

#### JAMAICA: FOUNDATIONS FOR COMPETITIVENESS AND GROWTH PROJECT Loan No: 9203-JM - Component One

Assignment Title: Development of Single Building Codes for Jamaica Reference No. (as per Procurement Plan): *FCG/AF/CON/31* 

## **TERMS OF REFERENCE**

#### 1. BACKGROUND

#### Country Background

Jamaica is defined as an upper middle-income country by the World Bank, with Gross Domestic Product (GDP) per capita at current prices at US\$4,665 per capita (current prices) in 2020. Presently, the country's main economic sectors are the services (tourism, financial services, restaurants, distributive trades, real estate, etc.) and good producing (agriculture, mining, manufacturing and construction) sectors. The construction sector is a key driver of economic growth, contributing to 7.9 percent of GDP in 2020.

An effective and efficient regulatory process is essential for economic development and to save lives, reduce losses, and preserve investment and economic assets from both disasters and chronic risk. This is of particular importance as Jamaica has a high exposure to many natural hazards, including hurricanes, floods, tsunamis, droughts, earthquakes, storm surges and landslides. Other benefits of a more effective and efficient building regulatory system include improving accessibility to persons with disabilities, preserving national heritage, improving health and safety, and curbing informality.

In 2003, the Jamaican Institution of Engineers (JIE) initiated the updating of the Jamaica National Building Code. The working group adopted the approach of using the International Code Council's (ICC) building codes as the base codes for Jamaica and developing a parallel set of "Application Documents", outlining specific modification for the Jamaican context. Under the supervision of the JIE, Application Documents were developed for the relevant 2003 ICC codes. The Application Documents were later updated by the Bureau of Standards of Jamaica (BSJ) to correspond to the 2009 ICC model codes. Based on this framework, usage of the National Building Code of Jamaica (NBCJ) currently requires cross referencing at least three documents: The ICC model code, Application Documents, and the Jamaican Building Act.

The draft Building Act was passed in Parliament during 2017 and the regulations are currently being finalized. In the current Building Act, responsibility for maintenance of the building codes reside with BSJ. The Building Act, became legally effective on January 15, 2018, and gives legal effect to the adapted ICC building codes and promotes good practice in building code administration and implementation.

#### Current situation in the sector

The BSJ is now tasked with updating the National Building Code of Jamaica (NBCJ) and to publish a unified set of NBCJ documents. This process will require the customization of the 2018 ICC building codes and compiling the resultant documents with applicable portions of the corresponding Jamaican Application Documents, The Building Act and Regulations to form a coherent and user-friendly document for each code. The National Building Code of Jamaica comprises 11 codes. Of these codes, the World Bank has funded the following three (3): Jamaica Building Code, Jamaica Small Building Residential Code and the Jamaica Fire Code. Additionally, the United Nations Development Program in Jamaica has funded the following three (3): Jamaica Existing Building Code, Jamaica Mechanical Code and the Jamaica Property Maintenance Code.

As of 11 February 2022, the second drafts of the Jamaica Building Code and the Jamaica Fire Code have been submitted to ICC for review, following amendments resulting from Building Code Technical Committee meetings and the 60-day public comment period. The first draft of Jamaica Small Building/ Residential Code is being finalized by the Consultant, following the recommendations arising from Building Code Technical Committee meetings. The first drafts of the Jamaica Existing Building Code, Jamaica Mechanical Code and the Jamaica Property Maintenance Code are being finalized by the Consultant for the Building Code Technical Committee review and approval.

A total of five (5) codes remain to be financed, updated and compiled into single coherent and user-friendly documents.

These codes include:

- i. Jamaica Private Sewage Disposal Code
- ii. Jamaica Fuel Gas Code
- iii. Jamaica Plumbing Code
- iv. Jamaica Energy Conservation Code
- v. Jamaica National Electrical Code

During the updating of the first six (6) codes, the process experienced delays due to the highly integrated nature of the codes and the need to ensure coherence across the suite of codes. In preparing the remaining codes, these issues would have been substantially resolved and the documents are at an advanced stage in preparation for public enquiry.

