



Pan American  
Health  
Organization



REGIONAL OFFICE FOR THE

World Health  
Organization  
Americas

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## REPORT ON THE MASTER CAPITAL INVESTMENT FUND AND REASSESSMENT OF THE REAL ESTATE PROJECTS IN THE MASTER CAPITAL INVESTMENT PLAN

### Introduction

1. The purpose of this report is to inform Member States on the status of the Master Capital Investment Fund and to provide an update on the reassessment of the real estate repair and refurbishment liability facing the Pan American Health Organization. This document also outlines the options available to the Organization to address the identified repair and renovation liabilities and proposes a strategy with which to implement the recommended options in each location where the Organization owns real estate assets. Information technology needs and implementation strategies are addressed in Document CE156/26, Report on the PASB Information Technology Strategy.

### Status of the Master Capital Investment Fund

2. The Master Capital Investment Fund comprises four subfunds created to provide distinct funding sources for:

- a) Real estate maintenance and improvements;
- b) Information technology needs;
- c) Vehicle replacement; and
- d) Purchase of new premises or real estate.

3. As of 31 December 2014, the available balance of the Real Estate Maintenance and Improvement Subfund was \$1,804,810,<sup>1</sup> the available balance of the Information Technology Subfund was \$306,849, the available balance of the Vehicle Replacement Subfund was \$378,520, and the available balance of the Revolving Strategic Real Estate Subfund was \$0.

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\* The revision includes a correction in the color coding in Table 8 of Annex E.

<sup>1</sup> Unless otherwise indicated, all monetary figures in this report are expressed in United States dollars.

4. In accordance with Resolution CSP27.R19 (2007), the Director is required to notify the Executive Committee of any funds transferred to the Master Capital Investment Fund from surplus income. The transfers proposed are addressed under Item 5.3 (Proposal for the Use of the Balance of the IPSAS and Budgetary Surpluses), Item 5.4 (Programming of the Revenue Surplus), and Item 5.7 (Status of Projects Funded from the PAHO Holding Account). With regard to the Master Capital Investment Fund, the following transfers are proposed:

- a) \$2.0 million to the Information Technology Subfund;
- b) \$2.0 million to the Real Estate Maintenance and Improvement Subfund; and
- c) \$1.0 million to the Vehicle Replacement Subfund.

5. The recapitalized Information Technology Subfund will support implementation of the PASB Information Technology Strategy (see Document CE156/26).

6. The Real Estate Maintenance and Improvement Subfund will support implementation repairs and renovations identified in this report and listed in the PAHO Master Capital Investment Plan (refer to Annex A and Annex H).

7. The recapitalized Vehicle Replacement Subfund will be used to support centralized planned procurement of official vehicles to leverage bulk procurement opportunities and to reduce the administrative burden of country offices, with recapitalization in future years managed through a combination of a depreciation charge levied on offices and the income generated from sales of vehicles.

8. PAHO has 116 official vehicles (not including vehicles that have been purchased with voluntary donations for specific projects), as detailed below:

- a) 63 official vehicles will be five years old or more and planned for replacement in 2016. If all 63 vehicles identified for replacement were purchased in 2016, the estimated cost would be \$1,900,000.
- b) 25 official vehicles are planned for replacement in 2017.
- c) 13 official vehicles are planned for replacement in 2018.
- d) 11 official vehicles are planned for replacement in 2019.
- e) 4 official vehicles are not planned for replacement.

9. The proposed \$1 million recapitalization of the Vehicle Replacement Subfund will augment the existing balance of \$378,520 to provide a fund balance of \$1,378,520. PASB will “smooth” the resource requirement to manage the funding gap through leverage of bulk procurement, vehicle and vehicle specification standardization, rescheduling low-mileage vehicles to later in the replacement cycle, and strategic reviews of replacement needs. The Vehicle Replacement Subfund is expected to be

self-sustaining through a combination of remittance of future vehicle sale proceeds and internal charges for vehicle use.

### **Real Estate Projects Implemented in 2014 from the Master Capital Investment Fund and the Holding Account**

10. Annex B provides a summary of the building projects implemented in 2014 using the Master Capital Investment Fund. Annex C provides a summary of the building projects implemented in 2014 using Holding Account funds. (The Holding Account was created as a result of excess budget availability from the 2006-2007 biennium. One-time, major infrastructure projects in the administrative and technical areas were authorized by the 48th Directing Council in Resolution CD48.R1 of 2008.) Implementation of Holding Account real estate projects was delayed in 2014 pending the results of the condition assessment and the elaboration of a comprehensive real estate strategy.

### **Reassessment of Real Estate Projects within the Master Capital Investment Plan**

11. A comprehensive Organization-wide condition assessment survey of PAHO-owned real estate was conducted in 2014. This survey comprised a fire safety risk assessment, an initial environmental review, and a detailed inspection of the major building components of all PAHO-owned buildings to identify their anticipated remaining design life and the cost implications of any necessary maintenance and renewal within the next 10 years. The survey work was undertaken by independent professional surveyors. Repairs and renovations were prioritized using a standardized and objective risk assessment tool that evaluated:

- a) Security;
- b) Health and safety;
- c) Technological obsolescence;
- d) Environmental performance and energy reduction;
- e) Opportunities for reduced running costs; and
- f) Business continuity and disaster recovery.

12. Projects with a health and safety or security justification received a higher priority.

### **Context of Real Estate Investment Needs Compared to Other International Organizations**

13. PAHO is not alone within the United Nations system organizations in owning and managing aging real estate facilities. Many UN agencies own facilities that were constructed in the 1960s and are thus approaching or exceeding their design life.

Ownership of such facilities infers exposure to higher risks of component failure, business interruption, increased maintenance and operating costs, and contravention of host country building and legislative standards. An absence of sustainable funding sources with which to finance major refurbishments or renewals represents a barrier to implementation of capital-intensive real estate repair or renovation work.

14. The creation of a comprehensive, Organization-wide capital investment plan is considered a best practice within the real estate management industry and is recognized as such by the Joint Inspection Unit of the United Nations Management System.<sup>2</sup> To ensure that a comprehensive capital investment plan is realistic and objective, an independent professional assessment of PAHO-owned real estate was undertaken in 2014 to identify missed or deferred maintenance as well as renovations that can be reasonably ascertained to be necessary within a 10-year timeframe. This study facilitates identification of real estate risks and liabilities and enables the establishment of priorities to help frame a coherent investment and repair strategy and to budget for consequent capital outflows.

15. The United Nations is currently conducting a strategic capital review<sup>3</sup> of its principal sites, and WHO is preparing specifications and cost estimates, in consultation with the Swiss authorities, for a comprehensive renovation of its Geneva headquarters.<sup>4</sup>

16. The fundamental goals of the UN and WHO plans are to ascertain real estate liabilities and risks and to put in place long-term, prioritized, sustainably funded strategies to manage and mitigate those liabilities and risks. PAHO is undergoing a similar process, and this document presents the preliminary estimated costs of repairs and renovations identified through the 2014 condition assessment survey, as well as the options that exist to address the identified liabilities.

### **Condition Assessment Survey Results**

17. Annex A details the estimated costs of repairs and renovations identified in the condition assessment survey. The information is broken down by PAHO-owned country offices; rented, leased, or donated country offices; and Headquarters. The figures are estimates pending detailed feasibility studies, specifications, and procurement processes, and they do not include all professional fees or allowances for inflation. The estimates include the costs of real estate infrastructure that is failing or has failed as well as real estate infrastructure that is expected to fail within the 10-year timeframe of the plan. This information formed a basis for the evaluation of options to address the liability described elsewhere in this document.

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<sup>2</sup> Document JIU/REP/2014/3: Capital/Refurbishment/Construction Projects Across the United Nations System Organizations.

<sup>3</sup> Document A/68/733: Strategic Capital Review: Report of the Secretary-General.

<sup>4</sup> Document A67/61: Real Estate: Update on the Geneva Buildings Renovation Strategy.

### **Analysis of the Condition Assessment Survey of the Washington, D.C., Headquarters Main Building**

18. The United Nations Department of Safety and Security (UNDSS) compiled a report in September 2011 titled “Strengthening of the Security Arrangements in the Pan American Health Organization.” This report included a security risk assessment of the Headquarters main building located at 525 23rd Street, NW, Washington, D.C.

19. The UNDSS report noted that there were no direct threats identified against the Organization but that a variety of generic and indirect threats were present due to the location of the Headquarters building and the global profile of and threats facing United Nations system organizations. Using the UN Security Risk Management methodologies, threat scenarios associated with public disorder and criminality were characterized as low risk, whereas the impact and likelihood of acts of terrorism were characterized as critical but unlikely to occur, resulting in an overall risk level of “medium” for the Headquarters building. UNDSS recommended that the Organization consider a variety of security infrastructure enhancements to mitigate the risks identified in the report. These enhancements included:

- a) Hardening the perimeter by installing vehicular barriers and external guard posts to hinder and restrict vehicular access to the facility, including provisions to manage vehicular access to the loading dock and parking garage.
- b) Hardening the building façade and exposed columns to mitigate the effects of improvised explosive devices and blasts originating from other target buildings close to the Headquarters main building.
- c) Strengthening the pedestrian access infrastructure, including installation of turnstiles, installation of vertical movement access control within the building, and expansion of the lobby with an annex constructed under the building to provide an enlarged pedestrian screening point incorporating metal detection, x-ray screening, and badge control.
- d) Upgrading closed-circuit television (CCTV) systems and intrusion alarms.
- e) Creating a security control room.
- f) Constructing shelter-in-place points.
- g) Replacing external doors.

20. The UNDSS recommendations were incorporated into the condition assessment survey of the Headquarters main building at 525 23rd Street, NW, and the total estimated cost of security-justified repairs and renovations is \$12,217,534.

21. The figure above is an estimate, and subsequent requirements from local authorities, physical constraints related to buried services surrounding the building that impede implementation of the perimeter hardening work, and construction complications associated with work carried out on occupied premises in a busy city center location may

cause this figure to be reassessed and increased after the drafting of detailed specifications. The very close proximity of public roads to the Headquarters building limits the efficacy of perimeter security enhancements and increases the importance and extent of the façade strengthening work.

**Table 1. Overview of the Headquarters Buildings**

<b>Building Characteristics</b>	<b>Main Building: 525 23rd Street, NW</b>	<b>Annex: 2121 Virginia Avenue, NW</b>	<b>Annex: Organization of American States (OAS), 1889 F Street, NW</b>	<b>Total</b>
Owned/leased	Owned	Building leased; land owned	Leased	—
Size (rentable square feet)	126,261	36,671	14,500	177,432
Number of staff members housed	671	142	70	883
Efficiency (rentable square feet per person)	188	230	207	—
Estimated current market value <sup>5</sup>	\$37,878,300	\$20,000,000 (land value)	None	\$57,878,300

22. As described in Table 1, the Headquarters staff are accommodated in three buildings. The benchmark average efficiency of office use (ratio of rentable square feet to staff members) is 150-250 for similar international organizations in Washington, D.C. The current efficiency of the main building is 188 rentable square feet per person. Even if the Organization were, as part of the refurbishment, to significantly reduce the amount of space allocated to each staff member, it would not be possible to accommodate all Washington, D.C., staff in the Headquarters main building. This means that, even after significant renovation, the Headquarters building is too small for the Organization's current or future needs and that any investment would not support consolidation of the Organization's staff in one location.

### **General Condition of the Headquarters Main Building**

23. The results of the main building condition assessment survey indicate that substantial improvements are required to enable it to provide a sound and suitable, safe and secure, cost- and energy-efficient environment in which to conduct the business of the Organization. The existing exteriors and interiors are reaching or exceeding their original design life and no longer meet the standards of a headquarters building of an international organization. Modernizing the existing facilities is further impacted by the following:

<sup>5</sup> Analysis of PAHO Real Estate, Savills Studley, March 2015.

