarm. No external connection or supervision is provided. A Fire-Lite MS-4 system installed in circa 2005 connects to the fireman's recall system installed at the elevator.

### Condition

The fire alarm system is outdated, obsolete and provides limited protection to the building. As part of the considered change-of-use, we have recommended that a replacement building wide manual fire alarm system be installed to include strobes, pull stations and related peripheral devices.

### Projected Expenditures

Required Capital Expenditures:

We recommend budgeting for replacement and upgrade of the fire alarm system and related peripheral devices throughout the building as part of any change-of-use. Our opinion of cost for this work is included within the electrical section of this report.

Required Maintenance Expenditures:

No required maintenance expenditures are anticipated at this time.

## D50 ELECTRICAL

The electrical systems include the panelboards, safety switches, motor controls, lighting fixtures, public address systems, and security systems.

### Electrical Service and Distribution Equipment

### Description

*Electrical Service Equipment*

The CT Building portion of the campus receives electrical service from pad-mounted transformers located adjacent to the nearby CT-9 kitchen building, supplied by Potomac Electric Power Company (PEPCO), with primary service routed to the CT-9 basement main electrical rooms. Service is routed underground from the CT-9 building to the Property and its characteristics are 208/120-volts, 3-phase, 4-wire. Based on the ratings of the equipment observed within the Property, the incoming service is rated at 400 to 800 amps.

*Power Distribution*

Voltages

Large motors in the building (e.g. those serving the HVAC system equipment) are supplied at 208-volts, 3-phase. Light fixtures, general purpose receptacles, and small appliance and equipment loads are served at 120-volts.

Wire and Conduit

Power distribution is accomplished using wire in conduit. Observed wiring consists of copper with thermoplastic insulation, but some older wiring may have rubber insulation. Wiring within the building is believed to be copper. There were no observed aluminum conductors within the building.

Conduit types varied in the building based on area and usage. Rigid metal conduit is typically used in exposed areas subject to constant moisture and physical damage. Electrical metallic tubing (EMT) is used in most interior spaces. Limited amounts of flexible metal conduit and Type MC cable may also be used.

Panelboards

Two types of panelboards were observed in the building. The primary type is a 225-amp distribution panel, typically located on each floor in each wing of the building, with several of this panel type also located in service areas of the building, including the mechanical rooms. The second type of panelboard observed is an original, screw-in fuse type panelboard that appear to have been abandoned in place. The 225-amp panels utilize circuit breakers for over-current and short circuit protection of circuits.

Safety Switches

In addition to the fusible safety switches used as the service disconnecting means, fusible and non-fused type safety switches are also installed near equipment such as HVAC pumps and fans and serve as the required local disconnecting means for the equipment.

Motor Control

The motor control for pumps and fans consists of individual motor starters located near the associated equipment. The typical control unit consists of a magnetic contactor, overload relays, and associated control wiring.

*Equipment Manufacturers*

There is a variety of electrical equipment manufacturers installed in the building. Most of the equipment was manufactured by Federal Pacific Electric Company (FPE), with older panelboards by Wurback Electric Manufacturing Company.

### Condition

*General*

Electrical distribution equipment of the type installed in this building is generally considered to have a service life of 30-years. Switches, panelboards, motor starters, and wiring are often serviceable for 20 years or more beyond this time if properly maintained, and not subjected to repeated overload or short circuit conditions. However, at the Property, there is no indication that the equipment has received any maintenance. Further,

the older, original installation that may include rubber insulation used for the feeders and branch circuits will have become brittle with age and may disintegrate when handled during modifications.

In some locations, older FPE distribution panels have been exposed to water, particularly in the mechanical rooms and on the basement level. Some of the panels have exposed connections, which coupled with general concerns relative to the FPE equipment, represents a safety hazard and these panels should be replaced immediately, prior to re-occupancy.

*System Capacity*

The rating of the Property's incoming service could not be determined. However, the observed distribution panels would indicate service capacity of between 400- and 800-amps. At 208/120-volts, this equates to approximately 288 KVA. Given a building area of 41,317 square feet, the unit load capacity for the building is 6.97 VA/SF.

Unit load factors for an office building based on code requirements and industry design standards are 3.5 VA/SF for lighting, 1.0 VA/SF for general power (minimum), 6.0 VA/SF for HVAC equipment, and another 1.0 to 2.0 VA/SF to cover elevators, water heaters, and other miscellaneous loads. This yields a total of 11.5 to 12.5 VA/SF for the building. This requires at least a 1,400-amp service at 208/120-volts, or 1,000-amp service at 480/277-volts.

While the electrical system capacity appears adequate for its previous use, the existing service is significantly undersized for office occupancy.

Projected Expenditures

Required Capital Expenditure:

1. A change in building occupancy classification will trigger a requirement to comply with current code requirements. If the facility is converted to commercial office use, we recommend that the entire electrical distribution system be replaced and upgraded. Our opinion of cost for this work to is $1,725,000 excluding applicable Architectural and Engineering fees and General Contractor allowances. This includes the following projects:

    a. Re-routing the existing service to serve just the building ($100,000)
    b. Establishment of new primary and secondary service ($75,000)
    c. Installation of replacement equipment to include fire, data and emergency power ($1,550,000)

Additional Project Incurred Costs

- Item one above will require the retention of a District of Columbia registered engineer or architect to write specifications, produce design documents, monitor installation and provide final sign-off of the completed work. We have included an allowance of 10% of the capital cost of completing the work.

- Item one above represents a complex project that will require the retention of a General Contractor. We recommend budgeting for a General Contractor percentage allowance of 45% for each of these projects. The percentage includes 15% for project management, 20% overhead and profit and a 10% contingency. Percentages are based upon the cost to complete the work excluding A/E fees.

Emergency Power Generation and Distribution Equipment

Description

Emergency power is not provided to the building. There is no emergency power generator, with battery back-up power provided for exit signs and the fire alarm system.

Condition

The limited emergency power system is in the same general condition as the normal power systems described above, that is fair to poor.

Projected Expenditures

Required Capital Expenditure:

A change in building occupancy classification will trigger a requirement to comply with current code requirements. If the facility is converted to commercial office use, we recommend that the entire emergency electrical distribution system be replaced and upgraded. Our opinion of cost for this work is included within the Electrical Service and Distribution Equipment section of this report.

Lighting Systems

Description

Fluorescent lighting is typically used throughout the building, including administrative office areas, treatment rooms, restrooms, lounges, corridors and lobbies. Lamp and ballast types vary, but most fixtures seem to utilize the older F40T12 lamps and magnetic ballasts. Some fixtures have been replaced or upgraded and use the newer, more efficient F32T8 lamps and electronic ballasts.

Incandescent lighting is used in multiple areas including utility closets, mechanical and electrical equipment rooms. Illuminated exit signs are installed at exit doors and along the paths of egress. Lighting control is via local switching in the respective spaces.

Condition

The lighting systems appeared to be in fair to poor condition. Many fixtures have broken or missing lenses. Incandescent lamps in many equipment rooms and other areas are inoperative, leaving areas with insufficient or no illumination. Although the overall lighting systems can be serviceable through the end of the study

period, all equipment, wiring, and controls should be programmed for replacement as part of the overall electrical distribution system replacement.

### Projected Expenditures

Required Capital Expenditure:

A change in building occupancy classification will trigger a requirement to comply with current code requirements. If the facility is converted to commercial office use, we recommend that the entire lighting system be replaced and upgraded. The estimated cost for new lighting and control systems is included within the interior build-out cost included within the interiors section of this report.

## Communications and Data Systems

### Description

Telephone service enters the building in a first floor closet in the main entrance vestibule. Trunk cables are routed up and down to the administrative offices and selected other rooms. Incoming cables and equipment may be owned and maintained by the utility companies. Cabling and equipment within the building is owned and maintained by St. Elizabeths Hospital.

### Condition

The data and telephone infrastructure appeared to be in fair condition.

### Projected Expenditures

Required Capital Expenditure:

A change in building occupancy classification will trigger a requirement to comply with current code requirements. Further, the communications and data needs for an office building are significantly different than for a hospital. The cost of these systems will vary with the building and tenant layouts. Our opinion of cost for this work is included within the Electrical Service and Distribution Equipment section of this report.

## D60 SAFETY, SECURITY & ACCESS CONTROL

### Description

The Property was previously provided with an intrusion detection system (IDS) that included first floor door contacts; infra-red motion detection devices located in areas of the first floor, and web-based closed circuit television (CCTV) cameras. A public address (PA) system was provided, with system control located in the first floor administrative offices and ceiling mounted speakers throughout the building. Access control to the building is provided by keyed locksets on primary and secondary entrances.

### Condition

The IDS systems and PA systems were not operable at the time of our assessment, and much of the IDS and PA equipment had been removed. If the building is converted to office use, the security systems must be replaced and reconfigured to suit the intended function. A public address system is not expected to be required in an office building.

### Blast Shrapnel Protection

The Property's windows were not provided with blast shrapnel protection. Based upon their construction type, the use of non-tempered glazing panels and their general configuration, the existing window system will provide poor blast shrapnel protection.

### Safety / Security Review

In addition to observation of the safety, security and access control systems, we completed a cursory level safety and security review. The purpose of the review was to determine and document hazards and required improvement in all areas of the building and surrounding site.

The portion of the campus containing the Property is enclosed by fencing and access to the site in controlled by a security guard. Windows were provided with security grating. Doors consisted of steel panel construction.

### Projected Expenditures

Required Capital Expenditure:

A change in building occupancy classification will trigger a requirement to comply with current code requirements. Further, the security needs for an office building are significantly different than for a hospital. The cost of these systems will vary with the building and tenant layouts. Our opinion of cost for this work is included within the Electrical Service and Distribution Equipment section of this report.

# E. EQUIPMENT & FURNISHINGS

## E10 EQUIPMENT

### Description

Equipment provided at the Property included administrative offices equipment, clinical equipment and computers.

### Condition

Equipment appeared to be in generally fair condition. Under the change-of-use scenario, we assume that existing equipment will be disposed of by the District of Columbia prior to change-of-use.

### Projected Expenditures

Required Capital Expenditure:

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

## E20 FURNISHING

### Description

Furnishings provided at the Property included office furniture and library and storage shelving and files.

### Condition

Furniture appeared to be in generally fair to good condition. Under the change-of-use scenario, we assume that existing furniture will be disposed of by the District of Columbia prior to change-of-use.

### Projected Expenditures

Required Capital Expenditure:

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

## F. SPECIAL CONSTRUCTION

### F10 SPECIAL CONSTRUCTION

None.

## G. SITE FEATURES

### G10 SITE SYSTEMS

The site containing the Property is within the St. Elizabeths Hospital campus, with most site improvements shared by the numerous buildings on the campus. Shared site systems adjacent to the Property include the asphalt and concrete-paved roadways and parking areas at the front (southeast) and rear (northwest) of the Property, cast-in-place concrete sidewalks and curb and gutter sections along the roadways and parking areas, a combination of cast-in-place concrete and granite steps with painted steel railing assemblies, brick retaining walls, stormwater management features, site lighting fixtures and the landscaped lawn areas surrounding the building.

#### Description

A private roadway, Dogwood Street, is located along the southeast and east boundaries of the Property and is not considered part of the Property. This roadway is part of the internal campus road system and is accessed from a single secure entrance drive off of Alabama Avenue SE. A parking area drive, previously accessed from Dogwood Street, but since made inaccessible by fencing surrounding an adjacent hospital building (Building 124), is located to the northwest (rear) of the building (reference Photograph 3 in Appendix C). The principal portions of the drive were 20' wide and provided service access to the rear of the Property. The drive was paved with asphalt, with concrete curbing. Concrete aprons from the drive provide access to the entrances to the two mechanical rooms at the rear of the building

A series of 4' wide 4" deep un-reinforced cast-in-place concrete exposed aggregate sidewalk panels are provided at the front of the building. Table G10 summarizes the approximate area of the asphalt and concrete site features.

Table G10 Asphalt & Concrete Site Features

| Asphalt Pavement (s.y.) [1] | No. Parking Stalls (inc. ADA) [2] | Area of Concrete Pavement (s.f.) [3] | Area of Concrete Sidewalks (s.f.) [3] | Length of Concrete Curb & Gutter (l.f.) [4] |
|---|---|---|---|---|
| 708 | 0 | 0 | 7,211 | 724 |

1. s.y. indicates square yards
2. ADA indicates that parking stalls are marked and signed in general accordance with the intent of the 1991 Americans with Disability Acts Accessibility Guidelines (ADAAG)
3. s.f. indicates square feet
4. l.f. indicates linear feet

A series of cast-in-place concrete steps are provided at the main entrance at the south of the building (reference Photograph 47 in Appendix E). Steps consist of 4" thick cast-in-place concrete sections. Steps are 8' wide x 8' long and achieve a height of 55". Each step has 12" wide treads and 6" high risers. The outer perimeter of the step assemblies are lined with painted iron railing assemblies. Railings consist of 36" tall assemblies with ½" square pickets spaced at 5 ½" on-center, 1 ½" x ½" bottom rails and 1 ¾" x 1 ½" top rails.

Alternating surface-recessed pickets provide lateral support to the railings. An 8' wide x 6' 7" deep landing is provided at the top of the entrance steps. The landing consists of a 8" thick cast-in-place mild steel reinforced concrete slab enclosed by 30" tall railing assemblies.

### Condition

The asphalt pavement is in fair to poor condition. We noted widespread longitudinal and traverse cracks at the pavement surface, hardening and erosion of the wearing course, areas of poorly completed repair and partial overlay, and numerous instances of alligator cracking symptomatic of subbase failure.

We have recommended budgeting for the implementation of a structured pavement repair program to extend the life of the pavements and reduce the need for reactive repair and replacement. This repair program should consist of the near-term removal of the pavement wearing surface, replacement of areas of failed subbase (alligator cracking), the installation of a 1 to 1 ½" thick replacement wearing surface (tapered to drains), and the application of parking stall or other necessary surface markings at that wearing surface. Following the completion of this work, we recommend budgeting a capital allowance for the filling of cracks, the application of a one (parking stalls) to two (drive lanes) coat asphaltic-based seal coat, and the re-application of surface markings.

Concrete sidewalk panels and curb and gutter section are in poor to fair condition. We noted slightly heaved and cracked panels at walkways at the front and rear of the building. We have recommended budgeting for near-term replacement of deteriorated sidewalks.

The entrance steps and associated landing are in fair to good condition (reference Photographs 48 through 50 in Appendix C). We noted spalled concrete, calcium staining and exposed / corroded reinforcing steel at the underside of the landing, peeled paint and areas of corrosion at the perimeter railing assemblies, and areas of spalled concrete at the stair risers. We have recommended budgeting for near-term repair of these conditions.

### Projected Expenditures

Required Capital Expenditures:

No required capital expenditures are anticipated at this time.

Recommended Maintenance Expenditures:

1. Asphalt resurfacing (mill and overlay) is typically needed about every 15 to 20 years. Our opinion of cost to complete a 1 to 1 ½" mill and overlay of the service drive and associated parking areas is $21,210 ($30 per square yard) in 2010.

2. We recommend budgeting for replacement of deteriorated concrete pavement and sidewalk panels provided. Our opinion of cost for this work is $23,300 ($20 per square foot) in 2010.

3. We recommend budgeting for refurbishment of the entrance steps and landing. Refurbishment should consist of removing delaminated and severely cracked concrete, epoxy coating exposed reinforcing steel,

replacing that concrete with a low chloride mix, applying a flex impregnated cementious coating over the elevated landing, and cleaning, priming and coating the perimeter railing assemblies. Our opinion of cost for this work is $7,500 in 2010.

ACCESSIBILITY ISSUES

## H10 Accessibility

### Introduction

As a publicly accessible facility, access to and within the building for disabled building users will be governed (where applicable) by the 1991 Americans with Disability Act (ADA) Accessibility Guidelines. Specifically, two areas of the ADA have significant effect on the physical aspects of the Property.

Title I deals with employment discrimination, and requires that employers not discriminate against a disabled person in hiring or employment. This can impact the configuration and features of buildings and those employers are expected to make "reasonable accommodation", including making facilities readily accessible to disabled employees.

Title III requires that public accommodation provide goods and services to disabled patrons on an equal basis with the non-disabled patrons. This title is the part of the Act with perhaps the greatest impact on buildings, which provide public accommodations, including office buildings.

The ADA has provided a benchmark for measuring accessibility, primarily orientated towards new construction. It also provides guidance for modification of existing facilities to eliminate barriers to access. This benchmark is the ADA Accessibility Guidelines (ADAAG). The ADAAG was written by the Architectural and Transportation Barriers Compliance Board, and first issued in final form in July 1991. The stated purpose of the guidelines is to ensure that newly constructed facilities and altered portions of existing facilities covered by the ADA are readily accessible to disabled persons.

This report has been based upon the ADAAG issued in July 1991. Discussion has been made by the Architectural and Transportation Barriers Compliance Board for modification to the presently enforceable ADAAG. The details and enforcement date of these modifications have yet to be released. In light of this information, we recommend that prior to conducting any improvement, advice is sought from legal counsel and current guidelines be adhered to.

Regulatory implementation of the ADA includes the following prioritizes for barrier removal in existing facilities:

- Accessible Entrances. Providing access from public sidewalks, parking or public transportation that enables disabled individuals to enter the facility.
- Access to Goods and Services. Providing access to areas where goods and services are made available to the public.
- Usability of Restrooms. Providing access to restroom facilities.
- Removal of Remaining Barriers. Providing access to the goods, services, facilities, privileges, advantages, or accommodations.

### Applicability

The ADA states that if a facility issued a Certificate of Occupancy prior to the March 13, 1991 implementation of the ADA is subject to major renovation it will then be required to comply with the ADA requirements. Under the change-of-use scenario, we anticipate that the interior construction will be removed to allow the construction of an office specific layout. As part of this process, the reconfigured interior areas should be designed for accessibility, ADA compliant elevators be installed (see section D10), and the building exteriors be reconfigured to provide compliant access. We have included allowances for this work within the respective report sections (i.e. exteriors section, interior reconstruction allowance) and not individually within this section.

### Accessibility Considerations

### Accessible Entrances

The first consideration of the ADAAG relates to measures that will enable individuals with disabilities to physically approach and enter a place of public accommodation. The priority of "getting through the door" recognizes that providing actual physical access to a facility from public sidewalks, public transportation, or parking, is generally preferable to any alternative arrangement in terms of both business efficiency and the dignity of individuals with disabilities. In general terms this can mean exterior access to the building.

Persons traveling to the building by public transportation, specifically, arriving by bus will arrive at stops located on Alabama Avenue SE and Martin Luther King Avenue SE. Persons arriving by the Metrorail system will arrive via the Congress Heights metrorail station located at the east perimeter of the Property.

Pedestrians wishing to access the building are able to access through the main south entrance. This access requires that a disabled building user negotiate non-compliant steps. We anticipate that as part of the interior reconstruction, the rear entrance will be designated as the disabled entrance. With the addition of an elevator system, this entrance will meet the requirements of the ADAAG with regard to access to and within the building.

### Route of Travel

Disabled persons wishing to access the building are able to gain suitable means of entry via the connector building. The route of travel is generally unrestricted and accessible. However, the elevator is not compliant. As a result, once within the building at the basement level, a disabled building user is not provided with compliant access to other areas of the building.

### Accessible Parking

The Property contained no specifically assigned parking spaces.

### Accessible Drop-Off and Pick-Up Areas

Accessible drop-off and pick-up areas are provided at the rear of the building.

### Projected Capital Expenditures

Required Capital Expenditures:

Required capital expenditures are considered within the applicable report sections.

Required Maintenance Expenditures:

No required maintenance expenditures are anticipated at this time.

### Access to Goods & Services

The second consideration relates to measures that will enable individuals with disabilities to access areas within the Property that provides goods and services.

### Accessible Routes and Amenities

### Horizontal and Vertical Circulation

The building does not contain an accessible elevator or platform lift. Once within the building, a disabled individual is provided with level and generally unrestricted access to the basement level only. Access to the upper floors would require the installation of a compliant elevator or modification of the current elevator system.

### Door Widths and Signage

Section 4.1 (Minimum Requirements) of the ADAAG states that when accessible entrances are not all accessible then the inaccessible entrances shall have directional signage to indicate the route to the nearest accessible entrance. The building did not contain directional signage. Section 4.13 of the ADAAG (Doors) states that doorways shall have a minimum clear opening of 32". The building doorways meet this requirement, with a typical clear opening width of 33".

The ADAAG requires that signs that identify permanent rooms and spaces, such as those identifying restrooms and exits or providing classroom numbers, must have Braille and raised letters or numbers, so that they may be read visually or tactilely. The signs must also meet specific requirements for mounting location, color contrast, and non-glare surface. Signs used to identify offices, medical rooms, restrooms and other permanent rooms and spaces within the building did not meet these requirements. Signs did not have Braille letters or numbers.

Signs should be replaced as part of any change-of-use. Our opinion of cost for interior reconstruction under the change-of-use scenario includes for replacement of signs.

### Projected Capital Expenditures

Required Capital Expenditures:

Required capital expenditures are considered within the applicable report sections.

Required Maintenance Expenditures:

No required maintenance expenditures are anticipated at this time.

### Usability of Restrooms

The third priority emphasizes those measures that will provide individuals with disabilities with access to restroom facilities. The building contained several unisex restrooms, along with male and female restrooms (reference Photographs 89 & 90 in Appendix E). Restrooms were not compliant with the ADAAG. The following specific violations of the ADAAG were noted:

- The drain pipes under lavatories were not insulated as required to protect against contact
- Urinals were positioned above the maximum height of 17-inches permitted by the ADAAG.
- Water closets did not provide an adequate clearance. The ADAAG requires that a clearance of 18-inches from the side grab bar wall to the centerline of the water closet
- Signage was not mounted at 60-inches above the floor to the centerline of the sign as required by the ADAAG. In addition, signs did not contain Braille and raised pictographs as required by the ADAAG.

We anticipate that as part of any re-use the interior floor plate will be demolished and compliant restrooms will be constructed. Our opinion of cost for this work is included within the interior demolition and reconstruction allowance included previously.

### Projected Capital Expenditures

Required Capital Expenditures:

Required capital expenditures are considered within the applicable report sections.

Required Maintenance Expenditures:

No required maintenance expenditures are anticipated at this time.

### Removal of Remaining Barriers

None.

# I. HAZARDOUS MATERIALS

## I10 Hazardous Materials

Faithful+Gould was not requested to perform an environmental assessment of the Property and has not performed sampling or testing of materials as part of our assessment. However, as part of our assessment we noted materials that may be hazardous.

Based upon our visual observation of the building we anticipate that the building contains numerous hazardous materials (reference Photographs 91 & 92 in Appendix E) as detailed below:

- 9" x 9" asbestos containing floor tiles and associated mastics throughout the building
- Asbestos containing pipe insulation at the mechanical rooms and chases
- Lead-based paint at painted areas throughout the interior and exterior of the building

The hazardous materials observed during our evaluation appeared to be in fair condition and generally encapsulated. However, our evaluation consisted of a limited-scope visual assessment without the completion of sampling or destructive analysis. The true condition of the hazardous materials and the extent of the hazard they present will only be known after the completion of a more-in depth analysis.

### Projected Capital Expenditures

Required Capital Expenditures:

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

1. We recommend that an appropriately qualified environmental scientist be retained to test the suspected environmental hazards to determine density of contaminants and cell condition. Our opinion of cost for this work is $20,000 in 2010.

# J. ENVIRONMENTAL ANALYSIS

## J10 LEED Analysis

The United States Green Building Council (USGBC) as administers of the LEED rating system require as a prerequisite that a building considered for certification be occupied. The building is presently vacant and therefore not eligible for certification. We recommend that if certification is desired, the change-of-use / renovation plans include for this.

## J20 Green Roof Feasibility

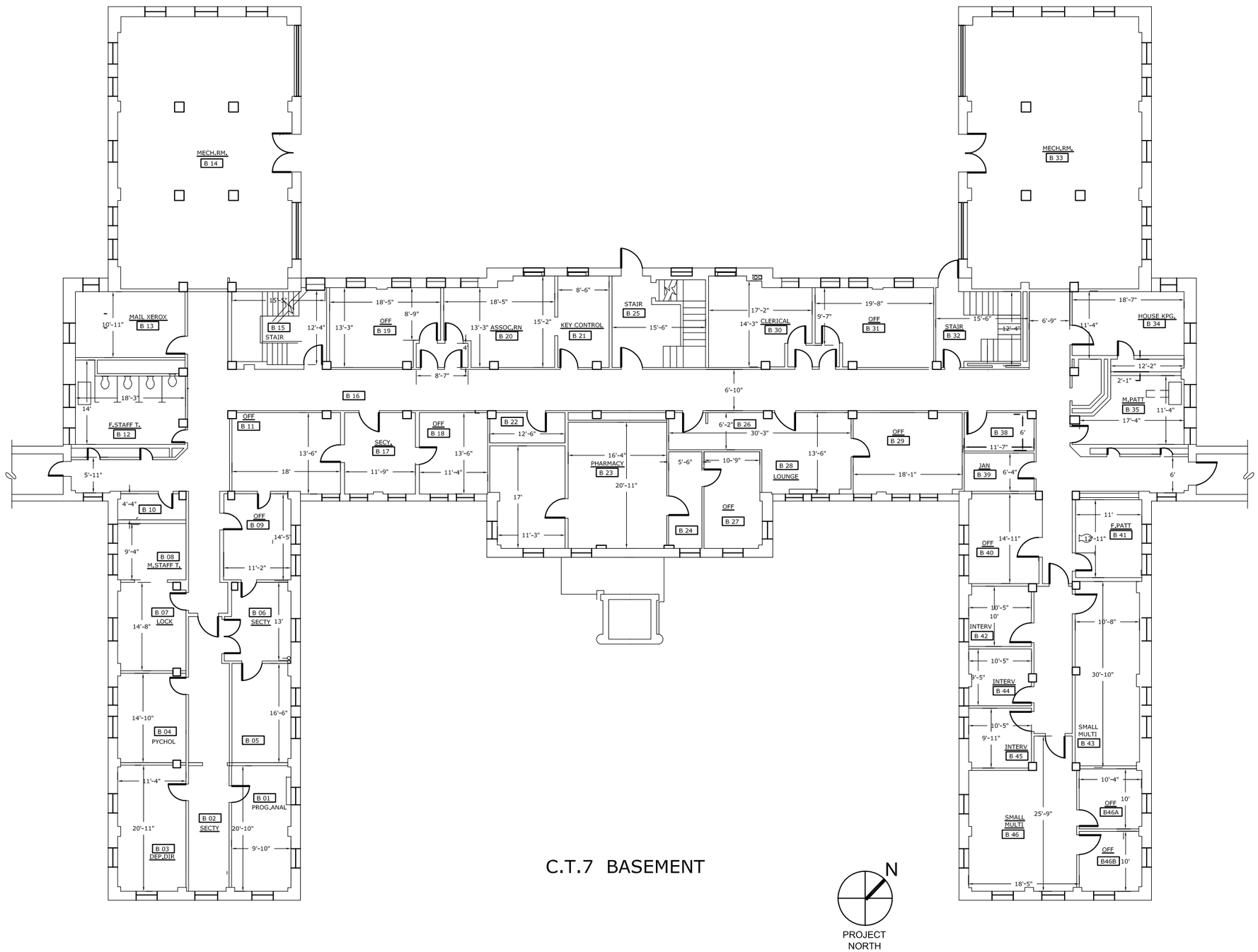
Faithful+Gould was requested to conduct a study for the design and installation of a green roof system to support low impact development solutions. This study consisted of an evaluation of the existing roof structure, subsurface components (i.e. roof system), drainage systems and structural load limits. The building contains a sloped roof system. As a result, the installation of a green roof system is not feasible.

## J30 Energy Efficiency

The current building systems are generally inefficient from an energy standpoint. We have assumed that when the building is renovated to facilitate change-of-use, energy efficient systems will be installed in accordance with local and national codes / standards. Furthermore, we have assumed that systems not subject to replacement will be modified to increase their energy efficiency. The cost for these works has been included within the various line item recommendations.