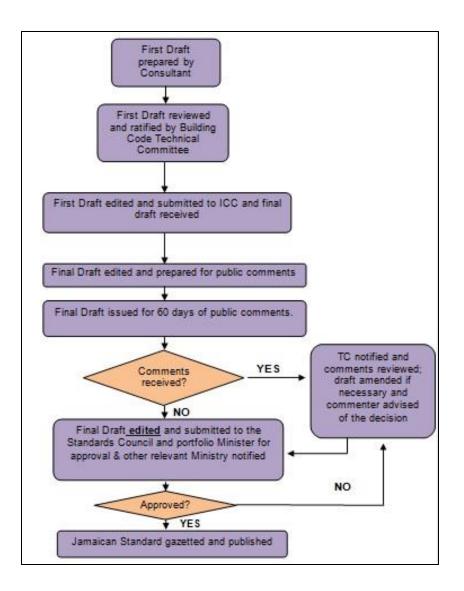
Throughout the development process, the relevant stakeholders will be engaged via technical committee participation, stakeholder workshops and public enquiry. See <u>Annex B</u> for the list of key stakeholders.

#### **Customizing the 2018 International Codes**

The most updated NBCJ consists of the 2009 editions of 10 ICC building codes, and 10 corresponding Jamaican Application Documents published in 2015. The Application Documents were developed by Jamaican Code Consultants then reviewed and approved by the BSJ's Building Code Technical Committee. The Application Documents contain the modifications to the ICC model codes that customize those codes to Jamaican natural hazards, climatic conditions, tried and proven, highly acceptable and appropriate local construction technologies and practices. The 2015 Application Documents and their earlier version did not reference the extant Jamaican Building Act and Regulations as these were over 100 years old at that time.

With a modern Building Act in effect, use of the NBCJ, requires extensive cross referencing between at least three documents. This tedious and time-consuming process can be made easier by incorporating the relevant elements of the three component documents into one text. This will greatly increase usage of the codes by designers, regulators and the building industry. The priority of the Implementation strategy is the editing and publishing of the unified set of code documents that will constitute the basis of subsequent training, building design, construction and enforcement. Each ICC model code has a corresponding application document. The naming of code sections, subsections and numbering system of the application documents corresponds directly to the ICC model codes.

The drafting and publication of the Jamaica Codes is a function of combining all applicable portions of the 2018 ICC model codes and the NFPA 70 National Electrical Code with the appropriately drafted texts which would be contained in the respective Jamaica Application Documents. To this must be added the relevant portions of the 2018 Building Act and Local Government's administration and enforcement practices, as well as metrication of the entire document including its tables, equations, graphs and drawings. This will be achieved by local Code Consultants developing the amalgamated, metricated first draft codes and obtaining all approvals of the BSJ's Standards Development Process, through modifications to the Word document versions of the ICC codes as provided by ICC. The Standards Development Process will be implemented as follows:



#### **Project description**

The Government of Jamaica (GoJ) successfully engaged the World Bank to extend and expand its 6-year US\$50 Million loan facility called Foundation for Competitiveness and Growth Project (FCGP) to allow it to deepen the reform initiatives that had been supported under the Project. Approval was granted for the Additional Financing of US\$10 Million from the World Bank and the Government committed to provide a further US\$5 Million, thus providing a total of US\$15 Million to support the various Government entities implementation of investment climate reforms.

FCGP is expected to be concluded on March 31, 2024, based on the Additional Financing that has been approved by the World Bank and Government of Jamaica to implement critical Investment Reforms. The initiatives under the Project are expected to strengthen the enabling environment for

private sector competitiveness to help Jamaica unleash its potential for productivity and growth, including improvement of the trade environment.

#### **Related Programmes**

The five codes are to be used in the technical (overview) training for the enforcers and implementers of the code, the Ministry of Local Government and the relevant agencies and departments.

## 2. OBJECTIVE(S) OF THE ASSIGNMENT

The FCG Project Development Objective of which this contract will form a part is, "To strengthen the business environment in Jamaica for private investment". The contract will contribute to Component 1's Project Development Objective of "Number of Recommended Business Environment and Pro-Competition Laws, Regulations, Amendments, and Codes Enacted; Policies Adopted; and Administrative Procedures Streamlined".