- a) The building structure and most of the infrastructure have not undergone a complete renovation in the last 50 years, even though key building performance criteria have evolved significantly in that time (notably requirements for security resistance, access, energy conservation, and environmental performance).
- b) Typical for buildings constructed in the 1960s, potentially harmful materials were identified in the condition assessment survey (lead, asbestos), complicating any renovation work due to essential safety procedures.
- c) The building requires significant upgrades to meet local life safety and accessibility codes as well as modern expectations. Notwithstanding PAHO's legal status, the extent of the major renovations required necessitates compliance with local building codes.
- d) The type of work necessary for the façade and infrastructure and the presence of harmful building materials would make the building difficult, if not impossible, to inhabit during the course of the work.
- e) The necessary changes to the façade and entrance lobby would necessitate local regulatory approval, requiring negotiation and lengthening the renovation process. The results of that negotiation and the proximity of public roads may reduce or negate the impact of the planned security-focused enhancements and compromise the building's compliance with UN security standards.

24. Each additional year without pursuing these renovations represents an increased financial and operational risk as systems and materials fail and reach obsolescence.

### **Principal Areas of Renovation Required for the Headquarters Main Building**

25. Headquarters main building renovation priorities:

- a) Exterior glazing and enclosure improvements:
  - i. Replacing glazing and glazing systems to meet the blast and security requirements of the UN Minimum Operating Security Standards (MOSS) and to provide an energy-efficient system that will reduce operating costs.
  - ii. Improving the weather and water tightness of leaking façades.
- b) Building system improvements:
  - i. Replacing and improving building infrastructure services in the main boiler and heating ventilation rooms and vertically throughout the building.
  - ii. Improving systems to meet local building code and life safety requirements.
  - iii. Providing alarm and monitoring systems for improved security and compliance with the UN Minimum Operating Security Standards (MOSS).

- c) Building interiors improvements:
  - i. Addressing life safety and code issues regarding egress and accessibility to provide a safe and secure environment.
  - ii. Improving the functionality and usability of assembly and office areas to meet modern standards.
  - iii. Replacing finishes and construction to improve functionality, appearance, and maintainability.
  - iv. Repairing and modernizing audiovisual and communication facilities in meeting rooms.
- d) Building site, lower level/parking, and first floor improvements:
  - i. Updating facilities and systems to meet the UN Minimum Operating Security Standards (MOSS).
  - ii. Implementing basic access control for improved security.
  - iii. Providing support spaces that facilitate the logistics associated with a modern meeting and conference center.
  - iv. Addressing site conditions for improved safety, security, and accessibility.

**Available Options for Addressing Repair Liability: PAHO Headquarters Main Building, Washington, D.C.**

26. There are multiple options available to the Organization to address the real estate challenges identified in the condition assessment survey. Although the cost of the repairs and renovations is significant and the scale of the work represents a considerable challenge, the building is not in immediate risk of catastrophic failure, and the Organization is in possession of valuable real estate assets. Table 2 outlines the options available to the Organization to address the Headquarters repair and renovation liability.

**Table 2. Explanation of Renovation and Relocation Options  
for 525 23rd Street, NW**

<b>Renovation Scenario</b>	<b>Scenario Description</b>
Option 1: status quo—minimal repair and renovation of Headquarters main building at 525 23rd Street, NW	<ul style="list-style-type: none"> <li>i. PAHO completes a very minimal renovation of 525 23rd Street (immediate needs and 50% of the building systems renovation); further study necessary to ascertain feasibility.</li> <li>ii. PAHO continues to lease at 2121 Virginia Avenue and extends its lease at 1889 F Street long term.</li> <li>iii. PAHO does not sell the land under 2121 Virginia Avenue.</li> </ul>



Renovation Scenario	Scenario Description
Option 2: conduct a fast-track one-year full renovation of Headquarters main building at 525 23rd Street, NW	<ul style="list-style-type: none"> <li>i. After an initial two years of design and permits, PAHO completes a full renovation of 525 23rd Street over the course of the third year, relocating to temporary swing space during the one-year construction.</li> <li>ii. PAHO sells the land under 2121 Virginia Avenue to help fund the renovation and signs a 10-year market rate office lease at 2121 Virginia Avenue as a component of the sale.</li> <li>iii. PAHO signs a long-term office lease extension at 1889 F Street.</li> </ul>
Option 3: carry out a 10-year phased renovation of Headquarters main building at 525 23rd Street, NW	<ul style="list-style-type: none"> <li>i. PAHO completes a full in-place renovation of 525 23rd Street over a 10-year period using internal swing space, per the Master Capital Investment Plan schedule.</li> <li>ii. PAHO renovates 2121 Virginia Avenue.</li> <li>iii. PAHO sells the land under 2121 Virginia Avenue to help fund the renovation and signs a 10-year market rate office lease at 2121 Virginia Avenue as a component of the sale.</li> <li>iv. PAHO signs a long-term office lease extension at 1889 F Street.</li> </ul>
Option 4: relocation to suburban new building (owned—installment sale)	<ul style="list-style-type: none"> <li>i. PAHO finds a 180,000 square foot (SF) (~200 SF per person) suburban Washington, D.C., proposed site and selects a fee developer to construct a new headquarters.</li> <li>ii. PAHO sells 525 23rd Street and leases it back during construction of the new headquarters.</li> <li>iii. PAHO sells the land under 2121 Virginia Avenue and simultaneously negotiates a lease termination for the office lease.</li> <li>iv. PAHO purchases the building from the developer after three years on a six-year installment sale basis. When construction is completed, all employees are relocated to a new consolidated headquarters.</li> </ul>

Renovation Scenario	Scenario Description
Option 5: consolidation and relocation to suburban new building	<ul style="list-style-type: none"> <li>i. PAHO finds a 180,000 SF (~200 SF per person) suburban Washington, D.C., proposed site and selects a developer to construct a new headquarters.</li> <li>ii. PAHO sells 525 23rd Street and leases it back during construction of the new headquarters.</li> <li>iii. PAHO sells the land under 2121 Virginia Avenue and simultaneously negotiates a lease termination for the office lease.</li> <li>iv. PAHO purchases the new building from the developer after three years, when construction is completed, and relocates all employees to a new consolidated headquarters.</li> </ul>
Option 6: consolidation and relocation to suburban existing building	<ul style="list-style-type: none"> <li>i. PAHO acquires a 215,000 SF (~240 SF per person) suburban Washington, D.C., existing building that substantially meets its needs and completes tenant improvement design and permits in the first year.</li> <li>ii. PAHO sells 525 23rd Street and leases it back during construction of the new headquarters.</li> <li>iii. PAHO sells the land under 2121 Virginia Avenue and simultaneously negotiates a lease termination for the office lease.</li> <li>iv. PAHO funds tenant improvements (conference facilities and security works) during the second year.</li> <li>v. After two years, PAHO relocates all employees to a new consolidated headquarters once the interior construction is complete.</li> </ul>
Option 7: relocation to suburban new building (leased)	<ul style="list-style-type: none"> <li>i. PAHO finds a 180,000 SF (~200 SF per person) suburban Washington, D.C., proposed site and selects an investor/developer to construct a new headquarters for lease.</li> <li>ii. PAHO sells 525 23rd Street and leases it back during construction of the new headquarters.</li> <li>iii. PAHO sells the land under 2121 Virginia Avenue and simultaneously negotiates a lease termination for the office lease.</li> <li>iv. PAHO leases the building from the investor/developer long term.</li> </ul>

27. In 2008, the D.C. Preservation League hosted a panel on the designation and future preservation of modern buildings at the Pan American Health Organization main building. The PAHO building was featured during discussions, and given that its architectural style is highly regarded, its preservation is likely to be enthusiastically defended by the Washington, D.C. authorities. This scenario negatively affects the development potential and consequently the value of the site.

28. Permission to completely demolish and rebuild the building is unlikely to be granted by local authorities; however, because of the location and design of the building, it retains development potential for adaptive reuse as luxury residential housing, student housing, hotel conversion, or office space.

### **Relative Costs of the Renovation and Relocation Options for 525 23rd Street, NW**

29. Table 3 indicates the net estimated capital costs (capital inflow and outflow) of each renovation and relocation option and the net present value (NPV) of the Organization's Headquarters real estate over a period of 18 years.

30. **Capital Costs:** Option 7, the leasing of new suburban space, requires the most capital. Option 2, the fast-track one-year renovation of the Headquarters main building, and Option 3, the 10-year phased renovation of the building, are the next most capital-expensive options, with the reduced construction costs of the fast-track renovation offset by the need to lease swing space during the construction period. The least capital-expensive scenario is Option 1, completing minimal renovations; however, this option does not address any security or obsolescence issues and assumes no catastrophic failure. Of the three relocation options, Option 6, relocation to an existing building, is the least expensive. In the two remaining relocation scenarios, the impact of smoothing the cash flow in Option 4 through negotiated deferred payments to the developer results in a higher total capital cost than Option 5, which infers a lump sum payment to the developer on completion of the construction of the new building.

31. Table 4 indicates the total cash flow, including net capital costs (cash inflow and outflow) and operational costs (maintenance and utilities), of the Organization's Headquarters real estate over a period of 18 years.

32. **Cash Flow:** Option 3, the 10-year phased renovation, is the most expensive option, although Option 2, the one-year fast-track renovation, is only marginally less expensive. Option 7, relocation and consolidation into a leased suburban new building, is the next most expensive of the options. Option 1, carrying out only minimal renovations of the existing main building, is the next most expensive option due to anticipated high maintenance and utility costs over the review period. Of the remaining relocation scenarios, Option 4, the phased payment option with construction of a new suburban building, is slightly more expensive than Option 5, the lump sum option to pay for the entire construction on completion of the building. The lowest cost scenario is Option 6, relocation to an existing suburban building.