# Space Utilization Survey

FAITHFUL GOULD




C.T.7 BASEMENT

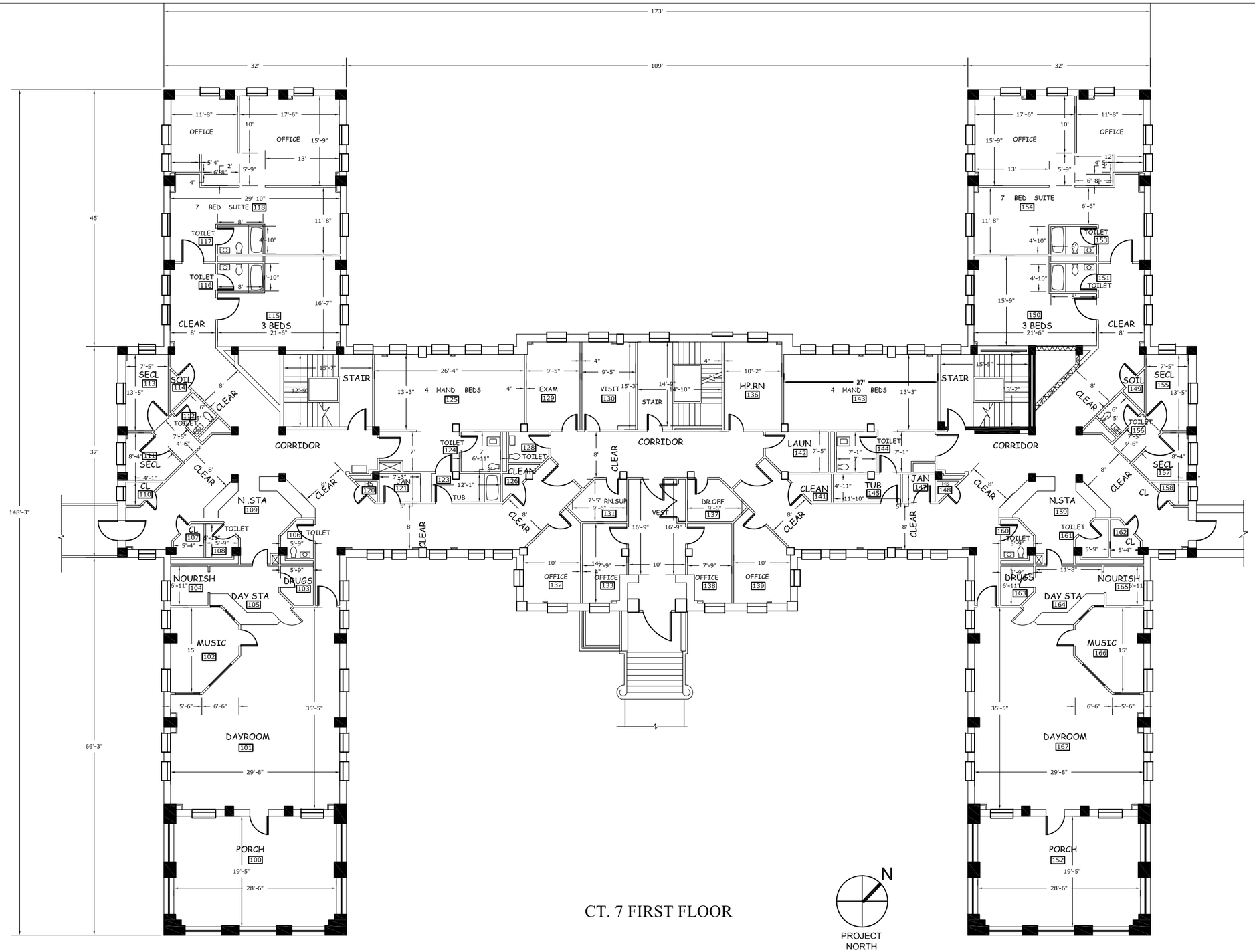
FAITHFUL + GOULD
CONSTRUCTIVE EXPERTISE

Project:
ST ELIZABETH'S HOSPITAL
CT-7 BUILDING 116
BASEMENT

Sheet No.:
1 OF 3

Sheet Title:

Description:
FLOOR PLAN




CT. 7 FIRST FLOOR

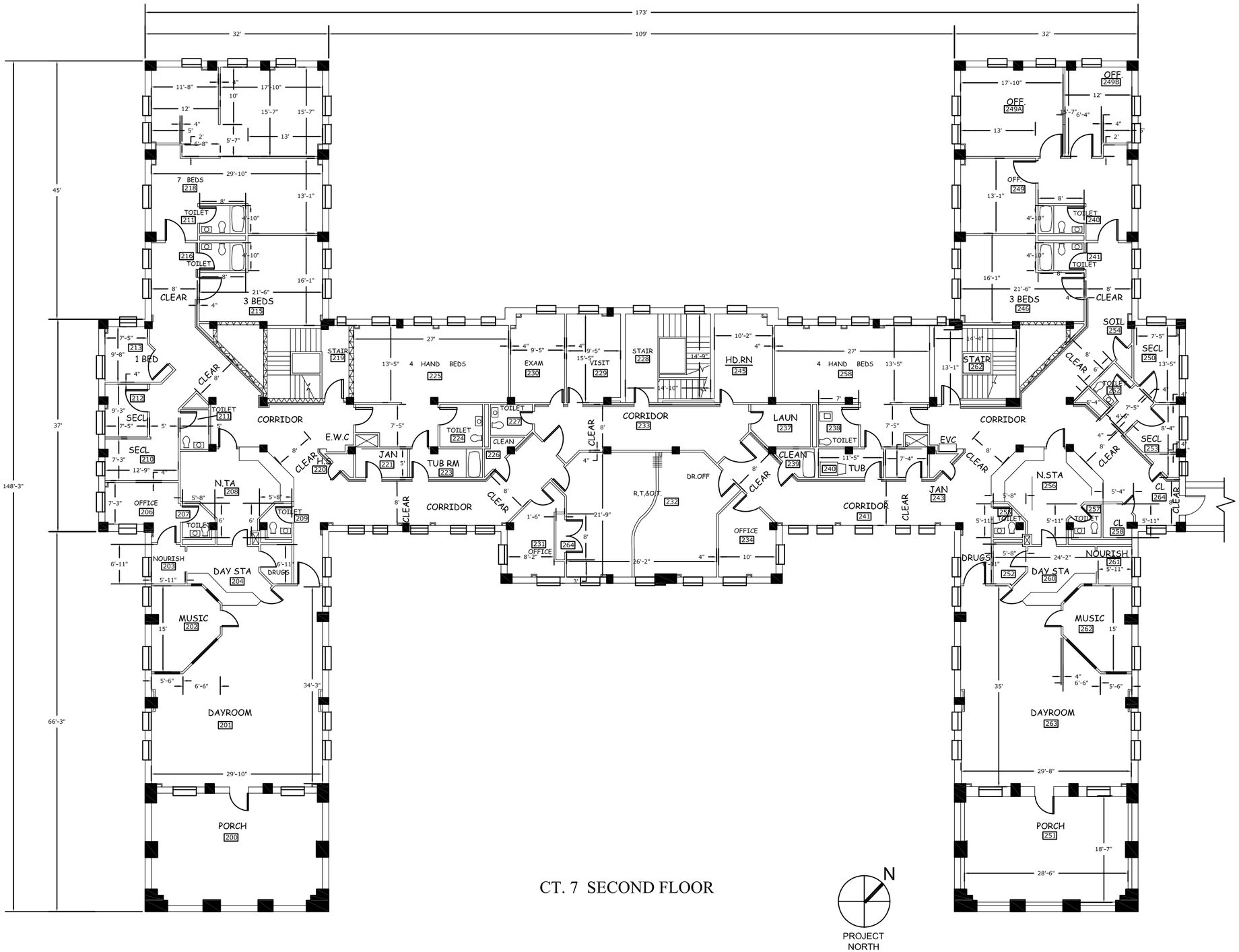
FAITHFUL + GOULD
CONSTRUCTIVE EXPERTISE

Project:
ST ELIZABETH'S HOSPITAL
CT-7 BUILDING 116
FIRST FLOOR

Sheet No.:
2 OF 3

Sheet Title:

Description:
FLOOR PLAN




CT. 7 SECOND FLOOR

PROJECT NORTH

FAITHFUL + GOULD
CONSTRUCTIVE EXPERTISE

Project:
ST ELIZABETH'S HOSPITAL
CT-7 BUILDING 116
SECOND FLOOR

Sheet No.:
3 OF 3

Sheet Title:

Description:
FLOOR PLAN

# Appendix A

## Six Year Capital Expenditure Forecast

## CONVERSION TO OFFICE USE

**SIX YEAR CAPITAL EXPENDITURE FORECAST**
**Building 116 (CT 7)**
**1100 Alabama Avenue, SE**
**Washington, D.C. 20032**

| | ITEM | EUL | RUL | Unit Cost | Quantity | Unit of Measurement | Priority | Repair / PM | Replace | A/E Serv. | GC Allow. | Immediate | 2010 Year 1 | 2011 Year 2 | 2012 Year 3 | 2013 Year 4 | 2014 Year 5 | 2015 Year 6 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Priority 1 | Priority 2 | | Priority 3 | | | Priority 4 | |
| A. SUBSTRUCTURE | | | | | | | | | | | | | | | | | | | |
| A10 Foundations | | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | | |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| A20 Basement Construction | | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | | |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| | | | | SUBSTRUCTURE TOTALS = | | | | | | | | | | | | | | | $0 |
| B. SHELL | | | | | | | | | | | | | | | | | | | |
| B10 Superstructure | | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | | |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| B20 Exterior Closure | | | | | | | | | | | | | | | | | | | |
| 1 | Replace Cracked, Spalled & Separated Mortar at Cast Stone | 20 | 0 | $160.00 | 220 | LF | 2 | | √ | √ | √ | | $35,200 | | | | | | $35,200 |
| 2 | Replace Cracked, Spalled & Separated Mortar / Brick at Exterior Wall | 20 | 0 | $20.00 | 1,030 | SF | 2 | | √ | √ | √ | | $20,600 | | | | | | $20,600 |
| 3 | Replace Failed Trim & Soffits | 10 | 0 | $30.00 | 910 | SF | 2 | | √ | √ | √ | | $27,300 | | | | | | $27,300 |
| 4 | Exterior Repainting (Trim, Lintels, Soffits) | 7 | 0 | $13.00 | 4,190 | SF | 2 | √ | | √ | √ | | $54,470 | | | | | | $54,470 |
| 5 | Refurbish Windows (See Text) | 50 | 0 | $91.00 | 4,607 | SF | 2 | √ | | √ | √ | | $419,237 | | | | | | $419,237 |
| 6 | Replace Enclosure Screens at Porches | 50 | 0 | $50.00 | 1,778 | SF | 2 | | √ | √ | √ | | $88,900 | | | | | | $88,900 |
| 7 | Replace Exterior Doors | 20 | 0 | $1,500.00 | 12 | EA | 2 | | √ | √ | √ | | $18,000 | | | | | | $18,000 |
| | | | | | | | | | | | | | | | | | | | |
| | A/E Consulting Services (A/E Serv.) - 10% | N/A | N/A | 10.00% | N/A | Percent | 2 | Applicable to all items above | | | | | $66,371 | | | | | | $66,371 |
| | General Contractor OH & Supervision Allow. - 45% | N/A | N/A | 45.00% | N/A | Percent | 2 | Applicable to all items above | | | | | $298,668 | | | | | | $298,668 |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $1,028,746 |
| B30 Roofing | | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | | |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| | | | | SHELL TOTALS = | | | | | | | | | | | | | | | $1,028,746 |
| C. INTERIORS | | | | | | | | | | | | | | | | | | | |
| 1 | Interior Demolition (Create Clear Floor Plate) | N/A | 0 | $6.00 | 41,317 | SF | 2 | | √ | √ | √ | | $247,902 | | | | | | $247,902 |
| 2 | Interior Reconstruction (Including Finishes) | N/A | 0 | $52.00 | 41,317 | SF | 2 | | √ | √ | √ | | $2,148,484 | | | | | | $2,148,484 |
| | | | | | | | | | | | | | | | | | | | |
| | A/E Consulting Services (A/E Serv.) - 10% | N/A | N/A | 10.00% | N/A | Percent | 2 | Applicable to items 1 & 2 above | | | | | $239,639 | | | | | | $239,639 |
| | General Contractor OH & Supervision Allow. - 45% | N/A | N/A | 45.00% | N/A | Percent | 2 | Applicable to items 1 & 2 above | | | | | $1,078,374 | | | | | | $1,078,374 |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $3,714,398 |
| | | | | INTERIORS TOTALS = | | | | | | | | | | | | | | | $3,714,398 |

**SIX YEAR CAPITAL EXPENDITURE FORECAST**
**Building 116 (CT 7)**
**1100 Alabama Avenue, SE**
**Washington, D.C. 20032**

## CONVERSION TO OFFICE USE

| | ITEM | EUL | RUL | Unit Cost | Quantity | Unit of Measurement | Priority | Repair / PM | Replace | A/E Serv. | GC Allow. | Immediate | 2010 Year 1 | 2011 Year 2 | 2012 Year 3 | 2013 Year 4 | 2014 Year 5 | 2015 Year 6 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Priority 1 | Priority 2 | Priority 3 | | | | Priority 4 | |
| D. SERVICES | | | | | | | | | | | | | | | | | | | |
| D10 Conveying | | | | | | | | | | | | | | | | | | | |
| 1 | Modernize Connector Elevator | 20 | 0 | $200,000.00 | 1 | EA | 2 | | √ | √ | √ | | $200,000 | | | | | | $200,000 |
| 2 | Install Elevator | 30 | 0 | $400,000.00 | 1 | EA | 2 | | √ | √ | √ | | $400,000 | | | | | | $400,000 |
| | | | | | | | | | | | | | | | | | | | |
| | A/E Consulting Services (A/E Serv.) - 10% | N/A | N/A | 10.00% | N/A | Percent | 2 | Applicable to items 1 & 2 above | | | | | $60,000 | | | | | | $60,000 |
| | General Contractor OH & Supervision Allow. - 45% | N/A | N/A | 45.00% | N/A | Percent | 2 | Applicable to items 1 & 2 above | | | | | $270,000 | | | | | | $270,000 |
| | | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | $930,000 |
| D20 Plumbing | | | | | | | | | | | | | | | | | | | |
| 1 | Replace Domestic Hot & Cold Water System | N/A | 0 | $2.50 | 41,317 | SF | 2 | | √ | √ | √ | | $103,293 | | | | | | $103,293 |
| 2 | Replace Sanitary & Vent Piping System | N/A | 0 | $2.20 | 41,317 | SF | 2 | | √ | √ | √ | | $90,897 | | | | | | $90,897 |
| | | | | | | | | | | | | | | | | | | | |
| | A/E Consulting Services (A/E Serv.) - 10% | N/A | N/A | 10.00% | N/A | Percent | 2 | Applicable to all items above | | | | | $19,419 | | | | | | $19,419 |
| | General Contractor OH & Supervision Allow. - 45% | N/A | N/A | 45.00% | N/A | Percent | 2 | Applicable to all items above | | | | | $87,385 | | | | | | $87,385 |
| | | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | $300,994 |
| D30 HVAC | | | | | | | | | | | | | | | | | | | |
| 1 | Install Replacement Central Heating & Cooling System | 30 | N/A | $29.00 | 41,317 | SF | 2 | | √ | √ | √ | | $1,198,193 | | | | | | $1,198,193 |
| 2 | Remove Existing HVAC Equipment | 30 | N/A | $2.30 | 41,317 | SF | 2 | | √ | √ | √ | | $95,029 | | | | | | $95,029 |
| | | | | | | | | | | | | | | | | | | | |
| | A/E Consulting Services (A/E Serv.) - 10% | N/A | N/A | 10.00% | N/A | Percent | 2 | Applicable to items 1 & 2 above | | | | | $129,322 | | | | | | $129,322 |
| | General Contractor OH & Supervision Allow. - 45% | N/A | N/A | 45.00% | N/A | Percent | 2 | Applicable to items 1 & 2 above | | | | | $581,950 | | | | | | $581,950 |
| | | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | $2,004,494 |
| D40 Fire Protection | | | | | | | | | | | | | | | | | | | |
| 1 | Install Fire Suppression Sprinkler System | 50 | 0 | $4.00 | 41,317 | SF | 2 | | | √ | √ | | $165,268 | | | | | | $165,268 |
| | | | | | | | | | | | | | | | | | | | |
| | A/E Consulting Services (A/E Serv.) - 10% | N/A | N/A | 10.00% | N/A | Percent | 2 | Applicable to item 1 above | | | | | $16,527 | | | | | | $16,527 |
| | General Contractor OH & Supervision Allow. - 45% | N/A | N/A | 45.00% | N/A | Percent | 2 | Applicable to item 1 above | | | | | $74,371 | | | | | | $74,371 |
| | | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | $256,165 |
| D50 Electrical | | | | | | | | | | | | | | | | | | | |
| 1 | Replace & Upgrade Electrical, Fire & Telecommunication Systems | | | | | | | | | | | | | | | | | | |
| a | Re-Rout Electrical Service | 30 | 0 | $100,000.00 | 1 | LS | 2 | | √ | √ | √ | | $100,000 | | | | | | $100,000 |
| b | Establish New Primary Electrical Service | 30 | 0 | $75,000.00 | 1 | LS | 2 | | √ | √ | √ | | $75,000 | | | | | | $75,000 |
| c | Installation of Fire, Data & Emergency Power Systems | 30 | 0 | $1,550,000.00 | 1 | LS | 2 | | √ | √ | √ | | $1,550,000 | | | | | | $1,550,000 |
| | | | | | | | | | | | | | | | | | | | |
| | A/E Consulting Services (A/E Serv.) - 10% | N/A | N/A | 10.00% | N/A | Percent | 2 | Applicable to item 1 above | | | | | $172,500 | | | | | | $172,500 |
| | General Contractor OH & Supervision Allow. - 45% | N/A | N/A | 45.00% | N/A | Percent | 2 | Applicable to item 1 above | | | | | $776,250 | | | | | | $776,250 |
| | | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | $2,673,750 |
| | | | | | SERVICES TOTALS = | | | | | | | | | | | | | | $6,165,404 |

**SIX YEAR CAPITAL EXPENDITURE FORECAST**
**Building 116 (CT 7)**
**1100 Alabama Avenue, SE**
**Washington, D.C. 20032**

## CONVERSION TO OFFICE USE

| ITEM | EUL | RUL | Unit Cost | Quantity | Unit of Measurement | Priority | Repair / PM | Replace | A/E Serv. | GC Allow. | Immediate | 2010 Year 1 | 2011 Year 2 | 2012 Year 3 | 2013 Year 4 | 2014 Year 5 | 2015 Year 6 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Priority 1 | Priority 2 | Priority 3 | | | | Priority 4 | |
| E. FURNISHINGS & EQUIPMENT | | | | | | | | | | | | | | | | | | |
| E10 Equipment | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| E20 Furnishings | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| | | | FURNISHINGS & EQUIPMENT TOTALS = | | | | | | | | | | | | | | | $0 |
| F. SPECIAL CONSTRUCTION & DEMOLITION | | | | | | | | | | | | | | | | | | |
| F10 Special Construction | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | SPECIAL CONSTRUCTION & DEMOLITION TOTALS = | | | | | | | | | | | | | | | $0 |
| G. BUILDING SITEWORK | | | | | | | | | | | | | | | | | | |
| G10 Site Systems | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| | | | BUILDING SITEWORK TOTALS = | | | | | | | | | | | | | | | $0 |
| H. ACCESSIBILITY | | | | | | | | | | | | | | | | | | |
| H10 Site Improvements | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| | | | ACCESSIBILITY TOTALS = | | | | | | | | | | | | | | | $0 |
| I. HAZARDOUS MATERIALS | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| | | | HAZARDOUS MATERIALS TOTALS = | | | | | | | | | | | | | | | $0 |
| J. ENVIRONMENTAL ANALYSIS | | | | | | | | | | | | | | | | | | |
| J10 LEED Analysis | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| J20 Green Roof Feasibility | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| J30 Energy Efficiency | | | | | | | | | | | | | | | | | | |
| (Included Elsewhere) | | | | | | | | | | | | | | | | | | $0 |
| | | | | | | | | | | | | | | | | | | |
| | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| | | | ENVIRONMENTAL ANALYSIS TOTALS = | | | | | | | | | | | | | | | $0 |
| TOTALS | | | | | | | | | | | $0 | $10,908,548 | $0 | $0 | $0 | $0 | $0 | $10,908,548 |
| TOTALS (w/ Inflation @ 4%) | | | | | | | | | | | $0 | $10,908,548 | $0 | $0 | $0 | $0 | $0 | $10,908,548 |

# Appendix B

## Six Year Maintenance Expenditure Forecast

## CONVERSION TO OFFICE USE

**SIX YEAR MAINTENANCE FORECAST**
**Building 116 (CT 7)**
**1100 Alabama Avenue, SE**
**Washington, D.C. 20032**

| | ITEM | EUL | RUL | Unit Cost | Quantity | Unit of Measurement | Priority | Repair / PM | Replace | A/E Serv. | GC Allow. | Immediate | 2010 Year 1 | 2011 Year 2 | 2012 Year 3 | 2013 Year 4 | 2014 Year 5 | 2015 Year 6 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Priority 1 | Priority 2 | Priority 3 | | | | Priority 4 | |
| A. SUBSTRUCTURE | | | | | | | | | | | | | | | | | | | |
| A10 Foundations | | | | | | | | | | | | | | | | | | | |
| | No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| A20 Basement Construction | | | | | | | | | | | | | | | | | | | |
| | No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| | | | | SUBSTRUCTURE TOTALS = | | | | | | | | | | | | | | | $0 |
| B. SHELL | | | | | | | | | | | | | | | | | | | |
| B10 Superstructure | | | | | | | | | | | | | | | | | | | |
| 1 | Evaluate Loading Capacity of Structural System | N/A | 2 | $150.00 | 160 | Hours | 2 | | | √ | | | $24,000 | | | | | | $24,000 |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $24,000 |
| B20 Exterior Closure | | | | | | | | | | | | | | | | | | | |
| | No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| B30 Roofing | | | | | | | | | | | | | | | | | | | |
| 1 | Roof Life-Extension Maintenance | N/A | N/A | $5,000.00 | 1 | LS | varies | √ | | | | | $5,000 | $5,000 | $5,000 | $5,000 | $5,000 | $5,000 | $30,000 |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $30,000 |
| | | | | SHELL TOTALS = | | | | | | | | | | | | | | | $54,000 |
| C. INTERIORS | | | | | | | | | | | | | | | | | | | |
| | No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| | | | | INTERIORS TOTALS = | | | | | | | | | | | | | | | $0 |

**SIX YEAR MAINTENANCE FORECAST**
**Building 116 (CT 7)**
**1100 Alabama Avenue, SE**
**Washington, D.C. 20032**

**CONVERSION TO OFFICE USE**

| ITEM | EUL | RUL | Unit Cost | Quantity | Unit of Measurement | Priority | Repair / PM | Replace | A/E Serv. | GC Allow. | Immediate | 2010 Year 1 | 2011 Year 2 | 2012 Year 3 | 2013 Year 4 | 2014 Year 5 | 2015 Year 6 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Priority 1 | Priority 2 | Priority 3 | | | | Priority 4 | |
| D. SERVICES | | | | | | | | | | | | | | | | | | |
| D10 Conveying | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $0 |
| D20 Plumbing | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $0 |
| D30 HVAC | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $0 |
| D40 Fire Protection | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $0 |
| D50 Electrical | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $0 |
| SERVICES TOTALS = | | | | | | | | | | | | | | | | | | $0 |
| E. FURNISHINGS & EQUIPMENT | | | | | | | | | | | | | | | | | | |
| E10 Equipment | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| E20 Furnishings | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $0 |
| FURNISHINGS & EQUIPMENT TOTALS = | | | | | | | | | | | | | | | | | | $0 |
| F. SPECIAL CONSTRUCTION & DEMOLITION | | | | | | | | | | | | | | | | | | |
| F10 Special Construction | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| SPECIAL CONSTRUCTION & DEMOLITION TOTALS = | | | | | | | | | | | | | | | | | | $0 |

## CONVERSION TO OFFICE USE

**SIX YEAR MAINTENANCE FORECAST**
**Building 116 (CT 7)**
**1100 Alabama Avenue, SE**
**Washington, D.C. 20032**

| | ITEM | EUL | RUL | Unit Cost | Quantity | Unit of Measurement | Priority | Repair / PM | Replace | A/E Serv. | GC Allow. | Immediate | 2010 Year 1 | 2011 Year 2 | 2012 Year 3 | 2013 Year 4 | 2014 Year 5 | 2015 Year 6 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Priority 1 | Priority 2 | Priority 3 | | | | Priority 4 | |
| G. BUILDING SITEWORK | | | | | | | | | | | | | | | | | | | |
| G10 Site Systems | | | | | | | | | | | | | | | | | | | |
| 1 | Mill & Overlay Pavements | 20 | 0 | $30.00 | 707 | SY | 2 | | √ | | | | $21,210 | | | | | | $21,210 |
| 2 | Replace Failed Concrete Sidewalk Panels | 10 | 0 | $20.00 | 1,165 | SF | 2 | | √ | | | | $23,300 | | | | | | $23,300 |
| 3 | Refurbish Entrance Steps | 20 | 0 | $7,500.00 | 1 | LS | 2 | √ | | | | | $7,500 | | | | | | $7,500 |
| | SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $52,010 |
| | BUILDING SITEWORK TOTALS = | | | | | | | | | | | | | | | | | | $52,010 |
| H. ACCESSIBILITY | | | | | | | | | | | | | | | | | | | |
| H10 Site Improvements | | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | | |
| | SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $0 |
| | BUILDING SITEWORK TOTALS = | | | | | | | | | | | | | | | | | | $0 |
| I. HAZARDOUSE MATERIALS | | | | | | | | | | | | | | | | | | | |
| 1 | Environmental Evaluation | N/A | N/A | $20,000.00 | 1 | LS | 2 | | | √ | | | $20,000 | | | | | | $20,000 |
| | SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $20,000 |
| | ACCESSIBILITY TOTALS = | | | | | | | | | | | | | | | | | | $20,000 |
| J. ACCESSIBILITY | | | | | | | | | | | | | | | | | | | |
| J10 LEED Analysis | | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | | |
| | SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $0 |
| J20 Green Roof Feasibility | | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | | |
| | SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $0 |
| J30 Energy Efficiency | | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | | |
| | SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $0 |
| | ENVIRONMENTAL ANALYSIS TOTALS = | | | | | | | | | | | | | | | | | | $0 |
| TOTALS | | | | | | | | | | | | $0 | $101,010 | $5,000 | $5,000 | $5,000 | $5,000 | $5,000 | $126,010 |
| TOTALS (w/ inflation @ 4%) | | | | | | | | | | | | $0 | $101,010 | $5,200 | $5,408 | $5,624 | $5,849 | $6,083 | $129,175 |

**Total Expenditures (current $)** $126,010

# Appendix C
## Photographs

Photograph Number 1

Missing window at basement

Photograph Number 2

Rear elevation

Photograph Number 3

Crawl space showing underside of structural floor system

Photograph Number 4

Underside of structural floor system

Photograph Number 5

Structural slab at attic

Photograph Number 6

Wood-framed roof structure

Photograph Number 7

Brick and mortar in good condition (typical)

Photograph Number 8

Wood-framed roof system

Photograph Number 9

Wood-framed roof system


Photograph Number 10

Front elevation

Photograph Number 11

Front elevation

Photograph Number 12

Corner detailing (front elevation).
Note also soffit overhang detail

Photograph Number 13

Overview of front elevation showing general configuration and porch screens

Photograph Number 14

Side elevation

Photograph Number 15

Side elevation

Photograph Number 16

Rotted wood at soffit

Photograph Number 17

Spalled cast stone

Photograph Number 18

Window grating


Photograph Number 19

Typical windows

Photograph Number 20

Corrosion of grating at window system

Photograph Number 21

Interior view of window system

Photograph Number 22

Broken roof tiles at grade

Photograph Number 23

Porch screens

Photograph Number 24

Utility tunnel

Photograph Number 25

Surface of utility tunnel

Photograph Number 26

Failed mortar at cast stone band

Photograph Number 27

Steel fastener at cast stone band

Photograph Number 28

Stepped cracks at outer wall of utility tunnel

Photograph Number 29

Peeled paint and rotted boards at soffit overhang

Photograph Number 30

Peeled paint at soffit trim

Photograph Number 31

Peeled paint at rake trim

Photograph Number 32

Severely corroded steel lintel serving exterior wall to utility tunnel

Photograph Number 33

Failed urethane caulk at juncture between utility tunnel and building

Photograph Number 34

Failed urethane caulk at outer perimeter of window system

Photograph Number 35

Failed caulk at window

Photograph Number 36

Peeled paint at window

Photograph Number 37

General deterioration of porch screens

Photograph Number 38

Expansive corrosion of framing member at porch screens

Photograph Number 39

Corrosion of steel panel doors at mechanical room

Photograph Number 40

Front elevation


Photograph Number 41

Typical interior hallway

Photograph Number 42

Day room

Photograph Number 43

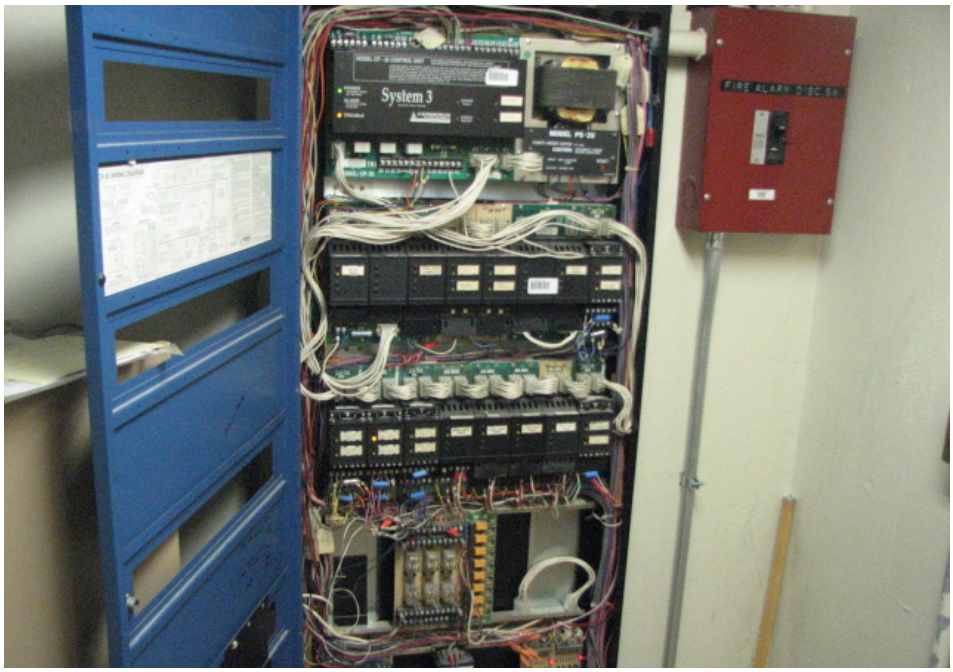
Porch


Photograph Number 44

Basement

Photograph Number 45

Stair




Photograph Number 46

Fire alarm control panel


Photograph Number 47

Entrance steps

Photograph Number 48

Failed concrete at underside of entrance steps

Photograph Number 49

Corroded reinforcing steel at underside of entrance steps

Photograph Number 50

Peeled paint and corrosion at railings to entrance steps

Photograph Number 51

Concrete steps

# Appendix D

## Inventory & Checklist

Project Name/Address: CT-7

Mechanical Equipment List

| Equipment Type/Use | Model Name/No. | Serial No. | Manufacturer's Name | Capacity/Rating | Installation Date | Comments |
|---|---|---|---|---|---|---|
| Air Handlers (2) | CCMB41E0R015 | K83J07743 | Trane | Not Available | 1983 | Mechanical Rooms A and B |
| Ingersoll Rand Compressor | T30 | 6016552 | Ingersoll Rand | Not Available | N/A | Mechanical Room A |
| Refrigerated Air Dryer | 5U285 | 2452583-016 | Speedaire | Not Available | 1983 | Mechanical Room A |
| Condensate Pumps (4) | Not Available | Not Available | Not Available | Not Available | Not Available | Mechanical Rooms A and B |
| Pneumatic Controller (4) | Not Available | Not Available | Johnson Controls | Not Available | Not Available | Mechanical Rooms A and B |
| Return Air Fans (2) | CAF830B11BA | K83K05914 | Trane | Not Available | 1983 | Mechanical Rooms A and B |
| Supply Air Fans (2) | CAF830B11BA | K83K05906 | Trane | Not Available | 1983 | Mechanical Rooms A and B |
| Ingersoll Rand Compressor | T30 | 6016552 | Ingersoll Rand | Not Available | N/A | Mechanical Room A |
| Refrigerated Air Dryer | 5U285 | 2452583-016 | Speedaire | Not Available | 1983 | Mechanical Room A |
| Chilled Water Pumps (2) | Not Available | Not Available | Not Available | Not Available | Not Available | Mechanical Room A |
| Hot Water Pumps (2) | Not Available | Not Available | Not Available | Not Available | Not Available | Mechanical Room B |
| Exhaust Fans (2) | EFMA | Not Available | Not Available | Not Available | Not Available | Mechanical Rooms A and B |
| Unit Heaters (2) | UHSA100 | D83A00108 | Trane | Not Available | 1983 | Mechanical Rooms A and B |
| Sump Pumps (3) | Not Available | Not Available | Not Available | Not Available | Not Available | Mechanical Rooms A and B |
| Fan Coil Convectors (2) | Not Available | Not Available | Not Available | Not Available | Not Available | Stairwells |
| Hot Water Convectors (151) | Not Available | Not Available | Not Available | Not Available | Not Available | All areas not accessible |