The primary objective of this project is to develop a unified set of five metricated building codes for Jamaica, namely:

- i. Jamaica Plumbing Code
- ii. Jamaica Fuel Gas Code
- iii. Jamaica Private Sewage Disposal Code
- iv. Jamaica Energy Conservation Code
- v. Jamaica Electrical Code

The results to be achieved by the Consultant are the finalization of the above five metricated building codes for Jamaica.

## **3. SCOPE OF SERVICES, TASKS (COMPONENTS) AND EXPECTED DELIVERABLES**

3.1 The specific services of the Consultant shall include, but are not limited to the following:

## 1. Inception Report

- i. Prepare a work plan, methodology and data collection instruments for undertaking the assignment.
- ii. This should include timelines and the administrative support needed to support the consultant in undertaking the scope of works.
- iii. Assist the BSJ with organizing and establishing sub-committees of the National Building Code Technical Committee (NBC TC).

iv. Present the Inception Report to the Project Management Committee.

## Deliverable: Inception Report

## 2. First Draft Building Codes

- i. Conduct gap analyses between 20012, 2015 and 2018 codes to identify areas to be updated.
- ii. Complete an initial draft of the updated, metricated and amalgamated Jamaica Building codes as assigned;
- iii. Solicit the review and approval of each draft code from the BSJ's Building Code Technical Committee and incorporate the recommended alterations arising therefrom.
- iv. Adhere to the guidelines provided by the BSJ for the preparation of standards in accordance with the BSJ's standards development process.

## Deliverable: First Drafts of Jamaica Plumbing Code, Jamaica Fuel Gas Code, Jamaica Private Sewage Disposal Code, Jamaica Energy Conservation Code and Jamaica Electrical Code.

## 3. Stakeholder Consultation Workshop

- i. In consultation with BSJ, organize and facilitate a stakeholder consultation workshop for five Building Codes.
- ii. Prepare Workshop Report on proceedings and outcomes of the workshop.

## Deliverable: Workshop Report

## 4. Second Draft Building Codes

- i. Complete the second draft of the updated, metricated and amalgamated Jamaica Building codes as assigned.
- ii. Integrate findings and recommendations from stakeholder workshop and other stakeholders in draft Building Codes.
- iii. Evaluate, and where appropriate, integrate, public comments in the draft codes as well as factor in all recommended changes emanating from the reviews.
- iv. Address feedback received from the ICC review of each draft code as communicated through the Secretariat.
- v. Solicit the review and approval of each draft code from the BSJ's Building Code Technical Committee and incorporate the recommended alterations arising therefrom.

Deliverable: Updated Drafts of Jamaica Plumbing Code, Jamaica Fuel Gas Code, Jamaica Private Sewage Disposal Code, Jamaica Energy Conservation Code and Jamaica Electrical Code.

## 5. Finalized Building Codes

i. Attend the BSJ's Standards Council review and approval of each code and factor into each code any recommended changes made by Council.

## Deliverable: Finalized Building Codes

## 6. Monthly and Final Reports

- Prepare and submit monthly progress reports and other updates, as is required.
- Prepare Final Report

## Deliverables: Monthly Progress Reports, Final Report

- 3.2. Expected deliverables are:
  - i. Inception Report
  - ii. First draft Jamaica Building Codes
  - iii. Workshop Report
  - iv. Second draft Jamaica Building Codes
  - v. Finalized Jamaica Building Codes
  - vi. Monthly Progress Reports
  - vii. Final Report

## 3.3 All documents submitted must conform to the following minimum standards:

The following are to be completed for each Code:

- Technical Editing
- Metric conversions of text, tables, equations and drawings
- Technical review
- Amendments to the Administrative Provisions

Each code will be submitted in the following format:

- In a custom word document
- All New text should be underlined, strike-through all deleted text, and note any new or deleted Tables and/or Figures.
- See Annex 1 for additional information and a sample script provided by ICC.