**Table 3. Comparison of Net Capital Costs of Renovation and Relocation Options for 525 23rd Street, NW**

Fiscal Year End 12/31		Option 1 Stay Put: Status Quo	Option 2 Stay Put: 1-Year Renovation	Option 3 Stay Put: 10-Year Renovation	Option 4 Relocation to: Suburban New Construction (Owned - Installment Sale)	Option 5 Relocation to: Suburban New Construction (Owned)	Option 6 Relocation to: Suburban Existing Building (Owned)	Option 7 Relocation to: Suburban New Construction (Leased)
2121 Virginia Ave., NW Net Proceeds:		\$ -	\$ (24,387,500)	\$ (24,387,500)	\$ (20,968,137)	\$ (20,968,137)	\$ (20,968,137)	\$ (20,968,137)
525 23rd St., NW Net Proceeds:		\$ -	\$ -	\$ -	\$ (36,893,538)	\$ (36,893,538)	\$ (36,893,538)	\$ (36,893,538)
Total Net Sale Proceeds:		\$ -	\$ (24,387,500)	\$ (24,387,500)	\$ (57,861,675)	\$ (57,861,675)	\$ (57,861,675)	\$ (57,861,675)
1	2016	334,562	143,768	143,768	-	-	-	-
2	2017	334,562	168,941	168,941	-	-	25,783,342	-
3	2018	1,287,898	35,161,504	2,155,172	-	-	-	-
4	2019	1,287,898	221,701	221,701	13,318,260	34,380,079	-	-
5	2020	643,949	249,332	9,353,989	5,000,000	-	-	-
6	2021	643,949	277,826	11,618,742	5,000,000	-	-	-
7	2022	-	307,209	6,063,559	5,000,000	-	-	-
8	2023	-	337,502	6,115,873	5,000,000	-	-	-
9	2024	-	368,732	2,699,598	5,000,000	-	-	-
10	2025	-	400,923	2,746,991	-	-	-	-
11	2026	-	434,102	434,102	-	-	-	-
12	2027	-	468,294	468,294	-	-	-	-
13	2028	-	503,528	503,528	-	-	-	6,748,717
14	2029	-	539,831	539,831	-	-	-	8,858,340
15	2030	-	577,232	577,232	-	-	-	9,079,799
16	2031	-	615,760	615,760	-	-	-	9,306,794
17	2032	-	655,446	655,446	-	-	-	9,539,464
18	2033	-	696,320	696,320	-	-	-	9,777,950
<b>Aggregate Total</b>		<b>\$ 4,532,818</b>	<b>\$ 42,127,950</b>	<b>\$ 45,778,846</b>	<b>\$ 38,318,260</b>	<b>\$ 34,380,079</b>	<b>\$ 25,783,342</b>	<b>\$ 53,311,064</b>
<b>Net present value (NPV) at 5%</b>		<b>\$ 3,779,255</b>	<b>\$ 34,368,944</b>	<b>\$ 32,398,075</b>	<b>\$ 28,766,321</b>	<b>\$ 28,284,576</b>	<b>\$ 23,386,251</b>	<b>\$ 24,909,117</b>
Total Renovation Cost:		\$ 4,532,818	\$ 59,431,167	\$ 64,003,615	\$ -	\$ -	\$ -	\$ -
Total New Building Cost:		\$ -	\$ -	\$ -	\$ 95,206,466	\$ 91,268,284	\$ 78,108,820	\$ 123,091,108
<b>Total Scenario Costs:</b>		<b>\$ 4,532,818</b>	<b>\$ 59,431,167</b>	<b>\$ 64,003,615</b>	<b>\$ 95,206,466</b>	<b>\$ 91,268,284</b>	<b>\$ 78,108,820</b>	<b>\$ 123,091,108</b>
NPV of Headquarters Asset(s):		\$ (40,781,887)	\$ (26,014,526)	\$ (26,014,526)	\$ (19,169,689)	\$ (19,169,689)	\$ (16,435,674)	\$ -
Total square feet (SF):		173,432 SF	173,432 SF	173,432 SF	180,000 SF	180,000 SF	215,000 SF	180,000 SF
SF per person (900 Staff):		193 SF per person	193 SF per person	193 SF per person	200 SF per person	200 SF per person	239 SF per person	200 SF per person

**Table 4. Total Cash Flow, Including Net Capital Costs and Operational Costs, of Relocation Options for 525 23rd Street, NW**

Fiscal Year End 12/31		Option 1 Stay Put: Status Quo	Option 2 Stay Put: 1-Year Renovation	Option 3 Stay Put: 10-Year Renovation	Option 4 Relocation to: Suburban New Construction (Owned - Installment Sale)	Option 5 Relocation to: Suburban New Construction (Owned)	Option 6 Relocation to: Suburban Existing Building (Owned)	Option 7 Relocation to: Suburban New Construction (Leased)
2121 Virginia Ave., NW Net Proceeds:		\$ -	\$ (24,387,500)	\$ (24,387,500)	\$ (20,968,137)	\$ (20,968,137)	\$ (20,968,137)	\$ (20,968,137)
525 23rd St., NW Net Proceeds:		\$ -	\$ -	\$ -	\$ (36,893,538)	\$ (36,893,538)	\$ (36,893,538)	\$ (36,893,538)
Total Net Sale Proceeds:		\$ -	\$ (24,387,500)	\$ (24,387,500)	\$ (57,861,675)	\$ (57,861,675)	\$ (57,861,675)	\$ (57,861,675)
1	2016	4,156,160	4,846,423	4,846,423	4,702,655	4,702,655	<b>4,702,655</b>	4,702,655
2	2017	4,272,902	4,997,590	4,997,590	4,828,649	4,828,649	<b>30,611,990</b>	4,828,649
3	2018	5,346,361	<b>37,933,827</b>	<b>7,113,291</b>	4,958,119	4,958,119	2,280,935	4,958,119
4	2019	5,469,962	5,312,868	5,312,868	<b>15,285,168</b>	<b>36,346,987</b>	2,349,363	2,753,672
5	2020	4,953,196	5,477,226	<b>14,581,883</b>	<b>7,025,916</b>	2,025,916	2,419,844	2,836,282
6	2021	5,084,064	5,646,235	<b>16,987,151</b>	<b>7,086,693</b>	2,086,693	2,492,439	2,921,371
7	2022	4,574,777	5,820,026	<b>11,576,377</b>	<b>7,149,294</b>	2,149,294	2,567,212	3,009,012
8	2023	4,713,344	5,998,737	<b>11,777,108</b>	<b>7,213,773</b>	2,213,773	2,644,229	3,099,282
9	2024	4,855,931	6,182,506	<b>8,513,373</b>	<b>7,280,186</b>	2,280,186	2,723,556	3,192,261
10	2025	5,002,655	6,371,479	<b>8,717,547</b>	2,348,592	2,348,592	2,805,262	3,288,028
11	2026	5,153,639	6,565,804	6,565,804	2,419,049	2,419,049	2,889,420	3,386,669
12	2027	5,309,006	6,765,633	6,765,633	2,491,621	2,491,621	2,976,103	3,488,269
13	2028	5,468,885	6,971,123	6,971,123	2,566,370	2,566,370	3,065,386	<b>10,341,634</b>
14	2029	5,633,409	7,182,437	7,182,437	2,643,361	2,643,361	3,157,347	<b>12,559,045</b>
15	2030	5,802,713	7,399,739	7,399,739	2,722,662	2,722,662	3,252,068	<b>12,891,525</b>
16	2031	5,976,940	7,623,201	7,623,201	2,804,341	2,804,341	3,349,630	<b>13,232,872</b>
17	2032	6,156,231	7,852,999	7,852,999	2,888,472	2,888,472	3,450,119	<b>13,583,324</b>
18	2033	6,340,738	8,089,313	8,089,313	2,975,126	2,975,126	3,553,622	<b>13,943,126</b>
<b>Aggregate Total</b>		<b>\$94,270,913</b>	<b>\$147,037,168</b>	<b>\$152,873,859</b>	<b>\$89,390,046</b>	<b>\$85,451,865</b>	<b>\$81,291,182</b>	<b>\$119,015,796</b>
Net present value (NPV) at 5%		<b>\$ 59,834,918</b>	<b>\$ 99,656,228</b>	<b>\$ 99,573,532</b>	<b>\$ 63,196,608</b>	<b>\$ 62,714,862</b>	<b>\$ 59,643,380</b>	<b>\$ 67,854,936</b>
Total Renovation Cost:		\$ 4,532,818	\$ 59,431,167	\$ 64,003,615	\$ -	\$ -	\$ -	\$ -
Total New Building Cost:		\$ -	\$ -	\$ -	\$ 95,206,466	\$ 91,268,284	\$ 78,108,820	\$ 123,091,108
Total Scenario Costs:		<b>\$ 4,532,818</b>	<b>\$ 59,431,167</b>	<b>\$ 64,003,615</b>	<b>\$ 95,206,466</b>	<b>\$ 91,268,284</b>	<b>\$ 78,108,820</b>	<b>\$ 123,091,108</b>
NPV of Headquarters Asset(s):		\$ (40,781,887)	\$ (26,014,526)	\$ (26,014,526)	\$ (19,169,689)	\$ (19,169,689)	\$ (16,435,674)	\$ -
Total square feet (SF):		173,432 SF	173,432 SF	173,432 SF	180,000 SF	180,000 SF	215,000 SF	180,000 SF
SF per person (900 Staff):		193 SF per person	193 SF per person	193 SF per person	200 SF per person	200 SF per person	239 SF per person	200 SF per person

### **Risk Assessment of Renovation and Relocation Options for 525 23rd Street, NW**

33. Annex E describes the risks identified for each option to address the repair and renovation liabilities identified for the Headquarters main building. The risk assessment analyzes the impact and incidence probability of identified threats to produce an overall risk level for each option.

34. The conclusion of the risk analysis is that Option 6, relocation to an existing suburban building, is the lowest risk option. Options 4 and 5, describing relocation to suburban new premises, represent only a marginal increase in risk. Option 7, the leasing of new suburban premises, represents a further marginal risk increase. Of the scenarios involving renovation of the existing building, Option 2, the one-year fast-track renovation, is the alternative of least risk; however, the risk level of this option is still nearly double that of the relocation scenarios. Option 1, the minimal renovation, and Option 3, the 10-year phased renovation, are the highest risk strategies.

### **Comparison of Renovation and Relocation Options for 525 23rd Street, NW**

35. Annex F provides an overview of the renovation and relocation options. The renovation options for the Washington, D.C., Headquarters building at 525 23rd Street, NW, are high-risk strategies. The total estimated costs of the renovation strategies do not offer any comparative financial advantage in return for the risk involved. For these reasons, renovation of 525 23rd Street, NW, is not recommended.

36. Of the identified consolidation and relocation strategies, the leasing of new suburban premises offers risk mitigation relative to renovation of the existing facilities but is relatively expensive compared to the ownership strategies.

37. Relocation to new suburban premises represents a comparatively reduced risk, reduced cost option compared to any of the renovation strategies for the main building at 525 23rd Street, NW. Opportunities exist to smooth cash outflows with a phased payment solution, and these consolidation and relocation strategies require less net capital outlay and result in a lower overall cost than the renovation or leasing scenarios.

38. Option 6, relocation to existing suburban premises, represents the lowest overall risk of all of the options appraised. This option also represents the lowest overall capital and operational costs over the period analyzed. The principal challenge associated with consolidation and relocation to an existing building is finding a suitable (in terms of size and configuration) available building in a suitable location within a reasonable timeframe.

### **Recommendations for the Washington, D.C., Headquarters Building**

39. It is recommended that PAHO continue investigations to identify feasible relocation options (existing buildings or new construction) to enable a detailed proposal to be submitted to Member States. In parallel with this process, it is recommended that

the Organization implement the minimal urgent repairs to the Headquarters building identified in the condition assessment as an interim measure pending a decision by Member States on the future of the site.

### **Analysis of Condition Assessment Results for PAHO-Owned Country Offices**

40. The PAHO-owned country office real estate portfolio was analyzed by independent professional real estate consultants in the context of the results of the condition assessment, annual operating costs (maintenance and utilities), space efficiency, and the suitability of the existing buildings to support the Organization's mandate in the country concerned. The results of this analysis are summarized in Annex G, and the full report is available to Member States on request.

41. The results of the independent professional analysis of the PAHO-owned country office real estate portfolio demonstrate that the country office buildings are, in general, the appropriate size, in the appropriate locations, and in good condition. The conclusion is that the PAHO country office real estate portfolio is efficient and fit-for-purpose.

42. The analysis of the condition assessment has confirmed the identified need for a number of renovations of country offices that are necessary due to failing components or that will improve the operating efficiency of the buildings by reducing energy consumption, with particularly notable benefits available in Barbados, Jamaica, Haiti, and Venezuela. The analysis of the condition assessment has also confirmed previously identified opportunities in Jamaica to lease unused space to other UN system organizations as a means of increasing space efficiency and offsetting future operating costs.

### **Recommended Option for PAHO-Owned Country Offices**

43. The analysis of the condition assessment indicates that there is no financial, security, or operating advantage to PAHO in divesting any of the PAHO-owned country offices at this time. In view of this finding, the independent real estate consultants' conclusion is that PAHO should proceed with the implementation of the renovations and repairs identified for the PAHO-owned offices and as listed and identified in Annex A of this document.

### **Financing of the Master Capital Investment Plan**

44. Annex H indicates the estimated costs and cash flow of implementing the repairs and renovations identified in the condition assessment survey of country offices and the further investigation of the preferred option to relocate the PAHO main building to a suburban site. This annex is a revision of and update to the 2014 Master Capital Investment Plan (Annex A) and reflects the postponement of all but the most essential and urgent repairs to the Headquarters main building pending the completion of further professional studies to formulate a detailed relocation proposal for the Headquarters main building. The impact shown in Annex H is a reduction in overall repair and

renovation liability over the 10-year duration of the plan from \$66,988,000 to \$39,983,200.