Project Name/Address: CT 7

Electrical Equipment List

| Equipment Type/Use | Model Name/No. | Serial No. | Manufacturer's Name | Capacity/Rating | Installation Date | Comments |
|---|---|---|---|---|---|---|
| Panelboard MDPH2 | Not Available | Not Available | Federal Pacific | 277/480V, 3PH, 4W / 400A | Not Available | Mechanical Room A |
| Panelboard MDPH2A | Not Available | Not Available | Federal Pacific | 277/480V, 3PH, 4W / 400A | Not Available | Mechanical Room B |
| Pump Controllers (2) | Not Available | Not Available | Messco Controls | Not Available | Not Available | Mechanical Rooms A and B |
| Transfer Switch | DT5336 | Not Available | Federal Pacific | 30 A | Not Available | Mechanical Room B |
| Bypass Switch (4) | Not Available | Not Available | ABB | Not Available | Not Available | Mechanical Rooms A and B |
| Motor Controllers | Not Available | Not Available | GE | Not Available | Not Available | Mechanical Rooms A and B |
| Transformer | 9T51B0013 | Not Available | GE | 3 KVA | Not Available | Mechanical Room B |
| Data Center Battery (2) | 114981 | Not Available | Lucent | Not Available | Not Available | First and Second Floors |
| Data Center Power Unit (2) | 1145B1 | Not Available | Lucent | Not Available | Not Available | First and second Floor |
| Panelboard (6) | Not Available | Not Available | Federal Pacific | 120/208V, 3PH, 4W / 225A | Not Available | Basement, First Floor Second Floor |
| Power Extender | 4009 N.A.C. | Not Available | Simplex | Not Available | Not Available | Second floor corridor |
| Amplifier | TPU-100B | Not Available | Berger | 100 Watt | Not Available | First floor closet |
| Telephone Panel | 1890ECT1NSC-100 | Not Available | Circa Telecom | Not Available | Not Available | Basement telephone closet |

Building 116 (CT7)

CHECKLIST GUIDE

| System | Detail | Yes / No | Comment |
|---|---|---|---|
| Foundation | Settlement, alignment changes or cracks | No | |
| | Moisture penetration | No | |
| | Surface material deterioration | No | |
| | Openings deterioration | No | |
| | | | |
| Basement | Cracking or arching | No | |
| | Wall deterioration/seepage | No | |
| | Inadequate ventilation | No | |
| | | | |
| Superstructure | Overall alignment | N/A | Good |
| | Deflection | No | |
| | Surface condition – cracks | No | |
| | Scaling, spalls, & pop-outs | No | |
| | Stains | No | |
| | Exposed reinforcing | No | |
| | Type | N/A | Conventionally reinforced concrete, steel and load-bearing masonry |
| | Loading capacity | | See Text |
| | | | |
| Building Exterior | Overall appearance | N/A | Fair/Good |
| | Paint or surface treatment | N/A | Poor |
| | Caulking | N/A | Poor |
| | Windows and doors fittings | N/A | Poor |
| | Flashing conditions | N/A | Good |
| | Hardware conditions | N/A | Poor |
| | Material integrity | N/A | Fair / Poor |
| | Cracks | Yes | Minor |
| | Evidence of moisture | No | |
| | Construction joints | Yes | Adequate spacing |
| | Pointing of brick and stone works | N/A | Poor |
| | Paving (walks and steps) | N/A | Generally Poor |
| | Type of paving | N/A | Concrete |
| | Handicap accessibility | No | Compliant |
| | Railings | Yes | Painted steel pipe railings and iron |
| | Exterior lighting | Yes | Wall-mounted |
| | Peeling paint | Yes | N/A |
| | Stains | Yes | Clean in conjunction with tuckpointing |
| | Discoloration | No | |
| | Roof ventilators | Yes, Passive | Adequate |
| Roofing | Water tightness (evidence of leaks) | Water tight | |
| | Standing water | No | |
| | Roofing surface (blisters, wrinkles, cracks, holes, tears, alligatoring, fish mouths, ballast) | No | |

Building 116 (CT7)

CHECKLIST GUIDE

| System | Detail | Yes / No | Comment |
|---|---|---|---|
| | Insulation | Yes | Fiberglass batts |
| | Flashing (deterioration, holes or damages, open joints) | Good Condition | |
| | Drainage (alignment, corrosion) | Some deterioration | Fair |
| | Parapets | | None |
| | Downspouts & gutters | Yes | Fair |
| | Type of roofing | | Pan tiles over hip system |
| | Drains, downspouts – Nos. & size | | See Text |
| | Loading limits | | See Text |
| | Roof Top Equipment | None | |
| | | | |
| Building Interior | Floors, walls and ceilings (stains, holes, tears, etc.) | Poor | |
| | Restrooms | Yes | 9 provided; poor condition |
| | Stairwells | Yes | 3 provided; adequate |
| | Surface damage (missing tiles and floor coverings) | Yes | |
| | | | |
| Site | Paving (walks and driveways) | Yes | Cast-in-place concrete in poor condition |
| | Fountains | No | |
| | Parking (number of spaces & areas) | | None directly assigned |
| | Fences | No | |
| | Transformers | Yes | Utility company owned transformer(s) in underground vault |
| | Underground storage tank | No | |
| | | | |
| Mechanical / Plumbing | Leaks, dripping, running faucets and valves | No | System disconnected |
| | Pipe insulation | Yes | Fiberglass and probably ACM in poor condition |
| | Hangers, supports and clamps | Yes | Steel in good condition and adequately spaced |
| | Drain and waste connections | Yes | Cast iron no-hub in good condition |
| | Adequate flow | Unknown | System disconnected |
| | | | |
| Mechanical / HVAC | Condition of motors, fans, drive assembly and pumps – rust and corrosion | | Poor |
| | Wiring and electrical controls | | Poor |
| | Thermal insulation | | Poor |
| | Air cooled condensers | | See Text |
| | Compressors | | See Text |
| | Air distributors | | See Text |
| | Supply and return ducts – | | See Text |

Building 116 (CT7)

CHECKLIST GUIDE

| System | Detail | Yes / No | Comment |
|---|---|---|---|
| | corrosion, cracks and air leaks | | |
| | Burner assembly | | See Text |
| | Dampers, louvers and grilles | | See Text |
| | Heating and cooling capacity | | See Text |
| | Exhaust system | | See Text |
| | Air intake system | | See Text |
| | No. of Window Air Conditioning Units | | 3 |
| | | | |
| Electrical Service and Distribution | Transformer arching or burning | No | System disconnected |
| | Exposed wiring | No | |
| | Missing breakers | Yes | |
| | Panel – marked | Yes | |
| | Incoming conduits – marked | Yes | |
| | Panel schedule | No | |
| | Emergency generator | No | |
| | Auto start and switch over | No | |
| | Cooling and exhaust | No | |
| | Exit signs | Yes | See Text |
| | Emergency lighting | Yes | See Text |
| | Public address system | Yes | Not functional |
| | | | |
| Conveying System (elevators and escalators) | Overall appearance | | Fair |
| | Door operation | | Fair |
| | Control systems | | Fair |
| | Noise | | Fair |
| | Code compliance | | No (See Text) |
| | Handicap access | | Yes |
| | Carriage lighting | | Yes |
| | Signage | | Yes |
| | Floor alignment | | Yes, Good |
| | | | |
| Fire Resistive Requirements | Exterior bearing walls | | 2 hours |
| | Interior bearing walls | | 1 – 2 hours |
| | Exterior non bearing walls | | 2 hours |
| | Structural frame | | 3 hours |
| | Permanent partitions | | 1 hour |
| | Shaft enclosures | | 2 hours |
| | Floor & ceiling / floor | | 2 hours |
| | Exterior doors & windows | | 1 hour |
| | Stairway construction | | 2 hours |
| | | | |
| Fire Alarm Required | Provided | Yes | |
| | | | |
| Draft Stops | Provided | Yes | |
| | | | |
| Doors (Analyze doors for | Number | | Exterior – See Text |

Building 116 (CT7)

CHECKLIST GUIDE

| System | Detail | Yes / No | Comment |
|---|---|---|---|
| ratings in area separations, occupancy separations, and rated exitways) | | | 71 (interior) |
| | Size | | See Text |
| | Sealant – Type and LF | | See Text |
| | Glazing | Yes | Single glazed |
| | Location | | Front, Rear and Side Elevations |
| | Type | | Steel panel hollow core; steel frames |
| | Hardware | | Lever, cylindrical, push/pulls |
| | | | |
| Windows | Number | | See Text |
| | Size | | See Text |
| | Sealant – Type and LF | | See Text |
| | Glazing | | Single glazed |
| | Location | | Front, Rear and Side Elevations |
| | Type | | See Text |
| | Hardware | | Integrated steel hinges and latches |
| | | | |
| Access Control | Card Reader | No | |
| | Type of access control | | Locks |
| | X-Ray machine | No | |
| | Interior Cameras | No | |
| | Exterior Cameras, Location | No | |
| | Intrusion Detection Systems | No | |
| | Emergency Call Boxes | No | |
| | | | |
| Fire Stops | Provided | Yes | Some breached |
| | | | |
| Exits (From Building) | Number Required | | 3 (assuming change-of-use) |
| | Number Provided | | 4 |
| | Distance Required | | 80' max. (assuming change-of-use) |
| | Distance Provided | | 80' max. |
| | Width Required | | 36" (assuming change-of-use) |
| | Width Provided | | 36" |
| | | | |
| Fire Extinguishers | Number Provided | | 0 |
| | Number Required | | 11 (assuming change-of-use) |
| | | | |
| Automatic Fire Suppression System | Provided | No | Partial |
| | Required | Yes | Required assuming change-of-use |
| | | | |
| ADA REQUIREMENTS | | | |
| Public Access | Accessible Parking | No | None |

Building 116 (CT7)

CHECKLIST GUIDE

| System | Detail | Yes / No | Comment |
|---|---|---|---|
| | Floor or Ground Surfaces | | Compliant resilient vinyl tile |
| | Curbs / ramps | No | |
| | Elevators | No | |
| | Stairways including Treads, Risers, Nosing and Handrails | | Painted treads have a depth of 12”<br><br>Risers are exposed steel with a height of 7”<br><br>Nosings project beyond treads<br><br>Handrails are painted steel with a height of 36” and a clear opening sphere of 4” |
| Entry Doors and Doorways | 32” Clear opening | Yes | |
| | Clearances | | Adequate |
| | ½” Maximum height threshold | Yes | Compliant |
| | Door hardware (lever type) | Yes | Compliant lever-type |
| | Door – opening force | | Complaint |
| | | | |
| Toilet Rooms | Wheelchair Turning Space | | Compliant |
| | Water Closets & Toilet Compartments Including Location, Clearances, Height, Size & Accessories | | Non compliant |
| | Grab Bars (42” long on side wall, 24” long on back wall) | No | Non compliant |
| | Urinals (17” max) | Yes | Compliant |
| | Lavatories and Sinks (34” Max. high) | No | Non compliant |
| | | | |
| Drinking Fountains | Clearances | Yes | Non compliant |
| | Spout Height (36”) | No | Non compliant |
| | | | |
| Alarms | Audible Alarms | Yes | Non compliant |
| | Visual Alarms | Yes | Non compliant |
| | | | |
| Signage | Signs | Yes | Non compliant |

# Appendix E

## Scope of Services, Document Review & Exclusions

FAITHFUL GOULD

# SCOPE OF SERVICES & DOCUMENT REVIEW

Faithful+Gould was requested to complete a Facility Condition Assessment and Space Utilization Study of the site and site improvements of the subject Property. This report was completed with the principal intention of identifying current conditions, recommending corrective actions and developing an occupancy profile to indicate current utilization of occupiable space.

The scope of services for the Facility Condition Assessment included performing a visual assessment of the interior, exterior and site components of the subject Property.

The primary purpose of the Facility Condition Assessment was to identify visually apparent deficiencies in the building and site and to determine the general extent of capital and maintenance projects required to facilitate continued use of the building within its current use type. The evaluation included site visits to observe the building and site systems, interviewing available building management and maintenance personnel, and reviewing available maintenance systems, design and construction documents and plans, and public records.

The primary purpose of the Space Utilization Study was to provide an occupancy profile for the facility to indicate current utilization of occupiable space. This effort included providing an inventory of furnishings and occupants, and producing dimensioned floor plans of each occupied floor.

The Facility Condition Assessment was conducted in general accordance with industry standards and the American Society for Testing and Materials (ASTM) Standard E 2018-08 Standard Guide for Property Condition Assessment: Baseline Property Condition Assessment Process.

The Space Utilization Study was conducted in general accordance with industry standards and standards produced by the General Service Administration's Public Buildings Service and as contained within the ANSI/BOMA Z65.1-1996 Standard Method for Measuring Floor Area in Office Buildings.

## Facility Condition Assessment

We performed a visual non-destructive assessment of the interior, exterior and site components of the Property, including the following major components and systems:

1.0 Facility Attributes: During our field evaluation, we collected and verified real estate and certain environmental information in order to prepare an accurate building information system. The information collected included the following:

A. Building address, site location with at least two street references
B. Lot, square and ward numbers
C. Gross square foot area of building and land
D. Assessed building and land values
E. Occupancy status – occupied, vacant or partially occupied
F. Building designation – historic or non-historic
G. Building location – within or not within a historic district
H. Environmental details as provided within OPM supplied checklist

2.0 Condition Assessment: We conducted a condition assessment of the Property. The condition assessment consisted of a detailed on-site evaluation completed to determine or verify and document the condition of all building major systems and components. The condition assessment consisted of the following elements:

A. Collection of Baseline Facilities Data: We conducted a field survey of the Property for the purpose of updating and validating existing architectural floor plans. Updated floor plans are included within the report appendix.

B. Facility Existing Condition Data: We identified the facility status data (i.e. age, historical status, construction type, square footage, materials, user/tenants, and functional areas such as offices, mechanical / electrical rooms, etc.); architectural floor plans; and site plan/general development map data (surface man-made site features, and real estate boundary maps).

C. Condition Assessment Survey: As part of the condition assessment survey we:

i. Provided a description of systems along with manufacturer's name for each major piece of equipment and the estimate age.

ii. Identified the current condition of the facilities and their components. This included a description of the deficiencies indicating what the deficiency is, how much it is, and where it exists.

iii. We provided a description of the recommended corrective measures, the associated cost, the remaining service life of the building component or system if the deficiency is left uncorrected. We specifically included quantitative information on recommended work to include opinions of cost and recommended date of accomplishment. This information was presented within the OPM supplied cost spreadsheets.

iv. We prioritized the criticality of necessary repair, renovation and or replacement with estimated cost forecast by the projected year.

v. We furnished the survey findings in the format supplied to us by OPM.

vi. We quantified deferred maintenance and furnish estimated costs within the format supplied to us by OPM.

vii. We provided an annual preventative maintenance schedule for the installed equipment.

2.1 Drawing and Maintenance Review: We reviewed any available construction documents (plans, specifications, etc.) and maintenance and repair logs prior to visually assessing the buildings. In addition, we interviewed available maintenance personnel to determine the maintenance / repair history, and know defects in each building.

2.2 Included Components: We surveyed the physical components and systems of the identified facilities. These will include the following for:

2.2.1 Substructure: We visually evaluated the condition of the foundation systems, slab-on-grade, basement excavation and walls, and other applicable substructure elements. We evaluated for signs of distress (cracking, displacement, insect infiltration etc.) and have documented and photographed our findings.

2.2.2 Core and Shell: We visually evaluated the condition of the superstructure (floors, bearing walls, columns, beams, roofs and related structures): exterior closure (exterior walls, windows and doors): and roofing systems. The evaluation included assessment of the accessible shell components and ancillary elements for signs of distress and documentation and photographing of our findings. This included cracking, displacement, and connection adequacy, continuity of flashing and seals, and evidence of other types of distress. We also checked for flashing and connections for proper drainage on walls and for the condition and proper placement of expansion joints. When assessing the roofing, we accessed the roofs to visually observe the condition of the system and any accessories and details to include flashings and penetrations. We also documented existing warranties, replacement costs and remaining useful life.

2.2.3 Interiors: We visually evaluated the interior construction (interior partitions, doors and specialties such as toilet accessories, lockers, storage shelving, etc.); stairway and finishes; and interior finishes (paint and other wall finishes, flooring and interior ceiling finishes and systems). The evaluation included documenting and photographing the condition of the interior finishes.

2.2.4 Services: We visually evaluated the condition of the conveyor systems (elevators, and other vertical transportation and conveying systems), plumbing systems (fixtures, domestic water distribution, sanitary waste, rain water drainage and special plumbing systems such as gasoline dispending, compressed air, etc.); HVAC Systems to include heat generation, rejection, distribution and transfer systems; HVAC controls and instrumentations and other HVAC support elements; Fire detection and suppression systems (alarm systems, monitoring systems, sprinkler systems, standpipe and hose systems, pumps, fire protection specialties, and special fire suppression systems); Electrical Systems (service and distribution, feeder type), lighting and branch wiring, communications and security systems, emergency generators, UPS systems, electrical controls and instrumentation, service points, meters and capacities.

For each item of service equipment we visually evaluated the conditions and code compliance of the service and photographed and documented our findings. For the conveying systems (where provided), we reviewed available maintenance records and reports on the equipment and evaluate the performance and anticipated service life of the systems. For plumbing, HVAC and electrical systems, we observed the age, condition and adequacy of the capacity and status of maintenance of these systems and have documented their condition, deficiencies and code violations. We also commented on renovations to the system that would prove beneficial to their overall efficiency or performance, and have stated the estimated expected remaining useful service life of each major piece of equipment with and without repair. For fire and life-safety systems, we listed all major components and identified those systems that require upgrades. Findings were supported with photographs.

2.2.5 Equipment and Furnishings: We evaluated the condition of fixed components of the structure and non-moveable furnishings, office or support equipment. Representative examples include security vaults, commercial laundry equipment, fixed audio-visual equipment, parking control equipment, kitchen and food service equipment, fixed casework and seating etc. For each applicable piece of equipment or furnishing that

we visually evaluated, we documented and photographed conditions, and produced a tabulated inventory of the equipment to include rating / capacity, make and manufacturer, year of manufacture, and location.

2.2.6 Other Building Construction: We visually evaluated items of special construction and systems (i.e. special security systems, incinerators, kennels, storage tanks, building automation systems, special purpose rooms etc.).

2.2.7 Building Site Improvements: We evaluated the condition of site improvements to include grading and drainage, slope stabilization, protection and erosion control; roadways and parking lots (pavement, curb, gutter, steps etc.); site development (fences and gates, recreational facilities, exterior furniture, bridges, flag poles, exterior signage etc.); and landscaping (planting, irrigation systems, etc.). For each element we visually evaluated, photographed and documented our findings. For grading and drainage, we observed the site systems for removal of storm water, and identified any areas that appear under-capacity or distressed. We also evaluated the site with respect to flood potential. We reviewed and documented the condition of the pavements, curb and gutter, sidewalks and plazas, retaining walls, fences, signs, landscaping and irrigation systems and will present our finding supplemented with photographs.

2.2.8 Accessibility: We completed an evaluation of the Property to determine compliance with applicable accessibility guidelines. This evaluation included a site review to determine major barriers to access to and into the building, through the building, to restroom facilities, and to other service areas within the building.

2.2.9 Safety / Security: We considered the facility as a whole when completing this evaluation. The evaluation included evaluation of the performance and current ability of lower-level wall / window system with regard to blast shrapnel protection. The evaluation also included a safety and security review to determine and document hazards and needed improvements in all areas of the building and surrounding site.

2.2.10 Access Control: We evaluated, documented and photographed the condition of doors and windows, including hardware and other components; intrusion detection systems; and the access control system. We also identified a pattern in faulty hardware systems and controls, and have conducted a review of potential points of access and determined and documented the effectiveness of the access control system.

2.2.11 Hazardous Materials: We identified for further analysis building components and stored materials suspected of containing hazardous materials such as asbestos, lead, petroleum products etc.

2.2.12 Equipment List: The report includes an equipment list in tabulated form indicating the make, model, manufacturer's name, capacity / rating and installation date of each principal item of contained equipment.

At the completion of our on-site activities we issued this report of Facility Condition Assessment. The report includes detailed descriptions of installed systems, conditions and recommendations. The report also includes expenditures of anticipated capital and maintenance expenditures required over the next six-years. Expenditures are detailed in the year we recommend that they be completed and are prioritized as follows:

- Priority 1 – Critical (immediate) need that may prevent the continued use of the facility or is required to address issues of life safety and/or code compliance;

- Priority 2 – Potentially Critical (one to two years) need addressing system, equipment or component failure that, if not addressed promptly, may prohibit the continued use of the facility;

- Priority 3 – Necessary (but not yet Critical, three to five years) need that, if left unaddressed, will result in a portion or all of the facility to be unfit for continued use;

- Priority 4 – Recommended (six years and greater) need that represents a good practice improvement or action based on the observed conditions or the expected useful life of the component or system.

The scope of services under which the Facility Condition Assessment was completed was visual in nature and not intended to be destructive to the Property to gain access to hidden conditions. We did not perform any destructive testing or uncover or expose any system members. We have documented the type and extent of visually apparent defects in the systems in order to perform the condition assessment.

The scope of services includes only those items specifically indicated. The evaluation does not include any environmental services such as (without limitation) sampling, testing, or evaluation of asbestos, lead-based paint, lead-in-water, indoor air quality, PCB's, radon, mold, or any other potentially hazard materials, air-borne toxins or issues not outlined in the previous scope of services.

Space Utilization

We completed a space utilization survey to consist of providing an occupancy profile for the facility to indicate current utilization of occupiable space. Pertinent information collected will included:

A floor plan for each facility. The floor plan produced indicates interior dimensions and room areas for each floor. We also calculated the gross floor area versus occupiable (net rentable) area of each individual floor. Our determination of gross floor area and occupiable area was governed by the guidelines and methodology established by the General Service Administration's Public Buildings Service and as contained within the ANSI/BOMA Z65.1-1996 Standard Method for Measuring Floor Area in Office Buildings.

- Building core area, including elevator shafts, toilets, storage area, public corridors, and other support areas

- The location of all walls, partitions, doors, and windows

- Location and size of all occupiable areas and the name of current tenant agency

- Personnel density that includes number of personnel, furniture, files, and equipment in occupied space. This includes submission of the information gathered in written, graphic and digital format with floor and building summaries.

Document Review

In addition to the completion of our visual evaluation, Faithful+Gould interviewed the current Building Engineer and reviewed the following documentation:

## Drawings

None

## Other Documents

None.

# Appendix F

Resumes

FAITHFUL GOULD

Report of

# Comprehensive Facilities Condition Assessment & Space Utilization Survey

For

Building 116 (CT7)
Saint Elizabeths Hospital
1100 Alabama Avenue, SE
Washington, D.C 20032


Mayor Adrian M. Fenty

Published November 2010, by
District of Columbia Department of Real Estate Services
Robin-Eve Jasper, Director
Gerick T. Smith, Deputy Director of Construction Division

1725 DUKE STREET SUITE 200 ALEXANDRIA VA 22314 PH 703.684.6550 FX 703.684.8590

November 1, 2010

District of Columbia Capital Construction Services Administration
Department of Real Estate Services
2000 14th Street, NW, Eighth Floor
Washington, D.C. 20009

Attention: Mr. Ajay Kapoor, PE, PMP
Chief of Operations

Reference: Report of Comprehensive Facilities Condition Assessment & Space Utilization Survey
Building 116 (CT7)
Saint Elizabeths Hospital
1100 Alabama Avenue, SE
Washington D.C. 20032
District of Columbia Contract No. DCAM-2008-C-0033-A03

Dear Mr. Kapoor:

Faithful+Gould, Inc. has completed a report of our Comprehensive Facilities Condition Assessment and Space Utilization Survey of Building 116 (CT7) contained within the grounds of the former Saint Elizabeths Hospital located at 1100 Alabama Avenue in Southeast (SE) Washington, D.C. ("the Property").

This report has been prepared under the preface that the Property will be converted to Class B commercial office use in 2010. Under this preface, this report identifies the current condition of the Property, anticipated repairs, replacement and upgrades required to achieve this change-of-use, the costs of these works and anticipated capital and maintenance expenditures required over the next six-years. The report also includes an occupancy profile to include floor plans and summarization of the current utilization of occupiable space.

This report was completed in general accordance with the District of Columbia issued Statement of Works and Faithful+Gould's revised proposal for Facility Condition Assessment as authorized under Purchase Order 335355 by Ms. Diane B. Wooden of the District of Columbia Contract and Procurement Group on July 20, 2010.

It has been a pleasure working with you on this project, and we look forward to working with you on other projects.

Very Truly Yours,

Richard A. Needler, AIA
Senior Facility Assessor

Benjamin J.M. Dutton, MRICS, MCIOB
Scope Compliance & Technical Review

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# EXECUTIVE SUMMARY

Building 116 contained within the east campus of the former St. Elizabeths Hospital located at 1100 Alabama Avenue in Southeast (SE) Washington D.C. ("the Property") consists of a two-story (plus below grade / walkout basement level) concrete-framed (with load-bearing masonry components) wood-framed former hospital / clinical support building. The building is also known as Continued Treatment (CT) 7 and the A.P. Noyos Division Building 7. The Property most closely resembles construction type IIIB (unprotected). The Property shares its site with other buildings on the 170-acre St. Elizabeths Hospital east campus site bounded primarily by Alabama Avenue SE and Martin Luther King Avenue SE.

The Property was developed in circa 1937, subject to large-scale renovation in 1983 and is designated as a National Historic Landmark and is contained within a local Historic District. The Property contains a measured gross floor area of approximately 41,317 square feet. The Property is served by bus stops located on Alabama Avenue SE and Martin Luther King Avenue SE, and by the Congress Heights metrorail station located at the east perimeter of the St. Elizabeths Hospital east campus.

On July 29, 2010 Mr. Benjamin Dutton, MRICS and Mr. Richard North of Faithful+Gould visited the Property to observe and document the condition of the building and site components. During our site visit, Faithful+Gould was assisted intermittently by Mr. Gilbert Taylor, Director, Facilities and Environment with the District of Columbia Department of Mental Health.

The Property is currently vacant having been vacated by the District of Columbia Department of Mental Health in mid 2010. This report considers that in 2010 the Property will be renovated and re-occupied for Class B Commercial Office use. As such, the purpose of this report is to identify visually apparent deficiencies in the building and directly assignable site systems, determine costs required to facilitate change-of-use / re-occupation, determine capital and maintenance costs required over the next six-years and calculate the Facility Condition Index (FCI) of the Property. Based upon the calculated FCI, the Property is in poor condition with a 0.76 rating reflective of a total Deferred Maintenance expenditure requirement of $11,034,558 over the six-year study period. Refer to the next page for further discussion of the Property's Facility Condition Index.

When considering re-use of the Property, the largest capital expenditures anticipated relate to exterior repainting and trim replacement ($81,770), replacement of failed mortar at the cast stone bands ($55,800), refurbishment of windows and related grills ($419,237), replacement of porch screens ($88,900), demolition and reconstruction of the interior build-out ($2,396,386), installation of an additional elevator and modernization of the connector elevator ($600,000), and replacement and upgrade of the mechanical ($1,293,222), electrical ($1,725,000), plumbing ($194,190) and fire life safety systems ($165,268). The proceeding costs as stated exclude Architectural Engineering fees and General Contractor fees. The cost tables included within Appendix A and B detail the capital and maintenance expenditures required over the next six-years.