# 4. TEAM COMPOSITION & QUALIFICATIONS REQUIREMENTS FOR THE KEY EXPERTS

## Key Expert 1: Project Leader

The Project Leader should satisfy the following requirements:

- Postgraduate Degree in Engineering, or any other related field
- 15 years working experience in the building or construction sector
- Certificate in project management
- Excellent organizational and time management skills
- Excellent oral and written communication skills in the English language
- Knowledge of the technical and administrative process for standards development at the Bureau of Standards Jamaica
- Knowledge of the ICC base code, particularly the 2009 code
- Knowledge of the 2012, 2015 and 2018 code is desirable
- Knowledge of the Jamaica Application documents
- Existing relationships with the Jamaica Institute of Engineers and Jamaica Institute of Architects.

## Key Expert 2: Chief Code Drafter

The Chief Drafter should satisfy the following requirements:

- Postgraduate Degree in Engineering or any other related field
- 15 years working experience in the building or construction sector
- Excellent organizational and time management skills
- Excellent oral and written communication skills in the English language
- Knowledge of the technical and administrative process for standards development at the Bureau of Standards Jamaica
- Knowledge of the ICC base code, particularly the 2009 code
- Knowledge of the 2012, 2015 and 2018 code is desirable
- Knowledge of the Jamaica Application documents
- Existing relationships with the Jamaica Institute of Engineers and Jamaica Institute of Architects.

#### Non -Key experts: Three Code Drafters

The Code Drafter should satisfy the following requirements:

- Bachelor of Science Degree in Engineering, or any other related field
- Minimum of 6 years working experience in the building or construction sector with a Postgraduate Degree in Engineering; or 8 years working experience in the building or construction sector
- Excellent organizational and time management skills
- Excellent oral and written communication skills in the English language
- Knowledge of the technical and administrative process for standards development at the Bureau of Standards Jamaica
- Knowledge of the ICC base code, particularly the 2009 code
- Knowledge of the Jamaica Application documents

The Consultant must select and hire other experts as required according to the profiles identified in the Organization & Methodology and/or these Terms of Reference. All experts must be independent and free from conflicts of interest in the responsibilities they take on.

The Consultant will select a legal code drafter to provide guidance on the administrative provisions and legal infrastructure for implementation and enforcement.

The Consultant will provide support facilities to their team of experts (back-stopping) during the implementation of the contract. The Consultant must ensure that experts are adequately supported and equipped. In particular it must ensure that there is sufficient administrative, secretarial and interpreting provision to enable experts to concentrate on their primary responsibilities.

## 5. REPORTING REQUIREMENTS AND TIME SCHEDULE FOR DELIVERABLES

The Planning Institute of Jamaica is the Contracting Authority and shall approve any contractual amendments and payments.

The Consultant will report to Bureau of Standards Jamaica, the Supervising Entity. The Supervising Entity shall be responsible for the approval of contractual reports and payment requests. The designated representative of the Supervising Entity is the Director – Standards Division.

In fulfilling his/her responsibilities, the designated representative of the Supervising Entity will collaborate with a Project Management Committee (PMC) comprising of senior officers from the BSJ's Standards and Engineering Divisions for the approval of submitted draft Codes. The BSJ's Building Code Technical Committee and the designated representative are required to verify the adequacy of the deliverables prior to sign off by the Project Management Committee.

The intended start date is November 2022 and the period of implementation of the contract will be fourteen months from this date.

Name of report	Minimum Content	Time of submission	Review Period	Payment %
Deliverable #1: Inception Report	Work plan, methodology for conducting the assignment, reports/documents to be reviewed, draft outline for each code, TORs, composition for each sub-committee and list of sub-committee members.	Within one (1) month of start of contract	2 weeks	10%
Deliverable #2: First Drafts of Jamaica Plumbing Code, Jamaica Fuel Gas Code and Jamaica Private Sewage Disposal Code	Amalgamated Code documents, to include clauses to be added to deal with local issues, hard metrication, drawings	Three (3) months after the approval of the Inception Report	Two (2) months	20%
Deliverable #3: First Drafts of Jamaica Energy Conservation Code and Jamaica Electrical Code	Amalgamated Code documents, to include clauses to be added to deal with local issues, hard metrication, drawings	Two (2) months after the submission of Deliverable #2	Six (6) weeks	15%
Deliverable #4: Workshop Report	Overview of Proceedings of Workshop based on agenda, summary of discussions and conclusions, Appendices- Agenda, Attendance List (name, organization, position, email, telephone)	2 week after Consultation Workshop (to be held during public comment period)	2 weeks	10%
Deliverable #5: Second Drafts of Jamaica Plumbing Code, Jamaica Fuel Gas Code, Jamaica Private Sewage Disposal Code, Jamaica Energy Conservation Code and	Revised Amalgamated Code documents, to include amendments arising from Building Code Technical Committee review, public comments and ICC.	One (1) month after the approval of the Deliverable #3	1 month	25%