### **Sustainable Financing of the Master Capital Investment Plan**

45. The real estate industry typically uses a ratio of between 1% and 2% of a building's appraised value as an indicator of the annual repair and investment requirements necessary to maintain and replace the building. The approximate value (using 2013 appraised figures) of PAHO-owned buildings is \$79.7 million, resulting in an annual buildings-related investment target of \$1.6 million (at 2%). It is anticipated, therefore, that \$1.6 million per year (\$3.2 million per biennium) will be allocated to the Program and Budget for transfer to the Real Estate Maintenance and Improvement Subfund to address current and future real estate liabilities. The Director may choose to use surplus revenue from miscellaneous income to finance shortfalls related to building repair and replacement.

### **Action by the Executive Committee**

46. The Committee is invited to take note of this report and to provide any recommendations it might consider necessary.

### **Annexes**

Annex A: 2014 PAHO Master Capital Investment Plan (Real Estate)

Annex B: Master Capital Investment Fund Real Estate and Maintenance Improvement Subfund—Projects Implemented in 2014

Annex C: Implementation of the Holding Account Projects Related to Real Estate

Annex D: Funding Requirements and Proposed Sources of Funds

Annex E: Risk Assessment of Options to Address PAHO Headquarters Main Building Repairs and Renovations

Annex F: Comparison of Options to Address PAHO Headquarters Main Building Repairs and Renovations

Annex G: Summary Analysis of Condition Assessment Results for PAHO-Owned Country Offices

Annex H: 2015 PAHO Master Capital Investment Plan (Real Estate)



**Annex A****2014 PAHO Master Capital Investment Plan (Real Estate - in thousands of US\$)**

	<b>2014-2015</b>	<b>2016-2017</b>	<b>2018-2019</b>	<b>2020-2021</b>	<b>2022-2023</b>	<b>Total</b>
<b>1. Estimated resources needed for repairs and maintenance</b>						
Country offices and Centers rented/leased/provided free of charge (Refer to Table 1)	260.7	407.0	42.5	10.0	110.0	<b>830.2</b>
Country offices owned by PAHO (Refer to Tables 2-11)	2,010.0	1,862.8	1,326.1	2,576.9	1,354.4	<b>9,130.2</b>
Headquarters (Refer to Table 12)	1,550.0	19,892.1	19,149.8	7,535.3	2,705.6	<b>50,832.8</b>
<b>Total Repairs and Maintenance</b>	<b>3,820.7</b>	<b>22,161.9</b>	<b>20,518.4</b>	<b>10,122.2</b>	<b>4,170.0</b>	<b>60,793.2</b>
<b>2. Acquisition of land, construction of buildings and relocation costs</b>						
Country offices and Centers rented/leased/provided free of charge (Refer to Table 1)	0.0	105.0	0.0	0.0	0.0	<b>105.0</b>
Country offices owned by PAHO (Refer to Tables 2-11)	0.0	0.0	0.0	0.0	0.0	<b>0.0</b>
Headquarters (Refer to Table 12)	0.0	0.0	0.0	0.0	0.0	<b>0.0</b>
<b>Total Acquisitions and Construction</b>	<b>0.0</b>	<b>105.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>105.0</b>
<b>Total Estimated Construction Cost 2014-2023 (1+2)</b>	<b>3,820.7</b>	<b>22,266.9</b>	<b>20,518.4</b>	<b>10,122.2</b>	<b>4,170.0</b>	<b>60,898.2</b>
<b>3. Total estimated cost including consultant fees at 10% of estimated construction cost</b>						
Estimated construction costs	3,820.7	22,266.9	20,518.4	10,122.2	4,170.0	<b>60,898.2</b>
Estimated consultant costs	382.1	2,226.7	2,051.8	1,012.2	417.0	<b>6,089.8</b>
<b>Total</b>	<b>4,202.8</b>	<b>24,493.6</b>	<b>22,570.2</b>	<b>11,134.4</b>	<b>4,587.0</b>	<b>66,988.0</b>

**Table 1. Master Capital Investment Plan for PAHO country offices and centers rented/leased/provided free of charge**

Country	Office	Project Description	Estimated Cost (thousands of US\$)					Total
			2014-2015	2016-2017	2018-2019	2020-2021	2022-2023	
		<b>Major repairs and maintenance</b>						
<b>Belize</b>	Country office	Replacement of camera surveillance system	7.7					7.7
<b>Bolivia</b>	Country office	Renovation of emergency escape infrastructure	17.0					17.0
<b>Chile</b>	Country office	Smoke detector installation	5.0					5.0
<b>Chile</b>	Country office	Video camera security system installation		2.0				2.0
<b>Chile</b>	Country office	Organizer rack for server room			2.0			2.0
<b>Chile</b>	Country office	Maintenance of access control doors	1.5					1.5
<b>Costa Rica</b>	Country office	Renovation of bathrooms	45.0					45.0
<b>El Salvador</b>	Country office	Installation of electric fence for exterior of office	4.0				5.0	9.0
<b>El Salvador</b>	Country office	Electrical repairs	20.0					20.0
<b>El Salvador</b>	Country office	Replacement of 18 air conditioning units		15.0			18.0	33.0
<b>El Salvador</b>	Country office	Remodeling of conference rooms, including audiovisual equipment		8.0		8.0	10.0	26.0
<b>El Salvador</b>	Country office	Exterior repairs		4.0			5.0	9.0
<b>El Salvador</b>	Country office	Replacement of 10 air conditioning units			8.5		10.0	18.5
<b>El Salvador</b>	Country office	Remodeling and maintenance of rest rooms			10.0		10.0	20.0
<b>El Salvador</b>	Country office	Remodeling of kitchen, including appliances		3.0				3.0
<b>El Salvador</b>	Country office	Replacement of alarm system			15.0		15.0	30.0
<b>Honduras</b>	Country office	PWR cost share contribution to UNDSS for replacement of VHF radio system	36.0					36.0
<b>Mexico</b>	Country office	Conversion of unused office space to meeting facilities	72.0					72.0
<b>Mexico</b>	Country office	Procurement and installation of a UHF station (MOSS)	4.0					4.0
<b>Mexico</b>	Country office	Fitting out of costs associated with planned relocation to a MOSS-compliant building		370.0				370.0
<b>Panama</b>	Country office	Replacement of PAHO central air conditioning unit	5.0				5.0	10.0
<b>Panama</b>	Country office	Remodeling of bathrooms		3.0				3.0

**Table 1. Master Capital Investment Plan for PAHO country offices and centers rented/leased/provided free of charge (cont.)**

Country	Office	Project Description	Estimated Cost (thousands of US\$)					Total
			2014-2015	2016-2017	2018-2019	2020-2021	2022-2023	
<b>Panama</b>	Country office	Replacement of security entrance gates	1.8					1.8
<b>Panama</b>	Country office	Updating and modernization of telephone system			5.0			5.0
<b>Panama</b>	Country office	Replacement and conversion of 3 radios to digital programming	1.7					1.7
<b>Panama</b>	Country office	Repairs to the roof of the building	2.0	2.0	2.0	2.0	2.0	10.0
<b>Suriname</b>	Country office	Repainting and repair of office building	30.0				30.0	60.0
<b>Uruguay</b>	Country office	Installation of protective films on windows and glass doors; installation of a new surveillance system to control access to PWR offices	8.0					8.0
		<b>Total repairs and maintenance</b>	<b>260.7</b>	<b>407.0</b>	<b>42.5</b>	<b>10.0</b>	<b>110.0</b>	<b>830.2</b>
	<b>Acquisitions of land and construction of buildings</b>							
<b>Ecuador</b>	Country office	Relocation of country office		105.0				105.0
		<b>Total acquisitions and construction</b>	<b>0.0</b>	<b>105.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>105.0</b>
		<b>Total estimated capital investment</b>	<b>260.7</b>	<b>512.0</b>	<b>42.5</b>	<b>10.0</b>	<b>110.0</b>	<b>935.2</b>

Table 2. Summary of PAHO-Owned Buildings

Country	Office	Description	Estimated Cost (thousands of US\$)					Total
			2014-2015	2016-2017	2018-2019	2020-2021	2022-2023	
		<b>1. Major repairs and maintenance</b>						
<b>Haiti</b>	Port-au-Prince	Summary of works identified	63.5	268.7	15.2	184.2	13.6	545.2
<b>Jamaica</b>	Kingston	Summary of works identified	356.3	352.5	23.9	415.0	13.6	1,161.3
<b>Guyana</b>	Georgetown	Summary of works identified	155.8	100.0	460.5	26.4	24.1	766.8
<b>Barbados</b>	Bridgetown	Summary of works identified	339.1	323.2	93.6	13.0	651.1	1,420.0
<b>Peru</b>	Lima	Summary of works identified	230.0	182.3	267.8	19.5	501.5	1,202.1
<b>Argentina</b>	Buenos Aires	Summary of works identified	108.5	48.4	27.3	222.2	82.5	488.9
<b>Paraguay</b>	Asunción	Summary of works identified	54.7	23.0	106.4	276.3	17.3	477.7
<b>Brazil</b>	Brasilia	Summary of works identified	400.0	431.6	264.1	913.0	27.4	2,036.1
<b>Venezuela</b>	Caracas	Summary of works identified	302.1	133.1	67.3	507.3	23.3	1,032.1
		<b>Total major repairs and maintenance</b>	2,010.0	1,862.8	1,326.1	2,576.9	1,354.4	9,130.2
		<b>2. Acquisitions of land and construction of buildings</b>						
		<b>Total acquisitions and construction</b>	0.0	0.0	0.0	0.0	0.0	0.0
		<b>Total Estimated Capital Investment Capital Master Plan 2014-2024 (1+2)</b>	2,010.0	1,862.8	1,326.1	2,576.9	1,354.4	9,130.2

**Table 3. Master Capital Investment Plan for PWR Haiti**

Country	Office	Description	Estimated Cost (thousands of US\$)					Total
			2014-2015	2016-2017	2018-2019	2020-2021	2022-2023	
		<b>1. Major repairs and maintenance</b>						
<b>Haiti</b>	Port-au-Prince	Installation of emergency lighting/renovation of electrical system/installation of smoke detector and start-up of detection system/review and installation of ground floor and first floor piping supports	5.6					5.6
		Installation of gravel terrain (northwest façade)/repair of flooring and pavement (entrance zone)/repair of façades/installation of metallic structure base support for air conditioning outdoor units/protection of outdoor elastomeric coatings	8.8					8.8
		Installation of a standby-reserve water pump/installation of water treatment unit (storage tank)/installation of change-over (switching) supply/generator	9.5					9.5
		Flat roof waterproofing/roof gutter repair		4.4				4.4
		Paint for metallic structure supporting sloped roof		1.3				1.3
		Reinstatement of attic thermal insulation panels	2.8					2.8
		Substitution of uninterruptible power system (UPS) battery/installation of light intensity sensors/installation of outdoor shutters/waste management			2.2		0.6	2.8
		Window replacement				21.2		21.2
		Energy-saving measures for façades				150.0		150.0
		Installation of solar panels		250.0				250.0
		Installation of environmental and maintenance management system	36.8	13.0	13.0	13.0	13.0	88.8
<b>Haiti</b>		<b>Total major repairs and maintenance</b>	<b>63.5</b>	<b>268.7</b>	<b>15.2</b>	<b>184.2</b>	<b>13.6</b>	<b>545.2</b>
		<b>2. Acquisitions of land and construction of buildings</b>						
		<b>Total acquisitions and construction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
		<b>Total Estimated Capital Investment Capital Master Plan 2014-2024 (1+2)</b>	<b>63.5</b>	<b>268.7</b>	<b>15.2</b>	<b>184.2</b>	<b>13.6</b>	<b>545.2</b>