# BUILDING 116 – CT 7

## PROPERTY DETAILS

ADDRESS: 1100 ALABAMA AVENUE, SE
WASHINGTON, DC 20032

NEAREST INTERSECTION: ALABAMA AVENUE, SE & MARTIN LUTHER KING, JR. AVENUE, SE

SQUARE: 5868 LOT: 0802 QUAD-WARD: SE-8

HISTORIC DISTRICT: YES ☒ NO ☐

HISTORIC BUILDING: YES ☒ NO ☐

GROSS SQUARE FOOTAGE OF BUILDING: 41,317

GROSS SQUARE FOOTAGE OF LAND: 7,405,170

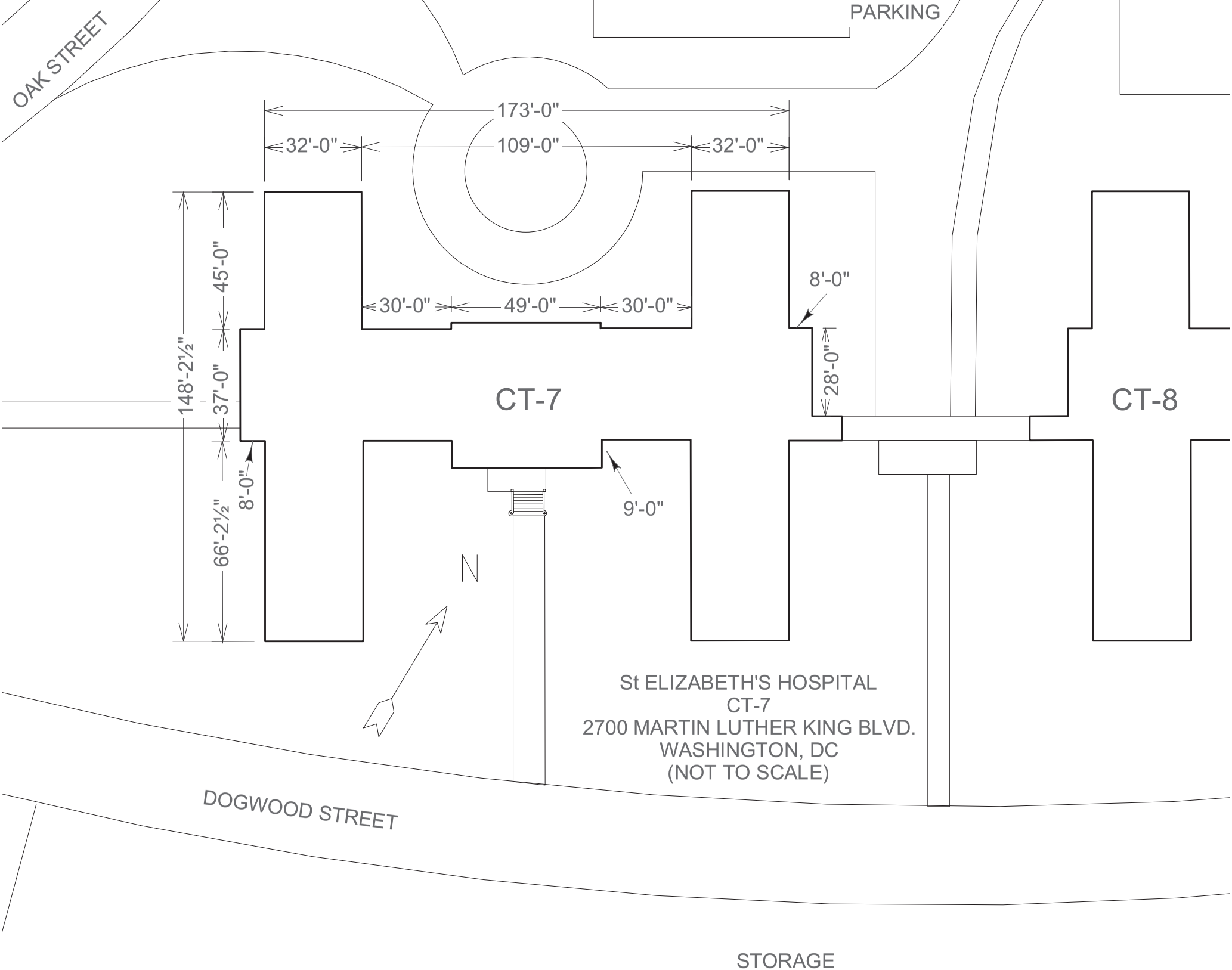
YEAR OF CONSTRUCTION: 1937

NUMBER OF PARKING SPACES: 0

OCCUPANCY STATUS: OCCUPIED ☐ VACANT ☒ PARTIALLY OCCUPIED ☐

ASSESSED BUILDING VALUE: $7,149,570.00

ASSESSED LAND VALUE: $2,357,290.00


PARKING
OAK STREET
173'-0"
32'-0"
109'-0"
32'-0"
45'-0"
148'-2½"
37'-0"
66'-2½"
8'-0"
30'-0"
49'-0"
30'-0"
8'-0"
28'-0"
9'-0"
CT-7
CT-8
N
St ELIZABETH'S HOSPITAL
CT-7
2700 MARTIN LUTHER KING BLVD.
WASHINGTON, DC
(NOT TO SCALE)
DOGWOOD STREET
STORAGE

## USE SCENARIO & REPORT FORMAT

### Scope & Use Scenario

The purpose of this report is to identify visually apparent deficiencies in the building and site systems in order to complete the following specific tasks:

1. Completion of a thorough study of the existing condition of the Property
2. Determination of work required to allow change-of-use / re-occupation to Class B Commercial Office standard
3. Determination of maintenance and upgrade issues
4. Development of a six-year forecast of required capital repair / renewal projects along with estimated costs
5. Cataloging of deferred maintenance items

This report provides an analysis of the Property condition and required capital and maintenance expenditures under the assumption that in 2010 the building will be converted from Hospital / Clinical (I - Institutional Group) to Commercial Office (B - Business Use Group) use and as such will be required to comply with presently enforced District of Columbia codes.

When considering change-of-use issues and the resulting affect upon the Property condition, required repair, replacement and modifications, requirements to comply with grandfathered and presently enforced code requirements, and use dictated expenditures, we have made the following general assumptions:

1. Due to the location and built constraints, under any conversion, the Property would be converted to a Class B Commercial Office building. Class B is considered a mid market commercial office class (as opposed to Class A or Class C ) typically constrained by location, lack of public transportation, lack of on-site or adjacent amenities, mid-level heating, ventilation and air conditioning systems, minimum floor to ceiling heights, and other built constraints. For budgetary and planning purposes, the study further assumes that any conversion would occur in or around 2010. Where possible, when considering projects required as part of the change-of-use, we have attempted to group projects for completion in conjunction with the conversion period.

2. Any change-of-use from I (Institutional) to B (Business) use will result in a loss of grandfathered code status. As a result, the attached expenditure forecasts include the anticipated costs to upgrade the building to achieve compliance with the presently enforced District of Columbia codes.

3. The Property is listed on the National Register of Historic Places and is contained within a Historic District. As a result, any renovations must comply with requirements set by applicable conservation bodies.

4. The Property will be developed to a mid-level specification reflective of the Class B use.

5. The converted building will be subject to the following presently enforced District of Columbia codes:

   - 2000 edition of the International Building Code with 2003 District of Columbia Construction Code Supplement
   - 2000 edition of the International Plumbing Code with 2003 District of Columbia Construction Code Supplement
   - 2000 edition of the International Mechanical Code with 2003 District of Columbia Construction Code Supplement

- 2000 edition of the International Fire Code with 2003 District of Columbia Construction Code Supplement
- 2000 edition of the International Property Management Code with 2003 District of Columbia Construction Code Supplement
- 2000 edition of the International Fuel Code with 2003 District of Columbia Construction Code Supplement
- 2000 edition of the International Energy Code with 2003 District of Columbia Construction Code Supplement
- 1996 edition NFPA National Electrical Code with 2003 District of Columbia Construction Code Supplement

6. The Property will be developed as a stand-alone building and will not share services (i.e. HVAC) with other buildings at the site.

Under this scenario, please consider that although the report attempts to assess the required use and code dictated upgrades, modifications and replacement works required to facilitate any future change-of-use from hospital to Class B office use, the true extent of these works and the actual feasibility for change-of-use will only be known after extensive analysis of codes, consultation and approval by the National Register of Historic Places and other applicable conservation bodies, market conditions and associated factors beyond the scope of this study.

Therefore, the recommendations and opinions of costs contained within this report should be considered as a guide with the full extent of required repairs and replacements not known until change-of-use submittals and fit-out drawings are produced and submitted to the local jurisdictions and the eventual class of the building is determined. Therefore, the discussions and recommendations contained within this report should serve only as a general guide to probable repair and replacement costs required based upon our evaluation of the existing conditions.

Facility Condition Index

As part of this evaluation, Faithful+Gould was requested to calculate the Facility Condition Index ("FCI") of the Property. This was calculated to reflect the current condition of the building and the expenditures required to facilitate change-of-use. The FCI is the ratio of accumulated Deferred Maintenance (DM) to the Current Replacement Value (CRV). The DM includes the total Capital Expenditure Forecast amount indicated in Appendix A and the Maintenance Expenditure Forecast amount indicated in Appendix B, less Environmental Analysis costs. The CRV is based on cost data provided by Faithful+Gould's in-house cost estimators at a value of $350 per gross square foot times the gross square footage of floor area. The FCI of the constructed asset is calculated by dividing DM (maintenance and capital costs) by the CRV as indicated by the following formula:

Deferred Maintenance / Current Replacement Value = Facility Condition Index

The FCI range is from zero for a newly constructed asset, to one for a constructed asset with a DM value equal to its CRV. Acceptable ranges vary by "Asset Type', but as a general guideline the FCI scoring system is as detailed in Table FCI-1.

Table FCI-1 Facility Condition Index (FCI) Values

| Numerical Value | Condition |
|---|---|
| 0.00 to 0.02 | Excellent |

| | |
|---|---|
| 0.02 to 0.04 | Very Good |
| 0.04 to 0.06 | Good |
| 0.06 to 0.10 | Fair |
| Greater than 0.10 | Poor |

We have calculated a Current Replacement Value of $14,460,950 (based on a value of $350 per gross square foot and a floor area of 41,317 gross square feet) and a Deferred Maintenance value of $11,034,558, the FCI ratio for the Property is 0.76 indicating that the Property is in poor condition.

| | |
|---|---|
| Capital Expenditure Forecast | $10,908,548 |
| Maintenance Expenditure Forecast | $126,010 |
| Subtotal | $11,034,558 |
| | |
| Less Environmental Analysis Expenditures | |
| Capital Expenditure Forecast | ($0) |
| Maintenance Expenditure Forecast | ($0) |
| Subtotal | ($0) |
| | |
| Deferred Maintenance (DM) | $11,034,558 |

$11,034,558 DM / $14,460,950 CRV = 0.76 FCI

## National Register of Historic Places / Historic District

The Property is registered on the National Register of Historic Places and is contained within a Historic District. As such, any renovations should be sympathetic to the historic nature of the building, will need to be approved by the National Park Services and other applicable legislative and non-legislative parties, and is likely to focus more on refurbishment of historic systems rather that replacement.

## Opinions of Cost

Our primary opinions of cost have been prepared by our Alexandria, Virginia based cost estimators. These costs have been prepared based upon open market costs and inflated to account for the cost factors listed below:

- National Register of Historic Places (Consultative / Administrative Costs)
- Davis-Bacon Act (State Prevailing Wage Laws)
- District of Columbia Cost Factors (i.e. Procurement Factors etc.)

- Removal of Environmental Contaminants (i.e. Asbestos, Lead Based Paint etc.)

Unless otherwise indicated, opinions of cost presented within this report represent open market costs inflated by these and other applicable factors.

Exclusions & Interpretation

This report and the attached expenditure forecasts generally identify the Expected Useful Life (EUL) and the Remaining Useful Life (RUL) of observed systems and components. EUL is projected based upon industry-standard guidelines and our experience with similar systems. RUL is projected based upon our assessment of age, condition and maintenance / repair history.

Our opinion of cost included within this report are based upon our experience with similar buildings and systems, industry-standard cost data, local cost data, discussions with contractors, and information provided by the current building management and maintenance staff. The costs provided are for planning purposes only and assuming open procurement of the recommended works. Actual project costs may vary significantly to those projected based upon inflationary factors, weather and time of season, unforeseen economic circumstances and market trends, contractor schedules, unusual owner requirements, and other factors beyond our control.

Where recommended projects require the use of a registered architect, licensed engineer of other professional (collectively referred to as A/E) we have included an allowance of 10% of the base project fee for this retention. Where recommended projects are likely to involve the retention of a General Contractor, we have included a separate collective line item for this retention. This allowance includes a percentage fee based upon the base project cost of 15% for Project Management, 20% for Contractors Profit and Overhead and a Contingency allowance of 10%. Unless otherwise stated project line items included within the capital and maintenance forecasts do not include for A/E fees or General Contractor costs.

When making the determination as to whether a General Contractor will be retained, we have generally considered that a General Contractor will only be retained when a project requires management of multiple contractors is required. A typical example would be brick repair and refurbishment resulting in management of masons, lintel installers, painters and related trades. An example of a project where we have considered that a General Contractor would not be required is pavement resurfacing. For this type of project, we have assumed that a single specialty contractor will be retained to complete and manage the project. Under this scenario, we have included the 45% allowance previously detailed into our unit rate.

The timing of the projected expenditures and their associated costs represent our opinion considering the aforementioned factors. Alternative methods of managing the existing equipment or systems may be feasible over the six-year study period. However, these alternative methods will depend upon actual management practices, financing requirements, and the ability of the engineering staff to perform some of the repairs in-house. Alternative scenarios that have not been presented to Faithful+Gould have not been considered within this report.

This report has been presented based upon our on-site observations, information provided to us, discussion with building management and maintenance staff listed in the executive summary, our review of available documentation (see scope of services and document review section) and our experience with similar systems. If any information

becomes available that is not consistent with the observations or conclusions expressed within this report, we request that this information be immediately forwarded to us.

The evaluation of existing structures requires that certain assumptions be made regarding existing conditions. This evaluation was based upon our visual non-destructive evaluation of accessible conditions of the Property. Furthermore, this evaluation was limited in time on-site, fee, and scope and was not based upon a comprehensive engineering evaluation. As such, our report is not intended to represent a complete review of all systems or system components or a check or validation of design professionals' computations. Therefore, Faithful+Gould's evaluation and this report do not represent, warranty or guarantee any system or system component or the future performance of any site improvement.

Furthermore, under the change-of-use scenario, please consider that this report attempts to assess the required use and code dictated upgrades, modifications and replacement works required to facilitate change-of-use from hospital to Class B office use. The true extent of these works and the actual feasibility for change-of-use will only be known after extensive analysis of codes, market conditions and associated factors. Therefore, the recommendations and opinions of costs contained within this report should be considered as a guide with the full extent of required repairs and replacements not known until change-of-use submittals and fit-out drawings are produced and submitted to the local jurisdictions and the eventual class of the building is determined. Therefore, the discussions and recommendations contained within this report should serve only as a general guide to probable repair and replacement costs required based upon our evaluation of the current existing conditions.

FACILITY CONDITION ASSESSMENT

## A. SUBSTRUCTURE

### A10 FOUNDATIONS

#### Description

In the absence of structural drawings we have based our description of the foundation systems upon our visual observation (where possible) of the systems and our experience with similar structural systems. Based upon the sizing, type and anticipated loadings of the superstructure systems and our visual observation of geotechnical conditions, we anticipate that the superstructure at the southeast (front), northeast (side) and southwest (side) of the building are founded on a series of mild-steel reinforced cast-in-place concrete spread footings.

The northwest (rear) of the building was founded on mild-steel reinforced cast-in-place concrete spread footings at the outer perimeter (supporting the exterior walls and end bearing plate of the cast-in-place concrete beams) and on concrete piers at the interior areas (providing mid-span support to the concrete beams).

#### Condition

Assuming a change-of-use from hospital / clinical to office, the building will be required to meet the structural live and dead loading requirements of the presently enforced District of Columbia structural code (the 2000 edition of the International Building Code with 2003 District of Columbia Construction Code Supplement). Under this code and use profile, the foundation systems will be required to support the following live and dead loads:

*Live Loads*

| Area | Code Required Live Load – Pounds Per Square Foot (psf) |
|---|---|
| General Office | 50 psf plus an additional 20 psf for partition load |
| Lobbies and First Floor Corridors | 100 psf uniform; 2,000 psf concentrated |
| Corridors above First Floor | 80 psf uniform, 2,000 psf concentrated |
| File Rooms / Computer Machine Rooms | Designed for anticipated occupancy but typically 125 psf |

In the absence of structural drawings, we were unable to determine the live loads for which the foundation systems were designed for. However, it is apparent from the proven performance of the foundation systems

that they were adequately designed to support the required loads of Group I (Hospital) occupancy. Group B (Business) design live loads are comparable to Group I occupancy.

Final determination of the adequacy of the foundation systems to support the live loads to be imposed by the converted (I to B group) building use will depend on the design lay-out of the converted building. There may be some foundation modifications necessary to support the point loads imposed by newly installed equipment or systems (i.e. elevators). However, significant upgrade, underpinning or replacement is not anticipated.

*Dead Loads*

Design dead loads in the converted building are likely to be equal to or less than dead loads in the original building. Interior finish materials and other materials used in modern construction are typically lighter than the materials used at the time of the buildings construction (e.g. drywall on light gauge metal stud framing versus concrete masonry unit or structural clay tile walls). Significant upgrade, underpinning or replacement of the foundation systems due to the anticipated dead loads is not expected.

### Projected Expenditures

Required Capital Expenditures:

No capital expenditures are required at this time. However, within section B10 (superstructure) of this report we have recommended the retention of a District of Columbia licensed structural engineer to complete an analysis of the structural systems (including foundations) once any final re-use specifications and layout are determined.

Required Maintenance Expenditures:

No required maintenance expenditures are anticipated at this time.

## A20 BASEMENT CONSTRUCTION

### Description

The building contained a full basement level. To account for the sloping grade, the basement was below grade at the front (southeast) elevation and above grade at the rear (northwest) elevation (reference Photographs 1 & 2 in Appendix C). The basement level housed office and secondary clinical space, storage, service and other support areas.

The basement level at the southeast (front), northeast (side) and southwest (side) of the building contained a slab-on-grade floor. The slab consisted of an 8” thick welded wire mesh reinforced cast-in-place concrete slab founded over a compacted subgrade.

The basement at the northwest (rear) of the building was contained over a mechanical crawlspace (reference Photographs 3 & 4 in Appendix C). At these areas, the basement contained a structural (elevated) slab

consisting of 8" deep cast-in-place concrete joists spaced at 24" on-center and supported on the framework of conventionally-reinforced concrete columns and foundation walls. Floor joists were covered with 5" thick cast-in-place concrete flat panel slabs bearing onto the network of columns and beams. Slab edges were thickened to 24" at the connection with the exterior wall system.

The below ground portions of the basement (and crawl space) were enclosed by 8" to 9" thick cast-in-place concrete walls. Walls were supported on the cast-in-place concrete footings.

### Condition

As part of any change-of-use we anticipate that the basement will continue to provide primary and secondary use spaces. Based upon these uses and observed conditions, under a change-of-use we do not anticipate a requirement to complete condition or code dictated upgrades to the basement construction during the study period.

### Projected Expenditures

Required Capital Expenditures:

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

No required maintenance expenditures are anticipated at this time.

## B. SHELL

## B10 SUPERSTRUCTURE

### Description

<u>Concrete Strength</u>

In the absence of structural drawings, we were unable to determine the designed strength of the concrete elements.

<u>Lowest Floor</u>

The lowest floor at the building was at the basement and the crawlspace. The floor system at the basement consisted of either an 8" thick slab-on-grade or a 5" thick flat panel slab. The floor slab at the crawlspace consisted of a 5" thick slab-on-grade. Refer to report Section A20 for further details of the lowest floor slab construction.

Upper Floors

Upper floors including the floor at the attic space consisted of 8" deep cast-in-place concrete joists spaced at 24" on-center and supported on the concrete frame, interior load-bearing terra cotta walls or the exterior masonry walls (reference Photograph 5 in Appendix C). Floor joists were covered with 5" thick cast-in-place concrete flat panel slabs bearing onto the load-bearing masonry. Slab edges were thickened to 24" at the connection with the exterior wall system.

Superstructure

The superstructure consisted of the concrete columns and beams, exterior load-bearing masonry walls and the interior load-bearing terra cotta (structural clay tile) walls which loaded onto the foundation systems (reference Photographs 6 & 7 in Appendix C). The exterior walls consist of clay face bricks mechanically-attached with wall ties against either a brick back-up (roof levels) or a 4" thick cinder block back-up (remaining levels). Walls load directly onto the foundation systems. Lateral bracing is provided by the back-up and interior configuration. The structure at the interior load-bearing walls consisted of 4" x 8" mortared structural clay tile.

Stairs consisted of prefabricated 14 gauge steel stair assemblies with concrete in-fill slabs. Intermediate landings consisted of 4" thick concrete landings supported on 10 gauge flat Type B steel pan decks. Stairs are attached to the floor system with 3" x 3" x ¼" clips with 5/8" galvanized steel expansion bolts. Stairs are attached to upper supports with 6" x 4" x 3/8" steel shelf lintels with 1 ½" x ¼" strap anchor bolt clips.

Internal Walls & Ceilings

Interior wall construction consisted of two primary types; load-bearing and non-load-bearing. Load-bearing walls consisted of the 4" x 8" mortared structural clay tiles discussed previously. Non load bearing walls consisted of ½" gypsum wallboard applied over either 2" x 4" galvanized steel or wood studs. Studs were spaced at 24" on-center.

The ceiling system consisted of a cementious plaster screed applied over a non galvanized steel mesh. The mesh was supported on horizontal square steel dowel rods that were in-turn supported on the superstructure system.

Exterior Walls

The building is enclosed by a load-bearing clay brick exterior wall system with joints filled with colored recessed cementious mortar. Bricks are mechanically-attached with wall ties against either a brick back-up (roof levels) or a 4" thick cinder block back-up (remaining levels). A series of 45" long cast stone bands are provided continuously at the transition between the basement and first floors. Cast stone sills are provided below each window. Sills are 4 ½" deep and extend 2 ½" past the side of each window.

Roof Structure

The structural system utilized to support the sloped hip roof system consisted of site-assembled wood rafters (reference Photographs 8 & 9 in Appendix C). The structure consisted of 1" x 12" wood rafters placed at 14"

on-center and bearing on 2" x 12" (double 1" x 12") juncture beams. Support at the juncture beams and mid-span support of the rafters was provided by 6" x 4" king posts. The roof deck consisted of 1" x 6" wood tongue and groove decking boards.

Condition

The respective superstructure systems appeared to be in good condition with no evidence of overloading or failure noted. However, continued water ingress through joints in the cast stone panels of the exterior wall system (refer to Section B20) is likely to result in future deterioration of the wall tie connection between the panels and superstructure. Furthermore, continued corrosion of steel lintels at the west ramp will lead to localized failure of the wall system at that location. Assuming the completion of near-term tuckpointing of the exterior wall system and replacement of failed lintels, we do not anticipate a requirement to complete significant repair, replacement or supplementing of the superstructure system during the study period.

In addition to the above conditions, as part of the change-of-use from hospital to office the superstructure will be required to meet the structural live and dead loading requirements of the presently enforced District of Columbia structural code (the 2000 edition of the International Building Code with 2003 District of Columbia Construction Code Supplement). Under this code, the superstructure systems will be required to support the following superimposed live and dead loads:

*Live Loads*

| Area | Code Required Live Load – Pounds Per Square Foot (psf) |
|---|---|
| General Office | 50 psf plus an additional 20 psf for partition load |
| Lobbies and First Floor Corridors | 100 psf uniform; 2,000 psf concentrated |
| Corridors above First Floor | 80 psf uniform, 2,000 psf concentrated |
| File Rooms / Computer Machine Rooms | Designed for anticipated occupancy but typically 125 psf |

In the absence of structural drawings, we were unable to determine the design live loads capacity of the superstructure. However, it is apparent from the proven performance of the superstructure components that the superstructure was adequately designed to support the required loads of Group I (Hospital) occupancy. Group B design live loads are comparable to Group I occupancy.

Final determination of the adequacy of the superstructure systems to support the live loads to be imposed by the converted (I to B group) building use will depend on the design lay-out of the converted building. There may be some superstructure modifications necessary to support the point loads imposed by newly installed equipment or systems (i.e. file rooms). However, significant upgrade or replacement is not anticipated.

*Dead Loads*

Design dead loads in the converted building are likely to be equal to or less than dead loads in the original building. Interior finish materials and other materials used in modern construction are typically lighter than the materials used at the time of building construction (e.g. drywall on light gauge metal stud framing versus masonry walls). Significant upgrade or replacement of the superstructure systems due to the anticipated dead loads is not expected.

### Projected Expenditures

Required Capital Expenditures:

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

1. We reviewed the structural systems (substructure and superstructure) for visually apparent condition and signs of distress. We also completed cursory level analysis to indicate whether the systems as designed appeared to provide adequate resistance to support any change-of-use to commercial office from both a code compliance and use standpoint.

   This evaluation was completed based upon our general interpretation of how the building floor plate may be reconfigured to facilitate any change-of-use. The adequacy of the structural systems cannot be fully determined until the final building layout has been determined, extensive measurements of the structural systems completed and cores taken. We recommend that an allowance be budgeted for the retention of a District of Columbia licensed structural engineer to evaluate the adequacy of the structure once the final building layout has been determined, and to provide recommendations and opinion of cost for any required upgrade. Our opinion of cost for this work is $24,000 in 2010. This cost assumes spending 160 hours on the evaluation at a per hour rate of $150.

## B20 EXTERIOR CLOSURE

### Description

<u>Exterior Wall System</u>

The building is configured in a “H” shape with the principal exterior wall system throughout the Property consisting of a full height clay brick cavity wall system laid in stretcher bond (reference Photographs 10 through 15 in Appendix C). Brick headers are provided above each window. Bricks are mechanically-attached with wall ties against either a brick back-up (roof levels) or the 4” thick cinder block back-up (remaining levels). Painted wood trim is provided at the roof level soffit overhang and associated fascia. Trim at the soffit consisted of 1” x 4” tongue and groove painted southern pine screwed to the underside of the rafter overhang (reference Photograph 16 in Appendix C). Fascia trim consisted of 1” x 6” tongue and groove painted southern pine screwed to the end of each rafter and accented with 1” x 1” curved decorative painted molding.

A series of 45" long cast stone bands are provided continuously at the transition between the basement and first floors. The band is 12" tall and 4" thick with the top 3" of the band tapering towards the building (reference Photograph 17 in Appendix C). The base of each band is provided with a continuous drip edge. Bands are attached into the load-bearing walls with ½" diameter iron bars spaced at 24" on-center. Cast stone sills are provided below each window (reference Photograph 18 in Appendix C). Sills are 4 ½" deep and extend 2 ½" past the side of each window. The base of each sill is provided with a continuous drip edge. A decorative cast stone surround is provided at the outer perimeter of the main entrance vestibule located off Dogwood Street (reference Photograph 19 in Appendix C). The surround is 14' tall and consists of 22" wide tapered plinths with top-level decorative finales. Decorative cast stone or brick keystones are also provided adjacent to the main building entrance.

Windows and Doors

The building contained 269 windows. Windows at the first floor and above consist of single-glazed non-tempered operable sash units placed within painted steel frames (reference Photographs 20 & 21 in Appendix C). The lower section of each window was enclosed by painted iron grates placed within perimeter steel framing assemblies. Grate assemblies are attached to the supporting perimeter brick veneer with 4" long 1/8" diameter steel bolts. The connection between the brick veneer and the window frames was sealed with a 1/8" to ¼" wide urethane sealant.

Windows at the basement level front and side elevations consist of single-glazed non-tempered operable hopper units placed within painted steel frames (reference Photograph 22 in Appendix C). The connection between the brick veneer and the window frames was sealed with a 1/8" to ¼" wide urethane sealant. The two multi-level porches provided at the front corners of the building are enclosed with screen assemblies (reference Photograph 23 in Appendix C). Screens consist of closed steel mesh supported on ½" x ½" painted steel vertical and horizontal bars and covered with 1" x 1" flat panel steel covers.

Table B20-1 summarizes the window areas and quantities.

Table B20-1 Summary of Window Systems

| Location | Type | Dimensions (Square Feet) | Quantity | Total Area (Rounded Square Feet) |
|---|---|---|---|---|
| North (Rear) Elevation | Type A<br>Steel Framed<br>Single Pane<br>Single Hung | 36" x 77"<br>(19.25 SF) | 46 | 886 |
| | Type C<br>Steel Framed<br>Single Pane<br>Single Hung | 45" x 72"<br>(22.5 SF) | 34 | 765 |
| East Elevation | Type A<br>Steel Framed | 36" x 77"<br>(19.25 SF) | 23 | 443 |

| Location | Type | Dimensions (Square Feet) | Quantity | Total Area (Rounded Square Feet) |
|---|---|---|---|---|
| | Single Pane Single Hung | | | |
| | Type B Steel Framed Single Pane Hopper | 39" x 22" (5.96 SF) | 8 | 48 |
| | Type C Steel Framed Single Pane Single Hung | 45" x 72" (22.5 SF) | 11 | 248 |
| | Type D Steel Framed Single Pane Single Hung | 36" x 53" (13.25 SF) | 7 | 93 |
| | Type E Steel Framed Single Pane Single Hung | 36" x 61" (15.25 SF) | 3 | 46 |
| South (Front) Elevation | Type A Steel Framed Single Pane Single Hung | 36" x 77" (19.25 SF) | 47 | 905 |
| | Type B Steel Framed Single Pane Hopper | 39" x 22" (5.96 SF) | 32 | 191 |
| | Type C Steel Framed Single Pane Single Hung | 45" x 72" (22.5 SF) | 4 | 90 |
| West Elevation | Type A Steel Framed Single Pane Single Hung | 36" x 77" (19.25 SF) | 20 | 385 |
| | Type B Steel Framed Single Pane Hopper | 39" x 22" (5.96 SF) | 8 | 48 |
| | Type C Steel Framed | 45" x 72" (22.5 SF) | 12 | 270 |

| Location | Type | Dimensions (Square Feet) | Quantity | Total Area (Rounded Square Feet) |
|---|---|---|---|---|
| | Single Pane Single Hung | | | |
| | Type E Steel Framed Single Pane Single Hung | 36" x 61" (15.25 SF) | 8 | 122 |
| West Ramp | Type F Steel Framed Single Pane Single Hung | 45" x 30.75" (9.61 SF) | 2 | 19 |
| | Type G Steel Framed Single Pane Single Hung | 36" x 48" (12 SF) | 4 | 48 |
| | | TOTAL | 269 | 4,607 |

Table B20-2, Summary of porch screen systems, summarizes the screen type, areas and quantities.