The Consultant shall provide the following reports:

Name of report	Minimum Content	Time of submission	Review Period	Payment %
Jamaica Electrical				
Code				
Deliverable #6: Finalised Building Codes: Jamaica Plumbing Code, Jamaica Fuel Gas Code, Jamaica Private Sewage Disposal Code, Jamaica Energy Conservation Code and Jamaica Electrical Code	Amalgamated Code documents to include amendments from Standards Council.	One month after the approval of Deliverable #5	1 month	20%
Deliverable #7: Monthly Reports	<ul> <li>Activities undertaken for the month</li> <li>Status of implementation of project versus plan, with explanation for variations</li> </ul>	5 days after the end of each month	n/a	n/a
Deliverable #8: Final Project	Description of achievements including issues faces, risks contemplated and related responses and recommendations.	Two (2)weeks after approval of Deliverable #6	2 weeks	10%

Reports may be submitted in soft/electronic copy using Microsoft Word and Adobe PDF. The Final Report and PowerPoint Presentation shall be delivered by electronic copy as above, via email. Each Report mentioned above, except the monthly status report, should be presented to BSJ's Building Code Technical Committee to facilitate review and approval. Where deliverables are subject to revision following review, the Consultant shall provide the updated version in tracked change and clean formats, along with a review matrix as may be appropriate.

The Consultant will be required to participate in monthly contract execution update meetings to facilitate proactive monitoring and mitigation of risks. The Consultant shall maintain a rolling list of Action Items resulting from these meetings. All deliverables produced under this assignment are the property of the GoJ and cannot be reproduced, shared, or distributed without prior consent of the Contracting Authority and Supervising Entity.

#### 6. CLIENT'S INPUT AND COUNTERPART PERSONNEL

All day to day operations and communication regarding the implementation of activities under the contract will be handled by the Supervising Entity – the Bureau of Standards. The Focal Point is the Director, Standards Division, who will coordinate and monitor the activities of the Consultant and the Building Code Technical Committee, including schedule management, verification of deliverables and maintenance of project documentation.

The Project Management Committee shall be responsible for the coordination of the implementation of activities under the contract. The BSJ shall ensure that deliverables are reviewed and approved by its Building Code Technical Committee and any recommended changes are satisfactorily addressed by the consultant.

The Consultant will work remotely and only be accommodated at the Bureau of Standards as needed.

#### **ANNEX A: SAMPLE SCRIPT FOR A CUSTOM CODE**

#### SAMPLE SCRIPT FOR A

#### CUSTOM CODE (WHEN BASED

#### ON AN I-CODE)

When preparing a custom code in cooperation with ICC's Publishing Division all that is needed from the customer is a script of the desired changes. This script does not need to be formatted unless there is a state-specific format (for example, a unique table).

#### **CUSTOM CODE PROCEDURES**

These guidelines offer the smoothest transition and quicker turnaround from I-Code to State Custom Code.

Contact ICC publications to request text files of desired International Code and which printing your code will be based on, for example, first or subsequent. This is important for content accuracy, as subsequent printings will include errata to that I-Code. First printings will not include errata.

Create your custom Microsoft Word document.

Underline all new text, strike-through all deleted text, and note any new or deleted Tables and/or Figures.

#### Please do not include sections that DO NOT have changes.

Be sure to review and adjust copyright, all preface content and the ordinance if necessary (ICC will update the Table of Contents).

## MOST CUSTOM CODES FOLLOW THE SAME MARGINAL MARKINGS FORMAT:

- **New text** is marked with a double margin rule
- **Deleted text** is marked "RESERVED" or "DELETED" to preserve formatting.