**Table 4. Master Capital Investment Plan for PWR Jamaica**

Country	Office	Description	Estimated Cost (thousands of US\$)					Total
			2014-2015	2016-2017	2018-2019	2020-2021	2022-2023	
		<b>1. Major repairs and maintenance</b>						
<b>Jamaica</b>	Kingston	Repair of roof/replacement of existing roof rainwater drainage system	81.6					81.6
		Replacement of air conditioning units/installation of roof toilet extraction fan box	200.5					200.5
		Installation of a standby-reserve water pump/installation of water treatment unit (storage tank)/renovation of plumbing piping/installation of water-saving taps/acquisition of waste segregation containers	27.9					27.9
		Repair of fissures in girders and façades/repair of tile cladding of façade corbels		9.6				9.6
		Renovation of electrical system/installation of smoke detector and start-up detection system start-up/installation of movement (presence) detectors for lighting control/replacement of fluorescent lighting		99.3				99.3
		Repair of fissures in reinforced concrete outdoor walls/repair of fissures in interior walls, girders, and pillars/repair of fissures in girders and concrete floor			10.9			10.9
		Replacement of uninterruptible power system (UPS) batteries		0.6			0.6	1.2
		Installation of a photovoltaic system		230.0				230.0
		Energy-saving measures for façades				402.0		402.0
		Installation of environmental and maintenance management system	46.3	13.0	13.0	13.0	13.0	98.3
<b>Jamaica</b>		<b>Total major repairs and maintenance</b>	356.3	352.5	23.9	415.0	13.6	1,161.3
		<b>2. Acquisitions of land and construction of buildings</b>						
		<b>Total acquisitions and construction</b>	0.00	0.00	0.00	0.00	0.00	0.00
		<b>Total Estimated Capital Investment Capital Master Plan 2014-2024 (1+2)</b>	356.3	352.5	23.9	415.0	13.6	1,161.3

**Table 5. Master Capital Investment Plan for PWR Guyana**

Country	Office	Description	Estimated Cost (thousands of US\$)					Total
			2014-2015	2016-2017	2018-2019	2020-2021	2022-2023	
		<b>1. Major repairs and maintenance</b>						
<b>Guyana</b>	Georgetown	Clean-up of plot to remove standing water and studies of wooden structure to determine presence of termites	21.0					21.0
		Repair of rooftop guard rail (water tank structure)/repair of fire escape stairway	1.9					1.9
		Installation of a standby-reserve water pump/installation of water treatment unit (storage tank)	4.5					4.5
		Installation of ventilation system in storeroom/replacement of fire detection system	16.6					16.6
		Upgrade of perimeter and entrance security/refurbishment of generator room	55.0					55.0
		Repair of wooden cladding in façade/repair of wooden window frames/replacement of main façade windows		58.5				58.5
		Repair of fissures in concrete girder/construction of ground linear channel drain between façade and fence		2.9				2.9
		Repair and cleaning of roof	8.2		8.2		8.2	24.6
		Roof repairs and installation of drainage system for generator shed		4.5				4.5
		Replacement of plumbing system/installation of water-saving devices		20.5				20.5
		Treatment and protection of wooden roof truss	2.3		2.3		2.3	6.9
		Renovation of electrical cabling network and connections/installation of movement detectors for lighting control/replacement of fluorescent luminaires			35.0			35.0

**Table 5. Master Capital Investment Plan for PWR Guyana (cont.)**

Country	Office	Description	Estimated Cost (thousands of US\$)					Total
			2014-2015	2016-2017	2018-2019	2020-2021	2022-2023	
		Replacement of R-22 refrigerant gas in air conditioning units				3.0		3.0
		Substitution of uninterruptible power system (UPS) battery		0.60			0.60	1.2
		Replacement of indoor window blinds/acquisition of waste segregation containers				4.4		4.4
		Attic insulation				6.0		6.0
		Energy-saving measures for façades			402.0			402.0
		Installation of environmental maintenance management system	46.3	13.0	13.0	13.0	13.0	98.3
<b>Guyana</b>		<b>Total major repairs and maintenance</b>	155.8	100.0	460.5	26.4	24.1	766.8
		<b>2. Acquisitions of land and construction of buildings</b>						
		<b>Total acquisitions and construction</b>	0.00	0.00	0.00	0.00	0.00	0.00
		<b>Total Estimated Capital Investment Capital Master Plan 2014-2023 (1+2)</b>	155.8	100.0	460.5	26.4	24.1	766.8



**Table 6. Master Capital Investment Plan for PWR Barbados**

Country	Office	Description	Estimated Cost (thousands of US\$)					Total
			2014-2015	2016-2017	2018-2019	2020-2021	2022-2023	
		<b>1. Major repairs and maintenance</b>						
<b>Barbados</b>	Bridgetown	Repair of flat roof/repair of sheet metal pitched roof/structural reinforcement of exterior staircases	143.2					143.2
		Renovation of electrical system/installation of emergency lighting in generator room and water pump room/installation of movement detectors for light control/replacement of indoor lighting	111.0					111.0
		Feasibility study for implementation of a photovoltaic system	7.2					7.2
		Installation of water treatment unit (storage tank)	7.0					7.0
		Repair of fissures in concrete floor slab	9.0					9.0
		Renovation of plumbing piping/installation of water-saving devices	13.0					13.0
		Substitution and protection of roof air conditioning pipe coating/installation of exhaust pipe for standby generator	2.4					2.4
		Installation of photovoltaic system		265.2				265.2
		Repair of fissures in façades		45.0				45.0
		Replacement of uninterruptible power system (UPS) batteries			0.6		0.6	1.2
		Replacement of fire detection system and improvement of security system			80.0			80.0
		Energy-saving measures for façades and windows					637.5	637.5
		Installation of environmental and maintenance management system	46.3	13.0	13.0	13.0	13.0	98.3

**Table 6. Master Capital Investment Plan for PWR Barbados (cont.)**

Country	Office	Description	Estimated Cost (thousands of US\$)					Total
			2014-2015	2016-2017	2018-2019	2020-2021	2022-2023	
Barbados		Total major repairs and maintenance	339.1	323.2	93.6	13.0	651.1	1,420.0
	2. Acquisitions of land and construction of buildings							
	Total acquisitions and construction		0.0	0.0	0.0	0.0	0.0	0.0
	Total Estimated Capital Investment Capital Master Plan 2014-2023 (1+2)		339.1	323.2	93.6	13.0	651.1	1,420.0

**Table 7. Master Capital Investment Plan for PWR Peru**

Country	Office	Description	Estimated Cost (thousands of US\$)					Total
			2014-2015	2016-2017	2018-2019	2020-2021	2022-2023	
		<b>1. Major repairs and maintenance</b>						
Peru	Lima	Replacement of water distribution system and installation of sump pump	12.3					12.3
		Replacement of auditorium air conditioning system	37.8					37.8
		Repair and enhancement of exterior lighting system and closed-circuit television (CCTV) systems	10.0					10.0
		Replacement of external irrigation pump and pipework and control systems/installation of water meter	2.6					2.6
		Replacement of uninterruptible power system (UPS) equipment and interior lighting and installation of movement detectors	115.8			5.0		120.8
		Masonry repairs		1.9				1.9
		Roof repairs and railing repairs		167.4				167.4
		Façade repair and replacement of external carpentry			253.8			253.8
		Replacement of air conditioner in server room				1.5		1.5
		Replacement of uninterruptible power system (UPS) equipment in server room			1.0		1.0	2.0
		Renovation of façade					487.5	487.5
		Installation of environmental and maintenance management system	52.5	13.0	13.0	13.0	13.0	104.5
Peru		<b>Total major repairs and maintenance</b>	231.0	182.3	267.8	19.5	501.5	1,202.1
		<b>2. Acquisitions of land and construction of buildings</b>						
		<b>Total acquisitions and construction</b>	0.0	0.0	0.0	0.0	0.0	0.0
		<b>Total Estimated Capital Investment Capital Master Plan 2014-2023 (1+2)</b>	231.0	182.3	267.8	19.5	501.5	1,202.1

**Table 8. Master Capital Investment Plan for PWR Argentina**

Country	Office	Description	Estimated Cost (thousands of US\$)					Total
			2014-2015	2016-2017	2018-2019	2020-2021	2022-2023	
		<b>1. Major repairs and maintenance</b>						
<b>Argentina</b>	Buenos Aires	Roof and column repairs/repairs to water cistern covers	3.5					3.5
		Lighting repairs on 4th floor and installation of back-up air conditioning system in server room	57.0					57.0
		Replacement of uninterruptible power system (UPS) battery	0.4	0.4	0.4	0.4	0.4	2.0
		Refurbishment of electrical distribution board and closed-circuit television (CCTV) system	10.6					10.6
		Installation of central air conditioning system in 4th-floor offices		26.0				26.0
		Façade repairs and repairs to underground storage tank		3.0				3.0
		Internal floor repairs and air conditioning repairs		6.0				6.0
		Renovation of cold water distribution system and pump and repair of fire escape			8.9			8.9
		Replacement of uninterruptible power system (UPS)			4.0		4.0	8.0
		Replacement of sanitation pipework/replacement of pump and electrical control panel				4.4		4.4
		Replacement of ceiling					44.6	44.6
		Replacement of heating system					20.5	20.5
		Renovation of façade			1.0	204.4		205.4
		Installation of environmental and maintenance management system	37.0	13.0	13.0	13.0	13.0	89.0
<b>Argentina</b>		<b>Total major repairs and maintenance</b>	108.5	48.4	27.3	222.2	82.5	488.9
		<b>2. Acquisitions of land and construction of buildings</b>						
		<b>Total acquisitions and construction</b>	0.0	0.0	0.0	0.0	0.0	0.0
		<b>Total Estimated Capital Investment Capital Master Plan 2014-2023 (1+2)</b>	108.5	48.4	27.3	222.2	82.5	488.9

**Table 9. Master Capital Investment Plan for PWR Paraguay**

Country	Office	Description	Estimated Cost (thousands of US\$)					Total
			2014-2015	2016-2017	2018-2019	2020-2021	2022-2023	
		<b>1. Major repairs and maintenance</b>						
<b>Paraguay</b>	Asunción	Renovation of sanitation and cold water piping, pumps, and office lighting	3.8					3.8
		Fire alarm upgrades	6.0					6.0
		Replacement of uninterruptible power system (UPS) battery	0.8	0.8	0.8	0.8	0.8	4.0
		Hand-railing improvements to stairs	1.3					1.3
		Renovation of fire detection system	4.3					4.3
		Façade repairs		3.0				3.0
		Repairs to ventilation system		4.2				4.2
		Sprinkler system repairs and repairs to staircase and guardrails		2.0				2.0
		Replacement of interior lighting system and installation of low flow faucets			33.1			33.1
		Replacement of air conditioners			56.0			56.0
		Replacement of uninterruptible power system (UPS)			3.5		3.5	7.0
		Renovation of external façade				262.5		262.5
		Installation of environmental and maintenance management system	38.5	13.0	13.0	13.0	13.0	90.5
<b>Paraguay</b>		<b>Total major repairs and maintenance</b>	54.7	23.0	106.4	276.3	17.3	477.7
		<b>2. Acquisitions of land and construction of buildings</b>						
		<b>Total acquisitions and construction</b>	0.0	0.0	0.0	0.0	0.0	0.0
		<b>Total Estimated Capital Investment Capital Master Plan 2014-2023 (1+2)</b>	54.7	23.0	106.4	276.3	17.3	477.7