Table B20-2 Summary of Screen Systems

| Location | Type | Dimensions (Square Feet) | Quantity | Total Area (Rounded Square Feet) |
|---|---|---|---|---|
| North Elevation (Rear) | No windows | | | |
| East Elevation | Type A Steel Framed Steel Mesh | 81" x 107" (60.19 SF) | 2 | 120 |
| | Type B Steel Framed Steel Mesh | 81" x 119" (66.94 SF) | 2 | 134 |
| South Elevation (Front) | Type A Steel Framed Steel Mesh | 81" x 107" (60.19 SF) | 2 | 120 |
| | Type B Steel Framed Steel Mesh | 81" x 119" (66.94 SF) | 2 | 134 |
| West Elevation | Type A Steel Framed | 81" x 107" (60.19 SF) | 10 | 601 |

| Location | Type | Dimensions (Square Feet) | Quantity | Total Area (Rounded Square Feet) |
|---|---|---|---|---|
| | Steel Mesh | | | |
| | Type B Steel Framed Steel Mesh | 81" x 119" (66.94 SF) | 10 | 669 |
| | | TOTAL | 28 | 1,778 |

The building contained 12 exterior doors. Doors throughout the building consisted of painted hollow-core steel panel doors placed within steel frames (reference Photograph 26 in Appendix E). Door hardware consisted of a combination of mechanical lock-sets and lever handles. The connection between the brick veneer and the door frames was sealed with a 1/8" to ¼" wide urethane sealant. Table B20-3 summarizes the door areas and quantities.

Table B20-3 Summary of Door Systems

| Location | Type | Dimensions | Quantity | Total Area (Rounded Square Feet) |
|---|---|---|---|---|
| North (Rear) Elevation | Mechanical Room Doors Pair of Steel Units in Steel Frames | 72" x 84" | 2 Pairs | 84 |
| | Exit Doors Steel Units with 10" x 10" Wire-glass in Steel Frames | 36" x 84" | 3 | 63 |
| East Elevation | Basement Service Door Steel Unit with 6" x 21" Wire-glass in Steel Frame | 36" x 84" | 1 | 21 |
| South (Front) Elevation | Entry Door Steel Unit in Steel Frame | 44" x 84" | 1 | 26 |
| | Porch Doors Steel Unit with 10" x 10" Wire-glass in Steel Frames | 34" x 84" | 4 | 79 |
| West Elevation | Basement Service Door | 36" x 84" | 1 | 21 |

| | | | | |
|---|---|---|---|---|
| | Steel Unit with 6" x 21" Wire-glass in Steel Frame | | | |
| TOTAL | | | 12 | 294 |

Other Building Features

A pedestrian walkway provides access from Oak Street to the west building entrance (reference Photographs 24 & 25 in Appendix C). The walkway consisted of both elevated and at-grade sections. Elevated sections consisted of an 8" thick exposed aggregate surfaced concrete slab supported on 8" thick (two sections of 4" thick walls) cavity walls. At-grade sections consisted of 5" thick welded wire mesh reinforced panels placed over a compacted subgrade.

The building contained seven wall-mounted exterior lights.

## Condition

Exterior Wall System

The exterior wall system was in fair to good condition and represented a well constructed yet poorly maintained system. We noted a number of concerns resulting primarily from the age of the system and the lack of on-going maintenance and repair. The exterior wall system will require near-term renovation.

The first and primary area of concern noted at the exterior wall system was severe cracking, erosion and separation of the cementious mortar provided between the cast stone panels (reference Photographs 26 through 27 in Appendix C). At the lower level panels this had resulted in localized displacement of the panels and longitudinal and traverse cracks resulting from freeze-thaw cycles. We have recommended budgeting for the near-term replacement of mortar at the cast stone panels and for cleaning of rust stains.

The second principal area of exterior deterioration noted was at the brick masonry. The exterior brick wall system was in fair condition but has been subject to limited on-going maintenance and repair since installation. This has resulted in numerous instances of cracked and detached mortar at the brick veneer, significant brick and mortar deterioration at the west entrance ramp, and areas of cracked and spalled bricks (reference Photograph 28 in Appendix E). We have recommended budgeting for near-term tuckpointing of the exterior wall system.

The third principal area of exterior deterioration noted was peeled paint at the steel lintels, wood trim, wood paneling and entrance doors (reference Photographs 29 through 31 in Appendix C) and sectional corrosion of lintels provided at the west ramp (reference Photograph 32 in Appendix C). These conditions have resulted in surface corrosion at the steel lintels and entrance doors, and localized widespread instances of split, detached and rotted wood trim. We have recommended budgeting for near-term repainting of the exterior of the building.

The final areas of deterioration noted at the exterior system were hardening and separation of the urethane expansion joint sealant provided between the west ramp and the building (reference Photograph 33 in Appendix C). We have recommended budgeting for near-term replacement of the urethane sealant.

Windows and Doors

Windows are original to the building and in fair structural condition and poor aesthetic condition (reference Photographs 34 through 36 in Appendix C). We noted widespread instances of peeled paint at the window frames and lintels, localized instances of cracked glazing panels, hardening and separation of perimeter caulking, corrosion of window mullions and gratings, poor seals between operable and fixed portions of the windows, missing (and now covered with wood) windows at the basement level, and poor operation of the windows. Based upon the extent of deterioration and considering the historic nature of the building, we recommend that windows be refurbished as part of any change-of-use. Refurbishment should consist of the following general scope:

- Determine exact condition of each window and required repair / replacement work
- Remove and deconstruct windows
- Remove lead based paint
- Repair structural mortise and tenon joints
- Replace deteriorated components
- Apply epoxy coating
- Apply epoxy filler
- Finish sand
- Replace glazing and sealants
- Finish prime and paint
- Re-install to include replacing perimeter caulking and installing storm windows

Screens provided at the end porches were in poor condition (reference Photographs 37 & 38 in Appendix C). We noted numerous instances of damaged screen sections, expansive sectional corrosion of structural bars and displacement of covers. Due to the extent of deterioration at their supporting structure, we have assumed that the appropriate regulatory parties will allow removal of the screens and replacement with a new comparative system.

Doors appeared to be in generally fair to poor condition with base level frame and door corrosion noted throughout (reference Photograph 39 in Appendix C). We have recommended budgeting for replacement of doors and associated frames.

Other Building Features

The elevated pedestrian walkway was in good condition. We noted no significant instances of spalled concrete or corroded reinforcing steel at the top, ledge or underside of the slab. Areas of failed brick and lintels provided at the walkway are discussed above.

## Projected Expenditures

Required Capital Expenditures:

When considering the definition of capital and maintenance expenditures, we have considered that the projects recommended below consist of macro level refurbishment. As a result, even when an individual project value falls below the threshold typically considered for capital work, we have still classified the work as capital under the assumption that it will be completed as part of the larger capital renovation.

1. We recommend budgeting for replacement of cracked, spalled and separated mortar and stone at the cast stone panels and at the base of surface-recessed railing assemblies. Our opinion of cost for this work is $35,200 ($160 per linear foot / per instance) in 2010. This opinion of cost excludes applicable Architectural and Engineering fees and General Contractor allowances.

2. At the brick wall system, we recommend budgeting for replacement of cracked, spalled and separated mortar and replacement of deteriorated bricks. Our opinion of cost for this work is $20,600 ($20 per square foot) in 2010. This opinion of cost excludes applicable Architectural and Engineering fees and General Contractor allowances. This cost also includes an allowance of $12,000 for replacement of the 12 failed lintels at the west entrance ramp.

3. We recommend budgeting for replacement of failed exterior trim and other exposed wood in 2010. Our opinion of cost for this work is $27,300. This assumes replacement of 30% of trim.

4. We recommend budgeting for repainting of painted wood trim, wood paneling, steel panel doors, grates and steel lintels at the building exterior. Our opinion of cost for this work is $54,470 in 2010.

5. We recommend budgeting for refurbishment of windows in accordance with the guidelines previously listed. Our opinion of cost for this work is $419,237 in 2010.

6. We recommend budgeting for replacement of porch screens in 2010. Our opinion of cost for this work is $88,900 ($50 per square foot).

7. We recommend budgeting for replacement of exterior doors in 2010. Our opinion of cost for this work is $18,000 ($1,500 per door).

Additional Project Incurred Costs

- The entire project listed above will require the retention of a District of Columbia registered engineer and architect to write specifications, produce design documents, monitor installation and provide final sign-off of the completed work. We have included an allowance of 10% of the capital cost of completing the work.

- The entire project listed above represent is of a complexity that will require the retention of a General Contractor. We recommend budgeting a General Contractor percentage allowance of 45% for each of these projects. The percentage includes 15% for project management, 20% overhead and profit and 10% contingency. Percentages are based upon the base cost to complete the work excluding A/E fees.

Required Maintenance Expenditures:

No required maintenance expenditures are anticipated at this time.

## B30 ROOFING

### Description

The building contained one sloped roof area. The plan below shows the general configuration of the roof system.

Overview of Roof Configuration


The roof is covered with a sloped hip roof covered with clay pan tiles (reference Photograph 40 in Appendix C). The roof was placed at a field slope of 4 (V):12 (H) and drained to perimeter 6" wide painted copper gutters. Gutters drained to 2" x 4" (nominal) copper downspouts which in-turn drained to the below-grade drainage system. Pan tiles appeared to be attached to 1" x 2" nominal non-graded southern pine purlins with surface recessed stainless steel roofing nails. Purlins are mechanically-attached through the wood roof deck. Table B30-1 provides a summary of the roof system.

Table B30-1 Summary of Roof Construction (Central Wing)

| Roof Component | Sloped Roof |
|---|---|
| Age | Original (1937) |
| Roof Area (total / approx. square footage) | 17,536 |
| Application/ Membrane | Mechanically-Attached Clay Tile |
| Manufacturer / Model | Unknown |
| Surface | Exposed |
| Deck Type | Wood |
| Insulation | Fiberglass Batt at Attic Space Floor |
| Cover Board | None |
| Drainage | Perimeter Gutters & Downspouts |
| Overflow Scuppers | None |
| Base Flashings | None |
| Cap Flashings | None |
| Perimeter Enclosure | Unenclosed |
| Warranty (Manufacturer) | None |
| Warranty (Contractor) | None |

Condition

We were unable to access the surface of the roof. Our findings are based upon our visual observation of the roof from ground level using binoculars and from walking the entire length of the attic space. Based upon these observations, the roof system is in generally good condition. We noted no evidence of significant water ingress through the roof system of significant slipped or cracked slates. However, minor instances of slipped and detached slates were noted. In addition, we noted localized instances of detached gutters. We have

included a near-term and periodic allowance for replacement of detached or cracked tiles and for re-attachment of gutters.

### Projected Expenditures

Required Capital Expenditure:
No capital expenditures are anticipated at this time.

Required Maintenance Expenditure:

1. We recommend budgeting an allowance of $5,000 per year for as-needed repair and life-extension maintenance of the sloped roof system and associated drainage systems. Per cycle, this cost assumes the retention of two roof operatives for a sixteen hour period at a per hour / per operative rate of $100 (combined value of $1,600 per day) and a combined material, contingency and disposal cost of $1,800.

## C. INTERIORS

C10 INTERIOR CONSTRUCTION
C20 STAIRS
C30 INTERIOR FINISHES

### Description

The interior configuration was generally consistent throughout the building (reference Photographs 41 through 44 in Appendix C). The interior areas consisted of a central loaded corridor enclosed at each side with structural clay tile walls. Variable size clinical spaces or administrative offices were provided at the outer perimeter of each corridor with demising walls between the rooms constructed of steel or wood stud walls. The list below provides a summary of the interior areas:

- Clinical space
- Conference rooms
- Assembly rooms
- Office
- Restrooms
- Residential rooms
- Restrooms
- Support and storage areas

Interior finishes were generally consistent throughout the building. Finishes consisted of a combination of 12" x 12" resilient vinyl floor tiles, painted and partially tiled gypsum board or structural clay tile walls and a painted cementious plaster ceilings. Interior doors typically consisted of either painted steel panel or varnished wood.

Stairs consisted of painted steel-framed, concrete-filled metal pan tread and steel riser assemblies, with cast-in-place concrete on corrugated metal deck intermediate landings, with painted steel railings. Stairs were supported by the floor decks, with intermediate landings supported by secondary faming.

### Condition

The interior of the building is configured specifically to support the current hospital / clinical use. Under the change-of-use scenario, in order to allow effective and efficient change-of-use we anticipate a requirement to complete large-scale reconfiguration. The extent of this reconfiguration will be dependant upon the final floor plan selection and space utilization requirements of the building. However, for budgetary purposes we have assumed that the reconfiguration will consist of complete clearing (demolition) of the existing configuration (except structural walls) and reconstruction. Based upon this assumption and our observation of the condition and configuration of the construction and finishes, we anticipate that any change-of-use will consist of the following steps:

*Design*

Following market analysis to determine the final use (i.e. single / multi tenant) of the building, design of the interior floor plate to show rentable areas, common areas and the final layout should be completed. We have included a 10% Architectural / Engineering fee for the completion of this work.

*Demolition & Abatement*

Based upon the constraints of the current interior configuration, we anticipate that any commercial owner or leaseholder will opt to remove the interior construction (walls, ceilings, doors, floor coverings, restrooms) back to the exposed superstructure. At this time, the interior areas will consist of exposed floor slabs, exposed structure, the exposed face of the cinder block exterior wall back-up, and the exposed underside of the structural floor slabs. Based upon observed and reported areas of asbestos containing floor and ceiling tiles, and lead-based paint, this project will also include removal of hazardous materials.

*Reconstruction*

Following demolition and removal of the existing interior construction, the building interior will be exposed to the superstructure elements. At this point, we anticipate that interior reconstruction will commence to allow commercial office use. For budgetary purposes, we have assumed that the building will be built-out to standard office configuration including common areas (including restrooms).

Projected Expenditures

Required Capital Expenditures:

1. We recommend budgeting for demolition and disposal of the interior construction in 2010. Our opinion of cost for this work to include removal and disposal of hazardous materials is $6 per square foot to a total cost of $247,902.This opinion of cost excludes applicable Architectural and Engineering fees and General Contractor allowances but includes for anticipated environmental contaminants.

2. We recommend budgeting for reconstruction of the interior areas to include providing perimeter and interior gypsum board walls and finishing of common areas. Our opinion of cost for this work is $52 per square foot to a total cost of $2,148,484 in 2010. This opinion of cost excludes applicable Architectural and Engineering fees and General Contractor allowances.

Additional Project Incurred Costs

- Items one and two above will require the retention of a District of Columbia registered engineer and architect to write specifications, produce design documents, monitor installation and provide final sign-off of the completed work. We have included an allowance of 10% of the capital cost of completing the work.

- Items one and two above represent complex projects that will require the retention of a General Contractor. We recommend budgeting a General Contractor percentage allowance of 45% for each of

these projects. The percentage includes 15% for project management, 20% overhead and profit and 10% contingency. Percentages are based upon the cost to complete the work excluding A/E fees.

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

# D. SERVICES

## D10 CONVEYING

### Description

The connector provided between Building 116 (the subject building) and Building 115 contains a single three-stop 75 feet per minute 2,500-lbs capacity hydraulic passenger / freight elevator. The elevator was installed in circa 1983.

### Condition / Change-Of-Use

The existing elevator is obsolete and in generally poor condition. The elevator is not of a condition that will adequately support any re-use of the building. In addition, based upon our experience with Class B commercial office buildings in the D.C. marketplace, we anticipate that in order to create a market-ready building under a change-of-use scenario, the installation of an additional elevator at or near the center core will be required. For budgetary purposes, we have recommended budgeting for modernization of the existing elevator and the installation of a single hydraulic passenger elevator.

### Projected Expenditures

Required Capital Expenditure:

1. We recommend budgeting for modernization of the existing hydraulic elevator in 2010. Our opinion of cost for this work is $200,000.

2. We recommend budgeting for the installation of one hydraulic passenger elevator at or near the center core. The installation will consist of creating a fire-rated elevator shaft and below-grade pit (to include removal of the floor slab), removing walls to create elevator lobbies, creating a fire-rated ground floor machine room, and installing the elevator equipment. Our opinion of cost for this work is $400,000 in 2010.

Additional Project Incurred Costs

- Items one and two above will require the retention of a District of Columbia registered engineer and architect to write specifications, produce design documents, monitor installation and provide final sign-off of the completed work. We have included an allowance of 10% of the capital cost of completing the work.

- Items one and two above represent complex projects that will require the retention of a General Contractor. We recommend budgeting a General Contractor percentage allowance of 45% for each of these projects. The percentage includes 15% for project management, 20% overhead and profit and 10% contingency. Percentages are based upon the cost to complete the work excluding A/E fees.

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

## D20 PLUMBING

The following information was obtained through our visual observations of the building systems. The plumbing systems include domestic cold and hot water systems, sanitary waste and vent systems, and storm water collection system. Natural gas service is not provided to the building.

### Domestic Water Systems

#### Description

Domestic Cold Water

Domestic cold water enters the building at core area of the basement level. The incoming line size is 6" diameter and appears to be ductile iron pipe. The piping is changed to copper for routing throughout the building. There is no pressure booster system, with water service for the building supplied directly from the street pressure. Taps are made to the water line and routed to plumbing fixtures and equipment in the various wings of the building. A water meter was not observed within the building, but may be provided in an exterior in-ground vault.

Domestic Hot Water

Domestic hot water (as well as heating system hot water) is generated by a heat exchanger located in a basement mechanical room. Steam generated in a central plant is provided to the insulation-wrapped exchanger, producing hot water for the building. Storage tanks or independent domestic water heaters were not observed.

Domestic Water Piping

Observed domestic water piping included ductile iron and galvanized steel tubing in larger sizes and copper tubing in smaller sizes. Domestic cold and hot water piping is partially insulated.

#### Condition

The building was unoccupied and the domestic water systems were not in service at the time of our assessment. However, the system appeared to be in fair to poor condition. Based upon our experience with similar buildings in the District of Columbia, the 6" diameter incoming water service line should be adequate to serve for the needs of the building assuming conversion to commercial office. Piping in exposed locations within the basement had damaged or deteriorated insulation and the tubing was corroded. Because the systems were not in service, no active problems were observed, but it was evident that the systems have lacked adequate maintenance for an extended period and that original portions of the systems have reached the end of useful life. The basement floor had standing water in many locations, although the source of the

water may have been attributable to the heating system. We recommend that the domestic cold and hot water systems be replaced as part of any re-use.

Projected Expenditures

Required Capital Expenditure:

1. A change in building occupancy classification will trigger a requirement to meet current code requirements. If the Property is converted to commercial office use, we recommend that the domestic cold and hot water system be replaced. Our opinion of cost for this work is $2.50 per square foot of floor area to a total cost of $103,293 in 2010. Costs for replacement of plumbing fixtures are included within the interior reconstruction allowance previous included. This opinion of cost excludes applicable Architectural and Engineering fees and General Contractor allowances.

Additional Project Incurred Costs

- Item one above will require the retention of a District of Columbia registered engineer or architect to write specifications, produce design documents, monitor installation and provide final sign-off of the completed work. We have included an allowance of 10% of the capital cost of completing the work.

- Item one above represents a complex project that will require the retention of a General Contractor. We recommend budgeting for a General Contractor percentage allowance of 45% for this project. The percentage includes 15% for project management, 20% overhead and profit and a 10% contingency. Percentages are based upon the cost to complete the work excluding A/E fees.

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

Sanitary Waste and Vent Systems

Description

Sanitary waste is collected from multiple riser stacks throughout the building and tied to horizontal mains that are routed out of the building via gravity drain lines to campus sanitary lines at various points around the perimeter of the building. Duplex sewage ejector pump systems, with submersible pumps, are provided in the basement level mechanical room and collect waste in the below-grade areas that cannot be directly discharged through the gravity lines.

Sanitary waste and vent piping materials vary. Much of the waste and vent piping is threaded galvanized steel piping or cast iron hub and spigot type material.

### Condition

The domestic water systems, and therefore the sanitary waste and vent systems, were not in service at the time of our assessment, but appeared to be in fair to poor condition. Because the systems were not in service, no active problems were observed, but it was evident that the systems have lacked adequate maintenance for an extended period and that original portions of the systems have reached the end of useful life. We recommend the sanitary waste and vent system be replaced as part of any re-use.

### Projected Expenditures

Required Capital Expenditures:

2. A change in building occupancy classification will trigger a requirement to comply with current code requirements. If the Property is converted to commercial office use, we recommend that the sanitary waste and vent piping system be replaced. Our opinion of cost for this work is $2.20 per square foot of floor area to a total cost of $90,897, excluding applicable Architectural and Engineering fees and General Contractor allowances.

Additional Project Incurred Costs

- The item above will require the retention of a District of Columbia registered engineer or architect to write specifications, produce design documents, monitor installation and provide final sign-off of the completed work. We have included an allowance of 10% of the capital cost of completing the work.

- The item above represents a complex project that will require the retention of a General Contractor. We recommend budgeting for a General Contractor percentage allowance of 45% for this project. The percentage includes 15% for project management, 20% overhead and profit and a 10% contingency. Percentages are based upon the cost to complete the work excluding A/E fees.

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

## Storm Water Systems

### Description

The building is constructed with sloped roofs. Storm water from the sloped roofs is collected in gutters at the roof perimeters and routed to grade in external downspouts and into the campus' underground storm water drainage system.

Gutter and downspout materials vary, with the original sections copper, with repairs, replacements and extensions comprised of aluminum.

### Condition

The conditions of the gutter and downspout storm water systems and recommendations for repairs or replacement are described in the roofing section of this report.

### Projected Expenditures

Required Capital Expenditure:

No required capital expenditures have been identified at this time.

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

## Natural Gas Systems

Natural gas service is not provided to the Property.

# D30 HVAC

The heating, ventilation and air conditioning systems include central heating systems, local cooling systems, and central air-handling, exhaust and ventilation systems.

## Heating Systems

### Description

The building is heated using low pressure steam piped through a steam-to-hot-water shell-in-tube heat exchanger located in the basement mechanical rooms, providing hot water circulated through radiators and perimeter convection units, ceiling recessed and suspended cabinet fan-coil units and through coils in central air-handling units.

Steam is provided by a St. Elizabeth Hospital campus central plant via underground piping to the Property. Steam condensate from the heat exchanger is collected within the respective wing's mechanical room and routed via dual pump sets to the central plant's condensate return unit/boiler feed-water system.

The steam piping system is welded black steel pipe. Most steam piping is insulated except at equipment connections and steam traps. Most of this older steam piping insulation is believed to contain asbestos.

Heating hot water from the heat exchanger is circulated by a loop system by two end-suction style pumps in each of the mechanical rooms, providing heating hot water through the heat exchanger to the perimeter

baseboard radiation convectors, to cabinet heaters in the stairwells, entry vestibule and mechanical rooms and to heating coils in two central air handling units located in the basement of the building.
The heating hot water piping system is typically welded black steel pipe in the larger sizes, with smaller piping and run-out connections to equipment assumed to be copper. Heating hot piping is typically insulated except at equipment connections. It is suspected that the insulation contains asbestos.

### Condition

The building was unoccupied and the heating system was not in operation at the time of our assessment. The basement mechanical rooms are accessible from the rear of the building. Only Mechanical Room A in the building was accessible at the time of our assessment, as the doors to Mechanical Room B were locked. Neither the air handling units and their supply and return air fans, nor the heating hot water circulating pumps or cabinet units were operating on the day our assessment was conducted.

Conditions observed in the accessible mechanical room and within the basement level indicated numerous leaks within the system, causing corrosion and rusting of piping, deterioration and failure of piping insulation and standing water on the basement floor. It was unclear whether the standing water was due to a leak in the heating system, or was associated with the domestic water or storm water systems. The major equipment in the mechanical room with legible data tags appeared to be installed in 1983, making the equipment 27 years old. It is assumed that portions of the hot water distribution system piping may be original, or approximately 73 years old.

Much of the distribution piping is at the end of its service life, as are the heat exchangers, heating hot water pumps and air handling units. We anticipate that the overall heating system and its major components should be replaced regardless of the proposed use of the building.

### Change-of-Use

A change in building occupancy classification will trigger a requirement to comply with current code requirements. If the Property is converted to commercial office use, we recommend that the entire heating system be replaced and upgraded. The total area of the building was measured at 41,317 gross square feet. For office occupancies, loads usually run in the 300 square feet per ton (SF/ton) of cooling range. This can vary depending on the types and quantities of windows, and the roof and wall insulation values. Given the amount of glazing in this building, a load estimate of 275 SF/ton seems more appropriate. Therefore, the Property is estimated to have a total cooling load of 150 tons.

Given the structural and historic architectural constraints of the building and the assumption that under a change-of-use the building will be reconfigured as "Class B" office space, there are a limited number of cost appropriate HVAC systems. Final selections may depend on the landlord's decisions relative to allocation of utility costs.

For the purposes of this report, we have assumed that split system heat pump units will be installed. This system will consist of indoor fan units installed in the ceiling plenum above each occupied zone with condensing units located on grade. The system can be easily configured for separate metering by tenant,

however, the system is somewhat inefficient under heavy load conditions and results in "condenser unit farms" (i.e. large quantities of grouped condensing units).

Projected Expenditures

Required Capital Expenditure:

1. We recommend budgeting for the installation of split system heat pump units. Our opinion of cost for this work is $29 per square foot of floor area to a total cost of $1,198,193 in 2010 excluding applicable Architectural and Engineering fees and General Contractor allowances.

2. We recommend budgeting for an allowance of $2.30 per square foot of floor area to a total cost of $95,029 in 2010 for removal of the existing HVAC systems as part of any change-of-use.

Additional Project Incurred Costs

- The items above will require the retention of a District of Columbia registered engineer or architect to write specifications, produce design documents, monitor installation and provide final sign-off of the completed work. We have included an allowance of 10% of the capital cost of completing the work.

- The items above represent a complex project that will require the retention of a General Contractor. We recommend budgeting for a General Contractor percentage allowance of 45% for each of these projects. The percentage includes 15% for project management, 20% overhead and profit and a 10% contingency. Percentages are based upon the cost to complete the work excluding A/E fees.

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

Cooling Systems

Description

Description

Chilled water for the air handler systems' cooling coils was supplied from the central plant via an insulated steel piping system. Some administrative offices and treatment areas are furnished with in-window electric air conditioners, most appearing to have been installed in the past 10 years. The window units are self-contained packaged air-conditioning units with cooling capacities of between 1- and 2-tons of refrigeration each and utilize R-22 refrigerant.

Condition

The chilled water distribution system was not in service during the assessment. The system is in poor visually apparent condition and should be replaced as part of any change-of-use.

### Projected Expenditures

Required Capital Expenditure:

A change in building occupancy classification will trigger a requirement to comply with current codes. If the building is converted to commercial office use, we recommend that the entire heating and cooling systems be replaced and upgraded including a change from in-window air-conditioning systems to systems with split system heat pump units described above. Our opinion of cost for completion of this work is included within the cost for installation of the heating system heat pump units (as previously included).

## Air-Handling Units

### Description

Central station air-handling systems are installed to heat and ventilate the building. These consist of an air-handling unit located in a basement mechanical room in each wing of the building. Each unit consists of a central hot water heating coil component, a supply air fan and a return air fan. Supply air is routed to the spaces through sheet metal ducts and distributed overhead (above the ceilings) and discharged to the spaces via ceiling-mounted diffusers. Return air is collected at ceiling-mounted grilles into the plenum and into a riser, ducted back to the respective air-handling unit. The air-handling units were installed in approximately 1983 and are, therefore, 27-years old. Ductwork is sheet metal and is appears to be uninsulated.

### Condition

The air-handling units are in fair to poor condition and are at the end of their service lives. Completion of on-going maintenance, such as replacing motors, fan belts and greasing bearings could extend the life of the equipment, but replacement of all air-handling equipment is recommended for a change in building occupancy.

### Projected Expenditures

Required Capital Expenditure:

A change in building occupancy classification will trigger a requirement to comply with current code requirements. If the building is converted to commercial office use, we recommend that the entire air-handling system be replaced and upgraded, as part of the heating and cooling systems. Refer to the discussion above under “Heating Systems”.

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

## Ventilation and Exhaust Systems

### Description

Outside air for ventilation of the occupied floors is supplied through operable windows around the perimeter of the building and by the central air handling units. Fresh air for the air handling units is provided through sidewall louvers in the mechanical area wells and ducted to the units.

The building contains several exhaust systems, primarily serving the restrooms/bathrooms. Exhaust air is ducted trough ceiling grilles and up to exhaust fans installed in the attic space, venting through louvered opening in dormers. Fan capacities vary.

### Condition

The windows are operable and adequately sized to comply with requirements for "natural ventilation". The various exhaust systems appeared to be in fair to poor condition, nearing the end of useful life and should be replaced. In the absence of design or shop drawings and product data that indicate fan capacities, it is uncertain if the mechanical ventilation and exhaust systems meet current code requirements.

### Projected Expenditures

Required Capital Expenditure:

A change in building occupancy classification will trigger a requirement to comply with current code requirements. If the building is converted to commercial office use, we recommend that the entire mechanical ventilation and exhaust system be replaced and upgraded. Refer to the discussion above under "Heating Systems".