**TABLE CHANGES**Please give all new tables a table number and a title.

**FIGURE CHANGES** If the change is to an existing ICC figure, it may be more convenient to mark up a hard copy and submit that. If adding a new figure, please submit in its original format. All figures must be at least 300 dpi. Images copied from web browsers are not usable.

SAMPLE SCRIPT

101.1. Title. These rules shall be known as the building code, hereinafter referred to as "the code."

104.9. Approved equipment. Equipment shall be constructed or installed in accordance with approvals granted under section 21 of 1972 PA 230, MCL 125.1521 or by the building official.

106.1. Submittal documents. Construction documents, special inspection and structural programs and other data shall be submitted in 1 or more sets with each application for a permit. The construction documents shall be prepared by, or under the direct supervision of, a registered design building professional when required by article 20 of 1980 PA 299, MCL 339.101 et seq. Where special conditions exist, the building official is authorized to require additional construction documents to be prepared by a registered design building professional.

108.1. Payment of fees. The fees prescribed by section 22 of 1972 PA 230, MCL 125.1522, shall be paid to the enforcing agency of the jurisdiction before a permit to begin work for new construction, alteration, removal, demolition, or other building operation may be issued. An amendment to a permit necessitating an additional fee shall not be approved until the additional fee has been paid.

105.1.2. Annual permit records. No changes

105.2. Reserved (e.g., text was deleted, but number is kept).

113.4. Violation penalties. It is unlawful for any person, firm, or corporation to violate a provision of the code or fail to conform with any of the requirements thereof, or erect, construct, alter, extend, repair, move, remove, demolish, or occupy any building, structure, or equipment regulated by the code, or cause work to be performed or done, in conflict with or in violation of the approved construction documents or directive of the enforcing agency, or a permit or certificate issued under the code. A violator shall be assessed a fine in

accordance with section 23 of 1972 PA 230, MCL 125.1523.

Allowable tier areas in table 406.3.5 shall be increased for open parking garages constructed to heights less than the table maximum. The gross tier area of the garage shall not exceed that permitted for the higher structure. At least 3 sides of each such larger tier shall have continuous horizontal openings not less than 30 inches (762 mm) in clear height extending for at least 80% of the length of the sides, and no part of such larger tier shall be more than 200 feet (60 960mm) horizontally from such an opening. In addition, each such opening shall face a street or yard accessible to a street with a width of at least 30 feet (9144 mm) for the full length of the opening, and standpipes shall be provided in each such tier.

Open parking garages of type II construction, with all sides open, shall be unlimited in allowable area where the height does not exceed 75 feet (22 860 mm). For a side to be considered open, the total area of openings along the side shall not be less than 50% of the interior area of the side at each tier, and such openings shall be equally distributed along the length of the tier. All portions of tiers shall be within 200 feet (60 960 mm) horizontally from such openings.

907.2.12. High-rise buildings. No changes

907.8.2. High-rise buildings. No changes

OCCUPANCY	FLOOR AREA IN SQ. FT. PER OCCUPANT
Agricultural building	300 gross
Aircraft hangars	500 gross
Airport terminal	
Baggage claim	20 gross
Baggage handling	300 gross
Concourse	100 gross
Waiting areas	15 gross
Assembly	
Gaming floors (keno, slots, etc.)	11 gross
Assembly with fixed seats	See section 1004.7
Assembly without fixed seats	
Concentrated (chairs only-not fixed)	7 net
Standing space	5 net
Unconcentrated (tables and chairs)	15 net
Bowling centers, allow 5 persons for each lane including 15 feet of runway, and for additional areas	7 net
Business areas	100 gross
Courtrooms-other than fixed seating areas	40 net
Dormitories	50 gross
Educational	
Classroom area	20 net
Shops and other vocational room areas	50 net
Locker rooms	15 gross
Exercise rooms	50 gross
H-5 Fabrication and manufacturing areas	200 gross
Industrial areas	100 gross
Institutional areas Inpatient	-
treatment areas Outpatient	240 gross
areas	100 gross
Sleeping areas	120 gross
Kitchens, commercial	200 gross
Library	
Reading rooms	50 net
Stack area	100 gross
Locker rooms	50 gross