**Table 10. Master Capital Investment Plan for PWR Brazil**

Country	Office	Description	Estimated Cost (thousands of US\$)					Total
			2014-2015	2016-2017	2018-2019	2020-2021	2022-2023	
		<b>1. Major repairs and maintenance</b>						
<b>Brazil</b>	Brasilia	Repairs to electrical system	16.0	150.0				166.0
		Installation of lightning conductor and emergency generator and perimeter security upgrades	230.0					230.0
		Upgrading of closed-circuit television (CCTV) system	8.5					8.5
		Replacement of internal lighting		5.0				5.0
		Waterproofing of roof (repair)	8.0					8.0
		Server room air conditioning upgrades	15.0					15.0
		Water feature pump replacement		12.0				12.0
		Renovation of bathrooms		1.6	45.0			46.6
		Roof repairs to auditorium			11.2			11.2
		Replacement of cold water distribution system			11.5			11.5
		Waterproofing of main building roof (renewal)			144.5			144.5
		Replacement of auditorium air conditioning system			18.0			18.0
		Replacement of uninterruptible power system (UPS)			14.4		14.4	28.8
		Installation of motion sensors to control lighting and feasibility study for alternative power generation			6.5			6.5
		Installation of central air conditioning system		250.0				250.0
		Renovation of façade and sunscreens	45.0			900.0		945.0
		Installation of environmental and maintenance management system	77.5	13.0	13.0	13.0	13.0	129.5
<b>Brazil</b>		<b>Total major repairs and maintenance</b>	400.0	431.6	264.1	913.0	27.4	2,036.1
		<b>2. Acquisitions of land and construction of buildings</b>						
		<b>Total acquisitions and construction</b>	0.0	0.0	0.0	0.0	0.0	0.0
		<b>Total Estimated Capital Investment Capital Master Plan 2014-2023 (1+2)</b>	400.0	431.6	264.1	913.0	27.4	2,036.1

**Table 11. Master Capital Investment Plan for PWR Venezuela**

Country	Office	Description	Estimated Cost (thousands of US\$)					Total
			2014-2015	2016-2017	2018-2019	2020-2021	2022-2023	
		<b>1. Major repairs and maintenance</b>						
<b>Venezuela</b>	Caracas	Waterproofing repairs to roofs	20.9					20.9
		Electrical repairs and replacement of air conditioner in server room and closed-circuit television (CCTV) system	26.1					26.1
		Replacement of internal lighting	6.6	1.1	1.1	1.1	1.1	11.0
		Upgrade of air conditioning system	209.0					209.0
		Façade repairs		2.8				2.8
		Replacement of cold water distribution system		26.0				26.0
		Replacement of emergency lighting and wiring in technical rooms		85.0				85.0
		Installation of motion sensors in internal lighting systems		5.2				5.2
		Replacement of uninterruptible power system (UPS)			3.2		3.2	6.4
		Installation of emergency generator and replacement of fire detection system			50.0			50.0
		External repairs and decoration				9.2		9.2
		Installation of fire extinguishing/anti-intrusion system				34.0		34.0
		Replacement of kitchen installation					6.0	6.0
		Replacement of façade				450.0		450.0
		Installation of environmental and maintenance management system	39.5	13.0	13.0	13.0	13.0	91.5
<b>Venezuela</b>		<b>Total major repairs and maintenance</b>	<b>302.1</b>	<b>133.1</b>	<b>67.3</b>	<b>507.3</b>	<b>23.3</b>	<b>1,033.1</b>
		<b>2. Acquisitions of land and construction of buildings</b>						
		<b>Total acquisitions and construction</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
		<b>Total Estimated Capital Investment Capital Master Plan 2014-2023 (1+2)</b>	<b>302.1</b>	<b>133.1</b>	<b>67.3</b>	<b>507.3</b>	<b>23.3</b>	<b>1,033.1</b>

**Table 12. Master Capital Investment Plan for PAHO Headquarters**

Country	Office	Description	Estimated Cost (thousands of US\$)					Total
			2014-2015	2016-2017	2018-2019	2020-2021	2022-2023	
		<b>1. Major repairs and maintenance</b>						
<b>United States</b>	Headquarters	Urgent projects: roof repairs, garage and freight elevator door replacement, granite façade panel replacement	250.0					250.0
		Building systems/electromechanical systems renovation	800.0	5,092.5	2,622.5			8,515.0
		Office tower: façade renovation/marble end walls renovation		610.0				610.0
		Rotunda and connector, roof, and façade renovations		1,193.5	3,687.9			4,881.4
		Façade replacement: new exterior glazing		9,548.1				9,548.1
		10th-floor renovation		1,856.6	1,912.3			3,768.9
		Floor-by-floor renovation (3-9)			5,463.5	5,796.4		11,259.9
		3rd-floor cafeteria renovation				1,738.9		1,738.9
		2nd-floor renovation			5,463.6			5,463.6
		1st-floor renovation (security upgrades)	250.0	795.7				1,045.7
		Plaza and site renovations (security upgrades)	250.0	795.7				1,045.7
		Basement renovations					1,229.8	1,299.8
		Installation of fitness center					1,475.8	1,475.8
		<b>Total Headquarters major repairs and maintenance</b>	<b>1,550.0</b>	<b>19,892.1</b>	<b>19,149.8</b>	<b>7,535.3</b>	<b>2,705.6</b>	<b>50,832.8</b>
		<b>2. Acquisitions of land and construction of buildings</b>						
		<b>Total acquisitions and construction</b>						
		<b>Total Estimated Headquarters Capital Investment 2014-2024 (1+2)</b>	<b>1,550.0</b>	<b>19,892.1</b>	<b>19,149.8</b>	<b>7,535.3</b>	<b>2,705.6</b>	<b>50,832.8</b>



**Annex B**

**Master Capital Investment Fund Real Estate  
Maintenance and Improvement Subfund–Projects Implemented in 2014  
(as of 31 December 2014, in US\$)**

<b>Location</b>	<b>Description</b>	<b>Planned</b>	<b>Disbursed</b>	<b>Implemented (%)</b>
PAHO Headquarters (Washington, D.C.)	Rehabilitation of four elevators	156,478	156,478	100
PAHO Headquarters (Washington, D.C.)	Procurement of services of elevator project consultant	3,250	3,250	100
PAHO Headquarters (Washington, D.C.)	Changing of chilled water	11,800	11,800	100
PAHO Headquarters (Washington, D.C.)	Procurement of architectural services for installation of flagpoles	19,130	11,588	61
PAHO Headquarters (Washington, D.C.)	Procurement of HVAC units on B2 level	27,428	27,428	100
PAHO Headquarters (Washington, D.C.)	Upgrading of HVAC building management technologies	38,400	38,400	100
PAHO Headquarters (Washington, D.C.)	Replacement of two electrical panels	32,200	32,200	100
PAHO Headquarters (Washington, D.C.)	Security assessment for reorganization of foyer and external esplanade	23,314	3,893	17
PAHO Headquarters (Washington, D.C.)	Procurement of architectural services to create Revit background files for all floors of main building and an architectural site plan	32,922	32,922	100
PWR Argentina	Replacement of outdated wiring and installation of new lighting system	15,000	5,916	39
PWR Barbados	Replacement of emergency generator, roof straps, and fire sensors	64,700	1,903	3

**Master Capital Investment Fund Real Estate  
Maintenance and Improvement Subfund– Projects Implemented in 2014  
(as of 31 December 2014, in US\$) (cont.)**

<b>Location</b>	<b>Description</b>	<b>Planned</b>	<b>Disbursed</b>	<b>Implemented (%)</b>
PWR Colombia	Relocation of PWR office	8,389	8,389	100
PWR Cuba	Renovation/repairs in main office building and auxiliary building	23,876	3,517	15
PWR Dominican Republic	Replacement of AC equipment and ducting	70,000	0	0
PWR El Salvador	Replacement of AC equipment	39,048	39,045	100
PWR Guatemala	Relocation of PWR office	1,825,855	1,712,137	94
PWR Guyana	Replacement of AC compressors and ducting, security upgrades, and interior space rehabilitation	17,458	12,593	72
PWR Haiti	Reconstruction of PWR office	1,040,059	1,039,096	99
PWR Jamaica	Repaving of parking lot, exterior repainting, and window blind replacement	18,962	18,961	100
PWR Nicaragua	HVAC, electrical, and other infrastructure rehabilitation of auditorium	77,598	20,668	26
PWR Peru	Interior renovation and electrical upgrade to auditorium and cafeteria	35,000	18,949	54
<b>Total</b>		<b>3,580,867</b>	<b>3,199,133</b>	

**Annex C****Implementation of the Holding Account Projects Related to Real Estate  
(as of 31 December 2014, in US\$)**

<b>Location</b>	<b>Project</b>	<b>Expenditure</b>
Washington, D.C.	4.F: Improvements to Facilities: Refurbishment of Conference Rooms and Furniture: architectural services for the 2nd- and 10th-floor office renovations at the PAHO Headquarters building	49,485
Washington, D.C.	4.D: Improvements to Facilities: Security and Sanitary Measures: architectural services for reorganization of foyer and external esplanade and renovation of sanitary installations	18,114
	<b>Total</b>	67,599

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**Annex D****Funding Requirements and Proposed Sources of Funds**

<b>Fund</b>	<b>Funding Status</b>	<b>Funding Requirements</b>	<b>Proposed Source(s) of Funding</b>	<b>Funding Proposed</b>
Master Capital Investment Fund (MCIF) – Information Technology (IT) Subfund	MCIF is primarily funded through the appropriation of budgetary surpluses. The available balance in the IT Subfund as of 31 December 2014 was \$ 306,849. <sup>1</sup>	PASB's Report on the IT Strategy (Document CE156/26) indicates that the Bureau requires significant additional investment in IT infrastructure and support.	IPSAS surplus	\$ 2,000,000
Human Resources Strategy reserve	This is a new funding recommendation.	PASB's Report on the Development of the Human Resources Strategy (Document CE156/31) indicates that one-time funding will be required to achieve the recommended transformation.	Unallocated IPSAS surplus (\$ 281,684) and unallocated budgetary surplus (\$ 773,494)	\$ 1,055,178
MCIF – Real Estate Maintenance and Improvement Subfund	The balance of this existing MCIF Subfund as of 31 December 2014 was \$ 1,804,810.	The Report on the Master Capital Investment Fund (Document CE156/24, Rev. 1) sets forth the results of a Region-wide assessment of PAHO-owned real estate, identifying approximately US\$ 2 million of needed major repairs to country office buildings per biennium for the coming decade.	Revenue surplus	\$ 2,000,000
MCIF – Vehicle Replacement Subfund	The balance of this existing MCIF Subfund as of 31 December 2014 was \$ 378,520.	The Vehicle Replacement Subfund lacks sufficient resources to launch a Region-wide, self-financing vehicle replacement program needed for country office operations.	Revenue surplus	\$ 1,000,000

<sup>1</sup> Unless otherwise indicated, all monetary figures in this report are expressed in United States dollars.

**Funding Requirements and Proposed Sources of Funds (cont.)**

Fund	Funding Status	Funding Requirements	Proposed Source(s) of Funding	Funding Proposed
Epidemic Emergency Fund - special reserve for infectious disease response	The balance of this existing fund is \$464,550.	Additional funds are required to ensure that PASB can advance funds so that Member States can procure needed supplies to respond to Ebola and other emergent outbreaks.	Revenue surplus	\$ 1,000,000
Revolving Fund for Strategic Public Health Supplies - capitalization	The capitalization balance stood at \$7.6 million as of 31 December 2014, less outstanding advances of \$1.6 million, for an available cash balance of \$6.0 million.	The trend toward increasing utilization of the Strategic Fund by Member States requires strengthening of the capitalization level.	Revenue surplus	\$ 1,000,000
TOTAL proposed for allocation				\$ 8,055,178
AVAILABLE SOURCES				
	Unappropriated IPSAS surplus			\$ 2,281,684
	Unappropriated budgetary surplus			\$ 773,494
	Revenue surplus			\$ 5,090,037
TOTAL AVAILABLE SOURCES				\$ 8,145,215
REMAINING UNALLOCATED AMOUNT				\$ 90,037

**Annex E****Risk Assessment of Options to Address PAHO Headquarters Main Building  
Repairs and Renovations****Table 1. Key to Risk Levels**

Probability	Impact				
	Insignificant (1)	Minor (2-3)	Moderate (4-6)	Severe (7-9)	Catastrophic (10)
Highly Probable (10)	Moderate	Moderate	High	High	High
Probable (7-9)	Low	Moderate	Moderate	High	High
Possible (4-6)	Low	Low	Moderate	High	High
Improbable (2-3)	Negligible	Negligible	Low	Moderate	High
Highly Improbable (1)	Negligible	Negligible	Low	Moderate	Moderate

**Negligible** – These risks are considered unlikely to occur and, should they occur, present insignificant or minor impact.