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

## Temperature Control Systems

### Description

Controls for the HVAC systems' major equipment generally consists of a pneumatic system. There is a control air compressor pump and line air-dryer system installed in the basement Mechanical Room A that provide control air for valve actuators and thermostats.

### Condition

The pneumatic control system was not operating on the day of our assessment. The control system is believed to be functional, but provides a minimum in flexibility to adapt system operations to changing

conditions. The air dryer is in fair to good condition and appears to have been more recently installed, whereas the compressor pump equipment appears to have been installed with the air handling units in 1983.

### Projected Expenditures

Required Capital Expenditure:

A change in building occupancy classification will trigger a requirement to comply with current code requirements. If the facility is converted to commercial office use, we recommend that a new digital device control system be provided that is compatible with the selected HVAC system. Refer to the discussion above under "Heating Systems".

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

## D40 FIRE PROTECTION

Fire and life safety elements observed included structural fire protection, audible fire alarm and detection systems, a fire suppression sprinkler system, handheld fire extinguishers, and fire-rated means of egress.

### Structural Fire Protection

#### Description

The structure consisted of concrete floors, a concrete attic space floor, a concrete-framed superstructure, masonry walls and a wood-framed roof structure. Common area corridors were constructed with a one hour fire rating. Enclosures at each egress stairwell and the floor structure were designed to be rated with a two hour fire rating with 1 ½ hr fire resistance rated doors. Doors at interior rooms typically consisted of ¾-hr fire resistance rated doors. Doors at exit stairs consisted of 1 ½-hr fire resistance rated metal doors, automatic door closers and panic hardware. The building construction resembles a Type IIIB construction per IBC Table 601.

#### Condition

We noted the condition and adequacy of the structural fire protection systems at the mechanical rooms in the basement, in the corridors and exit stair shafts. The structural fire protection appeared to be in good condition and generally installed in accordance with industry accepted practice and the codes enforced at the time of construction. However, we noted piping penetrations in the basement level corridor without fire stooping (reference Photograph 78 in Appendix E). This condition will be resolved when the building floor plate is reconstructed.

### Projected Expenditures

Required Capital Expenditures:

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

No required maintenance expenditures are anticipated at this time.

## Means of Egress

### Description

The building is provided with exiting through three stairwells distributed throughout the building and leading to the street level at the basement level, rear elevation (reference Photograph 45 in Appendix C). Stairs are enclosed in two-hour rated protected staircases. Exit doors had a clear opening width of 33" per leaf. Battery backup exit signs are provided at each exit and at appropriate locations along the path of egress.

### Condition

The paths of egress appeared to be generally compliant with the building codes in effect at the time of construction and presently enforced codes.

### Projected Expenditures

Required Capital Expenditures:

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

No required maintenance expenditures are anticipated at this time.

## Fire Suppression Systems

### Description

The laundry rooms and other limited rooms were provided with an automatic fire suppression sprinkler system. Other areas of the building were not provided with an automatic fire suppression sprinkler system. Standpipes were provided in the stairwells. Handheld fire extinguishers, located in wall cabinets, were provided in the central hallway on each floor.

### Condition

Under a change-of-use to commercial office, the presently enforced District of Columbia fire code will require that an automatic sprinkler system be installed throughout the building.

### Projected Expenditures

Required Capital Expenditures:

1. Under a change-of-use, code will require the installation of a fire suppression sprinkler system throughout the building. Our opinion of cost for this work assuming installation when the interior areas are removed to the superstructure (i.e. at the time of interior reconstruction) is $4 per square foot of floor area to a total cost of $165,268 in 2010 for the suppression system excluding applicable Architectural and Engineering fees and General Contractor allowances.

Additional Project Incurred Costs

- The item above will require the retention of a District of Columbia registered engineer and architect to write specifications, produce design documents, monitor installation and provide final sign-off of the completed work. We have included an allowance of 10% of the capital cost of completing the work.

- The item above represents a complex project that will require the retention of a General Contractor. We recommend budgeting a General Contractor percentage allowance of 45% for each of these projects. The percentage includes 15% for project management, 20% overhead and profit and 10% contingency. Percentages are based upon the cost to complete the work excluding A/E fees.

Required Maintenance Expenditures:

No required maintenance expenditures are anticipated at this time.

## Fire Detection and Alarm Systems

### Description

The building is protected by a manual hard wire, conventional fire alarm system installed in circa 1990 and manufactured by Cerberus Pyrotronics (reference Photograph 46 in Appendix C). The fire alarm control panel (FACP) is located at the basement level. The fire alarm system monitors manual pull stations, strobes, smoke and heat detectors and flow switches. The FACP drives audio and visual devices located in the corridors and provides only local alarm. No external connection or supervision is provided. A Fire-Lite MS-4 system installed in circa 2005 connects to the fireman's recall system installed at the elevator.

### Condition

The fire alarm system is outdated, obsolete and provides limited protection to the building. As part of the considered change-of-use, we have recommended that a replacement building wide manual fire alarm system be installed to include strobes, pull stations and related peripheral devices.

### Projected Expenditures

Required Capital Expenditures:

We recommend budgeting for replacement and upgrade of the fire alarm system and related peripheral devices throughout the building as part of any change-of-use. Our opinion of cost for this work is included within the electrical section of this report.

Required Maintenance Expenditures:

No required maintenance expenditures are anticipated at this time.

## D50 ELECTRICAL

The electrical systems include the panelboards, safety switches, motor controls, lighting fixtures, public address systems, and security systems.

### Electrical Service and Distribution Equipment

### Description

*Electrical Service Equipment*

The CT Building portion of the campus receives electrical service from pad-mounted transformers located adjacent to the nearby CT-9 kitchen building, supplied by Potomac Electric Power Company (PEPCO), with primary service routed to the CT-9 basement main electrical rooms. Service is routed underground from the CT-9 building to the Property and its characteristics are 208/120-volts, 3-phase, 4-wire. Based on the ratings of the equipment observed within the Property, the incoming service is rated at 400 to 800 amps.

*Power Distribution*

Voltages

Large motors in the building (e.g. those serving the HVAC system equipment) are supplied at 208-volts, 3-phase. Light fixtures, general purpose receptacles, and small appliance and equipment loads are served at 120-volts.

Wire and Conduit

Power distribution is accomplished using wire in conduit. Observed wiring consists of copper with thermoplastic insulation, but some older wiring may have rubber insulation. Wiring within the building is believed to be copper. There were no observed aluminum conductors within the building.

Conduit types varied in the building based on area and usage. Rigid metal conduit is typically used in exposed areas subject to constant moisture and physical damage. Electrical metallic tubing (EMT) is used in most interior spaces. Limited amounts of flexible metal conduit and Type MC cable may also be used.

Panelboards

Two types of panelboards were observed in the building. The primary type is a 225-amp distribution panel, typically located on each floor in each wing of the building, with several of this panel type also located in service areas of the building, including the mechanical rooms. The second type of panelboard observed is an original, screw-in fuse type panelboard that appear to have been abandoned in place. The 225-amp panels utilize circuit breakers for over-current and short circuit protection of circuits.

Safety Switches

In addition to the fusible safety switches used as the service disconnecting means, fusible and non-fused type safety switches are also installed near equipment such as HVAC pumps and fans and serve as the required local disconnecting means for the equipment.

Motor Control

The motor control for pumps and fans consists of individual motor starters located near the associated equipment. The typical control unit consists of a magnetic contactor, overload relays, and associated control wiring.

*Equipment Manufacturers*

There is a variety of electrical equipment manufacturers installed in the building. Most of the equipment was manufactured by Federal Pacific Electric Company (FPE), with older panelboards by Wurback Electric Manufacturing Company.

### Condition

*General*

Electrical distribution equipment of the type installed in this building is generally considered to have a service life of 30-years. Switches, panelboards, motor starters, and wiring are often serviceable for 20 years or more beyond this time if properly maintained, and not subjected to repeated overload or short circuit conditions. However, at the Property, there is no indication that the equipment has received any maintenance. Further,

the older, original installation that may include rubber insulation used for the feeders and branch circuits will have become brittle with age and may disintegrate when handled during modifications.

In some locations, older FPE distribution panels have been exposed to water, particularly in the mechanical rooms and on the basement level. Some of the panels have exposed connections, which coupled with general concerns relative to the FPE equipment, represents a safety hazard and these panels should be replaced immediately, prior to re-occupancy.

*System Capacity*

The rating of the Property's incoming service could not be determined. However, the observed distribution panels would indicate service capacity of between 400- and 800-amps. At 208/120-volts, this equates to approximately 288 KVA. Given a building area of 41,317 square feet, the unit load capacity for the building is 6.97 VA/SF.

Unit load factors for an office building based on code requirements and industry design standards are 3.5 VA/SF for lighting, 1.0 VA/SF for general power (minimum), 6.0 VA/SF for HVAC equipment, and another 1.0 to 2.0 VA/SF to cover elevators, water heaters, and other miscellaneous loads. This yields a total of 11.5 to 12.5 VA/SF for the building. This requires at least a 1,400-amp service at 208/120-volts, or 1,000-amp service at 480/277-volts.

While the electrical system capacity appears adequate for its previous use, the existing service is significantly undersized for office occupancy.

Projected Expenditures

Required Capital Expenditure:

1. A change in building occupancy classification will trigger a requirement to comply with current code requirements. If the facility is converted to commercial office use, we recommend that the entire electrical distribution system be replaced and upgraded. Our opinion of cost for this work to is $1,725,000 excluding applicable Architectural and Engineering fees and General Contractor allowances. This includes the following projects:

    a. Re-routing the existing service to serve just the building ($100,000)
    b. Establishment of new primary and secondary service ($75,000)
    c. Installation of replacement equipment to include fire, data and emergency power ($1,550,000)

Additional Project Incurred Costs

- Item one above will require the retention of a District of Columbia registered engineer or architect to write specifications, produce design documents, monitor installation and provide final sign-off of the completed work. We have included an allowance of 10% of the capital cost of completing the work.

- Item one above represents a complex project that will require the retention of a General Contractor. We recommend budgeting for a General Contractor percentage allowance of 45% for each of these projects. The percentage includes 15% for project management, 20% overhead and profit and a 10% contingency. Percentages are based upon the cost to complete the work excluding A/E fees.

Emergency Power Generation and Distribution Equipment

Description

Emergency power is not provided to the building. There is no emergency power generator, with battery back-up power provided for exit signs and the fire alarm system.

Condition

The limited emergency power system is in the same general condition as the normal power systems described above, that is fair to poor.

Projected Expenditures

Required Capital Expenditure:

A change in building occupancy classification will trigger a requirement to comply with current code requirements. If the facility is converted to commercial office use, we recommend that the entire emergency electrical distribution system be replaced and upgraded. Our opinion of cost for this work is included within the Electrical Service and Distribution Equipment section of this report.

Lighting Systems

Description

Fluorescent lighting is typically used throughout the building, including administrative office areas, treatment rooms, restrooms, lounges, corridors and lobbies. Lamp and ballast types vary, but most fixtures seem to utilize the older F40T12 lamps and magnetic ballasts. Some fixtures have been replaced or upgraded and use the newer, more efficient F32T8 lamps and electronic ballasts.

Incandescent lighting is used in multiple areas including utility closets, mechanical and electrical equipment rooms. Illuminated exit signs are installed at exit doors and along the paths of egress. Lighting control is via local switching in the respective spaces.

Condition

The lighting systems appeared to be in fair to poor condition. Many fixtures have broken or missing lenses. Incandescent lamps in many equipment rooms and other areas are inoperative, leaving areas with insufficient or no illumination. Although the overall lighting systems can be serviceable through the end of the study

period, all equipment, wiring, and controls should be programmed for replacement as part of the overall electrical distribution system replacement.

### Projected Expenditures

Required Capital Expenditure:

A change in building occupancy classification will trigger a requirement to comply with current code requirements. If the facility is converted to commercial office use, we recommend that the entire lighting system be replaced and upgraded. The estimated cost for new lighting and control systems is included within the interior build-out cost included within the interiors section of this report.

## Communications and Data Systems

### Description

Telephone service enters the building in a first floor closet in the main entrance vestibule. Trunk cables are routed up and down to the administrative offices and selected other rooms. Incoming cables and equipment may be owned and maintained by the utility companies. Cabling and equipment within the building is owned and maintained by St. Elizabeths Hospital.

### Condition

The data and telephone infrastructure appeared to be in fair condition.

### Projected Expenditures

Required Capital Expenditure:

A change in building occupancy classification will trigger a requirement to comply with current code requirements. Further, the communications and data needs for an office building are significantly different than for a hospital. The cost of these systems will vary with the building and tenant layouts. Our opinion of cost for this work is included within the Electrical Service and Distribution Equipment section of this report.

## D60 SAFETY, SECURITY & ACCESS CONTROL

### Description

The Property was previously provided with an intrusion detection system (IDS) that included first floor door contacts; infra-red motion detection devices located in areas of the first floor, and web-based closed circuit television (CCTV) cameras. A public address (PA) system was provided, with system control located in the first floor administrative offices and ceiling mounted speakers throughout the building. Access control to the building is provided by keyed locksets on primary and secondary entrances.

### Condition

The IDS systems and PA systems were not operable at the time of our assessment, and much of the IDS and PA equipment had been removed. If the building is converted to office use, the security systems must be replaced and reconfigured to suit the intended function. A public address system is not expected to be required in an office building.

### Blast Shrapnel Protection

The Property's windows were not provided with blast shrapnel protection. Based upon their construction type, the use of non-tempered glazing panels and their general configuration, the existing window system will provide poor blast shrapnel protection.

### Safety / Security Review

In addition to observation of the safety, security and access control systems, we completed a cursory level safety and security review. The purpose of the review was to determine and document hazards and required improvement in all areas of the building and surrounding site.

The portion of the campus containing the Property is enclosed by fencing and access to the site in controlled by a security guard. Windows were provided with security grating. Doors consisted of steel panel construction.

### Projected Expenditures

Required Capital Expenditure:

A change in building occupancy classification will trigger a requirement to comply with current code requirements. Further, the security needs for an office building are significantly different than for a hospital. The cost of these systems will vary with the building and tenant layouts. Our opinion of cost for this work is included within the Electrical Service and Distribution Equipment section of this report.

# E. EQUIPMENT & FURNISHINGS

## E10 EQUIPMENT

### Description

Equipment provided at the Property included administrative offices equipment, clinical equipment and computers.

### Condition

Equipment appeared to be in generally fair condition. Under the change-of-use scenario, we assume that existing equipment will be disposed of by the District of Columbia prior to change-of-use.

### Projected Expenditures

Required Capital Expenditure:

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

## E20 FURNISHING

### Description

Furnishings provided at the Property included office furniture and library and storage shelving and files.

### Condition

Furniture appeared to be in generally fair to good condition. Under the change-of-use scenario, we assume that existing furniture will be disposed of by the District of Columbia prior to change-of-use.

### Projected Expenditures

Required Capital Expenditure:

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditure:

No maintenance expenditures are required at this time.

## F. SPECIAL CONSTRUCTION

### F10 SPECIAL CONSTRUCTION

None.

## G. SITE FEATURES

### G10 SITE SYSTEMS

The site containing the Property is within the St. Elizabeths Hospital campus, with most site improvements shared by the numerous buildings on the campus. Shared site systems adjacent to the Property include the asphalt and concrete-paved roadways and parking areas at the front (southeast) and rear (northwest) of the Property, cast-in-place concrete sidewalks and curb and gutter sections along the roadways and parking areas, a combination of cast-in-place concrete and granite steps with painted steel railing assemblies, brick retaining walls, stormwater management features, site lighting fixtures and the landscaped lawn areas surrounding the building.

#### Description

A private roadway, Dogwood Street, is located along the southeast and east boundaries of the Property and is not considered part of the Property. This roadway is part of the internal campus road system and is accessed from a single secure entrance drive off of Alabama Avenue SE. A parking area drive, previously accessed from Dogwood Street, but since made inaccessible by fencing surrounding an adjacent hospital building (Building 124), is located to the northwest (rear) of the building (reference Photograph 3 in Appendix C). The principal portions of the drive were 20' wide and provided service access to the rear of the Property. The drive was paved with asphalt, with concrete curbing. Concrete aprons from the drive provide access to the entrances to the two mechanical rooms at the rear of the building

A series of 4' wide 4" deep un-reinforced cast-in-place concrete exposed aggregate sidewalk panels are provided at the front of the building. Table G10 summarizes the approximate area of the asphalt and concrete site features.

Table G10 Asphalt & Concrete Site Features

| Asphalt Pavement (s.y.) [1] | No. Parking Stalls (inc. ADA) [2] | Area of Concrete Pavement (s.f.) [3] | Area of Concrete Sidewalks (s.f.) [3] | Length of Concrete Curb & Gutter (l.f.) [4] |
|---|---|---|---|---|
| 708 | 0 | 0 | 7,211 | 724 |

1. s.y. indicates square yards
2. ADA indicates that parking stalls are marked and signed in general accordance with the intent of the 1991 Americans with Disability Acts Accessibility Guidelines (ADAAG)
3. s.f. indicates square feet
4. l.f. indicates linear feet

A series of cast-in-place concrete steps are provided at the main entrance at the south of the building (reference Photograph 47 in Appendix E). Steps consist of 4" thick cast-in-place concrete sections. Steps are 8' wide x 8' long and achieve a height of 55". Each step has 12" wide treads and 6" high risers. The outer perimeter of the step assemblies are lined with painted iron railing assemblies. Railings consist of 36" tall assemblies with ½" square pickets spaced at 5 ½" on-center, 1 ½" x ½" bottom rails and 1 ¾" x 1 ½" top rails.

Alternating surface-recessed pickets provide lateral support to the railings. An 8' wide x 6' 7" deep landing is provided at the top of the entrance steps. The landing consists of a 8" thick cast-in-place mild steel reinforced concrete slab enclosed by 30" tall railing assemblies.

### Condition

The asphalt pavement is in fair to poor condition. We noted widespread longitudinal and traverse cracks at the pavement surface, hardening and erosion of the wearing course, areas of poorly completed repair and partial overlay, and numerous instances of alligator cracking symptomatic of subbase failure.

We have recommended budgeting for the implementation of a structured pavement repair program to extend the life of the pavements and reduce the need for reactive repair and replacement. This repair program should consist of the near-term removal of the pavement wearing surface, replacement of areas of failed subbase (alligator cracking), the installation of a 1 to 1 ½" thick replacement wearing surface (tapered to drains), and the application of parking stall or other necessary surface markings at that wearing surface. Following the completion of this work, we recommend budgeting a capital allowance for the filling of cracks, the application of a one (parking stalls) to two (drive lanes) coat asphaltic-based seal coat, and the re-application of surface markings.

Concrete sidewalk panels and curb and gutter section are in poor to fair condition. We noted slightly heaved and cracked panels at walkways at the front and rear of the building. We have recommended budgeting for near-term replacement of deteriorated sidewalks.

The entrance steps and associated landing are in fair to good condition (reference Photographs 48 through 50 in Appendix C). We noted spalled concrete, calcium staining and exposed / corroded reinforcing steel at the underside of the landing, peeled paint and areas of corrosion at the perimeter railing assemblies, and areas of spalled concrete at the stair risers. We have recommended budgeting for near-term repair of these conditions.

### Projected Expenditures

Required Capital Expenditures:

No required capital expenditures are anticipated at this time.

Recommended Maintenance Expenditures:

1. Asphalt resurfacing (mill and overlay) is typically needed about every 15 to 20 years. Our opinion of cost to complete a 1 to 1 ½" mill and overlay of the service drive and associated parking areas is $21,210 ($30 per square yard) in 2010.

2. We recommend budgeting for replacement of deteriorated concrete pavement and sidewalk panels provided. Our opinion of cost for this work is $23,300 ($20 per square foot) in 2010.

3. We recommend budgeting for refurbishment of the entrance steps and landing. Refurbishment should consist of removing delaminated and severely cracked concrete, epoxy coating exposed reinforcing steel,

replacing that concrete with a low chloride mix, applying a flex impregnated cementious coating over the elevated landing, and cleaning, priming and coating the perimeter railing assemblies. Our opinion of cost for this work is $7,500 in 2010.

ACCESSIBILITY ISSUES

## H10 Accessibility

### Introduction

As a publicly accessible facility, access to and within the building for disabled building users will be governed (where applicable) by the 1991 Americans with Disability Act (ADA) Accessibility Guidelines. Specifically, two areas of the ADA have significant effect on the physical aspects of the Property.

Title I deals with employment discrimination, and requires that employers not discriminate against a disabled person in hiring or employment. This can impact the configuration and features of buildings and those employers are expected to make "reasonable accommodation", including making facilities readily accessible to disabled employees.

Title III requires that public accommodation provide goods and services to disabled patrons on an equal basis with the non-disabled patrons. This title is the part of the Act with perhaps the greatest impact on buildings, which provide public accommodations, including office buildings.

The ADA has provided a benchmark for measuring accessibility, primarily orientated towards new construction. It also provides guidance for modification of existing facilities to eliminate barriers to access. This benchmark is the ADA Accessibility Guidelines (ADAAG). The ADAAG was written by the Architectural and Transportation Barriers Compliance Board, and first issued in final form in July 1991. The stated purpose of the guidelines is to ensure that newly constructed facilities and altered portions of existing facilities covered by the ADA are readily accessible to disabled persons.

This report has been based upon the ADAAG issued in July 1991. Discussion has been made by the Architectural and Transportation Barriers Compliance Board for modification to the presently enforceable ADAAG. The details and enforcement date of these modifications have yet to be released. In light of this information, we recommend that prior to conducting any improvement, advice is sought from legal counsel and current guidelines be adhered to.

Regulatory implementation of the ADA includes the following prioritizes for barrier removal in existing facilities:

- Accessible Entrances. Providing access from public sidewalks, parking or public transportation that enables disabled individuals to enter the facility.
- Access to Goods and Services. Providing access to areas where goods and services are made available to the public.
- Usability of Restrooms. Providing access to restroom facilities.
- Removal of Remaining Barriers. Providing access to the goods, services, facilities, privileges, advantages, or accommodations.

### Applicability

The ADA states that if a facility issued a Certificate of Occupancy prior to the March 13, 1991 implementation of the ADA is subject to major renovation it will then be required to comply with the ADA requirements. Under the change-of-use scenario, we anticipate that the interior construction will be removed to allow the construction of an office specific layout. As part of this process, the reconfigured interior areas should be designed for accessibility, ADA compliant elevators be installed (see section D10), and the building exteriors be reconfigured to provide compliant access. We have included allowances for this work within the respective report sections (i.e. exteriors section, interior reconstruction allowance) and not individually within this section.

### Accessibility Considerations

### Accessible Entrances

The first consideration of the ADAAG relates to measures that will enable individuals with disabilities to physically approach and enter a place of public accommodation. The priority of "getting through the door" recognizes that providing actual physical access to a facility from public sidewalks, public transportation, or parking, is generally preferable to any alternative arrangement in terms of both business efficiency and the dignity of individuals with disabilities. In general terms this can mean exterior access to the building.

Persons traveling to the building by public transportation, specifically, arriving by bus will arrive at stops located on Alabama Avenue SE and Martin Luther King Avenue SE. Persons arriving by the Metrorail system will arrive via the Congress Heights metrorail station located at the east perimeter of the Property.

Pedestrians wishing to access the building are able to access through the main south entrance. This access requires that a disabled building user negotiate non-compliant steps. We anticipate that as part of the interior reconstruction, the rear entrance will be designated as the disabled entrance. With the addition of an elevator system, this entrance will meet the requirements of the ADAAG with regard to access to and within the building.

### Route of Travel

Disabled persons wishing to access the building are able to gain suitable means of entry via the connector building. The route of travel is generally unrestricted and accessible. However, the elevator is not compliant. As a result, once within the building at the basement level, a disabled building user is not provided with compliant access to other areas of the building.

### Accessible Parking

The Property contained no specifically assigned parking spaces.

### Accessible Drop-Off and Pick-Up Areas

Accessible drop-off and pick-up areas are provided at the rear of the building.

### Projected Capital Expenditures

Required Capital Expenditures:

Required capital expenditures are considered within the applicable report sections.

Required Maintenance Expenditures:

No required maintenance expenditures are anticipated at this time.

### Access to Goods & Services

The second consideration relates to measures that will enable individuals with disabilities to access areas within the Property that provides goods and services.

### Accessible Routes and Amenities

### Horizontal and Vertical Circulation

The building does not contain an accessible elevator or platform lift. Once within the building, a disabled individual is provided with level and generally unrestricted access to the basement level only. Access to the upper floors would require the installation of a compliant elevator or modification of the current elevator system.

### Door Widths and Signage

Section 4.1 (Minimum Requirements) of the ADAAG states that when accessible entrances are not all accessible then the inaccessible entrances shall have directional signage to indicate the route to the nearest accessible entrance. The building did not contain directional signage. Section 4.13 of the ADAAG (Doors) states that doorways shall have a minimum clear opening of 32". The building doorways meet this requirement, with a typical clear opening width of 33".

The ADAAG requires that signs that identify permanent rooms and spaces, such as those identifying restrooms and exits or providing classroom numbers, must have Braille and raised letters or numbers, so that they may be read visually or tactilely. The signs must also meet specific requirements for mounting location, color contrast, and non-glare surface. Signs used to identify offices, medical rooms, restrooms and other permanent rooms and spaces within the building did not meet these requirements. Signs did not have Braille letters or numbers.

Signs should be replaced as part of any change-of-use. Our opinion of cost for interior reconstruction under the change-of-use scenario includes for replacement of signs.

### Projected Capital Expenditures

Required Capital Expenditures:

Required capital expenditures are considered within the applicable report sections.

Required Maintenance Expenditures:

No required maintenance expenditures are anticipated at this time.

### Usability of Restrooms

The third priority emphasizes those measures that will provide individuals with disabilities with access to restroom facilities. The building contained several unisex restrooms, along with male and female restrooms (reference Photographs 89 & 90 in Appendix E). Restrooms were not compliant with the ADAAG. The following specific violations of the ADAAG were noted:

- The drain pipes under lavatories were not insulated as required to protect against contact
- Urinals were positioned above the maximum height of 17-inches permitted by the ADAAG.
- Water closets did not provide an adequate clearance. The ADAAG requires that a clearance of 18-inches from the side grab bar wall to the centerline of the water closet
- Signage was not mounted at 60-inches above the floor to the centerline of the sign as required by the ADAAG. In addition, signs did not contain Braille and raised pictographs as required by the ADAAG.

We anticipate that as part of any re-use the interior floor plate will be demolished and compliant restrooms will be constructed. Our opinion of cost for this work is included within the interior demolition and reconstruction allowance included previously.

### Projected Capital Expenditures

Required Capital Expenditures:

Required capital expenditures are considered within the applicable report sections.

Required Maintenance Expenditures:

No required maintenance expenditures are anticipated at this time.

### Removal of Remaining Barriers

None.

# I. HAZARDOUS MATERIALS

## I10 Hazardous Materials

Faithful+Gould was not requested to perform an environmental assessment of the Property and has not performed sampling or testing of materials as part of our assessment. However, as part of our assessment we noted materials that may be hazardous.

Based upon our visual observation of the building we anticipate that the building contains numerous hazardous materials (reference Photographs 91 & 92 in Appendix E) as detailed below:

- 9" x 9" asbestos containing floor tiles and associated mastics throughout the building
- Asbestos containing pipe insulation at the mechanical rooms and chases
- Lead-based paint at painted areas throughout the interior and exterior of the building

The hazardous materials observed during our evaluation appeared to be in fair condition and generally encapsulated. However, our evaluation consisted of a limited-scope visual assessment without the completion of sampling or destructive analysis. The true condition of the hazardous materials and the extent of the hazard they present will only be known after the completion of a more-in depth analysis.

### Projected Capital Expenditures

Required Capital Expenditures:

No required capital expenditures are anticipated at this time.

Required Maintenance Expenditures:

1. We recommend that an appropriately qualified environmental scientist be retained to test the suspected environmental hazards to determine density of contaminants and cell condition. Our opinion of cost for this work is $20,000 in 2010.

# J. ENVIRONMENTAL ANALYSIS

## J10 LEED Analysis

The United States Green Building Council (USGBC) as administers of the LEED rating system require as a prerequisite that a building considered for certification be occupied. The building is presently vacant and therefore not eligible for certification. We recommend that if certification is desired, the change-of-use / renovation plans include for this.