Table 1004.1.2 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

Mercantile	
Areas on other floors	60 gross
Basement and grade floor areas	30 gross
Storage, stock, shipping areas	300 gross
Parking garages	200 gross
Stages and platforms	15 net
Accessory storage areas, mechanical	
equipment room	300 gross
Warehouses	500 gross

For SI: 1 square foot =  $0.0929 \text{ m}^2$ 

1109.7 Lifts. Platform (wheelchair) lifts are permitted to be a part of a required accessible route in new construction where indicated in items 1 to 7. Platform (wheelchair) lifts shall be installed in accordance with the Michigan elevator code, R 408.8101 to R 408.8695.

1. An accessible route to a performing area and speakers' platforms in occupancies in group A.

2. An accessible route to wheelchair spaces required to comply with the wheelchair space dispersion requirements of sections 1108.2.2 to 1108.2.4.

**3**. An accessible route to spaces that are not open to the general public with an occupant load of not more than 5.

(REST OF SECTION DELETED).

## ANNEX B: List of Key Stakeholders

Code	Stakeholder
Jamaica Building Code	Incorporated Masterbuilders Association of Jamaica
-	Insurance providers
	Jamaica Fire Brigade
	Jamaica Institute of Architects
	Jamaica Institution of Engineers
	Ministry of Economic Growth and Job Creation
	Ministry of Health – Environmental Health Unit
	Ministry of Housing, Urban Renewal, Environment and Climate
	Change
	Ministry of Industry, Investment And Commerce
	Ministry of Local Government + Local Authorities/Municipal
	Corporations
	National Housing Trust
	National Environment and Planning Agency
	Planning Institute of Jamaica
	University of Technology, Jamaica
	University of the West Indies, Mona
Jamaica Electrical Code	Government Electrical Inspectorate
Vallarea Dicettical Code	Incorporated Masterbuilders Association of Jamaica
	Insurance providers
	Jamaica Fire Brigade
	Jamaica Institute of Architects
	Jamaica Institution of Engineers
	Ministry of Economic Growth and Job Creation
	Ministry of Housing, Urban Renewal, Environment and Climate
	Change
	Ministry of Industry, Investment And Commerce
	Ministry of Local Government + Local Authorities/Municipal
	Corporations
	National Housing Trust
	Planning Institute of Jamaica
	University of Technology, Jamaica
	University of the West Indies, Mona
Jamaica Energy	Government Electrical Inspectorate
Conservation Code	Incorporated Masterbuilders Association of Jamaica
Collservation Code	Insurance providers
	Jamaica Fire Brigade
	Jamaica Institute of Architects
	Jamaica Institution of Engineers
	Ministry of Economic Growth and Job Creation
	Ministry of Health – Environmental Health Unit
	Ministry of Housing, Urban Renewal, Environment and Climate
	Change Ministry of Industry, Investment And Commerce
	Ministry of Local Government + Local Authorities/Municipal
	Corporations
	National Housing Trust

	Netheral Engineering of a Discourse Assessed
	National Environment and Planning Agency
	Planning Institute of Jamaica
	University of Technology, Jamaica
	University of the West Indies, Mona
Jamaica Existing Building	Incorporated Masterbuilders Association of Jamaica
Code	Insurance providers
	Jamaica Fire Brigade
	Jamaica Institute of Architects
	Jamaica Institution of Engineers
	Jamaica National Heritage Trust
	Ministry of Economic Growth and Job Creation
	Ministry of Housing, Urban Renewal, Environment and Climate
	Change
	Ministry of Industry, Investment And Commerce
	Ministry of Local Government + Local Authorities/Municipal
	Corporations
	National Housing Trust
	Planning Institute of Jamaica
	University of Technology, Jamaica
	University of the West Indies, Mona
Jamaica Fire Code	Incorporated Masterbuilders Association of Jamaica
Jamaica I ne Code	Insurance providers
	Jamaica Fire Brigade
	Jamaica Institute of Architects
	Jamaica Institution of Engineers Ministry of Economic Growth and Job Creation
	•
	Ministry of Housing, Urban Renewal, Environment and Climate
	Change Ministry of Industry, Investment And Commerce
	Ministry of Industry, Investment And Commerce
	Ministry of Local Government + Local Authorities/Municipal
	Corporations National Hanning Treat
	National Housing Trust
	Planning Institute of Jamaica
	University of Technology, Jamaica
	University of the West Indies, Mona
Jamaica Fuel Gas Code	Incorporated Masterbuilders Association of Jamaica
	Insurance providers
	Jamaica Fire Brigade
	Jamaica Institute of Architects
	Jamaica Institution of Engineers
	Ministry of Economic Growth and Job Creation
	Ministry of Housing, Urban Renewal, Environment and Climate
	Change
	Ministry of Industry, Investment And Commerce
	Ministry of Local Government + Local Authorities/Municipal
	Corporations
	National Housing Trust
	Planning Institute of Jamaica
	University of Technology, Jamaica
	University of the West Indies, Mona