**Low** – These risks are considered acceptable. No further action is necessary other than to ensure that the controls are maintained. Alternatively, no additional controls are required unless they can be implemented at very low cost (in terms of time, money, and effort). Actions to further reduce these risks are assigned low priority. Arrangements should be made to ensure that the controls are maintained.

**Moderate** – Consideration should be as to whether the risks can be lowered, where applicable, to a tolerable level and preferably to an acceptable level, but the costs of additional risk reduction measures should be taken into account. The risk reduction measures should be implemented within a defined time period. Arrangements should be made to ensure that controls are maintained, particularly if the risk levels are associated with harmful consequences.

**High** – These risks are unacceptable. Substantial improvements in risk control measures are necessary so that the risk is reduced to a tolerable or acceptable level. The work activity should be halted until risk controls are implemented that significantly reduce the risk.

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**Table 2. Risk Assessment Summary Chart**

Risk	Stay Put at Current Locations			Relocate to Suburban Building			
	Option 1 Status Quo - Minimal Renovation	Option 2 Full 1-Year Renovation	Option 3 10-Year Phased Renovation	Option 4 New Construction (Owned)	Option 5 Existing Building (Owned)	Option 6 New Construction Installment Sale (Owned)	Option 7 New Construction (Leased)
Negative employee health impact caused by building environmental factors	High	High	High	Moderate	Moderate	Moderate	Moderate
Security threat or breach to PAHO facility	High	High	High	Moderate	Moderate	Moderate	Moderate
Single or multiple base building system(s) failure	High	Moderate	High	Moderate	Moderate	Moderate	Moderate
Mission fulfillment: risk that the physical environment will negatively impact ability to meet goals (technology obsolescence) and ethical commitments (energy reduction)	High	High	High	Moderate	Moderate	Moderate	Moderate
Transaction risk: risk associated with failure to successfully complete all necessary real estate transaction(s). Transaction risk could be inability to obtain the desired financial terms, entitlements, or an inability to close on any one of the transactions necessary to achieve the selected real estate scenario	Low	High	High	Moderate	Moderate	Moderate	Moderate
Employee productivity: loss in employee productivity due to working conditions or less than modern/optimal work environment or disruption	High	Moderate	High	Low	Low	Low	Low
Employee retention: loss of employees as a direct result of a change in PAHO's physical location	Negligible	Negligible	Moderate	Low	Low	Low	Low
Operation cost control: risk of controlling ongoing operational costs including expenses and maintenance /repair /replacement	High	Low	High	Low	Low	Low	Moderate
Implementation cost risk: risk associated with identifying and controlling implementation costs for the selected real estate scenario	Moderate	Moderate	High	Low	Low	Low	Low
Implementation schedule: risk of effectively controlling schedule for the selected real estate scenario	Moderate	High	High	Moderate	Moderate	Moderate	Moderate
Business continuity and disaster recovery	High	High	High	Low	Low	Low	Low
Total Risk Assessment	544	327	801	137	134	137	144

**Table 3. Alternative: Stay Put At Current Locations –  
Option 1: Status Quo (Very Minimal Renovations)**

Risk	Probability		Impact		Risk Assessed	
Negative employee health impact caused by building environmental factors	Highly Probable	10	Catastrophic	10	High	100
Security threat or breach to PAHO facility	Possible	5	Catastrophic	10	High	50
Single or multiple base building system(s) failure	Probable	7	Severe	8	High	56
Mission fulfillment: risk that the physical environment will negatively impact ability to meet goals (technology obsolescence) and ethical commitments (energy reduction)	Highly Probable	10	Severe	9	High	90
Transaction risk: risk associated with failure to successfully complete all necessary real estate transaction(s). Transaction risk could be inability to obtain the desired financial terms, entitlements, or an inability to close on any one of the transactions necessary to achieve the selected real estate scenario	Highly Improbable	1	Moderate	1	Low	5
Employee productivity: loss in employee productivity due to working conditions or less than modern/optimal work environment	Probable	8	Severe	7	High	56
Employee retention: loss of employees as a direct result of a change in PAHO's physical location	Highly Improbable	1	Insignificant	1	Negligible	1
Operation cost control: risk of controlling ongoing operational costs including expenses and maintenance /repair / replacement	Highly Probable	10	Severe	8	High	80
Implementation cost risk: risk associated with identifying and controlling implementation costs for the selected real estate scenario	Possible	5	Moderate	5	Moderate	25
Implementation schedule: risk of effectively controlling schedule for the selected real estate scenario	Possible	5	Moderate	5	Moderate	25
Business continuity and disaster recovery	Probable	7	Severe	8	High	56
<b>Total Risk Assessment</b>						<b>544</b>



**Table 4. Alternative: Stay Put at Current Locations –  
Option 2: Full 1-Year Renovation**

Risk	Probability		Impact		Risk Assessed	
Negative employee health impact caused by building environmental factors	Improbable	3	Catastrophic	10	High	30
Security threat or breach to PAHO facility	Possible	5	Catastrophic	10	High	50
Single or multiple base building system(s) failure	Improbable	2	Severe	8	Moderate	16
Mission fulfillment: risk that the physical environment will negatively impact ability to meet goals (technology obsolescence) and ethical commitments (energy reduction)	Possible	4	Severe	9	High	36
Transaction risk: risk associated with failure to successfully complete all necessary real estate transaction(s). Transaction risk could be inability to obtain the desired financial terms, entitlements, or an inability to close on any one of the transactions necessary to achieve the selected real estate scenario	Possible	4	Severe	7	High	28
Employee productivity: loss in employee productivity due to working conditions or less than modern/optimal work environment	Probable	7	Moderate	5	Moderate	35
Employee retention: loss of employees as a direct result of a change in PAHO's physical location	Highly Improbable	1	Insignificant	1	Negligible	1
Operation cost control: risk of controlling ongoing operational costs including expenses and maintenance /repair /replacement	Improbable	3	Moderate	5	Low	15
Implementation cost risk: risk associated with identifying and controlling implementation costs for the selected real estate scenario	Possible	5	Moderate	5	Moderate	25
Implementation schedule: risk of effectively controlling schedule for the selected real estate scenario	Possible	5	Severe	7	High	35
Business continuity and disaster recovery	Probable	8	Severe	7	High	56
<b>Total Risk Assessment</b>						<b>327</b>

**Table 5. Alternative: Stay Put at Current Locations –  
Option 3: 10-Year Phased Renovation**

Risk	Probability		Impact		Risk Assessed	
Negative employee health impact caused by building environmental factors	Highly Probable	10	Catastrophic	10	High	100
Security threat or breach to PAHO facility	Possible	5	Catastrophic	10	High	50
Single or multiple base building system(s) failure	Probable	8	Severe	8	High	48
Mission fulfillment: risk that the physical environment will negatively impact ability to meet goals (technology obsolescence) and ethical commitments (energy reduction)	Highly Probable	10	Severe	9	High	90
Transaction risk: risk associated with failure to successfully complete all necessary real estate transaction(s). Transaction risk could be inability to obtain the desired financial terms, entitlements, or an inability to close on any one of the transactions necessary to achieve the selected real estate scenario	Possible	4	Severe	7	High	28
Employee productivity: loss in employee productivity due to working conditions or less than modern/optimal work environment	Highly Probable	10	Severe	9	High	90
Employee retention: loss of employees as a direct result of a change in PAHO's physical location or difficult working conditions associated with an extended renovation	Probable	7	Moderate	5	Moderate	35
Operation cost control: risk of controlling ongoing operational costs including expenses and maintenance /repair /replacement	Highly Probable	10	Severe	9	High	90
Implementation cost risk: risk associated with identifying and controlling implementation costs for the selected real estate scenario	Highly Probable	10	Severe	9	High	90
Implementation schedule: risk of effectively controlling schedule for the selected real estate scenario	Highly Probable	10	Severe	9	High	90
Business continuity and disaster recovery	Highly Probable	10	Severe	9	High	90
<b>Total Risk Assessment</b>						<b>801</b>

**Table 6. Alternative: Relocate Suburban Building –  
Option 4: New Construction Installment Sale (Owned)**

Risk	Probability		Impact		Risk Assessed	
Negative employee health impact caused by building environmental factors	Highly Improbable	1	Catastrophic	10	<b>Moderate</b>	10
Security threat or breach to PAHO facility	Highly Improbable	1	Catastrophic	10	<b>Moderate</b>	10
Single or multiple base building system(s) failure	Highly Improbable	1	Severe	8	<b>Moderate</b>	8
Mission fulfillment: risk that the physical environment will negatively impact ability to meet goals (technology obsolescence) and ethical commitments (energy reduction)	Highly Improbable	1	Severe	7	<b>Moderate</b>	7
Transaction risk: risk associated with failure to successfully complete all necessary real estate transaction(s). Transaction risk could be inability to obtain the desired financial terms, entitlements, or an inability to close on any one of the transactions necessary to achieve the selected real estate scenario	Possible	4	Moderate	5	<b>Moderate</b>	20
Employee productivity: loss in employee productivity due to working conditions or less than modern/optimal work environment	Highly Improbable	1	Moderate	5	<b>Low</b>	5
Employee retention: loss of employees as a direct result of a change in PAHO's physical location	Possible	4	Minor	3	<b>Low</b>	12
Operation Cost Control: risk of controlling ongoing operational costs including expenses and maintenance /repair /replacement	Improbable	3	Moderate	5	<b>Low</b>	15
Implementation cost risk: risk associated with identifying and controlling implementation costs for the selected real estate scenario	Improbable	3	Moderate	5	<b>Low</b>	15
Implementation schedule: risk of effectively controlling schedule for the selected real estate scenario	Possible	5	Moderate	5	<b>Moderate</b>	25
Business continuity and disaster recovery	Improbable	2	Moderate	5	<b>Low</b>	10
<b>Total Risk Assessment</b>						<b>137</b>

**Table 7. Alternative: Relocate Suburban Building –  
Option 5: New Construction (Owned)**

Risk	Probability		Impact		Risk Assessed	
Negative employee health impact caused by building environmental factors	Highly Improbable	1	Catastrophic	10	Moderate	10
Security threat or breach to PAHO facility	Highly Improbable	1	Catastrophic	10	Moderate	10
Single or multiple base building system(s) failure	Highly Improbable	1	Severe	8	Moderate	8
Mission fulfillment: risk that the physical environment will negatively impact ability to meet goals (technology obsolescence) and ethical commitments (energy reduction)	Highly Improbable	1	Severe	7	Moderate	7
Transaction risk: risk associated with failure to successfully complete all necessary real estate transaction(s). Transaction risk could be inability to obtain the desired financial terms, entitlements, or an inability to close on any one of the transactions necessary to achieve the selected real estate scenario	Possible	4	Moderate	5	Moderate	20
Employee productivity: loss in employee productivity due to working conditions or less than modern/optimal work environment	Highly Improbable	1	Moderate	5	Low	5
Employee retention: loss of employees as a direct result of a change in PAHO's physical location	Possible	4	Minor	3	Low	12
Operation Cost Control: risk of controlling ongoing operational costs including expenses and maintenance /repair /replacement	Improbable	3	Moderate	5	Low	15
Implementation cost risk: risk associated with identifying and controlling implementation costs for the selected real estate scenario	Improbable	3	Moderate	5	Low	15
Implementation schedule: risk of effectively controlling schedule for the selected real estate scenario	Possible	5	Moderate	5	Moderate	25
Business continuity and disaster recovery	Improbable	2	Moderate	5	Low	10
<b>Total Risk Assessment</b>						<b>137</b>