## J20 Green Roof Feasibility

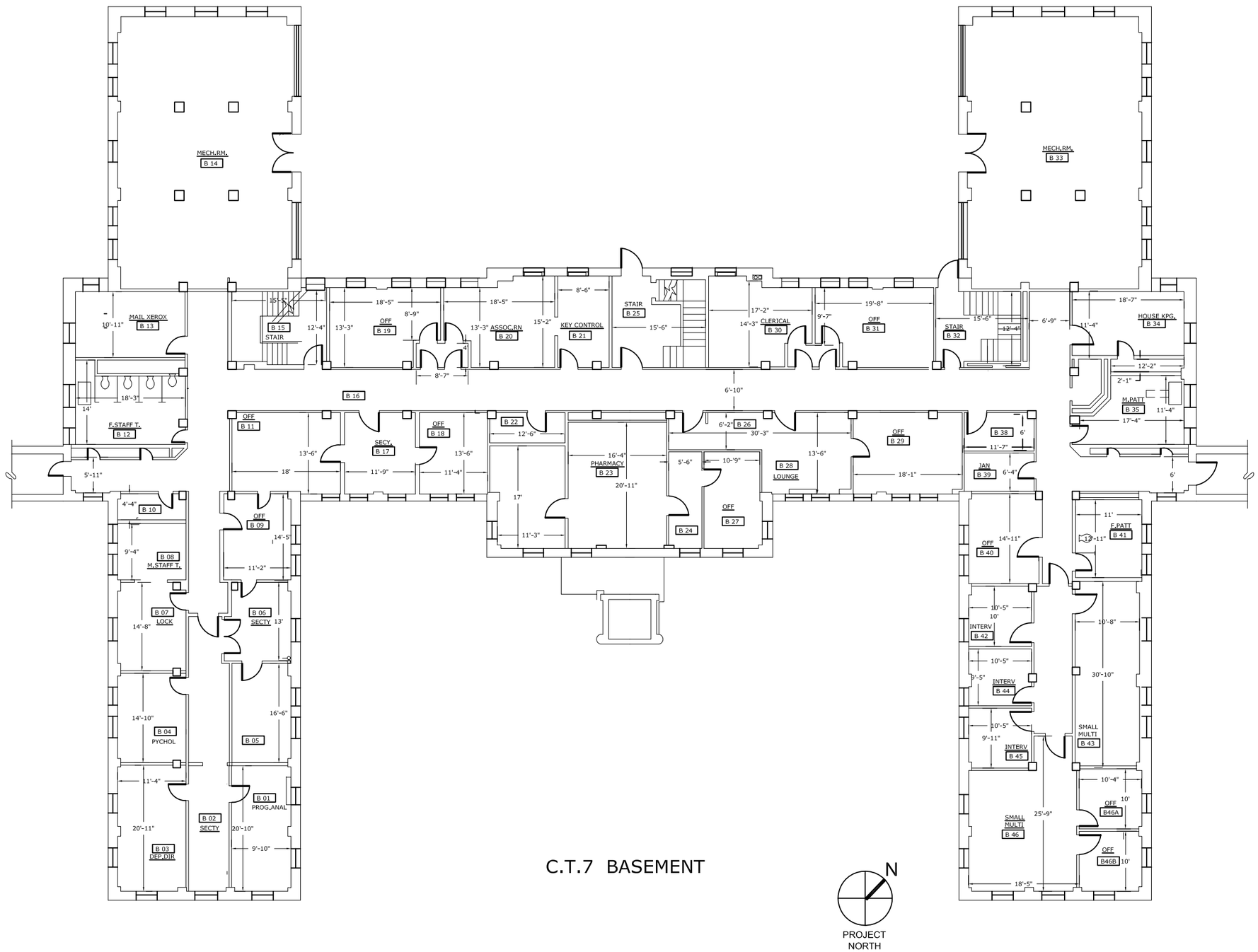
Faithful+Gould was requested to conduct a study for the design and installation of a green roof system to support low impact development solutions. This study consisted of an evaluation of the existing roof structure, subsurface components (i.e. roof system), drainage systems and structural load limits. The building contains a sloped roof system. As a result, the installation of a green roof system is not feasible.

## J30 Energy Efficiency

The current building systems are generally inefficient from an energy standpoint. We have assumed that when the building is renovated to facilitate change-of-use, energy efficient systems will be installed in accordance with local and national codes / standards. Furthermore, we have assumed that systems not subject to replacement will be modified to increase their energy efficiency. The cost for these works has been included within the various line item recommendations.

# Space Utilization Survey

FAITHFUL GOULD




C.T.7 BASEMENT

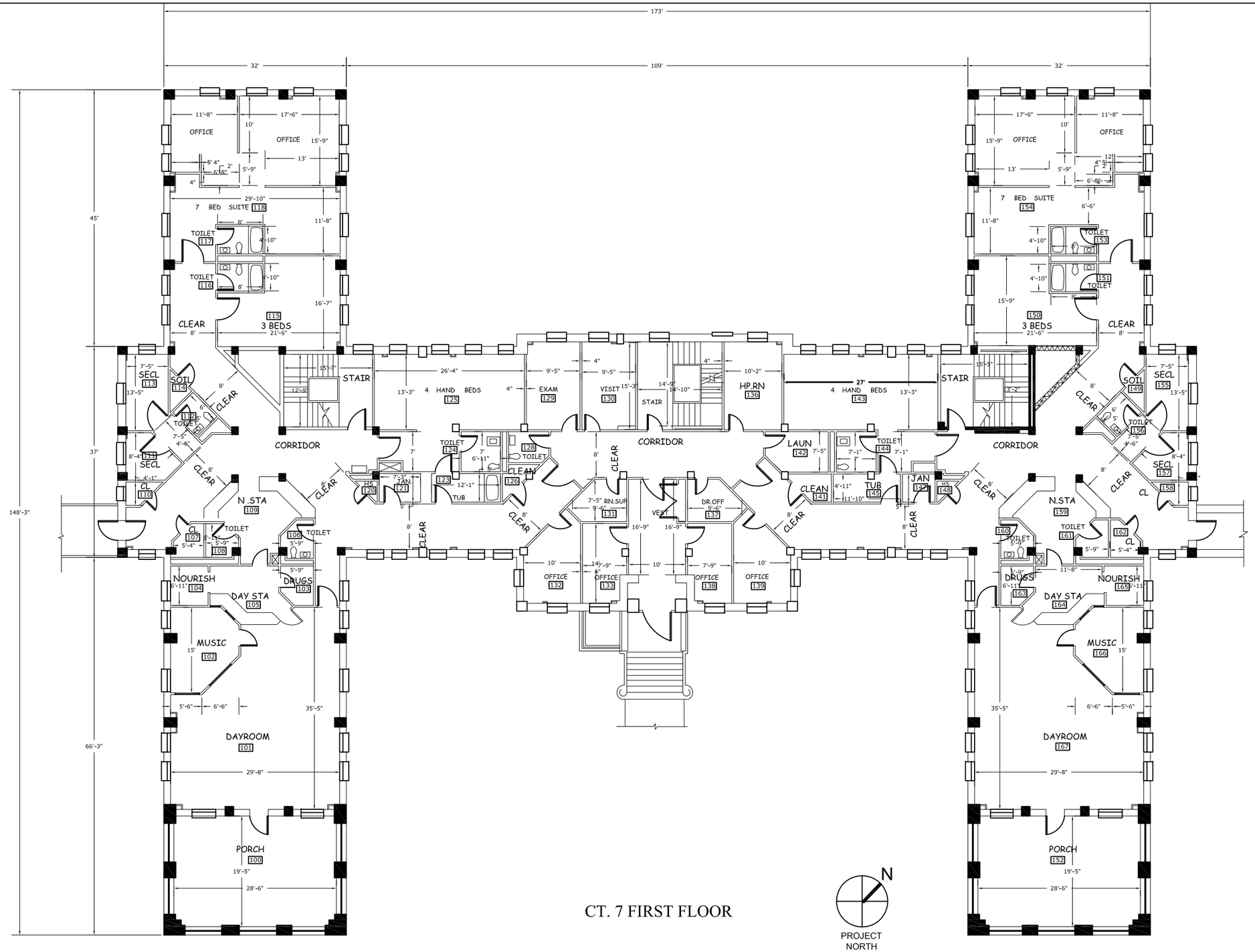
FAITHFUL + GOULD
CONSTRUCTIVE EXPERTISE

Project:
ST ELIZABETH'S HOSPITAL
CT-7 BUILDING 116
BASEMENT

Sheet No.:
1 OF 3

Sheet Title:

Description:
FLOOR PLAN




CT. 7 FIRST FLOOR

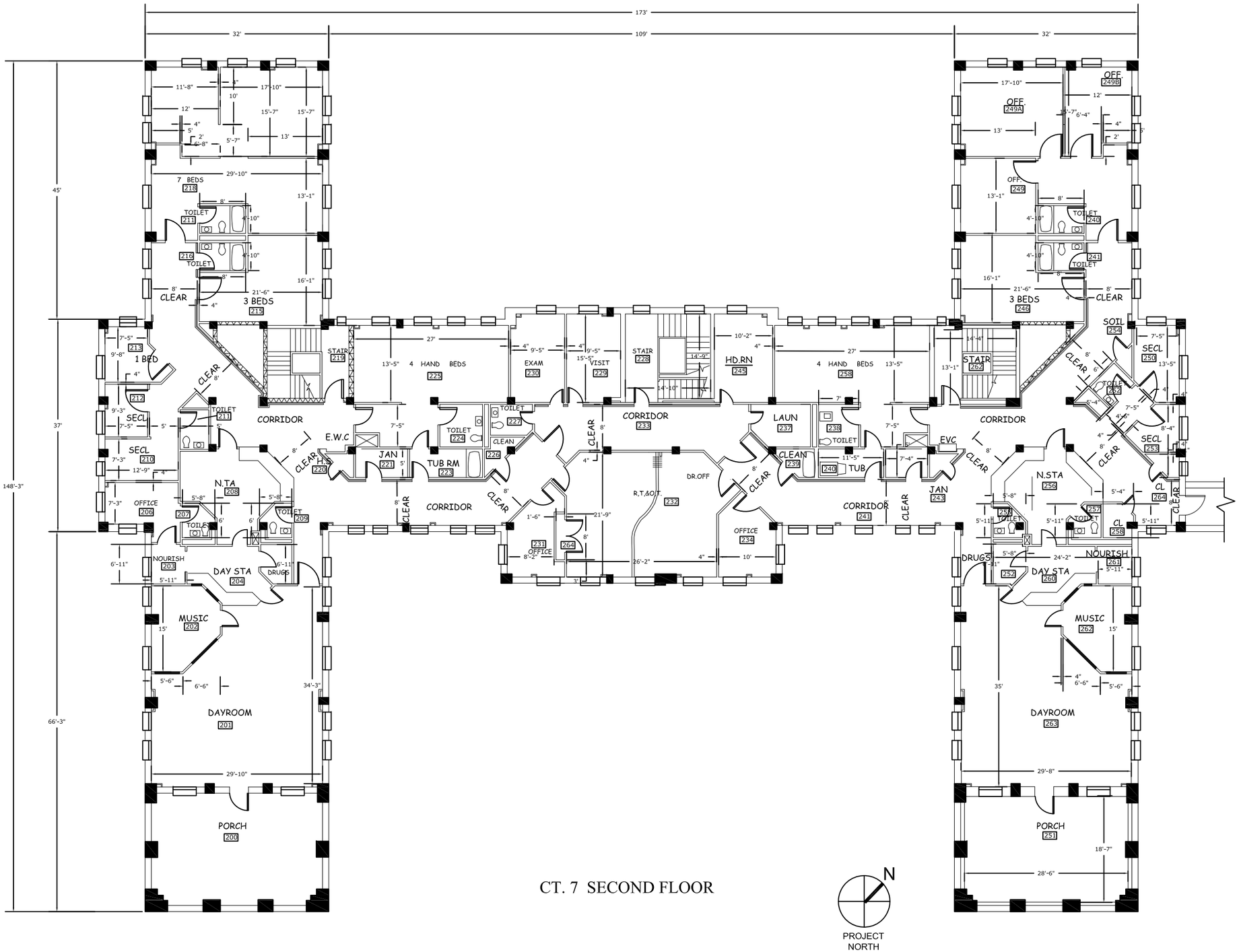
FAITHFUL + GOULD
CONSTRUCTIVE EXPERTISE

Project:
ST ELIZABETH'S HOSPITAL
CT-7 BUILDING 116
FIRST FLOOR

Sheet No.:
2 OF 3

Sheet Title:

Description:
FLOOR PLAN




CT. 7 SECOND FLOOR

PROJECT NORTH

FAITHFUL + GOULD
CONSTRUCTIVE EXPERTISE

Project:
ST ELIZABETH'S HOSPITAL
CT-7 BUILDING 116
SECOND FLOOR

Sheet No.:
3 OF 3

Sheet Title:

Description:
FLOOR PLAN

# Appendix A

## Six Year Capital Expenditure Forecast

## CONVERSION TO OFFICE USE

**SIX YEAR CAPITAL EXPENDITURE FORECAST**
**Building 116 (CT 7)**
**1100 Alabama Avenue, SE**
**Washington, D.C. 20032**

| | ITEM | EUL | RUL | Unit Cost | Quantity | Unit of Measurement | Priority | Repair / PM | Replace | A/E Serv. | GC Allow. | Immediate | 2010 Year 1 | 2011 Year 2 | 2012 Year 3 | 2013 Year 4 | 2014 Year 5 | 2015 Year 6 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Priority 1 | Priority 2 | | Priority 3 | | | Priority 4 | |
| A. SUBSTRUCTURE | | | | | | | | | | | | | | | | | | | |
| A10 Foundations | | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | | |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| A20 Basement Construction | | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | | |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| | | | | SUBSTRUCTURE TOTALS = | | | | | | | | | | | | | | | $0 |
| B. SHELL | | | | | | | | | | | | | | | | | | | |
| B10 Superstructure | | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | | |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| B20 Exterior Closure | | | | | | | | | | | | | | | | | | | |
| 1 | Replace Cracked, Spalled & Separated Mortar at Cast Stone | 20 | 0 | $160.00 | 220 | LF | 2 | | √ | √ | √ | | $35,200 | | | | | | $35,200 |
| 2 | Replace Cracked, Spalled & Separated Mortar / Brick at Exterior Wall | 20 | 0 | $20.00 | 1,030 | SF | 2 | | √ | √ | √ | | $20,600 | | | | | | $20,600 |
| 3 | Replace Failed Trim & Soffits | 10 | 0 | $30.00 | 910 | SF | 2 | | √ | √ | √ | | $27,300 | | | | | | $27,300 |
| 4 | Exterior Repainting (Trim, Lintels, Soffits) | 7 | 0 | $13.00 | 4,190 | SF | 2 | √ | | √ | √ | | $54,470 | | | | | | $54,470 |
| 5 | Refurbish Windows (See Text) | 50 | 0 | $91.00 | 4,607 | SF | 2 | √ | | √ | √ | | $419,237 | | | | | | $419,237 |
| 6 | Replace Enclosure Screens at Porches | 50 | 0 | $50.00 | 1,778 | SF | 2 | | √ | √ | √ | | $88,900 | | | | | | $88,900 |
| 7 | Replace Exterior Doors | 20 | 0 | $1,500.00 | 12 | EA | 2 | | √ | √ | √ | | $18,000 | | | | | | $18,000 |
| | | | | | | | | | | | | | | | | | | | |
| | A/E Consulting Services (A/E Serv.) - 10% | N/A | N/A | 10.00% | N/A | Percent | 2 | Applicable to all items above | | | | | $66,371 | | | | | | $66,371 |
| | General Contractor OH & Supervision Allow. - 45% | N/A | N/A | 45.00% | N/A | Percent | 2 | Applicable to all items above | | | | | $298,668 | | | | | | $298,668 |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $1,028,746 |
| B30 Roofing | | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | | |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| | | | | SHELL TOTALS = | | | | | | | | | | | | | | | $1,028,746 |
| C. INTERIORS | | | | | | | | | | | | | | | | | | | |
| 1 | Interior Demolition (Create Clear Floor Plate) | N/A | 0 | $6.00 | 41,317 | SF | 2 | | √ | √ | √ | | $247,902 | | | | | | $247,902 |
| 2 | Interior Reconstruction (Including Finishes) | N/A | 0 | $52.00 | 41,317 | SF | 2 | | √ | √ | √ | | $2,148,484 | | | | | | $2,148,484 |
| | | | | | | | | | | | | | | | | | | | |
| | A/E Consulting Services (A/E Serv.) - 10% | N/A | N/A | 10.00% | N/A | Percent | 2 | Applicable to items 1 & 2 above | | | | | $239,639 | | | | | | $239,639 |
| | General Contractor OH & Supervision Allow. - 45% | N/A | N/A | 45.00% | N/A | Percent | 2 | Applicable to items 1 & 2 above | | | | | $1,078,374 | | | | | | $1,078,374 |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $3,714,398 |
| | | | | INTERIORS TOTALS = | | | | | | | | | | | | | | | $3,714,398 |

**SIX YEAR CAPITAL EXPENDITURE FORECAST**
**Building 116 (CT 7)**
**1100 Alabama Avenue, SE**
**Washington, D.C. 20032**

## CONVERSION TO OFFICE USE

| | ITEM | EUL | RUL | Unit Cost | Quantity | Unit of Measurement | Priority | Repair / PM | Replace | A/E Serv. | GC Allow. | Immediate | 2010 Year 1 | 2011 Year 2 | 2012 Year 3 | 2013 Year 4 | 2014 Year 5 | 2015 Year 6 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Priority 1 | Priority 2 | Priority 3 | | | | Priority 4 | |
| D. SERVICES | | | | | | | | | | | | | | | | | | | |
| D10 Conveying | | | | | | | | | | | | | | | | | | | |
| 1 | Modernize Connector Elevator | 20 | 0 | $200,000.00 | 1 | EA | 2 | | √ | √ | √ | | $200,000 | | | | | | $200,000 |
| 2 | Install Elevator | 30 | 0 | $400,000.00 | 1 | EA | 2 | | √ | √ | √ | | $400,000 | | | | | | $400,000 |
| | | | | | | | | | | | | | | | | | | | |
| | A/E Consulting Services (A/E Serv.) - 10% | N/A | N/A | 10.00% | N/A | Percent | 2 | Applicable to items 1 & 2 above | | | | | $60,000 | | | | | | $60,000 |
| | General Contractor OH & Supervision Allow. - 45% | N/A | N/A | 45.00% | N/A | Percent | 2 | Applicable to items 1 & 2 above | | | | | $270,000 | | | | | | $270,000 |
| | | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | $930,000 |
| D20 Plumbing | | | | | | | | | | | | | | | | | | | |
| 1 | Replace Domestic Hot & Cold Water System | N/A | 0 | $2.50 | 41,317 | SF | 2 | | √ | √ | √ | | $103,293 | | | | | | $103,293 |
| 2 | Replace Sanitary & Vent Piping System | N/A | 0 | $2.20 | 41,317 | SF | 2 | | √ | √ | √ | | $90,897 | | | | | | $90,897 |
| | | | | | | | | | | | | | | | | | | | |
| | A/E Consulting Services (A/E Serv.) - 10% | N/A | N/A | 10.00% | N/A | Percent | 2 | Applicable to all items above | | | | | $19,419 | | | | | | $19,419 |
| | General Contractor OH & Supervision Allow. - 45% | N/A | N/A | 45.00% | N/A | Percent | 2 | Applicable to all items above | | | | | $87,385 | | | | | | $87,385 |
| | | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | $300,994 |
| D30 HVAC | | | | | | | | | | | | | | | | | | | |
| 1 | Install Replacement Central Heating & Cooling System | 30 | N/A | $29.00 | 41,317 | SF | 2 | | √ | √ | √ | | $1,198,193 | | | | | | $1,198,193 |
| 2 | Remove Existing HVAC Equipment | 30 | N/A | $2.30 | 41,317 | SF | 2 | | √ | √ | √ | | $95,029 | | | | | | $95,029 |
| | | | | | | | | | | | | | | | | | | | |
| | A/E Consulting Services (A/E Serv.) - 10% | N/A | N/A | 10.00% | N/A | Percent | 2 | Applicable to items 1 & 2 above | | | | | $129,322 | | | | | | $129,322 |
| | General Contractor OH & Supervision Allow. - 45% | N/A | N/A | 45.00% | N/A | Percent | 2 | Applicable to items 1 & 2 above | | | | | $581,950 | | | | | | $581,950 |
| | | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | $2,004,494 |
| D40 Fire Protection | | | | | | | | | | | | | | | | | | | |
| 1 | Install Fire Suppression Sprinkler System | 50 | 0 | $4.00 | 41,317 | SF | 2 | | | √ | √ | | $165,268 | | | | | | $165,268 |
| | | | | | | | | | | | | | | | | | | | |
| | A/E Consulting Services (A/E Serv.) - 10% | N/A | N/A | 10.00% | N/A | Percent | 2 | Applicable to item 1 above | | | | | $16,527 | | | | | | $16,527 |
| | General Contractor OH & Supervision Allow. - 45% | N/A | N/A | 45.00% | N/A | Percent | 2 | Applicable to item 1 above | | | | | $74,371 | | | | | | $74,371 |
| | | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | $256,165 |
| D50 Electrical | | | | | | | | | | | | | | | | | | | |
| 1 | Replace & Upgrade Electrical, Fire & Telecommunication Systems | | | | | | | | | | | | | | | | | | |
| a | Re-Rout Electrical Service | 30 | 0 | $100,000.00 | 1 | LS | 2 | | √ | √ | √ | | $100,000 | | | | | | $100,000 |
| b | Establish New Primary Electrical Service | 30 | 0 | $75,000.00 | 1 | LS | 2 | | √ | √ | √ | | $75,000 | | | | | | $75,000 |
| c | Installation of Fire, Data & Emergency Power Systems | 30 | 0 | $1,550,000.00 | 1 | LS | 2 | | √ | √ | √ | | $1,550,000 | | | | | | $1,550,000 |
| | | | | | | | | | | | | | | | | | | | |
| | A/E Consulting Services (A/E Serv.) - 10% | N/A | N/A | 10.00% | N/A | Percent | 2 | Applicable to item 1 above | | | | | $172,500 | | | | | | $172,500 |
| | General Contractor OH & Supervision Allow. - 45% | N/A | N/A | 45.00% | N/A | Percent | 2 | Applicable to item 1 above | | | | | $776,250 | | | | | | $776,250 |
| | | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | $2,673,750 |
| | | | | | SERVICES TOTALS = | | | | | | | | | | | | | | $6,165,404 |

**SIX YEAR CAPITAL EXPENDITURE FORECAST**
**Building 116 (CT 7)**
**1100 Alabama Avenue, SE**
**Washington, D.C. 20032**

## CONVERSION TO OFFICE USE

| ITEM | EUL | RUL | Unit Cost | Quantity | Unit of Measurement | Priority | Repair / PM | Replace | A/E Serv. | GC Allow. | Immediate | 2010 Year 1 | 2011 Year 2 | 2012 Year 3 | 2013 Year 4 | 2014 Year 5 | 2015 Year 6 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Priority 1 | Priority 2 | Priority 3 | | | | Priority 4 | |
| E. FURNISHINGS & EQUIPMENT | | | | | | | | | | | | | | | | | | |
| E10 Equipment | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| E20 Furnishings | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| | | | FURNISHINGS & EQUIPMENT TOTALS = | | | | | | | | | | | | | | | $0 |
| F. SPECIAL CONSTRUCTION & DEMOLITION | | | | | | | | | | | | | | | | | | |
| F10 Special Construction | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | SPECIAL CONSTRUCTION & DEMOLITION TOTALS = | | | | | | | | | | | | | | | $0 |
| G. BUILDING SITEWORK | | | | | | | | | | | | | | | | | | |
| G10 Site Systems | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| | | | BUILDING SITEWORK TOTALS = | | | | | | | | | | | | | | | $0 |
| H. ACCESSIBILITY | | | | | | | | | | | | | | | | | | |
| H10 Site Improvements | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| | | | ACCESSIBILITY TOTALS = | | | | | | | | | | | | | | | $0 |
| I. HAZARDOUS MATERIALS | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| | | | HAZARDOUS MATERIALS TOTALS = | | | | | | | | | | | | | | | $0 |
| J. ENVIRONMENTAL ANALYSIS | | | | | | | | | | | | | | | | | | |
| J10 LEED Analysis | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| J20 Green Roof Feasibility | | | | | | | | | | | | | | | | | | |
| No Capital Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| J30 Energy Efficiency | | | | | | | | | | | | | | | | | | |
| (Included Elsewhere) | | | | | | | | | | | | | | | | | | $0 |
| | | | | | | | | | | | | | | | | | | |
| | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| | | | ENVIRONMENTAL ANALYSIS TOTALS = | | | | | | | | | | | | | | | $0 |
| TOTALS | | | | | | | | | | | $0 | $10,908,548 | $0 | $0 | $0 | $0 | $0 | $10,908,548 |
| TOTALS (w/ Inflation @ 4%) | | | | | | | | | | | $0 | $10,908,548 | $0 | $0 | $0 | $0 | $0 | $10,908,548 |

# Appendix B

## Six Year Maintenance Expenditure Forecast

## CONVERSION TO OFFICE USE

**SIX YEAR MAINTENANCE FORECAST**
**Building 116 (CT 7)**
**1100 Alabama Avenue, SE**
**Washington, D.C. 20032**

| | ITEM | EUL | RUL | Unit Cost | Quantity | Unit of Measurement | Priority | Repair / PM | Replace | A/E Serv. | GC Allow. | Immediate | 2010 Year 1 | 2011 Year 2 | 2012 Year 3 | 2013 Year 4 | 2014 Year 5 | 2015 Year 6 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Priority 1 | Priority 2 | Priority 3 | | | | Priority 4 | |
| A. SUBSTRUCTURE | | | | | | | | | | | | | | | | | | | |
| A10 Foundations | | | | | | | | | | | | | | | | | | | |
| | No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| A20 Basement Construction | | | | | | | | | | | | | | | | | | | |
| | No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| | | | | SUBSTRUCTURE TOTALS = | | | | | | | | | | | | | | | $0 |
| B. SHELL | | | | | | | | | | | | | | | | | | | |
| B10 Superstructure | | | | | | | | | | | | | | | | | | | |
| 1 | Evaluate Loading Capacity of Structural System | N/A | 2 | $150.00 | 160 | Hours | 2 | | | √ | | | $24,000 | | | | | | $24,000 |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $24,000 |
| B20 Exterior Closure | | | | | | | | | | | | | | | | | | | |
| | No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| B30 Roofing | | | | | | | | | | | | | | | | | | | |
| 1 | Roof Life-Extension Maintenance | N/A | N/A | $5,000.00 | 1 | LS | varies | √ | | | | | $5,000 | $5,000 | $5,000 | $5,000 | $5,000 | $5,000 | $30,000 |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $30,000 |
| | | | | SHELL TOTALS = | | | | | | | | | | | | | | | $54,000 |
| C. INTERIORS | | | | | | | | | | | | | | | | | | | |
| | No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| | | | | SECTION SUBTOTALS = | | | | | | | | | | | | | | | $0 |
| | | | | INTERIORS TOTALS = | | | | | | | | | | | | | | | $0 |

**SIX YEAR MAINTENANCE FORECAST**
**Building 116 (CT 7)**
**1100 Alabama Avenue, SE**
**Washington, D.C. 20032**

**CONVERSION TO OFFICE USE**

| ITEM | EUL | RUL | Unit Cost | Quantity | Unit of Measurement | Priority | Repair / PM | Replace | A/E Serv. | GC Allow. | Immediate | 2010 Year 1 | 2011 Year 2 | 2012 Year 3 | 2013 Year 4 | 2014 Year 5 | 2015 Year 6 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | Priority 1 | Priority 2 | Priority 3 | | | | Priority 4 | |
| D. SERVICES | | | | | | | | | | | | | | | | | | |
| D10 Conveying | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $0 |
| D20 Plumbing | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $0 |
| D30 HVAC | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $0 |
| D40 Fire Protection | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $0 |
| D50 Electrical | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $0 |
| SERVICES TOTALS = | | | | | | | | | | | | | | | | | | $0 |
| E. FURNISHINGS & EQUIPMENT | | | | | | | | | | | | | | | | | | |
| E10 Equipment | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| E20 Furnishings | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $0 |
| FURNISHINGS & EQUIPMENT TOTALS = | | | | | | | | | | | | | | | | | | $0 |
| F. SPECIAL CONSTRUCTION & DEMOLITION | | | | | | | | | | | | | | | | | | |
| F10 Special Construction | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | |
| SPECIAL CONSTRUCTION & DEMOLITION TOTALS = | | | | | | | | | | | | | | | | | | $0 |

## CONVERSION TO OFFICE USE

**SIX YEAR MAINTENANCE FORECAST**
**Building 116 (CT 7)**
**1100 Alabama Avenue, SE**
**Washington, D.C. 20032**

| | ITEM | EUL | RUL | Unit Cost | Quantity | Unit of Measurement | Priority | Repair / PM | Replace | A/E Serv. | GC Allow. | Immediate | 2010 Year 1 | 2011 Year 2 | 2012 Year 3 | 2013 Year 4 | 2014 Year 5 | 2015 Year 6 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | Priority 1 | Priority 2 | Priority 3 | | | | Priority 4 | |
| G. BUILDING SITEWORK | | | | | | | | | | | | | | | | | | | |
| G10 Site Systems | | | | | | | | | | | | | | | | | | | |
| 1 | Mill & Overlay Pavements | 20 | 0 | $30.00 | 707 | SY | 2 | | √ | | | | $21,210 | | | | | | $21,210 |
| 2 | Replace Failed Concrete Sidewalk Panels | 10 | 0 | $20.00 | 1,165 | SF | 2 | | √ | | | | $23,300 | | | | | | $23,300 |
| 3 | Refurbish Entrance Steps | 20 | 0 | $7,500.00 | 1 | LS | 2 | √ | | | | | $7,500 | | | | | | $7,500 |
| | SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $52,010 |
| | BUILDING SITEWORK TOTALS = | | | | | | | | | | | | | | | | | | $52,010 |
| H. ACCESSIBILITY | | | | | | | | | | | | | | | | | | | |
| H10 Site Improvements | | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | | |
| | SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $0 |
| | BUILDING SITEWORK TOTALS = | | | | | | | | | | | | | | | | | | $0 |
| I. HAZARDOUSE MATERIALS | | | | | | | | | | | | | | | | | | | |
| 1 | Environmental Evaluation | N/A | N/A | $20,000.00 | 1 | LS | 2 | | | √ | | | $20,000 | | | | | | $20,000 |
| | SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $20,000 |
| | ACCESSIBILITY TOTALS = | | | | | | | | | | | | | | | | | | $20,000 |
| J. ACCESSIBILITY | | | | | | | | | | | | | | | | | | | |
| J10 LEED Analysis | | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | | |
| | SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $0 |
| J20 Green Roof Feasibility | | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | | |
| | SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $0 |
| J30 Energy Efficiency | | | | | | | | | | | | | | | | | | | |
| No Maintenance Expenditures are Forecasted | | | | | | | | | | | | | | | | | | | |
| | SECTION SUBTOTALS = | | | | | | | | | | | | | | | | | | $0 |
| | ENVIRONMENTAL ANALYSIS TOTALS = | | | | | | | | | | | | | | | | | | $0 |
| TOTALS | | | | | | | | | | | | $0 | $101,010 | $5,000 | $5,000 | $5,000 | $5,000 | $5,000 | $126,010 |
| TOTALS (w/ inflation @ 4%) | | | | | | | | | | | | $0 | $101,010 | $5,200 | $5,408 | $5,624 | $5,849 | $6,083 | $129,175 |