Jamaica Mechanical Code	Incorporated Masterbuilders Association of Jamaica
Jamaica Meenamear Code	Insurance providers
	Jamaica Fire Brigade
	Jamaica Institute of Architects
	Jamaica Institute of Architects
	e
	Ministry of Economic Growth and Job Creation
	Ministry of Housing, Urban Renewal, Environment and Climate
	Change
	Ministry of Industry, Investment And Commerce
	Ministry of Local Government + Local Authorities/Municipal
	Corporations
	National Housing Trust
	Planning Institute of Jamaica
	University of Technology, Jamaica
	University of the West Indies, Mona
Jamaica Plumbing Code	Incorporated Masterbuilders Association of Jamaica
	Insurance providers
	Jamaica Fire Brigade
	Jamaica Institute of Architects
	Jamaica Institution of Engineers
	Ministry of Economic Growth and Job Creation
	Ministry of Health – Environmental Health Unit
	Ministry of Housing, Urban Renewal, Environment and Climate
	Change
	Ministry of Industry, Investment And Commerce
	Ministry of Local Government + Local Authorities/Municipal
	Corporations
	National Housing Trust
	National Environment and Planning Agency
	Planning Institute of Jamaica
	University of Technology, Jamaica
	University of the West Indies, Mona
Jamaica Private Sewage	Incorporated Masterbuilders Association of Jamaica
Disposal Code	Insurance providers
1	Jamaica Fire Brigade
	Jamaica Institute of Architects
	Jamaica Institution of Engineers
	Ministry of Economic Growth and Job Creation
	Ministry of Health – Environmental Health Unit
	Ministry of Housing, Urban Renewal, Environment and Climate
	Change
	Ministry of Industry, Investment And Commerce
	Ministry of Local Government + Local Authorities/Municipal
	Corporations
	National Housing Trust
	National Water Commission
	National Environment and Planning Agency
	Planning Institute of Jamaica
	University of Technology, Jamaica
	University of the West Indies, Mona
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Jamaica Property	Incorporated Masterbuilders Association of Jamaica	
Maintenance Code	Insurance providers	
	Jamaica Fire Brigade	
	Jamaica Institute of Architects	
	Jamaica Institute of Architects	
	Ministry of Economic Growth and Job Creation	
	Ministry of Housing, Urban Renewal, Environment and Climate	
	Change	
	Ministry of Industry, Investment And Commerce	
	Ministry of Local Government + Local Authorities/Municipal	
	Corporations	
	National Housing Trust	
	Planning Institute of Jamaica	
	University of Technology, Jamaica	
	University of the West Indies, Mona	
Jamaica Small	Incorporated Masterbuilders Association of Jamaica	
Building/Residential Code	Insurance providers	
	Jamaica Fire Brigade	
	Jamaica Institute of Architects	
	Jamaica Institution of Engineers	
	Ministry of Economic Growth and Job Creation	
	Ministry of Health – Environmental Health Unit	
	Ministry of Housing, Urban Renewal, Environment and Climate	
	Change	
	Ministry of Industry, Investment And Commerce	
	Ministry of Local Government + Local Authorities/Municipal	
	Corporations	
	National Housing Trust	
	National Environment and Planning Agency	
	Planning Institute of Jamaica	
	University of Technology, Jamaica	
	University of the West Indies, Mona	