**Table 8. Alternative: Relocate to Suburban Building –  
Option 6: Existing Building (Owned)**

Risk	Probability		Impact		Risk Assessed	
Negative employee health impact caused by building environmental factors	Highly Improbable	1	Catastrophic	10	High	10
Security threat or breach to PAHO facility	Highly Improbable	1	Catastrophic	10	High	10
Single or multiple base building system(s) failure	Highly Improbable	1	Severe	8	High	8
Mission fulfillment: risk that the physical environment will negatively impact ability to meet goals (technology obsolescence) and ethical commitments (energy reduction)	Highly Improbable	1	Severe	7	High	7
Transaction risk: risk associated with failure to successfully complete all necessary real estate transaction(s). Transaction risk could be inability to obtain the desired financial terms, entitlements, or an inability to close on any one of the transactions necessary to achieve the selected real estate scenario	Possible	4	Moderate	5	High	20
Employee productivity: loss in employee productivity due to working conditions or less than modern/optimal work environment	Highly Improbable	1	Moderate	5	Moderate	5
Employee retention: loss of employees as a direct result of a change in PAHO's physical location	Possible	4	Minor	3	Moderate	12
Operation cost control: risk of controlling ongoing operational costs including expenses and maintenance /repair /replacement	Improbable	3	Moderate	5	Moderate	15
Implementation cost risk: risk associated with identifying and controlling implementation costs for the selected real estate scenario	Improbable	3	Moderate	4	Moderate	12
Implementation schedule: risk of effectively controlling schedule for the selected real estate scenario	Possible	5	Moderate	5	High	25
Business continuity and disaster recovery	Improbable	2	Moderate	5	Moderate	10
<b>Total Risk Assessment</b>						<b>134</b>

**Table 9. Alternative: Relocate to Suburban Building –  
Option 7: New Construction (Leased)**

Risk	Probability		Impact		Risk Assessed	
Negative employee health impact caused by building environmental factors	Highly Improbable	1	Catastrophic	10	Moderate	10
Security threat or breach to PAHO facility	Highly Improbable	1	Catastrophic	10	Moderate	10
Single or multiple base building system(s) failure	Highly Improbable	1	Severe	8	Moderate	8
Mission fulfillment: risk that the physical environment will negatively impact ability to meet goals (technology obsolescence) and ethical commitments (energy reduction)	Highly Improbable	1	Severe	7	Moderate	7
Transaction risk: risk associated with failure to successfully complete all necessary real estate transaction(s). Transaction risk could be inability to obtain the desired financial terms, entitlements, or an inability to close on any one of the transactions necessary to achieve the selected real estate scenario	Possible	4	Moderate	5	Moderate	20
Employee productivity: loss in employee productivity due to working conditions or less than modern/optimal work environment	Highly Improbable	1	Moderate	5	Low	5
Employee retention: loss of employees as a direct result of a change in PAHO's physical location	Possible	4	Minor	3	Low	12
Operation cost control: risk of controlling ongoing operational costs including expenses and maintenance /repair /replacement	Possible	5	Moderate	5	Moderate	25
Implementation cost risk: risk associated with identifying and controlling implementation costs for the selected real estate scenario	Improbable	3	Moderate	4	Low	12
Implementation schedule: risk of effectively controlling schedule for the selected real estate scenario	Possible	5	Moderate	5	Moderate	25
Business continuity and disaster recovery	Improbable	2	Moderate	5	Low	10
<b>Total Risk Assessment</b>						<b>144</b>

**Annex F****Table 1. Comparison of Options to Address PAHO Headquarters Main Building Repairs and Renovations**

<b>Solution Description</b>	<b>Number of Buildings Occupied</b>	<b>Surface Area (square feet)</b>	<b>Maximum Desk Capacity (200 square feet per person)</b>	<b>Total Project Duration</b>
Option 1: status quo—minimal repair and renovation of Headquarters main building at 525 23rd Street, NW	3	173,432	867	Not applicable
Option 2: conduct a fast-track one-year full renovation of Headquarters main building at 525 23rd Street, NW	3	173,432	867	3 years
Option 3: carry out a 10-year phased renovation of Headquarters main building at 525 23rd Street, NW	3	173,432	867	10 years
Option 4: relocation to suburban new building (owned—installment sale)	1	215,000	1075	4 years
Option 5: consolidation and relocation to suburban new building	1	173,432	867	4 years
Option 6: consolidation and relocation to suburban existing building	1	180,000	900	4 years
Option 7: relocation to suburban new building (leased)	1	180,000	900	3 years

**Rationalizing space and controlling cost**

Reducing the number of desk positions, and therefore the size of the new building, reduces costs. In the absence of information to the contrary, the study was conducted under the assumption that the overall size of the Headquarters building would remain constant. This assumption will be reexamined in subsequent studies.

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**Table 2. Comparison of Options to Address PAHO Headquarters Main Building Repairs and Renovations (Cost)**

<b>Solution Description</b>	<b>New Building Costs (\$)</b>	<b>Net Capital Costs (\$) Over 18 Years, Including Capital Inflows</b>	<b>Total Costs (\$), Including Operating and Maintenance Costs (18 Years)</b>
Option 1: status quo—minimal repair and renovation of Headquarters main building at 525 23rd Street, NW	0	4,532,818	94,270,913
Option 2: conduct a fast-track one-year full renovation of Headquarters main building at 525 23rd Street, NW	0	42,127,950	147,037,168
Option 3: carry out a 10-year phased renovation of Headquarters main building at 525 23rd Street, NW	0	45,778,846	152,873,859
Option 4: relocation to suburban new building (owned—installment sale)	95,206,466	38,318,260	89,390,046
Option 5: consolidation and relocation to suburban new building	91,268,284	34,380,079	85,451,865
Option 6: consolidation and relocation to suburban existing building	78,108,820	25,783,342	81,291,182
Option 7: relocation to suburban new building (leased)	0	53,311,064	119,015,796



## Annex G

### Summary Analysis of Condition Assessment Results for PAHO-Owned Country Offices

Country Office Findings and Recommendations		
Location	Findings	Recommendations
Argentina	The current real estate market in Buenos Aires is stable. However, there have been few transactions, with only two comparable buildings sold over the past 12 months.	Stay in the existing building and move forward with the recommended capital project to repair the HVAC (heating, ventilation, and air conditioning) system.
Barbados	The real estate market in Barbados is depressed, and selling an existing asset would be a challenge. The current building needs significant immediate repairs.	Stay in the existing building and move forward with the recommended capital projects to repair the roof and renovate the electrical system.
Brazil	Brazil is PAHO's most valuable country office asset, valued at approximately \$13 million. The building is operating efficiently and has sufficient room for growth.	Stay in the existing building and make any necessary renovations and upgrades to the building as needed.
Guatemala	Guatemala's office condominium was just purchased by PAHO in 2014. This location is the most efficient and has the lowest occupancy costs of the 10 country offices.	Due to the fact that this space is newly constructed, the recommendation is to stay in this location, with no necessary immediate actions needed for the building.
Guyana	Guyana is operating efficiently, and the location is well suited for PAHO's use. The market in Guyana is depressed, which would make selling the building a challenge.	Stay in the existing building and make any necessary renovations and upgrades to the building as needed.
Haiti	Haiti is one of the newest buildings, and it is operating efficiently. However, overall energy costs in Haiti are extremely high, and operating costs there are the highest of all of the country offices.	Stay in the existing building and move forward with the installation of solar panels to reduce the impact of Haiti's high energy costs and lower PAHO's overall occupancy cost.

**Summary Analysis of Condition Assessment Results for  
PAHO-Owned Country Offices (cont.)**

<b>Country Office Findings and Recommendations</b>		
<b>Location</b>	<b>Findings</b>	<b>Recommendations</b>
Jamaica	The building in Jamaica faces significant repairs to the roof and HVAC (heating, ventilation, and air conditioning) system as well as upgrades to the mechanical systems and building structure, which should be done immediately. The building also has a significant amount of vacant space on the ground floor and is therefore very inefficient. The market is starting to show signs of recovery, but sales prices are still well below asking prices, by almost 7%-10%.	Stay in the existing building and move forward with the immediate necessary repairs (roof, HVAC, etc.). If possible, PAHO should lease approximately 400 square meters of vacant space on the ground floor of the building to create additional revenue and offset future operating costs.
Paraguay	PAHO occupies a condominium interest in a relatively new building in Paraguay. The building is operating efficiently and is projected to have relatively low operating costs over the next 10 years.	Stay in the existing building. There are no immediate actions needed for this building.
Peru	The building in Peru is operating efficiently and is consistently well below the average occupancy costs of the other country offices. There are 44 staff members currently working in this location, and the corresponding space efficiency is considered to be suboptimal relative to PAHO's other country offices.	Stay in this location and consider leasing a portion of the space not currently utilized. If the security protocol will not support leasing the space, PAHO could consider a sale lease-back through which it leases only a portion of the building.
Venezuela	The building in Venezuela is not efficient and has a significant amount of vacant space. Due to the non-conforming construction of the building, the depressed market, and economic instability, selling the building would be challenging.	Stay in the building and move forward immediately with necessary renovations. Although the building requires significant capital costs, the alternative to build or relocate to a new site would be risky and more costly than completing the renovations.

**Annex H**  
**2015 PAHO Master Capital Investment Plan (Real Estate - in thousands of US\$)**

	2014-2015	2016-2017	2018-2019	2020-2021	2022-2023	Total
<b>1. Estimated resources needed for repairs and maintenance</b>						
Country offices and Centers rented/leased/ Provided free of charge (Refer to Table 1)	260.7	407.0	42.5	10.0	110.0	<b>830.2</b>
Country offices owned by PAHO (Refer to Tables 2-11)	2,010.0	1,862.8	1,326.1	2,576.9	1,354.3	<b>9,130.1</b>
Headquarters (Refer to Table 12)	250.0	250.0	25,783	0	0	<b>26,283.0</b>
<b>Total Repairs and Maintenance</b>	<b>2,520.7</b>	<b>2,519.8</b>	<b>27,151.6</b>	<b>2,586.9</b>	<b>1,464.3</b>	<b>36,243.3</b>

**2. Acquisition of land, construction of buildings and relocation costs**

Country offices and Centers rented/leased/ Provided free of charge (Refer to Table 1)	0.0	105.0	0.0	0.0	0.0	<b>105.0</b>
Country offices owned by PAHO (Refer to Tables 2-11)	0.0	0.0	0.0	0.0	0.0	<b>0.0</b>
Headquarters (Refer to Table 12)	0.0	0.0	0.0	0.0	0.0	<b>0.0</b>
<b>Total Acquisitions and Construction</b>	<b>0.0</b>	<b>105.0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>	<b>105.0</b>

<b>Total Estimated Construction Cost 2014-2023 (1+2)</b>	<b>2,520.7</b>	<b>2,624.8</b>	<b>27,151.6</b>	<b>2,586.9</b>	<b>1,464.3</b>	<b>36,348.3</b>
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**3. Total estimated cost including consultant fees at 10% of estimated construction cost**

Estimated construction costs	2,520.7	2,624.8	27,151.6	2,586.9	1,464.3	<b>36,348.3</b>
Estimated consultant costs	252.1	262.5	2,715.2	258.7	146.4	<b>3,634.9</b>
<b>Total</b>	<b>2,772.8</b>	<b>2,887.3</b>	<b>29,866.8</b>	<b>2,845.6</b>	<b>1,610.7</b>	<b>39,983.2</b>