**Total Expenditures (current $)** $126,010

# Appendix C
## Photographs

Photograph Number 1

Missing window at basement

Photograph Number 2

Rear elevation

Photograph Number 3

Crawl space showing underside of structural floor system

Photograph Number 4

Underside of structural floor system

Photograph Number 5

Structural slab at attic

Photograph Number 6

Wood-framed roof structure

Photograph Number 7

Brick and mortar in good condition (typical)

Photograph Number 8

Wood-framed roof system

Photograph Number 9

Wood-framed roof system


Photograph Number 10

Front elevation

Photograph Number 11

Front elevation

Photograph Number 12

Corner detailing (front elevation).
Note also soffit overhang detail

Photograph Number 13

Overview of front elevation showing general configuration and porch screens

Photograph Number 14

Side elevation

Photograph Number 15

Side elevation

Photograph Number 16

Rotted wood at soffit

Photograph Number 17

Spalled cast stone

Photograph Number 18

Window grating


Photograph Number 19

Typical windows

Photograph Number 20

Corrosion of grating at window system

Photograph Number 21

Interior view of window system

Photograph Number 22

Broken roof tiles at grade

Photograph Number 23

Porch screens

Photograph Number 24

Utility tunnel

Photograph Number 25

Surface of utility tunnel

Photograph Number 26

Failed mortar at cast stone band

Photograph Number 27

Steel fastener at cast stone band

Photograph Number 28

Stepped cracks at outer wall of utility tunnel

Photograph Number 29

Peeled paint and rotted boards at soffit overhang

Photograph Number 30

Peeled paint at soffit trim

Photograph Number 31

Peeled paint at rake trim

Photograph Number 32

Severely corroded steel lintel serving exterior wall to utility tunnel

Photograph Number 33

Failed urethane caulk at juncture between utility tunnel and building

Photograph Number 34

Failed urethane caulk at outer perimeter of window system

Photograph Number 35

Failed caulk at window

Photograph Number 36

Peeled paint at window

Photograph Number 37

General deterioration of porch screens

Photograph Number 38

Expansive corrosion of framing member at porch screens

Photograph Number 39

Corrosion of steel panel doors at mechanical room

Photograph Number 40

Front elevation


Photograph Number 41

Typical interior hallway

Photograph Number 42

Day room

Photograph Number 43

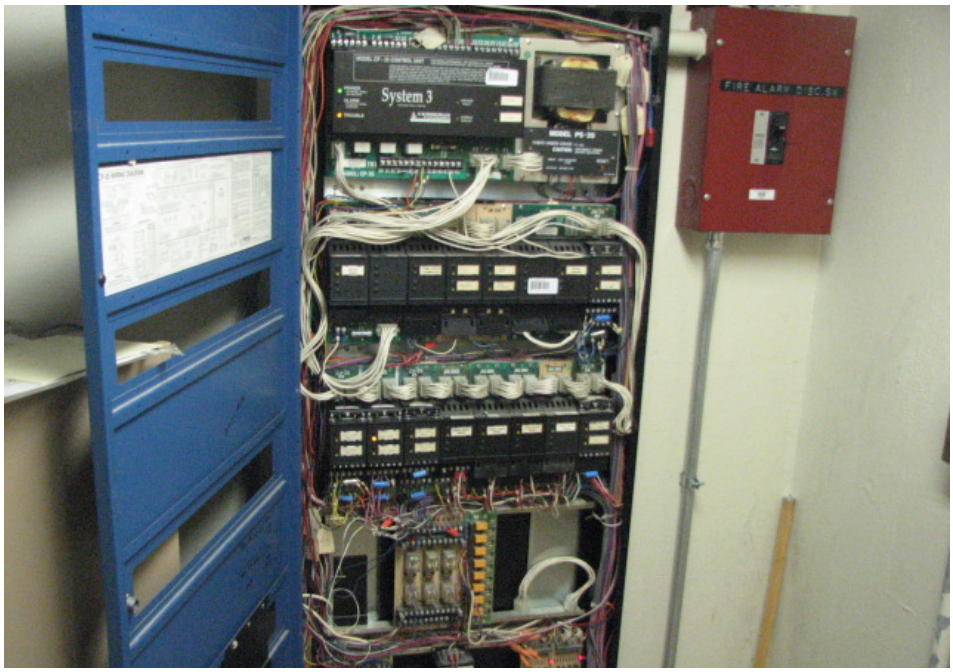
Porch


Photograph Number 44

Basement

Photograph Number 45

Stair




Photograph Number 46

Fire alarm control panel


Photograph Number 47

Entrance steps

Photograph Number 48

Failed concrete at underside of entrance steps

Photograph Number 49

Corroded reinforcing steel at underside of entrance steps

Photograph Number 50

Peeled paint and corrosion at railings to entrance steps

Photograph Number 51

Concrete steps

# Appendix D

## Inventory & Checklist

Project Name/Address: CT-7

Mechanical Equipment List

| Equipment Type/Use | Model Name/No. | Serial No. | Manufacturer's Name | Capacity/Rating | Installation Date | Comments |
|---|---|---|---|---|---|---|
| Air Handlers (2) | CCMB41E0R015 | K83J07743 | Trane | Not Available | 1983 | Mechanical Rooms A and B |
| Ingersoll Rand Compressor | T30 | 6016552 | Ingersoll Rand | Not Available | N/A | Mechanical Room A |
| Refrigerated Air Dryer | 5U285 | 2452583-016 | Speedaire | Not Available | 1983 | Mechanical Room A |
| Condensate Pumps (4) | Not Available | Not Available | Not Available | Not Available | Not Available | Mechanical Rooms A and B |
| Pneumatic Controller (4) | Not Available | Not Available | Johnson Controls | Not Available | Not Available | Mechanical Rooms A and B |
| Return Air Fans (2) | CAF830B11BA | K83K05914 | Trane | Not Available | 1983 | Mechanical Rooms A and B |
| Supply Air Fans (2) | CAF830B11BA | K83K05906 | Trane | Not Available | 1983 | Mechanical Rooms A and B |
| Ingersoll Rand Compressor | T30 | 6016552 | Ingersoll Rand | Not Available | N/A | Mechanical Room A |
| Refrigerated Air Dryer | 5U285 | 2452583-016 | Speedaire | Not Available | 1983 | Mechanical Room A |
| Chilled Water Pumps (2) | Not Available | Not Available | Not Available | Not Available | Not Available | Mechanical Room A |
| Hot Water Pumps (2) | Not Available | Not Available | Not Available | Not Available | Not Available | Mechanical Room B |
| Exhaust Fans (2) | EFMA | Not Available | Not Available | Not Available | Not Available | Mechanical Rooms A and B |
| Unit Heaters (2) | UHSA100 | D83A00108 | Trane | Not Available | 1983 | Mechanical Rooms A and B |
| Sump Pumps (3) | Not Available | Not Available | Not Available | Not Available | Not Available | Mechanical Rooms A and B |
| Fan Coil Convectors (2) | Not Available | Not Available | Not Available | Not Available | Not Available | Stairwells |
| Hot Water Convectors (151) | Not Available | Not Available | Not Available | Not Available | Not Available | All areas not accessible |

Project Name/Address: CT 7

Electrical Equipment List

| Equipment Type/Use | Model Name/No. | Serial No. | Manufacturer's Name | Capacity/Rating | Installation Date | Comments |
|---|---|---|---|---|---|---|
| Panelboard MDPH2 | Not Available | Not Available | Federal Pacific | 277/480V, 3PH, 4W / 400A | Not Available | Mechanical Room A |
| Panelboard MDPH2A | Not Available | Not Available | Federal Pacific | 277/480V, 3PH, 4W / 400A | Not Available | Mechanical Room B |
| Pump Controllers (2) | Not Available | Not Available | Messco Controls | Not Available | Not Available | Mechanical Rooms A and B |
| Transfer Switch | DT5336 | Not Available | Federal Pacific | 30 A | Not Available | Mechanical Room B |
| Bypass Switch (4) | Not Available | Not Available | ABB | Not Available | Not Available | Mechanical Rooms A and B |
| Motor Controllers | Not Available | Not Available | GE | Not Available | Not Available | Mechanical Rooms A and B |
| Transformer | 9T51B0013 | Not Available | GE | 3 KVA | Not Available | Mechanical Room B |
| Data Center Battery (2) | 114981 | Not Available | Lucent | Not Available | Not Available | First and Second Floors |
| Data Center Power Unit (2) | 1145B1 | Not Available | Lucent | Not Available | Not Available | First and second Floor |
| Panelboard (6) | Not Available | Not Available | Federal Pacific | 120/208V, 3PH, 4W / 225A | Not Available | Basement, First Floor Second Floor |
| Power Extender | 4009 N.A.C. | Not Available | Simplex | Not Available | Not Available | Second floor corridor |
| Amplifier | TPU-100B | Not Available | Berger | 100 Watt | Not Available | First floor closet |
| Telephone Panel | 1890ECT1NSC-100 | Not Available | Circa Telecom | Not Available | Not Available | Basement telephone closet |

Building 116 (CT7)

CHECKLIST GUIDE

| System | Detail | Yes / No | Comment |
|---|---|---|---|
| Foundation | Settlement, alignment changes or cracks | No | |
| | Moisture penetration | No | |
| | Surface material deterioration | No | |
| | Openings deterioration | No | |
| | | | |
| Basement | Cracking or arching | No | |
| | Wall deterioration/seepage | No | |
| | Inadequate ventilation | No | |
| | | | |
| Superstructure | Overall alignment | N/A | Good |
| | Deflection | No | |
| | Surface condition – cracks | No | |
| | Scaling, spalls, & pop-outs | No | |
| | Stains | No | |
| | Exposed reinforcing | No | |
| | Type | N/A | Conventionally reinforced concrete, steel and load-bearing masonry |
| | Loading capacity | | See Text |
| | | | |
| Building Exterior | Overall appearance | N/A | Fair/Good |
| | Paint or surface treatment | N/A | Poor |
| | Caulking | N/A | Poor |
| | Windows and doors fittings | N/A | Poor |
| | Flashing conditions | N/A | Good |
| | Hardware conditions | N/A | Poor |
| | Material integrity | N/A | Fair / Poor |
| | Cracks | Yes | Minor |
| | Evidence of moisture | No | |
| | Construction joints | Yes | Adequate spacing |
| | Pointing of brick and stone works | N/A | Poor |
| | Paving (walks and steps) | N/A | Generally Poor |
| | Type of paving | N/A | Concrete |
| | Handicap accessibility | No | Compliant |
| | Railings | Yes | Painted steel pipe railings and iron |
| | Exterior lighting | Yes | Wall-mounted |
| | Peeling paint | Yes | N/A |
| | Stains | Yes | Clean in conjunction with tuckpointing |
| | Discoloration | No | |
| | Roof ventilators | Yes, Passive | Adequate |
| Roofing | Water tightness (evidence of leaks) | Water tight | |
| | Standing water | No | |
| | Roofing surface (blisters, wrinkles, cracks, holes, tears, alligatoring, fish mouths, ballast) | No | |

Building 116 (CT7)

CHECKLIST GUIDE

| System | Detail | Yes / No | Comment |
|---|---|---|---|
| | Insulation | Yes | Fiberglass batts |
| | Flashing (deterioration, holes or damages, open joints) | Good Condition | |
| | Drainage (alignment, corrosion) | Some deterioration | Fair |
| | Parapets | | None |
| | Downspouts & gutters | Yes | Fair |
| | Type of roofing | | Pan tiles over hip system |
| | Drains, downspouts – Nos. & size | | See Text |
| | Loading limits | | See Text |
| | Roof Top Equipment | None | |
| | | | |
| Building Interior | Floors, walls and ceilings (stains, holes, tears, etc.) | Poor | |
| | Restrooms | Yes | 9 provided; poor condition |
| | Stairwells | Yes | 3 provided; adequate |
| | Surface damage (missing tiles and floor coverings) | Yes | |
| | | | |
| Site | Paving (walks and driveways) | Yes | Cast-in-place concrete in poor condition |
| | Fountains | No | |
| | Parking (number of spaces & areas) | | None directly assigned |
| | Fences | No | |
| | Transformers | Yes | Utility company owned transformer(s) in underground vault |
| | Underground storage tank | No | |
| | | | |
| Mechanical / Plumbing | Leaks, dripping, running faucets and valves | No | System disconnected |
| | Pipe insulation | Yes | Fiberglass and probably ACM in poor condition |
| | Hangers, supports and clamps | Yes | Steel in good condition and adequately spaced |
| | Drain and waste connections | Yes | Cast iron no-hub in good condition |
| | Adequate flow | Unknown | System disconnected |
| | | | |
| Mechanical / HVAC | Condition of motors, fans, drive assembly and pumps – rust and corrosion | | Poor |
| | Wiring and electrical controls | | Poor |
| | Thermal insulation | | Poor |
| | Air cooled condensers | | See Text |
| | Compressors | | See Text |
| | Air distributors | | See Text |
| | Supply and return ducts – | | See Text |

Building 116 (CT7)

CHECKLIST GUIDE

| System | Detail | Yes / No | Comment |
|---|---|---|---|
| | corrosion, cracks and air leaks | | |
| | Burner assembly | | See Text |
| | Dampers, louvers and grilles | | See Text |
| | Heating and cooling capacity | | See Text |
| | Exhaust system | | See Text |
| | Air intake system | | See Text |
| | No. of Window Air Conditioning Units | | 3 |
| | | | |
| Electrical Service and Distribution | Transformer arching or burning | No | System disconnected |
| | Exposed wiring | No | |
| | Missing breakers | Yes | |
| | Panel – marked | Yes | |
| | Incoming conduits – marked | Yes | |
| | Panel schedule | No | |
| | Emergency generator | No | |
| | Auto start and switch over | No | |
| | Cooling and exhaust | No | |
| | Exit signs | Yes | See Text |
| | Emergency lighting | Yes | See Text |
| | Public address system | Yes | Not functional |
| | | | |
| Conveying System (elevators and escalators) | Overall appearance | | Fair |
| | Door operation | | Fair |
| | Control systems | | Fair |
| | Noise | | Fair |
| | Code compliance | | No (See Text) |
| | Handicap access | | Yes |
| | Carriage lighting | | Yes |
| | Signage | | Yes |
| | Floor alignment | | Yes, Good |
| | | | |
| Fire Resistive Requirements | Exterior bearing walls | | 2 hours |
| | Interior bearing walls | | 1 – 2 hours |
| | Exterior non bearing walls | | 2 hours |
| | Structural frame | | 3 hours |
| | Permanent partitions | | 1 hour |
| | Shaft enclosures | | 2 hours |
| | Floor & ceiling / floor | | 2 hours |
| | Exterior doors & windows | | 1 hour |
| | Stairway construction | | 2 hours |
| | | | |
| Fire Alarm Required | Provided | Yes | |
| | | | |
| Draft Stops | Provided | Yes | |
| | | | |
| Doors (Analyze doors for | Number | | Exterior – See Text |

Building 116 (CT7)

CHECKLIST GUIDE

| System | Detail | Yes / No | Comment |
|---|---|---|---|
| ratings in area separations, occupancy separations, and rated exitways) | | | 71 (interior) |
| | Size | | See Text |
| | Sealant – Type and LF | | See Text |
| | Glazing | Yes | Single glazed |
| | Location | | Front, Rear and Side Elevations |
| | Type | | Steel panel hollow core; steel frames |
| | Hardware | | Lever, cylindrical, push/pulls |
| | | | |
| Windows | Number | | See Text |
| | Size | | See Text |
| | Sealant – Type and LF | | See Text |
| | Glazing | | Single glazed |
| | Location | | Front, Rear and Side Elevations |
| | Type | | See Text |
| | Hardware | | Integrated steel hinges and latches |
| | | | |
| Access Control | Card Reader | No | |
| | Type of access control | | Locks |
| | X-Ray machine | No | |
| | Interior Cameras | No | |
| | Exterior Cameras, Location | No | |
| | Intrusion Detection Systems | No | |
| | Emergency Call Boxes | No | |
| | | | |
| Fire Stops | Provided | Yes | Some breached |
| | | | |
| Exits (From Building) | Number Required | | 3 (assuming change-of-use) |
| | Number Provided | | 4 |
| | Distance Required | | 80' max. (assuming change-of-use) |
| | Distance Provided | | 80' max. |
| | Width Required | | 36" (assuming change-of-use) |
| | Width Provided | | 36" |
| | | | |
| Fire Extinguishers | Number Provided | | 0 |
| | Number Required | | 11 (assuming change-of-use) |
| | | | |
| Automatic Fire Suppression System | Provided | No | Partial |
| | Required | Yes | Required assuming change-of-use |
| | | | |
| ADA REQUIREMENTS | | | |
| Public Access | Accessible Parking | No | None |

Building 116 (CT7)

CHECKLIST GUIDE

| System | Detail | Yes / No | Comment |
|---|---|---|---|
| | Floor or Ground Surfaces | | Compliant resilient vinyl tile |
| | Curbs / ramps | No | |
| | Elevators | No | |
| | Stairways including Treads, Risers, Nosing and Handrails | | Painted treads have a depth of 12”<br><br>Risers are exposed steel with a height of 7”<br><br>Nosings project beyond treads<br><br>Handrails are painted steel with a height of 36” and a clear opening sphere of 4” |
| Entry Doors and Doorways | 32” Clear opening | Yes | |
| | Clearances | | Adequate |
| | ½” Maximum height threshold | Yes | Compliant |
| | Door hardware (lever type) | Yes | Compliant lever-type |
| | Door – opening force | | Complaint |
| | | | |
| Toilet Rooms | Wheelchair Turning Space | | Compliant |
| | Water Closets & Toilet Compartments Including Location, Clearances, Height, Size & Accessories | | Non compliant |
| | Grab Bars (42” long on side wall, 24” long on back wall) | No | Non compliant |
| | Urinals (17” max) | Yes | Compliant |
| | Lavatories and Sinks (34” Max. high) | No | Non compliant |
| | | | |
| Drinking Fountains | Clearances | Yes | Non compliant |
| | Spout Height (36”) | No | Non compliant |
| | | | |
| Alarms | Audible Alarms | Yes | Non compliant |
| | Visual Alarms | Yes | Non compliant |
| | | | |
| Signage | Signs | Yes | Non compliant |

# Appendix E

## Scope of Services, Document Review & Exclusions

FAITHFUL GOULD

# SCOPE OF SERVICES & DOCUMENT REVIEW

Faithful+Gould was requested to complete a Facility Condition Assessment and Space Utilization Study of the site and site improvements of the subject Property. This report was completed with the principal intention of identifying current conditions, recommending corrective actions and developing an occupancy profile to indicate current utilization of occupiable space.

The scope of services for the Facility Condition Assessment included performing a visual assessment of the interior, exterior and site components of the subject Property.

The primary purpose of the Facility Condition Assessment was to identify visually apparent deficiencies in the building and site and to determine the general extent of capital and maintenance projects required to facilitate continued use of the building within its current use type. The evaluation included site visits to observe the building and site systems, interviewing available building management and maintenance personnel, and reviewing available maintenance systems, design and construction documents and plans, and public records.

The primary purpose of the Space Utilization Study was to provide an occupancy profile for the facility to indicate current utilization of occupiable space. This effort included providing an inventory of furnishings and occupants, and producing dimensioned floor plans of each occupied floor.

The Facility Condition Assessment was conducted in general accordance with industry standards and the American Society for Testing and Materials (ASTM) Standard E 2018-08 Standard Guide for Property Condition Assessment: Baseline Property Condition Assessment Process.

The Space Utilization Study was conducted in general accordance with industry standards and standards produced by the General Service Administration's Public Buildings Service and as contained within the ANSI/BOMA Z65.1-1996 Standard Method for Measuring Floor Area in Office Buildings.

## Facility Condition Assessment

We performed a visual non-destructive assessment of the interior, exterior and site components of the Property, including the following major components and systems:

1.0 Facility Attributes: During our field evaluation, we collected and verified real estate and certain environmental information in order to prepare an accurate building information system. The information collected included the following:

A. Building address, site location with at least two street references
B. Lot, square and ward numbers
C. Gross square foot area of building and land
D. Assessed building and land values
E. Occupancy status – occupied, vacant or partially occupied
F. Building designation – historic or non-historic
G. Building location – within or not within a historic district
H. Environmental details as provided within OPM supplied checklist

2.0 Condition Assessment: We conducted a condition assessment of the Property. The condition assessment consisted of a detailed on-site evaluation completed to determine or verify and document the condition of all building major systems and components. The condition assessment consisted of the following elements:

A. Collection of Baseline Facilities Data: We conducted a field survey of the Property for the purpose of updating and validating existing architectural floor plans. Updated floor plans are included within the report appendix.

B. Facility Existing Condition Data: We identified the facility status data (i.e. age, historical status, construction type, square footage, materials, user/tenants, and functional areas such as offices, mechanical / electrical rooms, etc.); architectural floor plans; and site plan/general development map data (surface man-made site features, and real estate boundary maps).

C. Condition Assessment Survey: As part of the condition assessment survey we:

i. Provided a description of systems along with manufacturer's name for each major piece of equipment and the estimate age.

ii. Identified the current condition of the facilities and their components. This included a description of the deficiencies indicating what the deficiency is, how much it is, and where it exists.

iii. We provided a description of the recommended corrective measures, the associated cost, the remaining service life of the building component or system if the deficiency is left uncorrected. We specifically included quantitative information on recommended work to include opinions of cost and recommended date of accomplishment. This information was presented within the OPM supplied cost spreadsheets.

iv. We prioritized the criticality of necessary repair, renovation and or replacement with estimated cost forecast by the projected year.

v. We furnished the survey findings in the format supplied to us by OPM.

vi. We quantified deferred maintenance and furnish estimated costs within the format supplied to us by OPM.

vii. We provided an annual preventative maintenance schedule for the installed equipment.

2.1 Drawing and Maintenance Review: We reviewed any available construction documents (plans, specifications, etc.) and maintenance and repair logs prior to visually assessing the buildings. In addition, we interviewed available maintenance personnel to determine the maintenance / repair history, and know defects in each building.

2.2 Included Components: We surveyed the physical components and systems of the identified facilities. These will include the following for:

2.2.1 Substructure: We visually evaluated the condition of the foundation systems, slab-on-grade, basement excavation and walls, and other applicable substructure elements. We evaluated for signs of distress (cracking, displacement, insect infiltration etc.) and have documented and photographed our findings.

2.2.2 Core and Shell: We visually evaluated the condition of the superstructure (floors, bearing walls, columns, beams, roofs and related structures): exterior closure (exterior walls, windows and doors): and roofing systems. The evaluation included assessment of the accessible shell components and ancillary elements for signs of distress and documentation and photographing of our findings. This included cracking, displacement, and connection adequacy, continuity of flashing and seals, and evidence of other types of distress. We also checked for flashing and connections for proper drainage on walls and for the condition and proper placement of expansion joints. When assessing the roofing, we accessed the roofs to visually observe the condition of the system and any accessories and details to include flashings and penetrations. We also documented existing warranties, replacement costs and remaining useful life.

2.2.3 Interiors: We visually evaluated the interior construction (interior partitions, doors and specialties such as toilet accessories, lockers, storage shelving, etc.); stairway and finishes; and interior finishes (paint and other wall finishes, flooring and interior ceiling finishes and systems). The evaluation included documenting and photographing the condition of the interior finishes.

2.2.4 Services: We visually evaluated the condition of the conveyor systems (elevators, and other vertical transportation and conveying systems), plumbing systems (fixtures, domestic water distribution, sanitary waste, rain water drainage and special plumbing systems such as gasoline dispending, compressed air, etc.); HVAC Systems to include heat generation, rejection, distribution and transfer systems; HVAC controls and instrumentations and other HVAC support elements; Fire detection and suppression systems (alarm systems, monitoring systems, sprinkler systems, standpipe and hose systems, pumps, fire protection specialties, and special fire suppression systems); Electrical Systems (service and distribution, feeder type), lighting and branch wiring, communications and security systems, emergency generators, UPS systems, electrical controls and instrumentation, service points, meters and capacities.

For each item of service equipment we visually evaluated the conditions and code compliance of the service and photographed and documented our findings. For the conveying systems (where provided), we reviewed available maintenance records and reports on the equipment and evaluate the performance and anticipated service life of the systems. For plumbing, HVAC and electrical systems, we observed the age, condition and adequacy of the capacity and status of maintenance of these systems and have documented their condition, deficiencies and code violations. We also commented on renovations to the system that would prove beneficial to their overall efficiency or performance, and have stated the estimated expected remaining useful service life of each major piece of equipment with and without repair. For fire and life-safety systems, we listed all major components and identified those systems that require upgrades. Findings were supported with photographs.

2.2.5 Equipment and Furnishings: We evaluated the condition of fixed components of the structure and non-moveable furnishings, office or support equipment. Representative examples include security vaults, commercial laundry equipment, fixed audio-visual equipment, parking control equipment, kitchen and food service equipment, fixed casework and seating etc. For each applicable piece of equipment or furnishing that

we visually evaluated, we documented and photographed conditions, and produced a tabulated inventory of the equipment to include rating / capacity, make and manufacturer, year of manufacture, and location.

2.2.6 Other Building Construction: We visually evaluated items of special construction and systems (i.e. special security systems, incinerators, kennels, storage tanks, building automation systems, special purpose rooms etc.).

2.2.7 Building Site Improvements: We evaluated the condition of site improvements to include grading and drainage, slope stabilization, protection and erosion control; roadways and parking lots (pavement, curb, gutter, steps etc.); site development (fences and gates, recreational facilities, exterior furniture, bridges, flag poles, exterior signage etc.); and landscaping (planting, irrigation systems, etc.). For each element we visually evaluated, photographed and documented our findings. For grading and drainage, we observed the site systems for removal of storm water, and identified any areas that appear under-capacity or distressed. We also evaluated the site with respect to flood potential. We reviewed and documented the condition of the pavements, curb and gutter, sidewalks and plazas, retaining walls, fences, signs, landscaping and irrigation systems and will present our finding supplemented with photographs.

2.2.8 Accessibility: We completed an evaluation of the Property to determine compliance with applicable accessibility guidelines. This evaluation included a site review to determine major barriers to access to and into the building, through the building, to restroom facilities, and to other service areas within the building.

2.2.9 Safety / Security: We considered the facility as a whole when completing this evaluation. The evaluation included evaluation of the performance and current ability of lower-level wall / window system with regard to blast shrapnel protection. The evaluation also included a safety and security review to determine and document hazards and needed improvements in all areas of the building and surrounding site.

2.2.10 Access Control: We evaluated, documented and photographed the condition of doors and windows, including hardware and other components; intrusion detection systems; and the access control system. We also identified a pattern in faulty hardware systems and controls, and have conducted a review of potential points of access and determined and documented the effectiveness of the access control system.

2.2.11 Hazardous Materials: We identified for further analysis building components and stored materials suspected of containing hazardous materials such as asbestos, lead, petroleum products etc.

2.2.12 Equipment List: The report includes an equipment list in tabulated form indicating the make, model, manufacturer's name, capacity / rating and installation date of each principal item of contained equipment.

At the completion of our on-site activities we issued this report of Facility Condition Assessment. The report includes detailed descriptions of installed systems, conditions and recommendations. The report also includes expenditures of anticipated capital and maintenance expenditures required over the next six-years. Expenditures are detailed in the year we recommend that they be completed and are prioritized as follows:

- Priority 1 – Critical (immediate) need that may prevent the continued use of the facility or is required to address issues of life safety and/or code compliance;

- Priority 2 – Potentially Critical (one to two years) need addressing system, equipment or component failure that, if not addressed promptly, may prohibit the continued use of the facility;

- Priority 3 – Necessary (but not yet Critical, three to five years) need that, if left unaddressed, will result in a portion or all of the facility to be unfit for continued use;

- Priority 4 – Recommended (six years and greater) need that represents a good practice improvement or action based on the observed conditions or the expected useful life of the component or system.

The scope of services under which the Facility Condition Assessment was completed was visual in nature and not intended to be destructive to the Property to gain access to hidden conditions. We did not perform any destructive testing or uncover or expose any system members. We have documented the type and extent of visually apparent defects in the systems in order to perform the condition assessment.

The scope of services includes only those items specifically indicated. The evaluation does not include any environmental services such as (without limitation) sampling, testing, or evaluation of asbestos, lead-based paint, lead-in-water, indoor air quality, PCB's, radon, mold, or any other potentially hazard materials, air-borne toxins or issues not outlined in the previous scope of services.

Space Utilization

We completed a space utilization survey to consist of providing an occupancy profile for the facility to indicate current utilization of occupiable space. Pertinent information collected will included:

A floor plan for each facility. The floor plan produced indicates interior dimensions and room areas for each floor. We also calculated the gross floor area versus occupiable (net rentable) area of each individual floor. Our determination of gross floor area and occupiable area was governed by the guidelines and methodology established by the General Service Administration's Public Buildings Service and as contained within the ANSI/BOMA Z65.1-1996 Standard Method for Measuring Floor Area in Office Buildings.

- Building core area, including elevator shafts, toilets, storage area, public corridors, and other support areas

- The location of all walls, partitions, doors, and windows

- Location and size of all occupiable areas and the name of current tenant agency

- Personnel density that includes number of personnel, furniture, files, and equipment in occupied space. This includes submission of the information gathered in written, graphic and digital format with floor and building summaries.

Document Review

In addition to the completion of our visual evaluation, Faithful+Gould interviewed the current Building Engineer and reviewed the following documentation:

## Drawings

None

## Other Documents

None.

# Appendix F

Resumes

FAITHFUL GOULD

# Resumes Redacted